Description of document:	Bureau of Land Management (BLM) Interior Department Manual Sections: H-3160-5 (Inspection and Enforcement Documentation and Strategy Development Handbook (Internal)), H-3160-6 (National Certification Handbook For Oil and Gas Inspection and Enforcement Personnel (Internal)), H-3890-1 (Handbook for Mineral Examiners) 2005-2009
Requested date:	20-November-2020
Release date:	30-May-2024
Posted date:	10-June-2024
Source of document:	FOIA Officer Bureau of Land Management Attn: FOIA Office (WO-640) 1849 C St. N.W. Washington, DC 20240 Fax: 202-245-0050 E-mail: rwitt@blm.gov Department of Interior FOIA Public Access Link (PAL)

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Washington, D.C. 20240
http://www.blm.gov

May 30, 2024

In Reply Refer To:
1278-FOIA (640)
FOIA# 2021-000864

Via email

This letter is a final response to your Freedom of Information Act (FOIA) request, dated November 20, 2020. The tracking number is 2021-000864. In your letter, you asked for the following:

> *"A copy of the following Interior Dept Manual Sections: H-3160-5 (Inspection and Enforcement Documentation and Strategy Development), H3160-6 (National Certification Handbook...), H-3890-1 (Handbook for Mineral Examiners)."*

We have enclosed **289** pages, which are being released to you in their entirety.

Ryan Witt, Bureau of Land Management (BLM) FOIA Officer, is responsible for this release.

We do not bill requesters for FOIA processing fees when their fees are less than $50.00, because the cost of collection would be greater than the fee collected. *See 43 C.F.R. § 2.37(g)*. Therefore, there is no billable fee for the processing of this request.

For your information, Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA. See 5 U.S.C. § 552(c) (2006 & Supp. IV (2010). This response is limited to those records that are subject to the requirements of the FOIA. This is a standard notification that is given to all our requesters and should not be taken as an indication that excluded records do, or do not, exist.

The 2007 FOIA amendments created the Office of Government Information Services (OGIS) to offer mediation services to resolve disputes between FOIA requesters and Federal agencies as a non-exclusive alternative to litigation. Using OGIS services does not affect your right to pursue litigation. You may contact OGIS in any of the following ways:

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Please note that using OGIS services does not affect the timing of filing an appeal with the Department's FOIA & Privacy Act Appeals Officer.

Contact information for the Department's FOIA Public Liaison, who you may also seek dispute resolution services from, is available at *https://www.doi.gov/foia/foiacenters*.

If you have any questions regarding this request, please contact Kenneth Perry, BLM Government Information Specialist, at (720) 281-1649 or via email at BLM_WO_FOIA@blm.gov.

Sincerely,
Ryan Witt
FOIA Officer
Bureau of Land Management

Form 1221-2
June 1969)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
OREGON STATE OFFICE
MANUAL TRANSMITTAL SHEET

Release 3-333
Date 9/18/2009

Subject

H-3160-5 - INSPECTION AND ENFORCEMENT DOCUMENTATION AND STRATEGY DEVELOPMENT HANDBOOK (Internal)

1. **Explanation of Material Transmitted**
   This release transmits the Inspection and Enforcement documentation and yearly inspection Strategy development for the fluids program. This new Handbook Section provides direction for the documentation of inspections conducted on oil and gas operations and directions on how to develop the yearly inspection strategy for fluid minerals for the Bureau of Land Management (BLM) Oil and Gas Inspection and Enforcement (I&E) program 3160.

2. **Reports Required**
   None

3. **Material Superseded**
   Instruction Memorandum No. 2007-118 Oil and Gas Program Enforcement Policy and Procedures, and
   Instruction Memorandum No. 2008-196 FY 2009 Oil and Gas Inspection and Enforcement Strategy Matrices Instructions and Strategy attachments 1 and 2.

4. **Filing Instructions**
   File as directed below.

Remove:	Insert:
None	H-3160-5
	(Total: 134 sheets)

/s/

Assistant Director,
Minerals and Realty Management

Table of Contents

I. INTRODUCTION

The H-3160-5, *Inspection and Enforcement Documentation and Strategy Development Handbook* (Handbook), provides policy guidance for managers and the inspection staff and provides the inspection staff and managers with detailed overview and procedures on the preparation and completion of the annual Oil and Gas Inspection and Enforcement (I&E) Strategy, Inspection Documentation Requirements, Inspection Enforcement/Compliance Action Requirements, and guidance for reporting Major Undesirable events. Also included is a summary of the oil and gas I&E program.

The Bureau of Land Management (BLM) is committed to increased inspection coverage and frequency of Federal and Indian oil and gas operations. Further, the BLM is committed to a balanced oil and gas I&E program that will fulfill our Indian Trust responsibilities and serve to protect, on an equal basis, not only the Federal and Indian mineral interests but also the surface and subsurface environment and the public health and safety. The BLM will accomplish this through consistent implementation of the National Oil and Gas I&E Strategy (Strategy).

The Strategy is the vehicle to communicate consistent nationwide oil and gas inspection accomplishment goals to the field offices (FOs). Just as important, the Strategy is a tool for managers and staff to determine how many and what type of oil and gas inspections can be accomplished with available workmonths and resources, prioritize operational sites to be inspected, identify what funding and workmonths are needed for budget purposes to accomplish the nationwide goals, and monitor oil and gas inspection accomplishment results and progress.

The BLM must ensure that oil and gas operations on Federal and Indian lands are prudently conducted in a manner that ensures production accountability, protection of the surface and subsurface environment, and protection of general public safety. Second, the BLM must ensure that the public's oil and gas resources are properly developed in a manner that maximizes recovery while minimizing waste. Finally, the BLM must ensure oil and gas production from Federal and Indian lands is properly handled, measured accurately, and reported correctly. This responsibility includes the prioritization of oil and gas inspections to be conducted, tracking of accomplishments, and documentation of results.

The Strategy places a great deal of emphasis on achieving the number of oil and gas inspections required. However, most important is the quality of the inspection. The inspection plan matrix gives FOs the ability to determine workmonths necessary to conduct quality oil and gas inspections. Therefore, the numbers of inspections are used as a measure of workload accomplishments; however, these statistics should not deter the FOs from conducting and documenting oil and gas inspections properly to achieve quality inspections.

Oil and gas operations are inspected periodically to ensure that equipment, practices, and procedures are in accordance with the applicable laws, regulations, Onshore Orders, Notice-

to-Lessees (NTLs), and approval documents. Assigned BLM personnel shall inspect, take enforcement action if necessary, document, and report on oil and gas operations on Federal and Indian leases. All required inspections are to be carried out in accordance with the priority and the frequency established in the annual oil and gas I&E Strategy. The Strategy, as it applies to all inspections, is based upon national criteria, but how it will be accomplished is developed within each FO to address specific local situations.

The forms and procedures discussed as appendices and illustrations throughout this Handbook are mandatory in form and content. The procedures are designed to facilitate consistency and uniformity in oil and gas inspection office matrix submissions, documentation, and enforcement as well as Strategy accomplishments.

A. PROGRAM GOALS/INSPECTION WORKLOADS PRIORITY ORDER

The Oil and Gas I&E Strategy Program goals are to conduct inspections on all high priority drilling, plugging, and abandonment operations, all Federal and Indian production cases rated High to the Federal Oil and Gas Royalty Management Act (FOGRMA) Criteria, High Priority environmental inspections, and High Priority production inspections on new producing oil and gas wells (see II. OIL AND GAS INSPECTION AND ENFORCEMENT STRATEGY GOALS for details).

1. Cases that have had a change of operator (see II. OIL AND GAS INSPECTION AND ENFORCEMENT STRATEGY GOALS for details).

2. Inspections during any well production testing occurring during or after High Priority drilling operations but before the well is placed on a producing well status (see II. OIL AND GAS INSPECTION AND ENFORCEMENT STRATEGY GOALS for details) in accordance with laws mandated by FOGRMA and policy set by the Director.

B. STAGED IMPLEMENTATION

The BLM may increase oil and gas inspection coverage through staged implementation, providing for incremental increases in staffing and inspection accomplishment as specified by the Director. Increases in inspection accomplishments will be required only if program funding increases and through automated tools increasing inspection efficency. Each inspection office, through time tracking of field activities, collects adequate information to accurately determine how many inspections can be accomplished annually with a given workforce.

C. GOAL FORECASTING

Managers shall plan to meet or exceed oil and gas inspection accomplishment goals each year. The ultimate goal may be revised if the Director determines that a satisfactory level of confidence of operator compliance can be attained with a lower level of inspection accomplishment. Until this occurs, the goals established each year are minimum goals. However, newly hired inspection staff will, generally, not be prepared to accomplish a full inspection workload for a year or more due to the need for formal certification training and on-the-job training (OJT). Therefore, when planning for staffing increases, managers may anticipate a delay in attaining substantially increased inspection accomplishment with new staff.

D. BUDGET

The Authorized Officer (AO) must use the Inspection Plan Matrix Summary as a management tool. The matrix bridges the gap between the budget and accounts for all workmonths required to implement the program. Also, the matrix provides the AO with the ability to determine

- Work that can be accomplished with available inspection workmonths,
- Additional funding, workmonths, or positions required to obtain national inspection goals, and
- Workmonths necessary to perform oversight responsibilities by supervisors or managers. The matrix also accounts for necessary production accountability technicians, environmental specialists, and other support personnel. It also considers activities such as training, overtime requirements, etc.

1. Planning Target Allocation (PTA)

   The PTA is based on the BLM funding and performance levels that are included in the President's Budget Justifications for the following year. The Planning Target will be allocated as soon as policy decisions concerning the President's Budget Justifications are available. The AO shall use the current year I&E Strategy Matrix provided from Automated Fluid Minerals Support System (AFMSS) to help calculate projected accomplishments. The projected accomplishments should be based on the planned funding allocations for I&E for each field office. The AO should also identify any additional funding required to meet the minimum national goals for inspections.

2. Annual Work Plan (AWP) Adjustments

   When final AWP Program funding is determined, the PTA is adjusted in accordance with the actual funding level. Final inspection targets are then adjusted.

3. Positions and Workmonths

   In order to identify positions and workmonths dedicated to oil and gas I&E, close coordination between the specialist completing the I&E Strategy Matrices and the person preparing the budget submission is necessary.

E. WORK HOUR FLEXIBILITY

The effective oversight of oil and gas operations often requires onsite presence at irregular hours of the day or night and at many times with extremely short notice. These are very real and important differences between this and other BLM programs. As such, work hour flexibility and/or appropriate compensation, including overtime or compensatory leave as appropriate, must be effectively managed. Efficient use of work-hour tools can significantly increase inspection accomplishment while minimizing full-time equivalent (FTE) requirements. The AO shall ensure that this flexibility and/or compensation is provided and planned for in the budget process.

F. PERSONNEL

Managers shall ensure that a sufficient number of qualified and certified oil and gas inspection personnel are onboard to accomplish the current Fiscal Year (FY) inspection goals. Managers should, where possible, plan for staff increases one year ahead of time in order to advertise, hire, and train personnel in time to be able to effectively contribute to increased accomplishments the following year.

G. RECRUITING AND STAFFING

To maintain an experienced, well-trained, highly efficient inspection force, each office shall pursue an active recruiting program to promote a public awareness of opportunities available within the BLM for professionally trained field personnel. This will allow for minimum lost time in filling any vacancies that occur and to hire additional qualified inspectors as soon as funding becomes available.

H. MANAGEMENT TRAINING

To properly implement the oil and gas I&E Program, managers and supervisors involved with I&E shall attend, when available, the National Training Center (NTC) course "I&E for Managers." Training specifically targets District and Field Managers, Deputy State

Directors for Mineral Resources, Fluid Mineral Branch Chiefs, Field and State Office Program Coordinators, any other personnel who have oil and gas I&E responsibilities, and tribal oil and gas managers where a cooperative agreement exists between the Tribe and the BLM.

I. PERSONNEL TRAINING

All newly hired inspection personnel, without previous BLM oil and gas I&E experience, require orientation and instruction (formal and informal) in Federal and Indian laws, regulations, Onshore Orders, procedures, and records use. Accordingly, all these individuals shall receive job orientation in the office and OJT training in the field under the supervision of a senior Petroleum Engineering Technician (PET) as soon as possible after coming onboard. In addition, newly hired PETs shall complete the required courses in accordance with the National Certification program for oil and gas I&E personnel. Progress shall be monitored by the supervisor using the Criteria Record Review as required by the H-3160-6, *National Certification Handbook for Oil and Gas Inspection and Enforcement Personnel*, dated October 5, 2005.

Personnel training and skill acquisition is an ongoing process, and all inspection personnel, regardless of experience level, shall attend the required refresher courses for certified inspectors every 5 years.

Formal training sponsored by the NTC, attendance of BLM national conferences/ workshops, and local/state/national industry oil and gas conferences/workshops amounting to 24 hours (3 workdays) within each 2-year period may be substituted for the required refresher course.

I&E personnel shall attend formal AFMSS training to acquire the skills and knowledge needed to accurately and consistently enter data into the system.

J. CERTIFICATION

Completion of the self-study books and NTC Course 3100-01, "Oil and Gas Compliance Certification School for New Petroleum Engineering Technicians," with ongoing OJT will prepare the PET for final certification. Certification shall be in accordance with the BLM H-3160-6, *National Certification Handbook for Oil and Gas Inspection and Enforcement Personnel*. Certification provides evidence that the new PET will be able to successfully conduct entry-level inspections and provides signature authority as the Secretary's authorized and properly identified representative for issuance of Notices of Incidents of Noncompliance (INC). The INCs cannot be issued by personnel who are not certified. Some personnel may be partially certified, limiting their signature authority to specific types of INCs (surface, environmental, administrative). In all but exceptional instances, continued, structured, and supervised OJT as well as advanced training from

accredited sources are necessary before a PET can conduct more technical inspection tasks.

K. SHARING OF INSPECTION RESOURCES

In order to more efficiently utilize oil and gas I&E resources, managers should initiate, when feasible, cooperative arrangements between FOs and across state boundaries to share I&E personnel and resources in the accomplishment of oil and gas I&E goals. Unless otherwise stated or negotiated between offices, the office recruiting help will bear the expenses incurred by sharing inspection resources.

L. COORDINATION

In order to most efficiently utilize and maximize BLM field presence, each resource program will ensure that all field personnel make and report observations in support of other programs with activities in those field areas. An integral part of the oil and gas I&E program includes close coordination with law enforcement specialists in accordance with BLM policy. Coordination shall also take place with applicable tribes and/or the Bureau of Indian Affairs (BIA) regarding the prioritization of inspection cases and information exchanges, with the Forest Service (FS) regarding oil and gas operations on National Forest System lands, with the Department of Defense (DOD) regarding inspections on military lands, and with the Corps of Engineers. To assist in meeting oil and gas I&E goals, the AO should pursue Memorandums of Understanding (MOUs) and/or Cooperative Agreements with State and Tribal entities in accordance with BLM policy.

M. PROGRAM OVERSIGHT

Effective oversight is among the most critical items of a successful oil and gas I&E Program. It is imperative that managers are knowledgeable of the Program and are directly involved in its oversight. Equally important is the necessity for supervisors to monitor the quality of inspection work in both the office and field. Supervisors shall ensure quality checks of all PET work in the field and office at least annually. Another important aspect of program oversight is the review of information entered into AFMSS. The information from field inspections must be reviewed for correction after entry into the system. Reports generated from AFMSS shall also be reviewed by supervisors and managers to ensure consistency and accuracy of data entry. Field inspections conducted by a supervisor for program oversight purposes must be recorded in AFMSS. The Washington and state offices are responsible for conducting I&E related program reviews as specified by BLM policy.

N. ENVIRONMENT

In order to accomplish the BLM's goals of protection of the surface and subsurface environments, all field inspections shall routinely include identification of environmental concerns. An environmental inspection (activity) conducted by a PET along with a drilling, production, or abandonment inspection (type) shall include identification of environmental concerns such as spills and trash problems, improperly used and fenced pits, and inadequate tank battery dikes. It is not necessary to have separate environmental inspections by a PET and a Surface Resource Specialist (SRS)/Natural Resource Specialist (NRS)/Environmental Scientist (EnvS) on low environmental priority cases, but inspections can occur in some cases. However, existing or potential environmental problems noted by the PET should be brought to the attention of the specialist responsible for resolution. An environmental inspection type is required for all cases rated as High for environment.

An environmental inspection (type) is usually conducted by an SRS/NRS/EnvS to ensure compliance with the surface use plan, subsequent approvals, conditions of approval (COAs), lease stipulations, or monitor operations that could or may have resulted in impacts and were the reason for rating the case High for environment. The High priority environmental inspections will normally be done by the SRS/NRS/EnvS, but the AO may use other specialists.

II. OIL AND GAS INSPECTION AND ENFORCEMENT STRATEGY GOALS

A. PRODUCTION INSPECTIONS

All producing Indian and Federal cases rated High to the FOGRMA criteria must be inspected annually. In addition, it is the goal of the BLM to inspect 33 percent of all other Indian and Federal production cases annually as well. Refer to Oil and Gas Inspection and Enforcement (I&E) Strategy Matrices Instructions and Strategy Goal Instructional Memorandum issued each FY for guidance and specific details in establishing inspection priorities and current program goals.

When a case is selected for a Production Inspection (PI), the PET conducting the inspection will determine who purchases/transports production from the oil and gas production case being inspected. In some instances, there may be multiple purchasers/transporters or it may be the same entity as the operator/producer. In both instances, with either multiple purchasers/transporters or same operator/purchaser entities, a minimum of 25 percent of all wells and facilities where sales occur will be witnessed/inspected, including those on Fee and State leases when agreements are involved. Inspection activities that must be performed include those that ensure that production is being handled properly, measured accurately, reported correctly, and the environment and public are being protected. At a minimum, this requires that all methods of measurement used within the case are witnessed/inspected, including all Fee and State wells and facilities attached to the case. On large cases (greater than 10 wells and 10 facilities) when multiple purchasers are involved, the PET will witness sales on a minimum of three different sales per individual purchaser to ensure a good cross-section of the purchaser/transporter processes for sales. Observations of site security, inspections for environmental and public health and safety concerns, and a review of production records will be conducted. The selection of inspection activities can be as comprehensive as deemed necessary by the PET and can be accomplished with a mix of both field visits and in-office reviews.

If violations or problems are detected during the course of the inspection, steps must be taken to determine the extent of the problem and what corrective actions may be necessary. Additional inspection activities may be needed to determine if problems or violations exist at other facilities and/or wells within the case, including Fee and State leases associated with the case. Analysis may indicate that problems or violations are systemic for that particular operator and may require additional inspections of other cases managed by that operator(s).

The PET conducting the inspection must be satisfied that he/she has performed an adequate sampling of the applicable production activities (measurement, environment, site security, etc.) and ensure that any previously identified violations or problems have been resolved.

The following steps further define the minimum requirements for a PI:

1. If Production is Occurring on the Case:

   Measurement, environmental, site security inspection activities, and a partial records review must be performed. The measurement activity(s) must include comparison of the corresponding production record(s) related to the measurement activity. For example, if conducting a Tank Gauging (TG) activity, the PET would independently gauge the tank(s) for comparisons with the Oil and Gas Operations Report (OGOR) inventories or run tickets. In some instances, a single-run ticket will allow FOs to verify reported sales on the OGOR on low-producing cases.

   a. The FOs must inspect an adequate sample size of wells and facilities within a case (includes Fee and State wells and facilities in cases that involve agreements), along with an inspection of each type (oil and gas) of measurement (tank gauge, Lease Automatic Custody Transfer [LACT] meter, orifice meter, etc.). The PET may either witness or independently perform measurement activities to fulfill this requirement.

      The sample size is to be determined by the individual conducting the inspection. Factors to consider in determining the sample size are dependent on the number of wells, facilities, measurement equipment, methods, and types. The PET must be satisfied that he/she has performed an adequate number of inspection activities to ensure that the production is being properly handled and accurately measured.

      For example, if a case has 10 gas orifice meters, 5 oil sales tank facilities, and 2 LACT meters, the PET must witness or perform an inspection activity on each measurement type and method (gas measurement, oil tank sales, and meter proving), but may not have to witness all 10 gas orifice meter calibrations, 5 oil sales, etc., if problems are not detected during the initial representative sampling and additional activities are not warranted. This is a minimum requirement, and PETs are encouraged to conduct more measurement inspection activities if they feel it is necessary to ensure that oil and gas measurements are accurate. This practice is not unlike the policy previously established in various Instruction Memorandums (IM) that recommended on large cases the representative sampling size be 25 percent of the wells and facilities. Once again, the PET has the latitude and discretion to determine the representative sampling size for each case as long as the production inspection examines each measurement type and activity occurring within the case. The FOs may continue to use the 25 percent representative sampling size, taking care to ensure that the representative sampling of wells and facilities is documented accurately so that a different set of wells and facilities may be inspected in the future. This will also ensure that all wells and facilities within the case (includes Fee and State wells and facilities when case is an agreement) are inspected within a period of 3 years, not to exceed 4 years maximum.

The sample must include inspection activities associated with environmental (SP), public health and safety (HS), site security (SS), and records review (RR) or a production records review (PR). Any RR and PR inspection activities may be performed by either the PET or a Production Accountability Technician (PAT).

The FOs are encouraged to conduct detailed production record reviews, coded as PR activity. Significant amounts of volume discrepancies have been found when conducting the PR inspection activity. Due to the effectiveness of the PR, FOs are encouraged to continue using this inspection activity.

Also, at the discretion of the FO, a complete production records review (coded as PI/PR) may be conducted on Low FOGRMA priority cases (overall priority ranking of Y or Z) without a field visit. High FOGRMA cases must have a field inspection conducted on an annual basis. These PI/PR reviews include verification of "used on lease" and "flared/vented" volumes to ensure the appropriate approval is on file and records review of the oil and natural gas volumes associated with these reported disposition categories.

If a case is subject to a variable royalty rate, the PET must verify if the production subjects the lease to a higher royalty rate. If the production level indicates a higher royalty rate, a sample check of the status of the wells must be made to verify if they are countable wells. If the sample determines that the operator is reporting incorrectly, the sample will need to be enlarged to include additional wells.

2. If Production is Not Occurring on the Case:

Only the RR and the appropriate field inspection activities must be performed (such as site security, coded as PI/SS; well status checks, coded as PI/WS; environmental, coded PI/SP; and, if applicable, public health and safety, coded as PI/HS).

B. RECORDS VERIFICATIONS INSPECTIONS

For cases that are rated High for production and have been inspected for the past 3 years with no measurement problems or volume discrepancies detected, a Records Verification (RV/RR or RV/PR) may be conducted to fulfill FOGRMA requirements at a minimum. However, at a minimum a field inspection must be performed on these high production leases at least once every 3 years, even if no measurement problems or volume discrepancies are detected. In addition, it is the goal of the BLM to inspect 33 percent of all other Indian and Federal production cases annually as well.

C. DRILLING, PLUGGING, WELL PRODUCTION TESTING, CHANGE OF OPERATOR, NEW PRODUCING WELL, and WORKOVER INSPECTIONS

Conduct drilling inspections on all High priority drilling wells. The priority will be determined at the time of Application for Permit to Drill (APD) approval, and inspections will be conducted in accordance with that priority. It is critical that this priority setting is based upon real concerns rather than classifying all drilling as High priority. At a minimum, the activity causing the drilling well to be classified High priority must be witnessed.

Conduct plugging and abandonment inspection on all wells determined to be High priority at the time of approval of the Notice of Intent to Abandon (NIA). This High priority determination must identify which part of the plugging plan is critical, e.g., placing a cement plug across a water zone. Witnessing the other parts of the plan such as placement of stabilizing plugs or surface plugs may not be considered High priority.

High priority drilling and abandonment inspections shall take precedence over production inspections if scheduling conflicts arise. Drilling and plugging inspections are externally driven, while production inspections are controlled internally and can be more easily rescheduled. Ensuring that drilling and plugging operations are in compliance from the outset will minimize potential problems in the long term, particularly with regard to contamination of subsurface resources including fresh water aquifers and surface-related environmental concerns. These operations often occur outside normal work hours. The FOs must ensure that resources are available to conduct these inspections.

Conduct interim inspections of all well production testing operations rated High priority that occur during or after drilling operations but prior to a well being placed in producing well status. Disposition of produced fluids during production test operations is the purpose for these inspections.

Conduct inspections on wells/cases that are considered High priority for production and there is a change of operator during the FY. These inspections do not include mergers or name changes but are to do be done on cases where the operator is new to the area or has not operated on Federal or Indian lands in the past.

All new producing wells that come on production during the FY that are associated with High FOGRMA cases are considered High priority for an initial production inspection. In the situation of multiple new wells on a case, the instructions in part A "PRODUCTION INSPECTIONS" on large cases are to be followed.

Conduct inspections of all work-over operations rated High priority. Review and identify any critical operations to be inspected upon approval of the work plan. Inspect those operations deemed to be high priority at the time of approval.

D. ENVIRONMENTAL INSPECTIONS

Conduct all High priority surface inspections on drilling wells and plugged well site locations and environmental inspections annually on all cases rated High priority due to environmental concerns. A well that has completed drilling operations and is in a producing-well status must undergo a High-priority Environmental Interim Inspection for reclamation concerns. Classification of environmental ratings for the estimated drilling and plugging activities, as well as review of the rating for active cases, will be performed each year at the time of matrix preparation to ensure that there is an accurate accounting of environmental inspection workload requirements. High priority environmental inspections are determined if the well/facility meets at least one of the following:

1. The operations on a well/facility are located in or adjacent to an area of special environmental sensitivity[1] such as the following:
   - Designated wilderness areas
   - National Park Service and National Landscape Conservation System units, wilderness study areas
   - Areas of critical environmental concern
   - Sensitive watersheds
   - VRM Class I and II viewshed
   - Riparian areas
   - Floodplains
   - Wetlands
   - Threatened and endangered species habitat
   - Historic landmarks

2. The operations occur in other areas that, if conducted in noncompliance with lease stipulations or Conditions of Approval (COAs) included in the operating plan, could have a significant adverse impact on the environment.

3. The well/facility shows a history of surface and environmental noncompliance.

4. Six months has elapsed after well completion or well abandonment to ensure earthwork for reclamation has been properly completed.

5. The operator has submitted a final abandonment notice (FAN) of an abandoned well.

   a. Final abandonment will be approved only after the surface reclamation standards, required in the Surface Use Plan of Operations or Subsequent Report of Plug and Abandon, have been met to the satisfaction of the BLM or other Surface Managing Agency, if appropriate.

[1] The prioritization may include, but is not limited to these examples.

b. The BLM will take into consideration the views of the split-estate surface owner when approving FANs. This consideration will be limited to what was required in the approved Surface Use Plan of Operations or Subsequent Report to Plug and Abandon.

6. The BLM must document the protection of the surface after drilling operations through Interim Reclamation Inspections. After drilling operations have been completed, a majority of the pad location is normally reclaimed (recontoured, recovered with topsoil, reseeded, etc.). It is important to document BLM inspection of the reclaimed area to ensure the environment is protected and the area is being properly revegetated and stabilized.

   AFMSS includes an inspection activity code Interim Reclamation (IR), to indicate that the interim reclamation area is being inspected and the area is in compliance with reclamation requirements outlined in the:

   - Approved Application for Permit to Drill (APD) Surface Use Plan of Operations,
   - Applicable APD Conditions of Approval,
   - Inspection items in the Production and Interim Reclamation inspection form, and
   - Chapter 6 of The Gold Book: Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development.

   The IR Activity should be conducted by an Environmental Specialist. The initial inspection must occur within 6 months after the well is completed. Interim reclamation inspections will then continue as necessary to ensure that interim reclamation is complete. For example, if dirt work and reseeding has taken place, but vegetation is not yet re-established, another inspection would be necessary to ensure the vegetation is established. Once the interim reclamation has been completed and is successful, the well would then be rated as either High or Low based on the criteria for environmental ranking

Criteria 1 and 2 listed above are very broad in nature and could be misinterpreted to indicate all wells/facilities should be rated High. This is not the intent. Discretion should be used to determine the potential of noncompliance and impact along with the specific site conditions, production handling scenarios, and the past compliance history of ongoing activities occurring on the lease before assigning the priority. For example, if mitigation has been successful for threatened and endangered (T&E) species or wetland conditions and the need to inspect the well on a high priority basis does not exist, then the well should not be ranked as High priority.

The FS has the authority and responsibility under regulations based on the Federal Onshore Oil and Gas Leasing Reform Act of 1987 to ensure environmental inspections of FS surface. The FS will conduct environmental inspections (surface environmental concerns) on FS lands. Therefore, offices may rate these wells/facilities as Low priority

under the environmental priority rating for inspection purposes. Refer to the BLM/FS Interagency Agreement or local BLM/FS MOUs for more specific guidance on roles and responsibilities.

The BIA must concur with BLM recommendations to release well sites from further reclamation responsibilities. Once the BLM has notified the BIA and recommended approval of the FAN, the environmental priority may be rated Low.

When offices establish new FY ratings, the FOs should not assume that since the well/facility was rated High under Environment the previous year, the same will hold true for the current year. Site conditions, operator compliance, or lease activities may have changed and, therefore, may warrant a different priority.

As with the technical inspections, the environmental, drilling, and plugging inspections on those wells rated High priority for surface concerns shall take precedence over environmental production inspections (PI-SP).

E. OTHER INSPECTION REQUIREMENTS

Conduct an inspection on all cases rated as High priority for public health and safety, legal, or other standards. The inspection should be conducted to specifically address the reasons the case was rated High for these criteria.

Although not required under strategy goals, FOs should continue to conduct Records Verification (RV) and Undesirable Event (NU) inspection types as time or circumstances warrant. All major spills, fires, accidents, and fatalities must be inspected and reported per Notice to Lessee (NTL) 3A.

F. DOCUMENTATION

All inspections must be documented in accordance with the requirements contained in this Handbook.

III. CREATING INSPECTION AND ENFORCEMENT STRATEGY MATRICES FOR NEW FISCAL YEAR IN AFMSS

When sharing resources are planned the benefitting office will reflect the outside help on their matrix in the "I&E Inspection WMs" and in the "Planned Inspections" sections. The helping office will reflect an equivalent decrease in those sections on their matrix. The helping office will track the "Onboard Personnel" that is being shared on their matrix and not duplicated on the benefitting office.

A. CLOSE OPEN INSPECTIONS, REVIEW AND UPDATE PRIORITY RECORD INSPECTION STATUS CODES

The AFMSS Inspection Summary for Office (IEP .13) report must be run with the Include Open Inspection Only selected for entire current FY (Example: Start Date: 10/01/07, End Date: 9/30/08). Any open inspections must be closed; if more work is needed to complete the inspection, note in the remarks that the case will be opened in the next FY for completion.

The AFMSS I&E Strategy Matrix - Inspection Items (IEP.51) report must be generated and reviewed as the first step in the process of creating a new FY Strategy Matrix. Run the Inspection Items (IEP.51) report for the current FY year and update the Inspection Status Code in the priority record, if necessary, to reflect the need for inspections in the upcoming year (see Item III. A. 6 below for correct status codes). This must be done prior to creating new priority records for the new FY. Do not delete old priority records from the system if they were once valid. These will be left as an historical record in the database.

To review current priority records:

1. Click on Monitoring on the Main Menu for AFMSS.

2. Click on I&E Strategy, launching the I&E Strategy Matrix (IEP.54) screen.

3. Click on the button next to the version box and highlight the most current "official" strategy version; click on QUERY.

4. This will retrieve the Strategy Matrix. Once it is displayed, click on Reports button.

5. Select Inspections Items (IEP.51). Several sort options are available. Make note of the sort option used to run this report. If you sort by Case, Operator, Overall Priority, County, State, or FO, the Inspection Priority Finder screen will allow you to sort the records in the same order.

6. Print the entire Inspections Items report. This report will have to be manually checked to ensure that all the cases requiring inspection are listed. All inspection priority records reflect the correct/current operator, and the Inspection Priority Status code is set to:

   H= if it is an active case and an inspection for that case/operator combination is necessary; or

   A= if the case/operator wells have all been plugged and we are awaiting surface restoration (environmental inspection still necessary); or

   I= if the case no longer needs an inspection priority record for the upcoming FY and is in the system as an historical reference only. This includes all terminated agreements and/or cases that contain only plug and abandon (P+A) wells or case/operator combinations that are no longer valid (operator changes).

   The Inspections Item report contains columns that count the number of wells and facilities connected to a priority record. Pay special attention to those case/operator combinations that show zeros for both columns. This may indicate that there has been a change of operator or some other reason that the record should be marked as Inactive or deleted. All valid case/operator combinations should contain information in each one of the columns on the report (with the exception of the Last Insp Dates), and should have at least one well connected to it. If there is no information for a case/operator combination, the record must be updated to Inactive or deleted so it will not result in an erroneous count of inspection items.

   Inspection priority records can be established at the time the first well for a case/operator starts drilling. If an operator change occurs on the case, a new priority record must be created for the new operator for the case. The old operator priority record must be updated to "I" in the Inspection Status Code field. Do not use the old operator's compliance rating in the priority record for new operator on the case. New operators of a case start with a clean compliance record.

   If you find priority records for cases with only wells in Notice of Staking (NOS), Application for Permit to Drill (APD), Unapproved Notice of Staking (UNOS), Unapproved Application for Permit to Drill (UAPD), Approved Application for Permit to Drill (AAPD), or Reclaimed Location (RLOC) status, you must ask the Local User Support person in your office to delete these.

7. Once the Inspection Items report has been reviewed, update the necessary priority records.

   To Update the Inspection Status Code in the Priority Records:

   a. Click on Monitoring from the Main Menu.

b. Click on Inspections.

c. When the Inspection List screen (GLB.92) displays, make sure selection default is "by Priority."

d. Click on the Priorities button to launch the Inspection Priority List (IEP.69) screen.

e. To update your priority records, make sure that the Year field shows current FY and the "Exclude Inactive Priorities" option is checked. Click on the Query button. The screen will display all of the cases with current inspection priorities for FY 2009, for example. Click on the Sort button and add the fields to sort in the order you used on the inspection items (IEP.51) report. The display on the screen and the order of the report should now match. NOTE: Depending on the number of cases in your database, it could take a long time to display the results. On larger databases, it is suggested that you fill in one or more of the query fields to limit results. For example, if you sorted the inspection items report (IEP.51) by operator, query the Inspection Priority list (IEP.69) screen for a particular operator and work through the report until all cases for each operator have been reviewed.

f. On the Inspection Priority List (IEP.69) screen, select up to 200 records at one time. Highlight a group of records and click on the "Edit Insp Priority" button**.** The Inspection Priority (IEP.46) screen will be launched. Update those records that need the Inspection Status Code changed. Use the Next and Previous buttons to move among the records that need updating.

g. REMEMBER TO SAVE each priority record before going on to the next.

h. Exit to the Main Menu when finished updating the records.

B. RUN THE PRIORITY ROLLOVER

The Inspection Priority Rollover (IEP.68) is a function that allows AFMSS to create an upcoming FY Inspection Priority Record for use in building the annual Inspection Plan Matrix. The rollover function is to be performed once per year just prior to creating the matrix for the upcoming FY. The rollover process will create a new priority record for all active case/operator combinations that have a current year priority record if the Inspection Priority Status Code is not equal to "I" for inactive.

During the rollover process, the following prioritization categories will be recalculated based on BLM production volume and noncompliance threshold criteria:

- Operator compliance history
- Average monthly production
- Environmental rating
- Overall priority ratings

If threshold criteria are met, the category will be rated High priority and the overall rating will be adjusted accordingly. It is imperative that each office review and update its Inspection Priority Status codes for the current priority year prior to running the Priority Rollover function for the upcoming priority year to ensure that an accurate rollover occurs.

It is also critical that each office review each priority record to ensure that the rollover function has correctly calculated the average monthly production for oil and gas. Previous problems with the OGOR data have occurred in AFMSS, so each office must verify that the calculations are correct to determine the correct overall priority. If needed, the average production volumes and overall priority may be manually adjusted on the new FY records after the rollover is performed but must be done before the matrix is created.

NOTE: You must make any revisions or updates in the current year priority record before running the priority rollover. Do not run the rollover, update the new year priority records, and then run the rollover a second time. It will overwrite any updates you have made in the new records. Update the current year priority records, and then run the rollover. Any further updates must be made manually to the new year priority records after the rollover has been performed.

It is REQUIRED that each office conduct a "Dry Run" of the Inspection Priority Rollover Report before performing the actual rollover. This function can only be performed by individuals who have security clearance for this screen. From the AFMSS Main Menu, click on the User Support selection at the top of the screen:

Select Priority Rollover IEP.68 from the cascading menu to access the launcher screen.

1. An option to conduct a "Dry Run" of the rollover function is available by clicking in the box to mark it with an X. Conducting a dry run allows you to perform the rollover option without actually committing changes to the database. The output default is set to "Print Rollover Detail Report and Log File." It is REQUIRED to use this default. Review this printout to see if records require editing before performing the actual rollover. With the Dry Run option selected, click on the "Run Priority Rollover" button.

2. The launcher screen (IEP.68) also displays a "rollover from FY" and a "rollover to FY" area. When the rollover is performed for the first time, make sure the default

shows rollover from FY (current FY) to FY (next FY) for the FY to the next FY priority records to be created.

3. If the display shows the new/current FY to the new/current FY, change the first box to previous FY (example: FY 2008 to FY 2009). Click "Yes" when the system asks if you want to overwrite the current new FY records. (This should only occur if the rollover function is being performed after October 1. Normally at the beginning of the new FY, the system automatically creates a new priority record for all producing cases. It simply copies the record from the previous FY. The system does this for several reasons. One important reason is that it allows inspection personnel to document production inspection activities on active cases during the new FY, even though the rollover procedure has not been performed.)

4. The Detailed Report and Log File will print a listing of the rules AFMSS uses in running the priority rollover, the summary information, and a report listing each priority record for "current" FY versus "next" FY. This report includes a description of the number of environmental and FOGRMA violations the system counted for use in calculating the ratings for the "next" FY priority records. For the "Dry Run" option, this report will indicate that this is a "Dry Run Only - Database Not Updated."

   The report can be very long if you have a large database since the report will show four lines of data for each inspection priority record rolled over to the new FY. Keep this in mind prior to printing a hard copy of the report. The "Dry Run" may be performed as many times as you like. This process does not make changes to the data base.

   AFTER reviewing the Dry Run, and when you are confident that all records are correct, you are ready to perform the actual Inspection Priority Rollover. Follow the instructions listed above; however, to perform the actual rollover, make sure the toggle button next to the Dry Run option is not checked, then click on the Run Priority Rollover button to create the "next" FY inspection priority records. Another report will be generated that shows the priorities as they were actually created.

   Review the report again to ensure that the rollover was performed correctly for all inspection items. If needed, update any of the new year priority records that did not carry over correctly before creating a new version of the matrix.

C. CREATE A NEW VERSION OF THE MATRICES FOR THE UPCOMING FY

1. After the actual Priority Rollover function has been performed and you have reviewed all records for accuracy (and made any necessary adjustments), you are ready to create a Strategy Matrix for the new FY. From AFMSS Main Menu, click Monitoring.

2. Click on I&E Strategy from the cascading menu.

3. The I&E Strategy Matrix - Inspection Items (IEP.54) screen will be displayed.

4. If the record appears with the current year's data populated, you will have to exit from AFMSS and come back in. The matrix screen should be blank when creating a new matrix. Enter the new FY in the Fiscal Year box located on the first row of IEP.54.

5. Click into the box to the right of the word Version. Enter the name of the new matrix that you are creating (for example, FY 2007 Vernal Field Office). Next, there is a box next to the Version. Click on the arrow button to select either "Working" or "Official." This allows you to designate the type of matrix you are creating. Create a "Working" copy so you can edit the Matrix until you are sure it is accurate.

6. Count the Producing Inspection Items:

   a. From the Main Menu, click on Monitoring and I&E Strategy.

   b. Click on the Recount FOGRMA Items button located on the far right side of the first row of buttons. A message will appear informing you that this procedure could take a long time and asks if you want to continue. Click the Yes button.

      The system will count the number of producing and non-producing inspection items by Overall Priority that will be used in calculating the number of required production inspections. This does not include inspection items with a case status of Abandoned (A).

      The Inspection Items fields will populate once the count is completed. Review the total number of inspection items once the fields have auto-populated. NOTE: The number of items displayed will not equal the amount of cases listed on the IEP.51 report since the recount does not include those cases with an abandoned status.

7. Enter the Estimated Number of Inspections:

   When sharing resources are planned the benefitting office will reflect the number of increased inspections planned from the increase in capability. The helping office will reflect a decreased inspections planned due to the decrease in capability.

   a. Enter the number of estimated Federal and Indian High and Low priority Drilling Inspections to be conducted during the FY. Click on the box to activate it prior to entering information or tabbing from field to field.

   b. Enter the number of estimated Federal and Indian High and Low priority Plugging Inspections in the appropriate boxes.

c. Enter the number of estimated Federal and Indian High and Low priority Workover Inspections in the appropriate boxes.

d. Enter the number of Federal and Indian High and Low priority Environmental Drilling Inspections. (This number should total the same as the number of Drilling Inspections that are estimated for the year.)

e. Enter the number of Federal and Indian High and Low priority Environmental Producing Inspections. Environmental Producing Inspections should be planned on a well basis. High priority must include all wells requiring an Interim Reclamation (IR) inspection along with all other wells classified as environmental high.

f. Enter the number of Federal and Indian High and Low priority Environmental Abandonment/Reclamation Inspections to be conducted during the FY.

g. SAVE THE RECORD. Make sure the message box in the lower left corner of the screen states that the table was updated.

8. Enter the Positions and Workmonths Information for your office:

a. Click on the Positions/Workmonths button. This will display IEP.55.

b. Enter position and workmonth information based on your FO personnel that work in the program. To ensure proper accounting of the workmonths needed for the program, a base of 12 workmonths must be used for each FTE. Utilizing AFMSS data, enter the number of workmonths that are expected to be devoted to completing inspections in the "I&E Inspection Workmonths" column. The remaining workmonths are accounted for in the "Misc. Workmonths" column. (NOTE: Two of the 12 workmonths for each FTE are automatically placed in the miscellaneous column to account for annual and sick leave, 0999 account.) Account for the overtime workmonths in the "Overtime Workmonths" column. When querying AFMSS, be sure to deduct the overtime workmonths when determining your inspection workmonths. Time worked outside the I&E program, such as range or fire, will not be accounted for in the inspection plan matrix. Oversight time shall be accounted for under Management Support, and specific details regarding oversight workmonths planned may be further documented under the Special Considerations section of the matrices.

When sharing resources are planned, the benefitting office will reflect the increased workmonths but not an increase in onboard personnel. The helping office will reflect an equivalent decrease in workmonths and continue to show all onboard personnel.

c. SAVE THE RECORD. Look for the table update message in the message box.

d. Press the Exit button to return to IEP.54.

9. Ensure Percentage of Other Production Inspections Required is Correct:

a. Click on the Calculations button. This displays the Truly Strange Required Inspection Calculator (IEP.56) window. This window displays information entered on IEP.54 and allows the user to change the percentage of Other producing inspection items to be accomplished. The defaults for "Federal and Indian IIDs" will be set to 33.33 percent. SAVE THE RECORD.

b. Press Exit to return to IEP.54.

10. Enter the number of Planned Inspections:

a. Click on the Inspection Types button. This displays page 2 of the matrix (IEP.58). The window contains a listing of all inspection types, average hours to conduct each inspection type, the number of required and planned inspections, and workmonths necessary to conduct the inspections. The average inspection hours and the required number of inspections by inspection type auto-populate this screen when it is displayed.

b. If your office needs to adjust the average inspection hours, click on the Insp Hrs button. This brings up a window with an entry box for each inspection type. Click the Save button. Once you make the necessary changes and save, click the Exit button and the system will update the average inspection hours displayed on IEP.58. It will take a few moments to complete this procedure. The system is also calculating new workmonth figures. (NOTE: You may want to run the Inspection Summary for Office (IEP.13) report using the previous FY dates to validate the average inspection hours. To generate this report, select Reports from the main menu, click on I&E Reports, then select IEP.13. Enter the start and end date range that will give you an entire year's worth of inspection data (for example, 10/01/2005, 09/30/2006 for FY 2006 information). Make sure to select Inspection Details in Total for All Closed Inspections for the report. Click on print and the report will generate. The last page of the report summarizes the average hours and number of inspections by type.)

c. Once IEP.58 displays the new average inspection hours, SAVE THE RECORD before continuing on to input the number of planned inspections.

d. Enter the number of Federal and Indian Planned inspections for the FY in the appropriate columns. The number of planned inspections must be based on available workmonths indicated in the IEP.55 Positions/Workmonths window. To enter information, you may tab from field to field, or use the mouse to click on the desired area you want to enter information. If you do not use the Tab key, the system will not generate workmonth information until the record is saved. If you

want to see the workmonths displayed after entering the number of inspections, be sure to use the Tab key at that point.

e. SAVE THE RECORD.

11. Review the Required versus Planned Inspections:

a. Click the Required/Planned button to review required versus planned inspections. Once again, verify the number of available workmonths against what you have planned to ensure that you have not planned more inspections than you have workmonths to accomplish. To see available workmonths, click on the Positions/Workmonths button and look at the total inspection workmonths available. Press Exit to return to the Required/Planned window.

b. To amend planned inspections from the Required/Planned (IEP.57) window, click the Exit button. This closes IEP.57 and displays the previously opened window (IEP.58). Make the necessary changes and SAVE the record. Click on Exit to return to IEP.54.

12. Add Remarks or Special Considerations to the Matrices:

To add Remarks or Special Considerations, click the Remarks button. Enter information as applicable. Do not forget to document the position and workmonth availability descriptions, if necessary, any additional idle/orphan-well workload adjustments made to the strategy, and the number or production records reviews that your office plans on conducting in the upcoming FY. SAVE the record. Click the Exit button.

Note: You may revise the "Working" version of your matrix until you are confident that the matrix is complete. Change the box from "Working" to "Official" to indicate that this is the matrix to be used for this FY.

13. Print the Matrices:

Print the Matrix Summary Report by clicking the Reports button. Select IEP.50 Inspection Matrix Summary. This brings up a preview of the report.

Exit the open windows by clicking the Exit button on each window and return to AFMSS Main Menu.

IV. INSPECTION DOCUMENTATION REQUIREMENTS AND DEFINITIONS

A. REASONS FOR DOCUMENTATION

Documentation gathered during an inspection must be, without exception, incorporated into the official hard copy BLM files. This information is often used in management control reviews, alternative management control reviews, technical procedural reviews, Office of Inspector General and Government Accountability Office reviews, as well as congressional committee inquiries, State Director Reviews, and court cases. The official BLM files are reviewed by these groups to verify if the operators, the BLM, and inspection personnel are meeting the requirements established by law, regulations, and orders. It is critical to the inspection personnel, the BLM, and other involved parties that clear, concise, and accurate inspection documentation be developed and maintained in the official records. Without clear and accurate documentation of existing conditions and activities, enforcement actions cannot be taken or decisions upheld if appealed by the operator. Hard copy inspection documentation is considered the official BLM record. Automated inspection documentation is a supplement to the hard copy files but is also required. Enforcement action and program decisions will be based upon information contained in the official hard copy files.

Precise and clear inspection documentation allows anyone reviewing the file to verify the type of inspection conducted, the specific operational activities conducted or witnessed, when the activities were conducted, what actions were taken by the inspection personnel to ensure operations were conducted as required, and what types of problems and results were observed. Inspection documentation must be concise and not contain materials that are not pertinent to verify inspection activities and results. A brief summary of the inspection activities and results must be included in the hard copy files and AFMSS. Handwritten notes created by inspection personnel must be included in the hard copy files and summarized in AFMSS. These may include, but are not limited to, violations or problems detected that may reoccur, resolution of problems, volume discrepancies, installation of new equipment such as a LACT, gas meter, or tank(s), Blowout Preventer Equipment (BOPE) failures, and placement of plugs.

B. REQUIRED INSPECTION FORMS

The following inspection forms are mandatory for completion, as applicable to the inspection type, and must be maintained in the historic inspection file:
3160-10 *Inspection Record - Drilling* (October 2003**,** or AFMSS form)
3160-11 *Inspection Record - Production* (December 7, 2002, or AFMSS form)
3160-13 *Inspection Record - Abandonment* (October 2003, or AFMSS form)
3160-27 *Inspection Record – Environmental* (January 31, 2006, or AFMSS form - Well Surface or Facility Surface)
3160-15 *Measurement Record - Gas* (December 2003)
3160-16 *Measurement Record - Oil By Tank Gauging or Alt. Method* (December 2003)

3160-17 *Measurement Record - Oil by LACT Meter* (December 2003)
Drilling/Construction Inspection - Environmental (August 2007)
Production & Interim Reclamation Inspection/Monitoring - Environmental (August 2007)
Final Reclamation Inspection/Monitoring - Environmental (August 2007)

Forms 3160-10, -11, and -13 are required to be completed. Forms 3160-15, -16, and -17 are to be used as applicable**,** when conducting independent inspection measurement activities or when witnessing product sales, calibrations, or a meter proving. These forms ensure that all areas of the operations are inspected for compliance in our efforts to verify production accountability. Forms must be filled out completely. If a specific item does not apply to the inspection, enter "N/A" in the inspected column. If an N/A column exists, place a check in that column.

The AFMSS form (Form 3160-27, *Well Surface or Facility Surface*) for environmental inspections must be used by the Environmental Specialist when these inspections are conducted.

The documentation of all inspections must be clear, concise, and legible and provide an accurate description of what was inspected, including the findings. The following lists specific items to be documented when performing an inspection:

1. The type of inspection performed.
2. Activities that were performed or witnessed (e.g., tank gauging, meter calibrations, etc.).
3. Who witnessed the activity (including the person representing the company (Tool Pusher, service company representative, etc.)).
4. Specific times and dates when critical activities were witnessed.
5. Problems encountered during the inspection process and how they were resolved.
6. Deviations from the approved plan and reasons for the changes.
7. Telephone or personal conversations or verbal requests critical to the operation or inspection where agreements or decisions were made.
8. The results of the inspection or operation witnessed.
9. Any violations or problems (potential future violations) identified and Written Orders, Shut Down Notices, Verbal Warnings, or Incidents of Noncompliance (INCs) issued.
10. Other information pertinent to the inspection.
11. Worksheets or checklists developed by offices or other sources used to document inspection results.
12. Personal notes; independent calculations performed to verify drilling and abandonment cement, spacer, and displacement volumes; and oil or gas volumes documented in the official hard copy file. The purpose of these calculations is to verify to the inspection personnel, as well as anyone reviewing the file, that independent confirmation of volumes was performed.

13. Job logs, service company reports, or any other information available either from the operator or its contractors requested, if applicable, to documenting operations witnessed. These documents should be requested from the operator, not the service company.
14. Photographs taken to document violations containing a brief, accurate description of what was photographed, including the location, as well as the date and time of the photo.
15. Telephone conversations relating to an inspection documented in one of several different ways. It must contain a description of what was discussed, who was contacted (name, position, and company name), and the time and date of the contact.
16. A summary of the results of the inspection, any problems encountered and resolved, and all other pertinent information including notes that may aid future inspections included in both the hard copy file and the AFMSS database. Document only facts, not unverified assumptions or personal opinions.

Example of a typical PI Inspection Summary:

"PI inspection activities were conducted <time and date(s)>. Identified seal violations during a <inspection activity>. INC #(s), were issued <if corrected, state date>. <Indicate the gravity of any violations – major or minor>. No environmental or health and safety issues identified (if issues found, summarize the issue and action taken). Witnessed meter calibrations and oil sales, production measurement and handling operations, no problems founds (if problems were found, summarize the issue and actions taken). Records review of production information from <timeframe> indicates accurate reporting of production and no reporting discrepancies. Average OGOR production of xxx MCF/BO agrees with field calculated/source document volume of xxx MCF/BO." (If discrepancies were discovered and a PR activity was conducted**,** state the timeframe and results of activity**,** along with volumes gained, lost**,** and/or recovered).

Examples of notes to help future inspection personnel could include:

"Another inspection will be conducted on seal violations in a few months since this appears to be a reoccurring problem with the operator"; or add helpful hints such as "operator mentioned plans of adding additional tanks and separation equipment to facility, will re-inspect, and verify a new facility diagram when completed"; or "the combination to the locked gate across private land is xx-xx-xx."

C. RETENTION OF INSPECTION DATA – RECORD MAINTENANCE REGULATIONS

The BLM Records Schedule contains specific requirements for maintaining records. Premature destruction of these records carries a fine of $2,000 and/or 2 years in prison. However, the schedule does not specifically address forms or information that is obtained or generated during an inspection. The intent is to maintain a sufficient amount of data to

support the inspection. The following procedures must be adhered to for the maintenance of records:

1. All inspection forms used to document inspections (Forms 3160-10, -11, -13, -15, -16, and -17, including the *Environmental Inspection* form (Form 3160-27); *Notice of Incidents of Noncompliance* form (Form 3160-9); *Notice of Written Order* form (Form 3160-18) or letter; and *Notice to Shut Down Operation* form (Form 3160-12) must be maintained in conformance with the BLM's Disposition Authority (refer to BLM Manual, Section 1220) Schedule 4, Item 27.

2. Inspection data gathered or documented on Indian cases must be retained and disposed of in accordance with the BLM's Disposition Authority identified in item 1 above, as well as any new policy developed by the BLM as a result of ongoing litigation. Always check with the Records Management Specialist on the proper disposition of Indian-related documents.

3. All inspection data gathered or documented on Federal cases must also be retained and disposed of in accordance with the BLM's Disposition Authority identified in item 1 above, as well as any new policy developed by the BLM. Always check with the Records Management Specialist on the proper disposition of inspection records.

D. PRODUCTION INSPECTION (PI)

Only **ONE** PI inspection type is recorded per case/operator per FY. Hard copy documentation of the PI inspection must include the Form 3160-11 and additional measurement forms as applicable and other supplemental documentation as outlined in B above. If several trips were made to conduct the PI, the inspection personnel will adjust the entries for 'Inspection Activities', 'Open' and 'Close' Dates, 'Office', 'Travel', and 'Inspection' Times, and Number of 'Trips' accordingly. Subsequent PI(s) may be conducted if requested by MMS, BIA, or a Tribe. If a subsequent PI is requested during the same FY the existing PI entries for 'Inspector' Inspection Activities', 'Close' Dates, 'Office', 'Travel', and 'Inspection' Times, and Number of 'Trips' must be adjusted accordingly

Extreme care must be exercised when coding 'Office', 'Travel', and 'Inspection' times so that the cumulative time recorded for any day worked DOES NOT exceed what was actually worked. Example: 4 cases involving 10 wells inspected on 4/1/2008, inspector coded 8 hours on Time and Attendance. DO NOT code more than 8 hours into AFMSS for 4/1/2008.

1. Documenting Production Inspection Activities in AFMSS

Non-measurement activities are documented once per PI and associated to all wells/facilities for the Inspection 'Activity'. Edit the 'Open' and 'Close' Dates, the associated wells/facilities, and 'Office', 'Travel', and 'Inspections' Times

appropriately. Do not create a separate Inspection 'Activity' code for every well or facility that receives a non-measurement activity on different trips under a PI. (Activity codes: HS, RR, RD, PR, SP, SS, WS. See Appendix 1 "Inspection Type and Activity Codes" for code definitions.) See below for guidance on entering activities for 'Multiple Inspection Personnel.'

Measurement activities are documented once per PI unless a volume discrepancy is discovered. Document one Inspection 'Activity' code for measurement activities and indicate the number conducted in the corresponding 'Count' field in AFMSS. For example, enter one TG Inspection 'Activity' code instead of entering 10 separate tank gauge activity lines. Then select the 'Wells/Facilities' tab and select the applicable wells/facilities associated with the activity. The 'Count' field will auto-populate with the number of wells/facilities. At least one well/facility must be selected for each Activity Code. Measurement activities conducted by different inspection personnel on large cases or jointly would be accounted for separately. (See further guidance below for entering activities with multiple inspection personnel. Activity Codes: TG, MC, MP, LV, CV, TV, TR, T. See Appendix 1 "Inspection Type and Activity Codes" for code definitions.)

Volume discrepancies may be discovered during the PI. If a measurement activity results in a volume discrepancy determination, the activity must be documented separately and associated to the applicable facility or well as selected in the 'Well/Facility' tab. Record specific remarks to each volume discrepancy discovered.

Existing Activity Lines must be updated to reflect the total count of measurement activities whenever inspection personnel conduct additional measurement activities on a case/operator throughout the year on a PI. Do not enter separate activity lines to account for different trips. For example, if inspection personnel conducted 5-meter calibrations (MC) for a PI, and later in the FY they conduct an additional 5-meter calibration inspection activities, the MC Inspection 'Activity' code is entered once and the 'Count' field, Activity 'Close' Date, 'Office', 'Travel', and 'Inspections' Times, and Number of 'Trips' are updated accordingly.

Multiple inspection personnel who conduct separate activities on the same case/operator to complete the PI should record their Inspection Activities on separate activity lines in AFMSS. If a supervisor or State I&E Coordinator conducts an oversight inspection while accompanying inspection personnel, the supervisor codes the inspection as an Oversight (OV) Inspection Type with the appropriate Inspection Activity code(s).

Production Records Review (PI/PR) may be included in the PI. If a complete production records review is conducted by inspection personnel, enter the Inspection Activity code of PR only once per PI (PI/PR). Enter the 'Inspector' Name, appropriate 'Open' and 'Close' Dates, and total 'Office' hours for this activity. The

PI/PR activity may be opened before the first field visit and closed when all paperwork review is complete.

If the Production Accountability Technician (PAT) conducts a production records review in conjunction with the PET performing fieldwork, enter the PI/PR with the PAT name in the 'Inspector' field. The PAT may initiate the PI and enter the PR activity before the PET begins the fieldwork. The PAT will initiate the PI and enter the 'Open' Date the PR activity is started by the PAT. The PET must take care to enter field activities in the same PI that has been started by the PAT. It is critical that duplicate PIs are not created for the same case/operator during the FY. For those case/operators where only a PR activity is planned, without conducting any field inspection activities, the PET or PAT may Open and Close the PI as appropriate. These inspections must be in accordance with the strategy requirements for Low FOGRMA criterion.

Records Reviews (PI/RR) that are conducted as part of an ongoing Production Inspection must be coded as PI/RR with the appropriate name listed in the 'Inspector' field. Enter one RR Inspection Activity per case/operator. If the RR Inspection Activity results in a full Production Records Review (PR), change the RR Inspection Activity in AFMSS to a PR and continue editing the 'Office' Time spent conducting the activity.

E. DRILLING, ABANDONMENT, AND WORKOVER INSPECTIONS

Drilling, Abandonment, and Workover Inspections must be recorded by well to ensure an accurate inspection count. For example, if a Drilling Inspection is conducted on 50 wells for the same case/operator, 50 Drilling Inspections (DW) will be entered into AFMSS, and 50 Drilling Inspection forms (Form 3160-10) will be completed and filed. The same applies to the Abandonment and Workover Inspections.

Documenting Drilling (DW), Abandonment (PD), and Workover (WK) Inspection Activities, Inspection Activities for Drilling, Abandonment, and Workover Inspections must be entered once instead of creating numerous entries of the same Inspection Activity (unless conducted by different inspection personnel). For example, if over the course of several months three Health and Safety Inspection Activities are conducted on the same drilling well, instead of creating three separate HS Activity codes edit the first 'Activity' code created and adjust the 'Office', 'Travel', and 'Inspection' Times, 'Open' and 'Close' Dates and Number of 'Trips' accordingly. The 'Open' Date for the activity would be the first date that the activity was conducted and the 'Close' Date would be the last date that an HS inspection activity was conducted. The total time spent on that Inspection Activity would be reflected in the appropriate 'Office', 'Travel', and 'Inspection' Time fields.

If more than one inspector conducts an Inspection Activity on the well, the activities conducted would be recorded on separate activity lines under one Inspection Type.

F. ENVIRONMENTAL INSPECTIONS (ES)

Environmental Inspections occur throughout the life cycle of a well or facility. All surface inspections of wells must be documented by well. For Surface Inspection Activities conducted on producing oil and gas operations (SP-surface production), the inspections may be recorded on a well or facility basis. If eight Surface Production Inspections are conducted on eight wells on the same case/operator during the FY, eight Surface Production Inspection Types are recorded (each associated to the well being inspected). If eight Surface Production Inspections are conducted on eight facilities on the same case/operator during the FY, eight Surface Production Inspection Types are recorded (each associated to the facility being inspected).

NOTE: When documenting Environmental Surface Inspections in AFMSS, if the ES Inspection is by well, then 'Well Surface' must be used. If the ES Inspection is conducted on a facility, then 'Facility Surface' must be used. Do not combine wells and facilities on the same ES Inspection.

G. SURFACE DRILLING (ES/SD) AND CONSTRUCTION (ES/SC) ACTIVITIES

These inspections are documented on a well basis. If nine Surface Drilling Inspections are conducted on nine wells on the same case/operator during the FY, nine surface Drilling Inspection Types are recorded (each associated to the well being inspected). This also applies to the ES/SC (Surface Construction - prior to spud) inspections.

H. SURFACE ABANDONMENT (ES/SA) ACTIVITIES

These inspections are documented on a well basis. If six Surface Abandonment/Reclamation Inspections are conducted on six wells on the same case/operator case during the FY, six Surface Abandonment/Reclamation Inspection Types are also recorded (each associated to the well being inspected).

I. SURFACE INTERIM RECLAMATION (ES/IR) ACTIVITIES

Beginning in FY 2006, the BLM required documentation for the protection of the surface after drilling operations. After drilling operations have been completed, a portion of the pad location is normally reclaimed (reseeded, recontoured, etc.). It is important to document inspections of the reclaimed area to ensure the environment is protected and the area is being properly revegetated. These inspections are documented on a well basis. Interim reclamation inspections should then continue as necessary to ensure that interim reclamation is complete. For example, if dirt work and reseeding has taken place, but

vegetation is not yet re-established, another inspection would be necessary to ensure the vegetation is established. Once the Environmental Specialist is satisfied that the interim reclamation has been completed and is successful, the well would then be rated as either high or low based on the criteria for environmental ranking. The Environmental Specialist should determine acreage reclaimed and document that in the remarks of the initial inspection on the hard copy inspection sheet as well as in AFMSS. If five Interim Reclamation Inspections are conducted on five wells on the same case/operator during the FY, five Interim Reclamation Inspection Types are recorded (each associated to the well being inspected).

Example of coding these inspections:

The Inspection Type of ES is used with an Inspection Activity code of SP (Surface Production) for the general surface review. The IR Inspection Activity code will also be recorded to indicate the Interim Reclamation portion of the location was inspected as well (ES/SP, IR).

J. RECORDS VERIFICATION INSPECTIONS (RV)

An RV Inspection Type consists of an inspection of one specific type of production record (for example, run ticket, meter calibration report, well test report, meter proving report, etc.) that is not part of an Inspection Activity conducted during the course of a production inspection.

An RV Inspection Type is recorded once for each type of record reviewed on a case/operator each FY. If a production records review (PR) Inspection Activity (a review of all operator production records) is conducted, do not record it under the RV inspection. Record one RV Inspection Type with the appropriate Inspection Activity conducted. See the Valid Inspection Type/Activity Code Cross Reference Table, Appendix 1 “Inspection Type and Activity Codes.”

The RV Inspection Type is only used when one type of production or measurement-related document is reviewed to ensure that the document is filled out properly and the calculations are correct. This document is not reviewed during the course of a field-witnessed measurement activity.

A review of the Minerals Management Service (MMS) Form 4054, the *Oil and Gas Operations Report* (OGOR) not associated with a PI may be recorded as a Records Verification/Records Review (RV/RR) Inspection.

K. MULTIPLE WELL COMPLETIONS

Inspection information on wells with multiple completions (for example, D1, D2, or T1, T2, T3, etc.) that are committed to different case/operator combinations, will be recorded in AFMSS for each case/operator. See Appendix 2 "MMS Appendix G" for details.

L. INSPECTION OPEN AND CLOSE DATES

The 'Open' Date of an inspection must be the date that initial work was started on the inspection. This can be when paperwork is initiated as part of the records review, or it can be the first trip to the field to conduct an Inspection Activity. The 'Close' Date for the inspection must be the last 'Close' Date of all of the Inspection Activities recorded. By clicking the 'Close' button on the AFMSS inspection screen(s), the 'Close' Date will populate with the last Inspection Activity 'Close' Date of all of the Inspection Activities recorded. The 'Open' and 'Close' Dates may be edited as needed, due to additional Inspection Activities or Enforcement Action follow-up.

Inspections are <u>not</u> to remain open while Enforcement Actions are pending. Enforcement Action dates (follow-up, extensions, etc.) are to be entered in the individual Incident of Noncompliance (INC) (IEP.43) screen. The amount of time spent conducting follow-up(s) inspections must be added to the 'Office', 'Travel', and/or 'Inspection' Time(s) for the original Inspection Activity where the violation occurred.

If a volume discrepancy is discovered during the inspection, the 'Close' Date for the Inspection and/or Inspection Activity should be the date the discrepancy is resolved with the operator, <u>OR</u> the date the MMS has been notified that amended reports from the operator are necessary. Once the MMS has been notified, the discrepancy is considered resolved by the BLM.

M. WELLS AND/OR FACILITIES INSPECTED

When recording inspection information in AFMSS, the well(s) and/or facility(s) inspected must be selected. For each Inspection Activity performed, select the appropriate wells and/or facilities on the 'Wells and Facilities' tab of the Inspection screen(s).

N. OFFICE, TRAVEL, AND INSPECTION TIME

It is critical that the amount of time is takes to complete an inspection is accurately recorded. This information is used to plan the workload requirements and determine the number of personnel needed to complete quality inspections. Inspection time must be tracked by each Inspection Activity. The inspection times are to be recorded to the

nearest one-tenth (1/10) of an hour. For example, if an Inspection Activity took 5 minutes of office time to complete, the time will be recorded as 0.1 hours for the activity.

Extreme care must be exercised when coding Office, Travel, and Inspection times so that the cumulative time recorded for any day worked DOES NOT exceed what was actually worked. Example: 4 cases involving 10 wells inspected on 4/1/2008, inspector coded 8 hours on Time and Attendance. DO NOT code more than 8 hours into AFMSS for 4/1/2008.

V. AFMSS DATA ENTRY REQUIREMENTS BY INSPECTION SCREENS

The following are the requirements for correctly entering oil and gas inspection information into AFMSS. The information is categorized by inspection related-topics and provides detailed data entry requirements by data field. See *NIAFMSS V3 User Guide Feb 1 2007* and *NIAFMSS Handheld User Guide* for details.

A. ESTABLISHING INSPECTION PRIORITY RECORDS

A priority record can be created as soon as an inspection is required (usually during pad construction or drilling operations). Although drilling, abandonment, and environmental inspections can be entered without establishing an inspection priority record, all case/operators must have a current fiscal year priority record before the system will allow entry of production inspection information. Priority records are associated to a specific case and operator. The case/operator combination constitutes an inspection item.

1. Inspection Priority (IEP.46) Screen Data Entry Requirements:

Case No: Required entry when adding a new inspection priority record; system edit.

Type: System-generated display field. This field will populate with the 'Case Type' for the case number.

Operator: Required entry when adding a new inspection priority record; system edit.

Year: System-generated display field. May be edited if necessary.

Rank: Optional entry field. Each office may determine a priority order that inspections are conducted if desired, or leave the field blank.

Frequency: Select the appropriate frequency for the inspection item:

A = Annually
B = Every Other Year
C = Every Three Years

The codes for all priority ratings for **Prod**, **Env**, **H&S**, **Legal**, **Other**, and **Oper** are **H**=High and **L**=Low. The default settings for these ratings are all **L**=Low and must be reviewed and edited as necessary for the case/operator. The exception is the rating for **Oper** which defaults to blank. This rating must be edited for this case/operator combination.

Overall Priority: Required entry. The overall priority codes are as follows:

W = **FOGRMA** High and **Other** High
X = **FOGRMA** High and **Other** Low
Y = **FOGRMA** Low and **Other** High
Z = **FOGRMA** Low and **Other** Low

Note: **FOGRMA** represents the production and/or operator compliance priorities. **Other** represents environmental, health and safety, legal, and other priorities. A case/operator is rated FOGRMA High if the average monthly oil or gas production is significant as determined by annual Washington Office Instruction Memorandum. Operator compliance is rated as High if the operator had a noncompliance history of two major violations or a total of six FOGRMA-related violations within the preceding 24-month period.

Status: Required entry. The inspection priority status code for the priority record reflects the need for an inspection. 'Inspection Priority Status' codes are:

H = active case/operator and an inspection is necessary. (For case/operator combinations that are inspected on a 3-year rotation, it is necessary to record the status as **H** for each FY, even if the case/operator will not be inspected in a particular FY.
A = case/operator wells have all been plugged and awaiting surface restoration (environmental inspection still necessary).
I = case/operator no longer needs an inspection but is maintained for historical purposes. It is only necessary to record an inactive case/operator record for one FY. (This includes all terminated agreements regardless of well status and/or cases that contain only P+A wells.)

Monthly Average Oil and Gas: Required entry. System-generated at the beginning of each FY. For new case/operator, enter the average oil and gas production amounts using information contained in the Oil & Gas Operations Report (OGOR) Production Averages Report if available. At the beginning of each FY, a priority rollover function is performed to establish priority records for the coming year. The system automatically calculates and populates these fields based on information contained in OGORs.

Remarks: Optional for Low priority, Required for High priority ratings. Enter remarks related to the 'Other' priority, or remarks pertinent to the case. If a case is rated High priority for environmental concerns, or for other rating categories, identify the reason for the High priority rating in the remarks field.

Hazard: Required entry. The default is set to "N" for no existing hazard on the location. If Hydrogen Sulfide (H_2S) is present, the hazard code must be set to "Y" to notify the inspection personnel of the potential for hazardous conditions on location.

B. CASE STATUS VERSUS INSPECTION STATUS CODES

'Case Status' codes and 'Inspection Priority Status' codes are often confused due to the similarities in code designation. However, their use is for different purposes as described below:

1. Case Status Codes:

   This code is used in the Case (Lease/Agreement) information in AFMSS to identify the current status of the overall Case. Valid codes are as follows:

   A = Abandoned (all Federal/Indian wells in the Case have been plugged and awaiting restoration)
   E = Extended Term
   H = Held by Production - Actual
   I = Inactive (1. All wells plugged and sites restored; historical record only; or, 2. The Case is terminated, expired, relinquished, canceled, etc.)
   L = Held by Production - Allocated
   P = Primary Term
   R = Renewal
   T = Indian Lease Recommended for Termination

2. Inspection Priority Status Codes

   'Inspection Priority Status' codes are associated to a case AND operator combination. The 'Inspection Priority Status' code is a critical field in AFMSS used in the development of the Inspection Strategy Plan Matrices. The 'Inspection Priority Status' code indicates to inspection personnel the case/operator combinations that need inspections during an FY, or if the case/operator is no longer active and an inspection is no longer necessary. If these codes are not set correctly, all workload estimates and resource needs projected for an upcoming FY may be inaccurate.

3. Distinction between Case and Inspection Priority Status Codes

   There is no direct correlation between the 'Inspection Priority Status' code and the 'Case Status' code. It may appear that a correlation exists because many times the codes will be the same for producing, abandoned, or inactive cases.

   Cases entered into AFMSS include lease and agreement records. A 'Case Status' code is entered for each lease record, even if the lease is in an agreement. The 'Case Status' code for the agreement takes precedence over the individual lease status code.

The ‘Case Status’ code indicates the actual case status. ‘Case Status’ codes are entered once for a case regardless of the number of operators. The ‘Case Status’ code does not affect the need for inspections of that Case.

See *IAFMSS/NIAFMSS V3 User Guide Feb 1 2007* and *NIAFMSS Handheld User Guide* for detailed instructions.

VI. OIL AND GAS PROGRAM ENFORCEMENT PROCEDURES

To ensure uniform implementation of the Oil and Gas Program enforcement procedures, the following provides the policy to be implemented by FOs having oil and gas program responsibilities.

In the past, several terms have been used to define a verbal warning issued to an operator. A verbal warning has often been referred to as a verbal Incident of Noncompliance (INC), an oral warning, or an oral INC. The use of these terms all refer to the same type of enforcement action. It is non-written communication to an operator for a minor, inadvertent and non-reoccurring violation that will be corrected immediately prior to the inspector leaving the location. To ensure consistency, verbal warning is the term to be used for enforcement actions of this type. A verbal warning is not to be confused with an oral order per 43 CFR 3161.2.

A. PROACTIVE MEASURES TO ACHIEVE COMPLIANCE

On occasion, operators are not aware of the regulatory requirements on Federal and Indian lands. By taking a proactive approach to compliance, the BLM inspectors may assist the operator to more clearly understand what is required. These efforts will also foster better working relationships with industry.

There are several proactive steps that may be taken to help prevent and alleviate some noncompliance issues. As a first step, FOs must review operator noncompliance ratings each year to identify issues or trends of noncompliance. This provides an opportunity to communicate with the operator and possibly avoid repeated violations. It is critical to have open lines of communication with operators to discuss the problems that are occurring and explain the regulatory requirements. Other proactive measures to consider include:

- Attending company safety meetings to explain regulatory requirements.
- Conducting one-on-one meetings in the field to discuss specific violations that are occurring.
- Reminding the operator prior to violation abatement dates that compliance must be obtained by the due date or assessments may occur.
- Holding operator meetings and discussing common violations occurring in the area.
- Contacting the operator to schedule a meeting to address the situation if systemic violations or problems are identified during the early stages of an inspection. This should be done before the enforcement actions issued become overwhelming to both the operator and the BLM.

Although these proactive measures may not help obtain compliance in all cases, the measures may facilitate better working relationships with companies that are trying to operate in accordance with the regulations.

B. IDENTIFICATION AND DOCUMENTATION OF VIOLATIONS AND PROBLEMS

1. Identifying a Violation

Recognizing a violation is the critical first step in ensuring compliance; although, it is not always as straightforward as it may seem. Operators must be in violation of a specific requirement outlined in the Federal regulations (usually 43 CFR 3160s), Onshore Oil and Gas Orders (Onshore Orders), Notices to Lessees (NTLs), lease terms, approved permits, Conditions of Approval (COAs), and/or Orders of the Authorized Officer (AO) before a *Notice of Incident of Noncompliance (INC)*, Form 3160-9, or an INC in letter format can be issued.

2. Identifying a Problem

Recognition of a problem as opposed to a violation can be difficult. A problem is defined as a concern or issue identified during an inspection that is not covered by a specific regulatory requirement. In these instances, the issuance of an INC is not appropriate. Examples of these types of instances include such items as environmental protection, public health and safety issues (other than those specific requirements addressed in Onshore Order No. 6), or workmanlike conduct. Although these areas are discussed in the regulations, specific standards are not provided for operations. The AO must notify the operator in writing using either the *Notice of Written Order* (Form 3160-18) or letter format.

Written Orders of the AO are used to specify or clarify requirements that may or may not be covered or addressed in detail by regulations, Onshore Orders, NTLs, lease terms, approved permits, COAs, or to supplement an existing approval and must be in writing. The Written Order must 1) specify any requirement(s) or corrective action(s) necessary to address the problem(s), 2) provide a reasonable timeframe to comply, and 3) include appeal rights. If at the end of the timeframe the requirement is not met, enforcement actions pursuant to §3163.1 must be taken. A table and flow charts, summarizing enforcement steps, are included in Appendix 3 “Summary of Enforcement Actions” for easy reference.

3. Documentation of the Violation or Problem

Sufficient documentation is the mainstay of successful enforcement. Clear evidence of a violation/problem supports the issuance of an INC/Written Order and will be vital evidence if the action is submitted to the State Director for review and appealed to the Interior Board of Land Appeals (IBLA) or to U. S. Federal Court.

There are three principal ways to document a violation or problem:

a. Written documentation

Written documentation provides a record of the facts of what, when, where, why, and the conditions pertaining to the violation/problem. This documentation must be maintained in an official hard copy file and forms the legal historical record for the inspection program. This hard copy file contains detailed information regarding the violation/problem and authority requirement(s). Meetings and telephone calls (date, time, name of the individual, and discussion points) related to the violation/problem must also be documented. Documentation of verbal communications is critical to an official hard copy file and supports enforcement actions if appealed.

All actions, including INCs, Written Orders, and Verbal Warnings must also be recorded in AFMSS (See *NIAFMSS V3 User Guide Feb 1 2007* and *NIAFMSS Handheld User Guide).* Recording and maintaining this data in AFMSS is critical in providing FOs with the capability to determine program direction and the ability to focus on the most critical noncompliance areas. It provides statistical information as to the overall effectiveness of the program on a State and National level. AFMSS also provides a Violation Status Report containing enforcement action information and abatement dates that assists in the prompt follow-up on actions to ensure compliance.

b. Physical evidence

Physical evidence may range from collecting water samples to gathering reports. If samples are to be analyzed by a laboratory, consult with the laboratory on how to collect and preserve the sample. Proper collection of the sample is critical to the analysis. Reports include but are not limited to logs, driller's tour sheet data, mud reports, run tickets, pit samples, calibration reports, and cement job reports.

c. Photographs:

Photographs must be taken of the violation/problem and included with the documentation. When violations cannot be depicted in photographs, written report(s) will be essential to document actions taken. Photographs are effective tools when describing violations such as missing seals, well signs, facility diagram deficiencies, oil spills, and safety hazards. They are also effective in documenting problems where an Order of the AO will be issued.

Inspection personnel must be careful to ensure photographs clearly show the specific violation or problem. In some cases, it may be necessary to take a series of photographs to properly indicate scale or relationship of the noncompliance to the site or equipment associated with the concern. For example, when

photographing a defective seal, the photograph must be close enough to clearly show the exact nature of the defective seal. Additional photographs may be needed in order to identify which valve and uniquely numbered tank had the defective seal.

All photographs must be identified, at a minimum, with the date, time, lease (case) number, operator, location, and a brief description of the violation or problem. Photographs must be attached to the official hard copy file of the Written Order or INC and filed appropriately.

4. Gravity of a Violation

All violations must be classified either major or minor. A major violation is defined in §3160.0-5 as a noncompliance that causes or threatens immediate, substantial, and adverse impacts to public health and safety, the environment, production accountability, or royalty income. If the violation does not meet these criteria, it must be classified as a minor violation.

The Onshore Orders provide information to operators about the typical classification for noncompliance with a specific requirement. However, each violation must be weighed against the criteria for a major violation before that classification can be assigned. For example, Onshore Order No. 3, Site Security, states that an unsealed or inappropriately sealed sales valve is a major violation. If the fluid level in the tank is at the same level as the valve near the bottom of the tank, the violation does not meet the criteria of a major violation and must be issued as a minor violation. The Onshore Order classification designation is a guideline, and inspection personnel must use judgment in determining if the violation meets the definition of a major violation.

A minor violation may change to a major violation when conditions meet the definition of a major violation. In these situations, a new INC must be issued as a major violation and a new abatement period. The INC for the minor violation is closed by showing a correction date that corresponds to the date the major violation is open.

For example, a minor violation is identified when an emergency pit is being used inappropriately but the conditions do not warrant a major violation. If, during the abatement period or if noncompliance continues and the emergency pit is in danger of breaching into a live waterway, it would then be classified as a major violation.

5. Immediate Assessments for Noncompliance - §3163.1(b)

Certain instances of noncompliance are so serious that they warrant the issuance of immediate assessments. The following violations will result in immediate assessments, which may be retroactive, in the following specified amounts per violation:

a. Failure to install a blowout preventer or other equivalent well control equipment as required by the approved drilling plan, $500/day for each day the violation existed, including days prior to discovery, not to exceed $5,000.

b. Drilling without approval or for causing surface disturbance on Federal or Indian surface preliminary to drilling without approval, $500/day for each day the violation existed, including days prior to discovery, not to exceed $5,000. Violations for causing surface disturbance on Fee (Private) or State surface (split estate) do not incur this assessment.

c. Failure to obtain approval of a plan for well abandonment prior to commencement of such operations, $500 (one-time payment, 43 CFR 3163.1(b)(3)).

d. Removal of a Federal seal without approval of the AO, $250 (one-time payment per Federal seal removed, Onshore Order No. 3, Section IV).

C. NOTICE OF VIOLATION - §§3163.1, 3163.2, AND 3165.3(a)

CAUTION: Do not reference these instructions when citing a violation, assessment, or penalty. Always reference the appropriate approval document, Onshore Order, NTL, COA, or regulation.

When a violation is discovered, §§3165.3(a) and 3163.1(a) require the AO to notify the appropriate party in writing and provide a reasonable abatement period to correct the violation. The *Notice of Incidents of Noncompliance,* Form 3160-9, or letter format must be used and signed by the appropriate AO. The notice must be delivered by hand or by certified mail, return receipt requested, and include the appeal language. Refer to section VII *Instructions for Use of Letter Format for INCs and Orders* for detailed information regarding the letter format.

Note: Through the certification process (BLM Handbook H-3160-6, *National Certification Handbook for Inspection and Enforcement Personnel*), certified inspectors are authorized to sign the INC form. If the State or an FO delegation of authority allows, a certified inspector may sign the INC letter. Anyone other than a certified inspector must successfully complete the official (BLM NTC) compliance training specifically designed and presented for this purpose and must be deemed authorized to sign an INC or Written Order form.

1. When certified mail is used

   When certified mail is used, delivery is deemed to occur when the notice is received or 7 business days after the date it is mailed, whichever is earlier.

2. When the notice is delivered by hand

When the notice is delivered by hand, the BLM copy of the notice must be signed by the recipient. If the recipient refuses to sign the notice, record the time, date, and the name of the person who accepted the notice. The abatement period begins when the notice is delivered.

3. For major violations

For major violations §3165.3(a) requires "that a good faith effort must be made to contact such designated representative by telephone and must be followed by a written notice. Receipt of the notice is deemed to occur at the time of such verbal communication, and the time of notice and the name of the receiving party must be confirmed in the official hard copy file. If the good faith effort to contact the designated representative is unsuccessful, notice of the major violation may be given to any person conducting or supervising operations subject to the regulations in this part." The time of notice and the name of the receiving party must be documented in the remarks section of the notice.

To ensure that a "good faith effort" is made to contact an operator representative, verbal communication must take place. Leaving a telephone message may be acceptable if several attempts have been made. Attempts to contact the operator must be documented in the official hard copy file, including the date, time, and telephone number that were used.

Abatement periods typically will be very short, days or even hours in some cases, due to the serious nature of a major violation. Even with shorter abatement periods for major violations, the time to correct the violation must be considered reasonable so that the operator can correct the violation.

4. Minor violations

Minor violations per §3165.3(a) require written notice. This written notice can be served by personal service, by an authorized officer or certified mail. If the notice is served by personal service, the time of notice and the name of the receiving party must be documented in the remarks section of the BLM copy of the notice.

5. Verbal Warnings

Verbal Warnings may be used when the operator's efforts demonstrate good faith, the violation is minor, obviously inadvertent, and non-reoccurring. If the FO determines that a pattern of noncompliance or repeated violations are occurring, Verbal Warnings cannot be used. Furthermore, if the operator fails or refuses to comply with a Verbal Warning, the written notification procedures must be used prior to further enforcement action such as assessments or penalties. **All Verbal Warnings must be documented in AFMSS.**

D. NOTICE OF WRITTEN ORDER OF THE AUTHORIZED OFFICER, §3161.2

CAUTION: Do not reference these instructions when citing an order. Always reference the appropriate approval document, that is, Onshore Order, NTL, COA, or regulation.

When a problem is discovered, §3165.3(a) requires the AO to notify the appropriate party in writing and provide a reasonable abatement period to correct the problem. The *Notice of Written Order*, (Form 3160-18) or letter format must be used and signed by the appropriate AO. The notice must be delivered by hand or by certified mail, return receipt requested, and include the appeal language.

Note: Through the certification process (BLM Handbook H-3160-6, *National Certification Handbook for Inspection and Enforcement Personnel*), certified inspectors are authorized to sign the INC form. If the State or an FO delegation of authority allows, a certified inspector may sign the INC letter. Anyone other than a certified inspector must successfully complete the official (BLM NTC) compliance training specifically designed and presented for this purpose and must be deemed authorized to sign an INC or Written Order form.

1. When certified mail is used

   When certified mail is used, delivery is deemed to occur when the notice is received or 7 business days after the date it is mailed, whichever is earlier.

2. When the notice is delivered by hand

   When the notice is delivered by hand, the BLM copy of the notice must be signed by the recipient. If the recipient refuses to sign the notice, record the time, date, and the name of the person who accepted the notice. The abatement period for a hand-delivered notice begins when it is delivered.

3. All Written Orders must be documented in AFMSS

   When the letter format is used, the notice must be recorded in AFMSS for tracking purposes. The order may include multiple wells and/or facilities, but the requirements for each Case/Operator must be documented separately in AFMSS. The notice must include the case number (lease or agreement), well and/or facility identification, the nature of the problem, abatement period, and the "Failure to Comply" and "Appeal" language. Refer to section VII **Instructions for Use of Letter Format for INCs and Orders** for information regarding the letter format.

4. The regulations at §3161.2 discuss the use of Oral Orders

   Keep in mind that Oral Orders of the AO must be confirmed in writing within 10

business days. It should be noted that Oral Orders are not the same as Verbal Warnings.

Orders of the AO are not INCs and therefore do not affect an operator's compliance rating. An operator's compliance rating is determined by the number of FOGRMA related violations issued during a fiscal year. The rating is used during the development of the I&E Strategy Matrix for inspection prioritization purposes.

E. FOLLOW-UP INSPECTION

A follow-up inspection is required to ensure compliance within the abatement period. However, a follow-up field trip may not be necessary for minor violations per item 2 below:

1. Major violations

   Major violations must have a follow-up inspection immediately after the abatement period. If the operation is critical, for example if the public health and safety is at risk, inspections to check the status and condition may be necessary prior to the end of the abatement period.

2. In the case of a minor violation

   In the case of a minor violation when the operator/representative has signed and returned the INC form verifying the violation has been corrected (Self-Certification), a follow-up field trip may not be required except on a random basis. *The follow-up date is the date Self-Certification has been reviewed and the determination has been made that a field trip to ensure compliance is not necessary.*

   If the operator or responsible party fails to self-certify the minor violation's correction, a follow-up inspection is required. *Minor violations that have the potential to escalate to a major classification: if not abated promptly, the minor violations require a follow-up inspection even though correction has been self-certified.*

3. Follow-up inspections of Orders of the AO

   Follow-up inspections of Orders of the AO must be conducted in a timely manner to ensure the operator has corrected the problem(s). If the operator has failed to correct the problem(s) within the abatement period, an INC must be issued for failure to comply with an order of the AO (§3163.1(a)). Follow-up inspections for compliance are critical for the success of future enforcement actions. The AFMSS provides a Violation Status Report containing enforcement action information and abatement dates that assists in the prompt follow-up of actions to ensure compliance.

F. CORRECTED VIOLATIONS AND PROBLEMS

1. After the violation/problem is corrected

   After the violation/problem is corrected, and the correction is verified, the INC/Written Order is placed in the official hard copy file for compliance history.

2. Update the INC/Written Order record in AFMSS

   Update the INC/Written Order record in AFMSS by entering the follow-up and corrected dates and a brief summary of the follow-up in the remarks. If extension dates were granted, those also must be entered into AFMSS with an explanation for the extension(s).

G. RESCINDING INCS OR WRITTEN ORDERS

In rare instances, it may be necessary to rescind an INC. If technical or procedural errors such as typographical mistakes, incorrect legal description, incorrect regulatory citation, and so on, are identified on the original INC, the INC may be rescinded by the issuing Authorized Officer/Certified Inspector. The corrected INC must inform the operator that the original INC is being rescinded and provide the original INC number for reference, state what is being corrected, and include a revised abatement date. Written justification for rescinding the INC must be sent to the State Office I&E Program Lead/Coordinator, along with the corrected INC. For a major INC, the operator must also be immediately notified by telephone. The rescinded INC record must be deleted from AFMSS so it will not be counted toward the operator compliance history.

Any INCs issued by the Authorized Officer/Certified Inspector in accordance with applicable regulations or policy and which do not contain any discrepancies (i.e., incorrect operator, case, well, etc.) cannot be rescinded without review by the Deputy State Director.

H. ENFORCEMENT TOOLS FOR CONTINUED NONCOMPLIANCE

If the operator fails or refuses to comply with notices (INCs/Written Orders) described above, other means to gain compliance will be necessary. The list below provides the tools available to address noncompliance issues. All FOs should be aware that they may have more than one choice of enforcement tools that can be used, or in some cases multiple tools could be used. Each FO should take the time to identify the best tool(s) to gain compliance most effectively and should not assume only one approach/tool can be used for enforcement.

- Monetary assessment, §3163.1(a)(1) and (2)
- Immediate assessments, §3163.1(b)(1), (2), and (3)

- Civil penalties, §3163.2
- Shut down of operations, §3163.1(a)(3)
- Enter lease and perform, or have performed work at the sole risk and expense of operator, §3163.1(a)(4)
- Forfeiture under the bond, §3163.1(a)(5)
- Lease cancellation, §3163.1(a)(5) and 43 CFR 3163.2(j)

1. Monetary Assessments - §3163.1(a)

   a. Major Violations

   If a major violation is not corrected within the allowed time, the AO will impose an assessment of not more than $500/day for each day non-abatement continues (§3163.1(a)(1)). If more than one violation exists the assessment shall not exceed $1,000/day/operator/lease (§3163.1(c)).

   Issue a second INC informing the operator that it is being assessed $500/day for each day the violation continues, and provide another abatement period to correct the violation. The abatement period for the second INC should be based on criteria for what is a reasonable period to correct a major violation, typically a short timeframe. Before civil penalties can be proposed, the violation must remain uncorrected for at least 20 days from the date of first notice. Due to the nature of major violations, the 20-day civil penalty standard should not normally be used as an abatement period for the second notice.

   As identified in section VI.C.3 above, the second INC of a major violation also requires that a good faith effort must be made to verbally inform the operator of the violations and then are followed up in writing.

   The second INC must inform the operator that civil penalties may be initiated if the violation is not corrected in a timely manner. A copy of this notice must be sent to the lessee and/or operating rights owners if different from the operator.

   In those cases when an operator has failed to comply with the second INC on a major violation, inspection personnel are strongly encouraged to consider shutting down the operation, using the *Notice to Shut Down Operation* (Form 3160-12). Caution must be used when considering the shutdown of operations to ensure (1) shutdown is appropriate given the operational conditions, and (2) shutdown would not cause undue harm to the operations or the environmental resources.

   Note: Shutdown of operations on tribal or allotted leases must be coordinated with the appropriate tribe or agency.

   To ensure necessary compliance, the AO may also enter upon a lease and perform or have performed, at the sole risk and expense of the operator, operations that the

operator fails to perform when directed in writing (§3163.1(a)(4)). Charges shall include actual cost of work plus 25 percent to cover administrative costs.

b. Minor Violations

If a minor violation is not corrected within the time allowed, the AO may subject the operator to an assessment of $250 (§3163.1(a)(2)). If more than one violation exists the assessment shall not exceed $500/operator/lease/inspection (§3163.1(c)). In cases when the self-certification is not received from the operator, a field inspection will be necessary to verify the status of the violation.

Issue a second INC informing the operator it is being assessed $250 for failure to correct the violation. Provide another abatement period of not less than 20 days per 43 CFR 3163.2(g)(2)(ii). Even though the abatement period for the second notice cannot be less than 20 days, some violations may require longer periods to comply in order to meet the criteria for reasonableness.

When operators are unresponsive, or if violations could escalate to a major classification, shutdown of operations may be considered, using the *Notice to Shut Down Operation* (Form 3160-12). Caution must be used when considering the shutdown of operations to ensure (1) shutdown is appropriate given the operational conditions, and (2) shutdown would not cause undue harm to operations or the environmental resources.

To ensure necessary compliance, the AO may also enter upon a lease and perform or have performed, at the sole risk and expense of the operator, operations that the operator fails to perform when directed in writing (§3163.1(a)(4)). Charges must include actual cost of work plus 25 percent to cover administrative costs.

The second INC must also inform the operator that civil penalties may be issued if the violation is not corrected in a timely manner. A copy of the notice must be sent to the lessee(s) and/or operating rights owner(s) if different from the operator.

On a case-by-case basis, the State Director (SD) may compromise or reduce the assessment amount (§3163.1(e)). However, the SD must state on the record the reasons for such determination.

2. Civil Penalties, §3163.2

Note: Prior to initiating civil penalties, coordinate with the state office program lead and other subject matter experts for assistance.

Whenever an operator fails or refuses to remedy a violation, the following results:

a. If the violation is not corrected within 20 days of the first INC, or such longer time as the AO may agree to in writing, the operator shall be liable for a civil penalty of up to $500/violation for each day such violation continues from the date of the first INC. Refer to Item VI.H.3, below, to determine actual penalty calculation amounts.

b. A good faith effort to contact the operator must be made by telephone to notify the operator of potential civil penalties. The date, time, and the name of the receiving party must be confirmed in the official hard copy file.

c. Notification of proposed civil penalties will be issued in a letter format requiring the signature of the AO. Do not use an INC when issuing a civil penalty. The notification must include the appeal language and be delivered by hand or by certified mail, return receipt requested. Copies of the written notice must also be sent to all lessees and the operating rights owners.

   For the purpose of State Director Review (SDR), appeal, and hearing on the record, this letter will be the operator's only opportunity to file for review/appeal of the proposed civil penalties, §3165.3(c), 3165.4(b).

d. If the violation is not corrected within 40 days of the first INC, the operator shall be liable for a civil penalty of up to $5,000/violation for each day the violation continues, not to exceed 60 days from the date of the first INC.

e. During the civil penalty phase, continued follow-up inspections, as well as attempts to contact the operator and notify it of the ongoing status of compliance and accumulating civil penalties must be conducted and documented in detail.

   At a minimum, 5 days prior to the end of the 40-day penalty phase, a courtesy letter will be sent to the operator informing the operator of the pending increased penalty amount and urging immediate compliance. Five days prior to the end of the 60-day penalty phase, a second courtesy letter will be sent to the operator notifying the operator of pending lease cancellation proceedings and, again, urging immediate compliance. Notification must be delivered by hand or by certified mail, return receipt requested. Copies of the written notice must also be sent to all lessees and the operating rights owners. A good faith effort must be made to contact the operator by telephone at both penalty phases and must be documented in the official hard copy file.

   Note: Courtesy letters are not formal notices of decision. They are informational and must be filed in the hard copy file, but not be entered into AFMSS.

See Item 3 below for determination of penalty amounts for immediate, major, and minor violations. Any amount imposed or paid as assessment under §3163.1(a)(1) will be deducted from these penalties.

f. In accordance with 3163.2(c), "In the event the Authorized Officer agrees to an abatement period of more than 20 days, the date of notice shall be deemed to be 20 days prior to the end of such longer abatement period for the purpose of civil penalty calculations."

For example, the notice of violation was deemed received on January 1, with an abatement date of January 20. Prior to January 20, the operator requested an extension to January 30, and it was granted by the AO. The calculation for proposed civil penalty would then begin on January 10.

3. Calculations of Civil Penalties

The amounts for civil penalties under §3163.2 shall be determined as follows:

Note: Calculation of civil penalties is based on calendar days.

a. For major violations, all initial proposed penalties shall be at the maximum rate provided.

(1) If the violation is not corrected within 20 days of the first notice, or such longer period as agreed to by the AO, the penalty shall be a $500/violation/day from the date of first notice. If more than one violation exists, the penalty shall not to exceed the rate of $1,000/day/operator/lease through the 40th day.

(2) If the violation is not corrected within 40 days of the first notice, or such longer period as agreed to by the AO, the penalty shall be $5,000/violation/day from the date of first notice. If more than one violation exists, the penalty shall not exceed a maximum of $10,000/day/operator/lease, not to exceed a maximum of 60 days from such notice or report.

(3) If the violation continues beyond the 60-day maximum, lease cancellation proceedings shall be initiated under Title 43.

b. For minor violations, no penalty under §3163.2(a) shall be assessed unless:

(1) The operator was notified of the violation in writing and did not correct it within the allotted time; or

(2) The operator was assessed $250 under §3163.1 and a second INC was issued giving an abatement period of not less than 20 days (§3163.2(g)(2)(ii)).

For minor viololations, the following will result:

(3) If the violation is not corrected within 20 days, or such longer period as agreed to by the AO, the initial proposed penalty shall be at the rate of $50/day from the date of second notice; if more than one violation exists, the penalty shall not exceed $100/day/operator/lease.

(4) If the violation is not corrected within 40 days, or such longer period as agreed to by the AO, the initial proposed penalty shall be at the rate of $500/day from the date of second notice; if more than one violation exists the penalty shall not exceed $1000/day/operator/lease.

(5) If the violation continues beyond the 60-day maximum, lease cancellation proceedings shall be initiated under Title 43.

(6) If a minor violation is changed to a major violation after the operator is notified of civil penalties, the FO must immediately notify the operator verbally and follow up in writing that the violation classification has changed and a new abatement date has been established. This notification must inform the operator the penalty amounts will increase to the major violation rate if the operator fails to comply within the new abatement period. The major penalty rate will commence on the date the operator fails to comply with the new abatement period.

If this occurs, contact the state office program lead for guidance.

(7) The major violation penalty rate will begin on the date the operator receives notification of the major classification. Civil penalties incurred during the minor violation cease as soon as the major classification and penalty amounts begin.

(8) Billing, or demand for payment, for Civil Penalties – see section VI.N for detailed information.

4. Other Civil Penalties

a. Whenever a transporter fails to permit inspection for proper documentation, the transporter shall be liable for a civil penalty of up to $500/day, not to exceed a maximum of 20 days. If the violation continues beyond the 20-day maximum timeframe, the AO shall revoke the transporter's authority to remove crude oil or other liquid hydrocarbons from, or allocated to, any Federal or Indian lease site under authority of the AO.

b. Any person shall be liable for a civil penalty of up to $10,000/violation for each day, not to exceed 20 days, if he/she:

(1) Fails or refuses to permit lawful entry or inspection authorized by §3162.1(b); or

(2) Knowingly or willfully fails to notify the AO by letter or Sundry Notice, not later than the fifth business day, of any well that begins production or resumes production after being off production for greater than 90 days. See §3160.0-5 for definition of new or resumed production.

c. Any person shall be liable for a civil penalty of up to $25,000 per violation for each day, not to exceed 20 days, if he/she:

(1) Knowingly or willfully prepares, maintains, or submits false reports or other data;

(2) Knowingly or willfully takes or removes, transports, uses, or diverts any oil or gas, from any Federal or Indian lease without legal authority; or

(3) Purchases, accepts, sells, transports, or conveys to another, any oil or gas, knowing or having reason to believe that the oil or gas was stolen from the Federal or Indian lease.

NOTE: The Secretary delegated authority for administering operations on oil and gas leases to the Director, Bureau of Land Management, in 235 DM 1.1K. The authority with respect to the determination and levying of civil penalties under §3163.2 was re-delegated to State Directors. See Manual Part 1203, Release 1-1586, Appendix 1, page 67. Further, the Solicitor's Office has stated that the legislative history refers specifically to reductions and adjustments by the State Directors in the course of administrative review. Therefore, on a case-by-case basis, the State Director may compromise or reduce civil penalties and shall state on the record the reasons for such determination.

Civil penalties shall be supplemental to and do not detract from or decrease other penalties or assessments for noncompliance in any other provision of law, except as provided in §3163.2(a) and (b).

5. Shutdown of operations, §3163.1(a)(3)

Note: Caution must be used when considering the shutdown of operations to ensure 1) shutdown is appropriate given the operational conditions, and 2) shutdown would not cause undue harm to the operations or the environmental resources. Shutdown of

operations on tribal or allotted leases must be coordinated with the appropriate tribe or agency.

a. Immediate shutdown action may be taken when operations are initiated and conducted without prior approval, or when continued operations could result in immediate, substantial, and adverse impacts on public health and safety, the environment, production accountability, or royalty income.

b. Shutdown actions for other situations, such as continued noncompliance, may be taken only after due notice has been given in writing. Caution must be taken when considering this option. In some cases, shutting down an operation could cause irreversible damage to a reservoir if the well(s) was shut in. Internal communication with the petroleum engineer, geologist, and management (for Indian leases, only upon concurrence of the appropriate Bureau of Indian Affairs [BIA] office) is the key to determine if a shutdown action should be taken.

If the inspector has not been delegated authority to issue a shutdown of operations, the inspector must notify the AO and explain the problem and the lack of authority to enforce. The AO must then determine if a written or oral shutdown of operations will be issued in accordance with §3163.1(a)(3). If an oral shutdown of operations is issued it must be confirmed in writing.

Shutdown of operations can be used in conjunction with other enforcement actions to have the greatest effect in gaining compliance. For instance, if an operator has failed to comply with a major violation, issue a second notice with a $500 per day assessment and inform the operator that if the violation is not corrected, shutdown proceedings will be initiated. This puts the operator on notice as required by §3163.1(a)(3), that if the operator fails or refuses to correct the violation, operations will be shut down. If the shutdown action is taken due to continued noncompliance, the $500 per day assessment continues until the violation is corrected.

6. Enter lease and perform, or have performed work at the sole risk and expense of operator, §3163.1(a)(4)

To ensure necessary compliance, the AO may enter a lease and perform, or have performed, at the sole risk and expense of the operator, operations that the operator fails to perform when directed in writing by the AO. Appropriate charges shall include the actual cost of performance, plus an additional 25 percent of such amount to compensate the United States for administrative costs. The operator shall be provided with a reasonable period of time either to take corrective action or provide written justification to the BLM why the lease should not be entered.

The AO must approve the decision for the BLM to perform the work or contract for the work to be completed. This would only be required in emergency situations.

7. Forfeiture under the Bond, §3163.1(a)(5) and Lease cancellation, §3163.1(a)(5) and 43 CFR 3163.2(j)

   Continued noncompliance may subject the lease to cancellation and forfeiture under the bond. The operator will be provided with a reasonable period of time either to take corrective action or to provide written justification why the lease should not be recommended for cancellation.

   If the violation continues beyond the 60-day maximum civil penalty process, lease cancellation proceedings shall be initiated under either Title 43 or Title 25 of the Code of Federal Regulations.

   Both of the actions require close coordination with management and the leasing staff. Leases capable of production require a court action to terminate the lease (§3108.3).

I. STATE DIRECTOR REVIEW AND APPEALS

1. State Director Review §3165.3(b)

   Any adversely affected party who contests a notice of violation or assessment or an instruction, order, or decision of the AO may request an administrative review by the SD. Such request, including all supporting documentation, must be filed with the appropriate SD within 20 business days of the date such notice of violation, assessment, instruction, or order was considered received. Upon request and showing good cause, an extension for submitting supporting data may be granted by the SD.

   Any request for review by the SD will not result in a suspension of the requirement for compliance with the INC or proposed penalty, or stop the daily accumulation of assessments or penalties, unless the SD so determines.

2. Effect of a Hearing on the Record-§3165.3(e)(2), or Appeal to IBLA-§3165.4(d) on Compliance Requirements

   a. **43 CFR 3165.3(e)(2):** Any request for a hearing on the record before an Administrative Law Judge shall not result in a suspension of the requirement for compliance.

   b. **43 CFR 3165.4(d):** Any appeal filed pursuant to this section shall not result in a suspension of the requirement for compliance, unless a stay has been granted by IBLA.

3. Review of Proposed Penalties-§3165.3(c)

   a. No civil penalty shall be assessed until the party charged with the violation has

been given the opportunity for a hearing on the record in accordance with section 109(e) of FOGRMA. Therefore, any party adversely affected by the SD's decision on the proposed penalty may request a hearing on the record before an Administrative Law Judge or, in lieu of a hearing, may appeal directly to the IBLA as provided in §3165.4(b)(2). A request for a hearing on the record is to be filed with the SD within 30 days of receipt of the SD's decision on the notice of proposed penalty.

b. If the party adversely affected by the SD's decision waives the right for a hearing before an Administrative Law Judge and goes directly to IBLA, any further appeal to the U.S. District Court under section 109(j) of FOGRMA is precluded.

c. A request for a hearing on the record before an Administrative Law Judge, or an appeal to IBLA, will suspend the accumulation of additional daily penalties until final decision is rendered, according to §3165.3(e)(2) and 3165.4(e). The SD may, after review of a request for hearing, and within 10 days of receipt of such request, recommend the Director of BLM reinstate the accumulation of daily civil penalties until the violation is abated. The Director has 45 days from filing of the request to reinstate the accumulation of civil penalties. If not reinstated within 45 days, the suspension of penalties will continue.

4. Appeals - §3165.4

Any party who is adversely affected by the decision of a SD or an Administrative Law Judge may appeal that decision to the IBLA as provided in §3165.4.

J. INSTRUCTIONS FOR COMPLETING *NOTICE OF INCIDENTS OF NONCOMPLIANCE,* FORM 3160-9 (JANUARY 1989).

1. A separate form must be prepared for each violation.

2. Distribution of copies: Hard copy form: The hard copy form may be used in those instances where it is necessary to issue an immediate INC in the field; however, all INC information must also be entered into AFMSS. The original and a copy of the INC (Form 3160-9) are given to the operator. Instruct the operator to sign and return the original (original BLM signature) copy to the FO. A copy must be maintained in the FO. The information from the INC must be entered into AFMSS (and any other office tracking systems as appropriate). When the operator returns the original copy of the INC, ensure it has been signed and filed in the official hard copy files. The lessee(s) and operating rights owner(s) must be notified if civil penalties are initiated.

AFMSS-generated form: Complete the data entry screens as appropriate in AFMSS. Generate three copies of the INC form. Two copies are given to the operator. Instruct the operator to sign and return the original (original BLM signature) copy of the INC form and keep one for its records. Maintain a copy in the FO. When the

operator returns the original copy of the INC, ensure it has been signed and filed in the official hard copy files. See Appendices 3 and 4 for detailed instructions.

3. The following letters correspond to the fields on the Form 3160-9 found in Appendix 4. The asterisk (*) indicates corresponding AFMSS data elements for data entry (see L below).

   a. *Method of Delivery: If certified mail is used, so indicate. Enter the Certified Mail Receipt number for tracking.

      If hand delivered, so indicate. Enter the name of the person the form was hand delivered to. Ensure that a "received by" signature is obtained or record time and date delivered if the operator refused to sign.

   b. *Number: A unique number must be assigned to each notice. A suggested format would be inspector initials, fiscal year, and sequential numbers, such as JD-07-001.

   c. Page ___ of ___: Number each page of the form (Pg 1 of 3, Pg 2 of 3, Pg 3 of 3, and so on).

   d. *Identification: Enter the appropriate identification for the case, such as lease number, CA number, or unit name with PA designation.

   e. *Bureau of Land Management Office: Enter the name, address, and telephone number of the FO that has jurisdiction over the case.

   f. *Operator: Enter the operator's name.

      Address: Enter the operator's mailing address. Ensure that the appropriate mailing address is used. Some notices are sent to the office of record, while others may go to a local office for the operator.

      Attention: Enter the name of the company, agent, or representative responsible for correcting the violation, if known.

   g. *Site Name: If appropriate, enter the lease name. This may also be used to enter the Facility Identification (Facility Name). This should describe a location in terms that the operator is familiar.

   h. *Well or Facility Identification: Enter the name or number identifying the well or facility where the violation has been detected.

   i. *¼ ¼ Sec.: Enter quarter-quarter and section location of well or facility.

j. *Township: Enter the township for the location.

k. *Range: Enter the range for the location.

l. *Meridian: Enter the meridian for the location.

m. *Inspector: Enter the name of the inspector who discovered the violation.

n. *Date: Enter the date the violation is discovered.

o. *Time: Use the 24-hour clock system to enter time of day the violation is discovered.

p. *Violation: Cite the specific regulation, NTL, Oil and Gas Onshore Order, lease term, approved permits, COA, or agreement that is in violation. The authority reference shall be as specific to the nature of the violation as possible. In most cases, only one authority reference shall be used per INC.

q. *Gravity of Violation: Enter major or minor. Refer to 43 CFR 3160.0-5 for definition of major and minor violations.

r. *Corrective Action To Be Completed By: Enter date corrective action is to be completed or abatement timeframe, starting upon receipt of notice or 7 business days after notice is mailed.

s. *Date Corrected: Enter the date the violation was corrected. The operator should enter the date the violation was corrected before returning the form to the inspection office. If the date is not entered by the operator, the date the operator signed the return copy must be entered.

t. *Assessment for Noncompliance: Enter amount of monetary assessment as provided for in 43 CFR 3163.1, Remedies for acts of noncompliance.

NOTE: If an assessment is not applicable to the notice being issued, do not enter an amount in this field.

u. *Assessment Reference: If applicable, insert appropriate 43 CFR reference.

NOTE: Check the 43 CFR 3160 regulations for correct reference.

- Immediate assessments are issued under 43 CFR 3163.1(b).
- For failure to abate Major violation: 43 CFR 3163.1(a)(1).

- For failure to abate Minor violation: 43 CFR 3163.1(a)(2).

v. *Remarks: Clearly, and in detail, describe the nature of the violation, for example, "The seal is ineffective on the sales valve on Tank No. 154." The remarks must be consistent with the authority reference. Include only those remarks that are pertinent to the operator. Do not include remarks related to internal tracking.

w. Company Representative Title, Signature and Date: To be completed by the operator's representative authorized to certify completion of corrective action.

x. Company Comments: Optional, for use by the operator in commenting on violation and/or corrective action.

y. Signature of BLM Authorized Officer, Date, and Time: Inspectors delegated authority to issue notices of noncompliance or the AO must sign and enter the date and time of the signature to validate the notice of violation.

z. For Office Use Only:
*Number:

*Assessment:

*Penalty:

*Termination: This field is not used.

*Type of Inspection: Enter the appropriate Inspection Type code for the type of inspection being conducted when the violation was discovered.

K. INSTRUCTIONS FOR COMPLETING, *NOTICE TO SHUT DOWN OPERATION* FORM 3160-12 (JANUARY 1989).

1. When an immediate shutdown of operation is required under 43 CFR 3163.1(a)(3), the *Notice to Shut Down Operation*, Form 3160-12, must be used.

2. Distribution of copies: Hard copy form: The hard copy form may be used in those instances where it is necessary to issue an immediate *Notice to Shut Down Operation* in the field; however, all *Notice to Shut Down Operation* information must also be entered into AFMSS. The original and a copy of the *Notice to Shut Down Operation* (Form 3160-12) are given to the operator. Instruct the operator to sign and return the original (original BLM signature) copy to the FO. A copy must be maintained in the FO. The information from the *Notice to Shut Down Operation* must be entered into AFMSS (and any other office tracking systems as appropriate). When the operator

returns the original copy of the *Notice to Shut Down Operation*, ensure it has been signed and filed in the official hard copy files. The lessee(s) and operating rights owner(s) must be notified if civil penalties are initiated.

AFMSS-generated form: Complete the data entry screens as appropriate in AFMSS. Generate three copies of the *Notice to Shut Down Operation* form. Two copies are given to the operator. Instruct the operator to sign and return the original (original BLM signature) copy of the *Notice to Shut Down Operation* form and keep one for its records. Maintain a copy in the FO. When the operator returns the original copy of the *Notice to Shut Down Operation*, ensure it has been signed and filed in the official hard copy files. See *NIAFMSS V3 User Guide Feb 1 2007* and *NIAFMSS Handheld User Guide* for detailed instructions.

In those instances when there is a violation, a *Notice of Incidents of Noncompliance*, Form 3160-9, must also be issued to accompany the *Notice to Shut Down Operation*. While rare, there may be cases when a "Problem" is identified, an INC cannot be issued. In these situations a Written Order of the AO must accompany the *Notice to Shut Down*.

3. The following letters correspond to the fields on the Form 3160-12 (see appendix 4). The asterisk (*) indicates corresponding AFMSS data elements for data entry (see L below).

a. *Method of Delivery:

(1) If certified mail is used, so indicate. Enter the Certified Mail Receipt number for tracking.

(2) If hand delivered, so indicate. Enter the name of the person the form was hand delivered to. Ensure that a "received by" signature is obtained or record time and date delivered if the operator refused to sign.

b. *Number: A unique number must be assigned to each notice. A suggested format would be inspector initials, fiscal year, and sequential numbers, such as JD-07-001.

c. Page ___ of___: Number each page of the form used (Pg 1 of 3, Pg 2 of 3, Pg 3 of 3, and so on.).

d. *Identification: Enter the appropriate identification for the case, such as lease number, CA number, or unit name with PA designation.

e. *Bureau of Land Management Office: Enter the name, address, and telephone number of the FO that has jurisdiction over the case.

f. *Operator: Enter the operator's name.

Address: Enter the operator's mailing address. Ensure that the appropriate mailing address is used. Some notices are sent to the office of record, while others may go to a local office for the operator.

Attention: Enter the name of the company, agent, or representative responsible for correcting the violation requiring the shutdown notice.

g. *Site Name: If appropriate, enter the lease name. This may also be used to enter the Facility Identification (Facility Name). This should describe a location in terms that the operator is familiar with.

h. *Well or Facility Identification: Enter the name or number identifying the well or facility where the shutdown has been ordered.

i. *¼ ¼ Sec.: Enter quarter-quarter and section for the location.

j. *Township: Enter the township for the location.

k. *Range: Enter the range for the location.

l. *Meridian: Enter the meridian for the location.

m. *Inspector: Enter name of inspector who identified the violation requiring the shutdown notice.

n. *Date: Enter date the shutdown order is effective.

o. *Time: Enter the time of day the shutdown is ordered, using the 24-hour clock system.

p. *Corrective Action To Be Completed By: Enter date or date and hour corrective action is to be completed or abatement timeframe, starting upon receipt of notice.

q. *Report Corrective Action By: Enter the number of days, or date by which the operator must report corrective action taken to the inspection office.

r. *Date Corrected: Enter the date corrective action was completed.

s. *Remarks: The Remarks section must be used to explain why the notice to shut down is being issued. The explanation must describe in detail what operation is to be shut down. Reference *Notice of Incidents of Noncompliance* Form, 3160-9, and what needs to be corrected before operation can resume. Include only those remarks pertinent to the operation. Do not include remarks used for internal tracking.

t. Company Representative Title, Signature and Date: To be completed by the operator to certify completion of the corrective action.

u. Company Comments: This space is provided for a company representative to comment on the violation or the corrective action.

v. Signature of BLM Authorized Office, Date, and Time: The AO must sign and enter the date and time of signature.

L. AFMSS DATA ENTRY INSTRUCTIONS FOR ENFORCEMENT ACTIONS

All violation information must be entered into AFMSS. The AFMSS can generate the *Notice of Incidents of Noncompliance*, Form 3160-9, *Notice to Shut Down Operation*, Form 3160-12, and the *Notice of Written Order*, Form 3160-18. The following information describes the data entry fields required to generate a Written Order, INC or Shut Down Notice form or to document a Verbal Warning for tracking purposes. The term "INC" used throughout these instructions refers to all enforcement action types unless otherwise specified.

All Verbal Warnings must be documented in AFMSS. Indicate in the remarks that a written follow-up to a Verbal Warning was issued. Include the date, time, and name of person who received the Verbal Warning. Complete all of the applicable fields.

AFMSS Data Entry Screen: INC, Shut-Down Order, Written Order, or Verbal Warning Input (IEP.43):

This screen includes a series of TABs. Upon initial entry to this screen, the "Issued By" tab is activated. The following discusses each TAB separately.

ISSUED BY TAB

Contact Person: AFMSS allows for various "types" of addresses, such as LOC-local, GEN-general, INC-Incident of Non-Compliance, etc. Select the appropriate operator address and contact person.

BLM Office: This selection will default to the BLM Office issuing the notice. This may only be changed if the return notice should be addressed to a satellite office, rather than the main FO address.

SME Contact Person: Optional. Select the appropriate Surface Management Entity contact person for the notice.

WELLS AND FACILITIES TAB

The wells and/or facilities associated with the Case/Operator that was selected for this notice are displayed on this screen. The first column indicates the wells/facilities that have been selected/associated with the notice. To select (associate) a well or facility record, place the cursor in the "Sel" column in front of the appropriate record and double click to insert an "X" into the column. That record will then be associated with the notice. Multiple selections may be made; however, remember that for INCs, each violation must be addressed separately. Only Verbal Warnings and Written Orders can be associated with multiple records.

INC INFO TAB

INC Number: Required Field. A unique number must be assigned to each INC, Written Order, Notice to Shut Down of Operations, or Verbal Warning. For consistency unique numbers will conform as follows:

1. Fiscal Year (08 for 2008)
2. Inspectors Initials capitalized (first name and last name)
3. Sequential numbers beginning with 0001 for each FY
4. Last, a capital letter for the type of action (I=INC, S=Shut Down of Operations, V=Verbal Warnings, W=Written Order, A=Assessment, C=Civil Penalty)

NOTE: In issuing another INC for an uncorrected violation or when the severity changes from Minor to Major, close the first INC record by entering a correction date that corresponds to the issuance date of the second INC. When issuing a second INC with an assessment for an uncorrected violation, enter the same INC number as the first violation notice with an "A" designation on the end. If the violation goes to civil penalties, change the unique INC number to a "C." This will allow you to more easily track and recall all of the actual enforcement actions taken for a particular violation.

◉ Certified Mail
○ Hand Delivered: Select the appropriate option. The default option is Certified Mail.

CM RRR# /Delivered to: This corresponds to the selection above. Enter the Certified Mail receipt number, or the name of the person to whom the INC was delivered.

Inspector: Select the appropriate inspector name from the pull down picklist.

Type: Select the appropriate type of INC - operative or administrative.

INC Action Type: Select the appropriate option. Choices are: INC, Written Order, Verbal Warning, or Shut-Down Order.

INC Id Date: Enter the date the violation was identified.

INC Id Tm: Enter the time the violation was identified. (AFMSS format: 0800 for 8 a.m., 1300 for 1 p.m., etc.).

INC Eff. Date: Enter the date as 7 business days after the INC will be mailed, or the date the operator receives the notice if the notice was hand delivered.

Shut Dn Date: If appropriate, enter the date operations were shut down.

Authority Reference: Enter the appropriate CFR, Onshore Order reference, approved permit reference or COA item number. Be as specific to the nature of the violation as possible.

Act Type: Select the type of inspection or activity code that indicates the inspection that was being conducted when the violation or problem was found.

Description: This automatically populates with the description you have selected for the INC Type below.

INC Type: Select the appropriate description for the type of violation that has been identified. For example, if a well sign is missing, select the description "Location is not properly identified." To correctly identify those instances where the BLM requested that the operator submit paperwork (for example, Sundry Notices, Well Completion Reports, production record requests, and so on) use Item 51 from the listing. See Appendix 5 for information on recommended INC Type/Category designations.

Category: The category will default to the appropriate code based on the INC type selected above. Review the code to ensure it is appropriate for the type of violation.
F - FOGRMA (production related)
N - NON-FOGRMA (for example, well signs, etc.)
E - Environmental

See Appendix 5 for information on recommended INC Type/Category designations.

Gravity: Select the appropriate code:

○ Major (Noncompliance that causes or threatens immediate, substantial, and adverse impacts on public health and safety, the environment, production accountability, or royalty income).

◉ Minor (Noncompliance that does not rise to the level of a "major" violation).

Abatement: Enter the date the corrective action is to be completed. This date must be entered before printing and mailing the INC to inform the operator of the date the action is to be completed.

Trm Lse: If termination of the lease is considered appropriate, select the option that indicates the AO's action.

Y – Yes
N – No
BLANK – not applicable (default)

INC TEXT TAB

The entry field on this screen is where you must enter the text that will print on the forms. The text must contain language to tell the operator what the violation is and what must be done to correct the violation. For example, "No well sign on location. Install well sign with all of the required information per 43 CFR...."

NOTE: Do not enter any remarks that are not pertinent to the operator and are for internal tracking or internal information. This text will print on the form. A method for entering internal remarks is discussed below.

ASSESSMENT/PENALTY TAB

Amount Assessed: Enter the assessment amount to be paid by the operator in whole dollars, that is, $250, not $250.00.

Amount of Penalty: Enter the amount of the civil penalty in whole dollars. Do not enter administrative fees or interest that result from an assessment.

Assessment Schedule: Select the appropriate schedule for the assessment.

S – Single payment
P – Per day payment
BLANK – not applicable

Assmt Reference: Select the appropriate 43 CFR 3163 reference that applies to this assessment.

b – 43 CFR 3163.1(b)
a1 – 43 CFR 3163.1(a)(1)
a2 – 43 CFR 3163.a (a)(2)

RESOLUTION TAB

Date Corrected: When you have been notified that the violation or problem has been corrected, or a field visit has verified correction, enter the correction date.

NOTE: In issuing another INC for an uncorrected violation or when the severity changes from Minor to Major, close the first INC record by entering a correction date that corresponds to the issuance date of the second INC. When issuing a second INC with an

assessment for an uncorrected violation, enter the same INC number as the first violation notice with an "A" designation on the end. If the violation goes to civil penalties, change the unique INC number to a "C." This will allow you to more easily track and recall all of the actual enforcement actions taken for a particular violation.

Exten Date: The AO may extend the abatement date for the violation, up to three extensions. As any extensions are granted, enter the extension date(s) for the violation, if appropriate.

Follow-Up Date: Enter the date when follow-up occurred to ensure that the violation has been corrected. If a field visit was made, enter the date a follow-up inspection was conducted. If no field visit was made enter the date paperwork was reviewed in the office.

Trips: Optional. If a follow-up must be accomplished by field visit(s), enter the number of follow-up trips conducted to ensure that the violation was corrected. If an office review was used as a follow-up, leave this field blank.

SDR Filed: If a State Director Review (SDR) is requested by the operator, enter the date that the operator filed a request.

SDR No.: Enter the number assigned to the SDR.

Appeal Date: If the operator files an appeal to the IBLA, enter the date the appeal is filed.

IBLA No.: Enter the number assigned by IBLA.

Follow-Up Remarks: Enter remarks that pertain only to the follow-up for this notice. Follow-up remarks are required if a follow-up date is entered.

REMARKS BUTTON

Text that was entered under the INC Text Tab will print on the *Notice of Incidents of Noncompliance*, Form 3160-9, the *Notice to Shut Down Operations*, Form 3160-12, and the *Notice of Written Order*, Form 3160-18 as appropriate with the selection of the "INC Action Type" discussed earlier. Those remarks will be displayed on the Remarks screen with the appropriate category code. Also, any follow-up remarks entered under the Resolution Tab will also be displayed on the Remarks screen with the appropriate category. The entry of other remarks for internal purposes is optional and should only be entered **after** the form has been printed. Any remarks in the "General" category will print on the form.

If internal remarks are desired, use the Remarks button to enter the INC Remarks (IEP.43r) screen. CLICK THE "ADD NEW" BUTTON PRIOR TO ENTERING

REMARKS. Select the appropriate "Category" code – General or Follow-up. The "Remark Date" will fill with today's date. It may be changed if necessary.

Enter remarks into the large text field. Indicate that these are internal or subsequent remarks and they are not to be printed on the form. SAVE the remarks.

In the display above these fields, there are eight columns which show all remarks associated with this notice.

Identifier: Displays the Unique INC Number assigned to each record.

Date: Displays the date the remarks were entered/saved.

Author: Displays the name of the person who entered the remarks.

Subject: Displays INC, even though the remarks can be associated with a Written Order, etc.

Category: Will display either General or Follow-up.

API/Fac ID: Displays the API Number for the well or Facility ID for the facility associated with this notice. If multiple wells/facilities were selected, it will display "Various."

Well/Fac Name: Displays the Well Name or Facility Name associated with the notice. If multiple wells/facilities were selected, it will display "Various."

Number: Displays the well number for the API Number associated with the notice. If multiple wells were selected, it will display "Various."

To view remarks listed in this display, click on the desired row and the corresponding remarks will be displayed in the text field below.

Association of Remarks to Records within AFMSS

When remarks are entered, there are three options available for the association of the remarks to various documents within AFMSS.

* This INC only – all remarks entered for a specific notice will only be associated for this particular record. THIS IS THE DEFAULT SELECTION AND IS RECOMMENDED FOR THE MAJORITY OF NOTICES. The remarks for this notice will only be displayed in the Remarks screen for the notice.

All INCs for Case and Operator – This option can be used if you wish to associate the remarks for the notice to all other notices for the Case/Operator.

All INCs for Same Wells/Facilities – This option can be used if you wish to associate the remarks for the notice to all general remarks for wells/facilities selected for the current notice.

Remark Display

Three additional options are available on the Remarks screen. These options affect the display of remarks associated with the Case/Operator for the current notice.

To view the remarks associated to inspections or undesirable events, associated wells and facility records, and/or associated Sundry Notices for the Case/Operator the INC is associated with, click in the box to turn these options on. Click on the "Query" button and all remarks will be displayed. You may select one or more of these selections.

M. INC CATEGORY CODES

The following list of violation types contains the recommended category default. Users are encouraged to refer to this listing to ensure consistent application of the Category designation for compliance rating purposes.

Users will be able to edit the INC category field as necessary to meet site-specific conditions.

AFMSS automatically sets the INC Category Code to the appropriate classification listed below. However, it will be necessary to verify the code when documenting compliance actions. The INC Category Codes are:

F = FOGRMA-related
N= Non-FOGRMA
E = Environmental

N. PROCEDURES FOR COLLECTION OF ASSESSMENTS AND PENALTIES FOR NONCOMPLIANCE ON FEDERAL AND INDIAN OIL AND GAS LEASES

1. Overview/General Requirements
   If a *Bill for Collection*, Form 1371-22, is sent to the operator and the operator fails to pay the amount owed, the FO will send a demand letter to the operator. If the operator fails to make payment within the time allotted, the lease can be shut down (for Indian leases, only upon concurrence of the appropriate BIA office, tribe and allottee as appropriate), and a second demand letter will be sent. If the operator fails to make payment within the timeframe allotted in the second letter, the BLM will attach the bond for the amount owed without further notice.

If lease shutdown or bond attachment is not available or advisable (for example, the lease is already shut down, there are other higher priority demands on the bond, or the Indian lessor does not support such action, etc.), the BLM may be able to collect the outstanding debt through administrative offset or litigation against the operator. The BLM also may pursue lease cancellation as a result of continued noncompliance.

The following procedures provide detailed guidance on collecting outstanding assessments/civil penalties. This guidance modifies existing guidance found in the debt collection portion of the BLM *Collections Reference Guide*. The modification applies only to outstanding debts from noncompliance on Federal and Indian oil and gas leases. Detailed guidance for attachment of a bond is found in the Fluid Minerals Bond Processing User Guide, formally referred to as the 3104-1 *Bond Manual and Handbook*.

2. Steps for Issuing a Billing Notice for Assessments or Civil Penalties

a. When an INC or an order of the AO has been issued and an assessment and/or civil penalties have resulted, a Bill for Collection, Form 1371-22, is to be sent to the operator. A bill for an assessment can be sent with the INC notice; however, by regulation civil penalties cannot be assessed/billed until the party charged with the violation has either elected not to appeal the notice or has exhausted all appeal rights.

In order to determine whether bills originated from assessments or civil penalties on Federal or Indian leases, the preprinted alpha prefix "A" in the bill number is to be changed to an "I" for Indian Leases.

The bill must include:

- Lease Number;
- INC Number;
- Due Date (30 days from receipt);
- A statement that failure to pay will result in additional enforcement actions, including civil penalties, lease shutin and/or attachment of the bond; and
- A statement that failure to pay and subsequent attachment of the bond may also put the lease in jeopardy of cancellation (43 CFR 3104.7, 3108.3, and 3163.1(a)(5) for Federal leases and 25 CFR 211.27, 212.23, 213.40 or 225.36 for Indian leases).

b. The FO shall mail the bill to the operator by certified mail, return receipt requested, with a courtesy copy sent to the lessee(s) and the party holding the surety bond. If the lease is an Indian lease, the appropriate BIA office shall also receive a copy.

c. After the bill is sent, the operator has 30 days from receipt of the bill to make payment. If, after 30 days, the operator fails to pay the assessment/civil penalty, a demand letter must be sent (refer to items VI.N.3 and 4 for demand letter instructions). Under normal circumstances the BLM will shut in the lease before the BLM takes steps to attach the bond, initiate litigation, or begin lease cancellation. Prior to shut in, however, the AO may take into consideration such things as operator history, number and amount of outstanding assessments/civil penalties, BIA concurrence if applicable, lease production, and existing bond coverage in deciding the appropriate action to take.

Examples of when shutdown action should not be initiated include cases where the lease is already shut down for other infractions or is in a temporarily abandoned status, the BIA does not support the shutdown of an Indian lease, shutdown would result in damage to the well or loss of resources, or the lease is in bankruptcy and the trustee does not allow shutdown. If the lease situation does not meet these examples, then the FO should proceed with shutdown procedures.

Since continued operator noncompliance will result in additional enforcement actions ranging from lease shutdown to lease cancellation, it is important that the lessee of record is made aware of pending enforcement activities. As such, the lessee(s) shall receive copies of the bill and all subsequent correspondence to the operator.

3. First Demand Letter

a. The first demand letter is to be sent to the operator by certified mail, return receipt requested, with a copy sent to the lessee and the party holding the bond. The letter shall include information that the payment is due 15 days from receipt and a statement that failure to pay the assessment/civil penalty, plus handling charges and accrued interest, will result in lease shutdown. The demand letter must also provide information on appeal rights under 43 CFR 3165.3(b).

In the case where lease operations are already shutdown due to nonabatement, the FO is to start with the second demand letter.

b. If an Indian lease is involved, the BLM must consult with the BIA prior to sending out the letter to determine if lease shutdown is an acceptable option to the tribe or allottee. If it is acceptable, the operator is to be reminded that the lease may be terminated if production ceases as provided for in the lease terms.

c. For Federal leases, a copy of the first demand letter must be sent to the appropriate fluid mineral adjudication personnel in the state office to place in the lease case file and to the surety company or party holding the personal bond at the time the bond demand is made. If Indian leases are involved, the appropriate BIA office must receive a copy.

d. The operator has 15 days from receipt of the first demand letter to make the payment. If the operator has not made payment after 15 days, the BLM may shutdown lease operations using BLM Form 3160-12, *Notice to Shut Down Operations*. The operator then has 30 days from receipt of the *Notice to Shut Down Operations* to make payment. If payment is not received, the BLM will send a second demand letter. Failure to comply with the second demand letter will also result in assessments or civil penalties.

4. Second Demand Letter

a. If lease operations have been shutdown and the operator has not responded within the specified timeframe (30 days), a second demand letter shall be sent to the operator by certified mail, return receipt requested, with a copy sent to the lessee and the party holding the bond. The second demand letter shall state that the operator has 15 days from the date of receipt to make the payment and that it is the final notice before the BLM/BIA takes action to attach the bond under which operations are being conducted.

The letter shall include a statement that failure to pay will result in:

(1) A request for payment by the surety or collection from other collateral posted as bond (after elapse of 15 days from date of receipt), and

(2) If the amount owed is not fully covered by the bond, any amount outstanding after the attachment of the bond shall be reported as income to the Internal Revenue Service on Form 1099-G, *Certain Government Payments*.

b. For Federal leases, a copy of the second demand letter must be sent to the appropriate fluid mineral adjudication personnel in the state office to be placed in the lease case file. Adjudication is required to send a copy of the letter to the surety company or party holding the personal bond at the time the bond demand is made. When the adjudication staff makes the decision to attach the bond, copies must be directed to the lessee, operator, surety company, and principal or the party holding a personal bond. If Indian leases are involved, the appropriate BIA office takes the necessary action to attach the bond.

5. Attachment of Bond

If the operator fails to pay the assessment and accrued interest within 15 days after receipt of the second demand letter, the following steps are to be taken:

a. For Federal leases, the BLM FO requesting bond attachment must send a memorandum to the appropriate state office fluid minerals adjudication personnel to initiate attachment of the bond for the outstanding amount. The bond to be

attached is the bond under which the operations are conducted whether it is the operator's or lessee's bond. The standard procedures found in the BLM *Interim Guidance Handbook*, H-3104-1, Bonds, are to be followed. Notification to other agencies, such as the Minerals Management Service (MMS), that the BLM will be attaching the bond must be made. For Indian leases, the BLM FO shall send a letter to the appropriate BIA office with a request that the bond be attached.

b. After the bond has been attached, the principal/obligor has 6 months, or less at the discretion of the AO, to restore the bond to the face amount, post a new bond, or to establish alternate bonding coverage for the operator (see 43 CFR 3104/7(b)). The AO may require an increase in the amount of bond whenever it is determined that the operator poses a risk, as provided in 43 CFR 3104.5(b) or in 25 CFR 211.6(c), 212.10, 213.15(c) or 225.30(e). If the bond is not re-established as required, lease operations shall remain shutdown and the lease may be subject to cancellation under the provisions of 43 CFR 3108.3 for Federal leases, and 25 CFR 211.27, 212.23, 213.40 or 227.28 for Indian leases.

6. Surety Fails to Pay

In accordance with the *Interim Guidance Handbook*, H-3104-1, Bonds, failure of a surety company to submit payment will result in a BLM recommendation to the Department of the Treasury for removal of the surety from the list of certified, acceptable sureties. See section 10 below for referring the case to the Department of Justice for litigation.

7. Bankrupt Entities

Bankruptcy proceedings do not stop the BLM's regulatory responsibilities. If violations are discovered and they are not abated timely, assessments and civil penalties shall be imposed. Close coordination with the regional or field solicitor's office is required for liabilities involving bankrupt parties. The bankruptcy court must be notified by the state office minerals adjudication personnel through the regional or field solicitor's office that the bond is being attached. If a bankrupt operator has incurred assessments and/or civil penalties and has failed to pay, the bond covering the operations is to be attached with an information copy provided to the regional or field solicitor's office.

8. Credit Bureau Reporting

If there is still a portion of the debt outstanding after the bond is attached or if for some reason the bond is not attached, the FO must send written notification to the National Operations Center (NOC), Division of Business Services, requesting that the details of the debt be reported to the appropriate credit bureaus.

9. Administrative Offset

The use of an administrative offset procedure allows agencies to collect debts from monies that otherwise would be refunded to the debtor for overpayment to other Federal agencies such as the MMS or the Internal Revenue Service. Although this procedure is not widely used at this time, opportunities for administrative offset should be pursued where available. Contact the NOC, Division of Business Services, concerning administrative offset.

10. Litigation

In instances where there is no appeal pending, the statute of limitations has not been exceeded, and the amount due and the right to collect the debt are clear, the Department of Justice (DOJ) has established a system of direct referral making it unnecessary to send a request to the regional or field solicitor's office to initiate litigation. Using this process, debts over $600 can be referred to the DOJ's National Center Intake Facility (NCIF) for litigation. The DOJ will consider litigation for amounts under $600 if it is important to the enforcement of some agency program (see Page 2 of 7, Claims Collection Litigation Report (CCLR) Instructions). Although debts can now be referred directly to the DOJ, the regional or field solicitor's office is to be advised that such action is being taken.

a. The DOJ *Litigation Referral Process Handbook* should be reviewed carefully. When referring a debt to the DOJ, it is important that the 7-page CCLR, exhibit 3 in the handbook, be filled out as completely as possible. Instructions for completing it are on the back of the form. Items 1, 3, and 4 of the form are particularly important to facilitate timely distribution of the claim and to ensure that all correspondence from the NCIF and U.S. Attorney is sent to the appropriate BLM office.

(1) Item 1 is the agency claim number: enter the document identification number from the *Bill for Collection* (Form 1371-22).

(2) Item 2 is an address block: enter the address of the U.S. Attorney's Office.

(3) Item 3 is a return address block: enter the address of the BLM office initiating the claim.

b. The CCLR package must also contain certain other information (see page 5 of the CCLR), including a credit report. The NOC, Division of Business Services is to be contacted to obtain credit bureau information. Fees for credit reporting must be added to the amount due. In order for credit bureaus to provide the most accurate and up-to-date information possible, the BLM must be able to supply them with a company (or individual's) name and current address. If the taxpayer identification number (TIN) or social security number (SSN) is available, it also is

to be provided. Although the BLM does not require lessees or operators to provide a TIN/SSN, this number may be available from the Debt Collection Section of the MMS, Accounts Receivable Division.

Additional sources of financial information include State Corporation Commissions and special credit bureau reports such as business profiles. Questions relating to the administrative aspects of the direct referral process or forms that are to be submitted can be directed to the NCIF at 301-585-2391.

c. At the point that the debt is referred to the DOJ, all other agency collection actions for that debt must cease. When the NCIF receives a referral, NCIF screens the referral prior to legal action. Once the referral has been screened and accepted, the NCIF sends an acknowledgment of receipt to the client agency. The package is then forwarded to either the U.S. Attorney or private counsel, on contract to the DOJ, for action. Any payments that are collected as a result of such action are deposited to a DOJ lockbox at a bank in Atlanta, Georgia. The bank processes the payments, wires the funds directly to the appropriate departmental account, and provides any necessary follow-up information to the NCIF. The NCIF is able to provide its client agencies with reports on the debts referred, the litigating office handling the debt, and information on the disposition of closed debts.

d. If there is some question as to whether litigation should be pursued through the solicitor's office or by direct referral to the DOJ, or if there is some uncertainty regarding the legal existence or legal merits of the debt, the solicitor's office or local U.S. Attorney's Office is to be consulted.

11. Uncollectible Assessments/Civil Penalties

a. When bankruptcy is not involved, or there is no bond, and all available steps have been taken, the matter is to be turned over to the regional or field solicitor's office for final determination that the debt is uncollectible.

b. If the solicitor's office makes a determination that the debt is uncollectible and recommends that the debt be written off, the case is to be turned over to the NOC, Division of Business Services, for official write-off. A *Cover Sheet for Write-Off* (Form 1370-45) must be submitted by the SD to the NOC to write off a debt. In the comments section (item number 19) a notation is to be made that the data is to be sent to the credit bureau and the amount being written off will be reported as income to the Internal Revenue Service.

c. The Division of Business Services will notify the Internal Revenue Service via Form 1099-G, *Certain Government Payments*, that the amount of uncollected debt is to be considered income for tax purposes.

12. Lease Cancellation

a. For a Federal lease, if the decision is made to initiate lease cancellation, the regulations at 43 CFR 3108.3 provide that a lease may be canceled by the Secretary only if the leasehold does not contain a well capable of producing in paying quantities, or the lease is not committed to a unit or communitization agreement that contains a well capable of production of communitized substances in paying quantities. If the lease does contain such a well or is committed to an agreement with such a well, the lease may be canceled only by judicial proceedings in Federal court. The state office fluid minerals adjudication personnel handle lease cancellation proceedings (see Handbook 3108.1).

b. For an Indian lease, the BLM shall make a recommendation to the BIA that the lease be canceled under the appropriate sections of Title 25 CFR.

13. Appeals Process

The filing of a request for an SDR will not result in the suspension of the requirement for compliance or stop the accumulation of assessments or civil penalties unless the State Director so determines.

In some instances, the timing of a SDR decision may occur on or shortly after the deadline for payment if the operator waits until the last minute to file an appeal. The FO actions from this point will be contingent upon the decision rendered by the SD. Questions from FOs may arise on whether or not to continue pursuing payment until the decision is rendered. Such questions should be directed to the state office for resolution. In most cases, FOs shall continue pursuit of payment of the assessments/civil penalties in a timely manner despite the filing of an appeal.

VII. INSTRUCTIONS FOR USE OF LETTER FORMAT FOR INCIDENT OF NONCOMPLIANCE (INC) and ORDER OF THE AUTHORIZED OFFICER (Order)

In section VI **Oil and Gas Program Enforcement Procedures,** parts C and D provide for the basic requirements of formal notification for violations or problems. The policy requires notification to be issued using either the AFMSS forms (INC or Order) or a letter format.

The use of the letter format for issuing INCs, Written Orders, or a combination of INCs and Orders presents unique challenges to those issuing the letter, the operators, and if a State Office Review is requested. In order for the letter format to be effective in gaining compliance and supportable upon review or appeal, certain standards must be followed.

The following information outlines 1) mandatory elements that must be included in the letter format and 2) recommended practices when using a letter. An example letter format can be found in Appendix 4 Forms.

A. MANDATORY ELEMENTS

All letters used to notify an operator of any problem or violation must contain the following information:

1. When using mailing services, the letter must be sent via certified mail using the return receipt request. The letter must include the certified mail number and indicate return receipt requested.

2. Operator's[2] or appropriate party's company name and address.

3. Whenever possible the salutation (e.g., Attention: John Smith) should be addressed to a specific person or the appropriate designated representative.

4. Announce the purpose of the letter in bold, capitalized, underlined, and centered text:

   a. **NOTICE OF INCIDENT OF NONCOMPLIANCE (INC),**
   b. **NOTICE OF AN ORDER OF THE AUTHORIZED OFFICER**, or
   c. both **NOTICE OF INCIDENT OF NONCOMPLIANCE (INC) and ORDER OF THE AUTHORIZED OFFICER.**

   Note: Use of the letter format without the emphasized text has been a source of dispute, argument, and problems sometimes ending in review or appeal. The objective of the emphasized text is to ensure there is no confusion on the part of those receiving

[2] Operator is defined by 43 CFR 3160.0-5, as "... any person or entity including but not limited to the lessee or operating rights owner, who has stated in writing to the authorized officer that it is responsible under the terms and conditions of the lease for the operations conducted on the leased lands or a portion thereof."

the letter as to the purpose and importance of the notice. The use of the emphasized text avoids possible miscommunication and misunderstandings on the part of the operator and supports the letter format if appealed.

5. Legal Identification Information:

   a. Lease or agreement number, well or facility name and/or number, legal location information (township, range, ¼-¼, county, state, etc.).

   b. Letters that identify multiple problems and/or violations must include the legal identification information for every separate lease, agreement, well, or facility for each problem and/or violation identified.

   c. For approved off-lease operations/facilities with problems or violations, the letter must include both the legal identification information for 1) the off-lease facility and 2) appropriate well(s), facility(s), lease(s), and/or agreement(s) that are connected to or affected by the off-lease facility problems and/or violations.

6. Date and time of the inspection in which a particular problem or violation was found. Again, when multiple problems and/or violations are listed in the letter that involve differing dates or times, each problem and/or violation or group thereof must indicate the appropriate date and/or time when discovered.

7. Each individual INC or Order identified in the letter contains the following information:

   a. A unique number;
   b. A clear and concise description of the problem or violation;
   c. Most appropriate regulatory citation or authority (CFR, Onshore Order, Notice to Lessees (NTL), Conditions of Approval (COA), etc.) for the problem or violation. Do not cite the BLM policy or guidance;
   d. The corrective action for each individual Order or INC. Do not stipulate how to correct the problem or violation, unless existing regulatory authority (lease stipulations, COAs, NTLs, Onshore Orders, etc.) provides specifications for correction;
   e. The abatement date or time for correction of each specific Order or INC;
   f. Company representative's signature and date lines for each Order or INC (this is to be used by the operator to certify when the violation or problem was corrected);
   g. Each INC listed must be assigned the appropriate gravity determination; and
   h. Each INC, when required and applicable, must assign the proper assessment amounts.

8. Each Letter must include both complete **"WARNING"** and **"REVIEW AND APPEAL RIGHTS"** paragraphs from the INC/Order form.

9. Date and signature of the appropriate AO.

Note: Check your local delegation of authority identified in the 1203 BLM manual under BLM form No. 1221-2.

In addition, 43 CFR 3165.3(a) *Notice*, requires BLM to notify "…an operating rights owner or operator, as appropriate, [on any failure] to comply with any provision of the lease, the regulations in this part, applicable orders or notices, or any other appropriate orders of the authorized officer, written notice shall be given the appropriate party and the lessee(s) to remedy any defaults or violation." This citation (3165.3(a)) also allows, under certain circumstances, notice to be given to any "…person conducting or supervising operations subject to the regulations in this part…" for major violations, and "…any contractor or field employee or designated representative…" for minor violations. When notice is provided in this manner, a copy must also be mailed to the operator.

B. ENTRY INTO AFMSS

Each uniquely numbered INC and/or Order must be individually entered into AFMSS as directed in section VI.

C. ADDITIONAL RECOMMENDED PRACTICES

Use of the letter format to issue corrective actions for problems or violations, as discussed earlier, has caused confusion and frustration for both the operator and the BLM. These situations have occurred mainly due to how a letter was constructed and/or assumptions about how the instructions will be interpreted. Many of these problems and issues arise when multiple INCs, Orders, or a combination of both are addressed in the letter; or information, like those items required above, is not included in the letter. In an effort to prevent potential problems when using the letter format for enforcement and compliance actions, the following recommendations are provided:

1. When addressing multiple problems and violations for one object on a location, itemize the individual problems and/or violations separately, as required in item A.7 above. They could be listed under one heading, preferably, rather than combining them into one Order of the Authorized Officer or INC. For example, on an older facility with very few COAs you might find:

   Disposal Pit**:**

   Order of the Authorized Officer:
   1. Clean trash from pit
   2. Clean up oil-stained dirt within pit enclosure
   3. Install flagging per Gold Book standards for wildlife protection

Incident of Noncompliance:

1. Repair fence to standards required in item 9 in the APD COAs
2. Remove all fluids from the pit per Order No.7 emergency pit approval

2. When issuing both Orders and INCs in the same letter, use separate headings, as shown above, to clarify to the operator which items are violations (requiring INCs) and which items are Orders of the Authorized Officer.

3. Use only the most applicable and specific regulatory authority that applies to the violation or problem. Normally, this would mean only one citation would be used. If multiple citations are used, the problem or violation must be reviewed to ensure there is not more than one violation or problem involved in the action.

4. Unless specifically required by some type of requirement (COA, NTL, Onshore Orders, etc.), the description of the corrective action must not instruct operators in a specific manner on how the issue must be fixed. The method an operator uses to accomplish the correction is up to the operator, as long as the problem or violation is corrected. If the BLM were to require a specific method of correction not specified by an existing requirement, and the method failed, the BLM could be held liable for damages.

5. Policy and guidance document(s) should never be cited as a requirement with which an operator must comply or a method for correction. Policy and guidance are strictly BLM internal instructions on how its responsibilities should be conducted and have no legal bearing on the oil and gas operator.

6. Be as clear and concise as possible in directions to the operator. Do not assume that an operator necessarily will know or understand what you are attempting to describe. Consider having non-oil-and-gas personnel review your letter to see if they understand what is being conveyed.

Note: In most instances the use of the letter format is limited to INCs or Orders that involve an entire AFMSS case for example: An Order to submit production records.

APPENDIX 1 INSPECTION TYPE AND ACTIVITY CODES

A. Inspection Type Codes and Definitions

1. **Production Inspection Type Codes**

   PI - Production Inspection: An inspection that, at a minimum**,** includes measurement, environmental, site security, and health and safety inspection activities as well as a records review of monthly production data.

   RV - Records Verification Review: An office-only review of production records.

   OV - Oversight Inspection: An inspection performed independently to verify results of previous inspections by local or remote inspection personnel. This may be an office review of inspection documentation or field inspection.

   TH - Alleged Theft Inspection: An inspection that is triggered by a report of alleged theft of production.

2. **Well Specific Inspection Type Codes**

   DW - Drilling Well: An inspection related to drilling operations prior to well completion up through cementing of the production casing/liner.

   ES - Environmental Inspection: An inspection of the surface environment of a well or facility location. Environmental Inspections are documented for all post-approval activities such as pad construction, drilling, production, or abandonment operations. Pre-approval onsite inspections are recorded under the *Surface Review (GLB.80)* screen in AFMSS and not under this Inspection Type.

   NU - Undesirable Event Inspection: An inspection conducted as a result of a reported undesirable event in accordance with *Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases* (NTL-3A).

   PD - Plugging Operations Inspection: An inspection of plugging operations of dry holes or depleted producers.

   WK - Workover Inspection: An inspection of operations conducted on a wellbore subsequent to cementing production casing/liner and prior to plugging operations.

B. Inspection Activity Codes and Definitions

BO - Blowout Prevention Equipment (BOPE) Inspection: (Well specific) A drilling, workover, or plugging activity to witness BOPE tests. Coded as DW/BO, PD/BO, WK/BO or OV/BO.

C - Cementing Well Inspection: A drilling or workover activity consisting of witnessing cementing activities. Coded as DW/C, WK/C, or OV/C.

CS - Casing Test Inspection: A drilling or workover activity consisting of witnessing a casing test in any type of well. This includes pressure tests (mechanical integrity tests), mud weight equivalency tests, or any tests for temporarily abandoned or injection/disposal well approvals. Coded as DW/CS, WK/CS, or OV/CS.

CV - Gas Chart/EFM Verification: Field observations used to calculate reasonableness of reported volumes on the OGOR and to verify that the recorder or electronic flow meter (EFM) is functioning properly and recording correctly; or an office review of gas meter charts or EFM configuration and/or integration reports not associated with a PR or RR activity that includes calculating the volume from the charts or integration statements and comparing the volume to the OGOR. Coded as PI/CV, RV/CV, OV/CV, or TH/CV.

DI - Detail Drilling/Workover: A detailed activity of all ongoing drilling well operations, and completion of all applicable sections of the Drilling Inspection Record (Form 3160-10), including the General and Surface Use portions of the form. Coded as DW/DI, WK/DI, or OV/DI.

DS - Drill Stem Test: An activity related to witnessing DST operations. Coded as DW/DS or OV/DS.

FA - Fires/Accident: An activity of an Undesirable Event of a fire or a reportable accident involving personnel per NTL-3A. Coded as NU/FA or OV/FA.

HS - Health and Safety Inspection: An activity required for health and safety concerns (e.g., H_2S or hazardous materials). Coded as DW/HS, ES/HS, PI/HS, PD/HS, WK/HS, or OV/HS.

IR - Surface/Environmental - Interim Reclamation: An activity for the surface/environment of the reclaimed area of a pad location. Initial inspection should take place within 6 months after the well is completed for production (per Onshore Order No. 1). Coded as ES/IR.

LV - LACT Run Ticket Verification: An activity to witness a LACT meter calibration which includes S&W grind out, gravity determination, meter readings,

and/or preparation of run tickets associated with that sale. Coded as PI/LV, TH/LV, or OV/LV.

MC - Meter Calibration: An activity to witness a meter calibration, including the evaluation of the calibration report for completeness and meter accuracy; or an office review of meter calibration report(s) that includes calculating percent of meter error (see attachment 5 for determining volume discrepancy or calculating meter error). Coded as PI/MC, RV/MC, TH/MC, or OV/MC.

MP - Meter Proving: An activity to witness a meter proving, including the evaluation of the proving report for completeness and meter accuracy; or an office review of meter proving report(s). Coded as PI/MP, RV/MP, OV/MP, or TH/MP.

NI - Nondetailed Drilling/Workover Inspection: At a minimum, an activity for and completion of the first two sections of the drilling/workover inspection record, Form 3160-10. Includes inspection of any drilling/workover operations that have not progressed to the point where the applicable section can be completed entirely. Coded as DW/NI, WK/NI, or OV/NI.

PD - Plugging of a Depleted Producer/Service Well: An activity to witness the plugging operations of a depleted producer or service well. Coded as PD/PD or OV/PD.

PN - Plugging of a Dry Hole: An activity to witness the plugging operations of a nonproductive well. Coded as PD/PN or OV/PN.

PR - Production Records Review: An office review of all production records associated with a case (including but not limited to OGORs, run tickets, gas charts, integration statements, calibration/proving reports, volumes calculations, flaring/venting approvals, etc.) **for a given reporting period**. If a volume discrepancy is detected during a PR, the specific record should be identified in the remarks section. Coded as PI/PR, TH/PR, or OV/PR.

PT - Production Test: An activity conducted on a well basis. This activity is to verify test production and ensure proper reporting of these volumes to MMS. This activity is required during or after drilling operations, but prior to the completion of the well. Coded as DW/PT.

RD - Variable Royalty Rate Determination: An activity to verify well status and determine well count; or an office-determination of well count and royalty rate based on OGOR information. Coded as PI/RD, RV/RD, TH/RD, or OV/RD.

RR - OGOR Review: An office or field review of the OGORs as part of a PI or RV. If a complete records review is conducted under a PI, as defined under the PR activity, this code is not used. Coded as PI/RR, RV/RR, TH/RR, or OV/RR.

SA - Surface/Environmental - Abandonment: An activity of the surface/environment of abandoned well site reclamation in progress or completed. Coded as ES/SA, PD/SA, or OV/SA.

SC - Surface/Environmental - Construction: A post-approval environmental activity of a well location prior to well spud. This includes well pad construction activities. Coded as ES/SC or OV/SC.

SD - Surface/Environmental - Drilling: An activity of the surface/environment of a well being drilled. Coded as DW/SD, ES/SD, or OV/SD.

SP - Surface/Environmental - Producing: An activity of the surface/environment of a producing, shut-in, temporarily abandoned, or service well and/or facility. Coded as PI/SP, ES/SP, or OV/SP.

SS - Site Security: An activity of seals, valves, meter bypasses, and site facility diagram for a production facility(s); or an office review of the site facility diagram for completeness. Coded as PI/SS, RV/SS, TH/SS, or OV/SS.

SV - Spill/Venting: An activity of an Undesirable Event involving spills or venting of gas as a result of equipment failure or other accidents. Includes blowout inspection or loss of control of a well per NTL-3A. Coded as NU/SV or OV/SV.

T - Well Test Inspection: An activity related to witnessing or reviewing records of a well test. Coded as DW/T, PI/T, RV/T, or OV/T.

TG - Tank Gauge: An activity to witness or independently perform a tank gauge for sales, including run ticket verification; or conducting an independent tank gauge to establish a production rate to determine reasonableness as compared to the OGORs. Coded as PI/TG, TH/TG, or OV/TG.

TR - Transporter and/or Manifest Inspection: An activity to review the transporter's manifest. Coded as PI/TR, TH/TR or OV/TR.

TV- Run Ticket Verification: An office review of run tickets that includes calculating the volume and comparing to the OGOR. Coded as PI/TV, RV/TV, TH/TV, or OV/TV.

WS - Well Status Check: An activity to verify the actual status of a well compared to the reported status. This activity is used when the primary purpose of the inspection is to

check a well status, which may be part of the idle/orphan well initiative. Do not record as a separate inspection activity if a status check is conducted in conjunction with other inspection activity types. Coded as PI/WS, ES/WS, TH/WS, or OV/WS.

C. Valid Inspection Type / Activity Code Cross Reference Table

Valid Inspection Type and Activity Codes		
Production Inspection	**Inspection Type Code**	**Inspection Activity Code**
Tank Gauge	PI	TG
Meter Proving	PI	MP
Meter Calibration	PI	MC
Site Security	PI	SS
Environmental	PI	SP
Gas Chart Verification	PI	CV
Run Ticket Verification	PI	TV
Production Records Review	PI	PR
LACT Run Ticket Verification	PI	LV
Health and Safety	PI	HS
Transporter and/or Manifest	PI	TR
Well Test	PI	T
Variable Royalty Rate Det.	PI	RD
OGOR Review	PI	RR
Well Status Check	PI	WS

H-3160-5 - INSPECTION AND ENFORCEMENT DOCUMENTATION AND STRATEGY DEVELOPMENT HANDBOOK (Internal)

Valid Inspection Type and Activity Codes

Drilling Inspections	Inspection Type Code	Inspection Activity Code
Detailed Drilling Inspection	DW	DI
Non-detailed Drilling Inspect.	DW	NI
BOPE Test	DW	BO
Cementing	DW	C
Casing Test	DW	CS
Drill Stem Test	DW	DS
Environmental	DW	SD
Production Test	DW	PT
Health and Safety	DW	HS

Plugging Inspections	Inspection Type Code	Inspection Activity Code
Environmental	PD	SA
Plugging - Dry Hole	PD	PN
Plugging - Depleted Producer	PD	PD
BOPE Test	PD	BO
Health and Safety	PD	HS

Valid Inspection Type and Activity Codes		
Workover Inspections	**Inspection Type Code**	**Inspection Activity Code**
Detailed Inspection	WK	DI
Non-detailed Inspection	WK	NI
BOPE Test	WK	BO
Cementing	WK	C
Casing Test	WK	CS
Environmental	WK	SP
Health and Safety	WK	HS
Environmental/Surface Inspection	**Inspection Type Code**	**Inspection Activity Code**
Drilling	ES	SD
Producing	ES	SP
Abandonment	ES	SA
Health and Safety	ES	HS
Surface Construction	ES	SC
Interim Reclamation	ES	IR
Well Status Check	ES	WS

H-3160-5 - INSPECTION AND ENFORCEMENT DOCUMENTATION AND STRATEGY DEVELOPMENT HANDBOOK (Internal)

Valid Inspection Type and Activity Codes		
Records Verification Inspection	**Inspection Type Code**	**Inspection Activity Code**
Run Ticket Verification	RV	TV
Gas Chart Verification	RV	CV
Meter Proving	RV	MP
Meter Calibration	RV	MC
Site Security	RV	SS
Variable Royalty Rate Det.	RV	RD
OGOR Review	RV	RR
Well Test	RV	T
Production Records Review	RV	PR
Undesirable Event Inspection	**Inspection Type Code**	**Inspection Activity Code**
Spill/Venting	NU	SV
Fire/Accident	NU	FA
Oversight Inspection	**Inspection Type Code**	**Inspection Activity Code**
**	OV	All Activity Codes may be used

Valid Inspection Type and Activity Codes		
Alleged Theft Inspection	**Inspection Type Code**	**Inspection Activity Code**
Tank Gauging	TH	TG
Meter Proving	TH	MP
Meter Calibration	TH	MC
Site Security	TH	SS
Environmental	TH	SP
Production Records Review	TH	PR
Run Ticket Verification	TH	TV
Gas Chart Verification	TH	CV
LACT Run Ticket Verification	TH	LV
Transporter and/or Manifest	TH	TR
Variable Royalty Rate Det.	TH	RD
Records Review	TH	RR
Well Status Check	TH	WS

APPENDIX 2 MMS APENDIX G PRODUCING INTERVAL CODES

Appendix G
Producing Interval Codes

The producing interval code, sometimes referred to as the completion code, is a three-character standard format code (X99 where X = a letter and 9 = a number) assigned by BLM and OSM, when a Well Summary Report, Form MMS-125 is accepted. The numeric portion is uniquely and permanently related to a specific completion zone or producing configuration within a wellbore.

- The 3-character producing interval code is a separate identifier and is not part of the 12-digit API number. However, it does complete the well number for reporting purposes.

- The letter of the code is assigned based upon the number of tubing strings in the wellbore that are capable of production. For example, a producing interval code of **S01** indicates a single tubing string; **D01** indicates a dual completion.

NOTE

In the case of a multizone or dual completion where production from one reservoir flows through a tubing string and that from another reservoir through the annulus, the letter of the producing interval code is D. In this case, this does not signify the presence of two tubing strings but indicates there are two separate production streams with the annulus acting as a tubing string.

- The two numbers of the code relate to a specific reservoir or wellbore configuration and are assigned sequentially beginning with the number 01 for the first reservoir or formation completed within a wellbore, followed by consecutively increasing numbers assigned to

Minerals Production Reporting Functions
MMS/MRM Release 1.1 ◆ 05/2001

E. Producing Interval Codes

successive completed reservoirs or formations. For example, a producing interval code of S01 indicates the first reservoir completed in the well; S02 indicates the second reservoir or formation completed. If, however, additional perforations are added to an S01 completion in the same reservoir or formation, the producing interval code remains S01 because the completion is still producing from the same reservoir or commingled situation.

The components of the producing interval code are as follows:

- The first character indicates the number of tubing strings; for example:

Borehole	X
Single	S
Dual	D
Triple	T
Quadruple	Q
Quintuple	V
Allocated	A (onshore only)
Commingled	C (onshore only)

- The second and third characters indicate the reservoir or formation completed; for example, 01 through 99.

A producing interval code of X01 must be used when reporting only the wellbore, such as in the following cases:

- Reporting an active or inactive drilling well.
- Reporting a wellbore in which all completions have been abandoned but the wellbore itself has not been abandoned; that is, temporary abandonment.
- Reporting a wellbore that has been permanently abandoned.

Largely due to new technology, offshore special completions and producing situations exist that require exceptional naming and numbering guidelines. In turn, these cases are addressed by reserving and using blocks of

3. Producing Interval Codes

producing interval codes for well completion identification purposes. These reserved producing interval code ranges are identified as follows:

Producing interval code	Reserved for
01–19	All "routine" producing completions not included in any of the following groups.
21–39	All completions involving the combined production of oil and natural hydrocarbons in a single tubing string.
41–59	All completions that "cross lease lines."
61–79	All "capacity" completions. A capacity completion is defined as a completion with two or more tubing strings producing or capable of producing from the same reservoir.
81–99	Unassigned.

The producing interval code is required on the 3160-4 to complete the API well number and is confirmed to the designated operator through the WELL Confirmation Report. The following examples illustrate the correct producing interval codes for various completions:

(G) Onshore Examples

EXAMPLE

Example (G-1): Onshore—Basic drilling well

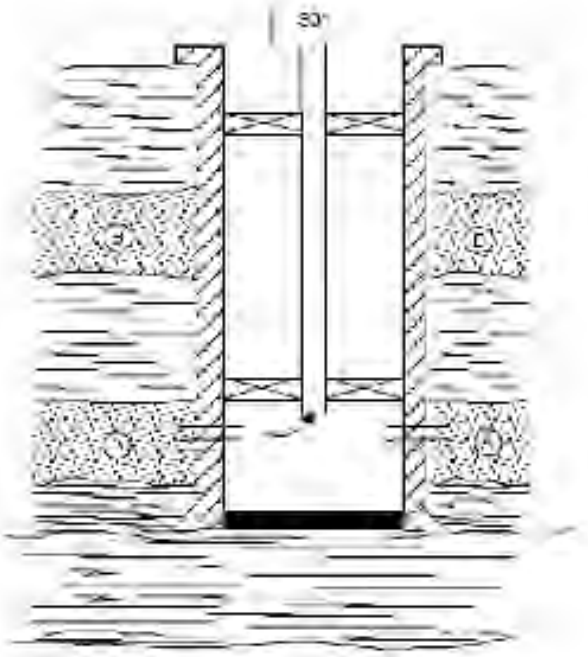
Completion code 200

NOTE

Determinations must be assigned by the appropriate BLM office.

EXAMPLE

Example 17-2. Onshore—Basic single completion



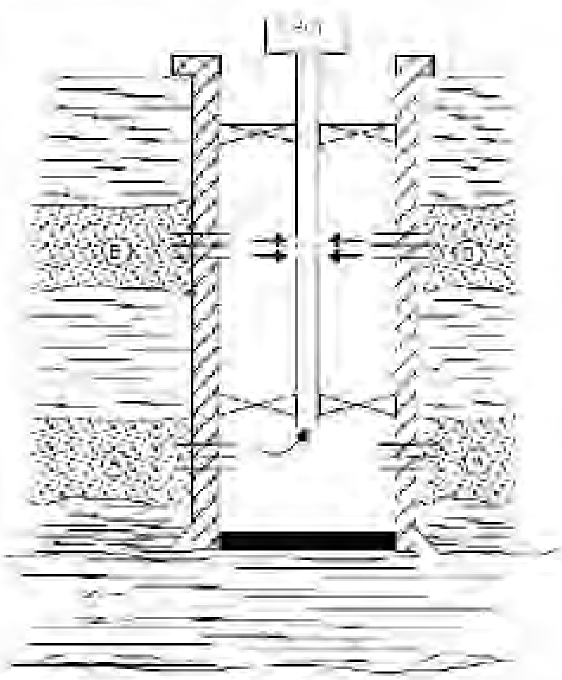
G. Producing Interval Codes

EXAMPLE Example G-3. Onshore Basic commingled completion

Case 1

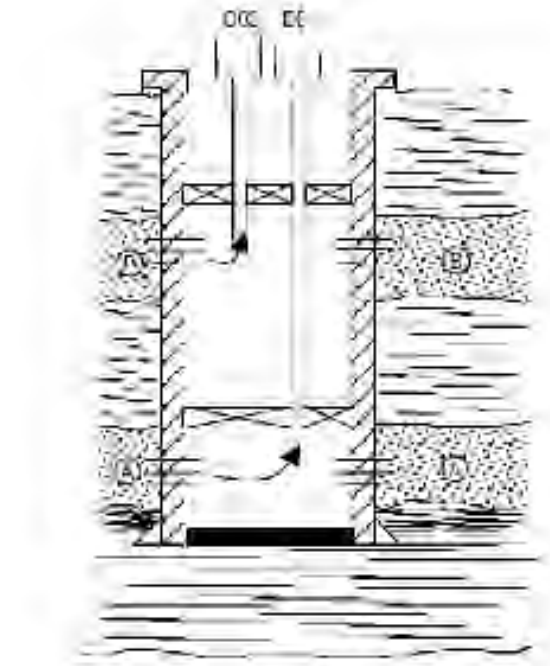
Assume:

- One tubing string
- One completion in zones A and B
- Approval to commingle downhole



NOTE A single tubing string that has commingled production from two sets of perforations and production allocated to two PAs (allocation might be accomplished by closing off one of the sets of perforations by a mechanical device, such as a sliding sleeve, and measuring the production) is recorded in a unique way. The completion codes in this instance are [illegible]

EXAMPLE



EXAMPLE   **Example G-5.   Onshore—Recompleting a well**

Time 1

Assume:
- One tubing string
- One completion in zone A

Result:
Zone A
Completion code S01

Time 2

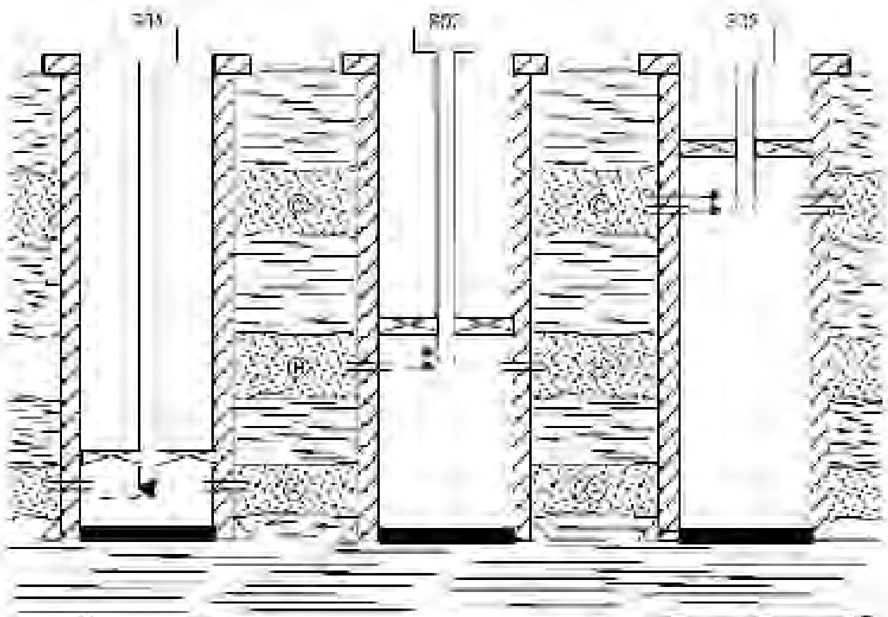
Assume:
- First completion in zone A squeezed off
- Well recompleted in zone B

Result:
Zone B
Completion code S02

Time 3

Assume:
- Second completion in zone B squeezed off
- Well recompleted in zone C

Result:
Zone C
Completion code S03



NOTE   *If the S01 completion in zone A is squeezed, recompleted in zone B and squeezed, then at a later date recompleted in the same zone A and tubing string, the completion code would be S03. The S01 will be reported as ABD on the OGOR the month the S02 begins reporting, and the S02 will be reported as ABD the month the S03 begins reporting.*

EXAMPLE

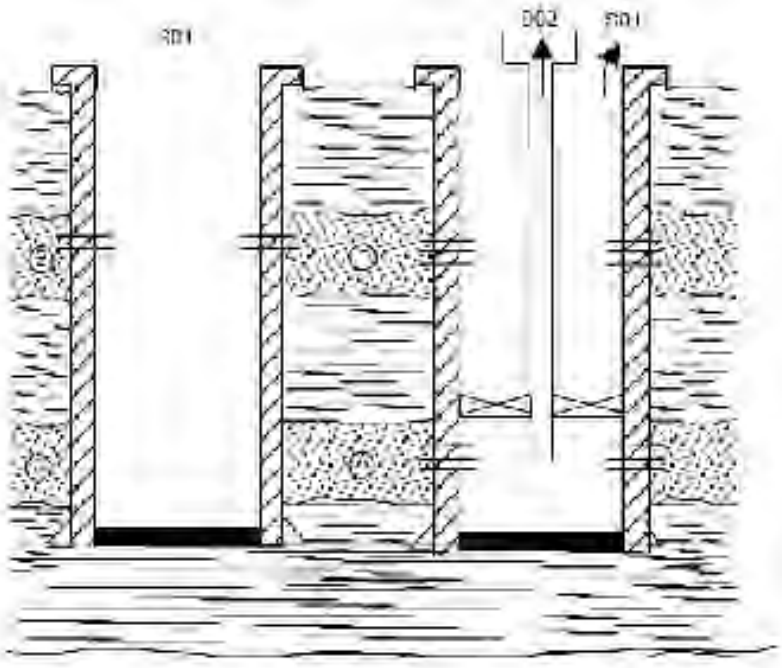
Example 15-6. Onshore—Tubingless completion

Time 2
Assume:
- One completion.
- Casing is used as the production string.

Result:
Completion code 501

Time 1
Assume:
- Well completed
- One tubing string
- Two completions
- One interval is producing using the annulus

Result:
Zone A
Completion code 041
Zone B
Completion code 501



EXAMPLE

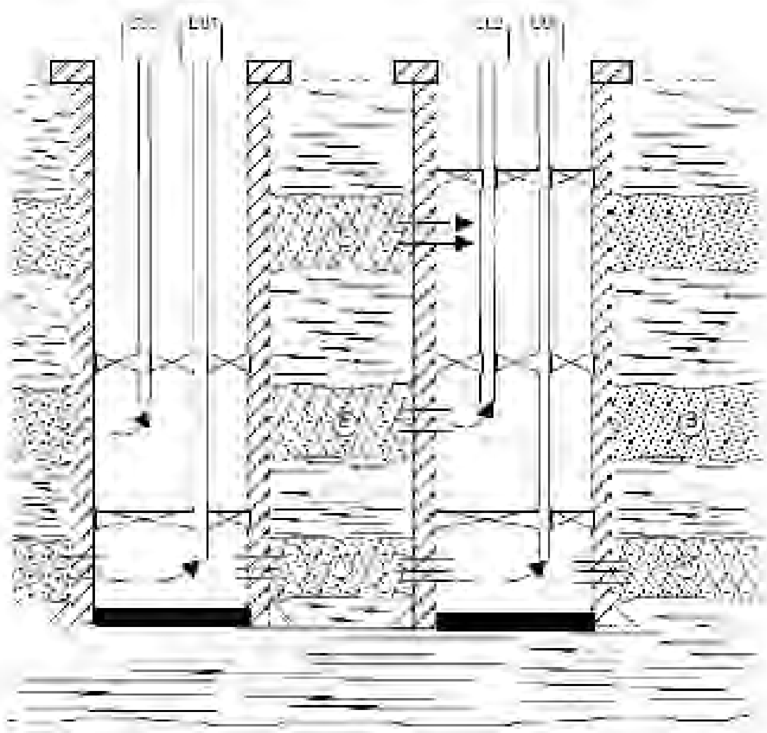
Example G-7. Onshore—Downhole commingling

<u>Time 1</u>
Assume:
- Two tubing strings
- Two completions

<u>Time 2</u>
Assume:
- Two tubing strings
- Three completions
- Production from upper tubing string is commingled downhole

Result:
Zone A
Completion code D01
Zone B
Completion code D02

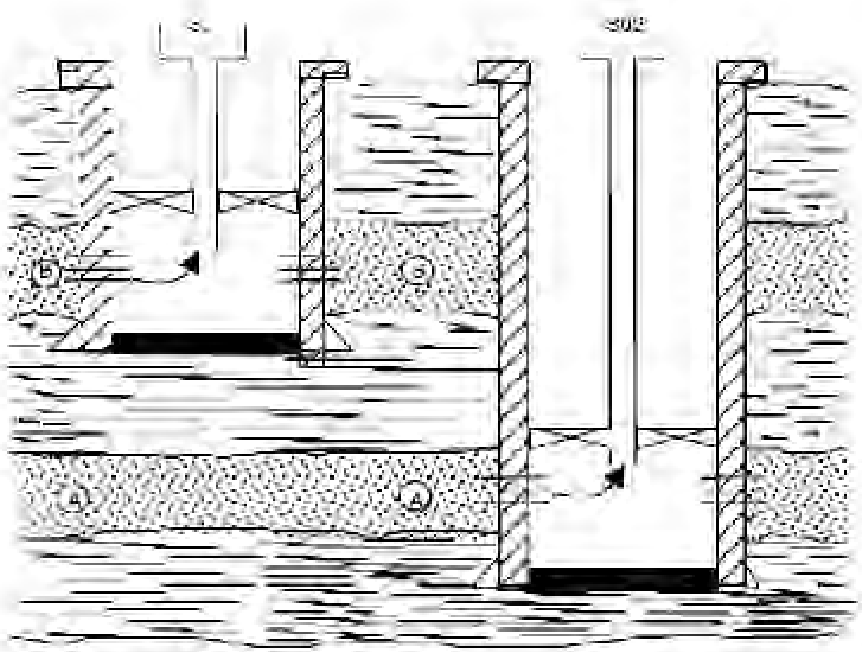
Result:
Zone A
Completion code D01
Zone B and C
Completion code D02



EXAMPLE

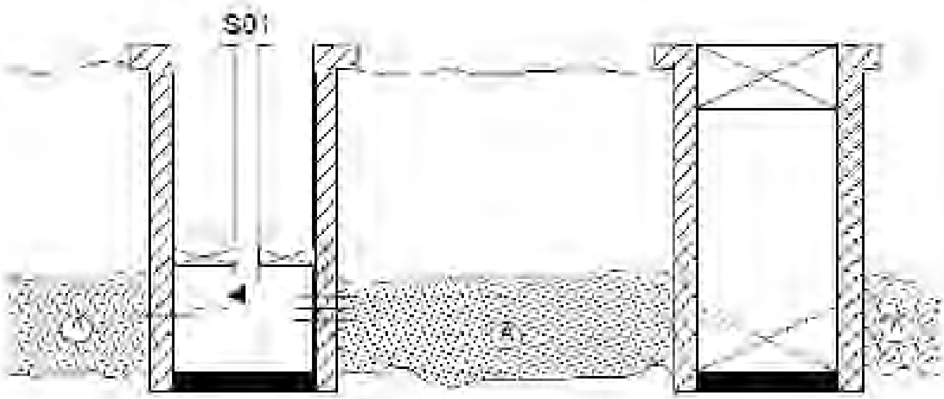
Example G-8. Onshore—Well deepened

Time 1	Time 2
Assume:	Assume:
• One tubing string	• One tubing string
• One completion	• Formation B completion is squeezed off
	• Well is deepened and completed in Formation A
Result:	Result:
Zone B	Zone A
Completion code S01	Completion code S02



EXAMPLE Example G-9. Onshore—Abandonment

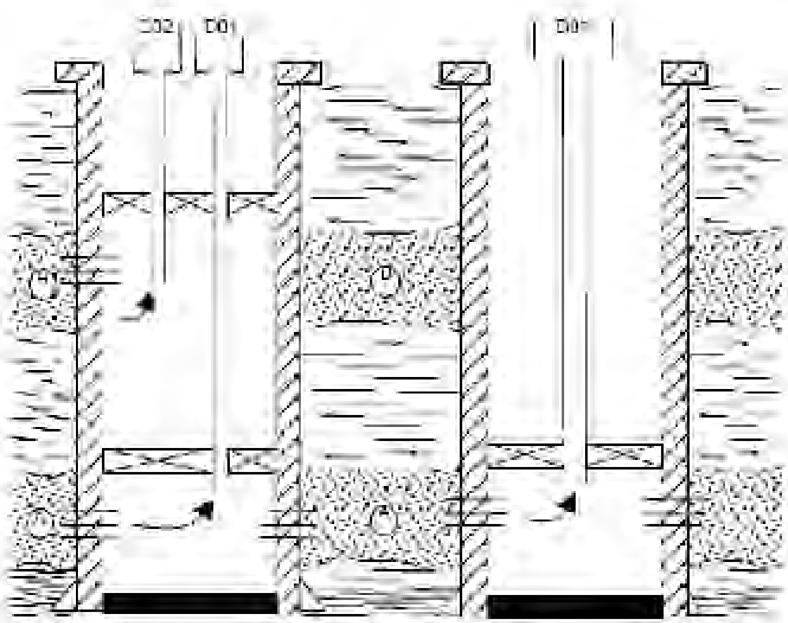
Time 1	Time 2
Assume:	Assume:
• One tubing string	• Completion is squeezed
• One completion	• Well is abandoned
Result:	Result:
Completion code S01	Zone A
Well status POW	Completion code S01
	Well status ABD



EXAMPLE

Example G-10. Onshore—Abandonment of one completion in a dually completed well

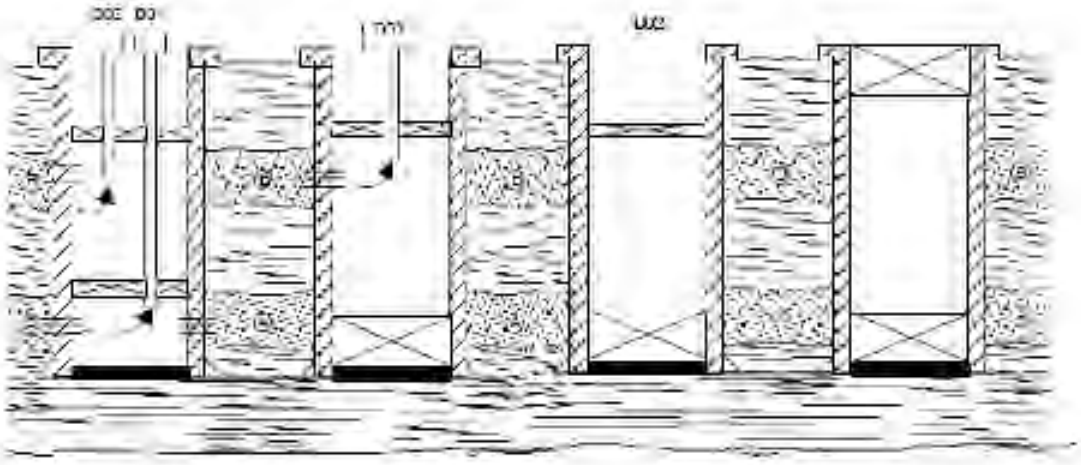
Time 1	Time 2
Assume	Assume
• Two tubing strings	• Zone B is abandoned
• Two completions	• One tubing string remains
Result:	Result:
Zone A	Zone A
Completion code D01	Completion code D01
Well status POW	Well status POW
Zone B	Zone B
Completion code D02	Completion code D02
Well status POW	Well status ABD



EXAMPLE

Example G-11. Onshore Abandonment of both completions within a dually completed well

Time 1	Time 2	Time 3	Time 4
Assume: • Two tubing strings • Two completions	Assume: • The D01 completion is abandoned • The D02 completion remains producing	Assume: • Zone B is temporarily abandoned during the report month	Assume: • Zone B is considered the next zone tested
Result: Zone A Completion code D01 Well status POW Zone B Completion code D02 Well status POW	Result: Zone A Completion code D01 Well status ABD Zone B Completion code D02 Well status POW	Result: Zone B Completion code D02 Well status TA	Result: Zone B Completion code D02 Well status ABD



EXAMPLE

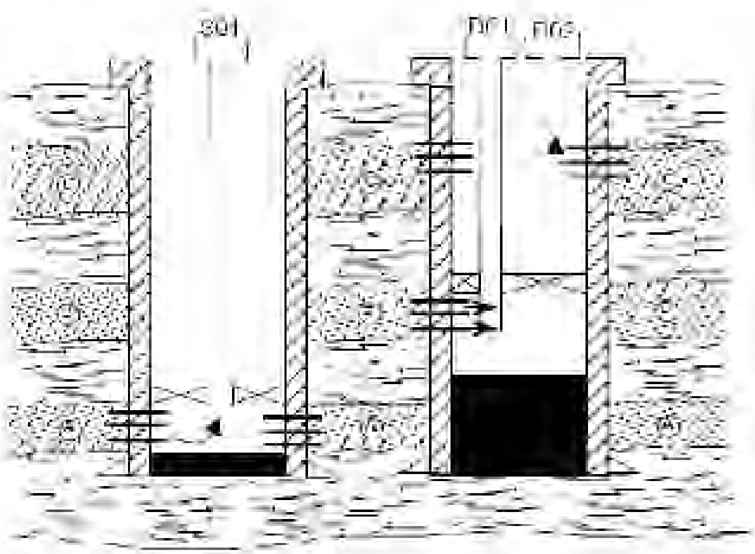
Example G-12. Onshore—Recompleting a well and adding a tubing string

Time 1
Assume:
- One tubing string
- One completion in zone A.

Result:
Zone A
Completion code S01

Time 2
Assume:
- First completion in zone A squeezed off
- Well recompleted in zone B and zone C with a tubing string added

Result:
Zone B
Completion code D01
Zone C
Completion code D02



NOTE

[illegible]

G Reporting Interest Codes

EXAMPLE

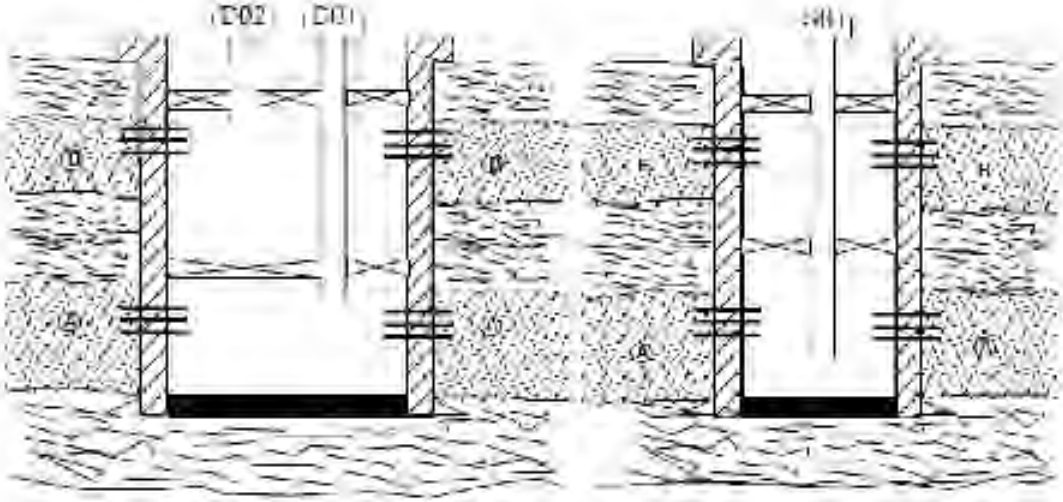
Example G-13. Onshore—Dual completion commingled downhole and one tubing string removed

Time 1
Assume:
- Two tubing strings
- Two completions in zone A and B

Result
Zone A
Completion code D01
Zone B
Completion code D02

Time 2
Assume
- Commingling (approved) D01 and D02 and remove one tubing string

Result
Completion code D01



NOTE

The D01 will change to the D01 on the OGOR, and the D02 will be reported as ABD the month the D01 begins reporting the commingled production on the OGOR.

EXAMPLE

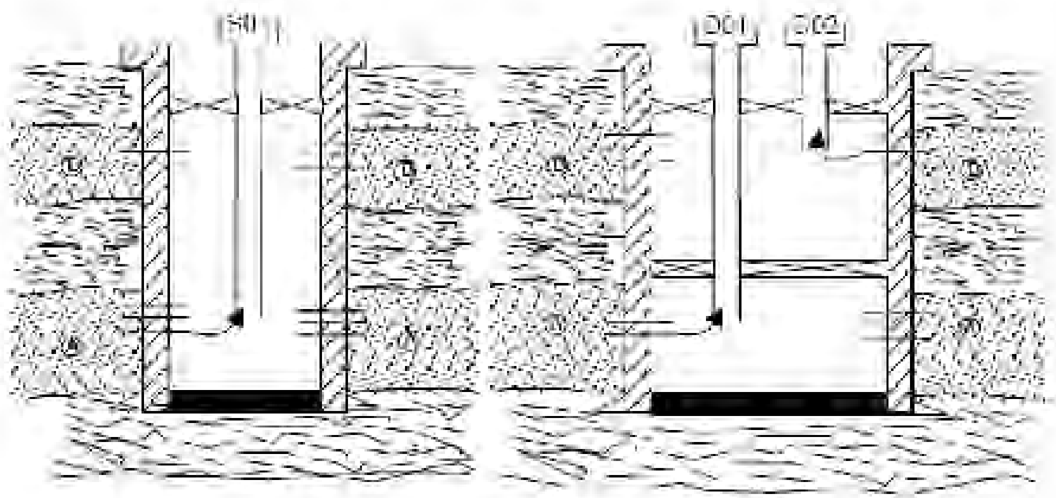
Example C-14: Onshore – Recompleting a commingled well and adding a tubing string

Case 1
Assume:
- One tubing string
- One completion in zones A and B
- Approval to commingle downhole

Result:
Completion code S01

Case 2
Assume:
- Two tubing strings
- Two completions in zones A and B

Result:
Zone A
Completion code D01
Zone B
Completion code D02



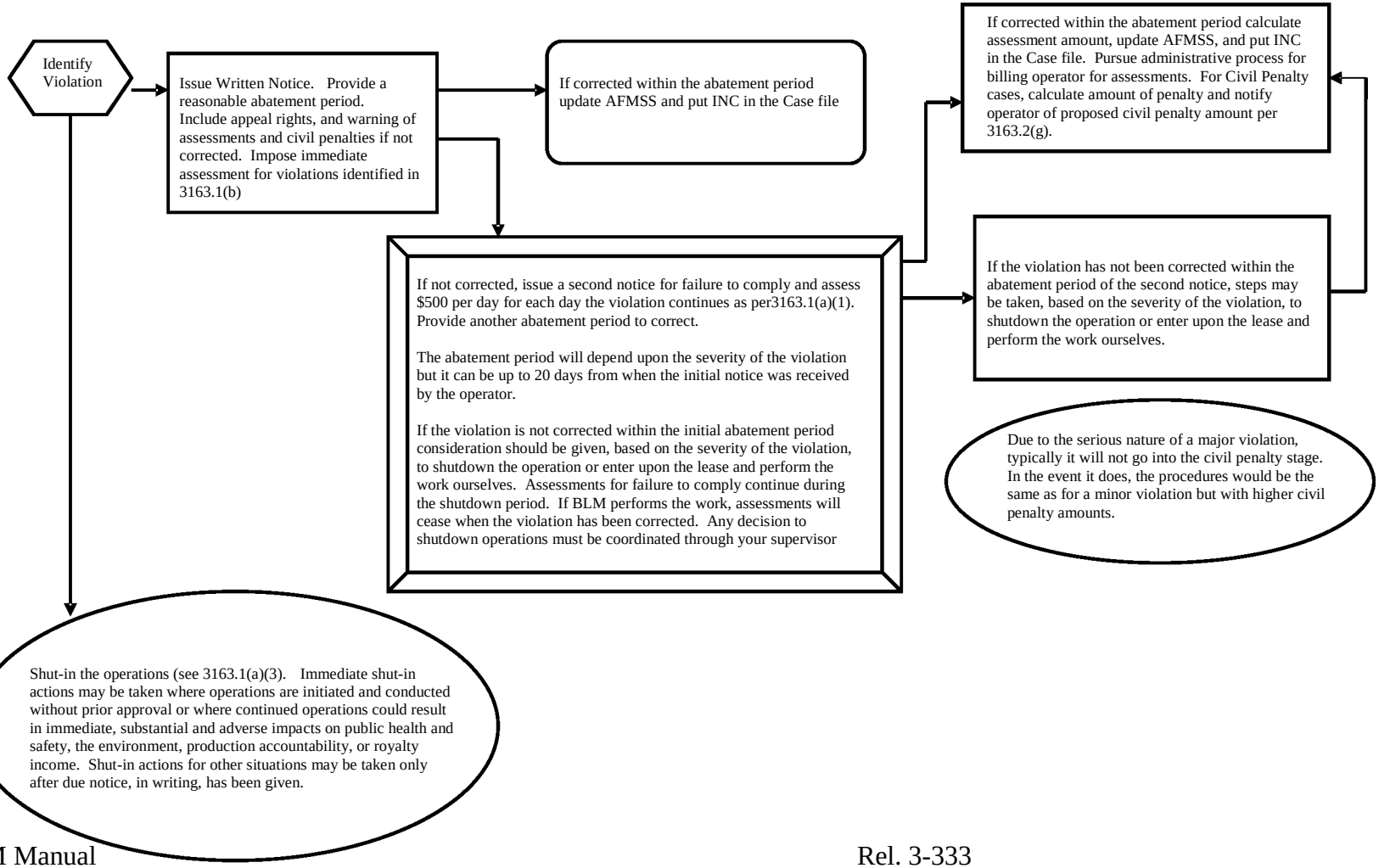
NOTE

APPENDIX 3 SUMMARY OF ENFORCEMENT ACTIONS

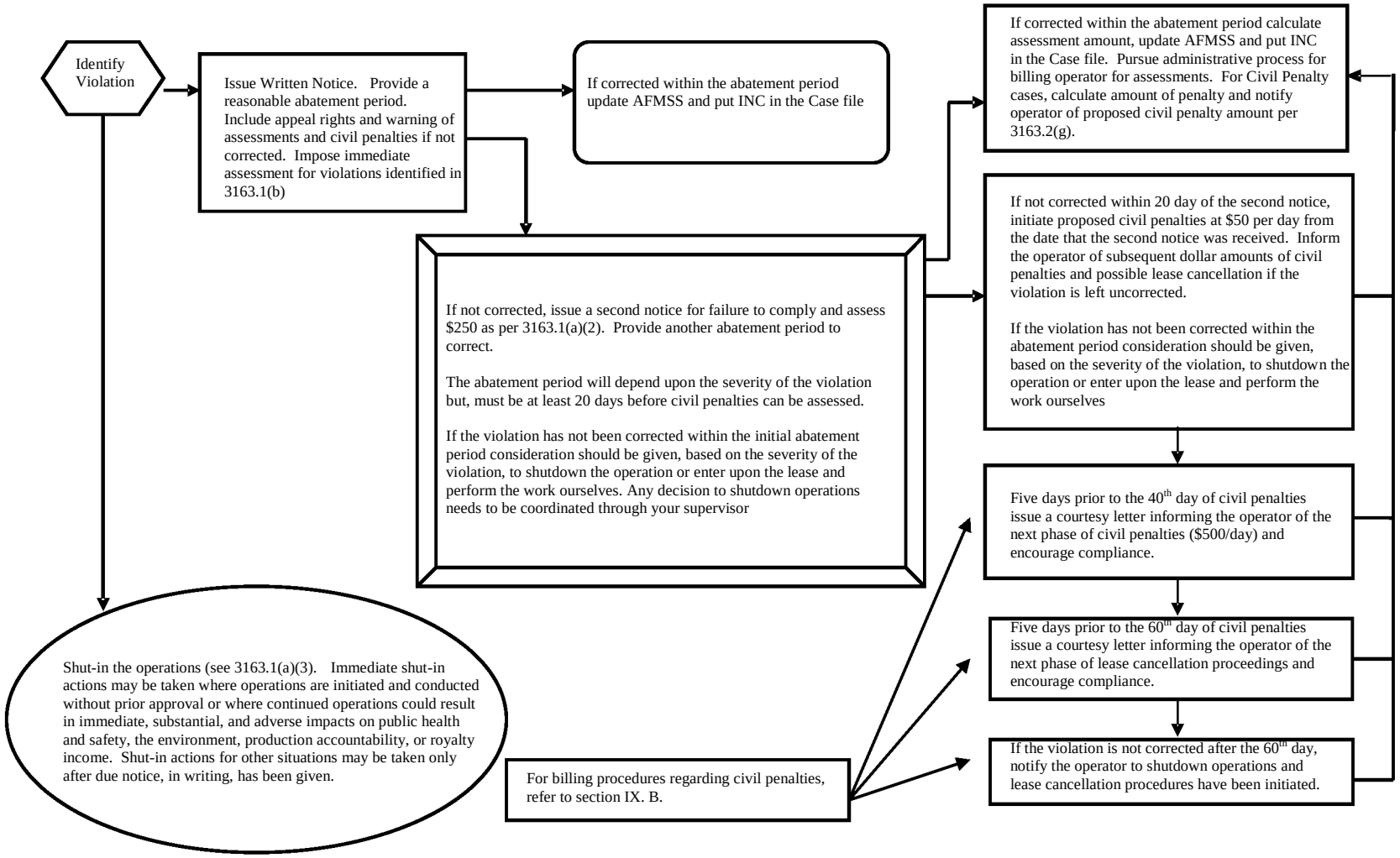
Enforcement Process Short Version		
Order of the Authorized Officer	**Minor Violation**	**Major Violation**
Used for problems that are not violations. Can initially notify the operator orally followed up in writing within 10 days.	In violation of a specific regulatory requirement that does not raise to the level of a major violation.	In violation of a specific regulatory requirement that causes immediate, substantial, and adverse impact on environment, public health and safety, production accountability or royalty income.
1. Issue the Order - provide an abatement date. Followup.	1. Issue the INC with a reasonable abatement date. Followup.	1. Issue the INC with a reasonable abatement date. Followup.
2. If not corrected - issue an INC.	2. If not corrected with in initial abatement date, issue a second notice with $250 assessment. Provide an abatement date of not less than 20 days. Followup. Consider whether operations should be shutdown or if we need to perform the work.	2. If not corrected within initial abatement date, issue a second notice with $500 per day assessment and provide a new abatement date. Followup. Consider whether operations should be shutdown or if we need to perform the work.
3. Follow the INC process	3. If not corrected within 20 days of the second notice, initiate proposed civil penalties at $50 per day from the date that the second notice was received. Inform the operator of subsequent dollar amounts of civil penalties and possible lease cancellation if the violation is left uncorrected. Consider whether operations should be shutdown or if we need to perform the work.	3. If the second INC is not corrected and due to the serious nature of the violation, steps may be taken to shutdown operations (if appropriate) or perform the work ourselves.

	4. Five days prior to the 40th day of civil penalties issue a letter informing the operator of the next phase of civil penalties ($500/day) and encourage compliance. Consider whether operations should be shutdown or if we need to perform the work.	
	5. Five days prior to the 60th day of civil penalties, issue a letter to inform the operator of the next phase. Initiate lease cancellation procedures and encourage compliance.	

Major Violation Flowchart



Minor Violation Flowchart



H-3160-5 - INSPECTION AND ENFORCEMENT DOCUMENTATION AND STRATEGY DEVELOPMENT HANDBOOK (Internal)

APPENDIX 4 FORMS SAMPLE LETTER FORMAT

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Field Office
Street
City, State, ZIP
website address

In Reply To:
3160
Case Number

Certified Mail No: [ ]
Return Receipt Requested

[Company Address]

NOTICE OF ORDER(S) OF THE BLM AUTHORIZED OFFICER

Use the appropriate title. Orders, INCs, or both.

or

NOTICE OF INCIDENTS OF NONCOMPLIANCE (INC)

Use specific company representative, if known.

Dear [ ]:

Insert lease, unit, or case number(s). Also list well name and number (or facility) and legal description, inspection date, and inspector name(s).

An inspection was performed on Federal lease WYW[ ], [Well name and #, ¼ ¼ section, county, State], on 00/00/0000, by [Inspector Name]. It was found that operations were not being conducted in a manner designed to protect the mineral resources, other natural resources, and environmental quality (43 CFR 3162.5).

ORDER(s) OF THE AUTHORIZED OFFICER

Cite pertinent regulation for the order and after…"states" … Insert the pertinent requirement (e.g., 43 CFR 3162.5-1(a), which states "The operator shall conduct all operations in a manner which protects the minerals resources, other natural resources and environmental quality"). If you have multiple environmental problems, some may be pertinent to other regulations. In this case, cite a different regulation for each environmental problem.

The following environmental compliance problems, pursuant to 43 CFR [ ] which states, "…" were identified during the latest inspection of the subject location. Specifically:

Each problem must have a unique number.

- **Environmental Problem No. [ ]:** [Specifically describe the problem (e.g., A substantial head-cut has started in the ditch on the west side of the road coming onto the well location.]

Corrective Action: [Identify what needs to be done to address the problem. Use performance objectives rather than specifically describing exact work. (e.g., take appropriate remedial measures to stabilize head-cut and restore perennial vegetation. Eliminate the source of the problem by diverting and/or slowing water flow from the access road.]

H-3160-5 - INSPECTION AND ENFORCEMENT DOCUMENTATION AND STRATEGY DEVELOPMENT HANDBOOK (Internal)

In accordance with 43 CFR 3163.1(a), you must comply with the corrective action(s) for the identified environmental problems no later than [ ]. If you fail to comply within the time frames specified, you will be subject to further enforcement action as may be deemed necessary.

Insert a specific date by which the problems must be corrected.

(If additional environmental problems were identified, list each problem separately, using the same format as shown above. Insert the well/facility identification, and legal location if different.)

- En**vironmental Problem No.:** Same format as above

Insert legal location information if different from

Corrective Action: Same as format as above

In accordance with 43 CFR 3163.1(a), you must comply with the corrective action(s) for the identified environmental problems no later than [ ]. If you fail to comply within the time frames specified, you will be subject to further enforcement action as may be deemed necessary.

Insert a specific date by which the problems must be corrected.

==========

INCIDENTS OF NONCOMPLIANCE

The following violations were identified during an inspection of the subject location. Specifically:

- **INC No.:** [ ]: [Specifically describe the violation and cite the authority.]

Corrective Action: [Identify what needs to be done to correct the violation.]

In accordance with 43 CFR 3163.1(a), you must comply with the corrective action(s) for the identified violation no later than **[ ]**. If you fail to comply within the time frames specified, you may be subject to an assessment or additional enforcement actions as deemed necessary to gain compliance.

Insert a specific date by which the INC must be corrected.

(If additional violations were identified, list each violation separately, using the same format as shown above. Insert the well/facility identification, and legal location if different.)

- **INC No.:** Same format as above

Insert legal location information if different from

Corrective Action: Same format as above

In accordance with 43 CFR 3163.1(a), you must comply with the corrective action(s) for the identified violation no later than **[ ]**. If you fail to comply within the time frames specified, you may be subject to an assessment or additional enforcement actions as deemed necessary to gain compliance.

Insert a specific date by which the INC must be corrected.

Orders of the Authorized Officer or Incidents of Noncompliance and reporting time frames begin upon receipt of the Notice or 7 business days after the date it is mailed, whichever is earlier. Each problem or violation must be corrected within the prescribed time from receipt of this Notice and reported to the Bureau of Land Management office at the address shown above.

For Incidents of Noncompliance, please note that you already may have been assessed for noncompliance (see amount under "Assessed for Noncompliance"). If you do not comply as noted above under "Corrective Action to be Completed By," you may incur additional assessment under (43 CFR 3163.1) and may also incur Civil Penalties (43 CFR 3163.2). All self-certified corrections must be postmarked no later than the next business day after the prescribed time for correction.

Section 109(d)(1) of the Federal Oil and Gas Royalty Management Act of 1982, as implemented by the applicable provisions of the operating regulations at Title 43 CFR 3163.2(f)(1), provides that any person who "knowingly or willfully" prepares, maintains, or submits false, inaccurate, or misleading reports, notices, affidavits, records, data, or other written information required by this part shall be liable for a civil penalty of up to $25,000 per violation for each day such violation continues, not to exceed a maximum of 20 days.

REVIEW AND APPEAL RIGHTS

Insert address for the State Office.

A person contesting a order of the authorized office or violation must request a State Director Review of the Order or Incident of Noncompliance. This request must be filed within 20 working days of receipt of the Incident of Noncompliance with the appropriate State Director at [ ] (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Lands Appeals, 801 North Quincy Street, MS 300-QC, Arlington, Virginia 22203 (see 43CFR 3165.4). Contact the abovelisted Bureau of Land Management office for further information.

If you have any questions, please contact [ ].

Sincerely,

Field Manager

Attachment: Corrective Action(s) Completed Form

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NOTICE OF INCIDENTS OF NONCOMPLIANCE

Certified Mail - Return Receipt Requested (1)

Hand Delivered Received by: (2)

Number (3) Page ___ of ___ (4)

Identification (4): IID / Lease / CA / Unit / PA

Bureau of Land Management Office (5)	Operator (6)
Address	Address
Telephone	Attention
Inspector (13)	Attn Addr

Site Name	Well or Facility	1/4 1/4 Section	Township	Range	Meridian	County	State
(7)	(8)	(9)	(10)	(11)	(12)		

THE FOLLOWING VIOLATION WAS FOUND BY BUREAU OF LAND MANAGEMENT INSPECTORS ON THE DATE AND AT THE SITE LISTED ABOVE

Date	Time (24-hour clock)	Violation	Gravity of Violation
(14)	(15)	(16)	(17)
Corrective Action To Be Completed By	Date Corrected	Assessment for Noncompliance	Assessment Reference
(18)	(19)	(20)	43 CFR 3163.1() (21)

Remarks: (22)

When violation is corrected, sign this notice and return to above address.

Company Representative Title (23) Signature ______ Date ______

Company Comments (24)

WARNING

[illegible]

[illegible]

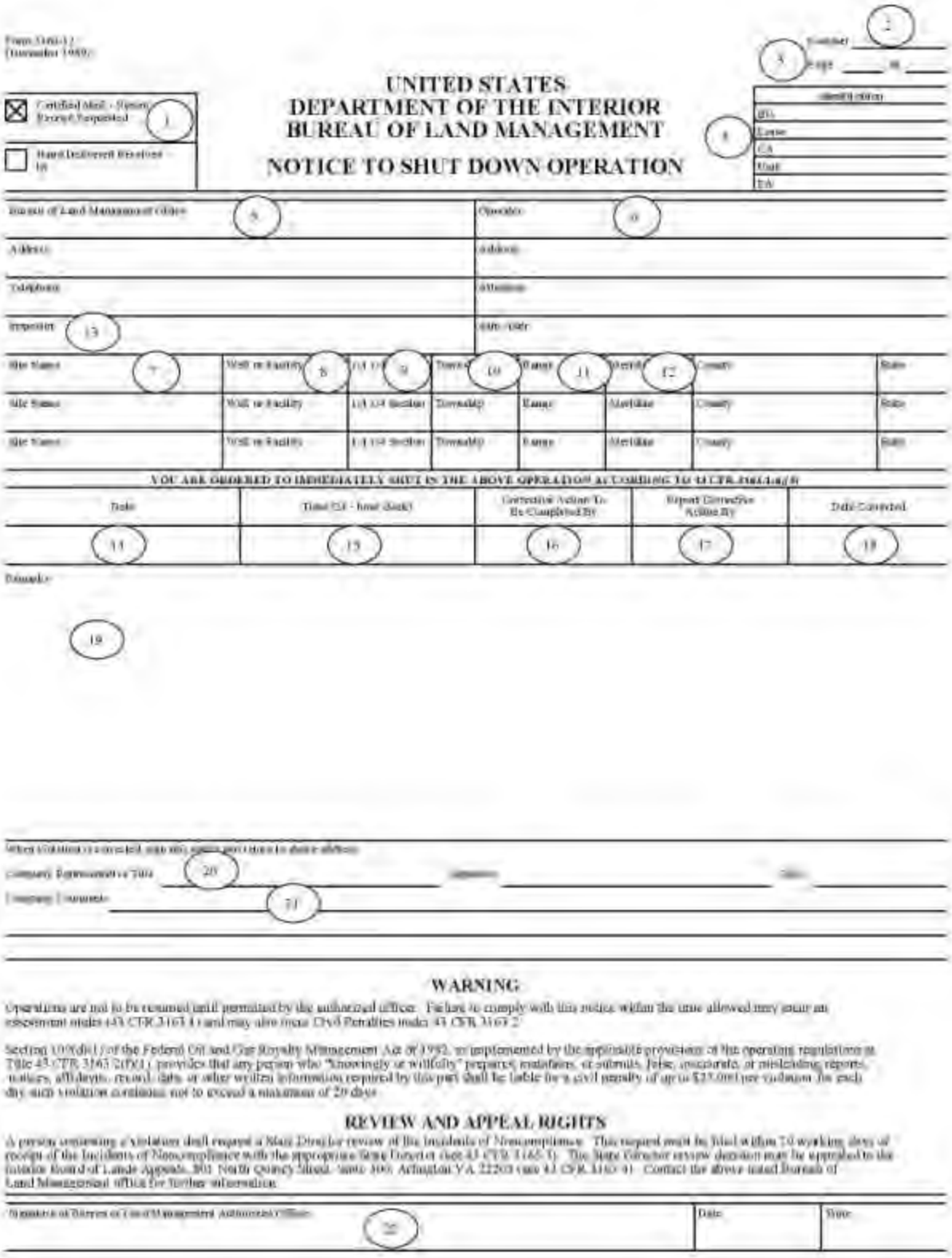
REVIEW AND APPEAL RIGHTS

[illegible]

Signature of Bureau of Land Management Authorized Officer (25)	Date	Time

FOR OFFICE USE ONLY

Number (26)	Date	Assessment	Penalty	Termination
Type of Inspection				



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NOTICE TO SHUT DOWN OPERATION

Certified Mail - Return Receipt Requested (1)

Hand Delivered Receipt (8)

Bureau of Land Management Office (5) | Operator (6)

Address | Address

Telephone | Attention

Inspector (13) | Date / Time

Site Name (7)	Well or Facility (8)	1/4 1/4 (9)	Township (10)	Range (11)	Meridian (12)	County	State
Site Name	Well or Facility	1/4 1/4 Section	Township	Range	Meridian	County	State
Site Name	Well or Facility	1/4 1/4 Section	Township	Range	Meridian	County	State

YOU ARE ORDERED TO IMMEDIATELY SHUT IN THE ABOVE OPERATION(S) ACCORDING TO 43 CFR 3163.1(a)(3)

Date (14)	Time (24 - hour clock) (15)	Corrective Action To Be Completed By (16)	Report Corrective Action By (17)	Date Corrected (18)

Remarks

(19)

Company Representative Title (20)

Inspector Comments (21)

WARNING

Operations are not to be resumed until permitted by the authorized officer. Failure to comply with this notice within the time allowed may result in assessment under 43 CFR 3163.1 (a) and may also incur Civil Penalties under 43 CFR 3163.2.

Section 109(d)(1) of the Federal Oil and Gas Royalty Management Act of 1982, as implemented by the applicable provisions of the operating regulations in Title 43 CFR 3163.2(f)(1), provides that any person who "knowingly or willfully" prepares, maintains, or submits false, inaccurate, or misleading reports, notices, affidavits, records, data, or other written information required by this part shall be liable for a civil penalty of up to $25,000 per violation for each day such violation continues, not to exceed a maximum of 20 days.

REVIEW AND APPEAL RIGHTS

A person contesting a violation shall request a State Director review of the Incidents of Noncompliance. This request must be filed within 20 working days of receipt of the Incidents of Noncompliance with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Lands Appeals, 801 North Quincy Street, Suite 300, Arlington VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

Signature of Bureau of Land Management Authorized Officer (22) | Date | Time

[illegible]
[illegible]

UNITED STATES
DEPARTMENT OF INTERIOR
BUREAU OF LAND MANAGEMENT
INSPECTION RECORD – DRILLING

Case Number	State	Field Office	Field Area	☐ Detailed ☐ Non-Detailed
Well No./API No.	Location (1/4 1/4 S-T-R)		Spud Date	Status
Operator/Representative			Rig Contractor/Representative	

Inspection Type	Activity Code	Inspector	Open Date	Closed Date	Office Time	Travel Time	Inspection Time	Trips

GENERAL		**Inspected**	**NA**	**Violation**
1. Is approved drilling permit and plan on location?				
2. Is drill site properly identified?				
3. Are operations being conducted in a workmanlike manner? *(Detailed list in handbook)*				
4. Did Operator report all spills?				
5. Are drill-stem tests conducted as required?				
6. Is hole deviation within approved tolerances?				
SURFACE USE				
7. Is surface use in accordance with approved plan?				
a. Well site lay-out				
b. Pits, sumps, and other ancillary facilities.				
c. Containment and disposal of solid, liquid, and gaseous wastes.				
d. Failure to implement dust control.				
e. Failure to obtain prior approval for additional surface disturbance.				
BLOWOUT PREVENTER AND ASSOCIATED EQUIPMENT				
8. Is BOP pressure rating and arrangement at least that approved? Rating ________				
9. Are choke lines and manifold, kill lines, and fill lines properly installed and operatable?				
10. Are Master controls installed and functional?				
a. Remote controls installed and functional?				
b. Hand wheels or autolock? *(Circle appropriate item)*				
c. Valve installed in closing line of annular preventer?				
11. Is pressure accumulator system adequate to activate BOP? ________ ________				
a. Nitrogen precharge pressure? Date last checked ________				
b. Will reservoir hold two times the usable fluid volume?				
c. Is power available and turned on to the accumulator pumps?				
12. Are ram-type preventers tested to stack working pressure if isolated by test plug or 70 percent of internal yield pressure of casing if BOP Stack is not isolated from casing? ________ psi test pressure				
13. Are annular-type preventers tested to 50 percent of working pressure? _____ psi	Date Recorded			
14. Are BOPE tests run and recorded in driller's log? ________ psi				
a. When initially installed?				
b. Whenever a seal subject to test pressure is broken?				
c. Following related repairs?				
d. 30-day intervals?				
15. Are BOP drills conducted weekly and recorded in driller's log? Time ________				
16. Is annular preventer activated weekly and recorded in driller's log?				

BLOWOUT PREVENTER AND ASSOCIATED EQUIPMENT (CONTINUED)	Date Recorded	Inspected	NA	Violation
17. Are pipe rams activated each trip and recorded in driller's log?				
18. Are blind rams activated each trip?				
19. Is the slow pump speed recorded each tour?				
20. Are drill string safety valves and/or inside BOP valves readily available?				
21. ☐ Is upper kelly cock installed? ☐ Is lower kelly cock installed? ☐ Are appropriate kelly cock wrenches available?				
a. BOPE shall be installed, used, maintained and tested in a manner necessary to ensure well control and shall be in place prior to drilling the surface casing shoe.				
CASING AND CEMENTING				
22. Was casing and cement in accordance with approved APD? (size weight grade depth ☐ New? ☐ Used?)				
23. When setting surface casing, did cement circulate to surface? If not, was remedial action taken?				
a. Centralizers as required?				
24. When setting casing was cement job conducted as approved? *(Circle applicable type)* Surface Intermediate Production Liner				
25. Were all casing strings pressure tested prior to drill out? _____ psi.				
a. Was remedial action taken if test indicated need? Action: _____				
b. Were all pressure tests recorded in drillers log? Date recorded _____				
26. Were all waiting on cement (WOC) times adequate to achieve a minimum of 500 psi compressive strength at the shoe?				
27. Are casing shoe pressure integrity tests (mud weight equivalency test) performed and recorded in log book? Date recorded _____ Mud weight _____ Depth _____ Pressure _____				
28. All indications of usable water reported to the authorized officer?				
29. Are wiper plugs used as required?				
MUD PROGRAM				
30. Is mud system in accordance with approved APD?				
31. Are appropriate quantities of mud on hand?				
32. Is mud monitoring equipment in accordance with approved APD?				
a. Electronic/mechanical mud monitoring equipment alarms set and turned on?				
33. Is gas detection equipment installed and operational as per APD?				
34. Are acceptable well control practices being followed while tripping?				
35. Are hourly mud tests (weight & viscosity) recorded in the drillers log?				
36. Is flare system installed?				
SPECIAL OPERATIONS-AIR/GAS DRILLING				
37. Is rotating head in operating condition?				
38. Is the blooie line installed and the pilot light and igniter installed and operating as per APD?				
39. Is deduster equipment installed?				
40. Is mud circulation equipment available for rapid use *(including mud, reserve pits, and steel tanks)*?				
41. Are engines equipped with spark arresters or water cooled exhaust?				
HYDROGEN SULFIDE OPERATIONS (500' above or 3 days prior to expecting H2S)				
42. Are the H_2S Drilling Operations Plan and Public Protection Plan, if required, available at the well site?				
43. Are the locations of safe briefing areas as approved, are they designated, and is safe access provided to them?				
44. Is a secondary means of egress available and possible?				

HYDROGEN SULFIDE OPERATIONS (CONTINUED)	Inspected	N.A.	Violation
45. Is required safety equipment for essential personnel available and operable?			
a. Portable H_2S and SO_2 detectors?			
b. Self-Contained breathing apparatus?			
c. Explosion proof ventilation fans?			
d. Other equipment as approved in drilling operations plan?			
46. Are initial and weekly training and H_2S well control drills held and recorded on the driller's log?			
47. Is permanent H_2S detection and monitoring equipment installed, tested, and operable?			
48. Is the wind direction equipment installed and visible?			
49. Are the caution/danger signs legible, visible, and posted a safe distance from the location?			
50. Are the warning flags, flare gun and flares available?			
51. Is the equipment H_2S trimmed as required?			
52. Is the remote kill line installed and tested?			
53. Is the flare system designed to safely gather and burn H_2S?			
a. Is the flare system equipped with a safe and suitable means of ignition?			
b. Is the flareline mostly at least 150' from wellhead?			
c. If non-combustible gas is to be flared, is supplemental fuel available?			
54. Are the mud-gas separator, degasser, and rotating head installed and operational (exploratory wells only)?			
55. Is the remote controlled choke installed, tested, and operable?			
56. Is the pH of flowback mud 10.5 or above unless otherwise approved?			
a. Are sufficient quantities of mud additives to scavenge H_2S available at the well site (exploratory wells only)?			
OTHER			
57. Other special requirements per approved APD and lease terms			
58. Description of operations witnessed:			

HIGH PRIORITY INSPECTION REMARKS

Form 3160-13
(October 2003)

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

INSPECTION RECORD – ABANDONMENT

Case Number	State	Field Office	Field Area

Well Name	Well Number	Hazard?

API No.	Location 1/4, 1/4, S-T-R (Lat/Long)	Spud Date	Status

Operator/Representative	Rig/Contractor/Representative

Well Type: (Circle One)
Dry Hole Depleted Producer Service Well Water Well Other (explain)

INSP. TYPE	ACT CODE	INSPECTOR	OPEN DATE	CLOSED DATE	OFFICE TIME	TRAVEL TIME	INSPECT TIME	TRIPS

PLUGGING OPERATIONS	WITNESSED		
	YES	NO	N/A
1. Plugs spotted across perforations or perforations isolated as approved if casing set?			
2. Plugs spotted at casing shoe?			
3. Open hole plugs spotted as approved?			
4. Retainers, bridge plugs, or packers set as approved?			
5. Cement quantities as approved?			
6. Method of verifying and testing plugs as approved?			
7. Pipe withdrawal rate satisfactory after spotting plugs?			
8. All annular spaces isolated to surface?			
9. Surface Cap Witnessed? (Circle one) Above Ground Below Ground			
10. INC issued?			

Remarks:

Cement and mechanical plug placement data ***(attach service company report, if available)***

BALANCE PLUG PROGRAM

Wellbore Information

	Size	Weight				
Open Hole						
Casing						
Tubing/DP (Workstring)						
Annular Volume (pipe in hole)						
Annular Volume (pipe in pipe)						

Helpful Hints: Number of sacks cement (s) yield of cement = cubic feet of cement
Cubic Feet (cf) x .1781 = Bbls
Sacks of cement (s) H2O required (gal/sk) ÷ 42 gals = Bbls

Mix H2O required

Plug # 1: Approved depth _____ to _____ Actual Depth _____ to _____

Sacks cement _____ Tagged Top of Cement at _____

Yield cement _____ Pressured tested cement plug to _____ psi ?

Plug # 2: Approved depth _____ to _____ Actual Depth _____ to _____

Sacks cement _____ Tagged Top of Cement at _____

Yield cement _____ Pressured tested cement plug to _____ psi ?

Plug # 3: Approved depth _____ to _____ Actual Depth _____ to _____

Sacks cement _____ Tagged Top of Cement at _____

Yield cement _____ Pressured tested cement plug to _____ psi ?

Plug # 4: Approved depth _____ to _____ Actual Depth _____ to _____

Sacks cement _____ Tagged Top of Cement at _____

Yield cement _____ Pressured tested cement plug to _____ psi ?

Plug # 5: Approved depth _____ to _____ Actual Depth: _____ to _____

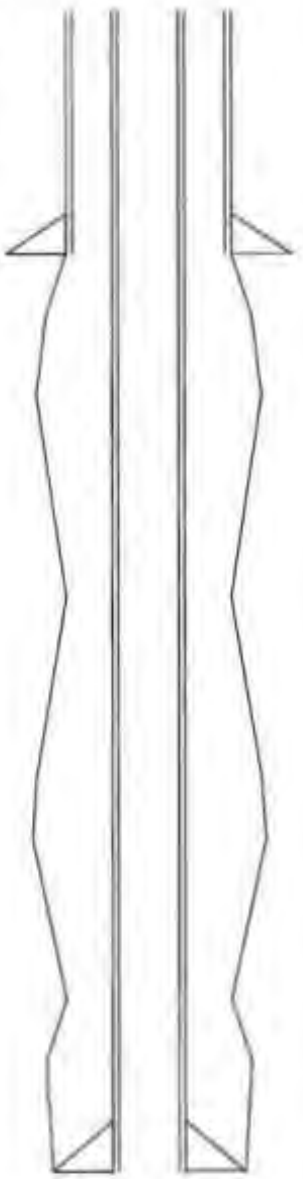
Sacks cement _____ Tagged Top of Cement at _____

Yield cement _____ Pressured tested cement plug to _____ psi ?

Surface Plug: Length of Plug ? From _____ ft to surface

Sacks cement _____

Yield cement _____



Form 3160-11
December 2, 2002

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

INSPECTION RECORD-PRODUCTION

Case/Unit PA/CA Contract No.	Unit Name	Operator	
PR Year	Inspection Type	Open Date	Close Date

Insp No.	Inspector	ACT Code	Open Date	Close Date	Wells Inspected	Facility ID Inspected	Office Time	Travel Time	Inspect Time	Trips	Referrals	Oil/Gas Gain/Loss Recovered

Purchaser Oil _____ Purchaser Gas _____ __ Oil __ Gas (check as appropriate)

GENERAL	Inspected	Violation	N/A
1. Identification Satisfactory (per 43 CFR 3162.6)			
A. Tanks			
B. Facilities			
C. Wells			
2. Well Equipment Satisfactory			
3. Environmental Protection Satisfactory (per 43 CFR 3162.3-1, 3162.5-1, 3162.7-5, Or) No. 7 and NTL3-A)			
A. Water Disposal			
1 Pit			
2 Subsurface			
B. Surface Use			
C. Undesirable Event			
Liquid Hydrocarbons Production (per Order No. 4)			
4. Liquid Handling Equipment Satisfactory			
A. Bypass Around Measurement Point			
5. Measurement Satisfactory (attach Run Ticket, Proving Report, 3160-16, 3160-17 and Volume Calculations)			
A. Tank Gauging: Bottom Gauge Temp			
1. Partial (attach volume calculations)			
2 Witnessed			
B. LACT Proving Witnessed Previous Factor New Factor (attach proving report)			
Natural Gas Production (per order No. 5)			
6. Gas Handling Equipment Satisfactory			
A. Bypass Around Measurement Point			
7. Type of Production: (check one) __ Gas Well __ Casing Head			
8. Measurement Satisfactory (attach appropriate forms 3160-15 or independent calculations)			
A. Orifice Pipe ID Beta Ratio			

Site Security (per 43 CFR3162.7-5, Order No. 3)

	Inspected	Violation	N/A
9. No Bypass			
10. Facility Diagram (Onsite Verification)			
A. Diagram Accurate			
B. Facilities Adequately Sealed ___ Sales/Trans ___ Production/Phase			
11. LACT			
A. Components Complete			
B. Sealed to Minimum Standards			

12. Seal Records	Facility	LACT			
A. Maintained by Operator					
B. Current					
Safety (per 43 CFR 3162.5-3 Order No. 6)					
13. H2S					
A. Hazard					
1. PPM	Ambient	STK	Gas Stream		
B. Operating Requirements Met					
C. Public Protection Plan	Required	Available			
14. General Safety- Are all operations performed in a safe and workmen like manner?					
Records Review	**Review Dates**				
15. Production Measurement Records (per Order No. 4&5)	From / /	To / /			
A. Internal Records(attach any independent calculations)					
1. MMS OGOR Forms					
2. LACT Meter Proving Report					
3. Gas Meter Calibration Report					
B. External Records(attach any independent calculations)					
1. Run Tickets/LACT print outs					
2. Pipeline Run Statements					
3. Pumpers Log					
4. Seal Records					
5. Purchasers Gas Volume Sales Report					
6. Chart Integration Reports					
7. Methods Used to Estimate Volumes of Gas Flared/Vented					
8. Method Used to Estimate Volumes of Gas or Oil Lost on Lease					
Other					
16. Royalty Rate Determination (per 43 CFR 3162.7-4) Effective Royalty Rate					
17. Transporter Manifest Review (see 43 CFR 3162.7-1)					

Remarks:

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MEASUREMENT RECORD - OIL

By Tank Gauge or Alternative Method
(Onshore Order No. 4)

Date: _____ Case No.: _____
Field Unit: _____ Field Office: _____
F&CA: _____ Operator: _____
County/State: _____ Purchaser: _____
Facility ID: _____ Location: ¼ _____ S: _____ T: _____ R: _____
Inspector: _____ Tank No: _____

TANK GAUGE

		Yes	No	N/A
1.	Does tank have a pressure-vacuum thief hatch and/or vent-line valve? III.C.1.a.			
2.	Is tank set level? III.C.1.b.			
3.	Does tank have a gauging reference point height stamped on a fixed bench mark, plate or etched on tank near the Gauging hatch? III.C.1.c.			
4.	Are strapping tables available for each tank? III.C.2.a.			
5.	Is the tank free of dents or damage? III.C.2.b.			
6.	Were oil samples taken prior to gauging tank? III.C.3.			
7.	Was gauge tape of proper type and quality used? III.C.4.a.			
8.	Were two identical gauges obtained? III.C.4.b.			
9.	Were tests for gravity taken acceptable? III.C.5.a. & f.			
10.	Was hydrometer of proper type and quality? III.C.5.b, c, d.			
11.	Were tests for tank temperature acceptable? III.C.5.e.			
12.	Was thermometer of proper type and quality? III.C.6.a. & b.			
13.	Were tests for BS&W content acceptable? III.C.7.			
14.	Is tank facility in conformance with applicable Site Security Regulations? (Self Inspection, Records, Site Sec. Plan, Fac. Diag) DO #3, III.F, G, H, and I.			
15.	Copy of run ticket attached? DO #3, III.C.1.a.			

16. Gravity: Date _____ @ _____ °F Corrected API Gravity _____
17. Sediment & Water Content: Tube # 1 _____ %, Tube # 2 _____ % %BS&W
18. Opening Tank Temperature: Date _____ °F Closing Tank Temperature Date _____ °F
19. Opening Gauge: Date _____ Closing Gauge: Date _____
20. Do fill lines enter: Top of Tank _____ Bottom of Tank: _____
21. Method of Shipment By: Pipeline _____ Truck _____
22. Load Line Seal Numbers: Off _____
(DO #3, III.A.1.f.) On _____
Fill Line Seal Numbers: On _____
Equalizer Line Seal Numbers: On _____
Drain/Circulating Line Seal Numbers: On _____

Alternate Method

23. Date of Alternative Measurement Method Approval: _____
24. Method Type: Turbine Metering _____ Calibrated Tank Truck _____
Net Oil Computer _____ Measurement by Weight _____
Other (describe) _____
25. Does this method accurately meet or exceed the minimum API Standard for:
Gross Volume Measurement _____ API Oil Gravity _____
Sediment & Water _____ Temperature _____
Net Volume Calculations _____

REMARKS

_____
_____

MEASUREMENT RECORD - OIL By Truck Mounted Coriolis Meter

DATE: ____________________ LEASE NO.: ____________________

FED/UNIT: ____________________ FIELD OFFICE: ____________________

CA/CA: ____________________ OPERATOR: ____________________

COUNTY/STATE: ____________________ PURCHASER: ____________________

BATTERY NO.: __________ TANK NO.: __________ LOCATION: ____________________

WELL NO.: ____________________ TECHNICIAN: ____________________

TRUCK MOUNTED CORIOLIS METER

Truck Number: __________ Meter Mfr.: __________ Size: __________

Meter Serial No.: ____________________ Normal Meter Proving Frequency: ____________________

Date of Last Proving: ____________________ Meter Factor: ____________________

	YES	NO	N/A
Are all Meter Proving Reports filed with the Authorized Officer within 10 working days following the meter proving?			
Does the Meter contain the following Items?			
Divert Valve			
Automatic Sampler			
Temperature well and probe for verifying meter temperature readings during meter proving			
Automatic Air Eliminator vented into the tank with provisions to prevent liquid from passing			
Block Valves upstream and downstream of meter (for zeroing meter prior to meter proving and/or when meter is repaired)			
Back Pressure Control Valve on divert line to ensure the integrity of the divert valve			
Prover Loop			
Heat tracing (only if meter is used to haul high pour point crude oil)			
Is the Coriolis Meter protected from pressure surges as well as excessive pressures caused by thermal expansion of the fluid when the system is not in operating? item			
Is there a By Pass around the Meter?			
Was the test for BS&W done in accordance with Onshore Order #4,III,C?			
Does oil tank have a pressure/vacuum thief hatch and vent-line valve?			
Is oil tank facility in conformance with applicable Site Security Regulations?			
Copy of run ticket attached?			

Seal Numbers and Oil Measurement data:

Meter Module seal number: __________ Meter Flange seal numbers: inlet __________ outlet __________

Divert Valve seal number: __________ Load Line seal numbers: off __________ on __________

Gravity ______ @ ______ °F BS&W ______ % Avg. Temp. ______ °F Gross Mass/Vol.: __________ bbls.

REMARKS

____

____

____

Form 3160-13
(October 2003)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MEASUREMENT RECORD – GAS

ID _____ Date _____

Well/Facility ID _____

Location: Unit _____ S_____ T_____ R_____ County & State _____

Operator _____ Purchaser/Processor _____

Inspector _____ Office _____

GENERAL METER INFORMATION (Orifice, or differential meter)

Method of Measurement: _____

Meter Station No.: _____ Specific gravity: _____

Atmospheric Pressure _____ or Elevation _____

PRIMARY METER INFORMATION

Meter Manufacturer _____ Meter Serial No: _____

ID of meter run: _____ Device size: _____ Beta ratio _____

Does the meter have a temperature recorder? Yes _____ No _____

Length of pipe upstream _____, downstream _____ of device

Required pipe upstream _____, downstream _____ of device

Figure from AGA No. 3 used to determine pipe length: 4 ___ 5 ___ 5 ___ 7 ___ 8 ___

Does the meter have straightening vanes? Yes ___ No ___

Type of taps: Flange ___ Pipe ___ Static pressure tap: Upstream ___ Downstream ___

Type of plate holder: Flange ___ Simplex ___ Junior ___ Senior ___

SECONDARY ELEMENT INFORMATION

DRY FLOW

Type of Chart: _____

Is DP pen recording in the outer 2/3 of chart? _____

Is SP pen recording in the outer 2/3 of chart? _____

EFM

Self Contained ___ Component ___

Manufacturer _____

Model _____

S/N _____

URL DP _____ URL SP _____

Static range: _____ Differential range: _____ Temp range: _____

Recorder Readings:

DP _____ SP _____ psig/psia T_____ Flow rate_____ scf/h | mcf/day

RECORDER CALIBRATION INFORMATION

19. Calibration frequency: _____ Witnessed: Yes ___ No ___ Reports attached: Calibration report ___ EFC Event log ___
20. Was a leak test performed? Yes ___ No ___
21. Was the differential pen arc checked? Yes ___ No ___
22. Was the differential linearity check at 0, 100% and 1 point within the normal range of the differential recording? Yes ___ No ___
23. Was the static linearity check at 0, 100% and 1 point within the normal range of the static recording? Yes ___ No ___
24. Was the static time lag check? Yes ___ No ___ N/A ___
25. Was meter calibration performed as per the requirements of 00 No. 5? Yes ___ No ___
26. Does the calibration report contain all of the information required by 00 No. 5? Yes ___ No ___
27. Date of the last meter calibration: _____

Remarks: _____

_____

_____

NOTE: This form is not necessary if all of the gas produced is either used on site or flared/vented.

Sketch of the meter facility and associated piping. (Optional)

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SURFACE INSPECTION FORM

[illegible] | Well #: | API #: | Well Status:

[illegible] | [illegible] | [illegible] | Section: | Township: | Rng/Long: | County: | [illegible]

[illegible] | [illegible] | [illegible]

[illegible] | [illegible] | [illegible] | [illegible] | [illegible]

[illegible]

[illegible] | [illegible]

[illegible]

[illegible] | Company/SME Rep: | Phone #:

Date: | Type: | Activity: | Office: | Travel: | Insp:

General Remarks:

Follow-up Requirements: (circle any that apply) NONE VERBAL LETTER INC NOTIFY PET

Follow-up Remarks:

CORRECT PROBLEM BY: | NEXT INSPECTION:

Drilling/Construction Inspection - Environmental

	Case #: **Lease #:** **Operator:**	**Well Name:** **Well #:** **API #:**
Twn: **Rng:** **Sec**: **Qtr:** **N/S Foot**: **E/W Foot:**	**County:** **State:** **X/Y Coordinates:**	**Facility ID:** **Facility Name:** **H2S: Yes ( ) No ( )**
Surface Owner:		**Inspection Activity:** ES/ SC : SD

Office Time:	**Travel Time:**	**Inspection Time:**	**Trips:**
Inspection Open Date:	**Inspection Close Date:**		**Inspector:**

Inspection Items	**Met**	**Not Met**	**N/A**	**Order/ INC**	**Photo # Direc.**
Location/Access Road/Utilities Constructed as per the Permit & Lease Stipulations?					
Unauthorized Disturbance?					
Drilling Pits (Reserve, Completion, and/or Ancillary):					
1. Pits Constructed in the Cut?					
2. Two Feet Minimum Pit Freeboard?					
3. Pits Free of Visible Leaks or Failures?					
4. Pits Free of any Accumulation of Oil, Trash and/or Debris?					
5. Pits or Location Fenced?					
Well Location & Access Road Conditions:					
1. Adequate Topsoil Properly Segregated and Stockpiled from Well Location and Road Construction Areas?					
2. Roads Well Maintained?					
3. Dust Abatement Necessary?					
4. Run-off and Run-on Diverted if Necessary?					
5. Erosion and Runoff Controlled?					
6. Natural Watercourses Free of Debris and Erosion?					
7. Pits, Cellars, Rat Holes and Other Bore Holes Back-filled?					
Utilities:					
1. Topsoil Properly Segregated and Stockpiled?					
2. Erosion Controlled?					
Facilities: Planned to be Clustered to Maximize Interim Reclamation?					

Comments, Inspection/Monitoring Results, and Additional Actions Necessary:

Initial disturbed Acres (including pad, roads, and pipelines):

Follow-up Requirements: (circle any that apply) NONE VERBAL LETTER INC NOTIFY PET

08-01-07	**Correct problem by:**	**Next Inspection date:**	**Date AFMSS updated:**

Production & Interim Reclamation Inspection/Monitoring – Environmental

	Case #: **Lease #:** **Operator:**	**Well Name:** **Well #:** **API #:**
Twn: **Rng:** **Sec**: **Qtr:** **N/S Foot**: **E/W Foot:**	**County:** **State:** **Latitude:** **Longitude:**	**Facility ID:** **Facility Name:** **H2S: Yes ( ) No ( )**
Surface Owner: **Present Yes ( ) No ( )**		**Inspection Activity:** ES/IR:SP:HS:WS
Office Time:	**Travel Time:**	**Inspection Time:** **Trips:**
Inspection Open Date:	**Inspection Close Date:**	**Inspector:**

Inspection Item	**Met**	**Not Met**	**N/A**	**Order/ INC**	**Photo # Direc.**
Constructed as Per the Permit Requirements and Utilizing BMPs as Appropriate?					
Unauthorized Disturbance?					
Interim Reclamation:					
1. Facilities Clustered?					
2. Recontoured?					
3. Topsoil Redistributed on Majority of the Disturbed Areas?					
4. Seeded? Method:					
5. Reveg. Close to the Wellhead?					
6. Reveg. Close to Road Surface?					
7. Revegetation Success?					
8. Erosion and Runoff Controlled?					
9. Mulch? Type:					
10. Free of Noxious & Invasive Weeds?					
Interim Reclamation Approved? (yes) (no) Work Needed? Note Below					
Roads:					
1. Proper Drainage?					
2. Culverts?					
3. Surface Material?					
4. Gates?					
5. Catttleguards?					
6. Maintenance?					
Corridors:					
1. Erosion Controlled?					
2. Final Reclamation? Approved? (yes) (no)					
3. Power Lines Exclude Raptors?					
Color/Screening: Painted to Blend with Vegetated Background?					
Pits, Ponds, Tanks, & Other Facilities? Number and Types:					

Pits:					
1. Adequate Freeboard?					
2. Lined? Good Condition?					
3. Leak Detection?					
4. Free of Oil & Trash?					
5. Excludes Wildlife?					
Tank Berm:					
1. Well maintained?					
2. Adequate Capacity?					
Exhaust stacks: Constructed to Prevent Bird/Bat Mortality?					
HAZMAT:					
1. Spills or leaks?					
2. Storage Issues?					
3. Drip Pans Exclude Wildlife?					
Housekeeping: Free of trash and Unnecessary Equipment?					

Comments, Inspection/Monitoring Results, and Additional Actions Necessary:

Initial Disturbed Acres:	**Interim Reclaimed Acres:**	**Final Reclaimed Acres:**
Follow-up Requirements: (circle any that apply) NONE VERBAL LETTER INC NOTIFY PET		
08-01-07 **Correct problem by:**	**Next Inspection date:**	**Date AFMSS updated:**

H-3160-5 - INSPECTION AND ENFORCEMENT DOCUMENTATION AND STRATEGY DEVELOPMENT HANDBOOK (Internal)

Final Reclamation Inspection/Monitoring - Environmental

	Case #: **Lease #:** **Operator:**	**Well Name:** **Well #:** **API #:**
Twn: **Rng:** **Sec**: **Qtr:** **N/S Foot**: **E/W Foot:**	**County:** **State:** **Latitude:** **Longitude:**	**Facility ID:** **Facility Name:** **H2S: Yes ( ) No ( )**
Surface Owner:	**Present at Onsite Yes ( ) No ( )**	**Inspection Activity:** ES/ SA
Office Time:	**Travel Time:**	**Inspection Time:** **Trips:**
Inspection Open Date:	**Inspection Close Date:**	**Inspector:**

Inspection Items	**Met**	**Not Met**	**N/A**	**Order/ INC**	**Photo # Direc.**
All Reclamation Work According to the Reclamation Plan?					
All Facilities Removed for Final Reclamation? (Including surface and shallow pipes, risers, markers, signs, fences, trash, etc.)					
Rock Surfacing Material Removed?					
Treatment of Oil or Salt Contaminated Soil Needed? Yes ( ) No ( )					
Treatment of Oil or Salt Contaminated Soil Occurring or Occurred? (circle one)					
Compacted Areas Ripped/Disked?					
Recontoured Back to Original Contour? Pad? Road? Pipeline?					
Topsoil Replaced? Pad? Road? Pipeline?					
Seeding: Broadcast? Drill? (circle one)					
Erosion Control?					
Reclamation Fence?					
Dry-hole Marker: Surface Monumented? [ ] Legal Description? [ ] Weep Hole [ ] Subsurface Monumented? [ ] Unknown? [ ]					
Noxious or Invasive Weeds Present? Treatment Needed? [ ] Species?					
Revegetation Success? Density? Species?					
Site Stability?					

Final Reclamation Approved? (Yes) (No)

Comments, Measurements, Inspection/Monitoring Results, & Additional Actions?

Initial Disturbed Acres:		**Final Reclaimed Acres:**	
Follow-up Requirements: (circle any that apply) NONE VERBAL LETTER INC NOTIFY PET			
08-01-07	**Correct problem by:**	**Next Inspection date:**	**Date AFMSS updated:**

H-3160-5 - INSPECTION AND ENFORCEMENT DOCUMENTATION AND STRATEGY DEVELOPMENT HANDBOOK (Internal)

APPENDIX 5 INC TYPE AND CATEGORY

	Production Violations	AFMSS Category Default
1.	Site is not properly identified	N
2.	Well equipment is not satisfactory	N
3.	Environmental protection is not satisfactory	E
4.	Temporary or emergency pits are not approved	E
5.	Pits are not satisfactory	E
6.	Surface use is not in accordance with approved plan	E
7.	Monthly Report of Operations is not complete and current	(No Longer Valid)
10.	Off-lease measurement is not approved (Oil)	**F
12.	Other method of measuring oil and condensate is not approved	**F
13.	Method of measuring oil and condensate is not satisfactory	F
14.	Valves are not sealed in accordance with minimum standards	F
15.	Site Facility diagram is not satisfactory	N
17.	Off-lease storage of oil and condensate is not approved	**F
18.	Liquid handling equipment is not satisfactory	**F
20.	Commingling is not approved	F
23.	Flaring or venting or other is not approved	F
24.	Off-lease measurement is not approved (Gas)	**F
27.	Method of measurement (other than orifice meter) of natural gas not approved	**F
28.	Method of measuring natural gas is not satisfactory	F
29.	Natural gas handling/treating equipment is not satisfactory	**F
31.	Collection of liquids is not satisfactory	F
33.	Water disposal method is not approved	N
35.	Disposal of water is approved but not satisfactory	N
37.	Tank batteries are not properly equipped	**F
38.	Warning signs are not properly installed	N
39.	If required, the contingency plan is not available	N
40.	Personnel are not properly protected	N
41.	Sales and management of oil, condensate and gas are not documented according to standards	F
42.	Operator has not established a site security plan in accordance with standards	F
43.	Operator does not maintain a seal record	F
44.	Operator does not have a self-inspection program	N
50.	Failed to comply with a notice, written order, or instruction of the AO	**F
51.	Operator is required to submit requested paperwork	N
50.	Failed to comply with a notice, written order, or instruction of the AO	**F
52.	Prepared, maintained, or submitted false, inaccurate or misleading reports etc.	F
53.	Failure to obtain approval for specific operations	F
81.	MRO confirms the reasonableness of Production vs. Sales	(No Longer Valid)
82.	MRO confirms the reasonableness of Tank capacity vs. inventory	(No Longer Valid)
83.	MRO confirms the reasonableness of Well status vs. actual status	(No Longer Valid)

H-3160-5 - INSPECTION AND ENFORCEMENT DOCUMENTATION AND STRATEGY DEVELOPMENT HANDBOOK (Internal)

**General Rule -- Those categories with two asterisks may be FOGRMA- or non-FOGRMA-related based upon site-specific conditions. AFMSS will default to the category indicated, and the user must review to ensure the category is correct for the actual violation. The user will have the capability of editing the field if it is actually a non-FOGRMA-related violation or order. Those items classified as FOGRMA in the listing are related to the proper production handling and measurement of product as well as items 50 and 52, which are specifically addressed in the Act itself.

Drilling Violations:		Category
1D.	Approved drilling permit and plan are not on location	N
2D.	Drill site is not properly identified	N
3D.	Operations are not conducted in a workmanlike manner	N
4D.	Operator failed to report spills	E
5D.	Drill-stem test was not conducted according to minimum standards	N
6D.	Hole deviation is not within approved tolerance	N
7D.	Surface use is not in accordance with approved plan	E
8D.	Well control and assoc. equip. is not installed, used, etc to maintain well control	N
23D.	Casing or cementing operations were not conducted according to approved plan	N
28D.	Mud system is not according to approved plan	N
33D.	Air and gas drilling op's are not according to approved plan or minimum stand	N
37D.	Hydrogen sulfide op's do not meet minimum standards or approved plan	N
50D.	Failed to comply with a notice, written order, or instruction of the AO	N
51D.	Operator is required to submit requested paperwork	N
52D.	Prepared, maintained, or submitted false, inaccurate, or misleading reports, etc.	N

Plugging Violations:		Category
1P.	Plugging/Abd. operations are not conducted according to approved plan	N
2P.	Rehabilitation does not meet approved plan	E
50P.	Failed to comply with a notice, written order, or instruction of the AO	N
51P.	Operator is required to submit requested paperwork	N
52P.	Prepared, maintained, or submitted false, inaccurate, or misleading reports	N

H-3160-5 - INSPECTION AND ENFORCEMENT DOCUMENTATION AND STRATEGY DEVELOPMENT HANDBOOK (Internal)

GLOSSARY

ACRONYMS

Acronym	Full Name
AAPD	Approved Application for Permit to Drill
AFMSS	Automated Fluid Minerals Support System
AO	Authorized Officer
APD	Application for Permit to Drill
AWP	Annual Work Plan
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BOPE	Blowout Preventer Equipment
CCLR	Claims Collection Litigation Report
CFR	Code of Federal Regulations
COAs	Conditions of Approval
DOD	Department of Defense
DOJ	Department of Justice
EnvS	Environmental Scientist
FOGRMA	Federal Oil and Gas Royalty Management Act
FOs	Field Offices
FS	Forest Service
FTE	Full-Time Equivalent
FY	Fiscal Year
I&E	Inspection and Enforcement
IAFMSS	Indian Automated Fluid Minerals Support System
IBLA	Interior Board of Land Appeals
IMs	Instruction Memorandums
INC	Notice of Incident of Noncompliance
IRS	Internal Revenue Service
LACT	Lease Automatic Custody Transfer
MMS	Minerals Management Service
MOUs	Memorandums of Understanding
NCIF	National Center Intake Facility
NIA	Notice of Intent to Abandon
NIAFMSS	Non-Indian Automated Fluid Minerals Support System
NOC	National Operations Center
NOS	Notice of Staking
NRS	Natural Resource Specialist

NTC	National Training Center
NTLs	Notices to Lessees
OGOR	Oil and Gas Operations Report
OJT	On-the-Job Training
OOGO	Onshore Oil and Gas Order
PAT	Production Accountability Technician
PET	Petroleum Engineering Technician
PTA	Planning Target Allocation
RLOC	Reclaimed Location
SD	State Director
SDR	State Director Review
SO	State Office
SRS	Surface Resource Specialist
SSN	Social Security Number
TIN	Taxpayer Identification Number
UAPD	Unapproved Application for Permit to Drill
UNOS	Unapproved Notice of Staking

Form 1221-2
(June 1969)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MANUAL TRANSMITTAL SHEET

Release
3-326

Date
10/05/05

Subject
H – 3160-6 NATIONAL CERTIFICATION HANDBOOK FOR OIL AND GAS INSPECTION AND ENFORCEMENT PERSONNEL (INTERNAL)

1. **Explanation of Material Transmitted**
   This release transmits the National Certification Policy (NCP), a new Handbook Section that provides direction for Training and Certification of Oil and Gas Inspection Personnel for the Bureau of Land Management (BLM) Oil and Gas Inspection and Enforcement (I&E) program 3100.

2. **Reports Required**
   None

3. **Material Superseded**
   None

4. **Filing Instructions**
   File as directed below.

Remove:	Insert:
None	H - 3160-6

(Total: 16 Sheets)

T. P. Lonnie

Assistant Director,
Minerals, Realty and Resource Protection

U.S. GOVERNMENT PRINTING OFFICE 1987-181-423/54150

United States
Department of the Interior
Bureau of Land Management

H-3160-6
National Certification Handbook for Oil and Gas Inspection and Enforcement Personnel (Internal)

TABLE OF CONTENTS

INTRODUCTION

In accordance with the Federal Oil and Gas Royalty Management Act (FOGRMA) of 1982 the Bureau of Land Management (BLM) has established the National Certification Policy (NCP) to train and to maintain a high level of expertise among oil and gas inspection personnel so that adequate oversight is provided for public health and safety, protection of the surface and subsurface environment, and production accountability while operations are being conducted on Federal and Indian oil and gas leases. The NCP provides procedures and/or requirements to acquire and maintain the skills and knowledge necessary to conduct inspections of oil and gas operations. It also provides flexibility in position management including the movement of inspection personnel between field office organizations. Personnel that conduct or participate in actual field inspections and perform oversight functions, or have day-to-day quality control responsibilities shall be certified. When certification is required, such certification shall be in accordance with the instructions contained in this handbook/manual.

Those skills and knowledge essential to the NCP are contained in the “National Certification Policy Handbook Criteria.” These criteria are a part of the “Certification Training Program” which outlines an extensive on-the-job training program. While the NCP is intended to develop and maintain competent inspection and enforcement personnel, it is not designed to produce "experts" in oil and gas technology. Advanced training and skills should be provided for in accordance with national, state, and local training plans and the Inspection and Enforcement (I&E) Strategy.

Section I provides a general overview and provisions of the National Certification Policy, purpose of the program, who must be certified, partial certification, use of noncertified personnel, responsibilities for program management, and certification of State and Indian cooperators.

Section II describes the certification process, model certification program, technical review process, crediting prior experience and education toward certification, completion of certification when on-the-job training (OJT) is not available, and the issuance of Inspector ID Cards.

Section III describes the training programs at the State level and crediting prior in-house formal training.

Section IV is a miscellaneous category that describes the phase-in period, position descriptions, transfer between States, and the rehiring policy for inspection personnel.

I. GENERAL PROVISIONS

A. The National Certification Program

The NCP for oil and gas inspection personnel is a systematic training and professional development process whereby the BLM:

- Provides personnel with the skill and knowledge necessary to conduct and document regulatory inspections of oil and gas operations.

- Recognizes the attainment of such skill and knowledge by issuing Form 3100-8, *Federal Oil and Gas Inspector ID Card,* Form 3100-9; *State Oil and Gas Inspector ID Card;* and Form 3100-10, *Indian Oil and Gas Inspector ID Card for Indian Inspectors.*

B. Purpose of the Certification Program

The BLM has established the NCP to train and maintain a high level of expertise among oil and gas inspection personnel nationwide. The establishment of a basic level of expertise is desirable for a number of reasons, including the following:

1. The I&E program regulates a major revenue-producing program of the U.S. Government.

2. I&E personnel have significant responsibilities in the areas of public health and safety, protection of the surface and subsurface environment, and production accountability while operations are being conducted on Federal and Indian oil and gas leases.

3. I&E personnel are a first point of contact for the BLM with the public and industry.

4. I&E personnel are responsible for identifying instances of regulatory noncompliance, and occurrences that may result in monetary penalties and litigation.

5. I&E personnel may be called on to serve as expert witnesses in hearings and legal proceedings.

C. Who Must Be Certified

The purpose of this program is to ensure that I&E program activities are performed by persons properly trained in the operating and regulatory requirements relating to oil and gas drilling and production activities. All personnel who conduct inspections within the I&E program shall be certified. This includes, but is not limited to personnel who:

1. Inspect oil and gas operations for compliance with operating regulations, regardless of the classification or title of their position. Personnel that conduct Environmental Protection Agency (EPA) assessments and/or surface compliance inspections, do not require certification.

2. Execute, issue, or contribute to the completion of citations for noncompliance with governing regulations, that is, Form 3160-9, *Notice of Incidents of Noncompliance*, concerning oil and gas operations.

3· Review and/or advise management or operators on the aspects of appeals from citations (incidents of noncompliance-INCs), penalties, and assessments, including state director and other technical reviews.

4. Review inspection activities for adequacy.

5. Coordinate inspection and enforcement program activities, (I&E coordinators, I&E specialists**,** supervisory inspectors and/or first line supervisors).

Personnel exercising administrative oversight (Field Office Managers, District Managers, Administrative Officers) over I&E program responsibilities should attend *Oil and Gas for Managers* or Course 3100-01, *Oil and Gas Compliance Certification School*, Module 1 only. Completion of one of these courses is desirable, but not mandatory.

Full certification requires completion of the *Certification Training Program Tracking Document (Appendix 1)*; successful completion of Course 3100-01, *Oil and Gas Compliance Certification School***,** comprising of six modules; successful completion of Course 3000-89, *Automated Fluid Minerals Support Systems (AFMSS) for Inspectors;* demonstration of competency before a technical reviewer and completion of the Certification Criteria and Record of Review (Appendix 2); and final review by the National Lead for Certification Training and Compliance.

D. Partial Certification

Partial certification for oil and gas inspection personnel may be accomplished by demonstrating a basic proficiency of inspection in areas of drilling or production operations including a working knowledge of the laws and regulations governing oil and gas exploration and production operations on Federal and Indian lands. This proficiency must be documented throughout the OJT and the *Certification Training Program and Tracking Document (Appendix 1).* As this process is documented and the technical reviewer is satisfied with the demonstrated level of competency in drilling or production operations**,** the inspector is eligible for partial certification. The Technical Reviewer shall inform the State Director and the national lead for certification and training that the inspector has demonstrated ability to conduct inspections in areas identified by the technical reviewer. The inspector that has been partially certified by the reviewer may conduct inspections in the area(s) of partial certification.

E. Utilization of Noncertified Personnel

Personnel performing activities such as National Environmental Policy Act (NEPA) assessments and compliance inspections**,** and right-of-way (ROW) compliance inspections are not required to be certified under this program.

For persons in the OJT phase of the certification program, participation in field inspections provides a valuable hands-on training opportunity. Trainees who have demonstrated competency in specific elements of the certification program may be utilized to perform work in

those areas. However, their work must be reviewed by certified inspection personnel before any official action is taken. Additionally, trainees may not independently perform inspections of elements for which they have not demonstrated the required basic skills through the certification criteria and record of review process.

F. Who May Issue Incidents of Noncompliance (INC) Form 3160-9

The use of the INC form is not limited to certified personnel only. All personnel that have successfully completed the National Training Center's (NTC) **Environmental Compliance Training module** (not the certification training program) may issue an INC using form 3160-9. To obtain compliance for non-technical aspects of the I&E program, the Notice of Violation Letter is optional.

G. Responsibilities for Program Management

1. The Director of the Bureau of Land Management is responsible for establishing program policy and standards, coordinating nationwide implementation, and evaluating the effectiveness of the National Certification Program.

2. The State Director is responsible for implementing a State-level certification program, including a formal on-the-job training program, and designating personnel to conduct technical reviews, in accordance with national program standards and goals. In designating these personnel, the State Director considers inspection qualifications such as locally recognized subject matter experts, full performance inspectors, and lead inspectors with quality experience from both BLM and the industry. The State Director approves certification upon demonstration of candidates' competency.

3. The National I&E Program Lead for Certification and Training (WO-310) will recommend to the State Director that an inspector should be certified upon completion of the final third-party technical review. The State Director will then be responsible for issuing Form 3100-8, *Federal Oil and Gas Inspector ID Card* and Form 3100-10, *Indian Oil and Gas Inspector ID Card,* and declaring that an inspector is "certified."

4. The Technical Reviewer must be certified and designated by the State Director. The reviewer will be responsible for determining if candidates can demonstrate basic proficiency in performing certification criteria elements. This review can be conducted on all or any portion of the Certification Criteria and Record of Review (Certification Criteria) (Appendix 2).

In the case of partial certification, documentation and approval resides with the State Director or its designated representative.

5. The Certified Instructor, in the context of the program, is an employee that has been certified under the NCP and who is selected to provide instructions to a candidate for the purpose of obtaining certification in any or all elements of the certification training program.

H. Certification of State and Indian Cooperators/ FOGRMA 638 Contracts

Qualification requirements for State and Indian tribal personnel participating in inspection and enforcement program activities under cooperative agreements, delegations, or memoranda of understanding will be determined by State Directors. State and tribal inspectors working under these agreements must meet the certification requirements outlined in the NPC.

II. THE CERTIFICATION PROGRAM

A. The Certification Process

An employee may be formally declared certified after successfully completing a specified regimen of internal training. The purpose of the training is to provide inspection personnel with the knowledge and skills to ensure oil and gas operations on Federal and Indian lands are in compliance. This program covers the knowledge and skills of operational standards and practices in use by industry as well as the governing regulatory requirements. Onsite inspection tasks and procedures, documentation systems and standards, and remedies and penalties for noncompliance are integral parts of the program. The programs are as follows:

1. Formal Training. Formal training requires completion of NTC *Course 3100-01, Oil and Gas Compliance Certification School; Course 3000-89, Applied AFMSS for Inspectors;* and any subsequent specified curriculum, including the required refresher course(s).

2. On-the-Job Training (OJT). OJT requires completion of a comprehensive training program developed and conducted by the employee's State Office organization in accordance with national standards. The full range of skills and knowledge deemed necessary for certification are consolidated into *Appendix 1, Certification Training Program Tracking Document* and should be used as the basis for State-level OJT programs. While most skill and knowledge requirements are addressed in Course 3100-01, some require further study, practice and/or field application in order to develop full proficiency. In some instances, OJT may be necessary for refresher purposes.

3. Technical Review. The technical review is the successful demonstration of applying skills and knowledge in performing a field inspection(s) while observed by the designated technical reviewer. Appendix 2, Certification Criteria and Record of Review, represents tasks that are routinely performed by inspection personnel while conducting field inspections. To become certified, inspection personnel must demonstrate proficiency in each task.

4. Certification. After the National Lead for Certification and Training has recommended to the State Director that an inspector be certified, the inspector will be certified when issued a Form 3100-8, *Federal Oil and Gas Inspector ID Card*, by the State Director. The inspector ID card will reflect the ID number and date of initial certification. When recertification occurs, the ID card will show the original ID number, date of initial certification, and current renewal issue date.

5. Certification Maintenance. Basic competency is required to maintain certification. In order to maintain competency, certified inspection personnel must successfully complete the *NTC Course 3100 -01, I&E Compliance Certification* course every five years. Any deficiencies identified during this training will be forwarded to the immediate supervisor for

correction. If deficiencies are not corrected with 90 days, the individual's certification will be revoked.

B. Model Certification Program

The certification program should adhere to the following chronology of events in the case of a new hire:

1. Phase 1, Orientation

After entry on duty, and prior to attending formal training, the trainee will be introduced to and familiarized with, the duties and responsibilities of the job through an orientation program established by the State Office organization and administered at the duty station. Typically, this orientation will consist of reviewing internal policies and procedures as contained in governing regulations, manual issuances, instruction memoranda, other references, and observing field inspections. As a part of this phase, the trainee is required to complete the Self-Study components 2 & 3 of Module 1 administered by the NTC; courses 3000-ST-1, *Familiarization With Oil and Gas: Overview*; 3000-ST-2, *Familiarization With Oil and Gas: Drilling Equipment and Operations;* and/or 3000-ST-3, *Familiarization With Oil and Gas: Production Operations.*

2. Phase II, Formal Training

All trainees must complete the following formal training courses sponsored by the National Training Center:

(1) Course 3100-01, *Oil and Gas Compliance Certification School*
(2) Course 3000-89, *Applied AFMSS for Inspectors.*

3. Phase III, Orientation and Formal On-the-Job Training

The trainee will receive ongoing training in inspection procedures and day-to-day operations through a program of on-the-job training established by the State Office organization and administered at the duty station. Supervisors of candidates for certification are responsible for arranging for a certified instructor to work with the trainee during the OJT training phase. The instructor may be different for various parts of the program and must date and initial the progress tracking chart as each element is completed. Instruction should place particular emphasis on the knowledge and skills specifically identified as production, drilling and abandonment criteria in Appendix 2, Certification Criteria.

4. Phase IV, Technical Review

Following completion of Phases I, II, and III, or in the course of completing Phase III, the trainee may be eligible for certification if proficiency in the certification criteria (Appendix 2) before a Technical Reviewer can be demonstrated.

Since the emphasis of the National Certification Program is on the timely and systematic acquisition of skills, the model chronology described above, which stresses orientation, formal training, and OJT training, may be modified to accommodate individual situations. Experienced Bureau employees or new hires with substantial field experience would be good candidates for this approach. For example, current employees who have completed formal training requirements and do not require orientation may move immediately to any part of the OJT phase or even directly to the demonstration-of-skills phase. New hires may move from orientation to OJT if attendance at formal training cannot be scheduled timely.

Likewise, the demonstration of individual certification criteria skills may take place over a period of time as instruction takes place and/or other circumstances dictate.

Final certification (Form 3100-8, *Federal Oil and Gas Inspector ID Card)* will be issued to a candidate by the State Director upon successful completion of the review and a recommendation for certification from the WO-310 Oil and Gas Certification and Training Lead. If the candidate fails to pass this review, additional training will be required in those areas of concern.

C. Technical Review Process

Skills and knowledge required for the inspection of oil and gas drilling and production operations cover:

The technical processes used by operators; and,

The specific regulatory requirements and procedures required by the U.S. Department of the Interior.

Demonstrations of skill will include all of the elements of the certification criteria (Appendix 2). Each element must be completed to the satisfaction of the Technical Reviewer. Demonstrations will be conducted on individual elements or groups of elements as agreed to by the trainee and reviewer. Demonstrations are to be conducted that clearly show proficiency in the required skill. For example, the use of gauging equipment should involve actual measurement at a production facility to replicate an oil transaction. The simulation of skills or procedures is not acceptable for purposes of this requirement.

The designated Technical Reviewer shall be responsible for completion of the appropriate portion of the checklist of the certification criteria (Appendix 2) by dating and initialing each criterion when the trainee has demonstrated competency of a particular element to the Technical Reviewer's satisfaction.

When all of the certification criteria have been met, the Technical Reviewer will forward the checklist to the National I&E Program Lead for Certification and Training (WO-310), who will ensure that the certification criteria has been met and recommend certification of the trainee by issuing Form 3100-8, *Federal Oil and Gas Inspector ID Card,* and/or

Form 3100-10, *Indian Oil and Gas Inspector ID Card* as appropriate. If it is determined that there is a need for further training, the trainee's immediate supervisor will be notified. The completed certification criteria and record of review checklist, including the certification certificate, will be filed in the employee's official personnel folder.

D. Crediting of Education and Experience Toward Certification

Many of the skills and knowledge required for certification may be attained through experience with industry, prior service with Federal or State organizations regulating oil and gas operations, or technical schools providing training in the petroleum field. However, the BLM has no effective means of crediting the wide range of possible education or work experiences against the individual criteria established for certification. Therefore, in order to be certified, a candidate must demonstrate specified knowledge, skill, and ability before a designated Technical Reviewer.

E. Completion of Certification Requirements Where Required Experience is Not Available at the Duty Station

Certification covers both drilling and production operations. The unavailability of specific on-the-job training experiences at the duty station does not change the requirement for training in, or demonstration of, that particular skill.

As a part of the State OJT program, State Directors should ensure that arrangements can be made to provide employees with needed experience, and technical review covering that experience, at another field office within the State or in another State Office organization.

F. Inspector ID Cards

The BLM will continue to utilize the current Form 3100-8, *Federal Oil and Gas Inspector ID Card,* and Form 3100-10, *Indian Oil and Gas Inspector ID Card* as a unique means of identification for oil and gas Federal and Indian inspection personnel. It is the intent of this policy that all Inspector ID Cards issued in the future will reflect certification under this program. Under no circumstances will Inspector ID cards be issued to personnel who are not certified.

1. New Employees. New employees will not be issued Inspector ID cards until they are certified.

2. Current Employees. Personnel now on the rolls will be issued new cards upon successful completion of the NTC refresher training courses.

III. TRAINING PROGRAMS

A. State-level OJT Programs

New Employees. New employees will not be issued Inspector ID cards until they are certified. Orientation and on-the-job training will be conducted under programs developed by the State Director.

The supervisor of each trainee is responsible for arranging for appropriate certified personnel to work with and review each element of the program as the trainee progresses. The Technical Reviewer, who may be different for each element, is responsible for dating and initialing the Certification Training Program Tracking Document checklist as each element is completed.

OJT requirements that cannot be met within the home office due to lack of opportunity, such as drilling operations not currently being conducted, will be met by detailing the employee to another field location where that opportunity does exist.

Portions of the OJT training program may be omitted when a trainee demonstrates competency in specific elements of the certification program.

B. Crediting Prior In-house Formal Training

All sessions of Course 3000-89, *Applied AFMSS for Inspectors,* Course No. 3000-17, *Fluids Inspection and Enforcement: Drilling,* and Course No. 3000-18, *Fluids Inspection and Enforcement: Production,* taught in and subsequent to fiscal year 1986 are fully creditable toward the formal training requirement for certification.

IV. MISCELLANEOUS

A. Phase-in Period

Timely completion of certification is encouraged. Certification would typically be accomplished within a one- to two-year time frame; however, it must be completed within 3 years. Failure to complete the certification process within the 3 year period should be addressed under the merit promotion plan. All future recruitment actions and vacancy announcements should include these requirements. Application of this standard for new inspection personnel already on board must be determined on a case by case basis.

Those employees certified for 5 years or more must satisfactorily complete the refresher training (NTC Course 3000-14) within 2 years of the effective date of this Handbook. When deficiencies are identified, an additional year will be provided for remedial training and demonstration of competency per section II.A.3.

B. Position Descriptions

The certification criteria represent a composite of common base-level knowledge and proficiency which are typical of all types of drilling, production, and other related inspections. The knowledge and proficiencies vary widely in application based on the nature, complexity, and phase of operations for each individual operational site. Therefore, the certification criteria cannot and should not be interpreted to constitute duties representative of any particular grade, nor should it be used as the basis for position descriptions.

C. Transfer Between State Offices Following Certification

Since the NCP is based on nationwide criteria, skills and knowledge are readily transferable from one state office to another. Therefore, certified employees who move to a different state office organization need not be recertified.

D. Annuitants or Government Rehires

Inspectors who resign from government service to work for private industry must give their Inspector ID card to the State I&E Coordinator/State Director. These cards are tracked and must be accounted for. If a former inspector applies for an I&E PET position and is rehired, but at the time of reemployment 5 years or more have elapsed since last certification, the hiree must attend the new 3100-01 Compliance Certification School. When the person attends Course 3100-01, *Oil and Gas Certification Compliance School,* all six modules must be completed with a score of 80% or better. This is consistent with policy for recertification or new hires every 5 years.

Glossary of Terms and Acronyms

Terms

-A-

Activities: are sub-inspections under the type of inspection being conducted. Activities are completed as they apply to the type of inspections.

Authorized Officer: any employee of the Bureau of Land Management who has been delegated the authority to perform the duties described in this Manual Section.

-C-

Certification Policy: outlines the certification requirements for all Petroleum Engineering Technicians (PETs).

Certification Program: the process used to ensure that all PETs attend the required formal training, receive on-the-job-training (OJT), and complete and demonstrate final certification criteria and record of review.

-N-

Noncertified: personnel who perform activities such as NEPA assessments, compliance inspections and ROW inspections; would issue written orders of the authorized officer for associated compliance issues. Noncertified personnel may not issue INCs (Form 3160-9).

-P-

Partial Certification: accomplished by demonstrating basic proficiency in inspection areas of drilling or production, including a working knowledge of laws and regulations. Proficiency must be documented throughout the On-the-Job Training (OJT) and the Certification Training Tracking System (Appendix 1) and the final Certification Criteria and Record of Review (Appendix) 2 of the National Certification Policy.

Petroleum Engineering Technician (PET): conducts oil and gas inspections on drilling and production operations in accordance with laws and regulations.

-T-

Technical Reviewer: certified personnel, designated by the State Director, who are responsible for determining if candidates can demonstrate basic proficiency in performing certification criteria.

Acronyms

AFMSS	Automated Fluid Minerals Support System
EPA	Environmental Protection Agency
FOGRMA	Federal Oil and Gas Royalty Management Act
I&E	Inspection and Enforcement Strategy
INC	Incident of Noncompliance
NCP	National Certification Policy
NEPA	National Environmental Policy Act
NTC	National Training Center
OJT	On-the-job training
PET	Petroleum Engineering Technician
ROW	Rights-of-Way

H-3160-6 NATIONAL CERTIFICATION HANDBOOK FOR OIL ANDGAS INSPECTION AND ENFORCEMENT PERSONNEL (Internal)

Appendix 1
Certification Training Program Tracking Document

Reference or Exercise		Target Competency	Completion Date
1.	Review *Mineral Leasing Act of 1920*	To become familiar with the Act.	
2.	Review *Federal Oil and Gas Royalty Management Act of 1982*	To become familiar with the Act.	
3.	Review all current I&E strategy, policy, documentation requirements, and guidance	To become familiar with the requirements necessary.	
4.	Review 43 CFR 3160, *Onshore Oil and Gas Operations*. This includes subparts:	To identify the regulatory reference for oil and gas operations and the reporting forms required.	
	(a) 3160, *General*	To identify the regulatory reference for purpose, policy, authority, objectives, and definitions.	
	(b) 3161, *Jurisdiction and Responsibility*	To identify the regulatory reference for jurisdiction and responsibility.	
	(c) 3162, *Requirements for Operating Rights Owners and Operators*	To identify the regulatory reference for general operator requirements.	
	(d) 3163, *Noncompliance, Assessments, and Penalties*	To identify the regulatory reference for *Incidents of Noncompliance (INC).*	
	(e) 3164, *Special Provisions*	To identify the regulatory reference for Onshore Oil and Gas orders, NTLs, surface rights,and damages.	
	(f) 3165, *Relief, Conflict and Appeals*	To identify the regulatory reference for relief, conflict, and appeals.	
5.	Review Onshore Oil and Gas Order No. 1, *Approval of Operation*	To become familiar with the contents of the order.	
6.	Review Onshore Oil and Gas Order No. 2, *Drilling Operations*	To become familiar with the contents of the order.	
7.	Review Onshore Oil and Gas Order No. 3, *Site Security*	To become familiar with the contents of the order.	
8.	Review Onshore Oil and Gas	To become familiar with the contents of the order.	

	Reference or Exercise	Target Competency	Completion Date
	Order No. 4, *Measurement of Oil*		
9.	Review Onshore Oil and Gas Order No. 5, *Measurement of Gas*	To become familiar with the contents of the order.	
10.	Review Onshore Oil and Gas Order No. 6, *Hydrogen Sulfide Operations*	To become familiar with the contents of the order.	
11.	Review Onshore Oil and Gas Order No. 7, *Disposal of Produced Water*	To become familiar with the contents of the order.	
12.	Review NTL 3A, *Reporting of Undesirable Events*	To become familiar with the requirements.	
13.	Review NTL 4A, *Royalty or Compensation for Oil and Gas Lost*	To become familiar with the requirements.	
14.	Review API Recommended Practices and Standards for Oil and Gas Operations, including:	To become familiar with industry, policies, practices, and procedures.	
	(a) RP-55, *Oil and Gas Production Operations*	Operations involving:	
	(b) RP-11ER, *Guarding of Pumping Units*	To identify public safety problems and recommend corrective action.	
	(c) RP-12R1, *Operation of Lease Tanks*	To identify proper installation of tank facilities.	
	(d) MPMS (Chapter 10.4), *Methods of Test for Water and Sediments in Crude Oil*	To identify reference for BS&W content.	
	(e) MPMS (Chapter 7.1), *Method of Measuring Temperature of Petroleum and Petroleum Production*	To identify reference for measuring temperature.	
	(f) Chapter 8.1, *Methods of Sampling Petroleum*	To identify reference for sampling petroleum.	
	(g) Chapter 9.1, *Density Determinations*	To identify reference for testing for API gravity.	
	(h) Standard 2540, *Petroleum Measurement tables 5A and 6A*	To be able to use correct factor to determine volume reduction and gravity correction.	
	(i) Specification 11N, *Lease*	To identify reference source for LACT equipment.	

H-3160-6 NATIONAL CERTIFICATION HANDBOOK FOR OIL ANDGAS INSPECTION AND ENFORCEMENT PERSONNEL (Internal)

Reference or Exercise		Target Competency	Completion Date
	Automatic Custody Transfer Equipment		
	(j) *Measurement of Petroleum Liquid Hydrocarbons by Positive Displacement Meter,* and MPMS Chapter 6.1, *Proving and Calibration*	To identify reference for LCT proving.	
	(k) Training Series, Book 4, *Well Testing*	To become familiar with proper procedures were used for testing a gas or oil well for production volume.	
	(l) RP-9*, Safe Drilling of Wells Containing Hydrogen Sulfide*	To identify safe drilling practices for wells with H_2S.	
	(m) RP-3, *Blow-out Prevention Equipment Systems for Drilling Wells*	To identify the proper use of BOP equipment.	
	(n) RP-54, *Oil and Gas Well Drilling and Servicing Operations*	To identify the proper equipment, procedures, and testing that must be used during drilling operations.	
15.	Review *AGA Committee Report No. 3, Second Edition 1985*	To identify industry policies and procedures for natural gas measurement.	
16.	43 CFR 3103.4, Review CDM 647.13, *Variable Royalty Rate and Well Count*	To become familiar with the variable royalty rate well count procedures and issues.	
17.	Review BLM Manual 3160-9, *Communitization*	To become familiar with the purpose of and authorities for Communitization agreements.	
18.	Review Release 3-101, Manual 3180, *Unitization (Exploratory),* and Release 3-102, H-3180-1 to:	To become familiar with the purpose of and authorities for Unitization.	
	(a) Become familiar with authority excerpt from Mineral Leasing Act of 1920; and,	To identify BLM reference for unit agreements.	
	(b) Become familiar with contents of Exhibit 4, *Model Agreement*	To identify the extent of Federal jurisdiction.	
19.	Receive instructions for H_2S escape pack	To use escape pack in life-threatening circumstances.	
20.	Receive instructions for H_2S monitor	To be able to calibrate and use H_2S monitor.	

Reference or Exercise		Target Competency	Completion Date
21.	Review H_2S safety requirements	To determine if H_2S safety requirements are satisfactory.	
PRODUCTION			
22.	Review *Automated Fluid Minerals Support System (AFMSS)*	To become familiar with computerized system and generate form 3160-11, *Inspection Record – Production*.	
23.	Tour producing case operation to:		
	(a) Review H_2S requirements	To determine if H_2S safety requirements are satisfactory.	
	(b) Determine tank volumes	To determine volumes by determining tank size(s).	
	(c) Observe site security methods used	To determine effective methods of sealing valves required to detect unauthorized access to oil.	
	(d) Determine degree of compliance with minimum standards for site security	To determine compliance with minimum standards.	
	(e) Learn how to trace battery flow systems	To be able to trace flow systems.	
	(f) Review battery facility diagram	To be able to compare accuracy of diagram to actual equipment on site.	
	(g) Observe well sign	To determine if well sign(s) are in compliance.	
	(h) Observe battery sign	To determine if battery sign(s) are in compliance.	
	(i) Observe environmental, housekeeping, and safety conditions	To determine if conditions are satisfactory.	
	(j) Determine methods of oil and gas measurement	To determine if methods of measurement are satisfactory.	
	(k) Determine if production is on or off lease	To determine if production is handled as approved.	
	(l) Observe commingled production facilities	To determine if production is handled as approved.	
	(m) Witness tank gauging to:		
	(1) Observe isolating tank for sales	To identify proper technique for isolating an oil tank.	
	(2) Observe methods of gauging	To identify proper gauging techniques.	

H-3160-6 NATIONAL CERTIFICATION HANDBOOK FOR OIL ANDGAS INSPECTION AND ENFORCEMENT PERSONNEL (Internal)

Reference or Exercise		Target Competency	Completion Date
	(3) Observe methods of sampling	To identify proper sampling methods.	
	(4) Observe measured API gravity	To identify proper technique for determining gravity.	
	(5) Observe taking of tank temperature	To identify proper technique for determining temperature.	
	(6) Observe completion of a run ticket	To determine compliance with minimum requirements.	
	(7) Complete form 3160-16, *Measurement Record – Oil by Tank Gauge*	To be able to accurately complete required form.	
	(n) Gauge and sample production in an oil tank	To develop skill and ability in the use of gauging equipment.	
	(o) Calculate the net oil volume from a sale	To be able to determine net volume using values from a run ticket.	
	(p) Witness a LACT meter proving to:		
	(1) Observe components, procedures, and calculations	To be able to determine if components, procedures, and calculations meet minimum requirements.	
	(2) Complete form 3160-17, Measurement Record – *Oil by LCT Meter*	To be able to accurately complete the required form.	
	(q) Witness gas meter calibration to:		
	(1) Observe procedures	To be able to determine if procedures meet minimum requirements.	
	(2) Complete form 3160-15, *Measurement Record – Gas*	To be able to accurately complete required form.	
	(r) Conduct a production inspection	To be able to accurately complete the AFMSS form 3160-11.	
DRILLING			
24.	Review *Automated Fluid Minerals Support System (AFMSS)*	To become familiar with computerized system and generate for 3160-10, Inspection Record – Drilling.	

Reference or Exercise		Target Competency	Completion Date
25.	Tour drilling operation to:	To be able to identify equipment, procedures and testing used during drilling operations as per approved APD.	
	(a) Recognize circulation system	To be able to identify pumps, pits, rotary hose, storage, return line, shale shaker(s), and their purpose.	
	(b) Recognize rotating system	To be able to identify swivel, Kelly bushings and rotary table and their purpose.	
	(c) Recognize hoisting system	To be able to identify crown block, monkey board, mast, cathead, traveling block, hook, elevators, draw works, etc. and their purpose.	
	(d) Recognize power system	To be able to identify generating plant, fuel tanks, motors, engines, and their purpose.	
	(e) Recognize pipe-handling equipment	To be able to identify drill pipe, drill collars, drill bit, rat hole, mouse hole, tongs, pipe ramps, etc. and their purpose.	
	(f) Recognize well control equipment	To be able to identify annual preventer, blind ram, pipe ram, choke manifold, accumulator, mud-gas separator, etc. and their purpose.	
	(g) Observe key drilling functions, including:		
	(1) Routine drilling	To be able to identify and understand procedures.	
	(2) Tripping operations	To be able to identify and understand procedures.	
	(3) Running casing	To be able to identify and understand procedures.	
	(4) Cementing	To be able to identify and understand procedures.	
	(h) Observe safety equipment	To be able to identify and understand explosion-proof lighting, hard hats, safety lines, sensors, hand rails, alarms, etc. and their purpose.	
	(i) Witness well control system test to:		
	(1) Identify equipment	(a) To be able to determine if blow-out preventer type, pressure rating and arrangement meets minimum requirements.	
		(b) To be able to determine if choke line, manifold fill line, and kill line are properly installed.	
		(c) To be able to determine if controls (i.e., automatic on floor, remote automatic, and locking device hand wheels) are properly installed.	

H-3160-6 NATIONAL CERTIFICATION HANDBOOK FOR OIL ANDGAS INSPECTION AND ENFORCEMENT PERSONNEL (Internal)

	Reference or Exercise	Target Competency	Completion Date
		(d) To be able to determine the adequacy of accumulator system to activate the blow-out preventer equipment (i.e., volumes and back-up system).	
		(e) To be able to identify all safety valves and handles for all safety valves.	
		(f) To be able to identify and understand operation of upper and lower Kelly cocks.	
	(2) Observe procedures	To be able to determine if procedures and test pressures meet minimum requirements.	
	(j)) Witness a casing and cementing job to:		
	(1) Identify equipment	(a) To be able to determine identify casing by size, weight, grade, thread type, and all other required associated equipment.	
		(b) To be able to calculate all capacities and volumes necessary to meet the requirements.	
	(2) Observe procedures	To be able to determine if procedures meet minimum requirements.	
	(k) Review a drilling mud program to:		
	(1) Identify materials and equipment	(a) To be able to determine identify mixing and monitoring equipment and additives used to condition the mud.	
		(b) To be able to calculate the pressure needed to conduct a mud weight equivalent test and casing shoe test.	
		(c) To be able to determine mud viscosity and weight.	
		(d) To be able to calculate hole volume.	
		(e) To be able to calculate hydrostatic head at total depth.	
	(l) Review special drilling operations to:		
	(1) Identify equipment	(a) To be able to determine identify all the required specialized equipment associated with drilling operations.	
		(b) To be able to determine the proper installation of a blooie line	

Reference or Exercise		Target Competency	Completion Date
		and explain circulation requirements.	
	(2) Observe procedures	To be able to determine if procedures meet minimum requirements.	
	(m) Review drillers log or equivalent	To be able to verify if log complies with the approved form 3160-3, *Application for Permit to Drill (APD).*	
	(n) Review appropriate well logs (bond, caliper, temperature, etc….)	To be able to determine if log information indicates that requirements have been met.	
	(o) Review Surface Use plan	To be able to determine if surface use complies with APD conditions of approval (COA).	
	(p) Conduct a Drilling Inspection	To be able to accurately complete the AFMSS form 3160-10.	
ABANDONMENT			
26.	Review *Automated Fluid Minerals Support System (AFMSS)*	To become familiar with computerized system and generate for 3160-13, Inspection Record – Abandonment.	
	(a) Witness abandonment of a well to:		
	(1) Identify equipment	(a) To be able to determine identify tubing/casing by size, weight, grade, and thread type.	
		(a) To be able to calculate all capacities an volumes necessary to meet the requirements.	
	(2) Observe procedures	To be able to determine if procedures meet minimum requirements for the various methods of placing plugs.	
	(b) Conduct an Abandonment Inspection	To be able to accurately complete the AFMSS form 3160-13.	

Appendix 2
Certification Criteria and Record of Review

_____
Employee Name

_____
Series/Grade/Title

CERTIFICATION CRITERIA AND RECORD OF REVIEW

I. PRODUCTION CRITERIA

Date	Reviewer	
/ /	_____	1) Determine if a tank battery is in compliance with minimum standards for site security.
/ /	_____	2) Determine if the appropriate valves are effectively sealed as dictated by ongoing lease activities.
/ /	_____	3) Trace battery flow systems and compare the accuracy of battery facility diagrams with actual equipment on site.
/ /	_____	4) Verify accuracy of Minerals Management Service (MMS) Form 4054 (parts A, B, and C), *Oil and Gas Operations Report* (OGOR).
/ /	_____	5) Determine if well signs are in compliance.
/ /	_____	6) Determine if battery signs are in compliance.
/ /	_____	7) Determine if environmental, housekeeping, and safety conditions at a well are satisfactory.
/ /	_____	8) Determine if the equipment used for measurement of oil and gas is satisfactory.
/ /	_____	9) Inspect case(s) involved in an off-lease measurement and production storage approval. Determine whether production is handled in accordance with approval.
/ /	_____	10) Verify compliance for disposal of produced water.
/ /	_____	11) Verify compliance for venting and flaring of gas.
/ /	_____	12) Inspect case(s) involved in a commingling approval. Determine whether accountability for commingled production is in accordance with the approval.

/ / _____ 13)Identify variances approved and verify compliance with conditions of approval.

/ / _____ 14)Determine if gas and liquid handling facilities are satisfactory to handle lease production.

/ / _____ 15)Accurately verify volumes of oil and gas produced, sold, reported by the lessee/operator.

/ / _____ 16) Identify the difference between a well in a shut-in mode and one that is temporarily abandoned.

/ / _____ 17)Distinguish between proper and improper techniques for sales from a tank battery, including:

/ / _____ a. Gauging techniques.

/ / _____ b. Sampling techniques.

/ / _____ c. Techniques for determining API gravity.

/ / _____ d. Techniques for determining temperature.

/ / _____ 18) Identify the correct method for completing a run ticket.

/ / _____ 19) Complete Form 3160-16, Measurement Record - Oil, By Tank Gauge or Alternate Method.

/ / _____ 20) Use gauging equipment i.e., tape, thief, centrifuge, hydrometer, and thermometer.

/ / _____ 21) Witness Lease Automatic Custody Transfer (LACT) meter proving and determine if meter meets Bureau standards and tolerances.

/ / _____ 22) Complete Form 3160-17, Measurement Record - Oil By LACT Meter.

/ / _____ 23) Calculate net oil volumes using values on a run ticket from both hand gauge and LACT.

/ / _____ 24) Witness a gas meter calibration and determine if the procedures are in accordance with approved standards.

/ / _____ 25) Complete Form 3160-15, Measurement Record - Gas.

/ / _____ 26) Calculate gas volumes from a gas meter flow chart using American Gas Association Report No. 3, Second Edition 1985.

/ / _____ 27) Determine if proper procedures were used for testing a well for production volumes as specified in the requirements of the order or approval.

/ / _____ 28) Complete Form 3160-9, Notice of Incidents of Noncompliance (INC).

/ / _____ 29) Use a H_2S Escape Pack.

/ / _____ 30) Calibrate and use an H_2S monitor.

/ / _____ 31) Review H_2S production operations for compliance.

/ / _____ 32) Complete Form 3160-11, Inspection Record - Production.

II. DRILLING AND ABANDONMENT CRITERIA

Date Reviewer

/ / _____ 1) Review Form 3160-3, Application For Permit To Drill or Reenter (APD) including the 8-point plan (engineering), the 13-point plan (surface use), conditions of approval, lease stipulations, and subsequent sundry notices.

/ / _____ 2) Determine if procedures used during the running of casing are in accordance with the approval.

/ / _____ 3) Determine if procedures used during cementing of casing are in accordance with approved plan and proper remedial action taken, if necessary.

/ / _____ 4) Calculate all capacities and volumes necessary to meet the requirements for primary cementing.

Determine:

/ / _____ a. BOPE, pressure rating, and arrangement are rated to at least that approved.

/ / _____ b. Choke line and manifold, fill line, and kill lines are properly installed and operable.

/ / _____ c. If controls are installed and functional, i.e., automatic on floor, remote, and master controls as specified in APD.

/ / _____ d. Accumulator system is adequate to activate BOPE

/ / _____ 1. Calculate accumulator volumes needed to open and close BOPE.

/ / _____ 2.Perform accumulator Function Test

/ / _____ 3. Determine availability and sources for accumulator based on approved pressure rating of BOPE.

/ / _____ e. If safety valves are on hand for all sizes of drill pipe and drill collars.

/ / _____ f. Upper and lower Kelly cocks are in place as per regulation.

/ / _____ g. Handles for all safety valves are accessible.

/ / _____ 5) If procedures used during a blow-out preventer equipment tests are satisfactory.

/ / _____ 6) If that personnel safety practices are acceptable.

/ / _____ 7) If the approved plugging plan and that cement volumes and plug depths are accurate.

/ / _____ 8) Calculate volumes of cement and displacement to spot a balanced plug.

/ / _____ 9) Identify casing by size, weight, grade, and thread type.

/ / _____ 10) Identify if the Drillers Log is in compliance with the APD and Onshore Order # 2.

/ / _____ 11) Calculate equivalent mud weight.

/ / _____ 12) Calculate hole volume.

/ / _____ 13) Calculate hydrostatic head of mud being used.

/ / _____ 14) If lighting is in accordance with OSO #2 III. D.

/ / _____ 15) Identify BOPE and Accumulator required for:

--- 2M (2,000 PSI) system.
--- 3M (3,000 PSI) system.
--- 5M (5,000 PSI) system.
--- 10M (10,000 PSI) system.
--- 15M (15,000 PSI) system.

/ / _____ 16) Determine mud viscosity and weight.

/ / _____ 17) Determine if surface use is in accordance with approved drilling permit.

/ / _____ 18) Verify the H_2S Drilling Operations plan equipment listed is available, installed, and operational as required.

/ / _____ 19)Verify proper installation of mud monitoring equipment as required. (e.g. APD, COAs, Orders, Onshore Orders).

/ / _____ 20) Verify that required safety equipment is available i.e.; Hand Rails belt guards and extinguishers.

/ / _____ 21)Verify that kill line is installed properly.

/ / _____ 22)Verify that flare system is installed in accordance with the APD, OSO #2&6.

/ / _____ 23)Verify that mud/gas separator is applicable, installed and operable.

/ / _____ 24)Complete Form 3160-10, Inspection Record - Drilling.

/ / _____ 25)Complete Form 3160-13, Inspection Record - Abandonment.

H-3160-6 NATIONAL CERTIFICATION HANDBOOK FOR OIL AND GAS INSPECTION AND ENFORCEMENT PERSONNEL (Internal)

II. BLM TRAINING

Date Completed

_____ 1) Successful completion of Course 3100-01, *Oil and Gas Compliance Certification School for New Petroleum Engineering Technicians* (formerly 3000-03: *Fluids Inspection and Enforcement: Drilling,* and Course 3000-04, *Fluids Inspection and Enforcement: Production)*

_____ 2) Successful completion of Course 3000-89, *Applied AFMSS for Inspectors.*

Recommendation

I recommend that _____ be certified as a Bureau of Land Management representative authorized to conduct inspections of Federal and Indian oil and gas lease operations.

_____ _____
Technical Reviewer Date

Certification

_____ is hereby certified as a Bureau of Land Management representative authorized to conduct inspections of oil and gas lease operations.

_____ _____
National Lead for Oil and Gas Compliance Certification and Training Date

cc: 310:LS:Rm.501
300:MIB:Rm.5625
310:LS:Rm.501:Fluids:FOneyear:kg-f:(307)261-7569:4/19/05
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Handbooks

Minerals Mgmt

3890-1 Hndbk for Mineral Examiners

H-3890-1 Hndbk for Min Examiners Rel 3-332

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management

H – 3890 -1 - HANDBOOK FOR MINERAL EXAMINERS

Policies, Procedures and Standards for Conducting Mineral Examinations of Mining Claims and Sites on Federal Land

and

Appearing as an Expert Witness in an Administrative Hearing before the Department of the Interior

Third Edition (Revised) 2006

by

The Mineral Examiner's Certification Panel [1]

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

CHAPTER IV – SAMPLING AND ASSAY PROCEDURES

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Chapter D – Travis, R. B., (1955): Classification of Rocks; Quarterly of the Colorado School of Mines, Vol. 50, No. 1; by permission of the author and the Colorado School of Mines. All rights reserved.

Chapter E – Travis, R. B., (1955): Classification of Rocks; Quarterly of the Colorado School of Mines, Vol. 50, No. 1; by permission of the author and the Colorado School of Mines. All rights reserved.

Chapter F -- Travis, R. B., (1955): Classification of Rocks; Quarterly of the Colorado School of Mines, Vol. 50, No. 1; by permission of the author and the Colorado School of Mines. All rights reserved.

Appendix IV -- Densities, Volumes, and Weights

Chapter A – Carnegie Pocket Companion (1923), United States Steel Corporation, pg. 308, 309. By permission of the United States Steel Corporation.

Chapter B -- Carnegie Pocket Companion (1923), United States Steel Corporation, pg. 300, 301, 309. By permission of the United States Steel Corporation.

Chapter C -- Carnegie Pocket Companion (1923), United States Steel Corporation, pg. 310. By permission of the United States Steel Corporation.

Chapter D -- Carnegie Pocket Companion (1923), United States Steel Corporation, pg. 311. By permission of the United States Steel Corporation.

Appendix V -- Geochemistry and Assays

Chapter A -- Hansen, W. R. (1991): Suggestions to Authors of the Reports of the United States Geological (7th Ed.); U. S. Geological Survey, U. S. Department of the Interior, pp. 106.

Chapter B – Courtesy of Chemex Labs.

Appendix VI -- Non – Placer Examinations

Chapter B -- Bureau of Land Management, Handbook for Mineral Examiners (1984-1989) and the National Training Center.

Appendix VII -- Placer Examinations

Chapter A – Bureau of Land Management, Handbook for Mineral Examiners (1957); and the National Training Center.

Chapter B -- Bureau of Land Management, National Training Center

Table of Contents

Chapter C – Wells, J. H. (1969): Placer Examination – Principles and Practice; Technical Bulletin 4, Bureau of Land Management, Department of the Interior, pg. 63 and the National Training Center.

Chapter D -- Wells, J. H. (1969): Placer Examination – Principles and Practice; Technical Bulletin 4, Bureau of Land Management, Department of the Interior, pp. 107-114; and the National Training Center.

Chapter E -- Wells, J. H. (1969): Placer Examination – Principles and Practice; Technical Bulletin 4, Bureau of Land Management, Department of the Interior, pp. 89.

Chapter I -- Introduction

A. The Authority of the Secretary of the Interior under the Mining Laws.

1. The Secretary of the Interior.

The authority of the Secretary of the Interior with respect to public lands is described in Cameron v. United States, 252 U.S. 450 (1920), where the U. S. Supreme Court said:

"By general statutory provisions the execution of the laws regulating the acquisition of rights in the public lands and the general care of these lands is confided to the Land Department, as a special tribunal; and the Secretary of the Interior, as the head of the department, is charged with seeing that this authority is rightly exercised to the end that valid claims may be recognized, invalid ones eliminated, and the rights of the public preserved.

* * * * * * * * * * *

"[T]he power of the department to inquire into the extent and validity of the rights claimed against the government does not cease until the legal title has passed. * * * [The Department's] province is that of determining questions of fact and right under the public land laws, of recognizing or disapproving claims according to their merits and of granting or refusing patents as the law may give sanction for one or the other."

* * * * * * * * * * *

Additional plenary authority is found at 43 U.S.C. § 1457:

"[T]he Secretary of the Interior is charged with the supervision of public business relating to the following subjects and agencies:

* * * * * * * * * *

13. Public lands, including mines."

and at 43 U.S.C. § 2:

"[T]he Secretary of the Interior or such officer as he may designate shall perform all executive duties appertaining to the surveying and sale of the public lands of the United States, or in anywise respecting such public lands, and, also, such as relate to private claims of land, and the issuing of patents for all grants of land under the authority of the government."

2. The Authority of the Director of the Bureau of Land Management.

The authority to administer the mining law program has been delegated to the Director of the Bureau of Land Management (BLM) by the Secretary of the Interior.[1]

The BLM's authority originates from its succession to the duties and responsibilities of the General Land Office and the Grazing Service.[2]

3. Mining Claims and Property Rights.

A mining claim constitutes a possessory interest in the land, authorized by the Mining Law of 1872 (30 U.S.C. §§ 21- 54) (hereinafter "Mining Law"). If a mining claim is valid, the mining claimant has a possessory interest in the mineral and the surface for mining or milling purposes. This property right may not be extinguished arbitrarily.[3]

4. Memoranda of Understanding with Other Agencies.

The U.S. Forest Service and the National Park Service may perform mineral examinations on lands they administer under Memoranda of Understanding (MOU) and Interagency Agreements (IA) they have entered into with the BLM. We retain responsibility for final review and approval of mineral examination work conducted by other agencies. For the purposes of 18 U.S.C. § 1905 and 43 C.F.R. Part 2, subpart C, (proprietary and confidential information handling), the non-BLM agency is a secondary office of control for the Department of the Interior for handling the proprietary and confidential information of a mining claimant whose mining claim is being investigated.

B. Definition of a Mineral Examiner.

A mineral examiner is a federal employee who through education, training and experience has met the requirements as defined within Manual Section 3895 and received certification as a mineral examiner (CME), or review mineral examiner (CRME) by the Director of the Bureau of Land Management. The National Park Service uses our certification process to certify its mineral examiners. The U.S. Forest Service (USFS) also maintains a certification program for its mineral examiners. Employees certified by the USFS as a CME may conduct mineral examinations for BLM under an interagency MOU. Only a BLM CRME may conduct final technical review of a mineral report if BLM is required to act upon the recommendations in the mineral report.

1 135 DM 1.1A(1)(c)(v); 235 DM 1.1A
2 Reorganization Plan No. 3 of 1946 (60 Stat. 1095-1102); Reorganization Plan No. 3 of 1950 (64 Stat. 1262).
3 Best v. Humbolt Placer Mining Co., 371 U.S. 334, 337 (1963).

C. Duties of the Mineral Examiner.

1. Role of a Mineral Examiner.

Your role as a CME is to conduct all validity determinations, common variety determinations, surface rights determinations, and mineral-in-character determinations. In order to make these determinations, you must have a working knowledge of the mineral industry, mineral property evaluation methodologies, geology, and mining engineering. You must also understand and be able to apply the standards established in public land laws, regulations, case law, and Departmental policy.

2. Conducting the Mineral Examination.

You must do a thorough, objective, and professional examination and evaluation of each mining claim, mill site, and tunnel site. Although you are required to work in an objective manner, you work on behalf of the United States, and have no fiduciary obligation to the claimant. Throughout this handbook the terms, "mining claims" or "claims" refer to lode claims, placer claims, mill sites and tunnel sites, unless otherwise noted.

3. Functions of a Mineral Examiner.

You apply the legal and technical standards for mining claim validity established by the Department and give an opinion regarding whether the examined mining claim has met those standards. If you conclude that the standards have been met, then the mining claim will be considered valid. If a mineral patent application is at issue, the mining claim will be recommended for patent. If you conclude that the standards have not been met, then you will recommend a contest. If a contest action is initiated, you will be required to testify as an expert witness for the Government (See Chapter 7).

a. Discovery of a valuable mineral deposit. Your must verify whether the mining claimant has, in fact, found a valuable mineral deposit. You should not explore or sample beyond those areas exposed by the claimant or perform discovery work for the claimant. Your examination is not intended to determine if additional unexposed mineralization might be found somewhere within the limits of the claim that might constitute a valuable mineral deposit.[4/] However, you have the discretion to do additional sampling to obtain a proper sample suite to characterize the deposit.

b. Common (or uncommon) variety determinations. The purpose of your examination is to determine if the claimant has found a mineral that is subject to location under the Mining Law, as amended. If you verify the mineral is subject to the mining laws, it is thereafter subject to the discovery requirements of the mining laws.

4 Hallenbeck v. Kleppe, 590 F.2d 852, 859 (10th Cir. 1979); United States v. Porter, 37 IBLA 313, 315 (1978).

4. Obligations of a Mineral Examiner.

A mineral examiner is obligated to make a careful and competent inspection of a mining claim in order to be able to testify meaningfully on the presence or absence of mineral discovery there.[5]

5. Expert Opinion of a Mineral Examiner Establishes a Prima Facie Case.

An expert is defined as "A person who, through education or experience, has developed skill or knowledge in a particular subject, so that he or she may form an opinion that will assist the fact finder."[6]

"[W]here a Government mineral examiner offers his expert opinion that discovery of a valuable mineral deposit has not been made within the boundaries of a contested claim, a prima facie case of invalidity has been made, provided that such opinion is formed on the basis of probative evidence of the character, quality, and extent of the mineralization allegedly discovered by the claimant. Mere unfounded surmise or conjecture will not suffice, regardless of the expert qualifications of the witnesses. * * * The admissibility of expert testimony in a mining claim contest is determined by the hearing examiner, who exercises a wide latitude of discretion in making these determinations."[7]

6. Market Expertise.

In order to testify as an expert witness, the

"...testifying mineral examiner must be an expert as to the marketability or value of the particular mineral."[8]

7. Alternate Approaches.

The procedures set forth in this handbook do not address all possible situations. You may encounter situations where handbook and manual guidance do not assist you or where rigid application of that guidance will create an incorrect or indefensible result. In such situations you are expected to draw upon your professional knowledge of accepted industry practices, and case law, as well as the scientific method, to develop a workable solution. If you must deviate from handbook and manual guidance, be certain to document the reasons for doing so, the methodology employed, and the results in the final product. The final product is usually a mineral report that will undergo technical review by a Bureau CRME.

5 United States v. Hess, 46 IBLA 1, 7 (1980).
6 Black's Law Dictionary 600 (7th ed. 1999).
7 United States v. Winters d/b/a/ Piedras Del Sol Mining Co., 78 Interior Dec. 193 (1971) (emphasis added).
8 Rodgers v. Watt, 726 F.2d 1376, 1380 (9th Cir. 1984) (emphasis in original) and cases cited therein.

D. How to Conduct Yourself with the Public.

1. Do Not Give Legal Advice.

Members of the public, including the mining claimant, may ask you to give advice and opinions on many topics. You are not an attorney or a professional consultant working on behalf of the claimant. Do not give legal advice. When asked legal questions, you should suggest that the person contact an attorney. You should avoid giving information, advice, or suggestions that are not within the scope of your authority.

2. Educating the Claimant.

It is important for you to educate the claimant about the mineral examination process. When mining claimants ask you questions about your investigation of his or her mining claims or mill sites, you should limit your answers to an explanation of the procedures you will follow during the course of the examination. This is especially true in talking to mining claimants who have mining claims on land under the jurisdiction of other federal agencies. Your job is to collect the relevant facts, make a professional judgment, and to form an opinion as to the validity of the mining claim. You then document the process and results in a mineral report and make a recommendation regarding the claim validity.

3. Contacts with Claimants.

Please be friendly and courteous at all times. Exercise patience and be a good listener. The mining claimant's primary contact with the Department may be you, the mineral examiner. The mining claimant's impression of the agency will depend on your manner and professionalism during the examination.

a. Invitation to join the mineral examination.

You must invite the mining claimant to accompany you during the validity examination. You must give the mining claimant the opportunity to identify the discovery points and other places from which he or she wishes you to take samples. You must not allow the claimant to collect the samples for you or in anyway handle the samples. It is not your job to perform exploration for the claimant. Your job is only to verify the claimant's data and results. It is important that you explain to the claimant that you will collect only a reasonable number of samples. You may also exercise your professional judgment and take samples from locations not selected by the mining claimant, in order to adequately evaluate the mining claim.

b. Expressing opinions.

Before the report is final, you should not express or imply any opinions or conclusions to the claimant or other outside parties about the value of the minerals present or the validity of the claim. A mineral report is not final until it has undergone all necessary agency

review (See Chapter 6). It is entirely appropriate for you to discuss your opinions and conclusions with other Bureau personnel or the Solicitor's Office.

c. Professional discretion in communications with a claimant.

After the mineral report is final discuss the general outcome with the claimant. In some cases, if the recommendation of the mineral report is to initiate a contest against all or some of the mining claims at issue, you may ask the claimant if he or she is interested in relinquishing those claims.

d. Suspected fraud.

If you suspect that the mining claimant has engaged in fraudulent or other potentially criminal activities, you should contact the Solicitor's Office and BLM Law Enforcement. Likewise, if the claimant has relied on unproven technology, unusual or proprietary assay methods, or you have reason to believe the claimant has salted the samples, you should
lt with the Solicitor's Office.

Chapter II – Mineral Investigation Types

A. Valid Locations under the Mining Laws.

1. Locations – Generally.

a. Lode or placer mining claims. A mining claim must be properly located, maintained, and contain a discovery of a valuable mineral deposit subject to location under the Mining Law, as amended.[1]

b. Mill sites.

(1) A dependent mill site must be properly located, maintained, and not exceed 5 acres in size. It must be located on non-mineral land that is not contiguous to a vein or lode. It must be used or occupied for mining or milling purposes in conjunction with an associated mining claim or claims, or for other uses reasonably incident to a mining or milling operation.[2] A claimant may locate more than one mill site per mining claim, as long as they are properly used or occupied.[3]

(2) Independent or custom mill sites may also be located and maintained for the custom tolling and processing of ores and concentrates from several mines.[4]

c. Tunnel sites. A tunnel site is located and maintained for the development of an existing vein or lode, or for the discovery of blind or undiscovered valuable mineral deposits. A tunnel site may not exceed 3000 feet length, as measured from the beginning of the portal. It must be worked diligently as required by law.[5] This requires advancing the working face or improving the tunnel every six months.[6]

A tunnel site is a subsurface right-of-way and intended as an exploration tool for the discovery of blind veins or lodes. A tunnel site cannot be patented. However, lode mining claims may be located over the surface trace of blind veins or lodes discovered within the tunnel. This right of location extends outwards for a radius of 1,500 feet from the centerline of the tunnel.[7] The date of location of the lode claim is retroactive to the date of the location of the tunnel site.[8]

1 30 U.S.C. §§ 22-54 and 43 C.F.R. § 3832.11 (2006).
2 30 U.S.C. § 42; Solicitor's Opinion M-37010 "Mill Site Location and Patenting under the 1872 Mining Law," (Oct. 7, 2003); 43 C.F.R. § 3832.30 (2006).
3 43 C.F.R. Part 3832, Subpart C (2006).
4 Id.
5 30 U.S.C. § 27; 43 C.F.R. § 3832.40 (2006).
6 43 C.F.R. § 3832.44(c) (2006).
7 43 C.F.R. Part 3832, Subpart C (2006).
8 Enterprise Mining Co. v. Rico-Aspen Consol. Mining Co., 167 U.S. 108, 113 (1897); United States v. Parker, 91 Interior Dec. 217, 292 (1984).

2. Determination of a Discovery of a Valuable Mineral Deposit.

a. The Prudent Person rule.

The "Prudent Person rule" defines what constitutes a discovery of a valuable mineral deposit. The "Prudent Person rule" was first mentioned in Castle v. Womble,[9] and has been repeatedly affirmed by the Federal courts.[10]

The "Prudent Person rule," as stated in Castle v. Womble, is:

"[W]here minerals have been found and the evidence is of such a character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success, in developing a valuable mine, the requirements of the statute have been met. To hold otherwise would tend to make of little avail, if not entirely nugatory, that provision of the law whereby 'all valuable mineral deposits in lands belonging to the United States . . . are . . . declared to be free and open to exploration and purchase.' For, if as soon as minerals are shown to exist, and at any time during exploration, before the returns become remunerative, the lands are to be subject to other disposition, few would be found willing to risk time and capital in the attempt to bring to light and make available the mineral wealth, which lies concealed in the bowels of the earth, as Congress obviously must have intended the explorers should have proper opportunity to do."

b. Marketability.

The "Marketability Test" is a refinement of the prudent person rule. It applies to all mining claims and was first enunciated in Layman v. Ellis.[11] The standard was affirmed and clarified in 1933:

". . . [a] mineral locator or applicant, to justify his possession, must show that by reason of accessibility, bona fides in development, proximity to market, existence of present demand, and other factors, the deposit is of such value that it can be mined, removed, and disposed of at a profit."[12]

This supplemental requirement has been affirmed by the Federal courts.[13]

9 19 Pub. Land Dec. 455 (1894).
10 Chrisman v. Miller, 197 U.S. 313 (1905); United States v. Coleman, 390 U.S. 599 (1968).
11 52 Pub. Land Dec. 714 (1929).
12 See Taking of Sand and Gravel from Public Lands for Federal Highways, 54 Interior Dec. 294, 296 (1933).
13 Foster v. Seaton, 271 F.2d 836, 838 (D.C. Cir. 1959); Converse v. Udall, 399 F.2d 616, 619 (9th Cir. 1968); United States v. Coleman, supra.

c. Considering the validity of a claim block.

The validity of mining claims that make up a mine may be considered together as a group, so long as the claimant shows that valuable minerals exist on each claim.[14]

d. Geochemical or geophysical information.

A mining claimant's geophysical or geochemical data[15] alone is an insufficient basis for proving a discovery of a valuable mineral deposit. A physical exposure of the valuable mineral is still necessary.

e. Drill core and cuttings.

Evidence of a discovery of a valuable mineral deposit collected from drill holes is adequate. You may verify the exposure by reviewing the drill sites, drill logs, core samples, and/or drill cuttings. Chapter IV-2D explains how you should handle and secure drill core samples and cuttings.

f. Discovery cannot be inferred.

Geological inference, no matter how strong or convincing, cannot be used as the basis for a discovery in lieu of a physical exposure of a valuable mineral deposit in place.[16]

You must be objective and exercise good professional judgment in evaluating the data that is pertinent to a discovery. Based on the mineral showing and its relationship to the geologic setting of the mineral district, you must decide if there is a discovery under the prudent person rule and marketability requirements.

3. Mineral Patent Applications.

Although the regulations at 43 C.F.R. § 3862-1 (2006) require patent applicants to designate the point of discovery on the mineral survey plat, it is not necessary for the discovery to be found within the "discovery working" that is marked on the plat. When the Mining Law was first enacted, many state laws required that a discovery working had to be identified by the erection of a monument. This monument did not necessarily mark the location of valuable minerals. Most states have discontinued this requirement. Nevertheless, there must still be an exposure of valuable minerals within the boundaries of each claim.[17]

14 United States v. Foresyth, 94 Interior Dec. 453, 488 (1987); Schlosser v. Pierce, 93 Interior Dec. 211, 223 (1986).
15 United States v. Feezor, 90 Interior Dec. 262 (1983); United States v. Feezor, 130 IBLA 146,148 (1994).
16 McCall v. Andrus, 628 F.2d 1185, 1188 (9th Cir. 1980), cert. denied, 450 U.S. 996 (1981); United States v. Feezor, 90 Interior Dec. 262 (1983).
17 United States v. Foresyth, 15 IBLA 43, 58 (1974).

B. Mineral-in-Character Determinations.

Make mineral-in-character determinations following the standards described in Southern Pacific Co.:[18]

"It is sufficient to show only that known conditions are such as reasonably to engender the belief that the land contains mineral of such quality and in such quantity as to render its extraction profitable and justify expenditures to that end. Such belief may be predicated upon geological conditions, discoveries of minerals in adjacent land, and other observable external conditions upon which prudent and experienced men are shown to be accustomed to act."

Lands examined that do not meet the above criteria are nonmineral-in-character.

1. Placer Mining Claims.

When examining placer mining claims, you must answer two questions:

a. Is there a discovery of a valuable mineral deposit?

b. Is each square ten-acre legal subdivision of a placer claim mineral-in-character?

The second question relates to the "ten-acre rule", which has been followed by the Department since 1899.[19]

These two requirements are discussed further in Chapter III, section G.

2. Mill Sites.

A mill site must be located on non-mineral land. Each square $2^1/_2$ acre subdivision of a mill site must be used or occupied for mining, milling or activities reasonably incident thereto. These requirements are discussed further in Chapter III, section H.

3. Mineral Potential Reports and Conveyances under the Federal Land Policy and Management Act (FLPMA).

The preparation and review of mineral potential reports and those for "known mineral values" under FLPMA are not covered by this Handbook, as they are not actions related to the Mining Law. Please refer to Manual Section 3060 Mineral Reports, Preparation and Review for further information.

18 71 Interior Dec. 224, 233 (1964).
19 United States v. Henrikson, 70 Interior Dec. 212 (1963); United States v. Lara, 67 IBLA 48 (1982); United States v. Lara, on recon., 80 IBLA 215 (1984); Lara v. Secretary of the Interior, 820 F.2d 1535 (9th Cir. 1987); 30 U.S.C. § 36.

C. Common Variety Determinations.

Not all mineral commodities are locatable. Common varieties of sand, stone, gravel, pumice, pumicite, or cinders are not locatable.[20] Mining claims that are located on or after July 23, 1955, for common variety minerals are not valid. Common variety minerals may be disposed only through sales contracts. When a notice or plan of operations is filed over a suspected common variety mineral deposit, a common variety determination must be made be we can accept or approve the notice or plan. Common variety determinations are discussed further in Chapter V.

D. Evaluation of Mineral Properties for Purchase or Condemnation.

Public lands that contain valid mining claims are occasionally needed for other federal purposes that would conflict with the mining claims. In such situations, mining claims may be appraised for purchase or for condemnation. The Department must determine the validity of the mining claims before the claims may be appraised for condemnation. An invalid mining claim has no property rights to appraise.[21] Please note that a patent or validity examination report does not appraise the value of the mining claims at issue.

E. Public Law No. 84-167.

The Surface Resources Act of July 23, 1955, Public Law No. 84-167,[22] allows the United States to manage the surface resources on unpatented mining claims located on or after enactment of the Act. The Act also provides a procedure whereby the United States may assert the right to manage the surface resources on unpatented mining claims located before enactment of the Act. Mining claims located on or after July 23, 1955, are subject to the provisions and limitations of the Surface Resources Act, including the right of the United States to manage the surface and vegetal resources.

Even though the Surface Resources Act authorizes the United States to manage the mineral materials and vegetative surface resources on unpatented mining claims, the mining claimant does not lose any possessory rights to the locatable minerals or to the use of as much of the surface as is reasonably necessary for mining operations. Furthermore, any permittee or licensee of the United States or user of the public land, including the government, may not endanger or materially interfere with authorized prospecting, mining, or processing operations or uses reasonably incident thereto.

20 30 U.S.C. § 611; 43 C.F.R. § 3830.12 (2006).
21 Best v. Humbolt Placer Mining Co., 371 U.S. 334, 337 (1963), Forbes v. Gracey; 94 U.S. 762 (1877); "A Procedural Guide for the Acquisition of Real Property by Governmental Agencies" Department of Justice, Land and Natural Resources Division (2000).
22 30 U.S.C. §§ 611-615.

F. Multiple Use Conflicts.

Mining claims and mill sites may conflict with other resource uses, such as land disposals, desert land entries, material sale sites, range-improvement projects, timber sales, or rights-of-ways. We may exercise our discretion to conduct validity examinations to clear invalid mining claims that conflict with other resource uses, especially if the lands have been withdrawn from mineral entry.

Validity examinations are not normally required to resolve occupancy trespasses on mining claims located under the guise of the Mining Law. The regulations at 43 C.F.R. Part 3715 are designed to cover most occupancy trespass situations. BLM may institute an administrative action against an unauthorized surface use of a mining claim without first conducting a validity examination.[23]

G. Surface Management Requirements.

A validity examination is required for notices and plans of operations in withdrawn areas before acceptance or approval may be given to proceed.

H. Mining Claim Administration.

There is no need to conduct any of the determinations described in this chapter if the mining claimant has not properly recorded and maintained the mining claims at issue. Be certain to check the status of each mining claim before beginning any mineral examination work.

1. Recording and Maintenance of Mining Claims or Sites.

Under the FLPMA, all mining claims or sites must be recorded with BLM within 90 days of location or they are forfeited.[24] Mining claims and sites located before October 21, 1976, must have been recorded with BLM by October 22, 1979, or were abandoned and void.

Mining claimants must pay an annual maintenance fee for each mining claim that is due each September 1st.[25] Owners of ten or fewer claims or sites may elect to file a waiver from the fee, perform the assessment work that is required by the Mining Law and make the annual filing that is required by FLPMA.[26]

2. Records Administration. Contact the State Office adjudication staff to ensure that the mining claim or site has been filed properly, is in good standing, and that

23 United States v. Henderson, 243 F.3d 1168 (9th Cir. 2001); United States v. Noguira, 403 F.2d 816 (9th Cir. 1968).
24 43 U.S.C.§ 1744.
25 30 U.S.C. § 28f.-k; 43 CFR Part 3834 (2006).
26 43 C.F.R. Parts 3830, 3834, 3835 (2006).

the mining claimant has paid applicable location and maintenance fees or has complied with the small miner waiver requirements under 43 C.F.R. Part 3834 or 43 C.F.R. Part 3835, respectively.

Chapter III – Mineral Examination Procedures

A. Preparation for a Validity Examination.

1. Case File Review.

Examine the mining claim case file for essential information such as: recordation of the location notice, chain of title, identification of critical dates (such as conveyance of an association placer claim, segregation or withdrawal of the lands or consideration of a patent application), location amendments, and continuous filings of affidavits of labor or notices of intent to hold, and payment of the location fees and annual maintenance fees.

a. Land status. Obtain land status information from the proper BLM State Office. Examine the Historical Index (HI) and Controlled Document Index (CDI) for Public Land Orders, classification actions, and other pertinent data that may show that the mining claim is null and void ab initio, in whole or in part. If available, obtain a copy of the mineral survey plat and notes.

b. Ownership. Identify the current owners and their last known address so that you can notify them of the field examination and any related issues.

2. Notification of the Mining Claimant.

a. Notification policy. You must notify the claimant at least 30 days before a planned mineral examination. If possible, contact the mining claimant directly to try to establish a date that is mutually agreeable. You must invite the mining claimant to accompany you for the field examination and give the claimant the opportunity to point out discovery point(s), claim corners and other essential features of the mining claim or mill site. The mining claimant may designate an agent to act in his/her place. You must confirm the arrangement in writing.

b. Notification requirements. The written notification must state the agreed upon date or must give a proposed examination date. You must send the notification by certified mail, return receipt requested. The field examination may take place even if the certified letter is returned as refused or returned as undeliverable.[1/] Failure to give written notification does not prevent the examination or disqualify the Government's case.[2/]

3. Mineral Property Information.

a. Public information.

(1) You should review all essential literature concerning the geology, mineralization, mining history, and economics of the property and the mineral commodities being investigated. Examine the information collected by the U. S. Geological Survey,

1 43 C.F.R. § 1810.2 (2006).
2 United States v. Grigg, 8 IBLA 331, 339 (1972).

local State geological surveys, and the former U. S. Bureau of Mines (these records are now with the U. S. Geological Survey). In addition, consult university libraries and any local geological societies. Do not disregard old scientific literature and records, as they will often provide considerable information about mining conditions and production records.

(2) For publicly owned or traded entities, or those properties that are being worked by a publicly owned or traded entity, you should request copies of prospectuses, annual reports, and related documents that they are required to file with the Securities and Exchange Commission (SEC), especially the company's 10K reports. These documents will include documentation of the reserves on the property and must be backed up by evaluation reports by the company. The documents are available from the SEC's EDGAR website **http://www. sec.gov/edgar.**[3/]

b. Claimant information.

(1) Request the mining claimant or his agent to make available any data concerning the geology, mineralization, structure, and any other physical attributes that will allow you to evaluate the mineral deposit. This includes, but is not limited to: geologic, geochemical, geophysical and mineral maps; drill hole information, assays, resource or reserve estimates, engineering studies, and any other information that will assist you in verification of the claimed valuable mineral deposit.

(2) Request copies of any feasibility or pre-feasibility studies, capital and operating cost information. Obtain copies of any economic studies, production records, marketing and sales information.

(3) You must keep a written record of the requests, whether made by telephone, e-mail, or other means.

B. Field Equipment.

Carefully check all field equipment before going into the field to ensure that everything is functioning properly.

1. Calibration of Directional Equipment.

a. Compass Calibration. Set your compass to the proper magnetic declination. Declination is variable through time. Old USGS topographic and other maps often do not reflect the current declination, but do give the annual drift of the magnetic field. It may be necessary to calculate the current declination for the subject area.

3 For additional information contact the SEC's Office of EDGAR and Information Analysis at 202-942-2930 and SEC's Natural Resources and Food Division at 202-942-1870.

b. Global Positioning Satellite units. When you use Global Positioning Satellite (GPS) mapping systems, you must ensure that the GPS equipment is accurate. Calibrate the instrument prior to use in the field according to the manufacture's instructions. When extreme precision is required, you must consult with the Bureau Cadastral Survey staff. You must be proficient in the use of GPS equipment and understand its limitations.

2. Field and Safety Equipment.

Inspect your field equipment. It must be in good working order. Carefully inspect and test the appropriate safety equipment, which is described below. Clean all equipment you plan to use for sampling prior to use.

3. Cameras and Photography.

You must photograph all significant features of the mining claim or mill site (discovery point, sampling points, improvements, and equipment). Use film with a good color contrast rating. Prints should be produced as opposed to slides.

a. Prints and negatives. Your report may include scanned or photocopied prints, but your original prints and negatives must be retained in case the accuracy of any reproduced photographs is questioned in judicial proceedings.

b. Digital and electronic images. The federal courts do not universally accept digital images as evidence. You must print the images as hard copy, on photographic paper that you intend to use in your report. This hard copy is kept as the official record. After making the hard copy, you may incorporate the digital images into your report.

c. Images as evidence. A factual foundation is required to admit any photograph into evidence. That foundation requires that you state under oath, that your photograph, whether a color print or a digital image, accurately portrays what it is intended to represent.

C. Field Safety.

You must complete all required safety training and all required job hazard analyses. Mine safety training is conducted by the National Training Center (NTC) and by most State Mine Inspection offices.

1. Mine Safety and Health Administration Safety Regulations.

Read and be familiar with the Mine Safety and Health Administration (MSHA) regulations, especially those in 30 CFR Chapter I, subchapters B, H, K, and M. You are required to follow these regulations when on a mining property.

2. Safety Handbooks.

U. S. Bureau of Mines Information Circular 7479 (This is a 1948 publication entitled, Hazards of Entering Old Mine Workings).

3. Underground Safety Policy.

Always file a safety plan before going underground.

YOU MUST ADHERE TO BLM'S UNDERGROUND SAFETY POLICY. See BLM Handbook 1112 - Safety.

4. Entry into Mine Workings.

NEVER ENTER UNDERGROUND MINE WORKINGS ALONE or go onto any areas around surface mine workings in a haphazard manner. BE ALERT AND REMAIN ALERT. Do not enter any areas you suspect are being used for criminal activities. Always carry and wear appropriate equipment.

5. Decision to Not Enter a Mine.

If you believe that it is unsafe to enter underground mine workings or go onto areas around surface mine workings, do not do so. **THE DECISION NOT TO ENTER IS SOLELY AT YOUR DISCRETION AS THE MINERAL EXAMINER.**

DO NOT ENTER UNDERGROUND WORKINGS ALONE.

6. Safety Equipment.

The following is a recommended checklist of items that are normally required for field safety in the examination of a mining claim:

- An MSHA approved hard hat.

- Sturdy over-the-ankle boots. Steel toes are required. Rubber boots with toe and metatarsal reinforcement are preferable where wet conditions may be encountered, and are usually required by the mine operator. BLM must provide safety boots for employees who need them. For hygienic reasons employees must not share boots, dust masks or similar items of a personal nature.

- When entering underground mine workings, at least three different suitable sources of light should be carried (e.g., head lamp, flashlight, penlight, chemical light stick). If there is any possibility that inflammable gas may be encountered, only MSHA-approved non-sparking light sources may be carried. Flame safety lamps are no longer MSHA-approved for underground use.

- When entering an underground mine, carry an oxygen detector, or preferably, a multiple gas detector inclusive of oxygen, combustibles, carbon monoxide, hydrogen sulfide, or other toxic gases known to occur in the particular mining district.

- Safety glasses or goggles for general underground and surface wear, and for use in rock breaking and sampling.

- An MSHA-approved Self-Rescuer (Respirator W 65 for self-rescue from carbon monoxide) for underground work.

- A personal first-aid kit.

D. Field Notes.

Adequate, accurate and legible field notes are critical. Geologic shorthand should use the standard abbreviations given in Compton (1962) or Dietrich (1982). You should use an engineer's field book with water resistant pages for taking field notes. You must keep a reserve copy of the field notes in the event the file copy is lost. If more than one mineral examiner participates in the examination, one mineral examiner should be designated as the official note recorder. However, all examiners should take notes to avoid any confusion that may occur in the office when the mineral report is being written.

Notes taken in the field should be recorded in sequence as the examination proceeds. Use the checklist below to guide the examination, as well as to help standardize note taking. It will also help minimize the possibility of overlooking essential data that should be recorded while in the field. Your mineral report must be written in conformance with Handbook H-3890-3 Validity Mineral Reports. You should review this handbook before entering the field and use the handbook's criteria to further guide you in the collection of data in the field.

Field notes may be subject to discovery requests in a mineral contest proceeding. Write all entries in a professional manner.

1. General.

a. Identify each participant. Identify each person involved in the field examination, and the dates that they are present.

b. Field notes. Date and number each page of the field notes.

c. Checklist for field notes. Appendix VI - A is a checklist for field note contents.

2. Field Maps

Before leaving for the field, gather and take with you all necessary maps, including:

a. Location map. A general location map for determining access and finding the mining claim.

b. Mineral survey plats. A mineral survey plat, where applicable.

c. A U. S. Geological Survey topographic map.

d. Enlargement of topographic maps. You may enlarge topographic maps to highlight mining claim features and assist in the detailed mapping of the mining claims. Keep in mind that enlarging a topographic map will not increase its on-the-ground precision.

e. Base maps.

(1) Prepare a base map of the mining claim(s) by enlarging a topographic map, preferably a 7.5 minute series (scale 1:24,000 or 1 inch to 2,000 feet) to a scale of one inch to 400 feet or better. This will be your base map for your work on the mining claims. Unless you have no other options, you should not map mining claim features directly on the 7.5 minute topographic map as the scale is too large for accurate placement of features being mapped. It may help to use a copy of the Mineral Survey Plat enlarged to an appropriate scale.

(2) Aerial imagery is an important tool for field examinations.[4] Air photos can be enlarged and used as base maps if topographic maps are not available. Aerial photographs at scales of one inch to 1,320 feet and one inch to 660 feet are preferred, as they may be enlarged 2-3 times without significant distortion of on-the-ground features.

f. Mapping procedures.

(1) All mapping should be done with the use of standard topographical, geologic, and mining symbols. Standard symbols are given in Dietrich et al. (1982), Compton (1962), Lahee (1951), and Appendix I, and should be used in all mineral reports.

(2) You should pencil in claim corners and boundaries in advance of your site visit, as given in the location notice(s). In addition, pencil in the claimant supplied geologic information. You must verify your draft map by comparing it to the actual

4 Coverage is available for most of the continental United States and can be obtained through the BLM's Cadastral Survey office, from the national aerial photograph library at the EROS Data Center in Sioux Falls, South Dakota, or from the U. S. Department of Agriculture Aerial Photography Field Office in Salt Lake City, Utah.

features on the ground while on field location. This will allow you to catch any errors before they can be compounded and allow geologic inferences to be made as the work progresses. Simply collecting notes and map coordinates for later compilation offsite is not considered proper professional practice.

(3) Do not use the Master Title Plat as a base for field mapping because it is not to scale.

3. Sampling Field Notes.

a. Sample numbers. You must number samples with a unique identifier, which can be numeric, alpha-numeric, or alphabetic. Use the same unique identifier in the sample field notes, on the sample bag or other container, and on the maps to correlate the locations, data, and notes.

b. Sample descriptions and photographs. You must describe and photograph each sample site before and after collecting the sample. For some sample locations it may be worthwhile to take photographs while sampling to document the process and people involved. Your field notes should contain enough information to later caption the photographs. Describe your sample collection procedure in detail, including dimensions of sample cut, the relationship of the sample to the mineral deposit, and the location of the sample on the mining claim.

c. Description of sample sites. Describe the geologic setting of the sample site, including structure and lithology. Clearly state the reasons for why you collected the sample at that site. Plot the sample site on the base map using the unique identifier.

d. Chain of custody and sample security.

(1) Briefly outline the sample chain of custody, the security employed, and how samples were transported and stored. This information will be needed in the mineral report. Your samples must be held in secured storage until sent to a laboratory for analysis. The rejects and pulps from the laboratory must be returned to you and retained in secured storage until the case has been fully adjudicated. Secured storage requires limited access locks and a sign in and out sheet record when the cabinets are accessed. Do not allow the claimant to gather or handle the samples. Only you are allowed to collect and handle the samples.

(2) Never allow the claimant, the claimant's family members, employees, representatives, or other related parties near enough to the sampling and processing areas to potentially salt or otherwise tamper with the samples.

e. Special measures when you suspect sample tampering or other fraudulent activity. In some cases, you may suspect fraud or criminal activity. These may include evidence of salting in the sample, such as the presence of bi-modal gold particles, gold

shavings, or gold with highly variable fineness or silver content. These may also include unusually uniform assay results over the breadth of the property, minerals in the samples that normally do not occur together for the deposit type being investigated, and any other unusual item that concerns you. If you suspect fraud or other criminal activity, you should consult Bureau law enforcement staff for advice on handling and storage of evidence that may be used later in a criminal trial.

4. Other Essential Data to be Included in Notes.

a. For all mining claims, take note of the following:

(1) Existence and position of mining claim or mill site monuments.

(2) Orientation of lode claims to the vein or lode, where appropriate.

(3) Posting on the mining claim of mineral survey plat and notice of mineral patent application, as applicable. Take a photograph of the posting. Posting is only required during the 60-day publication period for a patent application.

(4) Conflicts between mining claims.

(5) Compliance with applicable State and local laws.

(6) Notes for each photograph indicating what was photographed, showing date, location, direction the camera was facing, names of persons in the frame, photographer's name, and other specific information to facilitate producing a complete caption.

(7) Names of persons interviewed. Give names, addresses, telephone numbers, and the interview date.

b. For placer mining claims, take note of the following:

(1) Evidence of the use of dummy locators.

(2) Placer mining claims not conforming to legal subdivisions.

(3) Mineral-in-character status of each square ten-acre legal subdivision of placer claims (the "ten- acre rule").

c. For mill sites and tunnel sites, take note of the following:

(1) Mill site use and relationship to associated mining claims. See 43 CFR Part 3832, Subpart C for qualifying uses.

(2) Current viability of associated mining claims or patented mining claims.

(3) For custom or independent mill sites, describe the milling equipment, its operational capability, and identify the source and type of minerals proposed to be processed. Independent mill sites may only process materials from lode claims and not placer claims. See 43 CFR Part 3832, Subpart C for qualifying uses.

(4) Whether the mill site is being used to process minerals from lands that were previously patented under the agricultural land laws. Use of mill sites for such processing is prohibited.

(5) Any tunnel site activity, contrasting current activity from activity that is clearly historic.

E. The Field Examination.

1. Entering a Mining Claim.

Try to gain access to the mining claim or mill site with the claimant's consent. If the mining claimant threatens you or uses force to prevent you from going onto the mining claim or mill site, do not promote an angry confrontation. Leave the claim and contact your supervisor from another location to discuss the situation. On BLM-administered lands, also notify the BLM Law Enforcement Staff. If these officials are unable to get the mining claimant's consent for a mineral examination, request that BLM Law Enforcement Staff to accompany you and protect you while you are on the claim or site to conduct the field examination. Do not re-enter a claim for a field examination under any circumstances without law enforcement if there is concern for your safety.

2. Initial Reconnaissance.

Your field examination should start with a reconnaissance of the mining claim. This acquaints you with the area and facilitates planning and execution of an efficient mineral examination. The reconnaissance includes locating the claim corners and boundaries. Record major features on the base map. Record the geology and cultural features on the map as you walk around the claim. You should compare the mineral survey plat (if one exists) and associated survey notes with the actual location of monuments and workings on the mining claim.

3. Verification of Discovery.

Verify whether the claimant has exposed a mineral deposit on the mining claim. You must record and document all exposures of mineralization and all geologic attributes associated with each exposure. You will use this information when you have returned to the office to determine whether the claimant has discovered a valuable mineral deposit. When examining a mining claim, you are there to verify whether the claimant has discovered a

potentially valuable mineral deposit. You are not to "make a discovery" for the mining claimant. It is the responsibility of the claimant to have physically exposed the mineralization upon which the assertion of a discovery is based.

4. Discovery Points Must Be Open and Safe to Enter.

The discovery points must be open, available, and safe for examination. If the alleged valuable mineral exposure is in a surface or underground working which is inaccessible or unsafe to enter, **do not** try to make it accessible or enter under unsafe conditions.[5] If the mining claimant refuses to make the discovery points accessible or reveal their location, exercise professional judgment and sample where you can to adequately characterize the mineral deposit on the claim. Note the claimant's failure to identify a discovery point, but collect a sufficient number of samples to confirm the presence or absence of any mineral deposit, as well as to evaluate wall rock and barren zones. If the claimant proposes an excessive number of sample sites, you must use professional judgment to limit the sampling program to a reasonable number of samples to adequately evaluate any mineralization found.

5. Document Geologic Features.

Carefully examine and map all accessible geologic features. Show all important geologic structures, and their attitudes, and plot all sample points. If the discovery point is underground, map all safely accessible subsurface features. Use the symbols for plats, maps and surveys in Appendix I.

F. Lode Mining Claims.

1. Workings and Infrastructure.

It is essential that you prepare a detailed description of all workings and improvements on each mining claim. Draw all workings and infrastructure on the base map. Map all exposed geologic structures and correlate with geologic structures that may be visible in shafts, cuts, pits and other workings. Use the symbols for plats, maps and surveys in Appendix I. Include a description of the valuable minerals, gangue minerals, vein and wall rock alteration, and the country rock. Be certain to note whether the deposit is similar to others in the general area. Published data of the mines in the district can be helpful in evaluating the mineral deposit under investigation.

2. Potential for Extra-lateral Rights.

If the side or end lines of a lode claim extend or project onto land not open to mining claim location, the discovery must be on that portion of the land open to mining claim location in order to obtain extra-lateral rights to the lode deposit, to the extent the extra-lateral rights

5 United States v. Pool, 78 IBLA 215, 225 (1984), and cases cited therein. ("The mineral examiner has no obligation to either imperil himself or retimber the shaft.")

are to ores within the ground which has not been withdrawn.[6] A lode claim is limited by statute[7] to a length of 1500 feet along the vein and a width of 300 feet on each side of the vein. The rights asserted by one claimant against another under the extra-lateral rights provision of the mining law is a question of possessory right, and the issue must be decided between the parties in a court of competent jurisdiction.[8]

G. Placer Mining Claims.

1. Physical Exposure Required.

You must determine whether the claimant has a physical exposure of a potentially valuable mineral deposit within each placer mining claim. Draw ' " infrastructure and workings on the base map. Map the geologic formations or units carrying the recoverable values or commodities.

2. Each Ten-Acre Parcel Must Be Mineral In Character.

a. Claims located by legal subdivision. For placer mining claims located by legal subdivision, you must determine whether each square ten-acre aliquot part is mineral in character.[9] Placer mining claims not located in conformance with the public land survey (such as bench or gulch placers) are permitted under special rules.[10]

b. Claims located by metes and bounds. For placer claims of irregular shape, the ten-acre tracts, for purposes of determining whether each ten-acre parcel is mineral in character, are created by dividing the claim in half down its long axis and forming ten-acre parcels from the divided portions. This is done by establishing dividing lines at right angles to the base line. (The base line runs down the long axis of the claim). The ten-acre parcels do not have to be square if claim geometry will not permit it, but should approximate ten-acres within each area, to the extent possible.[11]

c. Ten-acre rule applied to mineral patent applications. If you are determining the validity of placer claims for which a patent application has been filed and conclude that one or more ten-acre parcels are nonmineral in character, ask the applicant to withdraw the nonmineral-in-character parcel(s) from the patent application. If the applicant refuses to withdraw the parcel(s), you must recommend those parcels for contest. You must not recommend for patent any nonmineral ten-acre parcels of a placer claim.

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6 Marilyn Dutton Hansen, 79 IBLA 214, 216 (1984); Santa Fe Mining, Inc., 79 IBLA 48, 50 (1984).
7 30 U.S.C. § 23
8 For further reading on the subject, see The Hidee Gold Mining Co., 30 Pub. Lands Dec. 420 (1901), and II Lindley on Mines § 363a.
9 United States v. Lara (On Recons.), 80 IBLA 215 (1984), aff'd by, Lara v. Secretary of the Interior, 820 F.2d 1535 (9th Cir. 1987).
10 Snow Flake Fraction Placer, 37 Pub. Lands Dec. 250 (1908); United States v. Henrikson, 70 Interior Dec. 212 (1963); 43 C.F.R. § 3832.12(c) (2006)
11 Lara cases, supra.

3. Technical References.

a. Alluvial placers. You should consult McCulloch (2003), Macdonald (1983), Peele (1959, p. 533-640), and Wells (1989), for the appropriate evaluation techniques, equipment, and processing methods for alluvial minerals from placer mining claims. These minerals include, but are not limited to, gold, diamonds, sapphires, cassiterite, garnet, monazite, ilmenite, and other minerals usually recovered using gravity methods.

b. Industrial minerals. Many types of industrial minerals may be located as placer mining claims. There are several good sources of information on industrial minerals that should be consulted.[12]/

H. Mill Sites.

1. Uses of Mill Sites.

All uses of a mill site must be reasonably incident to mine development and operation, except for uses exclusively supporting reclamation or mine closure. [13]/ Each mill site is limited to a maximum of 5 acres in size and must be located on nonmineral land. Mill sites may be located by legal subdivision or by metes and bounds. The claimant's use and occupancy of the land must be reasonably necessary for efficient and reasonably compact mining or milling operations.[14]/

2. Types of Mill Sites.

a. Associated or dependent mill sites. An associated or dependent mill site is one associated with lode or placer mining claims, either patented or unpatented. For a dependent mill site to be valid, the mining claim with which it is associated must be either a mineable patented or a valid unpatented claim. If there are no mining operations occurring on an associated mining claim, the claimant cannot claim that a mill site is necessary for mining or milling operations for that associated mining claim.[15]/ A dependent mill site cannot be patented unless the associated mining claim is being patented concurrently or has been previously patented and remains economically viable.[16]/

b. Independent or custom mill sites. A custom or independent mill site is not associated with a particular mining claim and is a stand alone operation. Custom mill

12 LeFond (1983); Industrial Minerals and Rocks (2 vols.), AIME; Barksdale (1991); The Aggregate Handbook, National Stone Association, Washington, D.C.; Maley (1996); Mineral Law (6th ed.), Mineral Lands Publications, Boise, ID.
13 43 C.F.R. § 3832.34 (2006).
14 United States v. LeFaivre, 138 IBLA 289, 293 (1997); Solicitor's Opinion M-37010, "Mill Site Location and Patenting under the 1872 Mining Law," (Oct. 7, 2003); 43 C.F.R. § 3832.32 (2006).
15 United States v. Dean, 14 IBLA 107, 109 (1973).
16 United States v. Dean, 14 IBLA 107, 109 (1973); Pine Valley Builders, Inc., 103 IBLA 384, 388-89 (1988).

sites[17] contain a "quartz mill or reduction works." In modern terms this means any milling (grinding or crushing), flotation, or beneficiation facility (smelters, heap leach pads, carbon-in-pulp mills, etc.) for the custom processing of ores.[18] Independent mill sites may be used or occupied for processing metallic minerals from lode claims.[19] Reasonably incidental uses in conjunction with mineral processing may be acceptable, as provided in 43 CFR subparts 3715 and 3809. You must plot all buildings, settling ponds, waste piles, and other structures associated with the operation on the map, and tie them to the mill site or mineral survey corners. The claimant may hold more than one custom mill site in a contiguous block if needed for the proper operation of the custom mill.

I. Tunnel Sites.

1. Tunnel Sites, Generally.

The Mining Law of 1872 authorizes subsurface exploration by tunneling.[20] It grants to the owner of the tunnel site the possession of all blind or previously undiscovered veins or lodes that are intersected by the tunnel.[21] The commencement of a tunnel is a prerequisite to the location of a tunnel site claim.[22] Tunnel sites are subsurface rights-of-way and, therefore, cannot be patented, but may be held indefinitely if the work on the tunnel is being diligently prosecuted.[23] Failure to perform work on the tunnel for over 6 months results in an abandonment of the owner's rights to any undiscovered veins or lodes in the tunnel.[24] Tunnel sites are rarely encountered in modern practice.

2. Rights Associated With a Tunnel Site.

Tunnel sites are located and recorded in the same manner as mining claims.[25] The maximum length of a tunnel site is 3000 feet from its point of origin.[26] A claimant may acquire the right to any blind veins, ledges, or lodes cut, discovered or intersected by the tunnel, if they are located within a 1500-foot radius from the center line of the tunnel.[27] While the tunnel site gives a claimant the right of possession or right to appropriate blind veins, ledges or lodes, the claimant must locate a lode claim on the surface of the trace of the lode or vein discovered in the tunnel to acquire a right to those blind veins, ledges, or

17 30 U.S.C. § 42(b).
18 43 C.F.R. § 3832.34(b) (2006) for what qualifies as proper use and occupancy of an independent mill site.
19 Id.
20 30 U.S.C. § 27.
21 43 C.F.R. § 3832.41 (2006).
22 United States v. Parker, 82 IBLA 344, 381 (1984).
23 43 C.F.R. §§ 3832.40, 3832.44 (2006).
24 Enter. Mining Co. v. Rico-Aspen Consol. Mining Co., 167 U.S. 108 (1897); 43 C.F.R. § 3832.44(c) (2006).
25 43 C.F.R. § 3832.42 (2006).
26 43 C.F.R. § 3832.42 (2006).
27 43 C.F.R. § 3832.44(a) (2006).

lodes.[28] In United States v. Parker,[29] the Board held that if a tunnel is located before a withdrawal, and a discovery is made in the tunnel after the withdrawal, the discovery relates back to the location date of the tunnel site. Therefore, a lode claim located many years after the effective date of a withdrawal would predate the withdrawal because the claim would be based on a right of appropriation that relates back to the tunnel site location date, assuming that work on the tunnel site was diligently prosecuted.

J. Mineral Patent Applications.

1. Development and Expenditure Requirements.

When you are evaluating a mining claim or mill site for a patent application, in addition to verifying the necessary elements of validity, the mineral examiner must also verify that a reasonable estimate of the value of improvements for each mining claim totals at least $500. If a mining claim is located over an earlier or abandoned mining claim, and a patent application is made for the new location, any improvements or labor made for the prior location **cannot be applied** toward the $500 expenditure for patent. If there is more than one mining claim included in the patent application, the total development expenditure must be equal to at least $500 times the number of claims in the application. The required expenditures may be concentrated on a portion of the claim group in the application. In modern situations, the total expenditures are usually far in excess of $500 per claim. The improvements made must clearly benefit the development of the claim group as a whole. Mill sites are not subject to the $500 expenditure requirement.

2. Survey Requirements.

You must ensure that the Mineral Survey Plat agrees with the actual location of the mining claims, mill sites, and their improvements. If the placer mining claim or mill site is located by legal subdivision, verify the location of the claims. If irregularities exist between the mineral survey or the legal subdivisions claimed and the situation on the ground, you are to notify the appropriate State Office Cadastral Survey and adjudication personnel. The Cadastral Survey staff will take your information and work with the deputy mineral surveyor that performed the original mineral survey to resolve the matter.

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28 Enter. Mining Co. v. Rico-Aspen Consol. Mining Co., 167 U.S. 108 (1897).
29 82 IBLA 344, 379 (1984).

Chapter IV —Sampling and Assay Procedures

A. General Sampling Procedures.

1. A Mineral Examiner Works for the United States.

The purpose of sampling in a validity examination is to allow the United States to verify the presence of a discovery of a valuable mineral deposit on a mining claim. You are required to work in an objective manner. Remember that you work for the United States. You do not have any fiduciary obligation to the claimant.

2. Confirmation and Corroboration of Discovery.

a. Confirmation. Your objective is to verify whether the claimant has made a discovery based on existing mineral exposures. A physical exposure of the locatable mineral(s) is required from within the boundaries of each mining claim. The exposure(s) may take various forms, including a mineral outcrop, trenches, shafts, adits, or drill holes. In older workings, the exposures may be partially hidden by weathering or vegetation. If a property has considerable sample data available, devise a sampling program to verify the claimant's sampling and analytical results.

b. Lack of exposures. There may be little or no evidence of any prior sampling on the claims. You must remember that it is not the government's responsibility to make a discovery for the claimant, only to verify what the claimant has done on the mining claim(s). As a general rule, you should not sample a mining claim where there is neither physical exposure nor evidence of historic mining or exploration activity. You must document the fact that the claim(s) are undisturbed and therefore you have nothing to verify.

c. Claimant obligations. Except for mineral patent applications, the claimant is under no obligation to provide geologic or economic information to the examiner.

3. Limitations on Mapping and Sampling a Deposit.

a. Exploration verses development. You are to verify the existence of a valuable mineral deposit and not to explore the mining claim(s) for the mining claimant. The dividing line between mapping and sampling adequately to understand the mineral deposit that is being prepared and engaging in an inadvertent exploration program for the mining claimant, is not always obvious. This issue was examined by the Interior Board of Land Appeals, where the Board discussed the issue at length:[1]

> The mining industry, itself, has no difficulty in distinguishing between prospecting, exploration, and development. Thus, Peele defines prospecting as "the search for minerals," exploration as "the work of exploring a mineral deposit when found * * * undertaken to gain knowledge of the size, shape, position, characteristics, and value of the deposit" and "development" as "the driving of openings to and in a proved deposit, for mining and handling the product

1 United States v. Willie White, 118 IBLA 266, 319-320, 98 Interior Dec. 129, 157 (1991).

economically." Peele, *Mining Engineers' Handbook* 10-03 (3d ed. 1941).

Based on the criteria given in White, supra, if the mineral deposit is not "proved," it must still be in the exploration stage and a discovery of a valuable mineral deposit has not been made. For a mineral deposit to be "proved" or "proven," it must meet the criteria given for a positive and/or probable mineral reserve. These terms are defined and explained in depth in chapter V of this handbook. If there are workings, it may be necessary for you to sample beyond the areas of existing workings to establish a defensible conclusion. You must exercise your professional judgment.

4. Chain of Custody.

a. Custody and control.

(1) It is your responsibility to maintain custody and control of the samples, also known as maintaining the "chain of custody." You have the responsibility to protect the samples and must take all appropriate steps to guard against contamination or salting from the time of sampling until the end of all administrative and legal proceedings. This includes the sampling process itself. You must take adequate precautions to detect any contamination or salting of your samples. IT IS EXPRESSLY FORBIDDEN FOR ANYONE OTHER THAN YOU OR A CO-EXAMINER, TO COLLECT OR OTHERWISE HANDLE THE SAMPLES.

(2) UNDER NO CIRCUMSTANCES will you allow the claimant, the claimant's family, employees, representatives, or other associates near enough to the sampling and processing areas to potentially salt or otherwise tamper with the samples.

(3) Plan for the handling, splitting (when technically appropriate), and secure storage of the samples in advance. Properly store splits, pulps, and rejects to assure availability of uncontaminated sample material for re-analysis. This is especially important if the assay results are questioned later, or if the case is involved in litigation.

b. Shipping samples. Maintaining the chain of custody of samples simply means that you are keeping track of who has possession of the samples at each stage of the process, from collection to delivery to the assayer. It is not necessary for you to hand-carry samples to the assayer to maintain the chain of custody. Using the U.S. Postal Service or an express delivery service is acceptable. If you use the U.S. Postal Service, send the samples via certified mail, with return receipt requested. If you use an express service (such as Federal Express), record the tracking number for each package. Be certain to get confirmation from the express service that each package was received at the destination to which you sent it. Place the receipt confirmation in the case file.

5. Joint Sampling With Claimant Prohibited.

When you collect samples during the field examination, you are collecting them on behalf of the United States. You must not allow the claimant to handle or touch the official samples at any time. Joint sampling is not permitted even if the claimant requests it to somehow "reconcile" widely disparate assay results. The claimant is welcome to collect a duplicate sample after you have collected an official sample. If the claimant disputes the results of the official samples, the claimant's remedy is to present his or her own evidence at a contest hearing based on the duplicate samples.

6. Mineral Examiner May Give Sample Split to Claimant.

You have the discretion to give the claimant a split of an official sample, unless it is a detrital (placer) mineral sample. Because you cannot assure the integrity of the split after it has been given to the claimant, the claimant's split cannot be considered an official sample for determining validity. If you provide the claimant with a sample split, it must be fully documented in the mineral report. The documentation must include the reasons for providing the split, a listing of the sample splits provided, and a disclaimer of further official status for the split.

7. Interim Discussion of Results.

In general, you should not share interim analysis or assay results with the claimant, because the mineral report is not a final document until technical review is completed and, in the case of a mineral patent application, until the Solicitor's Office completes its legal review. Discussion of the work in progress with the claimant may be appropriate at times, such as when evaluating a unique mineral deposit, or where a preliminary analysis of data indicates that it may be to the claimant's benefit to withdraw all or part of a patent application or to relinquish a mining claim.

8. When Fraud or Salting are Suspected.

If you suspect that the claimant has salted the claim or any samples, or engaged in any other type of fraudulent behavior, consult with the Solicitor and BLM Law Enforcement personnel before taking any actions regarding the suspected fraud.

B. Sampling of Lodes or Other Rock in Place.

1. Determination of Sampling Method.

You must determine the method by which you will take samples using methods and techniques that are currently recognized as standard practice in the minerals industry and appropriate to the deposit you are examining. For a porphyry copper/molybdenum deposit, empirical data shows that a maximum distance of 400 feet between drill holes is the limit for reliable grade control. In the same manner, a vein gold deposit should be sampled at 50 foot intervals. Other deposits have similar recognized confidence limits on the sample collection intervals.

2. Sampling Heterogeneous Material.

Where the material to be sampled shows a distinct variation in composition such as banding, bedding, or changes in hardness, each major variation should be sampled separately. Doing so reduces the chance of under collection of very hard portions of the structure, and over collection of relatively soft portions. Large, representative samples are to be taken whenever possible. This reduces sampling error if mineralization is not uniformly distributed in the host rock.

3. Sample Site Preparation.

Regardless of the type of sample you take, you must carefully prepare the area to be sampled to minimize the effects of dilution, oxidation, concentration, or any potential salting. You should expose a fresh surface when sampling material that has been weathered. You must clean the sample site to remove all salts, oxides, or any contaminants. Whenever possible, use a plastic tarp under the area to be sampled to ensure that you collect all of the sample material. Use the sampling tarp only once, to prevent cross-contamination of samples.

4. Sample Location and Spacing.

Determine the sample location and spacing by considering the topography and condition of the land and the nature of the material to be sampled. Controlling factors include vein dimensions, number of veins, hanging wall, footwall, variations in composition, outcrop, exposure, workings, claim boundaries, and the number of mineral exposures identified by you and the claimant.

5. Documenting Samples.

a. Information to be recorded. You must thoroughly document all samples using a proper reference number. In every instance, you must complete a sample card. BLM Form 3890-3 is a sample collection form, printed on cardstock. A locally produced form or commercial equivalent is also acceptable. Most sample collection cards, including BLM Form 3890-3, have room for notes and sketches. The sample collection card is not intended to replace the field notes. Sample locations, including any irregularities or contingencies, should be fully explained in the field notes, with the proper reference number for the sample. Describe the geologic feature sampled, the location and dimensions of the area sampled, and record in the notes any other information that will help in the evaluation.

b. Photograph the sample point. Photograph the sample point before and after you take the sample. Photograph a card on the sample point with the following information on the card, in large, thick, dark lettering:

(1) A unique sample number that can be used to identify the specific location.

(2) The date of sampling.

(3) A notation regarding whether you are taking the photograph before or after taking the sample.

c. Sketch the sample site. If the case results in a contest hearing or litigation, a sketch along with a photograph of the sample point, before and after sampling, can be a strong influence when establishing your credibility and expertise. If the assay results are unusual or erratic, the sample site sketch may assist in the interpretation of the results. If re-sampling is necessary, the sketch will assist in the location of a confirmation sample.

6. Deviations from Standard Sample Methods.

Local conditions may require sampling procedures that deviate from the industry norm. If you choose to deviate from the industry norm, you must fully document the methods you chose in the mineral report. You must include in the mineral report an explanation of why the standard methods were not suitable, a detailed description of the methods actually used, and an explanation of why the alternative methods were chosen. Consult McKinstry (1948), Parks (1957), or Peters (1987), for the appropriate sampling methods.

7. Preventing Sample Bias.

a. The nugget effect. The nugget effect can have a severe impact on any kind of sampling. Section 7 of this Chapter deals with the nugget effect as it pertains to placer samples. The nugget effect may also affect sampling of lode claims. Before taking any samples, you should become familiar with the problems caused by the nugget effect and the techniques for minimizing this effect.

b. Collect equal amounts across geologic structures. Channel or chip samples must often cross geologic structures of varying hardness. You must collect equal amounts by weight of each portion to prevent over-representing one part of a vein over another. It is preferable to take several short chip or channel sample segments, end to end, instead of collecting one long one. Shorter sample lengths will often reveal variations in mineral grade within a structure which must be taken into account when calculating resource tonnage and grades.

C. Types of Lode Samples.

1. Channel Samples.

Channel sampling requires the cutting of a uniform channel two or more inches wide and one or more inches deep across the feature to be sampled, amounting to at least two pounds per foot of the feature being sampled. Channel samples are preferred if conditions permit, especially where mineral distribution is erratic. Where possible, catch the sample on a tarp or ground cloth.

2. Chip Samples.

a. Methodology. Grid chip sampling is appropriate for broad geologic features where mineralization is homogenous. As the name indicates, grid chip sampling involves collecting a series of chips at regular intervals in a broad area across a feature. Sampling should be done in a regular pattern and spread over the entire feature.

b. Application of chip sampling. Chip sampling is normally used in particularly hard material, or where the mineralized area is homogenous and uniform over a wide feature. Be certain to obtain a representative sample, especially in hard material and/or where mineralization is not uniform. Properly done, the results of chip sampling should closely approximate the results of a channel sample. Progressive chipping across the feature should amount to at least one pound per foot of the feature being sampled. Care must be taken that no material is lost. A tarp or ground cloth can be used to catch the chips.

3. Grab Samples.

Grab sampling may yield interesting anecdotal information, but grab sampling is not systematic or statistically valid. Grab samples are occasionally useful at a reconnaissance level to aid in developing an appropriate sampling program. Grade and tonnage figures cannot be calculated from grab samples, and they carry little or no probative value.[2/]

4. Drill Core and Cuttings.

Choose sample intervals that represent the character of the deposit. It is advisable to sample both mineralized and non-mineralized intervals to obtain a good evaluation of the claimant's assay information. This will also allow you to determine if the claimant's assay laboratory is providing accurate data on the distribution of the mineral of interest.

a. Government does not normally conduct drilling. The government does not typically conduct its own drilling to confirm validity. You may use data from a claimant's drilling program. This data may be used in validity determinations only after you have verified the data. The verification process is described in detail in Chapter IV, Section 3A.

b. Retention and storage of cuttings and core by claimants. Core and cuttings are usually retained and stored by mining companies. Core is typically stored in boxes with each drill interval identified, whereas cuttings from rotary and reverse circulation drills are normally bagged and stored in 5-foot intervals.

c. Examination of cuttings and core. When planning to examine core or cuttings, you must not give the claimant any advance notice regarding the specific intervals you will evaluate. This is intended to prevent sample tampering, or the appearance of tampering. Make certain that you have the driller's log and geologist's sample log available

2 United States v. Parker, 82 IBLA 344 (1984).

to examine concurrently with the core or cuttings, noting gaps or discrepancies between the logs and the core or cuttings. Examine assay and geophysical logs of the hole and note any correlations or discrepancies. Do not use core or cuttings that do not match the log or that appear to have been rearranged from their proper order. If an unresolved problem exists with respect to the core or cuttings, you may ask the claimant to drill a confirmation hole in your presence.

d. Collecting samples from drill cuttings. Obtaining a sufficient sample from stored cuttings can usually be accomplished by the use of a riffle splitter.

e. Collecting samples from core.

(1) New or stored drill core should be cut in half lengthwise. This may entail cutting a core that has already been split one or more times. Use a core splitter, if one is available. Clean the splitter before each sample is split. If no core splitter is available, obtain a length of channel or angle iron, place the core into it, and split the core with a hammer and a sharp chisel. If the core is sheared or foliated, try to split the core along the major axis of deformation. Assay lengths will be governed by the mineral distribution, geology, and structure in the core.

(2) Drill core may occasionally resemble angular gravel rather than a rock cylinder. This situation is common in oxide or supergene zone metallic mineralization or where the rock in that interval is heavily fractured. It is particularly vexing when the only core available is of small diameter. You should be aware that the nugget effect can easily occur in these situations. When it is impossible to obtain an exact split, you should select a different core interval to verify, if possible, or use other available means to obtain a representative sample. In every case, photograph the core, and thoroughly describe the situation in your notes and in your report.

(3) As a general rule, individual assay lengths should be one to five feet. If the mineralized portion of the drill hole is greater than five feet, assay each five foot unit separately and then mathematically combine the assay units together (See Chapter V, section 4). For porphyry copper and molybdenum deposits, where the mineralized zones may exceed 1,000 feet in width and depth, a 20 to 50 foot assay length is commonly used.

D. Sampling Low Grade Disseminated Deposits.

1. Sampling Methodology Where Abundant Claimant Data Exists.

a. General considerations. If a property has considerable sample data available, devise a sampling program to verify the claimant's sampling and analytical results. You should ask the claimant about their sampling procedures and any variability they have experienced. You must not take samples that cannot be compared with the claimant's data for correlation. If possible, restrict your sampling to existing cores, rotary cuttings, split rejects, pulps, concentrates, slurries, or shot hole cuttings in the ore and other production zones. Review the claimant's drill logs, analytical reports, and sampling intervals before field sampling.

b. Selecting confirmation samples. If the claimant has a large sample retention program, the possibility of being salted is remote, barring a well-organized fraud.[3] You must still use normal precautions. Make arrangements with the claimant to have all stored samples available on the date of the visit to the storage facility. Give the claimant a list of the samples and intervals you plan to examine when you need them at the storage facility, but not before. At the storage site, the claimant may retrieve for you the appropriate closed core boxes or bags of cuttings, but the claimant must not directly handle the material to be sampled. You must take control of the stored samples, and retain custody of them until after you have collected the sample split. Mining claimants, who are familiar with due diligence property evaluations, will be accustomed to this process and will understand why you are doing so.

c. Selecting sample intervals. When you review the claimant's drill and analytical logs, look for sizeable intervals where the lithology and grades appear to be reasonably consistent. For example, a minimum of three intervals together with 10% or less variance would meet this requirement. Sample the middle interval. If you cannot find this situation, then look for two intervals together, avoiding high grade zones if possible. Try to pick intervals with grades similar to the average grade of the deposit, as these will normally give the least variance. It is advisable to sample several sections that the records indicate have low assay values to see if the claimant's assay laboratory is able to consistently report the lower values as well as the higher values from the mineralized intervals.

d. Number of confirmation samples required. The number of samples you should take depends on the number of claims you are examining. At least one sample per claim is required. However, in an evaluation of a small claim group associated with a large deposit, more samples are needed to reduce variability.

Standard statistical textbooks indicate that a minimum of 20 samples from a given sample population (the mineral deposit) are required to show a reliable trend.[4] Typically, 20% of the individual samples will have more than the traditionally acceptable 10-15% variance. Thus in a 20-sample program, there should be 17 closely conforming samples, which would reduce the overall variance to an acceptable limit. The more samples taken, the lower the overall variance will be.[5]

2. Compromised Claimant Data.

If you suspect sample tampering or believe that collecting samples from the claimant's existing cores, cuttings, rejects and pulps may not produce an accurate result, you will have to conduct an appropriate sampling program, which may involve drilling confirmation holes.

3 Danielson and Whyte (1998).
4 Levinson (1974), Introduction to Exploration Geochemistry; Rose, Hawkes, & Webb (1979), Geochemistry in Mineral Exploration (2nd ed.).
5 Levinson (1974); Davis (1986), Statistics and Data Analysis in Geology; Beus and Grigorian (1975), Geochemical Exploration Methods for Mineral Deposits.

E. Sampling Methodology Where Samples or Records Are Unavailable.

1. Assessing the Need for More Sampling.

In some cases, the claimant may have extensive sampling records but no remaining samples. In such cases, you should review the claimant's sampling data and then try to confirm that data by conducting a sampling program that will allow for a reasonable comparison. Confirmation drilling may be required. In other instances, samples may be available (core splits, drill cuttings, etc.) but documentation of the analysis may be lacking. Sampling remnant material would be appropriate. Where the claimant's data is spotty, more samples will be required than in situations where the examiner is only attempting to confirm specific intervals. In all cases where more sampling is necessary, develop a sampling plan based on your knowledge of the property.

2. Sampling Where Claimant's Data Is Nonexistent.

Keep in mind that a validity examination is intended to verify whether the claimant has discovered a valuable mineral deposit. It is not to explore for a deposit, nor to define and delineate a deposit. The government's verification sampling should be commensurate with the level of diligence shown by the claimant. The suggestions below may be helpful in designing a sampling program to supplement where data or remnant sampling material is unavailable, but it is apparent that the claimant has explored the claim.

a. Collection of representative chip samples. Collect representative chips in a grid pattern from a section of rock approximately 5 feet square (25 square feet) with a resulting sample weight of five to ten pounds.

b. Scope of sampling. Sample a variety of different rock, alteration types, silicified zones, and shear zones. Be aware that most precious metals mineralization, especially gold, is seldom visible and often occurs in nondescript rocks.

c. Pathfinder elements. In addition to analyzing for the metals of interest, test for the common pathfinder elements. As an example, for gold and silver deposits, analyze for As, Sb, and Hg. If the pathfinder elements come up high but no metals of interest are detected, you should consider re-sampling to be certain that precious metals were not missed in the first analysis.

d. No sampling for exploration purposes. You must recognize that more time and effort may be required in a situation where little data exists. The public interest is not served by performing what appears to be an exploration program for the claimant. When a sampling program begins to resemble an exploration program, it is time to complete the analysis and make an evaluation based on the data at hand. Review the difference between exploration and development given above in section A(3)(a) of this chapter.

F. Sampling of Severed Materials.

1. Definitions.

a. Tailings. Tailings are discharged from a mill, and are generally finely ground material, usually in sizes ranging from medium sand to powder. They may contain concentrations of valuable metals due to poor recoveries of earlier processing methods or changes in market conditions.

b. Dumps. Dumps are broken rock excavated from the mine in the course of exploration, development, and production. The material on a dump is heterogeneous and may range in size from fine sand to boulders. A dump is normally considered to be a deposit of rock that had no economic value at the time of its emplacement, even if it contained some mineralization.[6]

c. Heaps. Heaps are piles or stacks of severed material that have been processed by leaching. Heaps contain materials that range in size from cobbles to coarse sand. Heaps may resemble dumps in size and arrangement.

2. Ownership of Severed Materials.

You must keep in mind that the ownership and the definition of various severed materials can be a complex legal issue. In some cases, claimants may make doubtful assertions about what constitutes tailings or other severed materials, in order to obtain saleable mineral materials without paying for them.

a. Possessory title to tailings. Tailings are derived from the processing of locatable ores and are usually considered the personal property of the claimant, unless they were abandoned by the owner under State law or unless they no longer contain any locatable mineral values.[7] A tailing must be held and maintained as personal property under the law of the State in which they are located. Abandoned tailings revert to the land and become the property of the land owner.

b. When severed materials are considered mineral materials.

(1) Sand and gravel that are processed to remove detrital minerals are not considered tailings. Detrital minerals include, but are not limited to, gold, diamonds, tin, sapphires, and garnet. Unless the mining claim pre-dates the Surface Resources Act and the sand and gravel are deemed a valuable mineral deposit, the title to the sand and gravel remains in the United States and is subject to sale under the Material Sales Act of 1947.[8]

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6 Steinfeld v. Omega Copper Co., 141 P.. 847, 848 (Ariz. 1914).

7 United States v. Grosso, 53 Interior Dec. 115, 125 (1930) (quoting Steinfield v. Omega Copper Co., 141 P. 847, 848 (Ariz. 1914) ("The intention with which the owner of the property extracted the ore from the ground and the purpose and intention of the owner with which it was placed on the dump is controlling in arriving at the solution of the question of whether the ore after having been extracted and placed in the dump was personalty or realty.")); 2 Lindley on Mines § 426, at 1009 (1914).

8 Solicitor's Opinion, "Disposal of Sand and Gravel from Unpatented Mining Claims," M-36467 (Aug. 28,

(2) If the material is normally locatable but is of insufficient quality or quantity to constitute a valuable mineral deposit, it becomes a saleable mineral, as this is the only way it may be disposed of in this circumstance.[9/]

(3) The tailings have been permitted to co-mingle with waste rock so that it is no longer feasible to later process the tailings to recover any contained locatable mineral values,[10/] or the tailings are allowed to escape the impoundment and become deposited on the land as a sedimentary deposit.[11/]

(4) Buildings and structures are placed upon the tailings for non-mining purposes.[12/]

(5) The tailings are used or sold for a common variety use.[13/]

3. General Considerations.

Some mineral commodities that are valuable now may not have been at the time of mining, so they may have been discarded in the dump. The situation with tailings is similar. Early precious metals milling operations often had lower recoveries than mills using current technology, so residual valuable minerals may be found in some areas of the tailings repository. Stamp mills were fairly common until about 1915, so mercury containing amalgamated gold may be associated with their tailings. In later years, flotation methods may have been used to recover or suppress certain metals, depending on the market prices at the time. Residual valuable minerals in old heaps will vary according to commodity price and efficiency of the leaching process at the time each particular lift was emplaced.

4. Homogeneity of Material.

It is important to understand that piles of severed materials are rarely homogeneous. The spatial arrangement and stratigraphy of a dump will depend on what portion of the mine and its lithology was being mined at the time the material was dumped.

5. Severed Material Sample Results Do Not Validate Lode Claims.

Dumps, tailings, and heaps cannot be used to validate a lode mining claim. The content of dumps may provide interesting information about what is in the dump, and what materials may have been placed on the dump years before. However, samples collected on dumps, tailings, or heaps will provide no probative information about whether a valuable mineral deposit exists on the lode claim upon which the dumps, tailings, or heaps are found.

1957), as modified by M-36998 "Disposal of Mineral Materials from Unpatented Mining Claims" (June 9, 1999).

9 United States v. Robinson, 21 IBLA 363, 384 (1975).

10 Hayes v. Alaska Juneau Forest Indus., Inc., 748 P.2d 332 (Alaska 1988).

11 Jones v. Jackson; 9 Cal. 237 (Cal. 1858); II Lindley on Mines, § 426 (3rd ed. 1914); United States v. Grosso, 53 Interior Dec. 115, 126 (1930); Conway v. Fabian, 89 P. 1022, 1037 (Mont. 1939).

12 Id.

13 United States v. Robinson, 21 IBLA 3663, 82 Interior Dec. 414 (1975).

6. Placer Location of Severed Material That Is Mineralized.

Once a mining claim has been abandoned under State law, the mineralized dumps, tailings, and heaps that lay upon it may themselves be considered a mineral deposit, and may subsequently be appropriated by the location of a placer mining claim. The question of abandonment of title to the tailings (not of the mining claim), is a question of State law.

7. Sampling Procedures.

Some preliminary work should be performed before sampling deposits of severed materials.

a. Hazardous materials. Before sampling, consult with the appropriate hazardous materials personnel about potential site-specific safety issues.

b. Site maps. Prepare a map of the site so that you can determine the volume of severed materials.

c. Sample grids. Lay out an appropriate sampling grid on the deposit of severed materials. Transfer the grid to your base map at a scale that allows you to contour the mineral values later.

d. Density and tonnage. To determine the tonnage of the severed materials, take multiple measurements of density to compensate for variability within the deposit of severed materials.

e. Severed minerals – variations and complexities. Sampling methodology is dependent upon the variability and complexity of the severed materials deposit. Ensure that sampling is representative of the entire deposit. Taggart (1927) describes several suitable sampling methods.

(1) Tailings can usually be drilled with augers or reverse circulation equipment. Pits or trenches can be excavated in the tailings. Take appropriate safety precautions to prevent cave-ins, which may require shoring with small coffer dams.

(2) Dumps and heaps are difficult to accurately sample since the size of the material varies considerably. Where the dump is stratified, collect an individual sample from each layer at each sample location.

G. Sampling of Alluvial Placer Deposits.

Sampling precious metal placers is one of the most difficult, time consuming, and costly tasks that you will face. Considerations include the type of deposit; depth to bedrock; false bedrock; variation of silt, sand, and cobble size within the deposit; and quantity and physical characteristics of gold and other placer minerals. You must often rely on the mining history of the area and on experience rather than a rigidly defined formula for collection and interpretation of the sample data.

1. Gold Morphology.

a. Size and weight considerations. Gold can occur in particles from smaller than 100 mesh to large nuggets. Nuggets that are larger than 10 mesh often sell for a premium price above the market gold price, as specimens or for jewelry. However, most gold is valued by weight and not by size. It is customary to report gold weights in either milligrams per cubic yard or grams per cubic meter, and not as Troy ounces per cubic yard.

b. Gold content in a sample. The fraction of gold in a nugget or sample is measured by the "fineness." Fineness is the measure of the gold's purity given in parts per thousand. Gold that assays at 900 fine is 90 percent gold and 10% something else, usually silver and copper. The purest refined gold is usually known as 999.9 gold or four nines and exhibits the specific gravity of gold, 19.0 grams per cubic centimeter. For gold that is not sold as jewelry, you must adjust the amount of payable gold in a deposit for the fineness. This is normally done at the recovery stage in your calculations. Specific gravity will also vary by the fineness of the particle.

2. Relationship of Particle Size and Weight.

a. Sieve analysis. Sieving of recovered gold particles is an important method for separating gold sizes. Gold particle size analysis will assist you in designing a gold recovery system. A typical sieve analysis will use a stack of screens in units of ten mesh beginning with 100 mesh and increasing vertically upwards to 10 mesh, plus an 8mm screen on top. Sieve analysis best measures a particle's ability to pass through a specified size of sieve.

b. Size verses weight. There is no exact relationship between gold weight and sieve size, because of the varying shapes of gold particles of a given mesh, as well as each particle's flatness. A spherical gold particle of 1 mm in diameter will weigh much more than a gold particle of 1 mm diameter that has been flattened to the thickness of gold foil. Yet both gold particles will classify in the same sieve size range. Gold recovered in a placer evaluation must be weighed to provide economic information. See Appendix VII for further details.

3. Quantitative Samples Required.

You will need several quantitative samples to adequately verify a discovery and the mineral character of a placer mining claim. Remember that each ten-acre parcel of a placer mining claim must be mineral in character.[14/] If a discovery has been exposed on a placer mining claim, you may use geologic inference to assess the mineral character of the remaining 10-acre parcels. Placer mining claims may range in size from 20 acres for a claim located by an individual to 160 acres for an association placer claim located by eight or more persons.

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14 United States v. Lara (On Recons.), 80 IBLA 215 (1984), aff'd , Lara v. Secretary of the Interior, 820 F.2d 1535 (9th Cir. 1987).

4. Large Samples Required.

Placer samples should be large. Samples should consist of at least 3/4 cubic yard per three vertical feet of bank or outcrop to be considered quantitative.

a. Acceptability of smaller samples. Smaller samples may be acceptable under extenuating circumstances. Collecting small samples may produce less reliable data. You must fully document in the mineral report the reasons for collecting small samples. Those circumstances may include:

(1) The placer accumulation itself is about the size of a quantitative sample.

(2) There is no mechanical equipment available for sampling.

(3) Topographic, safety or legal conditions make it impossible to use mechanized equipment.

(4) Samples must be hand-dug and carried out via backpack or by pack train.

b. Reducing environmental impact. In some cases, you may be required to take samples from placers in withdrawn areas, where the use of mechanized earth moving equipment requires pre-approval from the appropriate surface managing agency. Discuss the available options with appropriate resource personnel and managers.

(1) A short duration sampling project using a few people with small earth moving equipment used to collect samples of adequate size may create minimal disturbance at a relatively low cost. Such a sampling program will usually involve only one or two trips to each sample point. The earth moving equipment can be used for immediate reclamation of the sample points.

(2) Hand sampling may require more time and personnel and may, therefore, be more costly. Pack animals may be required. Multiple trips to each sample point may be required to ensure collection of an adequate sample size. If the samples are too small, the final report may be less defensible and subject to remand at a hearing.

5. Nugget Effect.

The nugget effect can have a serious impact on placer sample value results. The impact on sample values is more pronounced with gold in medium to coarse size fractions due to the larger unit value of each particle. The nugget effect will be more pronounced in deposits with only a few gold particles, and worse still where those particles are large. Collecting relatively small samples creates a risk of missing gold particles altogether or catching more gold particles than are representative for the deposit. Collecting larger samples will reduce the potential error introduced by the nugget effect. McCulloch (2003) graphs the effects of one particle of gold on the valuation of a sample, and those figures should be consulted as you design a sampling program.

6. Determining Sample Sizes.

McCulloch (2003) provides two methods for estimating the sample size necessary for validity examinations.

a. Most accurate method. The first and most accurate method uses a graph to compare the nugget effect of gold particle sizes to sample sizes. This method first requires that you collect a large sample from the horizon suspected of containing placer gold particles. Next, perform a particle size analysis and use Tables 4.4, 4.5, 4.6, and 4.7 in McCulloch (2003) to select minimum sample sizes.

b. Alternate method. The second method is useful when there is insufficient information about particle size at the beginning of an examination. Using the second method, you can use field and literature data gathered during the examination process to select sample sizes from Table 4.3 in McCulloch (2003). This system considers critical data and should result in an appropriate sample size. The method is similar to a taxonomy key. It consists of a series of conditions leading to a minimum sample size and is given in Appendix VII B. The method considers the following:

(1) Gold particle size distribution from historic production.

(2) Historic mining methods.

(3) Gold fineness.

(4) Common accessory minerals.

(5) Predominant gold characteristics.

(6) Lode-source-deposit types.

(7) Placer deposit types.

7. Sample Sites.

No matter which collection method you use, be certain to clean the face of a previously exposed sample trench to a depth of at least four inches before cutting the sample to avoid salting. Photograph each sample site before and after sampling, using the same procedure as for lode samples.

8. Recording Weights and Volumes.

Record the sample volume in loose cubic yards. Measure the volume of the sample channel or pit to obtain the bank cubic yards. There are several available methods. One method is to use five-gallon plastic buckets, which can be calibrated for lesser volumes. Other methods involve using a backhoe bucket of a measured size.

a. Measure loose volume before transporting sample. When collecting samples in calibrated five gallon buckets, it is important to measure the loose volume of the sample before moving the samples away from the sample point. Any motion of the bucket will cause the sample to settle, which will alter the loose volume measurement.

b. Recording sample weights is optional.

(1) The sample weight (sand, gravel, etc.) is rarely needed to make volumetric calculations.

(2) Recording the sample weight may be useful in calculating the concentration ratio of processing equipment.

(3) When using a backhoe for sampling, it is impossible to weigh the sample unless it is transferred into buckets. Five gallon buckets are useful because they make it simple for you to calculate the total weight of each sample. In general, when collecting samples in five gallon buckets, it is usually a good idea to record sample weight, in case it is needed later.

9. Suction Dredge Sampling.

a. Timed analysis. If you use a suction dredge, you should operate it for a timed period of an hour or more to obtain a proper sample and to be able to calculate the economics of the operation on an hourly basis.

b. Collection of sample. If you can do it safely, place a metal tub of known size at the end of the suction dredge's sluice to roughly measure the volume of sample throughput. Measure the entire sample run or the amount that is run during a timed period. The tub will not capture fine materials that are washed away, but will produce a rough approximation.

c. Manufacturer's throughput rating is not reliable. The suction dredge manufacturer's rated throughput, or hourly capacity, is not a reliable indicator of actual production. The rated throughput is based on a controlled test that involves dredging roofing granule sized particles out of a swimming pool.[15/]

10. Concentrate Entire Sample Collected.

Placer deposits and placer samples are not homogeneous. You must recover and concentrate the entire sample, even if it is inconvenient to do so. If part of a sample is discarded, it is impossible to know if the part discarded is barren, rich, or merely representative.

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15 Thornton (1979).

11. Concentrating Samples.

You need to reduce the large volume of a placer sample to a manageable size. You can reduce a typical one-cubic-yard placer sample to a concentrate that weighs less than three pounds by mechanical gravity separation in washers, sluices, or jigs. Hand panning to a concentrate, commonly known as a black sand concentrate, is required as a final step.

a. Retaining precious metal values. Take special care in the concentration procedure to ensure you retain all gold values, recognizing that fine particles such as flour gold can be extremely difficult to capture. Whether or not the fine gold portion is commercially viable to recover, the sampling should seek to capture all of the contained gold. The equipment used in the concentration circuit must be capable of reliably recovering placer gold in fine fractions. Experience has shown that a Denver Goldsaver™ coupled with a tail sluice feeding a Knudsen bowl is especially well suited. However, you may also use other combinations of conventional equipment. Whatever equipment you use, you should be trained in its use.

b. Use of claimant's equipment. At your discretion, you may use a claimant's equipment for sampling and concentration. If you do, you must make sure that there is no opportunity for salting, and that the equipment is safe and appropriate for the situation. You must thoroughly clean the equipment before your sampling to avoid sample contamination. You are under no obligation to use the claimant's equipment.

12. Sampling Information and Notes.

a. Sampling information. Sampling of alluvial placer deposits is discussed in Wells (1989), Macdonald (1983), and McCulloch (2003). Consult these publications before sampling any placer deposit.

b. Field checklists. In addition to the field checklist in Chapter III- D, you should also use a placer checklist, such as is found in Appendix VII-C and in McCulloch (2003). Some items in the checklist are not applicable in every case. However, use of the checklist will ensure that you record the necessary data.

13. Reporting Placer Resources.

Placer mineral resources (volume and grade) are reported in bank cubic yards. However, calculate unit operations for handling placer ores in loose cubic yards. When planning mining and processing operations and sizing mining equipment, you must estimate the volume of loose cubic yards to be moved. Each major horizon must be estimated on an individual basis so that proper mine planning may occur.

a. Determination of swell. Determination of swell is an important part of a placer examination and applies to most mining operations. Swell and swell factor are related, but not the same. Swell is calculated as a percent, which represents the increase of volume from bank to loose measure. The swell factor is the reciprocal of the percent swell. There are swell calculations in Handbook 3890-2.

b. Book swell factors are insufficient. Selecting a swell factor out of a book or table is seldom sufficient. Percentage of swell can be estimated in several ways.

c. Estimation of percent swell. A reliable way to calculate a swell factor is as follows:

- Excavate a hole in the ground of known volume, to determine the bank volume.

- Calculate the volume of the hole (which will normally be a cone) by using the pyramid formula: $v = \frac{\pi r^2 h}{3}$ (h = depth of hole; r = radius at top of hole)

- If the hole is not a cone, consult the Appendices to find a suitable formula to calculate the hole volume.

- Gently place that material into buckets of known volume.

- Measure the volume of the fill in the buckets to determine loose volume.

- Percent swell = $\frac{\text{(loose volume - bank volume)}}{\text{bank volume}} \times 100$

Example: The measured bank volume is 8 yd^3 and the amount of loose yd^3 is 10.

Percent swell = $\frac{10 - 8}{8} \times 100 = \frac{2}{8} \times 100 = 0.25 \times 100 = 25\%$ swell

d. Alternate method for estimating percent swell. An alternate method involves using a bucket of known volume. This method may be more useful when excavating holes that will not stand well. You should strive to maintain the integrity of the hole because any slough will affect the results. A conical shaped hole will tend to reduce slough.

- Start with a bucket of known volume.

- Pick a relatively flat portion of the surface.

- Dig a hole and fill the bucket. Do not move or handle the bucket any more than necessary to prevent settling.

- Immediately pour material from the bucket back into the hole until the hole is full to the level of the original surface.
- Measure the material remaining in the bucket.

- The ratio of the remaining material to the initial empty volume of the bucket, expressed as a percentage, is the percent swell.

- Bank volume = empty bucket volume - material remaining in the bucket.

- Percent swell = $\frac{\text{(empty bucket volume - bank volume)}}{\text{empty bucket volume}} \times 100.$

Example: Bucket (14 inches deep) volume = 5 gallons (0.6685 ft^3). Bucket is completely filled to top.

Hole is refilled and 4 inches (0.1910 ft^3) remain in bucket.

Bank volume is therefore = 0.6685 ft^3 – 0.1910 ft^3 = 0.4775 ft^3.

Percent swell = $\frac{0.6685 - 0.4775}{0.6685} \times 100 = 0.28 \times 100 = 28\%$

e. Estimating a swell factor. Swell factor, is the reciprocal of swell and is normally expressed as a decimal fraction. Swell factor can be calculated as follows:

1 / (1 + percent swell as a decimal) = swell factor.

Example: Using the information from "c" above:

1/ (1 + 0.25) = 1/ 1.25 = 0.8 swell factor

f. Estimating loose volume. To estimate loose cubic yards from measured bank cubic yards, you may use the following method:

Loose cubic yards = bank cubic yards / swell factor.

Example: (using "c" above) $\frac{8 \text{ bank yd}^3}{0.8 \text{ swell factor}} = 10 \text{ loose yd}^3$

Alternatively, you may use this method:

Loose cubic yards = bank cubic yards + (bank cubic yards x percent swell as a decimal)

Example: (using "c" above) 8 bank yd^3 + (8 bank yd^3 x 0.25) = 8 yd^3 + 2 yd^3

= 10 loose yd^3

g. Prevention of sample settling before estimating swell. Whatever method is used, handle the material as little as possible. The measurements MUST be accomplished before transporting the material any distance. Samples cannot be collected at the site for later swell measurement in the laboratory. Any compaction of loose material will affect the estimation.

h. Use bank cubic yards for resource calculations. When calculating placer resources, you will measure sample sizes at the time of collection, and make all calculations in bank cubic yards.

14. Problems in Sampling.

Great care must be used to take representative samples. Several major problem areas may exist:

a. Boulders. If mining requires avoiding, blasting or moving boulders, the boulder factor will have to be considered. In this usage, the term boulder is not the same as used in sediment size analysis. If the largest rocks at the sample point will pass through the processing equipment, there is no boulder factor to calculate. A boulder factor correction can be found in Appendix VII-C, and in Wells (1989).[16/]

(1) Rocks small enough to be collected and pass through the sampling concentration equipment should be processed as a part of the sample. In such cases, there is no boulder factor to consider.

(2) Rocks too large to pass through the sample concentration equipment should be cleaned of adhering material and the adhering material should be processed through the equipment. It is important to determine if the rocks would pass through the actual production equipment. If they will, there is no boulder factor to consider.

(3) Estimate volume percent of boulders in the cut that cannot pass through the sample concentration equipment and add that volume to the appropriate volume calculation. Calculations using the boulder factor of Wells (1989) may be appropriate. It is extremely important in this case to have photographs before and after sampling.

(4) Boulders will often be a factor in suction dredge examinations. They will affect the volume and grade of placer resources and present operational challenges.

15. Other Valuable Detrital Minerals.

Valuable detrital minerals may occur in placer deposits or may be mixed in a placer gold deposit. These minerals must be identified and evaluated. These may include rutile, monazite, garnet, cassiterite, ilmenite, cinnabar, sapphires, rubies, diamonds, and monazite. Methods and equipment for sampling and concentrating these minerals are similar to those for placer gold. These minerals will generally occur in much larger volumes than gold and

16 The boulder factor in earlier editions of Wells is in error.

are of lower unit value, so the results of the nugget effect will be much less pronounced.

16. Prevention of Salting.

The following precautions should prevent salting, either accidentally or on purpose:

- Examine and clean all equipment used in sampling and sample processing before, during, and after use.

- Make sure that samples are kept secure. Due to the large size of placer samples, it is often impractical to store them in a locked cabinet or building before they can be concentrated. If this occurs, seal the five gallon buckets, if used, in a manner that will show if any tampering has taken place. It may be necessary for you to post a guard.

- Clean sample sites before taking samples, in a manner similar to lode sampling.

H. Analytical Methods and Assaying.

1. Assaying Defined.

Assaying can be generally defined as the quantitative determination of the metals in ores and furnace products. In the United States mineral industry, the word "assay" is most often applied to describe the protocol of a physical and chemical process that, using a precise methodology, determines the concentration of the valuable metals in weight percent. When undertaken properly, a chemical analysis is comparable in precision to an assay. There is no rigid differentiation between an assay and a chemical analysis. Tests for many industrial minerals and other metals are often referred to as analyses, or chemical analyses.

The written result from the laboratory is usually called an assay sheet or report of assay. In informal usage, the written result is often called simply an assay. A complete listing of assay and analysis methods, with a description of how they work, is beyond the scope of this Handbook. A good place to start when researching assay methods is Haffty (1977).

2. Managing Assay Costs.

Assaying can be expensive, especially for examinations involving large claim groups or industrial minerals. You should carefully plan sampling and assaying to minimize costs as much as possible. However, a sufficient amount of assaying or analysis is required, and only you can make that determination. Failure to perform an adequate amount of assay or analysis work may result in a weak case that must be redone. The Government could end up using public funds to settle a lawsuit or purchase mining claims that cause a resource conflict. Doing the examination right the first time usually prevents expensive litigation and settlements.

3. Assay Methods.

Assay and analysis methods in current use include Fire Assay (FA), instrumental methods, and amalgamation of frec gold using mercury.

a. Fire assays. Fire assaying is an industry-accepted, time-proven method of determining the concentrations of gold and silver in a sample, and may be applied to the platinum group metals. A fire assay is a miniature smelting process.

(1) There are no Earth materials that cannot be analyzed for gold and silver using a properly conducted fire assay.

(2) Gold and silver from lode or vein deposits (but not placers) should normally be fire assayed. Fire assay may also be used for platinum group elements if the laboratory is properly equipped.

(3) A fire assay is often used as a pre-concentration step. The resultant precious metal bead is subjected to further instrumental analysis, usually by Induction Coupled Plasma Arc (ICP) methods.

b. Instrumental methods. Instrumental methods include Atomic Absorption spectrophotometry (AA), Induction Coupled Plasma Arc Optical Emission Spectroscopy (ICP-OES), and Induction Coupled Plasma Arc Mass Spectrometry (ICP-MS). When instrumental methods are properly applied and conducted, their results are reliable.

(1) In all instrumental methods, certain metals, particularly iron and nickel, will interfere with spectral readings.

(2) If not taken into account, these interferences will cause the assayer to report erroneously high precious metal and platinum group values.

4. Tests for Bulk Tonnage, Low Grade, Metallic Deposits.

If assays confirm the presence of potentially economic metallic deposits that could be processed by leaching, the mineral examiner should arrange for leach tests. This test determines what proportion of the contained metal can be recovered using leaching technology. The leach tests are not additional assays, and are not to be used as such. These are typically column percolation or bottle agitation leach tests, where samples are leached, and passed through appropriate recovery systems. Reagent consumption is also measured in order to calculate leaching costs.

5. Other Tests May Be Needed.

Some metallic mineral deposits may require other tests. These may include such tests as: bulk density measurements, grinding studies, flotation recovery testing, and acid generation potential.

6. Analysis of Nonmetallic Materials.

Analysis of gem and semi-precious stones, specimen-grade minerals, and non-metallic or industrial minerals, requires tests and methods specific to each commodity. Industrial minerals are further discussed in Handbook 3890-4. If you have questions about the proper analytical technique required to produce a reliable analysis, consult with the selected lab, recognized experts, or refer to Rose, Hawkes, and Webb (1979), and Levinson (1974).

7. Assay of Placer Concentrates.

Successful recovery methods for placer minerals depend on removing the minerals from the sediment using gravity separation methods. Gravity recovery methods will not recover minerals that may be chemically contained within a rock.

a. Placer gold is not amenable to leaching. Placer gold cannot be economically leached or precipitated. Placer gold particles are too large, and slow the kinematics of the leach process. This results in poor recoveries and high costs.

b. Mercury amalgamation of placer gold concentrates. To determine the amount of placer gold in a concentrated sample (the black sand concentrates), use the free gold mercury amalgamation method. Any other process will give an inaccurate value which will usually be higher than the actual value of gold recoverable by placer mining methods.

(1) The concentrates must not be split.

(2) You must request that the assay laboratory report results in total milligrams recovered from the entire black sand concentrate. That result, added to any gold manually removed from the sample by the mineral examiner, represents the total milligrams of gold in the sample originally collected.

(3) A result reported in Troy ounces per ton reflects only the value in the concentrates. You must then mathematically convert that value to represent the actual value per bank cubic yard. Whenever possible, the assay laboratory should report the gold content in milligrams.

c. Preparing samples for amalgamation. Examine concentrates visually and sieve them before amalgamation to determine the percentage of the gold in specific particle size fractions. Use sieve sizes that range in units of ten mesh from 10 to 100 mesh. Nugget gold and coarse gold (> 10 mesh) may bring a premium price on the market as jewelry gold.

d. Fire Assay of amalgamation tailings. Once you finish the mercury amalgamation, perform a fire assay on each sample's remaining tailings to measure any gold that could be locked in and not recovered by mercury. Do not combine the tailings of several samples into one for fire assay. Gold that is identified in a fire assay of

amalgamation tailings is usually in concentrations too small to be of any economic value. Wells (1989) discusses the issue in depth.

e. Spectrographic analysis of black sands. Do an emission spectrographic analysis on the black sands recovered to check for rare earths, tin, titanium, columbium, tantalum, and the platinum group minerals. If these are found in significant amounts, have the black sands assayed. Some laboratories offer inexpensive analytical packages that will accomplish this.

8. Selecting an Assayer.

The analysis of samples is important and you must exercise considerable care in this regard. Erroneous or unreliable assays can cause the Government to lose its case in an administrative hearing. Selecting an assay laboratory solely on the basis of bid price is not acceptable. You must use an established analytical laboratory that has a good reputation and is qualified to perform the required assays. When ever possible, you must use a laboratory that conforms to requirements of The International Organization for Standardization (ISO).

a. Laboratory certification. Many reputable laboratories now possess accreditation or certification under one or more of several standards established by The International Organization for Standardization (ISO). A detailed description of the standards is beyond the scope of this Handbook. The ISO provides numerous descriptive publications. Their website, http://www.iso.ch/iso/en/ISOOnline.frontpage, is a good resource. Two ISO standards apply to analytical laboratories that analyze samples collected by mineral examiners.

(1) ISO-9002 deals with the establishment of quality management systems within organizations. ISO-9002 applies to a wide variety of industries in addition to analytical laboratories.

(2) ISO/IEC-17025 is the more applicable standard. Accreditation to ISO/IEC-17025 first requires that the laboratory meet the quality management system of the appropriate ISO-9000 series standard. However to meet the ISO/IEC 17025 standard, the laboratory must also possess adequate equipment to perform its calibration and testing tasks; and the laboratory must employ adequate personnel with the competency to perform the testing.

In addition, most accreditation plans in the United States and Canada require that the laboratory undergo regular proficiency testing, which typically includes "round robin" testing of standard reference materials with other laboratories. In essence, ISO/IEC 17025 accreditation recognizes laboratory competence, while ISO 9000 series certification alone recognizes conformity to a written quality control system.

b. Specific laboratory applications. Many types of laboratories may possess ISO 9002 and/or ISO/IEC 17025 accreditations. Such laboratories may specialize in unrelated work, such as water testing under the Clean Water Act, testing of effluents, or

analysis only of bullion. Experience has shown that sending rock or ore samples to such laboratories will usually produce incorrect results, even if the laboratories have a good reputation in their primary field.

c. ISO/IEC laboratories to be used when available. At a minimum, only assay laboratories that possess an applicable ISO 9002 certification, with labs that also carry applicable ISO/IEC 17025 accreditation preferred, should be used for official precious and base metal assays. The laboratories selected must routinely analyze ores, rocks, and concentrates as a primary business, not as an occasional service. ISO standards can change. At the time that this Handbook was written, there was discussion of modifying the ISO/IEC 17025 standards to conform with the ISO 9000-2000 standards. It is important that you keep track of which standards are current, and use only labs that are accredited. While appropriate ISO accreditation is required when applicable, the assay laboratory selected must also have a positive reputation in the mining industry.

d. Non-availability of ISO/IEC laboratory. In some cases, no ISO certified or accredited laboratory may offer the necessary analytical services. Such services could include strength testing for industrial minerals or mercury amalgamation for precious metal placer concentrates. In all cases, you should carefully consider experience and reputation when selecting a laboratory.

9. Protocols for Quality Control on Your Assays.

When submitting samples to a laboratory for assay work, you must check on the laboratory's accuracy by using a common quality control technique. You must include duplicate samples (labeled with a different sample number) and "blank" samples. Blanks are samples that have been analyzed and are known to not contain any mineral or metal being looked for in the remainder of your sample stream. In many cases (gold, platinum group elements, and certain base metals), standard samples of ores with a precise metal content may be purchased and introduced into the sample stream using sample numbers from your sample stream. Gold standards may be purchased from the Nevada Bureau of Mines and Geology in Reno, Nevada. Platinum group standards may be purchased from the Geological Survey of Canada. In using duplicate samples and standards, the assay values should not vary by more than ten percent. If the variance exceeds ten percent, the samples should be re-analyzed.

10. Unorthodox or Unusual Situations.

In some cases, you may be told by the claimant that only certain unusual, secret or proprietary assay methods will detect the precious metals on the claims. In other cases, the claimant will assert that only certain highly experienced assayers are capable of detecting the precious metals. These are among the warning signs for a mining scam. (Lechler, 1997).

a. Using a claimant's preferred laboratories. At your discretion, it may be prudent to send a few samples to the claimant's preferred assayer, primarily to check the laboratory's reliability. Any samples thus sent must be splits of samples also sent to

accredited laboratories. Contact the BLM National Training Center to find out whether the mining claimant's preferred assayer has already been determined to be unreliable by other BLM or Forest Service mineral examiners.

(1) Before sending samples to a claimant's preferred assayer, the mineral examiner should ensure that assay costs at the claimant's preferred lab are not excessive.

(2) The sample stream must include standard reference materials, plus one or more blanks that visually resemble the material from the claim.

(3) All samples should be numbered and packaged in such a way that the assayer cannot determine the actual origin of any sample.

(4) You must document the analytical methods and their results in the mineral report.

Chapter V – Evaluating a Mineral Deposit

A. General Requirements and Process.

The objective of evaluating a mineral deposit is to determine if the operator has a reasonable prospect of success in developing a valuable mine.[1/]

1. Test for Discovery.

a. Prudent person rule. In patent, validity and related examinations, the standard that you must apply is the prudent person rule, established in Castle v. Womble, supra:

". . .where minerals have been found and the evidence is of such a character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success, in developing a valuable mine, the requirements of the statute have been met. To hold otherwise would tend to make of little avail, if not entirely nugatory, that provision of the law whereby 'all valuable mineral deposits in lands belonging to the United States . . . . are . . . . declared to be free and open to exploration and purchase.' For, if as soon as minerals are shown to exist, and at any time during exploration, before the returns become remunerative, the lands are to be subject to other disposition, few would be found willing to risk time and capital in the attempt to bring to light and make available the mineral wealth, which lies concealed in the bowels of the earth, as Congress obviously must have intended the explorers should have proper opportunity to do."

b. A validity examination is not an appraisal. An appraisal and a validity report may rely on similar data. However, the purposes of and analyses in each document differ. An appraisal is intended to determine the fair market value of a property right for sale, trade, or taxation purposes. A validity examination is intended to determine whether a claimant has discovered a valuable mineral deposit under the Mining Law. Appraisals generally reflect risk assessments and the use of higher rates of return than does a validity examination, among other distinctions.

c. Factors to consider. You must consider a number of factors to estimate a deposit's probable economic viability, including:

- The grade, tonnage, and estimated gross value of the mineral deposit.
- All non-sunk capital costs, such as costs of equipment, buildings or other infrastructure at the mine (sunk costs are described below)
- All costs incidental to operating the mine, processing the ore, and reclaiming the site.
- Marketing costs.

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1 Castle v. Womble, 19 Pub. Lands Dec. 455 (1894).

- All applicable Federal and State taxes, including but not limited to income taxes, depletion allowance, depreciation allowance, property taxes, and severance taxes.

d. Grouping claims into logical mining units[2] is permitted for verifying discovery.

(1) Mining claims may be analyzed as a group for the purpose of ascertaining whether a marketable discovery exists, so long as each mining claim recommended for patent contains mineralization in sufficient quality and quantity that it can be reasonably expected to be developed profitably under an overall mining plan for the entire deposit. Schlosser v. Pierce, 92 IBLA 109, 130 (1986); see also United States v. Cactus Mines Ltd., 79 IBLA 20 (1984), In Re Pac. Coast Molybdenum Co., 75 IBLA 16 (1983).

(2) For a group of mining claims covering the same mineral deposit, you may treat the mining claims as a single unit for purposes of cost estimation and economic analysis, and validity determination.[3] After you verify that the claimant can show a physical exposure of the valuable mineral deposit on each claim in the group, you may treat the claim group as a logical mining unit for the remainder of the mineral examination. Each claim need not stand alone economically, but each claim must contribute to the overall value of the deposit. In general terms, each claim must have sufficient tonnage at or above the cut off grade for the deposit as a whole to justify extraction. This means that when you are analyzing marketability for a group of claims, "the recovery expected from each claim must not only exceed the costs of mining, transporting, milling, and marketing the particular deposit on that claim but each claim must also bear a proportionate share of the development and capital costs attributable to the combined operation." United States v. Collord, 128 IBLA 266, 287 (1994) (citing Schlosser, 92 IBLA at 131-132 (citing Pac. Coast Molybdenum, 75 IBLA at 24, 24 n.7, 24-26, 32)).

e. Limited information available. In many instances, you will have to verify whether a valuable mineral deposit exists based on limited information. Information available for a mining claim validity examination will only rarely be comparable to a major feasibility study in reliability and scope of available data.

2. Test for Whether Lands are Mineral-in-Character.

Beginning from the earliest days of the public land system, Congress created two categories of public lands: mineral land and agricultural land. Mineral lands were sold for $5 per acre. Agricultural lands were sold for $1.25 per acre. The criteria for determining whether lands were either mineral or agricultural was whether the lands were "chiefly valuable" for one or the other. With the enactment of FLPMA, this land classification distinction became less important. However, the question of whether lands are mineral-in-

2 Usage of the term "logical mining unit" in this context is similar to, but not identical to, the logical mining unit terminology used in solid leasable minerals. In Chapter II of this handbook, a logical mining unit is also referred to as a claim block.

3 Schlosser v. Pierce, 92 IBLA 109, 129-34 (1986).

character must still be addressed when determining the validity of placer mining claims and mill sites or when considering certain land transactions.[4]

a. Considerations for determining whether lands are mineral-in-character. The test for determining whether lands are mineral-in-character, like that for discovery, has been established by case law. It may be viewed as discovery minus a physical exposure. It may be determined by geologic inference, but requires more than a simple determination that unexposed minerals probably exist; their quality and quantity are also an issue. Land is mineral-in-character when known conditions engender the belief that the land contains mineral of such quality and quantity as to render its extraction profitable and to justify expenditure to that end.[5]

b. When required. Determining whether lands are mineral-in-character is most commonly necessary when evaluating the character of each ten-acre parcel of a placer mining claim or when evaluating mill sites under the Mining Law. Geologic inference may be used to estimate deposit size or establish mineral-in-character status.[6]

c. Evidence of Mineral-in-Character. A mineral-in-character determination is based upon a combination of physical exposures and geologic inference. When using geologic inference, you are making projections from known or reasonably inferred formations from adjoining lands into the land in question to determine its mineral character.[7] As such, reserves that may be inferred to reside within a geologic formation adjacent to the land in question may be used to establish the mineral character of the land being classified if available evidence shows that the formation likely projects into this land.

B. Classification of Ore Reserves and Resources.

Problems with defining and properly using terms to describe ore, reserves and mineral resources are not new. As early as 1909, Herbert C. Hoover wrote:

"Some general term is required in daily practice to cover the whole field of visible ore, and if the phrase 'ore in sight' be defined, it will be easier to teach the laymen its proper use than to abolish it. In fact, the substitutes are becoming abused as much as the originals ever were. All convincing expressions will be misused by somebody."[8]

1. Resources, Reserves and Ore.

Over the past few decades there has been a trend to shorten the phrase "ore reserves" to just

4 Manual Section 3060 Mineral Reports Preparation and Review.
5 Diamond Coal & Coke Co. v. United States, 233 U.S. 236, 240 (1914); S. Pac. Co., 71 Interior Dec. 224, 223 (1964); United States v. McCall, 7 IBLA 21, 27, 79, Interior Dec. 457, 460 (1972); United States v. Bunkowski, 5 IBLA 102, 127, 79 Interior Dec. 43, 55 (1972).
6 United States v. Feezor, 74 IBLA 56, 78-79 (1983).
7 S. Pac. Co., 71 Interior Dec. 224, 223 (1964)
8 Hoover, H. C., 1909, Principles of Mining, McGraw-Hill, p 17.

"reserves," and to use the terms "ore" and "reserves" interchangeably. When using these terms, you must be mindful of their various economic and legal meanings. In general usage, an "ore"/"reserve" is that portion of a mineral deposit that can be profitably mined under current economic, technological, and legal conditions. It is generally not possible to determine if a mineral deposit is an ore/reserve or a resource until you have completed your economic evaluation.

2. Terminology.

The terms "resources," "reserves" and "ore" are often classified by adding the terms "measured," "indicated," "proven," and "probable," as well as other descriptive adjectives. You will also encounter a wide variety of other terms such as "possible ore," "ore in sight," and "measured ore." It is important that you understand how these terms are used and the system from which they are derived. Many such terms have little to no direct applicability to determining the validity of a mining claim.

3. Ore Reserve Definitions.

For validity and mineral-in-character purposes, it is recommended that you use the definitions from McKinstry[9/] for describing ore reserves. They are well established in practice and match the common usage of the past century. Their focus is on the individual mining property in question rather than the mining district or region, and they can be readily established based on the data at hand. Those definitions are:

a. **Positive ore or ore blocked out**. These terms are now referred to as "proven ore," which are not always "proven" in the classical sense. Ore exposed and sampled on four sides, i.e., by levels above and below and by raises or winzes at the ends of the block. This definition applies to veins; for wide ore bodies the workings must be supplemented by crosscuts.

b. **Probable Ore**. Ore exposed and sampled either on two or on three sides.

c. **Possible Ore**. Ore exposed on only one side, its other dimensions being a matter of reasonable projection. Some engineers use an arbitrary extension of 50 to 100 feet. Others assume extension for half the exposed dimension.

4. Mineral Resource Definitions.

"Mineral resources" can be defined as minerals which are uneconomic to mine under present technological or economic conditions, or for which there is insufficient information to place them into an ore/reserve category. With changes in economic or technological conditions, or after further exploration, resources may become ore/reserves. "Resources" will be defined differently, depending on the classification system and its intended use.

9 Mckinstry, H. E., 1948, Mining Geology, Prentice-Hall Inc.

Resources are usually classified as "measured, indicated, or inferred."

a. Measured resource. To be classified as "measured,"[10] the grade and tonnage are computed from dimensions revealed in outcrops, trenches, workings, or drill holes; grade and/or quality are computed from the results of detailed sampling, and measurements are spaced so closely and the geologic character is so well defined that size, shape, depth, and mineral content is well established.

b. Indicated resource. To be classified as "indicated,"[11] the quantity and grade and/or quality are computed from information similar to that used for measured resources, but the sites for inspection, sampling, and measurement are farther apart or otherwise less adequately spaced. The degree of assurance, although lower than that for measured resources, is high enough to assume continuity between points of observation.

c. Inferred resource. An "inferred"[12] resource is estimated by assuming continuity beyond measured and/or indicated resources, for which there is geologic evidence. An inferred resource may or may not be supported by samples or measurements.

d. Grouping of defined classes. The term "demonstrated" is often encountered in the quantification of resources or reserves for a mineral deposit. "Demonstrated" is usually the sum of "measured" plus "indicated" for resources and "positive" plus "probable" for ore/reserves.

5. Using "Reserves" and "Resources" Terminology in Validity Determinations.

a. Reserves. If a claimant establishes positive and/or probable reserves on a mining claim, it is likely that the claimant has discovered a valuable mineral deposit under the Mining Law. This is because, if there are positive and/or probable reserves on a mining claim, it is likely that a prudent person would invest additional labor and means in the expectation of developing a valuable mine involving that claim. "Possible ore," (from McKinstry's classification) may similarly qualify as the basis for a finding of a discovery of a valuable mineral deposit.[13].

b. Resources. If a claimant establishes the existence of resources on a mining claim, resources are normally an insufficient basis, no matter how accurate or certain, for concluding that the claimant has discovered a valuable mineral deposit. Depending on the outcome of your economic evaluation, resources may or may not become reserves.

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10 Definition as given in Principles of a Resource/Reserve Classification for Minerals; USGS Circular 831 (1980). See also Principles of the Mineral Resource Classification System of the U.S. Bureau of Mines and U.S. Geological Survey; USGS Bulletin 1450-A (1976). The Bureau uses this term to describe the process for obtaining the resource classification, but the Bureau does not adopt the USGS classification system for mineral reserves.

11 Id.

12 Id.

13 United States v. Hooker, 48 IBLA 22, 30 (1980); United States v. Feezor, 74 IBLA 56, 79 (1983).

c. Discovery under the Mining Law. In a validity examination, use extreme caution when using ore/reserves or resources terminology to confirm the discovery of a valuable mineral deposit. There is no direct correlation between these terms and the validity determination standards because they differ in purpose. Consider a hypothetical situation in which a mineral examiner delineates a large mass of ore grade material in an area where mining operations have historically occurred.

- Until professionally-completed feasibility studies with encouraging results have been completed, that mass of ore grade material probably would not meet Society for Mining, Metallurgy, and Exploration (SME) standards for reserves, and would probably be a resource if SME standards alone are applied.

- Under the U.S. Geological Survey (USGS) "McKelvey" diagram, the mass of ore grade material might be a reserve.

- Under the prudent person rule, the mass of ore grade material would probably constitute a discovery of a valuable mineral deposit.

6. Other Commonly Used Classification Systems.

For many years, the industry worldwide has grappled with establishing actual, legal and verifiable classifications for "resources and reserves." Two of the most commonly used of these systems are the USGS classification system (the "McKelvey diagram") and the SME Guidelines. Neither of these systems is an exact fit with the requirements of the prudent person rule.

a. SME Guidelines and the prudent person rule do not correlate. The prudent person rule, as established in Castle v. Womble, supra, is the basic standard for determining whether a mining claim contains a valuable mineral deposit. The SME guidelines were developed by an international working group as a means of consistently defining and stating mineral resources for publicly reporting companies. Consequently, the prudent person rule and the SME guidelines do not correlate to each other. As an example, if a mining claim contains "proven mineral reserves" as defined by SME there is a very high probability of there being a discovery under the Mining Law. However, discovery under the Mining Law may well be achieved without attaining the level of confidence or certainty required by the SME guidelines for "proven mineral reserves."

(1) You are expected to understand the SME definitions of "reserves" and "resources," and to remain informed as to any amendments to them. You must be conversant in how the terms are used by the mining industry, and how the industry's usage may or may not relate to the Bureau's work so that you may understand the relationship between documents provided by the industry using that terminology and the discovery test. The SME Guidelines are not quoted within this Handbook or included as an appendix because they are subject to change by parties that are not affiliated with the U.S. Department of the Interior.

b. The McKelvey diagram differs from SME Guidelines and from the prudent person rule. The mineral resource classifications in the SME guidelines are not the same as the mineral resource categories in the "McKelvey diagram."[14/] The USGS developed the basics of the "McKelvey diagram" during World War II. It was officially published in 1972 and has remained as the USGS standard since then.[15/]

(1) USGS developed the McKelvey diagram for mineral resource inventories and land use planning and not for classifying resources and reserves on specific mineral properties. The McKelvey diagram lacks the precision necessary to properly classify resources and reserves for economic reporting purposes or determinations of validity using the prudent person rule.

(2) A noted authority on the use and classification of reserves for the evaluation of a mining property, in discussing the utility of the USGS classification system stated in 1948:

> "This classification leaves room for considerable deduction from geological background. It is well suited to its intended purpose, the estimation of the reserves of a district or a nation. It is less satisfactory for valuing a single mine." (McKinstry[16/]).

C. Calculation of the Tonnage and Grade of a Mineral Deposit.

1. Tonnage.

In order to calculate the tonnage of an ore reserve and waste rock in a mining operation you first need to calculate the volumes of each and calculate their respective densities.

a. Volume. Calculate the volumes of the valuable mineral deposit and waste rock that must be removed using geometric methods. In most instances, you will have to subdivide the deposit into multiple geometric bodies to accomplish this task.[17/]

b. Weight. Determine the weight, in pounds per cubic foot, of each geometric body. Use measured weights and densities, as they will give you more accurate results than if you rely on a reference, such as in Appendix IV-B. The weights and volumes calculated for waste rocks are included in your estimate of total mining costs.

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14 See Hansen, W. R., Suggestions to Authors of the Reports of the United States Geological Survey (7th ed.) (1991), Dept of the Interior, GPO, p. 96, Fig. 21.
15 McKelvey, V. E., 1972: Mineral Resource Estimates and Public Policy: American Scientist, vol. 60, no. 1, pp. 32-40. Hansen, W. R., 1991: Suggestions to Authors of the Reports of the United States Geological Survey, U. S. Dept. of the Interior, pp. 95-97.
16 Id. at.472
17 Popoff, C., 1966; Computing Reserves of Mineral Deposits: Principles and Conventional Methods; U. S. Bureau of Mines Information Circular 8283, U. S. Dept. of the Interior, pp. 113.

c. Total Tonnage. Using the resulting volumes and weights, calculate the tonnage of each geometric body. Determine the total tonnage by calculating a weighted average of the deposit's geometric bodies and adding them together. See Appendix VIII.

2. Grade.

Calculate the weighted average grade of the valuable mineral deposit. See Appendix VIII.

D. Precision of Calculations.

Be sure to avoid the appearance of extreme precision where it does not exist.

1. Making Calculations Involving Measurements of Varying Precision.

The precision of a calculation is limited to its least precise number. For example, assume that a mineral deposit is about 3.5 feet thick by about 150 feet long by about 750 feet wide. In this example, two of the measurements are significant figures that are not as precise as the third measurement. The correct volume, accounting for the imprecise significant figures, will be about 15,000 cubic yards, not 14,583.33 cubic yards. If the original measurements had been made using a precise survey, measuring exactly 3.502 feet, 150.00 feet, and 750.00 feet, then 14,580 cubic yards would be correct.

2. Rounding of Numeric Values.

You must ensure that rounding is within the accuracy of all measurements. Virtually all calculators and spreadsheet programs will carry an extensive number of digits after the decimal point while making calculations. Rounding can take place with each calculation, at the end of a string of calculations, or with the last calculation. Whichever method you decide to use, be certain to consistently apply it and to explain it in the mineral report.

3. Estimating Resource Values.

Methods of estimating resource values are found in Peele (1947), Peters (1987), Parks (1957), Popoff (1966), and McKinstry (1948). See Appendix VIII for brief examples of calculations. Your choice of method should be appropriate to the situation, recognize geologic boundaries, and be thoroughly explained in the mineral report.

E. Establishing a Market Price for a Commodity.

The Department has ruled that it is both proper and necessary to consider historic price and cost fluctuations in the consideration of marketability.[18/]

18 In Re Pac. Coast Molybdenum Co., 75 IBLA 16, 90 Interior Dec. 352, (1983).

1. Pricing Mineral Commodities.

a. Commodities traded on public exchanges. With certain commodities, especially precious metals and some base metals, prices can fluctuate considerably. You must take this fluctuation into account when evaluating the viability of an operation. You must take into account both current market trends and historic price fluctuations.

(1) BLM has established a policy for how to estimate a market price for mineral commodities.[19/] In brief, the methodology uses a six-year average, which is centered on the critical date for which the economic evaluation is being performed. Some examinations will require that the calculation be made for more than one critical date.

(2) To begin, calculate the average market price for the three year period before the appropriate critical date. Next, calculate the average commodity futures price for the three years after the critical date, based on the published prices for futures contracts. By including the market price for the month of the critical date, this method gives you 73 months of pricing that is averaged to give an expected commodity price for your economic analysis. Please refer to the policy statement given in Appendix VI-A for more detailed information.

b. Commodities not traded on public exchanges. The pricing policy does not work in all cases. For example, many industrial minerals are utilized in vertically integrated markets and there may not be published prices for them. In such cases, you must review all relevant information to develop a thoroughly documented reference price. For additional information regarding industrial minerals, consult BLM Handbook H-3890-5, *Industrial Minerals*.

F. Mine and Mill Modeling.

Before you can estimate the costs or potential returns, you must first determine what mining and processing methods are being used or are expected to be used.

1. Data Supplied by Claimants.

In many cases, the claimant will provide you with a detailed mine and mill plan that includes economic data. In this situation, you should verify whether that plan is operationally viable. You may evaluate the proposal and adjust or modify any component to improve efficiency, recovery of valuable minerals, savings on reclamation, and so forth. A number of other documents may provide useful information, including:

- Documents filed under the surface management regulations, such as notices or plans of operations

19 65 Fed. Reg. 41,724 (July 6, 2000); Appendix VI-A.

- Documents filed with the United States Securities and Exchange Commission (SEC) or foreign equivalents
- Documents filed with State securities agencies.
- Articles of incorporation, as well as periodic reports. These are normally filed with an agency in the state of incorporation.
- Information posted at a company website or an affiliated website on the internet.
- Company press releases.
- Articles in newspapers and trade journals.

2. Data Not Supplied By Claimants.

When the claimant does not provide a mine and/or mill plan, or where the claimant provides an unrealistic or inappropriate plan, you must develop a hypothetical operation suitable for the deposit being examined. Whether verifying mine and mill information provided by the claimant or developing a hypothetical operation, you must ensure that the mine and mill operations are properly sized and otherwise appropriate for the site and deposit being examined.

G. Preparing a Cost Estimate.

1. Sources of Operating Cost Data.

In many cases, you can get operating cost data for a planned or existing mine from the mine operator. However, you must verify any cost information you get from the mine operator. In other instances, you may have to calculate the costs of a proposed mine operation. Multiple sources of operational and cost information are available for this purpose.[20/] In addition, several computer programs are available to assist you in estimating costs. However, if you do not fully understand how the computer program handles the data that it manipulates, you could produce an impressive-looking result that may not be defensible.

2. Estimation Methods.

You may choose to use one of several methods of estimating costs. These include cost indexing, comparable costs in the same mining district, cost models, and grass roots estimating. In essence, you will build a mine on paper. Cost estimation is usually an iterative process, which requires information generated in the previous iterations to refine

20 Western Mine Engineering, equipment handbooks, trade journals.

the results as work progresses. Normally, several full iterations of a cost estimate will be required to provide a sufficient level of confidence. In cases where the resource values are very low or very high, only a few iterations are necessary. For example, there is little need to expend a large amount of effort to estimate the cost of a purported mine that actually contains only average crustal abundance concentrations of mineral commodities.[21/]

a. Cost estimating. You can use cost indexing to update or backdate the cost of equipment or services from one point in time to another point in time. The U. S. Department of Labor and Commerce publish monthly and annual cost indices for a large range of commodities and services including mining and milling. Indices are regularly compiled by Western Mine Engineering. Cost indexing does not work well as the sole cost estimation method for an overall mining operation. The resulting numbers become less reliable beyond five years.

(1) Sample index calculation. A D-8 Caterpillar bulldozer cost $150,000 in 1979. You need to know its cost in 1982. Its estimated cost would be:

$$1979 \text{ cost} \times \frac{1982 \text{ cost Index}}{1979 \text{ cost Index}}$$

$$\$150{,}000 \times \frac{343.8}{256.2} = \$150{,}000 \times 1.34 = \$201{,}000$$

b. Comparable operations in the same mining district. Neighboring mining operations within a particular mining district often use similar mining methods. The removal cost per ton of rock or cubic yard of gravel will usually vary by only a few percent between properties. If operating cost data is available for two or three properties in the district, you can use that data to estimate the average operating cost for removing a ton of rock or gravel per day for an operation of equivalent size. Comparative cost analyses do not work well if you are evaluating very small operations using site-built equipment, unless the operations are substantially identical. Comparing operations is often useful in spot checking costs provided by the claimant.

c. Grass roots estimating. This method independently estimates the project costs, or costs of parts of a project, based on unit operations and other discrete costs, all of which together represent the cost of a complete operation. The references cited in cost indexing above, especially Western Mine Engineering, contain up-to-date purchase costs of equipment and services. A number of publications advertise new and used equipment for sale. You may be able to get current and past sales prices at the local library, if the library's collections include these types of publications.[22/] Other cost information sources include equipment manufacturers, vendors, and service companies. Many equipment manufacturers publish operating or estimating guides, which can assist you in equipment

21 See generally, United States v. Pass Minerals, 168 IBLA 115, 121 (2006).
22 Past and present sale prices for metallic minerals are also found at www.kitco.com, www.cbot.com>, www.lme.co.uk.

sizing and selection, as well as determining cycle times for unit operations.

d. Sunk costs. Sunk costs are the unrecoverable past capital costs of certain types of equipment that the claimant already owned or the costs of improvements already made before the marketability date.[23] Do not include as expenses in the operation's cash flow those capital costs that were sunk **before** the date of marketability.

(1) Excavations, structures, and equipment affixed to the land and that cannot be removed, even for salvage value, may qualify as sunk costs. Examples include pits, underground workings, dumps, tailings ponds, monitor wells and some buildings.

(2) Sunk costs do not include ongoing equipment, improvement or maintenance expenses.[24] Purchase of new equipment or planned replacement of equipment or facilities after the date of marketability, consumable stores, repairs, and daily operating expenses are not sunk costs.

e. Equipment costs and accounting. The acquisition costs of equipment owned by a claimant before the marketability or withdrawal date need not be considered in calculation of costs.[25] Replacement costs of equipment after the marketability date are to be taken into account.

f. Labor costs. To establish the labor costs for a mining operation, use the local or regional wage rate for the job classification that was prevailing for the time period you are evaluating. The wage cost must normally account for burden, including Workers' Compensation, FICA, Medicare, and other required personnel costs that may be required by a state or local government. Burden is also applicable to persons who are self-employed. When you are evaluating a small "mom and pop" operation, do not calculate the burden as though the "mom and pop" operators are hiring outside employees. Use only the labor overhead costs that might apply to the "mom and pop" operation, e.g., self-employment taxes and insurance. The minimum wage should only be used for unskilled labor when the local job market is actually paying minimum wage for that kind of work, or if there is no other data.[26] When there is evidence that a prudent mine operator would expect to pay a higher wage for a certain type of labor, use the higher wage.

g. Environmental Compliance Costs. Include all costs associated with obtaining federal and State permits, reclamation, and monitoring and maintenance of post mining facilities in your estimate.

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23 United States v. Clouser, 144 IBLA 110, 131 (1998); United States v. Mannix, 50 IBLA 110, 119 (1980).
24 United States v. Garner, 30 IBLA 42, 67 (1977).
25 United States v. Clouser, 144 IBLA 110, 132 (1998); United States v. Mannix, 50 IBLA 110, 119 (1980)
26 United States v. Clouser, 144 IBLA 110, 129-130 (1998).

3. Milling Costs.

a. Information sources. Ask the operator for the costs of processing, but be certain to confirm those costs independently. If the operator cannot or will not give you processing costs, calculate the costs of proposed mill operations independently. Use Western Mine Engineering or a similar reference as a source for many milling costs.

b. Cost of compliance. All mill operations must meet current environmental and safety standards, including applicable regulatory requirements imposed by the surface managing agency and any applicable State regulatory requirements. You must consider all appropriate costs, including costs of acquiring water, water treatment, and disposal of tailings and waste. Report the final cost output in dollars per ton of rated capacity of the mill. Then calculate these costs back to the cost per ton of ore in the same manner as for other milling costs.

4. Smelter and Refining Costs.

A mining operator may plan to produce, process, and sell a finished product from the mineral property under evaluation. In such cases, determine the costs of the processing and refining needed to produce the marketable product. Determine the marketing costs to the first point of sale. In other words, determine whether the commodity will be sold on an FOB mine site basis, from a processing plant, or if transportation to market is normally required.

a. Custom smelters. If a mining operator sells the mine's output through a custom smelter, consider the cost of smelting or ore reduction, as well as the costs of transportation to the smelter, in the economic evaluation. Confirm that the smelter was operational and actually accepting and processing custom concentrates during the critical dates. In addition, confirm that the smelter would accept the form of concentrates proposed for production. Obtain smelter schedules from the mine or smelter operator. Western Mine Engineering has several sample smelter schedules for various commodities in the western United States and Canada. Smelter schedules typically have the following components:

- **Charges:** The basic cost of smelting and handling of the ore.
- **Deductions:** That portion of the received minerals that is not paid for, mainly for losses during smelting.
- **Penalties:** The additional cost to the smelter for treating undesirable constituents in the ore. Arsenic, bismuth, and antimony, for example carry a stiff penalty, as does high moisture content.

- **Premiums:** Credits given for specific constituents contained in the ore that are needed in the smelting process. For example, silica is a premium constituent in the smelting of copper ores because it is a necessary flux.

H. The Marketing of a Mine's Products.

Typical end products may include dore', concentrates, precious and semiprecious gemstones, or chemical feed-stocks. When a mine is proposed, but not in operation, you need to determine whether there is a market and whether market entry is feasible.

1. Metallic Mineral Deposits.

Products for which there is an established market, such as gold, silver, copper, lead, zinc, molybdenum and other metallic minerals, are inherently marketable. That does not mean that all deposits containing these metals are valuable. It only means that there is a market for the metals. Information sources include Engineering and Mining Journal and The Northern Miner. Internet sources include <www.kitco.com> and <www.cbot.com>.

2. Industrial Minerals.

You must determine whether industrial minerals and materials with local, regional or used in vertically integrated industries, are marketable. Mineral deposits may be of a very high grade, but if there is no market for them, they are not valuable.[27] There are five factors to consider in determining whether industrial minerals are marketable.[28] The five factors, with some additional considerations outlined in the subparagraphs, are as follows:

a. Accessibility.

(1) Is the deposit accessible?

(2) Is a market area accessible?

b. Bona fides in development.

(1) Are there any existing plants and equipment on the claim?

(2) Is there present or past usage evident on the claim?

(3) What is the status of mine (undeveloped, developed, or on standby)?

27 United States v. Coleman, 390 U.S. 599 (1968); Layman v. Ellis (On Recon.), 54 Interior Dec. 294 (1933); Layman v. Ellis, 52 Pub. Lands Dec. 714 (1929).
28 Foster v. Seaton, 271 F. 2d 836, 838 (D.C. Cir. 1959) (citing Layman v. Ellis, 54 Interior Dec. 294, 296 (1933)); 43 CFR 3830.12(b) (2006).

c. Proximity to market.

(1) What are the transport and haulage costs?

(2) How many users or buyers are available in the market area?

(3) How many competitors are there in the market area?

(4) How much material is being consumed by the available users?

(5) How much of the same type of mineral is being produced by competitors?

(6) Is it possible to enter the market?

d. Existence of present demand.

(1) Are there any sales contracts or verifiable, legitimate letters of intent to purchase?

(2) Is there present, legitimate use of the commodity in the market area?

(3) Does the quality of the product compare favorably with a competitor's product?

e. Other factors.

(1) Are there any other factors not covered above that would have a bearing on the sale of the product?

3. Common Variety Determination.

Not all mineral commodities are locatable. The Surface Resources Act, 30 U.S.C. § 611, provides that:

> No deposit of common varieties of sand, stone, gravel, pumice, pumicite, or cinders and no deposit of petrified wood shall be deemed a valuable mineral deposit within the meaning of the mining laws of the United States so as to give effective validity to any mining claim hereafter located under such mining laws.
>
> * * * * * * * * * *
>
> Common varieties" as used in sections 601 and 603 of this title does not include deposits of such materials which are valuable because the deposit has some property giving it distinct and special value and does not include so-called "block pumice" which occurs in nature in pieces having

one dimension of two inches or more.

a. McClarty test. To determine whether an otherwise common variety mineral has distinct and special value, follow the standards set forth in United States v. McClarty: [29]

(1) There must be a comparison of the mineral deposit in question with other deposits of such minerals generally;

(2) The mineral deposit in question must have a unique property;

(3) The unique property must give the deposit a distinct and special value;

(4) If the special value is for uses to which ordinary varieties of the mineral are put, the deposit must have some distinct and special value for such use;

(5) The distinct and special value must be reflected by the higher price which the material commands in the marketplace or by reduced costs or overhead so that the profit to the producer would be substantially more while the retail market price would remain competitive.

b. Some factors not relevant. Differences in the chemical composition or physical properties are immaterial if they do not result in a distinct economic advantage of one material over another.[30]

4. Unmarketable Resources (formerly known as "Excess Reserves").

a. Industrial minerals. If you are determining the validity of a mining claim or a group of mining claims located for industrial minerals, you must determine whether any ten-acre parcel of a placer claim or any mining claim in the group contains unmarketable resources. Unmarketable resources are mineral resources that cannot be presently marketed or marketed in the reasonably foreseeable future. Industrial minerals include, but are not limited, to sand, gravel, perlite, gypsum, limestone, cinders, and building stone. Industrial minerals may be of widespread occurrence and have a low unit value. They may exist on a particular mining claim or mining claim group in far greater abundance than can be reasonably marketed at present or in the reasonably foreseeable future.[31]

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29 17 IBLA 20, 24-26 (1974); 43 CFR 3830.12(c) (2006); see also United States v Multiple Use Inc., 120 IBLA 63 (1991).
30 United States v. Thomas, 1 IBLA 209, 217 (1971) (citing United States v. U. S. Minerals Dev. Corp., 75 Interior Dec. 127 (1968)).
31 McCall v. Andrus, 628 F. 2d 1185 (9th Cir. 1980), cert. denied, 449 U. S. 932 (1981); Solicitor's Opinion M-36984, Excess Reserves Under the Mining Law (1996); United States v. Oneida Perlite Corp., 57 IBLA 167, 204, 88 Interior Dec. 772, 793 (1981); United States v. Williamson, 45 IBLA 264, 293, 87 Interior Dec. 34, 53 n.8 (1980).

b. Market entry. To determine whether there are unmarketable resources, the appropriate test is to determine whether the deposits found in each ten-acre parcel of a placer claim or each mining claim in a claim group can enter the market presently or within the reasonably foreseeable future. Consider the total amount of the mineral resource held by a mining claimant, on private land to the extent possible, as well as the total amount of the mineral resource available in the general market area. The mining claimant's holdings must be treated in the same manner as other competitive sources of the same material.

c. Time line for calculation of unmarketable resources. The Department's policy is to treat any industrial mineral resource that can be marketed within 40 years of the marketability date as presently marketable or marketable within the reasonably foreseeable future. The Department's policy is to treat any industrial mineral resource that cannot be marketed within 40 years as an unmarketable resource.

d. Application. Apply the 40-year policy by first determining a reasonable annual production rate for the mineral. To arrive at a reasonable annual production rate, take into consideration the claimant's past production rates for an operating mine or the claimant's proposed production rate for a proposed mine plan. If there is no operating mine and the claimant has not provided you with a proposed mine plan, you must develop your own mine plan with a logical mining sequence to calculate a production rate. Next, consider the available market for the mineral. You may only consider what reasonably can be marketed, even if the mine could produce at a level that exceeds the available market. Any minerals that cannot be thus produced and marketed within 40 years cannot be marketed in the foreseeable future and may not serve as the basis for validating a mining claim in a claim group or a ten-acre parcel of a placer claim.

I. Economic Analysis of a Mineral Property.

1. Pre-tax Income.

The pre-tax income, in dollars per ton, is determined by deducting necessary capital and operating costs from the gross value of the sales or projected sales. These costs will normally include mining, milling, reclamation, environmental compliance, transportation, marketing, and all costs internal (itemized line items on your cost analysis sheet) to these categories. Compute the costs up to the point of delivery either Free on Board (FOB) at the mine site or at the first point of sale.

a. Results. If the pre-tax value is negative, you can conclude that there is no discovery of a valuable mineral deposit and recommend the mining claim or ten-acre parcel of a placer claim for contest. If the pre-tax value is positive, you can conclude that the claimant has demonstrated a discovery of a valuable mineral deposit.

2. Net Income.

To obtain the net income from the operation, account for taxes, amortization, depletion, depreciation, and other costs generally accounted for in financial reports on mineral properties.

3. Net Present Value Calculations.

Occasionally, it is necessary to estimate the net present value of a property containing proven or probable reserves. For example, a mine may have been developed but not yet placed into production. To do so, the property's future net earnings are converted to present day value by a discount process. The Discounted Cash Flow (DCF) method estimates either the project's net present value (NPV) or the Internal Rate of Return (IRR). The IRR is a projection of the percent payback to the investors in the project. The NPV is a projection of the present value of the property, based on a fixed rate of return, and is not to be confused with an appraisal of the value of the property. An appraisal takes into account other factors not considered in NPV calculations. For example, the rate of return is usually very different and an appraisal will take into account risk analyses.

Chapter VI - The Mineral Report

A. General Requirements.

1. Format.

The purpose of a mineral report is to convey the conclusions you have drawn about the validity of the mining claim or claims at issue based on your professional opinion and the factual technical data. The mineral report should conform with Bureau Handbook H-3890-3 Validity Mineral Reports, unless the designated BLM Certified Review Mineral Examiner (CRME) agrees to modifications for unusual circumstances. The report should be concise. Your conclusions must be supported by the data and analysis. The report should answer all relevant questions. Use plain language that a lay person can understand. Write in the active voice. Always acknowledge the sources of data and information you have used in the report.

2. Handling Confidential Commercial or Financial Information in Mineral Reports.

a. Confidential information. Mineral reports commonly contain confidential information that may be withheld from the public under Exemption 4 of the Freedom of Information Act (FOIA). Exemption 4 protects "trade secrets and commercial or financial information obtained from a person [that is] privileged or confidential."[1]

b. Freedom of Information Act (FOIA) request. If you receive a FOIA request for a draft or final mineral report, follow the instructions in 43 CFR 2.23 (2005) before releasing any information that might be considered confidential commercial or financial information.

c. Submission of confidential information. A mining claimant who has submitted commercial or financial information to you does not have to mark the information as commercially or financially sensitive in order for the information to be treated as such.[2]

d. Penalties for unauthorized release. Government employees and officers who disclose trade secrets, processes, operations, style of work, or apparatus, or the identity, confidential statistical data, amount or source of any income, profits, losses, or expenditures of any person, firm, partnership, corporation, or association, may be subject to criminal penalties, including substantial fines or imprisonment.[3]

1 5 U.S.C. 552(b)(4)(2006); 43 CFR Part 2, App. E (4) (2006).
2 43 CFR 2.24 (2006).
3 18 U.S.C. 1905.

3. Responding to FOIA Requests for Draft Mineral Reports

You will withhold pre-decisional, deliberative information under Exemption 5.[4/] Except for publicly available information, you will withhold the entire draft mineral report because it is a preliminary document that is subject to change upon further review by others and has not been formally or informally adopted by the agency. This includes draft mineral reports that are undergoing review by a technical reviewer, State Office management, the BLM Headquarters, or the Solicitor's Office.

B. Review Process for Mineral Reports.

1. Review and Approval Process. A BLM CRME must review and approve all mineral reports for validity examinations, including those prepared by other agencies or by contract, before BLM may take the recommended action. If the mining claims or sites are recommended for a mineral patent, the BLM Headquarters and the Solicitor's Office in Washington, D.C., must review the mineral report for legal adequacy before the patent application package is sent to the BLM Director for final action. Mineral reports must meet current standards of the Department of the Interior. Mineral reports that are not satisfactory will be returned for necessary revisions. Technical review is completed as outlined in BLM Handbook H-3890-3, Validity Mineral Reports.

2. Disagreements During Review. Disagreements between authors and technical reviewers must be resolved according to the procedures set forth in BLM Handbook H-3890-3 Validity Mineral Reports. If you disagree with the Solicitor's Office regarding any revisions requested by that office, discuss the matter with the attorney in the Solicitor's Office who reviewed the mineral report. Do not simply ignore the Solicitor's Office's recommendations.

4 5 U.S.C. 552 (b)(5) (2006); 43 CFR Part 2, App. E (5) (2006).

Chapter VII – Testifying as an Expert Witness

A. Purpose of a Hearing.

A mining claim contest involves issues of fact that can only be resolved at an administrative hearing. The Interior Board of Land Appeals (IBLA) has stated that it has "long been recognized that the power of this Department to determine that [a mining] claim is invalid requires an adequate hearing, and that an equitable or legal claim to property against the United States may not be invalidated except in accordance with the requirements of due process of law."[1] Moreover, IBLA has concluded that "the hearing requirements of the Administrative Procedure Act are applicable to hearings on the validity of mining claims."[2] Administrative hearings are conducted by an Administrative Law Judge (ALJ) and the proceedings are recorded verbatim by a court reporter. The ALJ hears the evidence, the parties file briefs, and then the ALJ issues a decision on the matter. Both the government and the contestee may offer oral and written testimony. Witnesses may be subject to cross-examination during the hearing by opposing counsel.

B. Appeals.

Either party may appeal the decision of the ALJ to the Interior Board of Land Appeals (IBLA).[3] The IBLA has the delegated authority of the Secretary of the Interior to review all appeals. The IBLA may decide the matter in a few ways, including upholding the ALJ's decision, reversing the ALJ's decision, or remanding the case to the ALJ or the agency for additional actions to resolve the issues involved. The IBLA decision is a final agency action and binding upon the Department. The mining claimant may appeal the IBLA decision to Federal court.

C. Expert Witness.

1. Definition.

An expert witness is one who is qualified to speak authoritatively by reason of professional experience, special training, skill, or familiarity on a given subject.[4]

2. Duties of an Expert Witness.

Expert witnesses are called upon for testimony related to their fields of expertise. If necessary, corroborating witnesses or outside experts may be called to give supporting testimony. If you are to testify as an expert witness, you must first demonstrate professional competence and qualifications to the satisfaction of the ALJ. For example, a

1 United States v. O'Leary, 63 Interior Dec. 341, 344 (1956).
2 Id. at 345.
3 43 CFR § 4.452-9.
4 Black's Law Dictionary, 579, 600 (7th ed. 1999).

mining engineer, geological engineer, or geologist can qualify as an expert witness on mining or geology only, unless the proper foundation has been laid that the individual is also an expert on other aspects of mineral property evaluation. Such a foundation may be established based upon your education and professional experience. The government's counsel develops this foundation at the opening of the hearing and as testimony continues.

3. Mineral Examiner Certification Supports Expert Credentials.

Mineral examiners and review mineral examiners are required to be certified. The certification process is designed to ensure that government geologists, geologic engineers, and mining engineers have had the necessary training and experience to be expert witnesses in mining claim contests. A certified mineral examiner is qualified to give expert testimony in an administrative hearing before an ALJ concerning the presence or absence of a discovery of a valuable mineral deposit under the Mining Law. Certification requirements are detailed in Manual Section 3895 Certification of Mineral Examiners.

a. Importance of mineral examiner's testimony. Certified mineral examiners should not underestimate their status as expert witnesses. They will normally be the primary witnesses for the government. Your testimony on the witness stand will not only affect the government's case, but may also be a factor in establishing future case law.

4. Preparation for a Hearing.

You must be fully prepared when presenting testimony at a hearing. It may be necessary for you to spend considerable time in advance with the government attorney assigned to the case, and during nights and weekends as the hearing progresses, to prepare for and present a credible case. **You must be prepared to spend whatever time is necessary and should expect to be compensated, as appropriate, by your home office.** State or Field Office management must prioritize your workload to allow adequate time for hearing preparation, participation in the hearing, and to prepare post-hearing briefs.

5. Pre-hearing Conference.

The ALJ may order a pre-hearing conference at his or her discretion, or upon request of either party. The purpose of the pre-hearing conference is to shorten the hearing by reducing the number of issues and simplifying those that remain. A pre-hearing conference may lead to the preparation of stipulations of facts, admissions regarding uncontested facts, responses to interrogatories, agreements regarding the introduction of exhibits, agreements to limit the number of expert witnesses, and agreements to deal with other matters that may aid in the disposition of the proceeding.

a. Role of mineral examiner in pre-hearing conference. Once the pre-hearing conference or hearing has been scheduled by the ALJ, you and the government's counsel must review all material issues and facts and prepare the government's case. You must be involved in all aspects of the case in order to properly support the attorney who is handling the contest for the government.

b. Mineral examiner must brief government's counsel. It is incumbent upon you to acquaint the government counsel with the facts and every technical issue in the case. If more than one mineral examiner has been involved, all mineral examiners should be present for the hearing. The mineral examiner and Departmental counsel will review the mineral report and the adequacy of all other exhibits (documents, maps, photographs, assay certificates, and other supporting evidence) to be used at a contest hearing. Three copies of each exhibit, equal in quality to the original document, should be prepared for the hearing: one for the ALJ, one for the opposing counsel, and one for the government's counsel. The ALJ will provide at least 30 days advance notice of the time and place for the hearing. Please be flexible and responsive in dealing with the attorney assigned to the case.

6. Maintenance of Working Files.

You should maintain a working file for reference until the case is finally decided. If possible, you should revisit the claims shortly before the hearing to determine whether there has been recent activity, and to refresh your memory regarding conditions on the ground. You should review all calculations, grade and tonnage estimates, mining costs, and other pertinent information. If critical discovery dates are not involved and considerable time has lapsed since the mineral report was written, you may need to prepare a supplemental report with the information updated to the present.

7. ALJ May Authorize Document Discovery.[5/]

The government's mineral report is usually given to the contestee before the hearing as a result of document discovery, pre-hearing agreements by the attorneys, or by an order issued by an ALJ. You should be prepared to define and/or explain any terms or procedures used in the mineral report that may be unfamiliar to the ALJ or to the opposing counsel. Although your mineral report will be introduced as evidence, you must still be prepared to testify from field notes and/or memory. Anything taken to the witness stand is subject to examination by the opposing counsel.

5 This is a legal process which allows each party to request the other party to produce certain documents or information and is not the same thing as discovery of a valuable mineral deposit.

D. Questions Asked at a Hearing.

1. Preparation for Direct Testimony at Hearing.

To effectively prepare for testimony, you should become familiar with the five categories of questions that the government's counsel will use to develop testimony:

a. Establishing qualifications. You must prepare a professional resume' to aid the government's counsel in demonstrating your competence to the court. Some attorneys and courts will call this document a "vita." You should include your education, professional licenses or registration, certifications, work experience, publications, and the hearings at which you appeared as an expert witness during the last three years. Counsel will introduce this document as evidence of your expertise.

b. Establishing knowledge of the subject property. The physical examination of the mining claim or mill site is covered here.

c. Nature and scope of data considered. Calculations of values, analysis of the market, and mining costs, etc.

d. Opinion as to the validity of the claim.

e. Reasons for the opinion.

E. Order of Testimony.

The government, as the party initiating the contest action ("contestant"), presents its case first. The "contestee," who is normally the claimant, follows. You are usually called as the first expert witness for the government. At that stage of the proceedings, the counsel for the government develops the witness's direct testimony, thereby presenting the government's case. Both you and the government's counsel must be thoroughly familiar with the testimony regarding the facts before the proceedings begin. The order and content of testimony are normally developed in advance of the hearing.

1. Prima Facie Case.

At this point, you as the expert witness must establish the government's prima facie case that the mining claim is invalid. A prima facie case is one that is established by sufficient evidence and can be overcome only by a preponderance of the evidence to the contrary. Once the government establishes a prima facie case that the mining claim is invalid, the burden shifts to the contestee to show by a preponderance of the evidence that the claim is valid. A prima facie case is also called a "case in chief" by many attorneys and Administrative Law Judges. In particular, a prima facie case

"[h]as been made when a Government mineral examiner testifies that he has examined the exposed workings on a claim and has found the evidence of mineralization insufficient to support a finding of discovery of a valuable mineral deposit."[6]

2. Cross-examination.

During cross-examination the opposing counsel may seek to discredit you as an expert witness and your testimony. Your professional reputation is "on the line." Be calm and maintain your composure on the witness stand. Do not allow opposing counsel to make you feel rushed. Take your time to answer questions and do not say more than is necessary.

a. Re-direct Examination. In re-direct examination, the government's counsel will have the opportunity to review and clarify points raised in cross-examination. However, the lapse of time between direct, cross-examination and re-direct testimony may result in loss of continuity, concentration, meaning, and emphasis. **You must strive to answer questions on re-direct in a way that re-establishes the continuity.** The Government's attorney will attempt to restore the continuity of testimony in post-hearing briefs by referring to appropriate parts of the transcript.

F. Assisting Counsel in Developing Questions.

1. Assistance during Hearing.

The government's counsel may have very little expertise in the technical issues involved. Therefore, during the testimony of the contestee's witnesses, you must listen attentively and write down questions that the government's counsel should ask of the contestee's witness during cross-examination. You will need to assist counsel in the preparation of the rebuttal case.

2. Sequestration.

In rare cases, government's counsel or contestee's counsel may request that the ALJ sequester witnesses from the courtroom until it is time for their testimony. This means that the witness must wait outside of the courtroom while other testimony is given. This can present a difficult situation. The government's counsel has the right to a technical expert to serve as advisor, or "Second Chair," whose role also includes keeping exhibits in order. When this situation occurs, you and the government's counsel should devise a strategy for dealing with sequestration.

6 United States v. Miller, 91 IBLA 245, 250 (1986).

3. Post-Hearing Briefs.

The post-hearing briefs are a vital part of the government's case. You should expect to assist the government's counsel in preparing post-hearing briefs. Doing so will require that you become familiar with the transcript of the entire hearing, as well as all exhibits introduced. **You should expect to devote all necessary time to this task and your supervisor must allow you to take the time necessary for this purpose.**

4. Appeals.

If either party appeals, you should again expect to assist the government's counsel in preparing the necessary briefs. There will usually be very short time frames involved, which cannot be extended. **The contest is a Departmental issue.** You must make time available.

G. Hearing and Courtroom Demeanor.

You represent the Bureau in these proceedings. You must be properly attired in business attire and be neatly groomed and look professional. In many courts, a judge will not allow persons not properly attired to participate in the proceedings. In giving expert testimony in an administrative hearing or in court, you must maintain a professional, dispassionate, and unbiased attitude. You are there as the government's witness to give an expert, objective opinion on the validity of the mining claim or mill site so that an impartial decision may be made by the ALJ. The government's counsel should be experienced in courtroom procedures and will do everything reasonably possible to help you be an effective witness.

H. Suggestions for an Expert Witness

When called to the stand as an expert witness, you must convince the ALJ, federal judge, and/or the jury that you are qualified to give expert testimony. You must present the facts and leave no question about how and why you formulated your opinions. The following time-proven suggestions will help you to strengthen your credibility as an expert and establish the government's case.

1. Address Your Answers to the Judge.

Do so regardless of who asked you the question. **Do not mumble. Do not nod in lieu of a verbal answer.** Speak loudly and clearly so that everyone in the hearing room can hear you. The court reporter taking the verbatim record of your testimony must be able to hear you and record what you say. You should normally spell out a difficult technical term the first time that you use it. For example, when using the word "poikilitic" in testimony, you should spell it out for the benefit of the court reporter.

2. ALJ Relies on Transcript for Facts of Case.

Always make sure that you give a complete statement using complete sentences. A half statement or incomplete sentence may convey your thought at the hearing, but may be unintelligible when read later by the ALJ, or on appeal. Prepare a list of technical terms that will be used in your testimony and give them to the court recorder to avoid misspellings and word errors.

3. Referring to Exhibits.

Explicitly identify your exhibit (e.g., referring to sample point 2 on Government Exhibit A). Verbal references such as "this section of the drawing" will not make sense in the written record. When your exhibit is a map or chart, be sure to describe exactly what part you may be referring to. Saying "from here, we walked to there, and then over to there" will be unintelligible in the transcript. Say instead, "We started at this point marked A, walked to the point marked B, and then to the point marked C."

4. Listen Carefully to the Question.

Give your attorney time to object by waiting for two long breaths before beginning your answer. Doing so will also help you formulate a concise and accurate answer. Answer directly and simply, **then stop**.

a. Do not anticipate a question. Do not anticipate a question, and never try to anticipate why you are being asked a particular line of questions. Doing so may cause you to unwittingly be led to an incorrect conclusion.

b. Objections by counsel. If a question you are asked raises an objection, wait for the ALJ to rule. If the objection is overruled, you are required to answer the question.

5. Give Definite Answers Whenever Possible.

Avoid phrases such as "I think," or "I believe," or "As best as I can remember." They weaken your testimony.

6. Do Not Guess.

If you do not know the answer, say so. Do not guess or make up an answer.

7. Do Not Attempt to Answer Unclear or Multiple-part Questions.

Ask the examining counsel for clarification, particularly when the question is long and involved or when two or more parts of the question need to be answered separately. Such situations usually occur on cross-examination. Sometimes the examining counsel cannot

or will not adequately clarify an answer, and the judge allows the question. When that occurs, preface your answer by stating that you don't fully understand the question, or that it is a multiple part question. If the examining counsel objects to your qualification of your response, answer the best you can. During a recess with your counsel, discuss the possibility of clarifying your answer on re-direct.

8. If You Make a Mistake, Correct it Immediately.

If your answer was not clear or was incorrect, correct it immediately. It is also acceptable to interrupt your own testimony to correct an error you made a few minutes before. If you discover that you made a mistake much later, discuss how to correct it with your counsel.

9. Never Volunteer Information.

Answer only the question that was asked, not what you think was intended. The transcript will show only the question asked, not what was in your mind. Remember, no matter how nice the opposing counsel may seem on cross-examination, his or her job is to discredit you as an expert witness.

a. Example. You may be asked "Can you explain your opinion?" Your answer should be "Yes." If the opposing counsel wants you to explain your opinion, the question asking you to do so should be "Please explain your opinion to the Court."

10. Stick to the Answers You Have Given, if Correct.

If it turns out you were mistaken in some of your testimony, admit it. Accuracy is more important than stubborn consistency.

a. Changing your opinion. A common practice for cross-examining attorneys is to ask if you would change your opinion to agree with someone who may have more education or experience. Do not fall into this trap. If you examined the mining claims in question, you probably know much more about the situation.

11. Beware of Hypothetical Questions.

Do not allow yourself to be led into expressing a positive opinion about things about which you are uncertain. However, the Federal Rules of Civil Procedure allow for hypothetical questions to be posed to you, as an expert witness. It is important to state that you are providing a hypothetical answer to a hypothetical question. Do not be too concerned if the hypothetical questions seem to lead to an answer contrary to the position you have taken in the case. The contestee's counsel will attempt to apply your hypothetical answer to the case, so it is important that you keep the situations separate in your mind and in your answers. Discuss the hypothetical questions you have been asked with your counsel during a recess so that an appropriate line of testimony may be developed for your redirect testimony.

12. Answering "Yes or No" Questions.

If you must answer a question on cross-examination by a "yes" or "no" and feel that you need to qualify or explain your answer, immediately begin the explanation. If the mining claimant's counsel attempts to stop you by saying that you have answered his question, explain to the ALJ the need to enlarge on your answer. If you are not allowed to do so, your counsel should question you later on your answer during re-direct testimony.

13. Questions Relying on Misquotations of Previous Testimony.

Misquoting your previous testimony or quoting it out of context is a common ploy of opposing counsel to get you to contradict yourself. Consider your answer carefully before replying to a question from opposing counsel concerning your earlier testimony. If you believe that your previous testimony has been misquoted, say so. You may ask to have your previous testimony read from the record if necessary.

14. Avoid Hearsay Testimony If Possible.

You are testifying as an expert witness to the facts upon which you based your opinion. In general, at some time during the hearing, you will be permitted to relate all the information (whether hearsay or not) upon which you based your opinion. Keep in mind that hearsay testimony should not be used unless absolutely necessary, as it is normally given very little weight by the ALJ. Hearsay testimony is testimony based not on a witness's personal knowledge but on another's statement not made under oath.

15. Do Not Become Argumentative or Flippant.

Do not argue or try to be clever with the ALJ or with the mining claimant's counsel. If you are perceived by the ALJ as flippant or argumentative, your testimony will be compromised. **Do not argue with the ALJ.**

16. Be Professional and Respectful.

Refer to other witnesses respectfully and in a professional and considerate manner. Strive to demonstrate to the ALJ that you know what you are doing and that you are objective. Do not let the opposing counsel upset you during cross-examination.

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