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.01 Purpose. This Manual Section provides minimum standards for preparing, reviewing, and approving energy and mineral resources reports in response to a specific action or application as listed in .11, .21, .22, and .31, below. For simplicity, the term "mineral" will be used for the term "energy and mineral resources". This is not intended to provide guidance on how to conduct technical evaluations which is covered in individual program manuals and handbooks. This Manual Section also applies to the approval of mineral reports prepared by other agencies and contractors.

.02 Objectives. The objectives of this Manual Section are to ensure that all mineral reports are prepared and presented in accordance with accepted professional standards, and are in compliance with the current policies and legal interpretations of the Department of the Interior.

.03 Authority. The general authority of the Secretary of the Interior with respect to administration of the public land or interest in lands was stated by the U.S. Supreme Court in Cameron v. United States, 252 U.S. 450 (1920):

"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 and the Secretary of the Interior, as the head of the Department, is charged with seeing that this authority is rightly exercised...."

This authority is delegated to the Director, Bureau of Land Management by Reorganization Plan No. 3 of 1946 (60 Stat. 1099), Reorganization Plan No. 3 of 1950 (64 Stat. 1262), and Departmental directives at 235 DM 1.1A and 135 DM 1.3B. Appendix I lists additional statutes and regulations which require mineral reports.

.04 Responsibilities. The organizational entities listed throughout this manual responsible for specific actions, may be subject to change depending on state-specific organizations and responsibilities.

A. Assistant Director for Energy and Mineral Resources, through the appropriate Division Chief, is responsible for oversight of all technical and review standards for mineral investigations.

.04B

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B. State Directors exercise management authority delegated by the Director and are responsible for the processing of land and minerals casework and planning documents within their area of jurisdiction. The level of technical review is dependent on staffing and delegation of authority. The State Director ensures that mineral reports are prepared by qualified technical staff. The State Director or their delegated representative make a management acknowledgement of each minerals report prepared in the District. The State Director also ensures that all mineral reports prepared by technical staff of the Bureau or by other agencies or contractors comply with minimum standards and receive appropriate technical review. In addition, the State Director will ensure that all mineral actions receive technical approval before final processing.

C. The Deputy State Director for Mineral Resources shall carry out all functions as delegated by the State Director. The technical review level for each type of mineral report is given in .11, .21, .22, and .31.

D. The District Manager or Assistant District Manager for Minerals shall carry out all functions as delegated by the State Director.

.05 References. See Bureau Manual Sections 3021, 3031, 3070, and 3891. See also Bureau Handbook H-3890-1.

.06 Policy.

A. The policy of the Bureau is that all mineral reports shall be prepared on a timely basis for all actions listed in .11, .21, .22, and .31 below and meet the minimum standards specified in this manual. The mineral report will be prepared by a mineral specialist or mineral examiner and shall be prepared based on the professional review of all available data. Field examinations are mandatory for mining claim validity, surface use determinations, and appraisal cases. Field examinations on other actions shall be performed if the mineral specialist/examiner determines that the existing geologic and engineering information is insufficient to determine the mineral potential. Unless otherwise specified and explained, the mineral report shall address all solid and fluid mineral resources that are known or inferred to exist at the time the report is written.

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B. Forest Service (FS) exchanges are processed under the General Exchange Act of March 20, 1922. The functions and responsibilities of the Secretary of the Interior with respect to the Act of March 20, 1922, were limited and defined by the Act of June 11, 1960. When the FS is reserving the minerals in the name of the United States or when mineral rights are all outstanding in third parties, the only role of the BLM is to issue the patent and note the status records. Where mineral rights are not being exchanged, there is no requirement for a mineral report. Where mineral rights are being exchanged, the following must be supplied by the FS to the BLM. A copy of the FS mineral report. This report may be supplemented by the BLM, if deemed necessary. A copy of the FS review appraiser's statement approving the appraised value for the Federal lands to be patented.

.07 File and Records Maintenance (Reserved).

.08 Introduction to the Mineral Reports.

A. Preparation of Mineral Reports. The mineral report is the written and graphic presentation of findings made during a field examination and/or an office review of existing literature and unpublished data which covers the land or interest in land that is under investigation. An acceptable mineral report is one that serves the purpose for which it was prepared. The report should be prepared within a reasonable timeframe, with a reasonable expenditure of money, and in accordance with accepted professional standards, with special attention to completeness and accuracy.

B. Mineral Report Cover Sheet. The mineral Report Cover Sheet (Bureau Form 3060-1, see Illustration 1) must be completed and attached to all mineral reports. This form shall be provided to other surface management agencies that prepare mining claim validity examination reports under a Memorandum of Understanding or Interagency Agreement with the Bureau.

C. Confidential Information. Confidential information used to prepare parts of a mineral report must be contained in a separate document. The confidential information is not available for public inspection. The text of the mineral report should be written to permit a public inspection (see Bureau Manual Section 1273 and 43 CFR 2.13 and 2.79). Information collected by the Government for its own use in evaluating public land is usually not considered to be confidential.

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1. As provided for by the Antitrust Civil Process Act of 1962 (18 U.S.C. 1905), any employee or officer of the United States or of any Department or agency thereof, that releases any confidential information without either authorization by statute or in writing by the owner of such information, shall be removed from office or employment and shall be subject to a fine of up to \$1,000, a year in jail or both.
2. A mineral report prepared as a part of a validity examination, a surface use determination, or any land sale, exchange, or disposal action, is an internal working document and may not be released to anyone, including the mining claimant, prior to issuance of a mineral patent or mineral contest complaint. This includes validity reports from other surface management agencies processed by the Bureau.
3. After all signoffs of the mineral report, with the exceptions of confidential and proprietary data, the report is subject to release under the Freedom of Information Act (FOIA), including the recommendations and conclusions.
4. For the purpose of FOIA, the claimant, their attorney, and the public are all treated equally.
5. The release of a mineral report by another agency under FOIA prior to its receipt by the Bureau, does not affect the Bureau's review process in any way. The mineral report shall be reviewed and processed in the usual manner.
6. Appendix 2 is a copy of a 1987 Solicitor's Opinion on the FOIA status of validity reports.

**D. Determination Dates for Mineral Reports.**

1. Withdrawn Land requires that a validity or mineral-in-character examination must reach a conclusion as to discovery or mineral in character on the date of withdrawal, as well as of the date of the field examination or the hearing.
2. Mineral Patent Applications located on land open to entry, the date for determination of discovery is the date of payment of the purchase price, if all other requirements for issuance of the first half of the mineral entry final certificate have been satisfied at that time. United States v. Norman Whittacker (On Reconsideration), 102 IBLA 162 (1988).

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3. For Non-Patent Validity Examinations on land open to entry, the discovery date is the date of the field examination by the Mineral Examiner or the hearing.

4. For Mineral-in-Character Determinations on land open to entry, the date of determination is the date of the perfecting of the application triggering the need for the determination.

E. Management Acknowledgement of Mineral Reports. A mineral report is produced by the collection and analysis of geologic and related data. The conclusion drawn from this analysis is the professional opinion of a Mineral Specialist who gathered the information and prepared the report. Once reviewed and approved by a mineral specialist or mineral review examiner, the report's technical conclusions are not subject to revision by management. However, the recommendations of a mineral report are advisory in nature. The Area Manager or Associate District Manager will indicate that they have read and understand the conclusions and recommendations of the mineral report by signing the management acknowledgement block on the mineral report cover sheet, (Illustration 1). If the Area or Associate District Managers cannot sign the acknowledgement then the District Manager may sign in their place.

.09 Format for All Types of Mineral Reports. The following items outline the content of the mineral reports. Depending on the type of mineral report, some items may be excluded from a particular report. Where issues have been discussed in previous items, the use of appropriate cross-references is encouraged.

A. Title Page.

1. Title and serial number. The title identifies the subject of the report. The serial number of the lease, application or license must be listed on the title page.
2. Signature and date. The author must sign and date the title page of the report.

B. Table of Contents.

C. Introduction. One or two paragraphs that state the purpose of the report and a short history of the case should be given. State that the conclusions of the report are limited to the action prompting the report. Give the dates of any field work and the personnel involved.



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D. Lands Involved. Describe by legal subdivision, protracted survey, or metes and bounds the area investigated and the acreage involved. Describe the geographic nature and general use of the land and any ongoing activities. Give the mineral survey number if applicable. Discuss access to the property, transportation network, and availability of power and water (if applicable). Provide the following information on the status of the record data if pertinent to the purpose of the report:

1. Mining claim (Serial Number).
2. Mineral leases/permits/licenses (Serial Number).
3. Material sale sites (Serial Number).
4. KLAs, KGRAs, withdrawals, and any exempted KGSs.
5. Other valid existing rights (i.e., right-of-way).
6. Mineral estate ownership.
7. Surface ownership.
8. Chain of title data from Bureau and County records.
9. Pertinent data from the Historical Index related to the subject areas and adjacent lands.
10. Withdrawals

E. Summary, Conclusions, and Recommendations. See Manual Section 3060.12 for additional information.

1. Clearly summarize the conclusions and recommendations of the Mineral Report including the detailed review of literature and data bases, and the results of the field examination, if undertaken. The summary should contain as little technical jargon as possible.
2. Conclusions (discovery, mineral land, mineral potential, etc. ).
3. Recommended action(s) such as including contest charges if appropriate, or reservations of certain minerals.
4. Cite case law if applicable.

F. Physiographic Data. Describe the landforms and topography within the area. Significant and unusual origins of particular topographic features should be discussed.

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G. Geologic Setting. Summarize the regional geology and establish the geological setting of the area. Include historical geology summary if applicable to mineral deposit setting. Cite applicable references to the geology, stratigraphy, and tectonics of the area. If regional geophysical or geochemical data are available, include a summary here. A geologic map at a scale not less than 1:250,000, if available, should be attached or at least referenced in the report. Larger scales (1:100,000 or 1:125,000) should be used if available.

H. Site Geology. Focus on the site-specific geology of the area. Include local structure, alteration zones, subsurface data, favorable reservoir rocks, ore controls, overburden, stratigraphic and structural traps, etc. If local geophysical or geochemical data is available, summarize the findings. Cite all geologic references used in the Report. A geologic map at a scale not less than 1:62,500, if available, should be attached to the report. Larger scales (1:24,000 or 1:50,000) should be used if available.

I. Production History. Summarize the production history of the mining district, leasing area, or basin. If the district or basin is dormant or nonproducing, give the reasons why.

J. Mineral Deposits. Discuss the form and type of mineral deposit(s) present (see Bureau Manual Section 3031.3). The minerals and their relationship to the local geology should be discussed. A statement as to the presence or absence of critical and strategic minerals, as contained in the Stockpile Report to Congress, is necessary. If present in quantities within 30% of the grade and tonnage of deposits being commercially produced, such critical and strategic mineral resources must be discussed in detail.

K. Mineral Exploration and Development Work. Discuss the exploration and development work that has been conducted on the property. A sketch map of the pertinent mine workings, geologic cross sections, well locations, as well as tank batteries and separators, when applicable, prepared by the applicant or the mineral specialist/examiner should be used if the data are available. Summarize results if available.

L. Extractive Operations. Describe the mining methods, the milling equipment, flotation cells, processing units, production facilities, wells, tailings ponds, and related ore or fluid transport system. Attach a flow chart of the beneficiation system employed or proposed, if available.

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M. Sampling Procedures and Analytical Work. Describe sample sites, method of sampling, and reasons for using that method. Show "chain of custody" of the samples. Describe any unusual sampling or analytical problems. State assay or analytical method used on samples (fire assay, amalgamation, atomic absorption, etc.). Show the calculations used in reserve or resource estimates, statistical methods, etc. Label all photographs and reference them to a specific sample site, working, building, etc.

N. Economic Evaluation. Economic evaluations of Federal mineral rights include two categories. One category is the estimation of the fair market value (the mineral appraisal) for mineral rights or for mineral development rights (see P below). The other is the general category of economic evaluation for private development projects which involve Federal mineral rights. These mineral economic evaluations include some test of the economic viability of the project.

The exact standards and objectives to be met in each of these evaluations vary with the project and the legal requirements associated with it. For example: for drainage cases, document whether an economic protective well can be drilled on the lease. For lease paying well determinations, document that the well is capable of producing quantities sufficient to cover all operating costs. For royalty reductions, document whether the mine meets the condition for royalty reduction. For preference right lease applications (PRLA's), determine whether a commercial deposit or a valuable deposit of a mineral included in the prospecting permit has been discovered and determine whether the lands are chiefly valuable for those minerals. For known leasing area determinations, determine that the area contains valuable deposits. For mining claim patent applications, verify that a valuable deposit has been discovered with a reasonable prospect of developing a valuable mine. For mineral in character determinations, verify that a valuable deposit has been discovered or can be inferred from geologic information known on the critical date. For lease royalty or rental reductions, document that the reduction encourages the greatest ultimate recovery of the mineral.

O. Mineral Potential. Discuss the potential of the area for contained energy and mineral resources deposits. The potential for all mineral commodities should be considered. Use the criteria and classification scheme in Manual Section 3031.3. The discussion must contain information and rationale to substantiate any conclusions regarding mineral potential. For instance, if there is no potential for some group of minerals, say solid leasables, then the report should contain sufficient, albeit brief, technical discussion and professional rationale to support that position. It is particularly important to support professional opinions of low, or no, potential because additional information could change the conclusion.

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P. Fair Market Value (FMV) Determination. In appraising or evaluating a tract for lease, sale, exchange, acquisition, or conveyance, a value must be placed on the mineral estate. The appraisal is separate from the initial mineral potential report. The fair market value is determined either on the basis of the sale value of comparable properties or on the net present value of the future income from the property. In the comparable sales method, document the search for prior comparable sales and the derivation of the estimated FMV. Describe the reserves on the tract and the potential recovery method. In order to estimate the income for developing the property in the net present value method, the future costs of developing the property and the product prices and production need to be documented. The difference between future costs and revenues is the expected net income.

It should be noted in this regard that the lands appraised may have no mineral value or zero value because no information is available to indicate mineral value or because the information indicated zero value. A similar result may occur where mineral development is not a compatible highest and best use or where the rights have nuisance instead of zero value.

Q. Surface Interference. Evaluate the possibility of interference between potential or existing mineral development activities and potential or existing uses of the surface. Address such conflicts that may result from implementing the proposed action.

R. Surface Use Determination of Mining Claims. Document the use of the surface of the mining claim for Noguiera and Crawford cases under 43 CFR 3712.1. Determine if the occupancy and structures are reasonably incident to prospecting, mining, or processing operations. (See the subsequent part .16 and also Manual Section 3893).

S. References. List, in alphabetical order by author's last name, all the references cited in the Report and attachments. References should be cited in conformance with Suggestions to Authors of the Reports of the USGS, 7th edition, (1991).

T. Illustrations.

1. Maps and Plats
2. Photographs

U. Attachments. List all attachments in the order that they appear in the text and place them at the end of the Report.

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.1 Realty and Locatable Minerals Reports..11 Actions Requiring a Mineral Report.

The report types are discussed in Sections .12, .13, .15, and .16.

<u>Action</u>	<u>CFR Citation</u>	<u>Report Type</u>	<u>Technical Approval Level</u>
Land Conveyance (GSA)	41 CFR 101-47	MP	District Office
Mineral Reports for Planning Documents	43 CFR 1610	MP	District and State
Acquisition (only for fee or subsurface)	43 CFR 2130	MP/AP	District or State
Exchange (only for fee or subsurface)	43 CFR 2200	MP/AP	District or State
Withdrawals	43 CFR 2310	MP	District Office
Desert Land Entry	43 CFR 2520	#MP	District Office
Indian Allotments	43 CFR 2530	#MP	District Office
Color-of-Title and Omitted Lands	43 CFR 2540	MP/AP	District or State
Native Allotments (AK)	43 CFR 2563	#MP	District Office
Homesites and Head- quarter Sites (AK)	43 CFR 2563	#MP	District Office
Cary Act Grants	43 CFR 2610	#MP	District Office
State Indemity	43 CFR 2621	#MP/AP	District or State
Quantity and Special Grant Selections	43 CFR 2622	MP	District Office
State Grants (Alaska)	43 CFR 2627	MP	District Office
Railroad Selections	43 CFR 2631	#MP	District Office
Airport Grants	43 CFR 2640	*MP	District Office
FLPMA Sales	43 CFR 2710	*MP	District Office
FLPMA Reservations and Mineral Estate Conveyance	43 CFR 2720	MP/AP	State Office

\* A surface interference statement is also required (see .16 below).

# A mineral land determination is also required (see .14 below).

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Recreation and Public Purposes Sales	43 CFR 2740	*MP	District Office
Airport Leases	43 CFR 2911	*MP	District Office
Recreation and Public Purposes Leases	43 CFR 2912	*MP	District Office
FLPMA Leases and Permits	43 CFR 2920	*MP/AP	District or State
Surface Uses Reasonably Incident to Mining	43 CFR 3710, 3802, & 3809	SU	State Office
Lode Mining Claims	43 CFR 3841	VA	State Office
Placer Mining Claims	43 CFR 3842	VA	State Office
Mill Sites	43 CFR 3844	VA	State Office
Mineral Trespass	43 CFR 9239	VA/AP	State Office
Bureau Initiated Motions		MP	District Office

The following abbreviations are used:

AP = Appraisal, VA = Validity, MP = Mineral Potential, SU = Surface Use Determination

.12 Mining Claim Validity Examination Reports.

A. Actions prompting this type of mineral report are the need to establish the validity of an unpatented mining claim or mill site in response to a mineral patent application or to verify the presence of a valid existing right to a mining claim or mill site within a withdrawal. The government may choose to examine, and where appropriate, bring contest action against mining claims or mill sites in other situations only when such action is deemed to be in the public's interest. Mining claim validity examinations will only be conducted by certified mineral examiners. The preparation of a validity mineral report is described in Handbook H-3890-1 and its outline and contents are listed in Illustration 3.

B. Conclusion of a validity examination report should be whether or not a discovery of a valuable mineral deposit exists within the limits of each lode or placer mining claim as required under the Mining Law of 1872 (30 U.S.C. 21-54), as amended. The criteria for determining discovery are given in Bureau Manual Section 3891-Validity Examinations and Handbook H-3890-1, Handbook for Mineral Examiners.

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1. Placer Mining Claims. In addition to a discovery, each square 10-acre legal subdivision must be mineral land (mineral-in-character). This is the Department of the Interior's 10-acre rule. See United States v. Charles H. Henrikson et al, 70 ID 212 (1963); McCall v. Andrus, 628 F.2d 1185, 9th Circuit (1980); cert denied, 49 USLW 3710 (1981); U.S. v. Robert B. Lara, 67 IBLA 48 (1982); U.S. v. Robert B. Lara (On Reconsideration), 80 IBLA 215 (1984); and Robert B. Lara v. Secretary of the Interior, 820 F. 2d 1535, 1538 (1987).

2. Mill Sites. The Mining Law (30 U.S.C. 42) requires that a mill site be located on nonmineral land. Mill sites must be used or occupied in support of mining or milling operations, or uses that are reasonably incident to the support of a mining or milling operation.

C. Recommendations to management should include statements that the mining claimant has met all the requirements of the law, that a mineral patent should issue, that an operator's activities or occupancy are reasonably related to mining operations, or that a mining claimant has not met all the requirements of the law and a contest action be initiated, if appropriate. Appropriate charges to be contained in the contest complaint should be recommended in this section. (See Bureau Manual Section 3894.) Additionally, if any minerals, particularly leasable minerals or mineral materials are being reserved, it should be clearly stated here.

.13 Mineral Potential Reports.

A. Actions requiring a mineral potential report cover 83 percent of those actions listed in .11 above. Mineral potential reports should be prepared by a mineral specialist, and in some cases by a mineral examiner. Mineral potential reports should consider all energy and mineral resources unless otherwise stated and specifically explained why certain mineral resources are not considered. In most areas, the potential for the occurrence of strategic and critical minerals should be evaluated.

B. Conclusions should be:

1. The land involved is known to be valuable for, is prospectively valuable for, or is not valuable for leasing act minerals.

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2. The land involved is classified as to its potential for the occurrence of locatable, salable and leasable (fluids and solids) mineral resources according to the criteria given in Bureau Manual Section 3031.

3. The analysis extends to all types of minerals: locatable, leasable, and salable and those minerals without current disposal authority (e.g., "hardrock" public domain minerals in States (Michigan, Minnesota, and Wisconsin) no longer subject to the mining law and some acquired lands, not open to leasing). In some cases, a statement is required as to whether or not a nonmineral entry may cause surface interference with a prospective leasable mineral operation.

### C. Recommendations to management:

1. For land and realty actions a statement as to whether or not the proposed action should be approved based upon report conclusions and possible surface use interference.

2. In the case of a mineral report prepared for a Section 209(b) Federal Land Policy and Management Act (FLPMA) conveyance that classifies the land as prospectively valuable, a recommendation for further investigation, including the drilling of boreholes, should be considered so that the fair market value of the mineral interests to be conveyed may be determined. The type of minerals or mineral commodities to be reserved should be specified here.

3. For a mineral report prepared for use in a planning document, include suggestions for further work if necessary. State any potential operating constraints that may interfere with mineral development as given in the pre-Resource Management Plan (RMP) issue identification process.

D. Technical Standards and guidance for evaluating the mineral potential of Federal lands are given in Manual Sections 3021, 3031, and 3891. Report format for mineral potential reports is given as Illustration 4.



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.14 Mineral Land (Mineral in Character) Reports. A number of public land laws (see Appendix 1) require a determination of the mineral character of a parcel of land proposed for conveyance or sale. If the land is mineral land, the land embraced by certain entries under the land laws (see Appendix 1, part B) must stay in Federal ownership. The definition of mineral land (mineral in character) is found in Southern Pacific Co., 71 ID 224 (1964):

"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 such quantity as to render its extraction profitable and justify expenditures to that end. Such belief may be predicted 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."

However, if the land is "mineral in character" because of leasable or salable mineral values, the subject land disposal may take place if subsequent use of the surface would not unreasonably interfere with prospective mineral operations. Mineral land determinations will only be conducted by mineral examiners or by engineers and geologists who have completed BLM Course 3000-11, Mining and Beneficiation Cost Estimation and Economic Evaluation.

A. Leasing Act Minerals. Land that is in a current or former Known Leasing Area (KLA), or Known Geothermal Resource Area (KGRA) is mineral land. See United States v. Bardsley et al, 45 IBLA 367 (1980).

B. For All Other Minerals.

1. If a mineral resource assessment of the subject lands has been previously conducted and the mineral potential classified according to Bureau Manual Section 3031, then that classification is to be used. Reference the applicable energy and mineral resources assessment report and/or RMP/Environmental Impact Statement (EIS). If the land has not been classified, a mineral assessment should be done and the land should be assigned a classification according to the guidance given in Manual Section 3031.

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2. After classification, if the classification is M (moderate) or H (high), then the potential of the area for development of economic mineral resources must be assessed. Should this assessment show that the lands could be profitably mined, if open to entry, or that they could have been profitably mined on the critical date when the lands were withdrawn or segregated against mineral entry, then the lands are considered to be "mineral in character" or are "known to be valuable".

C. Reports. The format for mineral land reports is given in Illustration 5. In the conclusion of the report, a statement must be made as to whether or not the land is "mineral land" and which mineral commodities make the land "mineral land".

### .15 Mineral Appraisal Reports.

A. Actions requiring an appraisal for a particular mineral or for the entire mineral estate are those upon which the fair market value must be determined. A mineral appraisal report shall be prepared by a mineral examiner who is also a qualified appraiser or by a mineral examiner in conjunction with a qualified appraiser. The definitions of mineral examiner and qualified appraiser are given in Glossary of Terms.

B. Conclusions of a mineral appraisal report include the estimated fair market value, in dollars, placed upon the mineral interest or mineral estate evaluated.

C. Recommendations to management will depend upon the particular action prompting the appraisal.

D. Technical Standards and guidance are outlined in H-3890-1, and Manual Sections 3891, 3630. The report format for mineral appraisals is given in Illustration 6.

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.16 Surface Use Determination Reports

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A. Actions requiring this form of report are detailed in 43 CFR 3712.1(a), (b), (c), and (d), and in the Departmental decision in Bruce W. Crawford Et Ux., 86 IBLA 350 (1985), and in the 9th Circuit decision in United States v. Noguiera, 403 F. 2nd 816 (1968). The determinations document the surface use of a mining claim. The focus is whether or not the ongoing surface use of a mining claim or mill site is reasonably incident to prospecting, mining, or processing operations. These investigations will only be conducted by mineral examiners.

B. Investigations include:

1. Nature and good faith effort of the occupant in working the mining claim or protecting valuable equipment used in such work.
2. Nature, type, and use of structures and/or other equipment.
3. Geographic isolation of the mining claim.
4. Special geologic and climatic factors that may affect operations on the mining claims.

C. Conclusions of the mineral report will specify whether or not the actual use of the mining claim or site satisfies the requirements of 43 CFR 3712.1(a), (b), (c), and (d). This type of action does not address the question of validity under the mining laws.

D. Recommendations for mining claims or sites not being used for purposes authorized under 43 CFR 3712.1(a), (b), (c), and (d) will include the appropriate charges for a mineral contest complaint, taken from Manual Section 3894.

E. Guidelines are given in Noguiera, supra, Crawford, supra, and Manual Sections 3809, 3891, and 3893 as to what uses of the surface are reasonably incident to prospecting, mining, or processing operations. The report format for this type of report is given in Illustration 7.

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.17 Format for Realty/Locatable Mineral Reports. (See Illustrations 3, 4, 5, 6, 7, and H-3890-1.)

- A. Title Page
  - 1. Title and serial number
  - 2. Signature and Date
  
- B. Table of Contents
  
- C. Summary
  - 1. Summary, conclusions, and recommendations
  - 2. Introduction
  - 3. Lands involved
  
- D. Itemized Discussion (Items)
  - 1. Physiographic data
  - 2. Regional and site geology
  - 3. Mining history
  - 4. Mineral deposits
  - 5. Mineral exploration and development work
  - 6. Mining, milling and related operations
  - 7. Sampling procedures and analytical work
  - 8. Economic evaluation
  - 9. Mineral Potential
  - 10. Fair market value estimations
  - 11. Surface Interference
  - 12. Surface Use Determination of Mining Claims
  
- E. Appendices
  - 1. Illustrations
  - 2. Glossary
  - 3. References

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.2 Coal and Other-Solid Leasable Minerals Reports..21 Actions Requiring a Coal Mineral Report.

The descriptions of report types are discussed in Section .23.

<u>Action</u>	<u>Report Type</u>	<u>Report Description</u>	<u>Technical Approval Level</u>
Coal Development Potential Screen	Detailed	Documents coal resources in terms of estimated amounts, locations, quality, and marketability within resource management plan documents.	State Office
Tract Delineation	Detailed	Describes the coal and other resources of a specific prospective coal lease tract for use in ranking the tract for potential coal lease sale.	State Office
Tract Selection	Brief	Describes the factors used in selecting Federal coal lease tracts for potential sale (lease Profile). Information required of the various resources, i.e. geology, are incorporated in the tract profile as reports.	District Office
Fair Market Value/ Maximum Economic Recovery	Detailed	Contains information on the mining methods, estimated reserves by bed, coal quality assessment, royalty and lease bond recommendations.	State Office
Cost Estimate Document	Brief	Describes the costs of compliance with the environmental lease stipulations, including those public comments that were adopted, and rejecting, with explanation, those comments that were not used.	District Office
Record of Decision	Brief	Justifies, with resource and other data as applicable, the decision to issue a coal preference right lease or to reject the preference right lease application for failure to demonstrate commercial quantities of coal.	State Office

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Evaluation of Coal Resources Exchanged	Detailed	Describes the methods used for determining values of the coal or other resources to be exchanged.	District Office
Energy Mineral Potential	Detailed	Provides an assessment of the potential for the occurrence of coal which follows the guidance given in Manual Section 3031 and is completed before the preparation of the RMP/EIS.	District Office
Preparation of RMP/EIS	Detailed	Provides an assessment of the potential for development of coal resources in the respective resource area. Also see Manual Sections 1624 and 3031.	District Office
Review of Preference Right Lease Application (PRLA)	Detailed	Recommends whether PRLA should be approved; specifically, whether commercial quantities of coal have been discovered.	State Office

.22 Actions Requiring an Other-Solid Leasable Minerals Report

The descriptions of report types are discussed in Section .23.

<u>Action</u>	<u>Report Type</u>	<u>Report Description</u>	<u>Technical Approval Level</u>
Review of Preference Right Lease Application (PRLA)	Detailed	Recommends whether PRLA should be approved; specifically, whether a valuable deposit has been discovered. For Na, K, S, etc., a chiefly valuable mineral report is required. Also addresses amount of bond.	State Office
Competitive Lease Offering	Detailed	Fair market value determination; setting of minimum acceptable bonus bid; makes recommendation on bonding.	State Office

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Application for Noncompetitive Fringe Acreage Lease; Lease Modification	Detailed	Recommends whether application should be approved, including verification that the mineral deposit is not in an area of competitive interest to holders of other active mining units of the same mineral (i.e., phosphate, sodium, potassium) in the area the lands applied for lack sufficient reserves to warrant independent development; and leasing the lands will result in most efficient use of natural resources and will provide for economical and efficient recovery as part of a mining unit.	District Office
Application for Use Permit	Checklist	Recommends whether application should be approved, including whether all the lands are necessary and adaptable to the proposed use (either in point of location, topography, or otherwise), and that they are unoccupied and unappropriated. For sodium use permits, the lands must be nonmineral.	District Office
Known Leasing Areas (KLA's)	Detailed	Documents Known Leasing Areas.	State Office
Prospectively Valuable Classification	Detailed	Documents whether land is classified as prospectively valuable for a leasable mineral.	State Office
Solid Mineral Potential	Detailed	Provides an assessment of the potential for the occurrence of solid non-energy leasable minerals which follows the guidance given in Manual Section 3031 and is completed before the preparation of the RMP/EIS.	District Office
Preparation of RMP/EIS	Detailed	Provides an assessment of the potential for development of solid nonenergy leasable minerals in the respective resource area.	District Office
Prospecting Permits	Detailed	Documents for any unclaimed, undeveloped area subject to leasing, that prospecting is necessary to determine the existence or workability of a leasable mineral deposit.	State Office

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### .23 Format for Coal and Other-Solid Leasable Minerals Reports (See Illustration 8)

#### A. Definitions for Report Levels.

1. Detailed report. A detailed report is a formal documentation of the decision process including all aspects of the technical analysis. The report shall be prepared by a mineral specialist. This level of report usually encompasses a combination of geology, engineering and economics. A high level of original analysis and professional judgement is used. It is comprehensive in the presentation of all original work done. The technical analysis is critical for any decisions which carry a high risk for litigation or a significant loss or risk to the government. The minimum standard format for a detailed report is given in section .23.B of this manual.

2. Brief report. A brief report documents a limited level of original work. It is often used for intermediate internal analysis or for evaluations which have little risk of appeal. These reports shall be prepared by a mineral specialist. The minimum standard format required for a brief report is specified in section .23.C of this manual. It is a formal, stand-alone report providing less detailed documentation than a detailed report.

3. Checklist. Checklists are used for routine analyses and the formats are generally specified or recommended in handbooks or manuals. They are used to document that the minimum requirements of application are met. Original analysis is minimal.

#### B. Content for Detailed Report

1. Title page
  - a. Title and serial number
  - b. Signature and date
2. Table of Contents
3. Summary
  - a. Introduction
  - b. Lands involved
  - c. Summary, conclusions, and recommendations



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4. Itemized Discussion (Items)

- a. Physiographic data
- b. Regional and site geology
- c. Mining history
- d. Mineral deposits
- e. Mineral exploration and development work
- f. Mining, milling, and related operations
- g. Sampling procedures and analytical work
- h. Economic evaluation
- i. Mineral potential
- j. Fair market value estimations (not always necessary)

5. Appendices

- a. Illustrations
- b. Glossary
- c. References

C. Content for Brief Mineral Reports

1. Title page

- a. Title and serial number
- b. Signature and date

2. Table of Contents

3. Summary

- a. Introduction
- b. Lands involved
- c. Summary, conclusions, and recommendations

4. Itemized Discussion (Items)

- a. Regional and site geology
- b. Mining history
- c. Mineral deposits

5. Appendices

- a. Illustrations
- b. Glossary
- c. References

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.3 Fluid Minerals Reports.31 Actions Requiring a Fluid Minerals Report

The descriptions of report types are discussed in Section .32.

<u>Action</u>	<u>Report Type</u>	<u>Report Description</u>	<u>Technical Approval Level</u>
Tract Evaluation	Detailed	Estimates the value of a known deposit on a mineral property.	District or State
Fluid Mineral Potential and Preplanning	Detailed	Mineral potential reports for the occurrence of fluid minerals are part of a fluid mineral report which follows the guidance given in Manual Section 3031 and is completed before the preparation of the RMP/EIS. Fluid minerals inventory reports include working well location maps, old KGS maps, well completion reports, production reports, geophysical exploration applications, etc.	District or State
Preparation of Resource Management Plans (RMP); Environmental Impact Statement (EIS).	Detailed	Provides an assessment of the potential for fluid mineral/geothermal resource occurrence and development.	District or State
Known Geologic Structure (KGS) Determination	Detailed	Determines whether the lands are presumptively productive for the purpose of leasing.	State Office
Known Geothermal Resource Area(KGRA) Determination	Detailed	Determines the limit of the competitive geothermal leasing areas. Also includes KGRA Establishment, Expansion, Contraction, and Deletion.	State Office
Prelease Geothermal Tract Evaluation	Brief	Evaluates potential to establish fair market value of the geothermal resource.	District or State
Post Lease Sale Geothermal Bid Evaluation	Brief	Determines adequacy/acceptability of competitive bids.	State Office

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Geothermal Leasing-- Significant Geothermal Features Adverse Impact	Brief	Determines whether there is a geologic and hydrologic connection to the listed significant geothermal feature. (Not an environmental document).	District or State
Geothermal--Diligent Exploration Expenditures Report	Brief	Determines whether exploration activities connected geologically to lease. Determines approval of expenditures application to leases.	District or State

.32 Format for Fluid Minerals Reports. (See Illustration 9)

A. Definitions for Report Levels.

1. Detailed Report. A detailed report is a formal documentation of the decision process including all aspects of the technical analysis. The report shall be prepared by a mineral specialist. This level of report usually encompasses a combination of geology, engineering and economics. A high level of original analysis and professional judgement is used. It is comprehensive in the presentation of all original work done. The technical analysis is critical for any decisions which carry a high risk for litigation or a significant loss or risk to the government. The minimum standards for a detailed report are given in section .32.B of this manual.

2. Brief Report. A brief report documents a limited level of original work. It is often used for intermediate internal analysis or for evaluations which have little risk of appeal. These reports shall be prepared by a mineral specialist. The minimum standard format required for a brief report is specified in section .32.C of this manual. It is a formal, stand-alone report providing less detailed documentation than a detailed report.

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B. Content for Detailed Report

1. Title page

a. Title and serial number. The title must identify the subject of the report. It should include as much identifying information as practical. The number for lease, leases or agreements, as appropriate, must be list on the title page.

b. Signature and date. The authors must sign and date the title page of the report.

2. Table of Contents

3. Summary

a. Purpose Statement. If not sufficiently covered in the title of the report, the purpose statement should be brief and should cover the reason for the analysis.

b. Lands Involved. The legal description must be given to identify the location of the affected lands.

c. Summary, conclusions, recommendations. The conclusions reached from the technical analysis and any recommendation or determination resulting from the technical evaluation must be clearly stated.

4. Itemized Discussion (Items)

a. Regional and site geology. The description and discussion of the stratigraphy and structural geology should be sufficient to show the possible location and extent of the oil and gas bearing formations and structures or geothermal reservoirs.

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- b. Discussion of evaluation process. The geologic information will be combined with the engineering into the reservoir engineering analysis which characterizes the pertinent reservoir properties. The reports can also address legal and appeal related issues. Although procedures need not be covered in detail when standard technical evaluations are done, the methods used and the reasoning for using that method must be documented. Guidance for specific reports are given in the Manual Section 3160-2.
- c. Data Sources. Original sources of all data used in the analysis must be documented in the body of the report.
- d. Assumptions. When assumptions are used, the specific assumptions must be stated and the rationale for using it must be explained.

### 5. Appendices

- a. Calculations of variables. Show all equations, define all variables, include units on all variables and results. Include intermediate results when appropriate.
- b. Illustrations. No illustrations should be included which are not discussed in the text of the report. Illustrations should be included whenever data is more clearly presented in graphs, maps, plats, or figures.
- c. Glossary. The glossary must define technical terms which are nonstandard or are generally unfamiliar to the intended reader of the report.
- d. References. Endnotes referenced in the text of the report are recommended. Any and all references must be specifically included in the appendix. References must be cited sufficiently for the reader to verify the source. In addition, all references must be cited in the text.

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C. Content for Brief Reports.

1. Cover Sheet

- a. Title. The title must identify the subject of the report.
- b. Serial number. The number for lease, leases or agreements, as appropriate, must be listed on the cover-sheet.
- c. Lands involved. The legal description must be given to identify the location of the effected lands.
- d. Signature and date. The authors must sign and date the cover sheet of the report.

2. Table of Contents

3. Itemized Discussion (Items)

- a. Purpose statement. If not sufficiently covered in the title of the report, the purpose statement should be brief and should cover the reason for the analysis.
- b. Summary, conclusions and recommendations. The determination and the results from that technical determination must be clearly stated.
- c. Calculations. Standard equations and procedures are documented in appropriate handbooks and manuals. The intermediate results from all calculations and all non-standard calculations must be presented.
- d. Data sources. Original sources of all data used in the analysis must be documented in the body of the report.

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e. Assumptions. Assumptions may be critical to the brevity of a short report, but must be fully documented and explained whenever used.

f References. References must be cited sufficiently for the reader to verify the source. In addition, all references must be cited in the text.

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.4 Technical Review of Mineral Reports. Prior to presentation to management, all mineral reports must be reviewed and approved by a qualified review mineral examiner or mineral specialist.

A. All mineral reports where a technical analysis is undertaken, are to be reviewed by a certified review mineral examiner. A review of the calculations makes sure that the grade and tonnage estimates are correct. The production and marketability forecasts are checked to ensure their reasonableness and accuracy. For locatable mineral reports the review process is standardized through Handbook H-3890-1 and by the use of Bureau form 3060-2, Mineral report Evaluation (see Illustration 2). This form is for confidential administrative use only and is not available to the public under the Freedom of Information Act (see .08 C).

B. For all other reports, the review is an evaluation of submitted data or proposed action. Professional judgement is most commonly used, but the conclusions should be supported by data. Documentation is generally limited to the decision document or by signature or acceptance of the application.

.41 Mineral Reports for Mining Claim Validity Examinations, Mineral Estate Appraisals, and Surface Use Determinations.

A. All Mining Claim Validity Examination Reports shall be reviewed and approved by a review mineral examiner. The review shall be made prior to the mineral report being submitted for management acknowledgement. The review mineral examiner is charged with ensuring that required professional and technical procedures were followed and the basis for the conclusions is in conformance with the requirements of the mining and public land laws. Mineral reports, which in the judgement of the review mineral examiner do not meet the minimum technical and professional standards described in the manual, shall be returned to the originating office for identified revisions. When the author of a validity report on lands administered by another agency cannot or will not bring the report up to Bureau standards, the reviewer will recommend to the State Director that a Bureau Certified Mineral Examiner be assigned to the case to complete the mineral examination and report.



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B. Unapproved Reports on lands administered by another agency, which involve mineral patent applications, must be approved by the appropriate State Director. If the other agency cannot or will not bring the validity report up to Bureau standards, the Bureau review mineral examiner shall recommend to the State Director that a Bureau mineral examiner(s) be assigned to the case to complete the mineral examination and mineral report.

C. All Mineral Estate Appraisals shall be reviewed and approved by the mineral specialist(s) or appraisers having authority delegated by the State Director. The reviewer(s) are charged with ensuring that the results of the appraisal are the product of an appropriate methodology applicable to the mineral commodities appraised.

D. Surface Use Determination Reports shall be reviewed by a review mineral examiner appointed by the State Director. The reviewer is charged with ensuring that the information contained in the report supports the conclusion and that the recommended contest charges are appropriate.

.42 Mineral Reports for Mineral Potential. Except for mineral estate appraisals, all mineral potential reports prepared by a mineral specialist/examiner for land and realty actions, and the energy and mineral resource assessments completed as part of the Management Situation Analysis for RMPs, shall be reviewed by a qualified reviewer appointed by the District Manager. If the District does not have a qualified mineral specialist/examiner on its staff, the District Manager shall obtain a review and technical approval through the State Office.

.43 Mineral Reports for Fluid Minerals. All technical evaluations which lead to a decision may be reviewed through the State Director Review process and appeal to the Interior Board of Land Appeals. Because of the high risk of appeal or loss, many types of detailed reports require technical review prior to the final decision. Technical reviews are conducted to ensure that the report is technically complete and accurate and based on the best available data, and interpretations are reasonable and based on sound professional judgment. All technical reviews must be documented with the signature of the qualified reviewer and with the date of the review. This signature certifies that the reviewer has verified all required standards as set forth in the handbook H-3160-1 and the applicable program manuals.

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~~.44~~ Mineral Reports for Coal and Other-Solid Leasable Minerals. All mineral reports will be reviewed and approved by the DSD, Mineral Resources. A knowledgeable mineral specialist or geologists approved by the DSD, Mineral Resources shall conduct a technical review. The report will be examined for the quality and adequacy of the materials presented.

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Glossary of Terms

For the purpose of this Manual Section, the following terms are defined.

Mineral means all energy and mineral resources, whether solids or fluids, and locatable, leasable, or salable.

A Mineral Specialist has, as a minimum, a B.S. or B.A. degree in the field of geology, geophysics, geological engineering, mining engineering, or petroleum engineering. By virtue of education, training, and professional experience, they are considered qualified to evaluate Federal land or interests in land to determine its mineral value, and may, under the supervision of a certified mineral examiner, assist in the conduct of validity exams, mineral-in-character determinations, and surface use determinations.

A Mineral Examiner is a mineral specialist who has been certified by the Assistant Director for Energy and Minerals pursuant to the National Certification Program for Mineral Examiners dated October 1990 (NCPME) as being fully competent to perform validity examinations of mining claims and sites, perform mineral in character determinations, and perform surface use determinations of mining claims and sites under the public land and mining laws. No one may perform these types of examinations on their own without being duly certified pursuant to NCPME.

A Review Mineral Examiner is a mineral examiner who has been certified by the Assistant Director for Energy and Minerals pursuant to NCPME as being fully competent to perform final technical review of mineral reports prepared for mining claim or site validity, mineral-in-character, or surface use determinations. No one may perform or serve as a final technical review for these types of mineral reports unless they have been duly certified under NCPME.

A Qualified Appraiser is a person approved by the authorized officer who is competent, knowledgeable, and has the training and experience necessary to estimate the market value of mineral interests and meets the qualifications in Manual Section 3070.15. The appraiser prepares a supportable opinion of value which meets the Bureau's standards.

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Example of a Cover Sheet

Form 3060-1  
(July 1984)  
(formerly 3980-1)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

Serial Number  
CA 25467

MINERAL REPORT

Validity Examination of the Piece of  
Cake Lode Claim (CAMC-129075) for the  
Mineral Patent Application of Charlie  
R. Brown.

(Title)

LANDS INVOLVED  
MS 2890 of 19.67 Acres  
located in  
SW $\frac{1}{4}$  SE $\frac{1}{4}$  SW $\frac{1}{4}$  of Section 32, TWP 8N and RGE 12W,  
San Bernardino Base and Meridian  
Riverside County, California

Prepared By:

Henry D. Hammer  
(Signature)

District Geologist

(Title)

October 29, 1984

(Date)

Technical Approval:

Ivan B. Roth  
(Signature)

State Office Mineral Examiner

(Title)

November 15, 1984

(Date)

Management Acknowledgement:

Jerald G. Swatz  
(Signature)

Assistant District Manager for Minerals

(Title)

November 29, 1984

(Date)

\* U.S. Government Printing Office: 1984-776-009/4879 PS

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Example of a Mineral Report Evaluation

Form 3060-2 (June 1984) (Formerly 3980-5)	<b>U.S. DEPARTMENT OF THE INTERIOR</b> <b>BUREAU OF LAND MANAGEMENT</b> <b>MINERAL REPORT EVALUATION</b>	Serial Number CA 25467				
NOTE: Form is for administrative use only and must not be released to the public.						
Report Title <u>Validity Examination of the Piece of Lake L e Claim (CAMC- 12,775)</u>						
DATE	Project assigned	Project completed	Report received	Assigned completion		
	<u>April 18, 1984</u>	<u>October 3, 1984</u>	<u>November 2, 1984</u>	<u>November 15, 1984</u>		
Mineral Examiner			Duty Station			
<u>Henry Q Hammer</u>			<u>Baker, California</u>			
Type of action				Subactivity/CJC		
<u>Mineral Patent Application</u>				<u>4132 - 11</u>		
Legal description (include county)						
<u>MS 2890 located in the SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> of Section 32, TWP 8N and RGE 12W, San Bernardino Base and Meridian, Riverside County, California</u>						
1. Report completed in timely manner? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (if "no," explain)						
2. Was Bureau approved format followed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA						
Remarks:						
<b>3. SUPPORTING DATA</b>						
(Check appropriate boxes)			(Check appropriate boxes)			
	YES	NO	NA	YES	NO	NA
a. Photographs	<input checked="" type="checkbox"/>			i. Mineral Survey Plat	<input checked="" type="checkbox"/>	
b. Geologic maps (surface and underground)	<input checked="" type="checkbox"/>			j. Master Title Plat	<input checked="" type="checkbox"/>	
c. Discovery and sample site shown	<input checked="" type="checkbox"/>			k. Assay data	<input checked="" type="checkbox"/>	
d. Geologic cross sections	<input checked="" type="checkbox"/>			l. Analysis of marketability	<input checked="" type="checkbox"/>	
e. Index map	<input checked="" type="checkbox"/>			m. Illustrations pertinent, legible, and each referred to in text	<input checked="" type="checkbox"/>	
f. Topographic maps	<input checked="" type="checkbox"/>			n. References complete and accurate	<input checked="" type="checkbox"/>	
g. Special map showing leases or mining claims	<input checked="" type="checkbox"/>			o. Other (specify)		<input checked="" type="checkbox"/>
h. Leasable minerals report			<input checked="" type="checkbox"/>			
4. References to legal documents, decisions, certificate, mining claims, leases, and material sales, etc., are present and proper? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA						
Remarks:						
5. Were proper field techniques used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
Remarks:						
6. Were proper sampling techniques used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
Remarks:						
7. Was fair market value determination proper and current? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA						
Remarks:						
(Continued on reverse)						

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Example of a Mineral Report Evaluation

8. Data was accurately and concisely presented?  Yes  No  
 Remarks:

9. Conclusion and recommendations are supported by the data?  Yes  No  
 Remarks:

10. Specify special problems which were not in the report.  
 NONE

11. Overall recommendation for improvements or changes (emphasizing the recommendations that are critical to the acceptability of the report).  
 NONE-Acceptable as submitted

12. EVALUATION  
 (Check appropriate boxes)

OVERALL	NEEDS	
<input checked="" type="checkbox"/> Acceptable	<input type="checkbox"/> Minor Revision	<input type="checkbox"/> Additional Market Analysis
<input type="checkbox"/> Unacceptable	<input type="checkbox"/> Major Revision	<input type="checkbox"/> Additional Appraisal Analysis
	<input type="checkbox"/> Additional Field Work	<input type="checkbox"/> Other (specify)

13. Overall comments (include attachments, if necessary).  
 Did a good job under adverse working conditions

Signature of Evaluator Norm B. Poole  
 Title State Office Mineral Examiner (CA-921) Date November 15, 1984

Instructions - State Office mineral examiner completes evaluation and returns evaluation with mineral report to District/Area examiner. District/Area examiner revises mineral report and returns to State Office examiner for approval.

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Report Outline and Table of Contents for a Validity Report

Table of Contents. The mineral report outline and contents are listed below. Items marked by an (\*) are required for all mineral reports. The other headings are to be used as needed for the purpose of the report. Professional judgement will determine the amount of information to be included under each heading.

- A. \*Title Page
  - B. \*Table of Contents
  - C. \*Introduction
  - D. \*Lands Involved
  - E. \*Summary, Conclusions, and Recommendations
  - F. \*Physiographic Data
  - G. \*Geologic Setting
  - H. \*Site Geology
  - I. Mining History
  - J. \*Mineral Deposits
  - K. Mineral Exploration and Development Work
  - L. Mining, Milling, and Related Operations
  - M. \*Sampling Procedures and Analytical Work
  - N. \*Economic Evaluation
  - S. \*References
- Appendices - as needed.

ATTACHMENTS

- \*Attachment 1, Topographic Map
- Attachment 2, Geologic Map
- Attachment 3, Map of Underground Works
- Attachment 4, Production History
- \*Attachment 5, Photograph of the Site
- Attachment 6, Sketch of Surface Cuts
- Attachment 7, Detailed Calculation for Appraisal

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Report Outline and Table of Contents for a Mineral Potential Report

Executive Summary for Managers

- I. Introduction
- II. Description of Geology
  - A. Physiography
  - B. Rock Units (lithology and stratigraphy)
  - C. Structural Geology and Tectonics
  - D. Geophysics/Geochemistry \*
  - E. Historical Geology \*
- III. Description of Energy and Mineral Resources
  - A. Known Mineral Deposits (including oil and gas fields)
  - B. Known Prospects, Mineral Occurrences, and Mineralized Areas
  - C. Mining Claims, Leases, and Material Sites
  - D. Types of Mineral Deposit (in area)
  - E. Mineral Economics (including brief section of strategic and critical minerals)
- IV. Potential for the Occurrence of Mineral Resources
  - A. Coal
  - B. Oil and Gas
  - C. Geothermal
  - D. Sodium and Potassium
  - E. Metallic Minerals
  - F. Uranium and Thorium
  - G. Nonmetallic Minerals / Industrial Minerals
  - H. Common Variety Minerals
  - I. Other (if any)
- V. Recommendations
  - A. Regarding the Action that Initiated the Assessment
  - B. For Additional Work
- VI. References and Selected Bibliography

\* This section should be used when geochemical and/or geophysical data are available, either from existing literature or from a new survey undertaken for this assessment. If there is no Geophysics or Geochemistry section, Historical Geology becomes section D.



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Report Outline and Table of Contents for a Mineral Land Report

Table of Contents. The mineral report outline and contents are listed below. Items marked by an (\*) are required for all mineral reports. The other headings are to be used as needed for the purpose of the report. Professional judgement will determine the amount of information to be included under each heading.

- A. \*Title Page
  - B. \*Table of Contents
  - C. \*Introduction
  - D. \*Lands Involved
  - E. \*Summary, Conclusions, and Recommendations
  - F. \*Physiographic Data
  - G. \*Geologic Setting
  - H. \*Site Geology
  - I. Mining History
  - J. \*Mineral Deposits
  - K. Mineral Exploration and Development Work
  - L. Mining, Milling, and Related Operations
  - M. Sampling Procedures and Analytical Work
  - N. Economic Evaluation
  - O. \*Mineral Potential
  - S. \*References
- Appendices - as needed.

ATTACHMENTS

- \*Attachment 1, Topographic Map
- \*Attachment 2, Geologic Map
- Attachment 3, Map of Underground Works
- Attachment 4, Production History
- Attachment 5, Photograph of the Site
- Attachment 6, Sketch of Surface Cuts
- Attachment 7, Detailed Calculation for Appraisal

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Report Outline and Table of Contents for a Mineral Appraisal Report

Table of Contents. The mineral report outline and contents are listed below. Items marked by an (\*) are required for all mineral reports. The other headings are to be used as needed for the purpose of the report. Professional judgement will determine the amount of information to be included under each heading.

- A. \*Title Page
  - B. \*Table of Contents
  - C. \*Introduction
  - D. \*Lands Involved
  - E. \*Summary, Conclusions, and Recommendations
  - F. \*Physiographic Data
  - G. \*Geologic Setting
  - H. \*Site Geology
  - I. Mining History
  - J. \*Mineral Deposits
  - K. Mineral Exploration and Development Work
  - L. Mining, Milling, and Related Operations
  - M. Sampling Procedures and Analytical Work
  - N. \*Economic Evaluation
  - O. Mineral Potential
  - P. \*Fair Market Value Estimate
  - S. \*References
- Appendices - as needed.

ATTACHMENTS

- \*Attachment 1, Topographic Map
- Attachment 2, Geologic Map
- Attachment 3, Map of Underground Works
- Attachment 4, Production History
- Attachment 5, Photograph of the Site
- Attachment 6, Sketch of Surface Cuts
- Attachment 7, Detailed Calculation for Appraisal

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Report Outline and Table of Contents for Surface Use Determination Report

Table of Contents. The mineral report outline and contents are listed below. Items marked by an (\*) are required for all mineral reports. The other headings are to be used as needed for the purpose of the report. Professional judgement will determine the amount of information to be included under each heading.

- A. \*Title Page
  - B. \*Table of Contents
  - C. \*Introduction
  - D. \*Lands Involved
  - E. \*Summary, Conclusions, and Recommendations
  - F. \*Physiographic Data
  - G. \*Geologic Setting
  - H. \*Site Geology
  - I. Mining History
  - J. \*Mineral Deposits
  - K. Mineral Exploration and Development Work
  - Q. \*Surface Interference
  - R. \*Surface Use Determination of Mining Claims
  - S. \*References
- Appendices - as needed.

ATTACHMENTS

- \*Attachment 1, Topographic Map
- Attachment 2, Geologic Map
- Attachment 3, Map of Underground Works
- Attachment 4, Production History
- \*Attachment 5, Photograph of the Site
- Attachment 6, Sketch of Surface Cuts

3060 - MINERAL REPORTS -- PREPARATION AND REVIEW

Report Outline and Table of Contents for a Coal or Other-Solid Leasable Minerals Report

Table of Contents. The mineral report outline and contents are listed below. Items marked by an (\*) are required for the short mineral reports. The other headings are to be used as needed for the detailed mineral reports. Professional judgement will determine the amount of information that should be included under each heading.

- A. \*Title Page
  - B. \*Table of Contents
  - C. \*Introduction
  - D. \*Lands Involved
  - E. \*Summary, Conclusions, and Recommendations
  - F. Physiographic Data
  - G. \*Geologic Setting
  - H. \*Site Geology
  - I. Mining History
  - J. \*Mineral Deposits
  - K. Mineral Exploration and Development Work
  - L. Mining, Milling, and Related Operations
  - M. Sampling Procedures and Analytical Work
  - N. Economic Evaluation
  - O. Mineral Potential
  - P. Fair Market Value Estimation (not always necessary)
  - S. \*References
- Appendices - as needed.

ATTACHMENTS

- \*Attachment 1, Topographic Map
- Attachment 2, Geologic Map
- Attachment 3, Map of Underground Works
- Attachment 4, Production History
- Attachment 5, Photograph of the Site
- Attachment 6, Sketch of Surface Cuts
- Attachment 7, Detailed Calculation of Appraisal

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Report Outline and Table of Contents for a Fluid Minerals Report

Table of Contents. The mineral report outline and contents are listed below. Items marked by an (\*) are required for the short mineral reports. The other headings are to be used as needed for the detailed mineral reports. Professional judgement will determine the amount of information that should be included under each heading.

- A. \*Title Page
- B. \*Table of Contents
- C. \*Introduction and Purpose Statement
- D. \*Lands Involved
- E. \*Summary, Conclusions, and Recommendations
- F. Physiographic Data
- G. Regional Geology
- H. Site Geology
- I. \*Discussion of Evaluation Process
- J. \*Data Sources and Assumptions
- K. \*Calculation of Variables
- L. Illustrations and Glossary
- M. \*References

ATTACHMENTS

- Attachment 1, Topographic Map
- Attachment 2, Geologic Map
- Attachment 3, Production History
- Attachment 4, Photograph of the Site
- Attachment 5, Sketch of Surface Cuts

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Laws, Regulations, and Decisions Regarding Mineral Reports

A. The following statutes require mineral land reports prior to Bureau actions.

30 U.S.C. 21 states "In all cases lands valuable for minerals shall be reserved from sale, except as otherwise expressly directed by law."

30 U.S.C. 76 states "Nothing ... shall be construed ... to authorize the sale of lands valuable for mines of gold, silver, or copper."

30 U.S.C. 81 discusses the rights of entrymen of lands subsequently classified as coal land and the disposal of coal land.

30 U.S.C. 82 states that the "Secretary of Interior may issue new patents without coal reservation when land is subsequently classified as noncoal in character."

30 U.S.C. 83 states that "public lands withdrawn or classified as coal lands, or are valuable for coal shall be subject to patent under the desertland law and the homestead laws only with a reservation to the United States of the coal."

30 U.S.C. 86 allows for the disposition of lands in Indian reservations which was withdrawn, classified, or reported as valuable for coal.

30 U.S.C. 90 authorizes the selection of public lands which have been classified, withdrawn, or are valuable for coal by several States.

30 U.S.C. 121 subjected lands withdrawn, classified, or reported as valuable for phosphate, nitrate, potash, oil, gas, or asphaltic minerals to selection, entry, location, appropriation, or purchase with the title to these minerals reserved to the United States.

30 U.S.C. 124 states that lands withdrawn, classified, or reported as valuable for sodium and/or sulphur are open for entry and purchase subject to a mineral reservation. This section also requires a surface interference determination with respect to all leasable minerals.

30 U.S.C. 612 states that all mining claims and sites, located after July 23, 1955, may not be used for any purposes other than prospecting, mining, or processing operations, and uses reasonably incident thereto. Mining claims validated by a discovery after July 23, 1955 are also subject to these restrictions.

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B. The following citations and respective acts specific to particular land disposal authority and preclude disposal of land that has known mineral values (i.e., mineral land, land that is mineral in character, or land that may be valuable for minerals)

43 U.S.C. 322 - Desert Land Entry  
43 U.S.C. 641 - Carey Act Grants  
12 Stat. 489 and 13 Stat. 356 - Railroad Land Grants  
43 U.S.C. 851 and 852 - State Indemnity Selections  
25 U.S.C. 334 - Indian Allotments  
43 U.S.C. 270-1 to 270-3 - Native Allotments (Alaska)  
43 U.S.C. 201 - Homesteads

C. The various sections of the Federal Land Policy and Management Act imply or require mineral reports:

43 U.S.C. 1701 (a) (9) requires that the United States will receive fair market value for its resource values.

43 U.S.C. 1701 (a) (12) states that the public lands will be managed in a manner which recognizes the Nation's need for domestic sources of minerals.

43 U.S.C. 1714 (c) (12) requires that mineral reports for withdrawals above 5,000 acres needing congressional approval will be prepared by a qualified mining engineer, engineering geologist, or geologist.

43 U.S.C. 1719 requires all conveyances (except exchanges under Section 206 of FLPMA) to reserve all minerals to the United States except under certain described circumstances. The character of the mineral deposits and a fair market value will be determined.

D. The following regulations and decisions can affect the preparation and content of mineral reports.

43 CFR Part 2 and Part 4  
43 CFR Group 2000 and Group 3000

Bruce W. Crawford, et ux, 86 IBLA 350 (1985).  
United States v. Noguiera, 403 F. 2nd 816, 825 (9th Circuit, 1968).  
Rogers et al. v. James Watt, 776 F.2d 1376, (9th Circuit, 1984).  
Charlestone Products v. Cecil Andrus, 553 F. 2d at 1213-14, (9th Circuit, 1977).  
Verrue v. United States, 457 F. 2d at 1204, (9th Circuit, 1972).  
United States v. Janet Copple et al., 81 IBLA at 132, 136 (1984).

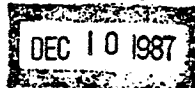
## 3060 - MINERAL REPORTS -- PREPARATION AND REVIEW

Availability of Mineral Reports under the Freedom of  
Information Act

## United States Department of the Interior

OFFICE OF THE SOLICITOR  
WASHINGTON, D.C. 20240

BLM.ER.0387



Memorandum

To: Director, Bureau of Land Management

From: Assistant Solicitor, Energy and Resources

Subject: Availability of Mineral Reports under the Freedom of Information Act

You have inquired whether Mineral Reports must be disclosed in response to a request from the public under the Freedom of Information Act (FOIA), 5 U.S.C. § 552. A Mineral Report is prepared by BLM or the Forest Service after examination of an unpatented mining claim, either on agency initiative or in response to a patent application. The Report assesses, among other things, whether the claimant has exposed a valuable mineral deposit (a "discovery"). If the Mineral Report assessment indicates that no discovery has been made, the Report will form the basis for a mineral contest against the claim(s). All Mineral Reports are prepared by BLM or Forest Service staff and reviewed by the respective management officials. The appropriate BLM State Office then conducts a "Technical Review" of the Report and, if in order, a State Office official signs it. The Report is then final. As explained below, the Report is available to the public at this point.

FOIA generally requires release of agency records in response to a request from the public. 5 U.S.C. § 552(a). Three exemptions from release to the public are potentially applicable to Mineral Reports: Exemption 4, proprietary and confidential information; Exemption 5, internal, pre-decisional documents; and Exemption 7, investigatory files. 5 U.S.C. § 552 (b)(4), (5), (7). As we advised you orally, Exemptions 4 and 5 are clearly applicable to Mineral Reports. Any proprietary or confidential information, within the meaning of Exemption 4 should be deleted before the Report is released to the public. You may withhold release of a Report under Exemption 5 at any time prior to the State Office's acceptance of the Report after its Technical Review. You have indicated that some Forest Service offices are releasing their Mineral Reports to the public before completion of the Technical Review by the BLM State Office. While you may question the wisdom of such disclosure, FOIA does not require an agency to withhold documents subject to Exemption 5; it only authorizes nondisclosure. See, e.g., 43 C.F.R. § 2.13(d). The fact that the Forest Service has released a draft Mineral Report should not affect the rigor of BLM's Technical Review in any way.



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Availability of Mineral Reports under the Freedom of  
Information Act

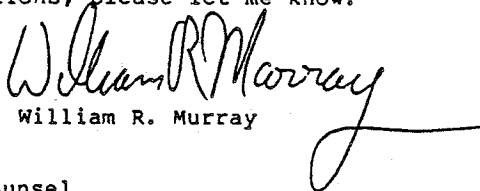
-2-

You specifically requested review of the applicability of Exemption 7, which excludes from mandatory disclosure:

(7) investigatory records compiled for law enforcement purposes, but only to the extent that the production of such records would (A) interfere with enforcement proceedings, (B) deprive a person of a right to a fair trial or an impartial adjudication, (C) constitute an unwarranted invasion of personal privacy, (D) disclose the identity of a confidential source and, in the case of a record compiled by a criminal law enforcement authority in the course of a criminal investigation, or by an agency conducting a lawful national security intelligence investigation, confidential information furnished only by the confidential source, (E) disclose investigative techniques and procedures, or (F) endanger the life or physical safety of law enforcement personnel.

I requested the various Regional and Field Solicitors to advise whether disclosure of Mineral Reports would have any of the consequences set out in Exemption 7. Those who responded indicated that they found no basis in Exemption 7 on which to withhold disclosure of a Mineral Report. I concur.

If you have any further questions, please let me know.

  
William R. Murray

cc: Office of the General Counsel  
U.S. Department of Agriculture