

From: "Marshall, Jay" <jmarshall@coalsource.com>
To: <waynehedberg@utah.gov>
Date: 5/24/2006 10:44:04 AM

Wayne:

Attached you will find information that is relevant to DOGM's decision on what to do with the Lila Portals.

Once the material is reviewed by DOGM and BLM it would be a good idea to have a conference call between all parties that may have an interest. I can set up the call if you give me a time and a date. Or if you would rather meet in person let me know.

If you have any questions please call.

R. Jay Marshall

Vice President

Utah, American Energy, Inc.

Office (435) 637 5032 ext 724

Cell (435 650 3157)

CC: <srigby@blm.gov>

Horse Canyon Chronology

Horse Canyon (Geneva) Mine was initially opened by the Defense Plant Corporation in 1942 as a source of metallurgical grade coal for the Geneva Steel Works in Orem, Utah. The mine was sold to U.S. Steel in 1946, who operated the mine until January 1984, when all mining was permanently suspended.

U.S. Steel submitted a permanent program mining and reclamation plan permit application on March 17, 1981 for the operations existing at the time. On October 15, 1982, U.S. Steel informed the Division of Oil, Gas and Mining (DOGGM) that it was temporarily suspending mining operations at the Horse Canyon (Geneva) Mine. In January 1984 U.S. steel informed DOGM of its plans to permanently suspend mining operations.

On November 11, 1984 Kaiser Steel purchased the Horse Canyon Mine property from U.S. Steel. On October 21, 1986, DOGM entered a stipulation and order for Kaiser Coal, successor in interest to Kaiser Steel, to submit either its response to DOGM's April 9, 1984 Determination Completeness finds for the U.S. Steel reclamation plan or submit a new reclamation plan and maintenance plan.

Interim reclamation was conducted during the fall of 1986. The project was conducted by Kaiser Coal, in cooperation with DOGM. In the third quarter of 1986 all portals, including Lila Canyon, were sealed with solid block wall to prevent unauthorized entry of the mine. The seals used are suitable for temporary closure or permanent reclamation.

On February 13, 1987, Kaiser Coal filed a petition for bankruptcy under Chapter 11, Title 11, of the U.S. Bankruptcy Code.

On April 5, 1990, Intermountain Power Agency ("IPA") acquired the Horse Canyon Mine. On July 3, 1990 DOGM executed a reclamation agreement with Intermountain Power Agency secured by the letter of credit. On August 10, 1990 the Permit Application Package was transferred to IPA with the agreement that IPA would continue to diligently pursue a permanent program permit and diligently pursue the reclamation work scheduled for summer and fall of 1990.

Areas of the Horse Canyon Mine was reclaimed by IPA in the fall of 1990 and spring of 1991. Phase I bond release was granted on February 5, 1997.

A Minor Exploration Permit was approved by DOGM on January 19, 1993. This permit allowed for BXG, Inc. to breach the seals and explore the Horse Canyon mine. The exploration plan states "This exploration is not being conducted by the owner or permit holder. Thus, no permit will be modified or revised."

BXG's Horse Canyon Exploration Project began in late August of 1992 with MSHA's approval of the Seal Breaching Plan and subsequent breaching of the Horse and Lila Canyon seals on August 26 and 27, 1992. Mine exploration began January 22, 1993, after MSHA approval of

the mine Exploration Plan was received on December 30, 1992. A re-sealing plan was submitted to MSHA on April 27, 1993 and was approved May 14, 1993. The Lila and Horse Canyon seals breached in August, 1992, have been restored to original condition.

On September 1, 1998 UEI subleased the Horse Canyon Mine from IPA and on July 31, 2000 UEI purchased the Horse Canyon Mine.

Phase II bond release was conditionally approved on October 10, 1999 with stipulations. Prior to final approval UEI was required to remove the culvert on the landfill area and to realign the channel and also to remove sediment pond #2. In the fall of 2001 an amendment was filed with DOGM requesting that the pond be breached but otherwise left in place. The approved MRP at that time allowed for breaching or total reclamation of the pond. The request to breach was denied by DOGM, and the pond was reclaimed. The pond and culvert work was completed in the fall of 2001 with the understanding that the reclamation time clock would not restart. On January 24, 2002 Phase II bond release was approved.

On January 3, 2006 UtahAmerican Energy, Inc. applied for Phase III bond release.

From 10/9/91
OSM Partial Inspection Phase I
by Mitchell S. Rollins, 370, OSM

Another question was whether or not the eastern most Carlson portal could be considered permanently sealed. This portal has a rock dust bin that trucks used to belly dump into and then the rock dust was fed into the mine via conveyor. The bin is not entirely open on top, but has two openings through a concrete cover. The seals on this portal are out by the rock dust bin. As such, entrance could conceivably be made via this bin. However, Mr. Clark said that the bin was almost full of rock dust, therefore, one would be prevented from accessing the main. The question arises whether or not this can be considered an acceptable seal. Someone could still get into the bin by way of one of the top entries to the bin where trucks used to belly dump, but because of the rock dust one could not access the main. I recommended that IPA check with MSHA to see if this is acceptable with them. DOGM will also look into this also. IPA will have to apply for a revision to their permit to reflect this type of seal if it is acceptable to MSHA so that DOGM could consider this from an environmental viewpoint. There may be problems with this type of seal if any surface water could seep into the bin and dissolve the rock dust, etc. In any event, this part of the mine will be under temporary cessation so all that is needed currently is a temporary seal.

Another questionable situation is the breakout seals. The breakouts were created and sealed prior to IPA assuming the site. When IPA permitted this mine, the breakout was intentionally left out of the permit area. A helicopter was used to transport blocks to the breakout to seal it. The disturbance outside was minimal and the material that was pushed out was seeded. We did not hike to the breakouts, but the next day I flew as close to it as we could in a helicopter. Unfortunately, I could not view the breakout well enough. If OSM participates in the subsequent bond release inspection, the inspector should hike in to assess the condition of the breakout.

The last time I had seen the mine was when Kaiser Steel was still the operator. The reclamation work that has been done since IPA assumed liability is significant and impressive. A number of buildings, railroad trestle, and tipples have been razed. All portals on the south side of Horse Canyon and those not needed for future activities on the north side have been sealed and reclaimed. The highwalls have generally been eliminated by material from a borrow pit. The grading has been left in a roughened state to help control erosion and retain moisture. Seeding and mulching were ongoing during the inspection. IPA has put major effort into reclaiming this site and it shows. The amount and quality of reclamation exceed that which I had expected.

Lila breakout NOT in
Permit AREA

2.4 PORTAL CLOSURES

In the third quarter of 1986 all portals were sealed with solid block walls to prevent unauthorized entry of the mine. The seals used are suitable for temporary closure or permanent reclamation. A complete description and location of the seals is found in Section 4.6.

Portals Sealed by ~~MRP~~
Prior To IPA's Permit ^{Kaiser} Application

From Approved
Horse Canyon MRP

2.6 AREAS TO BE RECLAIMED

There are 63.6 acres of disturbance within the permit area, of which 62.8 acres will be reclaimed. The area of disturbance to be reclaimed is shown on Plates II-3 A-G. An additional 10 acres will be disturbed when the bottom pit is used as fill and spoil material.

One area which will not be reclaimed are the two portals on the north side of Lila Canyon, 1.7 miles south-southeast of the facilities area (Plate II-2). This portal site comprises 0.8 acres of the total disturbance. Access to the site is a difficult two-hour hike on foot, climbing from the mouth of the canyon up the side wall to the breakout. From the south rim of the canyon above the site and from the canyon bottom the portal site is not visible to the casual viewer. All materials from mining activities were pulled inside the mine opening before it was sealed. Because of the remoteness of the site, lack of access, natural sloughing of rock which will eventually cover the portals, and small size of the disturbance, Intermountain Power Agency is proposing to do no further reclamation in this area.

*From Approved MRP
"NO further reclamation
OF Lila Portals"*

2.8 BACKFILLING AND GRADING

This section discusses the backfilling and regrading that will be done during the mining plan period. Backfilling and regrading will involve closure of the portals which are not required for future mining plans, regrading surface areas, backfilling against highwalls, and regrading some roads. The objective of these activities is to restore the site to topographic configurations and geomorphic conditions similar to the surrounding area. Details of the backfilling and regrading are discussed in this section and in Section 4.3.

2.8.1 Portal Closures

All portals have already been closed with a solid block masonry wall suitable for permanent reclamation. All portals with the exception of the Lila Canyon east and west portals will be backfilled and revegetated during reclamation. Figure 4.6.2-1 shows a typical portal section that has been sealed and backfilled.

The Lila Canyon portals have been sealed with permanent masonry walls immediately back from the opening. The exterior fan facilities have already been removed, and the small pad which remains has been cleared of any mining equipment. Because of the remoteness and inaccessibility of the portals it is proposed that no further backfilling or reclamation take place at this location. There is no means of access to the portals other than foot travel, thus it would be impossible to regrade the small pad which remains. Natural sloughing of rock from above the portals has been noted, and it appears that eventually the portals will be covered by this rock fall.

*From Approved MRP
"No further reclamation
of Lila Portals"*

4.6 PORTAL SEALS

There are twelve mine openings within the Horse Canyon permit area that are sealed. The seals used are suitable for temporary closure or permanent reclamation. These portals are specifically located on Plates II-1A,B.

There are two drill holes in the permit area (Plate II-1B). They will be permanently plugged and capped during reclamation. One is an 8-inch, cased drill hole that during mining operations was used to supply a pressurized source of water to the mine. The drill hole is connected to the mine water system on the surface by a six-inch steel pipeline and isolated with gate valves. Temporary sealing of the drill hole during the mining plan period will be achieved by closing the surface valve.

There is also a drill hole near the South Fan which was installed for the hoist power cable. This drill hole is temporarily sealed and will be plugged during demolition of the South Fan building.

4.6.1 Mining Plan

The main intake portal (south), the manway portal, and the drill hole will remain sealed during the period of time that the mine is inactive. The seals will be repaired on an as-needed basis if they are damaged by geomorphic process or by vandals.

*From Approved MRP
Portals are permanent
sealed*

49. North Fan Portal
50. Woodard Portal (East)
51. Woodard Portal (West)
52. Carlson Portal (East)
53. Carlson Portal (West)
54. Main Intake Portal (South)
55. Manway Portal
56. Rock Tunnel Portal
57. Main Intake Portal (North)
58. South Fan Portal
59. Lila Canyon Portals (East and West)

*Lila Portals Sealed
By Kaiser Prior TO
IPA Submitting MRP*



Facilities 49 - 59 are entries leading into the mine. All have been sealed.

60. Solid Waste Land Fill

The solid waste landfill is used to dispose of non-coal waste generated by the mining operation.

61. Topsoil Storage Area

The topsoil storage area provides a secure storage area for the protection of soil stored for reclamation.

62. Road Junction Refuse Pile

The refuse pile is the area designated for the permanent storage of mine development waste rock.

63. Hillside Refuse Pile

The refuse pile contains mine development waste rock. The structure is pre-law in age.

64. Railroad Bridge

The railroad bridge is a structural steel bridge that spans the Horse Canyon Wash.

*From Approved
MRP List
of Existing
Structures*

**Table 2
Portal Depth, Area and Volume**

<u>Portal</u>	<u>Depth to Seal (ft.)</u>	<u>Area (sq. ft.)</u>	<u>Volume (cu. yd.)</u>
49. North Fan	59	93	203
50. Woodard (E) Right Branch	60	39.00	87
Left Branch	35	25.00	32
51. Woodard (W)	47	60.30	105
52. Carlson (E) Culvert	30	33.18	37
Coal	32	108.00	128
53. Carlson (W) Culvert	42	50.26	78
Coal	12	49.00	22
54. Main Intake (S)	60	192.33	427
55. Manway	60	85.75	191
56. Rock Tunnel	108	98.00	392
57. Main Intake (N)	39	93.00	134
58. South Fan	90	95.50	318
59. Lila Canyon East	N/A	N/A	N/A
West	N/A	N/A	N/A
TOTAL VOLUME			2155

From approved MRP

No intent to backfill Lila portals

BXG, Inc.
Horse Canyon

Exploration Plan
December 11, 1992

EXPLORATION PLAN

Horse Canyon Mine

This coal exploration application, for less than 250 tons of coal extraction, is submitted to address proposed exploration activities at the Horse Canyon Mine. The application is presented in sequential regulation format. The applicable regulation number is listed, followed by the appropriate response:

R645-200

Coal Exploration Application

This coal exploration application is for minor coal exploration and complies with Utah Division of Oil, Gas, and Mining (DOG M) rules R645-200 through R645-203, dated September 11, 1992.

R645-201-100

Coal Exploration within Permit Area

This exploration is not being conducted by the owner or permit holder. Thus, no permit will be modified or revised. The BXG coal exploration permit application will comply with the requirements of R645-201-200.

R645-201-210

Division Approval

This application is being submitted to the DOGM prior to the commencement of coal exploration activities to receive approval for an activity where less than 250 tons of coal would be removed.

R645-201-220

Permit Information

The following information is required for submission of a coal exploration permit for less than 250 tons of coal:

From Approved Exploration Permit

RECEIVED
DEC 11 1992

DIVISION OF
OIL GAS & MINING



Entries Shaded in Blue Must be Entered into the System.

1. Action		A. New Entry <input checked="" type="checkbox"/>		B. Update		2. Activity Code AAA				3. Event Number 6012284			
Date Event Started		Mo	Da	Yr	5. Date Event Finished		Mo	Da	Yr	6. Mine ID 42-00200			
7a. Organization Code (Mine Assignment)		20921		b. Work Group Identifier		01		9. Company Name BXG, INC.					
8a. Organization Code (AR Assignment)		2		b. Work Group Identifier		10. Mine Name Horse Canyon mine							
11. Report Type (check one)		A. First		B. Interim		C. Last		D. Not Applicable <input checked="" type="checkbox"/>		12. Area of Inspection		A. Active Sections	B. Idle Sections
C. Outby Areas	D. Shafts/Slopes	E. Surface Areas (UG)	F. Surface Workings	G. Company Records	H. ATF	I. Impoundments	J. Refuse Piles	K. Major Construction					
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	(1) Shaft/Slope Sinking	(2) Impoundment Construction	(3) Buildings	(4) Dragline/Shovel	(5) Other	L. Misc.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
M. MMU/Pit Number													
Seals @ Portals													
(1) Surface	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)
13. Number of Samples Collected		A. Air Samples		B. Rock Dust Spot		C. Rock Dust Survey		D. Respirable Dust		E. Noise		F. Other	
		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	

14. Impoundments/Refuse Piles				15. Prime Independent Contractor Codes (Major Construction)							
A. Number	B. FHC	C. Configuration									
(1)	-	(1)									
(2)	-	(2)									
(3)	-	(3)									
(4)	-	(4)									
(5)	-	(5)									
(6)	-	(6)									
(7)	-	(7)									
(8)	-	(8)									
(9)	-	(9)									
(10)	-	(10)									
16. Inspection Results				17. Remarks:							
A. This Inspection		B. Previously Issued		Citations		Orders		Safeguards		Other	
				Coal Opr		Ind Con		Coal Opr		Ind Con	
(1) New Issuances											
(2) Terminations/Vacations											
(3) Modifications/Extensions											
(4) Left Pending											
(1) Modifications/Extensions											
(2) Terminations/Vacations											

18. Signature and Card Number of Authorized Representative/Right of Entry Person(s) Responsible for Activity

A.	Card Number
<i>James D. W. Palmer</i>	21686
B.	Card Number
C.	Card Number
J.	Card Number

19. Key Entered By _____ Date _____

- note - all portal entries are re-sealed up. NO further exploration work is being conducted. Fan motor & fans have been removed. NO persons working on site.
Impacted all seals & surface areas:

Mine Operator's Respirable
Dust Sampling Program Survey

U. S. Department of Labor
Mine Safety and Health Administration



1. Date: 6-15-93 2. District: 9 3. Mine ID Number: 42-00100 4. Mine Name: House Canyon mine

Company: BXB, INC. 6. Name (person responsible for calibration and maintenance of approved sampling devices): N/A

7. Name (person qualified to conduct sampling program): N/A 8. Number of Dust Pumps (in use at mine): N/A 9. All Dust Pumps Have Been Calibrated within Last 200 Hours
 Yes N/A No

10. Name(s) of Person(s) Assigned to Check Pumps During Sampling: N/A

11. Results of at Least Six Checks by Soap Film Calibrator

Check	Pump Number													
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
Avg														

6-15-93
mine idle - sealed up.

12. Reverse May Be Used for Remarks

13. Person Conducting Survey: George J. Benson (2-1686)

DOCUMENTATION OF PLAN REVIEWS

MINE NAME: Horse Canyon mine
 MINE ID NO: 42-00100

The following plans were reviewed and found to be adequate or inadequate for current mine conditions as marked below. A memorandum has been written to the district manager justifying why and recommending changes for any plans found to be inadequate.

Mine Idle & Sealed.

PLAN NAME	ADEQUATE	INADEQUATE
Fan Stoppage Plan	N/A <input type="checkbox"/>	<input type="checkbox"/>
Fire Fighting and Evacuation Plan	N/A <input type="checkbox"/>	<input type="checkbox"/>
Plan for Sealing Abandoned Sections	N/A <input type="checkbox"/>	<input type="checkbox"/>
Self-Contained Self-Rescuer Storage	N/A <input type="checkbox"/>	<input type="checkbox"/>
Smoking Program	N/A <input type="checkbox"/>	<input type="checkbox"/>
All Training Plans as Applicable	N/A <input type="checkbox"/>	<input type="checkbox"/>

(Part 48 Subpart A, Subpart B, Part 75, Part 77)

Jerry D. Penner (2-1686)
 Reviewer's Signature and Date

William L. Luff 6-18-93
 Supervisor's Signature and Date

WP(PREVIEW)



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, UT 84145-0155
<http://www.blm.gov>



IN REPLY REFER TO:
3484
SL-066145
(UT-923)

MAY 09 2006

Utah Coal Program
Ms. Pamela Grubaugh-Littig
Division of Oil, Gas and Mining
1594 West North Temple, Street, Suite 1210
Salt Lake City, Utah 84114-5801

Incoming
c/007/0013

Re: Lila Canyon Portals, Federal Coal Lease SL-066145

Dear Ms. Littig:

As per 43 CFR 3484.2 we are to inform you of the adequacy of the closure of the Lila Canyon portals on Federal Coal Lease SL-066145 for permanent abandonment and Phase III bond release. The Bureau of Land Management (BLM) was accompanied by the Division of Oil, Gas and Mining (DOG M) and Utah American Energy (lessee) on a field trip to look at the Lila Canyon portals on May 2, 2006 at the request of the DOGM for the Phase III bond release.

While on the inspection, BLM noted that the two Lila Canyon portals are open from the surface back to the concrete block seals. The fan portal is concrete lined for 25 feet. There are approximately two feet of coal in the roof from the concrete tunnel liner to the block seal. The roof of the entry from the portal liner to the seal is supported with bolts run through horizontal wooden crossbars. The block seal is approximately 80 feet inside the opening. There was a small decrease in the oxygen levels around the seal. The intake portal is partially caved. This seal is approximately 50 feet in by the opening and it is not lined with concrete. The roof in this entry has also been supported by roof bolts through wooden crossbars. Both entries show roof coal spalling.

BLM reviewed the situation after the site inspection and confirmed that the portals are on an existing Federal Coal lease SL-066145. The federal lease requires that all regulations under 43 CFR 3400 be met. Because Phase III bond release is for permanent abandonment of mines, the regulations at 43 CFR 3484.2 must be adhered to. BLM requires that in order to provide for permanent abandonment, to adequately protect the coal resource, and ensure public health and safety, the portals in Lila Canyon must be back filled prior to Phase III bond release. If the lessee would like to propose another equivalent type of closure, BLM will need to review and approve the closure method.

If you have any questions, please feel free to contact Mr. Stan Perkes of my staff at 801-539-4036.

James F. Kohler

James F. Kohler
Chief, Solid Minerals Branch

RECEIVED

MAY 12 2006

Cc: PFO
Lila Canyon Mine File
DIV. OF OIL, GAS & MINING

43 CFR 3484.2
misquoted

reserves mined from the pillars. The drilling of any lateral holes within 50 feet of any outside boundary shall be done in consultation with the authorized officer.

(ii) If the coal in adjoining premises has been worked out, an agreement shall be made with the coal owner prior to the mining of the coal remaining in the Federal barrier pillars which otherwise may be lost. If the water level beyond the pillar is below the operator/lessee's adjacent operations, and all the safety factors have been considered, the operator/lessee, on the written order of the authorized officer, shall mine out and remove all available Federal recoverable coal reserves in such barrier if it can be mined without undue hardship to the operator/lessee; with due consideration for safety; and pursuant to existing mining, reclamation, and environmental laws and rules. Either the operator/lessee or the authorized officer may initiate the proposal to mine coal in a barrier pillar.

(7) The abandonment of a mining area shall require the approval of the authorized officer.

(d) *Performance standards for surface mines.* (1) Pit widths for each coal bed shall be engineered and designed so as to eliminate or minimize the amount of coal fender to be left as a permanent pillar on the spoil side of the pit.

(2) The amount of bottom or rider coal beds wasted in each pit will be minimized consistent with individual mine economics and the coal quality standards that must be maintained by the operation.

(3) The abandonment of a mining area shall require the approval of the authorized officer.

(4) If a coal bed exposed by surface mining or an accumulation of slack coal or combustible waste becomes ignited, the operator/lessee shall immediately take all necessary steps to extinguish the fire and protect the remaining coal.

(5) The authorized officer shall approve the conditions under which a surface mine, or portions thereof, will be temporarily abandoned, pursuant to the rules of this part.

(6) *Barrier or boundary coal.* The operator/lessee shall be encouraged by the authorized officer, in the interest of

conservation of recoverable coal reserves and other resources, to mine coal up to the Federal lease or license boundary line; provided that, the mining is in compliance with existing State and Federal mining, environmental and reclamation laws and rules, the mining does not conflict with existing surface rights, and the mining is carried out without undue hardship to the operator/lessee and with due consideration for safety.

(e) *Performance standards for auger mines.* (1) If auger mining is proposed, the authorized officer shall take into account the percentage of recovery, which in general shall exceed 30 percent, and the probable effect on recovering the remaining adjacent recoverable coal reserves by underground mining. If underground mining from the highwall or outcrop is contemplated in the foreseeable future, auger mining may not be approved if underground mining would ensure greater recovery of the unmined recoverable coal reserves. Where auger mining is authorized, the authorized officer will require a sufficient number and size of pillars at regular intervals along the highwall or outcrop to ensure access to the unmined recoverable coal reserves.

(2) A plan for recovery of recoverable coal reserves by auger methods shall be designed to achieve MER.

(3) Auger mining must comply with the rules of this part, and 30 CFR Chapter VII or applicable requirements of an approved State program.

[47 FR 33179, July 30, 1982; 47 FR 53366, Nov. 26, 1982. Redesignated at 48 FR 41589, Sept. 16, 1983]

§ 3484.2 Completion of operations and permanent abandonment.

(a) Before permanent abandonment of exploration operations, all openings and excavations shall be closed, backfilled, or otherwise permanently dealt with in accordance with sound engineering practices and according to the approved exploration plan. Drill holes, trenches, and other excavations for exploration shall be abandoned in such a manner as to protect the surface and not endanger any present or future underground operation, or any deposit of coal, oil, gas, mineral resources, or ground water. Areas disturbed by ex-

ploration operations will be graded, drained, and revegetated.

(b) Upon permanent abandonment of mining operations, the authorized officer will require that the unmined recoverable coal reserves and other resources be adequately protected. Upon completion of abandonment, the authorized officer will inform the responsible office of the surface managing agency and regulatory authority as to whether the abandonment has been completed in compliance with the rules of this part.

Subpart 3485—Reports, Royalties and Records

§ 3485.1 Reports.

(a) *Exploration reports.* The operator/lessee shall file with the authorized officer the information required in paragraph (b) of this section. Such filing shall be within 30 days after the end of each calendar year and promptly upon completion or suspension of exploration operations, unless otherwise provided in the exploration license or Federal lease, and at such other times as the authorized officer may request.

(b) *Exploration report content.* The exploration report shall contain the following information:

(1) Location(s) and serial number(s) of the federally leased or licensed lands.

(2) Nature of exploration operations.

(3) Number of holes drilled and/or other work performed during the year or report period.

(4) Total footage drilled during the year or other period as determined by the authorized officer.

(5) Map showing all holes drilled, other excavations, and the coal outcrop lines.

(6) Analyses of coal and other pertinent tests obtained from exploration operations during the year.

(7) Copies of all in-hole mechanical or geophysical stratigraphic surveys or logs, such as electric logs, gamma ray-neutron logs, sonic logs, or any other logs. The records shall include a log of all strata penetrated and conditions encountered such as water, quicksand, gas, or any unusual conditions.

(8) Status of reclamation of the disturbed areas.