MINING PLAN DECISION DOCUMENT

Hidden Splendor Resources, Inc.

Horizon Mine

Federal Lease UTU-74804

Carbon County, Utah

U.S. Department of the Interior
Office of Surface Mining Reclamation and Enforcement

Prepared August 2005

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Horizon Mine
Federal Lease UTU-74804
Mining Plan Decision Document

United States Department of the Interior

OFFICE OF SURFACE MINING
RECLAMATION AND ENFORCEMENT
Washington, D.C. 20240
AUG - 1 2005

MEMORANDUM

To: Rebecca W. Watson
Assistant Secretary - Land and Minerals Management

From: Jeffrey D. Jarrett
Director, Office of Surface Mining

Subject: Recommendation for Approval, Without Special Conditions, of the Mining Plan Modification for Federal Lease UTU-74804 at Hidden Splendor Resources, Inc.'s Horizon Mine located in Carbon County, Utah

I recommend approval, without special conditions, of this mining plan modification. My recommendation is based on:

(1) Hidden Splendor Resources, Inc.'s complete permit application package (PAP),

(2) compliance with the National Environmental Policy Act of 1969,

(3) documentation assuring compliance with applicable requirements of other Federal laws, regulations, and executive orders,

(4) comments and recommendations or concurrence of other Federal agencies, and the public,

(5) the findings and recommendations of the Bureau of Land Management regarding the resource recovery and protection plan, the Federal lease requirements, and the Mineral Leasing Act, and

(6) the Utah Department of Natural Resources, Division of Oil, Gas and Mining (UT-DOGM) State Decision Document, Hidden Splendor Resources, Inc., Permit Boundary Expansion, Horizon Mine, C/007/020, and the Utah State program.

The Secretary may approve a Mining Plan for Federal leases under 30 U.S.C. §§ 207(c) and 1273(c). In accordance with 30 CFR Chapter VII, Subchapter D, I find that the proposed mining plan modification will be in compliance with all applicable laws and regulations.

Attachment

United States Department of the Interior

OFFICE OF SURFACE MINING
Reclamation and Enforcement
P.O. Box 46667
Denver, Colorado 80201-6667

UT-0077

IN REPLY REFER TO:
Memorandum

July 13, 2005

To: Jeffery D. Jarrett
Director, Office of Surface Mining

From: Allen D. Klein
Regional Director, Western Region

Subject: Recommendation for Approval, Without Special Conditions, of the Mining Plan Modification for Federal Lease UTU-74804 at Hidden Splendor Resources, Inc.'s Horizon Mine located in Carbon County, Utah

I. Recommendation

I recommend approval, without special conditions, of a mining plan modification for Federal lease UTU-74804 at the Horizon Mine. This is a mining plan modification for an underground coal mine being permitted under the Federal lands program, the approved Utah State program, and the cooperative agreement.

My recommendation to approve the new mining plan is based on:

(l) Hidden Splendor Resources, Inc.'s complete permit application package (PAP),

(2) compliance with the National Environmental Policy Act of 1969,

(3) documentation assuring compliance with applicable requirements of other Federal laws, regulations, and executive orders,

(4) comments and recommendations or concurrence of other Federal agencies, and the public,

(5) the findings and recommendations of the Bureau of Land Management regarding the resource recovery and protection plan, the Federal lease requirements, and the Mineral Leasing Act, and

(6) the Utah Department of Natural Resources, Division of Oil, Gas and Mining (UT-DOGM) State Decision Document, Hidden Splendor Resources, Inc., Permit Boundary Expansion, Horizon Mine, C/007/020, and the Utah State program.

If you concur with this recommendation, please sign the attached memorandum to the Assistant Secretary, Land and Minerals Management.

II. Background

The Horizon underground coal mine is located in Carbon County, Utah, approximately 14 miles northwest of the town of Price, Utah. The mine has been in operation since 1997 and employs 38 people during full production. The life of the currently approved mining operations within the approved permit area is estimated to be approximately three (3) years. The mining operations use continuous miners and industry standard room and pillar mining methods. The average annual production rate is approximately 0.3 million tons from the Hiawatha seam but could reach a maximum production rate of 0.5 million tons per year.

The original mining plan for Federal lease UTU-74804 at the Horizon Mine was approved on July 9, 2001. Since that approval, there have been no other mining plan approvals at the Horizon Mine.

The State's current permit area covers 711 acres.

Approximately 9 surface acres are disturbed within the State's permit area.

A total of 406 acres of Federal coal exist within the State's current permit area.

A total of 1.2 million tons of Federal coal remain within the current permit area.

A total of 40 acres of Federal surface land exist within the State's current permit area.

The post mining land use within the currently approved mining plan area is grazing, logging, mining, and recreation.

III. The Proposed Action

This mining plan action consists of a mining plan modification for Federal lease UTU-74804. Specifically, the mining plan action proposed by Hidden Splendor Resources, Inc. consists of:

> extending coal recovery operations in the Hiawatha seam, in the Beaver Creek Tract, Federal coal lease UTU-74804, northwest of Beaver Creek, within the area covered by Utah State permit C/007/020, in;
>
> Township 13 South, Range 8 East SL Meridian Utah
>
> Section 6, E½SW¼, SE¼SW¼, SE¼SE¼;
> Section 7, N½, N½S½, SE¼SW¼, SE¼SE¼;
> Section 8, SW¼NW¼; NW¼NW¼;
> NE¼NW¼ That Portion Lying Northwest of Beaver Creek;
> SW¼NE ¼ That Portion Lying Northwest of Beaver Creek;

SE¼NW¼ That Portion Lying Northwest of Beaver Creek;
NW¼SW¼ That Portion Lying Northwest of Beaver Creek.

The life of the mining operations is expected to continue for eight (8) years under Utah Permit C/015/032 and this proposed mining plan modification.

The average annual production rate would increase by 0.18 million tons per year and the maximum production rate would not change.

The approved State permit area would increase by 866 acres from its present 711 acres to a new total of 1,577 acres.

Surface disturbance within the approved State permit area will not increase from its present 9 acres.

This mining plan modification will add 866 acres for mining of Federal coal to the approved mining plan area shown on the map included with this decision document.

Approval of this mining plan modification will authorize mining of an additional 4.6 million tons of recoverable Federal coal.

No new acres of Federal surface lands will be included in the mining plan area as a result of this action.

The post mining land use within the permit and mining plan area will not change.

The UT-DOGM has placed two (2) Special Conditions to this permitting action. An explanation of each stipulation and the requirements for their resolution can be found in the State Decision Document made a part of this Mining Plan Decision Document. Hidden Splendor Resources, Inc.'s proposal does not require any additional special conditions to comply with Federal laws.

IV. Review Process

The UT-DOGM reviewed the PAP under the Utah State program, the Federal lands program (30 CFR Chapter VII, Subchapter D), and the Utah cooperative agreement (30 CFR § 944.30). Pursuant to the Utah State program and the cooperative agreement, UT-DOGM approved the permit revision on July 1, 2005.

The Office of Surface Mining Reclamation and Enforcement (OSM) has consulted with other Federal agencies for compliance with the requirements of applicable Federal laws. Their comments and/or concurrences are included in the decision document.

The Bureau of Land Management (BLM) reviewed the Resource Recovery and Protection Plan for compliance with the Mineral Leasing Act of 1920, as amended, and 43 CFR Part 3480. The BLM recommended approval of the mining plan modification in a

memorandum dated February 7, 2005.

The Bureau of Land Management concurred with the proposed mining plan modification with respect to Federally owned surface lands under its management within the mining plan area in a memorandum dated June 1, 2005.

In accordance with the September 24, 1996, Biological Opinion and Conference Report from the U.S. Fish and Wildlife Service (USFWS) to OSM, the UT-DOGM has sought comments from the U.S. Fish and Wildlife Service (USFWS) on threatened and endangered species and has incorporated the necessary reporting requirements into the UT-DOGM, State Decision Document, Hidden Splendor Resources, Inc., Permit Boundary Expansion, Horizon Mine, C/007/020. The USFWS and the UT-DOGM did not develop or recommend any species-specific protective measures, as indicated in the USFWS letter dated April 19, 2005.

The State Historic Preservation Officer concurred with the proposed mining plan in a letter dated June 10, 2005.

The proposed area of mining plan approval is not unsuitable for mining according to section 522(b) of SMCRA.

The mining plan modification area is not on any Federal lands within the boundaries of any national forest.

I have determined that approval of this mining plan modification will not have a significant impact on the quality of the human environment. The Environmental Assessment prepared by the Bureau of Land Management entitled, *Federal Coal Lease-By-Application UTU-74804 Beaver Creek Tract*, and other environmental documents noted in the Finding of No Significant Impact (FONSI), describe the impacts that may result from approval of this mining plan modification and its alternatives. The FONSI and supporting environmental analyses are included in this decision document.

OSM's review of the proposed action did not identify any issues that required resolution via the addition of special conditions to the mining plan approval.

Publication of a notice in the *Sun Advocate* newspaper notified the public of the availability of the administratively complete PAP for review. The last publication date was August 17, 2004. A request for an Informal Conference was received during the public comment period. An Informal Conference was held on December 23, 2004, and Hidden Splendor Resources, Inc. was directed to address several permit deficiencies regarding hydrology, subsidence, and bonding.

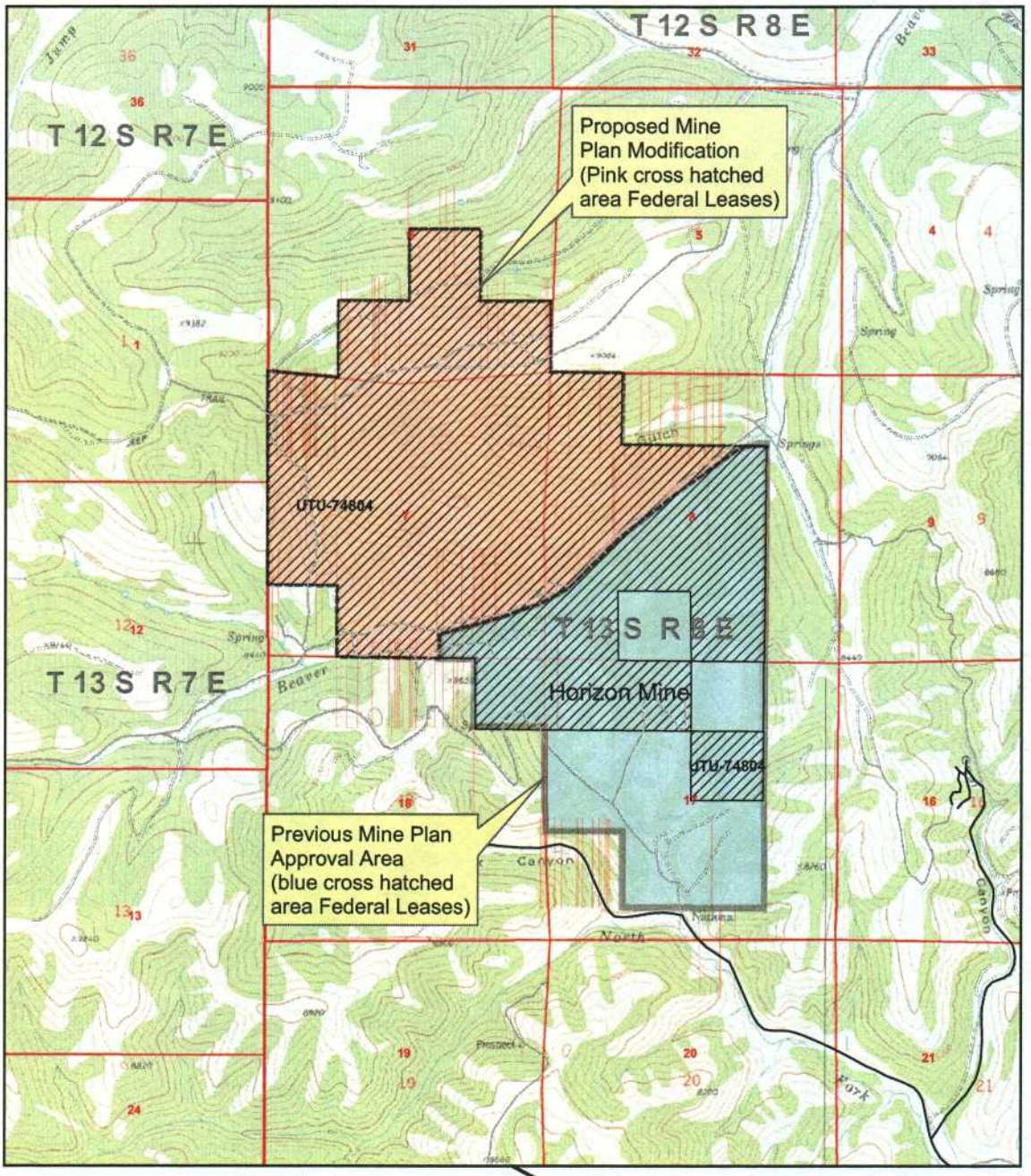
The UT-DOGM determined that a reclamation bond for $342,000.00 is adequate for the Utah Permit C/007/020 associated with this new mining plan.

A chronology of events related to the processing of the PAP and this mining plan decision is included with the decision document. The information in the PAP, and other information identified in the decision document, has been reviewed by UT-DOGM staff in coordination with the OSM Federal Lands State Coordinator.

OSM's administrative record of this new mining plan consists of the following:

- the PAP submitted by Hidden Splendor Resources, Inc., and updated through June 30, 2005,
- UT-DOGM's State Decision Document, Hidden Splendor Resources, Inc., Permit Boundary Expansion, Horizon Mine, C/007/020 provided to OSM under the cooperative agreement,
- the Environmental Assessment entitled, *Federal Coal Lease-By-Application UTU-74804 Beaver Creek Tract*,
- the FONSI of the proposed action and alternatives prepared by OSM,
- other documents prepared by UT-DOGM, and
- correspondence developed during the review of the PAP.

Attachment



Horizon Mine
Mining Plan Approval Area

ACT0070020

Carbon County, Utah

March 2005

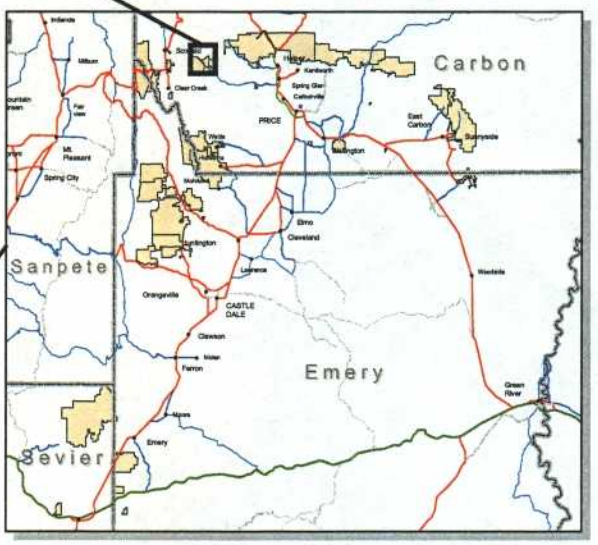
Township 12 South Range 7 & 8 East
Township 13 South Range 7 & 8 East

File: N:/gis/coal/coalareamaps/C0070020Fed.pdf

0 0.125 0.25 0.5 Miles

1:24,000

State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining



Locator Map

CHRONOLOGY

Crandall Canyon Mine
Federal Lease UTU-74804
Mining Plan Decision Document

DATE	EVENT
May 21, 2004	Hidden Splendor Resources, Inc. submitted the permit application package (PAP) under the approved Utah State Program to the Utah Division of Oil, Gas, and Minerals (UT-DOGM) for a permit revision for the Skyline Mine.
July 9, 2004	UT-DOGM determined that the PAP was administratively complete for public review and comment.
July 26, 2004	The Office of Surface Mining Reclamation and Enforcement (OSM) received the PAP.
August 17, 2004	Hidden Splendor Resources, Inc. published in the *Sun Advocate* the last consecutive notice of intent to add the remaining portion of the Beaver Creek Lease to the Horizon mine.
February 7, 2005	The Bureau of Land Management provided its findings and recommendations on the approval of the mining plan, with respect to the Resource Recovery and Protection Plan.
April 19, 2005	The U.S. Fish and Wildlife Service provided its final consultation comments on the mining plan.
June 1, 2005	The Federal land management agency, Bureau of Land Management, provided its concurrence with the approval of the mining plan with respect to the management of Federally owned surface lands under their control.
June 10, 2005	The State Historic Preservation Office provided its comments on the mining plan.
July 1, 2005	UT-DOGM approved the PAP.
July 13, 2005	OSM's Western Regional Coordinating Center recommended to the Director, OSM, that the mining plan action be approved.

U.S. DEPARTMENT OF THE INTERIOR
OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT
FINDING OF NO SIGNIFICANT IMPACT
FOR
Horizon Mine
Federal Coal Lease UTU-74804
Mining Plan Decision Document

1. Introduction

Hidden Splendor Resources, Inc. submitted a permit application package (PAP) for a permit revision for the Horizon Mine to the Utah Department of Natural Resources, Division of Oil, Gas, and Ming (UT-DOGM). The PAP proposed extending underground mining operations into approximately 866 acres of Federal lease UTU-74804. Under the Mineral Leasing Act of 1920, the Assistant Secretary, Land and Minerals Management, must approve, approve with conditions, or disapprove the mining plan for Federal lease UTU-74804. Pursuant to 30 CFR Part 746, the Office of Surface Mining (OSM) is recommending approval of the mining plan action without special conditions.

2. Statement of Environmental Significance of the Proposed Action

The undersigned person has determined that the above-named proposed action would not have a significant impact on the quality of the human environment under section 102(2)(C) of the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. 4332(2)(C), and therefore, an Environmental Impact Statement is not required.

3. Reasons

This finding of no significant impact is based on the attached Bureau of Land Management prepared Environmental Assessment, *Federal Coal Lease-By-Application UTU-74804 Beaver Creek Tract*, which has been independently evaluated by OSM and determined to assess the environmental impacts of the proposed action adequately and accurately and to provide sufficient evidence and analysis for this finding of no significant impact. OSM takes full responsibility for the accuracy, scope, and content of the attached environmental assessment.

Ranvir Singh
Chief, Northwest Branch

July 06, 2005
Date

UT 77

ENVIRONMENTAL ASSESSMENT

FEDERAL COAL LEASE BY APPLICATION
UTU-74804
BEAVER CREEK TRACT

97-09-29-03

Prepared for

U. S. Department of the Interior
Bureau of Land Management
Price River Resource Area
Price, Utah - Carbon County
(801) 637-4584

and

U. S. Department of the Interior
Office of Surface Mining Reclamation and Enforcement
Western Regional Coordination Center

APPLICANT: HORIZON COAL CORPORATION
P.O. BOX 599
HELPER, UT 84526
(801) 472-3994

PREPARED BY: EARTHFAX ENGINEERING, INC.
7324 SO. UNION PARK AVENUE
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(801) 561-1555

ENVIRONMENTAL ASSESSMENT DATA SHEET

APPLICANT: HORIZON COAL CORPORATION
P.O. BOX 599
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PROJECT: Beaver Creek Tract
UTU-74804

BLM OFFICE: Price River Resource Area
Price, Utah - Carbon County
(801) 636-3600

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1.0 INTRODUCTION

1.1 EXISTING MINING OPERATION

The proposed Horizon Lease Tract area is located approximately 15 miles northwest of Price, Utah in Carbon County. The surface facilities under construction for the Horizon No. 1 Mine are located adjacent to the Consumers Canyon Road approximately 14 miles northwest of Price (Plate 2). The mine permit area covers 317.5 acres, with 9.15 acres designated as disturbed.

The Horizon Coal Corporation (HCC) plans to recover fee coal during 1997 and 1998 from lands leased from Hidden Splendor Resources and a federal underground right-of-way lease (UTU-73227). The right-of-way lease (17.5 acres) connects the two blocks of coal leased from Hidden Splendor Resources.

HCC proposes to mine the coal from the lands within the Horizon Lease Tract as a logical extension of the current mining operations. The Horizon Tract is comprised of currently unleased federal lands, some of which were included in the terminated Federal Coal Lease SL 060311. The United States owns the coal deposits under the described lands and the appropriate rights to explore and mine the coal.

Economic coal reserves have been identified in the Castlegate "A" and Hiawatha Coal Seams. Horizon will begin underground mining of fee coal in the Hiawatha Seam, but when feasible intends to mine the Castlegate "A" Seam in the future.

Horizon Coal Corporation is the only coal operation presently owned by K & K Enterprises. However, the owners of K & K Enterprises share ownership in other coal operations in the United States.

Other adjacent unleased federal coal lands which are accessible only through the lands described above may ultimately be developed depending on the severity of the fault structure that separates the tracts The fault structure can be explored by underground workings in the lands requested to be leased.

1.2 AGENCY ROLES AND RESPONSIBILITIES

The proposed coal leasing and potential related future mining operations have been designed to effect full compliance with all applicable Federal, State, and local laws and regulations. Specifically, coal lease acquisition and management must comply with applicable land management regulations and guidelines of the BLM, and any mining plan application that may result from BLM's leasing decision must adhere to applicable regulations and guidelines set forth by Utah Division of Oil, Gas and Mining (UDOGM) and Office of Surface Mining (OSM).

Bureau of Land Management

The BLM has the responsibility and authority to determine whether or not mineral leases are to be issued for Federal lands under the BLM's jurisdiction. Under applicable NEPA provisions, prior to granting leases, an evaluation of the potential effects of the proposed development

on the environment of the affected area(s) must be completed. As the primary responsible Federal land management agency for those Federal lands which will be affected by the proposed mine, the BLM will utilize this EA as a basis for the required determination on the lease application. The BLM will select a Preferred Alternative and determine whether or not the Preferred Alternative will result in unnecessary or undue degradation of potentially affected Federal lands consistent with applicable provisions of Federal Land Policy and Management Act (FLPMA). The BLM will also review the lease application and associated development plans in the context of the existing Management Framework Plan (MFP). Lease approvals may be conditioned on coordination with other resource values and land uses and appropriate rehabilitation of disturbed lands.

Office of Surface Mining

The OSM has jurisdiction over any mining plan application that may result from BLM's leasing decision. As a result, OSM is participating in the preparation of this EA as a formal cooperating agency.

The Surface Mining Control and Reclamation Act of 1977 (SMCRA) give OSM primary responsibility to administer programs that regulate surface coal mining operations and the surface effects of underground coal mining operations. In January 1981, pursuant to Section 503 of SMCRA, the UDOGM developed, and the Secretary of the Interior approved, a permanent program authorizing UDOGM to regulate surface coal mining operation and surface effects of underground coal mining on non-Federal lands within the State of Utah. In March 1987, pursuant to Section 523 (c) of SMCRA, UDOGM entered into a cooperative agreement with the Secretary of the Interior authorizing UDOGM to regulate surface coal mining operations and the surface effects of underground coal mining on Federal lands within the State.

Pursuant to the cooperative agreement, Federal coal lease holders in Utah must submit permit application packages to OSM and UDOGM for proposed mining and reclamation operations on Federal lands in the State. UDOGM reviews the packages to assure that the permit application complies with the permitting requirements and that the coal mining operation will meet the performance standards of the approved permanent program. If it does comply, UDOGM issues the applicant a permit to conduct coal mining operations. OSM, BLM, and other Federal agencies review the permit application package to assure that it complies with the terms of the coal lease, the Mineral Leasing Act of 1920, NEPA, and other Federal laws and their attendant regulations. OSM recommends approval, approval with conditions, or disapproval of the mining plan to the Assistant Secretary, Land and Minerals Management. Before the mining plan can be approved, BLM and the surface management agency (if other than the BLM) must concur with this recommendation.

UDOGM enforces applicable performance standards and permit requirements during the mine's operation and has primary authority in environmental emergencies. OSM retains oversight responsibility for this enforcement. BLM has authority in those emergency situations where UDOGM or OSM inspectors cannot act before significant environmental harm or damage occurs.

Other Jurisdictional Agencies

For any related future mining operations, Horizon will also comply with applicable regulatory requirements relating to the following designated activities/structures under the authority of the noted jurisdictional agencies.

Federal Agencies

Environmental Protection Agency (EPA) - Compliance with applicable air, water, and hazardous materials requirements under programs administered by the Utah Division of Air Quality (UDAQ) and Utah Division of Water Quality (UDWQ)

U.S. Army Corps of Engineers (COE) - Compliance with Section 404 of the Clean Water Act as it relates to the planned construction and stream realignment.

U.S. Commerce Department, Bureau of Alcohol, Tobacco, and Firearms - Permits for procurement, transportation, storage, and use of explosives.

Mine Safety and Health Administration (MSHA) - Compliance with applicable requirements relating to coal processing waste dams; impoundments and sedimentation ponds; plans for underground disposal of development waste, coal processing waste, or excess spoil; reclamation and closure of mine openings; any discharges into underground mines; mining within 500 feet of an active underground mine; and plans for extinguishing coal mine waste fires.

U.S. Fish and Wildlife Service (USFWS) - Compliance under the Endangered Species Act, Bald Eagle Protection Act, and Migratory Bird Act.

State Agencies

Utah Division of Oil, Gas and Mining (UDOGM) - Compliance under the State Utah Coal Mining Rules.

Utah Division of Air Quality (UDAQ) - Compliance with applicable air quality permitting and operational requirements.

Utah Division of Water Quality (UDWQ) - Compliance with applicable water discharge permitting, operational, monitoring, and reporting requirements.

Utah State Engineer - Compliance with well and pond design and construction requirements and water rights requirements.

Utah Department of Transportation (UDOT) - Highway modification and driveway permits.

Utah Division of Wildlife Resources (UDWR) - Compliance with applicable wildlife protection measures.

Utah State Historic Preservation Office (SHPO) - Compliance with applicable provisions of the National Historic Preservation Act.

Local Agencies

Carbon County - Compliance with applicable requirements for special use, building and water and sewer permits.

HCC has either applied for and received, or approvals are pending for all required permits and approvals.

1.3 CONFORMANCE WITH LAND USE DESIGNATIONS AND PLANS

In accordance with applicable provisions of 43 CFR 1600, the BLM has developed an implemented a Management Framework Plan (MFP) for the Price River Resource Area which addresses both multiple use objectives and resource specific objectives for protection and management of those Federal lands under the BLM's jurisdiction and authority. The following program description summarizes the Mineral Management Decisions presented in the MFP:

"The minerals program provides for the exploration and disposal of minerals by lease, license, or permit; coordination for minerals development with other land uses; and the assurance of rehabilitation of mined land ..."

The proposed action of coal leasing is consistent with both the general minerals management objectives as stated and specific multiple use objectives and decisions as outlined in the MFP.

The multiple use objectives and decisions for specific management categories (range, recreation, watershed, wildlife, and cultural) include limitations relative to the nature and extent of allowable disturbance. Relative to coal leasing, actual physical disturbance would be limited to that disturbance which would result from mine development, operation, and reclamation as reasonably foreseeable related future actions. Specific control, reclamation, and monitoring provisions included in the mining and reclamation plans reviewed and approved by UDOGM with input form the BLM effectively address compliance with all applicable limitations imposed by the BLM's multiple use objectives and decisions as outlined in the MFP.

1.4 ISSUES AND CONCERNS

Issuance of the proposed coal lease and related development and operation of the planned mine offer a number of important benefits specifically including the following:

Combined adjacent minable coal reserves with existing leased coal reserves as a logical mining unit assuring effective utilization and recovery of the available resource.

Assures continued availability of a valuable energy resource for industry and to generate electricity.

Facilitates effective reclamation, through a comprehensive reclamation program, of both new disturbance and previously disturbed areas.

Provides stable jobs for approximately 45 employees.

Support Federal, State and local governments through payments of property, sales, excise, fuel, and other taxes.

Support the National, State, and local economies through direct purchase of equipment, materials, supplies, services, and royalty payments.

2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 PROPOSED ACTION

The proposed action is the approval and issuance of a coal lease ("lease") for approximately 1,280 acres of Federal lands administered by the BLM pursuant to a lease application by Horizon Coal Corporation (August 10, 1995).

Lease Description:

Township 13 South, Range 8 East, Salt Lake Meridian, Utah

Section 6: SE1/4SW1/4, S1/2SE1/4, NW1/4SE1/4;
Section 7: Lots 1 - 3, E1/2, E1/2W1/2;
Section 8: NW1/4NW1/4, S1/2NW1/4, SW1/4NE1/4, N1/2SW1/4, W1/2SE1/4, SW1/4SW1/4;
Section 17: N1/2NW1/4, SW1/4NE1/4;
Section 18: NE1/4NE1/4.

Refer to the Horizon Lease Tract application or Attachment D for drawings (HT3, 4 and 5, Block A-B) of the above described lease.

Leasing would provide both surface access for necessary mining related activities; and the rights to extract economically recoverable coal reserves. The coal would be recovered consistent with the terms of the BLM lease agreement, the approved Mining and Reclamation Permit (M&RP), Utah Division of Oil, Gas and Mining, and the approved mining plan, Assistant Secretary for Lands and Minerals.

2.2 PURPOSE AND NEED

The purpose and need for the proposed action are to make the coal resources available for development, extraction, and beneficial use consistent with applicable provision of the Mineral Leasing Act of 1920 as amended by Sections 2 and 3 of the Coal Leasing Amendments Act of 1976; the FLPMA of 1976; BLM regulations and the land use planning and management determinations presented in the Price River Management Framework Plan (1983).

Horizon considers the subsequent development of the requested federal lease to be necessary to the continued operation of the Horizon No. 1 Mine. Horizon presently retains access and extraction rights to coal resources which will provide coal productions for approximately one year. The "lease" would facilitate the operation of the mine for an additional 10 to 15 years, while providing a natural continuation of the mining unit. Leasing of this tract would assist in conserving the coal resource by avoiding a bypass. In addition the acquisition of the lease by Horizon would provide access for future development of coal reserves without requiring additional surface facility disturbance.

The current mine facilities are confined to Portal and Jewkes Canyons. Expansion of these facilities is possible, however the expansion would be within these canyons and would not extend into the "lease" area.

Environmental assessments of the area were performed in 1981 (Attachment A) and 1995 (Attachment B). The 1995 environmental assessment lists the unleased tract of Federal coal as the "Beaver Creek" tract.

2.3 ALTERNATIVE ACTION

The alternatives to issuance of the lease as described in this submittal would be as follows:

No Action

Under this alternative the requested coal lease would not be issued. This would result in the potential loss and sterilization of reserves since mining would then bypass these reserves and potential future access would be lost.

The only economical access to this reserve is through portals located on fee lands in Portal Canyon, where the Hiawatha Coal Seam nearly outcrops. The reserve block is bounded by the Fish Creek Graben to the south, the B-C Fault to the north, a stream channel system to the west and old mine workings to the east. No other economic point of access exists.

Should the coal lease not be issued, Horizon currently has coal reserves for one year of coal production.

Reduction in Size of Lease

A reduction in the area and total reserves under the requested lease was considered as a possible alternative to the proposed action. This alternative was eliminated because the requested lease block is based on natural geologic boundaries that support a logical sequence of mine development and recovery of available coal reserves. Reduction of the lease area would offer no advantage relative to reduction of potential mining-related impacts and would result in potential loss and sterilization of reserves since mining would then bypass these reserves and potential future access could be lost.

Expanding the Lease Area

The lease block is based on natural geologic boundaries that supports a logical sequence of mine development and recovery of available coal reserves. Data gained by mining the lease block may enable future economic crossing of the geologic boundaries to the north or west. Currently mining costs projected to cross the geologic boundaries cannot justify expansion of the lease area.

2.4 COAL MINE DEVELOPMENT AND PRODUCTION

Socio-Economics

With the acquisition of the "lease" the life of the mine will be extended for 10 to 15 years. Associated employment and economic benefits for the surrounding counties will be extended with the life of the mining operation. Horizon plans to hire and utilize employees from the Utah, Carbon and Emery County areas.

General Project Scope and Schedule

The Horizon Mine facilities are being constructed during 1997 in the adjoining Portal and Jewkes Canyons along Consumers Canyon Road. The mine facilities are being constructed on private lands leased from Hidden Splendor Resources. Mining of fee coal is due to begin during the Fall of 1997.

A BLM right-of-way was requested and granted (April 24, 1996) to connect two blocks of fee coal owned by Hidden Splendor Resources. The fee coal along with the BLM right-of-way lease should provide approximately one year of production, thus the necessity for the additional coal "lease".

Mine Construction and Development

No mine construction or development listed below is on the requested "lease". This information is provide for background purposes only.

The facilities in Portal and Jewkes Canyon will consist of the following structures:

3 Portals - Fan, Manway and Beltway
3 - 4 Trailers for use as offices, bath house, supply storage, etc.
Sediment Pond
Conveyor
Coal Stockpile
Substation
Storage Tanks - Fuels and Water
Pad Area for Equipment and Supply Storage, Parking

Mining and Related Operations

Coal will be extracted using continuous miners (2), loaded into shuttle cars, and hauled to an underground feeder breaker. The feeder breaker will reduce the coal to an appropriate size, after which the coal will be fed onto a conveyor to be carried to the surface. A crusher on the surface will further reduce the size of the coal, whereupon the coal will be transferred by conveyor to the raw coal storage pile. Coal from the storage pile will be loaded onto coal trucks.

The coal will be hauled by truck to the Wildcat Loadout and transported from there by train to various destinations and customers. No additional related operations are planned for the immediate mine area except as described above.

The coal from the Horizon No. 1 Mine will be sold on a run-of-mine basis, not washed. A minimal amount of rocky or high ash coal is expected to be produced. This material will be shipped to the coal terminal and blended with higher quality coal to be sold. Production/resource recovery is expected to be approximately 50,000 tons per month initially. A summary of anticipated coal reserves can be found in Attachment D.

The waste rock stowed underground will be backfilled into dead-end panels primarily near the outer extent of the area to be mined. Backfilling will occur prior to second mining to ensure that adequate roof support exists in the area.

2.5 SUBSIDENCE CONTROL AND MONITORING PLAN

The subsidence monitoring network will consist of permanent survey monuments located outside of the anticipated area of subsidence and a series of monitoring stations within the potential subsidence zone. The monitoring stations will be steel re-bar with aluminum caps set so that weather, frost heave, or livestock will not disturb them. Stations will be installed above the active mining area, as each new area is approached.

Multiple readings will be taken where necessary to ensure accuracy. Monitoring of the subsidence stations will be performed on an annual basis for a period of two years following final cessation of mining operations in a specific area. Reports of monitoring will be sent to the UDOGM on a yearly basis.

Springs Monitoring Plan

Each of the springs to be monitored issue from portions of the Blackhawk Formation which are stratigraphically higher than the Hiawatha coal seam. Therefore, data collected from the springs will allow quantification of potential impacts to perched aquifers within the permit and adjacent areas of both the initial permit term and future permit terms. Spring SP-2 is within approximately 400 feet of the initial planned workings and in an area which overlies future workings. Springs SP-1, SP-4, and GV-70 are in an area which lies within 200 to 700 feet of future workings. These distances are all within the zone of potential subsidence. Hence, data collected from these springs will assist in determining the impacts of subsidence on the groundwater resources of the Blackhawk Formation.

Springs SP-9 and 2-6-W lie approximately 1800 feet and 4900 feet southwest of the future mine workings. As a result, they are in areas which will not likely be impacted by subsidence effects. Hence, these springs will be monitored to provide background data on groundwater conditions within the Blackhawk Formation in areas that will not likely be impacted by mining. Spring locations are noted on Plate 7-1.

Stations SS-3, SS-5, SS-7, SS-8, SS-10, and SS-11 will be monitored once each calendar quarter (as access conditions permit) during the operational and reclamation periods. Stations SS-3 and SS-5 are located on Jewkes Creek down- and upstream from the surface facilities,

respectively, and will provide information regarding the impacts of surface disturbances. Stations SS-7 and SS-8 are located on Beaver Creek up- and downstream from potential future expansions of the mine. Similarly, stations SS-10 and SS-11 are located in tributaries to Jump Creek and Beaver Creek, respectively, downstream from potential future expansions of the mine. Through the collection of flow and water-quality data up- and downstream from underground mining activities, these latter four stations will provide information on the potential impacts of underground mining activities (e.g. increases or decreases in flow and water quality due to subsidence and other potential interruptions to the hydrologic regime) on surface hydrologic conditions.

Flow data collected from stations SS-7 and SS-8 will be compared to determine variations in flows up- and downstream from the mine workings. It should be noted that wide variations have been noted historically between these stations, with flows increasing and decreasing in the downstream direction. If the data suggest that abnormal variations in flow are occurring between stations SS-7 and SS-8, additional seepage evaluations will be conducted along Beaver Creek. Furthermore, station SS-12 will be established for the collection of flow data from Beaver Creek to further evaluate flow conditions in the creek as mining progresses to the northwest. These flow data will be collected on a quarterly basis during normal monitoring periods.

2.6 RECLAMATION OF MINING DISTURBANCES

Upon permanent cessation of operations, permanent reclamation will be performed in the disturbed area south of the "lease" area. All surface equipment, structures and facilities (other than sedimentation control) associated with the operation will be removed.

When no longer needed for mining operations, all entry ways or other openings to the surface from the underground mine will be sealed and backfilled. Prior to the sealing of the mine openings, all combustible materials will be removed from the portal area. The permanent closures will be constructed to prevent access to mine workings by people, livestock, and wildlife. Potential surface drainage will also be kept from entering the sealed entries.

All existing structures and roads which lie within the disturbed area boundary will be removed. Nonhazardous and nonflammable materials, such as concrete and steel, will be used as backfill in areas such as the sediment pond, highwalls, and cut slopes.

Diversions that are not planned for permanent use following reclamation will be removed during the backfilling and regrading operations. The area will be recontoured to drain to the final reclamation channel.

A loader will be used to load topsoil into haul trucks at the topsoil stockpiles. The haul trucks will be used to deliver the topsoil from the topsoil stockpile to the area where the dozer and backhoe will be working. The dozer will be used to evenly distribute the topsoil over the area.

Following redistribution of topsoil, the site will be reseeded, fertilized, and mulched.

Depending upon the season of the year and weather conditions the procedures listed above may be completed as one operation from start to finish or may be completed area by area to

control erosion and provide drainage. Erosion control matting and sediment controls will be place throughout the reclamation process as they are needed.

All exposed coal outcrops resulting from this operation as well as toxic and acid-forming materials will be covered with a minimum of 4 feet of non-combustible, non-acid, non-toxic material during backfilling and grading. Similarly, any underground development waste that remains in temporary storage on the surface at the time of reclamation will be placed against an adjacent faceup or cut slope and covered with at least 4 feet of suitable backfill.

The revegetation plan has been designed to assure that all disturbed lands will be returned to productive self-perpetuating plant communities once the mining operation has been completed. The plan calls for temporary revegetation of disturbed areas where possible during the mining operation as well as permanent reclamation of all areas once mining has ceased.

Reclamation is particularly important as a means of controlling erosion and restoring disturbed areas to a productive state. To assist in meeting these desirable ends, the following aspects have been incorporated into the reclamation plan: (1) planting a diverse mixture of native grasses, forbs, and (where appropriate) woody species, (2) using seedling stock rather than relying solely on seeds for trees or shrubs, and (3) planting vegetation to create an edge effect by clumping selected shrub or tree species.

2.7 PLANNED MITIGATION MEASURES

Cultural Resource Mitigation

Should cultural or historical artifacts be discovered, the appropriate regulatory agencies will be notified and the site will be protected from further disturbance until it can be examined by authorized personnel.

Mitigation and Management Plans

The small surface disturbance associated with the mining facilities (south of "lease" area) will be mitigated upon completion of the project by reclaiming the disturbed sites. The revegetation plant mix includes herbaceous and woody species that are adapted to on-site conditions and are of known value to wildlife for cover and forage.

Habitat loss associated with disruption or pollution of North Fork Gordon Creek (Consumers Canyon) will be controlled through the mine's runoff- and sediment-control plan. Impacts to Beaver Creek should not increase when mining is introduced to the lease area, since no surface disturbance will be associated with the "lease". The "lease" area will be accessed on existing private roads for well monitoring and the collection of seep and spring water data.

Impacts to wildlife will be minimized by mandatory employee awareness programs which will inform mine personnel of especially sensitive periods (e.g., the nesting season for raptors, fawning season for deer) or habitats in the vicinity of the mine area. Road kills will be minimized through the awareness program, speed limits, and game crossing signs. Mine personnel will be strongly discouraged from leaving the disturbed area boundary during working hours except as required to fulfill permitting requirements.

Horizon will attempt to mitigate impacts with the following procedures:

1. Controlled speed limits on roads to protect wildlife. Personnel will restrict travel to exiting roads.

2. Wildlife habitats will be reclaimed with beneficial plant species. Native plants and berry producing shrubs will be planted for avian species.

3. Pesticides will be avoided on the mine site.

4. All toxic materials will be fenced to keep wildlife out, and taken to a disposal site.

5. Raptors and their offspring will be protected from disturbance and subsidence. Electrical and other transmission lines will be designed in accordance with the regulatory guidelines.

6. Subsidence, surface water and groundwater will be monitored as described in the Horizon's M&RP.

A wildlife monitoring program will be conducted throughout the operational life of the mine as required by regulatory agencies. The monitoring will utilize the services of an environmental specialist or as necessary, professional consultants. The program will also ensure that sensitive or critical use areas remain undisturbed by future activities and permit monitoring of reclamation efforts upon completion of mining activities. Any threatened or endangered species observed will be reported to the UDOGM and UDWR. The monitoring program will immediately be initiated upon opening the Horizon Mine.

Mitigation for impacts is discussed more extensively in the UDOGM approved Horizon M&RP ACT 007/020.

3.0 AFFECTED ENVIRONMENT

3.1 EXISTING ENVIRONMENT

Topography, Minerals

Topographically, the area consists of steep slopes on the face of the plateau and along drainages, flat surfaces or terraces or flood plains in valley bottoms and relatively gentle terrain on top of the plateau. The area is underlain by nearly flat sedimentary rocks of the Tertio-Cretaceous North Horn Formation and the Lower Tertiary Flagstaff Formation.

Coal is the primary mined mineral in the immediate "lease" area.

Geology

The Horizon Mine is located in the northern portion of the Wasatch Plateau. The Wasatch Plateau is the northwestern outlier of the eroded San Rafael Swell. The plateau dips westward producing a great monoclinal fold that is interrupted by faults in the borderlands of the Great Basin. Superimposed over the region are numerous structural features including anticlines, synclines, faults and igneous intrusions.

The Wasatch Plateau is comprised primarily of Cretaceous to Tertiary age sedimentary rocks. These rocks are principally siliciclastic of both continental and marine origin. Coal seams of economic significance occur in the Cretaceous sediment.

The coal beds of interest lie within the Upper Cretaceous Mesaverde Group. This group is divided into four stratigraphic units and include in ascending order: The Star Point Sandstone, the Blackhawk Formation, the Castlegate Sandstone, and the Price River Formation. The minable seams are found in the lower 350 feet of the Blackhawk Formation. Plates 6-2 and 6-3 (Horizon M&RP) are geologic cross sections that illustrate the stratigraphic relationships of the Blackhawk and Star Point Formations and the mappable coal beds present in the Horizon Mine area.

Star Point Sandstone. The Star Point Sandstone is the oldest stratigraphic unit exposed in the area. It is the basal unit of the Mesaverde Group and is approximately 440 feet thick. The formation contains the Panther, Storrs, and Spring Canyon Sandstone Members which consist of coarsening upward littoral sequences of white to light gray, fine to medium grained, tight, quartzose sandstone (Blanchard 1981). The Star Point Formation overlies and intertongues with the marine Mancos Shale. The Star Point is the lowest cliff-forming unit over most of the east side of the Wasatch Plateau.

Blackhawk Formation. The Blackhawk Formation measures approximately 900 feet thick in the Gordon Creek area and 1,200 feet thick in the Beaver Creek area. The formation consists of interbedded fluvial and marine sandstone, siltstone, and shale. The Blackhawk Formation conformably overlies the Star Point Sandstone and the boundary between the two formations is sharp; the massive Spring Canyon Sandstone member of the Star Point Sandstone is overlain by an easily erodible, shaley sandstone.

A total of eight coal seams can be identified in the Gordon Creek region. Four of the eight seams are present in the mine area and outcrop on the walls of the North Fork of Gordon Creek Canyon, Coal Canyon, and Bryner Canyon. Weathering, burning and vegetation obscures the majority of coal outcrops of the Hiawatha, Gordon, Castlegate "A", and Bob Wright seams. Only the Hiawatha and Castlegate "A" seams have been economically mined in the area. The Hiawatha seam marks the base of the Blackhawk Formation. The Castlegate "A" seam overlies the Aberdeen Sandstone. The Aberdeen is a marine sandstone sequence that coarsens upward, and is similar in character to the Star Point Sandstone. The Aberdeen measures over 120 feet at Price Canyon (Sec. 12, T13S, R9E) and thins to the west pinching out within the lease boundary.

In the area, the Blackhawk Formation is the principal surficial bedrock unit. The Blackhawk is disconformably overlain by the massive, coarse grained, fluvial Castlegate Sandstone.

Castlegate Sandstone. The Castlegate Sandstone is exposed in the central and northeastern portion of the permit area. The formations consists of a white to gray, coarse grained to conglomeratic fluvial sandstone. Exposures of the Castlegate Sandstone typically form cliffs to steep slopes. The Castlegate Sandstone is approximately 300 feet thick in the Gordon Creek area.

Price River Formation. The Price River Formation occurs in the northeastern portion of the permit area. The Price River is also a fluvial deposit and contains gray to white silty sandstones with interbedded subordinate shale and conglomerate. The formation typically forms ledges and slopes. The Price River formation ranges from 600 to 1,000 feet in thickness.

Unconsolidated Deposits. Unconsolidated deposits composed of silt and fine grained sand, alluvial sediments and talus debris occur along valley floors and at the base of steep slopes. The thickness of these sediments is variable. In the Horizon Mine area, the thickest alluvial deposits occur along Beaver Creek. Based on field observations, the alluvial sediments appear to exceed 10 feet in thickness.

Igneous Dikes. Several igneous dikes have been reported in area mines including the Beaver Creek Coal Mines #2 and #3. The dikes are reported to be Miocene age and are a mica peridotite (Tingey, 1986). The dikes are typically associated with faults that bisect the area and trend east-west to northwest-southeast.

Both the lease and permit areas are faulted. Two major fault zones affect the area: the North Gordon and Fish Creek fault zones. The North Gordon fault zone measures three miles wide and five miles in length. The Fish Creek fault zone averages two miles wide and enters from the northwest. Both the fault zones pass through the lease area.

The two major fault trends are the N60 degree west trending faults (Range N50-75W) associated with the Fish Creek fault zone, and the N-S trending faults associated with the North Gordon fault zone. Sympathetic faulting also occurs within the mine area. Displacements of the faults in the mine area are variable ranging from a few feet to as much as 200 feet.

Faulting may also effect the locations of springs and seeps in the area. The faulting and fracturing of the bedrock in the area may provide open conduits for surface water to enter into the subsurface or allow groundwater movement between aquifers.

A structural feature which influences the area is the Beaver Creek Syncline. The synclinal axis trends NE-SW and the strata dip toward the axis at approximately 3.5 degrees. The lease is located on the western limb of the syncline.

The igneous dikes of the area generally trend parallel to the Fish Creek fault trend. The dikes range from 0.1 to 14.0 feet in thickness.

Geology of Coal Beds and Adjacent Strata

Numerous surface exploration and surface development holes have been drilled by various energy companies and government agencies in the surrounding area. Many of these drill holes were drilled under the direction of the Beaver Creek Coal Company during exploration and evaluation projects for their Gordon Creek mines. Four holes, LMC 1 - 4, were drilled in the area under the direction of LMC Resources. The LMC drill hole geophysical logs were interpreted and lithologic logs were constructed by the Bureau of Land Management (BLM). Geologic cross-sections were generated from drill hole logs created by Beaver Creek Coal Company (BCCC), LMC, and the USGS. See Plates 6-2 and 6-3 in the map section attached to this environmental assessment.

Hiawatha Seam. The Hiawatha Seam is the lowest stratigraphic coal in the current Horizon mining area. It directly overlies the Star Point Sandstone and is the most laterally persistent seam in the area. The Hiawatha seam ranges in thickness from 6.0 to 11.0 feet, averaging 7.0 feet within the area. A thin rider seam overlies the Hiawatha in the southwestern part of the current permit area.

The floor rock of the Hiawatha seam ranges from the competent littoral Spring Canyon of the Star Point Sandstone to fluvial overbank shales and siltstone and channel sandstones. Horizon Coal Corporation will be mining the Hiawatha Seam.

Gordon Coal Zone. The Gordon seam is stratigraphically located about 80 feet above the Hiawatha. It is very lenticular and generally less than 5.0 feet in thickness with multiple splits. It is not economically mineable in the Gordon Creek area.

Castlegate "A" Seam. The Castlegate "A" seam is stratigraphically located 150 to 230 feet above the Hiawatha seam. The seam ranges 4.0 to 14.0 feet in thickness. The average thickness in this area is 8.3 feet. The Castlegate "A" seam becomes unmineable in areas near the southwestern permit boundary and pinches out near the western boundary of the lease, there are no current plans to mine this seam. Horizon Coal Corporation plans on mining the Hiawatha Seam.

Bob Wright Seam. The Bob Wright seam lies about 120 feet above the Castlegate "A" seam. It is very lenticular and contains abundant partings. It does not achieve minable thickness (4.0 ft.) within the Gordon Creek area. However, the seam does thicken above 4.0 feet southwest of the current permit area.

3.2 SOILS

Soil mapping units are a refinement of USDA Soil Conservation Service manuscript mapping. The soils mapping was done by Patrick D. Collins (Botanist/Reclamation Specialist) using the information supplied by George Cook of the Soil Conservation Service (SCS) as to the locations, types and depths of soils.

The soil descriptions were compared with recorded characteristics of the soils in adjacent areas and in the official SCS series descriptions. Depths and types of soil were identified by SCS. A complete survey of the soil within the permit area was completed on November 3, 1990 and data for the lease area collected from SCS sources.

Shupert-Winetti Complex

The Shupert - Winetti complex consists of very deep, well drained, moderately permeable soils on narrow valley and canyon floors. These soils formed in alluvium derived from sandstone and shale. Slope is 1 to 8 percent. Elevation ranges from 4,600 to 7,200 feet but commonly is 5,200 to 6,400 feet. These soils are fine-loamy, mixed (calcareous), frigid Typic Ustifluvents. Average annual precipitation is 12 to 16 inches, and average annual air temperature is 43 to 45 degrees F.

Beje-Trag Complex

The Beje-Trag complex consists of shallow to deep, well drained, moderately permeable soils on ridges and draws of plateaus. These soils formed in alluvium derived from sandstone and shale. Slope is 3 to 30 percent. Elevation ranges from 7,000 to 9,700 feet. These soils are loam and clay loam. Average annual precipitation is 16 to 20 inches, and average annual air temperature is 38 to 45 degrees F.

Uinta Family-Podo Association

The Uinta Family-Podo Association consists of shallow to deep, well drained, moderately slow to rapid permeable soils on mountain ridges and slopes. These soils formed in colluvium derived from sandstone, shale, and siltstone. Slope is 30 to 70 percent. Elevation ranges from 8,000 to 9,000 feet. These soils are stony, sandy loam. Average annual precipitation is 16 to 30 inches, and average annual air temperature is 34 to 42 degrees F.

Uinta-Toze Families Complex

The Uinta-Toze Families Complex consists of deep, well drained, moderately slow permeable soils on mountain slopes. These soils formed in colluvium derived from sandstone, shale, and siltstone. Slope is 30 to 75 percent. Elevation ranges from 7,800 to 9,600 feet. These soils are loam, sandy loam, and gravelly silty loam. Average annual precipitation is 20 to 30 inches, and average annual air temperature is 34 to 38 degrees F.

Brycan

The Brycan Series consists of very deep, well drained, moderately slowly permeable soils on alluvium derived from shale and sandstone. Slope is 3 to 8 percent. Elevation is 7,700 to 8,600 feet. These soils are fine-loamy, mixed Cumulic Haploborolls. Average annual precipitation is 16 to 20 inches, and average annual air temperature is 38 to 45 degrees F.

Curecanti

The Curecanti family consists of very deep, well drained, moderately permeable soils on mountain slopes. These soils formed in colluvium derived dominantly from sandstone and shale. Slope is 50 to 70 percent. Elevation is 6,800 to 9,000 feet. These soils are loamy-skeletal, mixed Typic Argiborolls. Average annual precipitation ranges from 16 to 20 inches, and average annual air temperature ranges from 38 to 45 degrees F.

Rabbitex

The Rabbitex series consists of very deep, well drained, moderately permeable soils on mountain slopes and ridge tops. These soils formed in residuum and colluvium derived dominantly from sandstone, shale, limestone, and siltstone. Slope is 15 to 70 percent. Elevation is 7,000 to 9,200 feet. These soils are fine-loamy, mixed Typic Calciborolls. Average annual precipitation range from 16 to 20 inches, and average annual air temperature ranges from 38 to 45 degrees F.

Senchert

The Senchert family consists of moderately deep, well drained, moderately permeable soils on mountain slopes, plateaus, and ridges. These soils formed in residuum and alluvium derived dominantly from sandstone and shale. Slope is 1 to 50 percent. Elevation is 8,000 to 10,100 feet. Average annual precipitation is 20 to 30 inches. An average annual air temperature is 36 to 38 degrees F. These soils are fine loamy, mixed Argic Pachic Cryoborolls.

Prime Farmlands

The SCS has determined that there are no prime farmlands of statewide importance, or unique in the lease area. None of the soils mapped at the site have potential for the growth of crops or pasture land. The soils, short growing season, and weather are not conducive to the raising of crops.

Rangelands

The principle limitations for the use of the land as range are erosion and shallowness. According to the SCS the soils cannot support cultivated crops. The soils incapability have very severe limitations thus restricting the use of the land largely to grazing, woodland, or wildlife habitat.

3.3 HYDROLOGY

Field reconnaissance of the mine area by Darin Worden, UDOGM (1988-1990) permitted observation of the geologic setting of springs and seeps, and confirmation of the geologic observations made from aerial photo reconnaissance. Hydrologic data collected from wells and springs in the area were evaluated. Data evaluated also include drill hole logs, mine maps from the permit and adjacent areas, published and open file reports from the U.S. Geological Survey (USGS), Utah Geological Survey, Bureau of Land Management (BLM), and the U.S. Forest Service. BCCC records were also used to study the hydrology of the area.

Furthermore, at the request of UDOGM in 1996, a reconnaissance of the permit and surrounding areas was performed for seeps and springs. Areas evaluated included Sand Gulch, Coal Canyon, and several unnamed drainages which contribute to Beaver and Jump Creeks. The flow and temperature for each of the seep or spring within the Horizon permit boundary are summarized in the Horizon mining permit. These data were gathered to provide baseline information in anticipation of future mining. A plate showing the majority of the seeps and springs is included in this submittal as Plate 7-1. Several springs are outside the area covered by Horizon's current base map, however their locations will be provided upon request.

Regional Groundwater Hydrology

The lithologic nature of the Upper Cretaceous strata generally render these units unsuitable as significant aquifers. Price and Arnow (1974) do not identify Gordon Creek area as a region for potential large scale ground water development. In general, all the upper Cretaceous sediments of the area have low hydraulic conductivities and low specific yields (0.2 to 0.7 percent) (Price and Arnow, 1974). Much of the precipitation that falls in the Wasatch Plateau exits the area by overland flow and evaporation. Much of the water that does enter the ground moves only short distances before discharging as springs and seeps (field observations made by Darin Worden - UDOGM).

The lowest principal water-bearing formations of the Wasatch Plateau are the sandstone units of the Mancos Shale Group.

The Star Point Formation overlies the Mancos Shale. It is composed of littoral sandstones interbedded with tongues of the Mancos Shale. Lines (1985) identified the Blackhawk Formation and Star Point Sandstone as an aquifer in the region. The majority of the water contained in the Blackhawk-Star Point aquifer resides in the sandstone tongues of the Star Point Formation. It is likely that the Star Point Sandstone is the only formation within the permit and adjacent areas that contains groundwater on an areally-extensive basis.

The Blackhawk Formation overlies the Star Point Sandstone and contains the principal coal beds mined in the area. The Aberdeen Sandstone is a marine sandstone unit of the Blackhawk Formation. Sandstone units of the Blackhawk are generally very-fine grained, and have a significant clay content. Ground water that occurs in this formation generally occurs in laterally discontinuous perched aquifers. As a result, the Blackhawk is not a significant regional aquifer, and little work has been done to determine its hydraulic characteristics.

The Price River Formation overlies the Castlegate Sandstone and consists of interbedded sandstone, shale, and siltstone. Groundwater contained within the Price River Formation occurs within perched aquifers. Laboratory tests on sandstone from the Price River show that it has generally high porosity (21%) but apparently a low permeability (Cordova, 1964).

3.4 GEOLOGIC OCCURRENCE

Formations which outcrop within the Horizon permit and adjacent areas include quaternary alluvium, the Price River Formation, the Castlegate Sandstone, the Blackhawk Formation, the Star Point Sandstone, and the Mancos Shale. A regionally extensive groundwater system has not been identified in the permit area (Engineering Science, 1984). Characteristics of these formations, and their potential to serve as aquifers in the permit and adjacent areas, is presented below.

Price River Formation

Due to its limited outcrop extent within the permit and adjacent areas, the presence of claystone and shale within the formation, and drainage of the formation by deeply incised canyons, the Price River Formation is not considered to be a significant aquifer within the permit and adjacent areas. According to the Cumulative Hydrologic Impact Assessment (CHIA), completed by UDOGM (1989) for the Upper Gordon Creek Area, "groundwater associated with the Price River Formation may be characterized as occurring within a 'perched' aquifer and represents a relatively insignificant hydrologic resource." UDOGM compiled a CHIA for the Upper Gordon Creek and Beaver Creek Basins in September 24, 1996.

Castlegate Sandstone

The Castlegate Sandstone consists of 150 to 500 feet of white to gray, coarse-grained often conglomeratic sandstone with a few thin interbedded mudstones or shales near the base. Cliffs often form along outcrops of the Castlegate Sandstone. Based on the limited area of exposure for surface recharge (due to the steep slopes), the limited potential for recharge from the overlying perched aquifers of the Price River Formation, and drainage of the sandstone into the deeply incised canyons of the area, water contained within the Castlegate is minimal. Consequently, this formation is not considered to be a significant aquifer.

Blackhawk Formation

The Blackhawk Formation underlies the Castlegate Sandstone and consists of several hundred feet of interbedded sandstone, siltstone, shale, and coal. The Hiawatha coal seam is located near the base of the Blackhawk Formation. The Blackhawk Formation has a mixed lithology of sandstones, shales, and coals which produce alternating perched aquifers and impermeable beds (Doelling, 1972). Four springs were identified in the area by the 1989 Cumulative Hydrologic Impact Assessment with "all springs discharging from the Blackhawk Formation".

The above-mentioned springs are associated with fractures and/or channel sands that are of limited areal extent, which contain water perched over shale beds and have limited recharge

areas. This type of spring commonly has considerable variation in flow because of the limited recharge area and the limited amount of storage in the aquifer (Engineering Science, 1984).

According to UDOGM (1989), mine inflows into mines in the area of the Horizon Mine are insignificant. Since mining in the area occurs within the Blackhawk Formation, this indicates that extensive aquifers are not present within the Blackhawk Formation in the permit and adjacent areas.

The Aberdeen is present in the Horizon Mine area but is not anticipated to be a significant aquifer in the permit area.

Star Point Sandstone

The Star Point Sandstone consists of fine to medium grained sandstone that decreases in grain size with depth. This unit consists of several littoral sandstone tongues separated by Mancos shales (Doelling, 1972). Regionally, recharge to the Star Point occurs primarily from vertical movement of water through the overlying Blackhawk Formation. Due to the low vertical permeability of the Blackhawk Formation, the magnitude of this recharge is limited. This formation is monitored via monitoring wells HZ-95-1, HZ-95-2, and HZ-95-3, which have been installed into the uppermost Spring Canyon tongue.

Mancos Shale

Underlying the Star Point Sandstone is the Masuk member of the Mancos Shale. The Masuk Shale consists of blue-gray fissile claystone or silty claystone which weathers light blue-gray to light tan. Although the Masuk Member of the Mancos Shale may be locally saturated beneath the Star Point Sandstone, it is not considered to be an aquifer. Except where extensively fractured, the low-permeability shales in the Masuk will transmit only relatively small quantities of water (Lines, 1985).

Quaternary Alluvium

Unconsolidated Quaternary deposits are present in the floors of drainages and generally consist of silts, sands, and gravels. The alluvial deposits receive water from the adjacent bedrock in some of the deeply incised canyons. Water is probably supplied to the alluvium by seepage from the Blackhawk and Star Point Formations. Discharge from the Quaternary alluvium is to the surface water system. Due to the limited areal extent of alluvium in the area, this unit is not considered to be a significant aquifer.

No water rights exist within the permit and adjacent areas for water wells. However, rights exist for the use of water from several springs in the permit and adjacent areas. Typically, these rights are for the use of less than 5 gallons per minute of water from springs issuing from the Blackhawk Formation. Water in this formation issues from perched aquifers of limited areal extent. This accounts for the low flow and usage rates of the springs.

Approximately 50 to 70 percent of the stream flow in the region occurs during the May-July snowmelt runoff period (Waddell et al., 1981). Summer precipitation usually results in minor amounts of runoff.

Water quality in the Price River and its tributaries can be classified as good at the higher elevations, with TDS concentrations of 250 mg/1 and below. As is the case with springs in the area, these surface waters tend to be a calcium bicarbonate type. At lower elevations below diversions, the water changes to a sodium sulfate type with dissolved solids ranging from 2,500 to more than 6,000 mg/1 (Waddell et al., 1981). These changes are caused by leaching of salts from irrigation return flows and natural runoff from areas underlain by Mancos Shale.

The three principal surface water courses in the region of the "lease" are Jump Creek to the north, Beaver Creek through the center, and North Fork Gordon Creek to the south.

Beaver Creek originates at 9,200 ft. about 4 km west of the mine facilities, first being mapped as a perennial stream at an elevation of 8,950 ft. 0.8 kilometer below its upper end. Beaver Creek is fed by a perennial stream (Spring Creek) within the study area. During the 1980-81 field studies, however, this tributary was dry above the spring (8,550 ft.) except during snow-melt. Between the upper limits of permanent water and its confluence with Sand Gulch near the northern end of the study area at 8,300 ft., Beaver Creek has a mean gradient of 650 ft/mile (12 percent). Much of the stream length is characterized by active or abandoned beaver ponds, willow thickets, and wet meadows with fairly well-developed meanders in some broader sections.

One of the contributing springs, the Homestead Spring (sampled by BCCC as 2-6-W), is an area of seeps located in a small tributary to Beaver Creek in the SW¼ NE¼ Sec. 13, T. 13 S., R. 7 E. (approximately 0.5 mile south of the lease area). Past measurements collected by BCCC personnel have indicated that this spring discharges from 3 to 136 gallons per minute, with the higher flow rates in June including surface runoff from snowmelt conditions.

Jewkes Spring (SP-9) is located near the Beaver Creek stream channel in the SW¼ SW¼ Sec. 7, T. 13 S., R. 8 E., approximately .25 mile west of the lease area. With the exception of a spurious measurement in July 1985, discharges from this spring have generally varied during the period of record from about 1 to 40 gpm, with no observable flow during drought periods.

The general flow direction of Beaver Creek is to the northeast toward the Price River. The drainage pattern in the upper portions of the Beaver Creek basin is dendritic. The valley profile is not as steep as the North Fork of Gordon Creek.

The USGS formerly maintained a gauging station near the mouth of Beaver Creek (Station No. 09312700) approximately 8 miles northeast of the lease. During the 29-year period of record from October 1960 to October 1989, the minimum annual discharge of 254 acre-feet occurred during water year 1981. The maximum annual discharge of 9,950 acre-feet occurred two years later in water year 1983. The average annual discharge of Beaver Creek at the USGS monitoring station during the 29-year period of record has been 3,310 acre-feet.

The annual variability of flow in Beaver Creek can be seen by the fact that the annual maximum and the annual minimum during a 29-year period of record were separated by only two years. This variability is also evident in the high coefficient of variation for the station (74 percent).

Stream flow at the Beaver Creek USGS station was typically highest in the spring and early summer (April through June, as a result of snow melt) and lowest during the autumn and winter months. Occasional late summer rapid increases in flow were also observed, probably as a result of summer thunderstorms. Several days of no flow were also reported during the period of record (mostly in the winter and late summer).

Jump Creek is located approximately 1 mile north of the lease area. Flow data for Jump Creek is minimal therefore it is not discussed. The creek joins with Beaver Creek and flows into the Price River.

North Fork Gordon Creek originates from two unnamed intermittent tributaries about 5 kilometers (km) southwest of the mine site, at an elevation of about 8,750 ft. Within the study area, North Fork Gordon Creek is augmented by a number of minor intermittent tributaries, particularly the Jewkes Creek that flows through the mine's disturbed and permit area. North Fork Gordon Creek covers approximately 3.5 miles of stream length, with a mean gradient of 340 ft/mile or 6.5 percent. The stream has few meanders but is characterized by scattered beaver ponds. Riparian vegetation is poorly developed along much of its length. The elevation of North Fork Gordon Creek is lower than the Hiawatha coal seam, the lowest minable seam in the area.

Jewkes Creek originates at 8,240 feet at the spring being monitored by Horizon as SP-1. Multiple springs add to the flow in Jewkes Creek as it drops from the 8,240 feet to 7,600 feet and empties into the North Fork of Gordon Creek. Jewkes Creek is an intermittent stream which enters the Horizon disturbed area at approximately 7,600 feet.

3.5 VEGETATION

Mountain Shrub

One of the most widespread habitats, especially on steep slopes at lower elevations, was a highly variable mixture of shrub species typical of mountainous areas in the region.

The xeric phase was prevalent on south-facing slopes. Characteristically, these areas were dominated by open stands of Gambel's Oak with varying amounts of Alder-leaf Mountain Mahogany, Serviceberry, Snowberry, Antelope Bitterbrush, and Rubber Rabbitbrush. Conspicuous herbaceous species during early fall were a Tansy-aster and Salina Wildrye. At higher elevations, some south facing slopes were strongly dominated by Greenleaf Manzanita an evergreen shrub of particular values to wildlife.

The mesic phase, typically occurring on north-facing slopes, was dominated by dense stands of Gambel's Oak or Wasatch Maple. Associated woody plants included isolated clumps of Quaking Aspen, scattered Douglas Fir, and White Fir (often appearing to represent a later successional stage), and shrubs such as Chokecherry, Serviceberry, Snowberry, Woods' Rose, Oregon grape, and Mountain lower. The variable herbaceous stratum was dominated by Mountain Brome, Nodding Brome, and perennial forbs such as Aster, Erigeron, Fragaria, Frasera, Galium, Geranium, Lathyrus, Thalictrum, and Vicia.

Slope Bunchgrass

This rather widespread habitat was similar in composition to Xeric Mountain Shrub habitat, except for the near absence of woody species. The dominant plant was the bunchgrass Salina Wildrye. The casual distinction between these two xeric communities is not clear, but it probably is related to soil moisture and texture.

Middle Elevation Conifer

This widespread habitat type was limited to north-facing slopes and along drainages, typically appearing as isolated clumps scattered through larger areas of Aspen or Mesic Mountain Shrub. Mature White Firs and Douglas Firs were visually and numerically dominant throughout. Prominent understory species were Mountain Snowberry, Oregon Grape, Currants, Mallow Ninebark, Woods' Rose, Aster, Fragaria, and Heuchera.

High Elevation Conifer

Atop the Wasatch Plateau especially at elevations of 8,500 ft. or higher, coniferous forests were dominated by Engelman Spruce, Subalpine Fir, and Douglas Fir. Understory species were similar to those described above for Middle Elevation Conifer Forests.

Aspen

Dense stands of mature Quaking Aspen occurred as a mosaic in moist sites, either on north slopes among Mesic Mountain Shrubs and Middle Elevation Conifers or along forest edges adjacent to High Elevation Conifers. In both occurrences, the understory was similar to other mesic habitats; prominent species included Mountain Snowberry, Mountain-lower, Oregon Holly-grape, Fragaria, Geranium, Lathyrus, Thalictrum, and Vicia. In the north-slope phase of this community type, Wasatch Maple often was sufficiently common to be considered a co-dominant.

Mixed Riparian

Streams at lower elevations in the study area generally were characterized by riparian vegetation dominated by larger deciduous shrubs: Mountain Maple, Redtwig Dogwood, Elderberry, Chokecherry, and Willow (Salix) species. This assemblage was most common in shaded areas, where the stream was closest to the base of north-facing slopes. More open sites often lacked a distinct riparian community, instead being dominated by species occurring on adjacent xeric hillsides. Trees frequently were absent altogether, but some sites did support large Plains Cottonwoods and Box Elders.

At higher elevations, aspen and conifers (including Blue Spruce) often occurred as part of the riparian complex.

Subalpine Moist Meadow

Moist meadows commonly were the dominant riparian habitat type above 8,500 ft. These open areas supported dense stands of mesic grasses, such as Foxtail, Red-top, Canada Wildrye, Reed Canary-grass, Bluegrass species, and Sedge species.

Plate 9-1 outlines the sections of vegetation within and adjacent to the "lease" area. Refer to Section 4.0 for description of threatened and endangered species study.

3.6 WILDLIFE AND FISH

In 1981 and 1990, the UDWR provided detailed wildlife information for the area, UDWR also prepared a wildlife plan representing their recommendations for mitigation and impact avoidance procedures in the disturbed area. The UDWR personnel providing the information were John Livesay, Larry Dalton, Darrel Nish, Clark Johnson, Bill Bates, Robert G. Valentine, and Cleon B. Feight.

Large herbivores and large carnivores were inventoried by road surveys during each field session for abundance, distribution, and habitat use. This data was augmented with walked transects across each habitat type.

Medium-sized mammals, such as predators, lagomorphs (rabbits and hares), and large rodents were studied at dawn and dusk when they are most active. Data for small mammals, which may be used as indicators of ecosystem quality and reclamation success, were drawn almost exclusively from UDWR (1978) and Durrant (1952).

Upland game bird surveys were conducted in conjunction with other field programs. The upland fowl and water bird populations in this area were insufficient to warrant recreational value.

The most likely raptors in the mine area are the Flammulated Owl and Cooper's Hawk, which occur in the Wasatch Plateau and prefer wooded country, such as riparian and conifer forests. With the availability of cliffs for nesting and open areas for hunting within a relatively short distance the Prairie Falcon is a potential breeder in the area.

Information provided by UDWR (1981a) indicate that the most important habitat types in the study area are the Mixed Riparian zones along Beaver Creek and North Fork Gordon Creek and the Subalpine Moist Meadows atop the plateaus.

It is probable the sixty-six species of mammals inhabit the project area as well as the biogeographic area (reference the UDWR Publication No. 90-11). Mule deer and elk are inhabitants of the biogeographic area. In the lease area both species show altitudinal migrations in response to winter conditions.

On June 14, 1996 a bat survey in the portals located in Portal Canyon were performed by Brad Lengas, a qualified biologist. This report states that "the adit(s) show no evidence of being used as summer bat roost(s)". No bats were observed in the portal area during site construction (fall and winter, 1996).

Two hundred forty-two species of birds, all of which are protected, are known to inhabit the biogeographic area in which the mine and lease are located. It is possible that one hundred thirty-eight of these species inhabit the project area.

Golden eagles are a common yearlong resident of the area. No active aerie territories are known inside the project disturbed area. Golden Eagle/Prairie Falcon nests were observed during the 1995 survey, Bill Bates (UDWR) confirmed that they had not been nor were they inhabited recently. The nesting area surveyed by UDWR is used by Golden Eagles one year and by Prairie Falcons another year, only one species will use the nesting area any given year. The mine plan and adjacent areas have been ranked as being of substantial value to golden eagles.

The northern bald eagle is an winter resident (November 15 to March 15) of the biogeographic area. The area has been ranked as being of substantial value to wintering bald eagles, therefore the lease area may be used by the bald eagle. The American peregrine falcon and the prairie falcon are yearlong residents of the area.

The sixteen reptile species suspected of inhabiting the project area are protected under the law but none are federally listed as a threatened or endangered species. Six species of amphibians, all of which are protected, are known to inhabit the biogeographic area. No amphibians which are known to inhabit the mine area are federally listed as a threatened or endangered species.

Listed threatened and endangered species potentially present in the study area are the American Peregrine Falcon, which breeds in Utah; Arctic Peregrine Falcon, which migrates through Utah; and Bald Eagle, which winters in Utah.

Wildlife in the area has been monitored yearly by the UDWR due to the proximity of the lease to the Gordon Creek Wildlife Management Area. Detailed data is available from the UDWR and can be supplied upon request.

Aquatic Studies

Aquatic field and lab studies were performed in the North Fork Gordon Creek and Beaver Creek by the UDWR. Biotic components specifically included sampling for macroinvertebrates and evaluating the fisheries potential. Abiotic components included field techniques for testing water quality, as well as descriptions of substrate and channel morphology. Studies were conducted in November 1980 and April and June 1981. Additional stream surveys and inventories were done on Beaver Creek in 1953 and 1987 by the UDWR.

The 1980 and 1981 aquatic studies involved six stream sample sites: four in the Beaver Creek system and two in the North Fork Gordon Creek system. The sites were selected to provide information from representative stream reaches, above and below substantial tributaries. The sites on North Fork Gordon Creek were located in the drainage south of Bryner Canyon, southwest of the Horizon permit area. No fish were seen or collected in either the North Fork Gordon Creek or Beaver Creek (UDWR, 1981a).

The two sites in Beaver Creek were located upstream of the unnamed stream which is the tributary in extreme northwestern Section 18. A third site was located on the unnamed tributary called Spring Creek, and the fourth site was about 1 kilometer farther downstream, in southern Section 7.

Beaver Creek is ranked by UDWR as being of substantial value as a salmonid fishery, with a self-sustaining population of introduced Yellowstone Cutthroat Trout. Nongame fish species listed by UDWR for Beaver Creek in the study area are the Mottled Sculpin, Mountain Sucker, and Speckled Dace. No fish were seen in Beaver Creek during the April or June surveys, suggesting that populations are fairly small in the study area, probably due to low flows and low gradients (the latter reflected by fairly high temperatures). Fish surveys were not conducted because the mining project is not expected to affect the stream. This was recognized by UDWR in their evaluation of wildlife in the study area (UDWR 1981a).

Beaver Creek has been essentially unaffected by mining or exploratory drilling programs in the Beaver Creek valley. This situation is not expected to change with an additional mining operation.

3.7 CULTURAL RESOURCES AND PALEONTOLOGY

Coal mines were opened in the area in the 1920s. Among the larger mines in the area were Sweet in 1925, Consumers in 1922, and National in 1908. Mining camps sprang up at the mines and for a short time Coal City (Dempseyville), located 2 miles east of the mines served as the business and residential center of the mining district. Remains of the major mining camps and coal mining operations can still be seen, including remains of cabins and work areas constructed by National Coal Company.

The historical, cultural and paleontological resources inventory and Class I literature search for Horizon Coal Corporation were completed by Baseline Data, Inc. (BDI) in 1995 under Utah State Project Authorization No. U95-BS-416P. The inventory fulfills requirements of the Utah Coal Mining and Reclamation Act of 1979. A copy of the data collected by BDI can be found in Appendix 5-1 of the Horizon M&RP.

The area inventoried lies approximately 14 miles northwest of Price, Utah in Township 13 South, Range 8 East, Section 17. The BDI inventory consisted of a 100% examination of the proposed mine disturbed area. The area disturbed by the drilling of monitoring wells HZ-95-1, 1S and 2 (Section 8) was also inventoried for historical, cultural and paleontological resources. No artifacts were collected during the inventories. Since no additional surface disturbance is planned for the requested lease, the data is presumed sufficient.

The archaeological survey of the area recorded no historic archaeological sites. A search of the site files at the Utah Division of State History turned up no previously recorded sites in or near the permit area. Letters from the Utah State Historical Preservation Office (SHPO) on May 30, 1995 and October 24, 1995 both recommend that there would be **"No Effect"** upon cultural resources by the Horizon No. 1 Mine project. A conversation with James L. Dykmann (SHPO) on January 19, 1996 confirmed "no change" in their recommendation of 1995.

An inventory of the area was performed by Betsy L. Chapoose, Director of the Tribe Cultural Rights and Protection for the Ute Tribe. She determined there would be **"No Effect"** to tribal cultural artifacts with the issuance of the "lease" to HCC.

The permit and "lease" areas do not contain any public parks, cemeteries, archeological sites, units of the National System of Trails or of the Wild and Scenic River System.

Historic Land Use

The general region has been occupied by Native Americans for several thousand years. There is no evidence of permanent occupation by Native Americans, and their use of the area was probably limited to passage to higher grounds west of the mine or seasonal hunting and foraging activities.

Historic use of the area may have occurred as early and the 1830 - 1840s by fur trappers, but no evidence of this activity has been documented in the area. The first use of the mine location by Euro-Americans probably occurred in the early 1850s in the form of grazing by settlers from the Sanpete Valley. Grazing activities in the Gordon Creek Canyon were probably continued if not increased with the settlement of the Price River area east of the mine location.

A high quality coal seam was discovered in the area in 1921. Between 1922 and 1956, the mine area was the location of the operating Blue Blaze Mine. The mine expanded and contracted through those years with the ups and downs of local and national economic conditions.

From 1956 to the present, little activity has occurred at the mine property. There have been a few proposals to reopen the mines but none successfully. The mine properties generally deteriorated and buildings collapsed. In the mid-1980s, efforts aimed at public safety closed several portals and removed some mine buildings.

History of Gordon Creek Area

Gordon Creek was initially settled not for its coal resources, but as a ranching and farming area by Alfred Grams in 1885. Arthur E. Gibson began prospecting the Gordon Creek in 1920 and in the Spring of 1921, discovered a substantial deposit of high quality coal in the canyon walls. He secured a lease for 1480 acres in Gordon Creek and began development of the coal seam he had discovered (Daughters of the Utah Pioneers 1948).

In 1922, Gibson with a small crew of assistants removed 34 carloads of coal from Gordon Creek Canyon. The coal was shipped to prospective stockholders in Salt Lake City via the Utah Railway Company. Investors from Salt Lake City purchased the stock and organized the Consumers Mutual Coal Company which would later be known as the Blue Blaze Coal Company (Desert West, 1985).

Two other coal mines developed in Gordon Creek - the National and Sweet mines. National was actually developed earlier (1908) than Consumers by an engineer named Williamson who leased land from the government. In 1921, Fred Sweet took over the property developed by

Williamson and started the National Coal Company. A tent city developed around the Sweet Mine which was soon replaced by regular housing. Red tile housing constructed at National can still be seen at the site today. By 1925, the National Railroad extended into the area which greatly increased the capacity of each mine.

The community of Consumers (Blue Blaze Mine) boasted of a four story apartment house, store, service station, and a post office. During the later 1920s each of the three communities continued to develop. National had a row of red tile homes with arched doorways that are still found at the site, a store and a service station. The Consumers Mine closed in 1938, but a prominent Carbon County mining operator names Terry McGown opened the mine at a later date. By 1952, the demand for coal was low and all three of the mines in Gordon Canyon shut down. During its years of operation, the Blue Blaze produced over 2.5 million tons of coal (Doelling, 1972).

Prehistoric Inventory

No prehistoric sites or artifacts were noted during the inventory. The surface of the mine area has been heavily impacted by historic mining and the remains of any prehistoric sites have been removed or completely covered in mine tailing and rubble. Undisturbed areas along the edges of the mine location contained no evidence for prehistoric remains.

Paleontological Inventory

The paleontological inventory recorded the presence of plant "hash", or leaves, stems and branches. Occasional isolated larger wood sections were observed. In most instances, the paleontological remains are either impressions or compressions. A few of the finer sandstone and siltstone units contain well defined leaves, but these are the exception rather than the rule. The plant remains suggest the presence of Cretaceous deciduous trees and more limited conifers.

In addition to the plant remains, occasional invertebrate burrows were noted in the sandstone units. These trace fossils are fillings of burrows that preserved their shapes. The identification of the invertebrate animal that created the burrows would be difficult. Neither the plant hash or the trace burrows are considered to be paleontologically sensitive. No fossil remains found within the lease area were determined to fall into the sensitive category.

4.0 ENVIRONMENTAL IMPACTS

Subsidence Impacts

The surface effect of the backfilling operation will be to reduce the surface expression of subsidence in an area where subsidence will already be minimal.

The extent of the potential subsidence on adjacent area outside of the permit area was determined based on a maximum overburden thickness of 1500 feet (from data presented by Hansen, 1988) and an angle of draw of 35 degrees as measured from the vertical (the maximum angle of draw recommended by Dunrud [1976]). This angle of draw is significantly in excess of the 20-degree value used by Beaver Creek Coal Company for adjacent mining operations (Guy, 1985), but will result in a conservative estimate of the extent of the adjacent area. Based on the 35-degree angle of draw and a maximum overburden thickness of 1500 feet, subsidence impacts will extend a maximum of 1050 feet (0.2 mile) from the edge of the permit area. Hence, for the purpose of this application, the adjacent area for potential subsidence is defined as that area within 0.2 mile of the permit area.

Renewable Resources

Hydrologic and vegetative renewable resources exist within the area to be mined. One perennial stream, Beaver Creek, and various springs are known to exist above the area to be mined. Based on past experience and monitoring results from this area, it is not expected that mining will affect any hydrologic resource through subsidence.

Substantial inflows of groundwater to underground workings are not currently anticipated. However, should a substantial inflow of groundwater occur, mitigation measures may include: attempts to seal off the inflow, increased monitoring efforts, lining of the stream bed through the affected area, and replacement of lost water if indicated by monitoring. An extended mitigation plan will be enacted should a measurable impact occur to surface water due to mining activity.

The vegetation resource above the mining area consists of rangeland for stock and wildlife grazing and a limited timber resource. If subsidence should occur, the effects would be minimal, possibly resulting in some fractures or slight depressions. Thus, the effect upon vegetation resource would also be minimal. Should impacts to vegetation occur due to subsidence, mitigation measures may include: filling of fractures, regrading of broken areas, replanting degraded areas, and intensified monitoring.

Geologic Hazards

Geologic hazards in the mine area exist in the form of steep slopes and numerous inactive normal faults. Roof conditions will typically worsen in these areas due to fracturing and slickensides; however, no surface movement or new effects have been noted to date from mining through fault zones in this area.

Movement could result in rock falls from exposed outcrops; however, no evidence of such falls or movement has been noted in this area from past mining. There are no potential

landslide or slump areas known to exist that were caused by previous mining activities in the area. Horizon is unaware of escarpments within the "lease" area.

Subsidence can normally be expected to occur over areas where second mining (pillaring) has taken place. Maximum potential subsidence from pillar extraction in the No. 1 Mine (the Hiawatha seam) has been estimated from Figure 3-5 (Attachment D) using the following criteria:

Panel Width = 600 ft
Average Depth = 800 ft
Width/Depth Ratio = 0.75
Seam Thickness = 7.0 ft

Using these data, subsidence due to pillar extraction in the Hiawatha seam could reach 2.33 feet directly over a pillared panel. The cumulative potential subsidence for areas where both seams are pillared is 6.18 feet (3.85 + 2.33). Again, past experience in this area suggests that subsidence would be of a lesser magnitude.

The following observations and conclusions regarding subsidence have been made from past mining activities in the vicinity of the mine:

(1) Pillaring in the upper (Castlegate "A") seam has previously occurred beneath Beaver Creek. Specifically, the northernmost west panel was pillared beneath Beaver Creek by Swisher Coal Company in January 1978 in an areas where the overburden thickness was about 650 feet. In addition, in September 1981, Beaver Creek Coal Company pillared the "A" Panel area beneath Beaver Creek in an area with an overburden thickness of approximately 425 feet. Neither of these areas show any measurable effect on Beaver Creek.

(2) The Gordon Creek No. 2 Mine overlies areas pillared up to 40 years ago in the lower seam (Sweet's Mine) with no noticeable subsidence effects. The Consumers No. 3 Mine also pillared areas in the permit area which show no noticeable subsidence effects.

(3) The overburden in the permit area above the Castlegate "A" seam (with a thickness of 600 to 800 feet) contains massive sandstone units which are unlikely to allow caving effects to reach the surface. In addition, the seams are separated by over 150 feet of similar interburden with no noticeable effects from past pillaring.

(4) Subsidence, should it occur, is not likely to affect the Beaver Creek flow due to the numerous beds of swelling shales within the overburden and interburden. Fractures within these sedimentary deposits have a strong tendency to heal due to the swelling of the shales and sandy shales contained therein.

Threatened or Endangered Plants

In 1981, Mt. Nebo Scientific completed a preliminary vegetation study of the area for Sanders Exploration, Ltd. (C & W No. 1 Mine). In 1990, Mt. Nebo Scientific performed a vegetative study for Blue Blaze Coal Company and a threatened and endangered plant and general vegetation study for Horizon in 1995. In August of 1995 a habitat study for Ute Lady's Tresses (Spiranthes diluvialis Shev.) specifically was performed. No threatened or endangered plant species were found during the 1995 study. Refer to Appendix 9-1 of the Horizon M&RP for details of these studies.

Threatened or Endangered Animals

No reptiles or amphibians known to inhabit the mine area are federally listed as a threatened or endangered species.

Listed threatened and endangered species potentially present in the study are the American Peregrine Falcon, which breeds in Utah; Arctic Peregrine Falcon, which migrates through Utah; and Bald Eagle, which winters in Utah. Bald Eagles are known to use riparian woodlands along lower North Fork Gordon Creek and the Price River as winter roosts (UDWR 1981a). The mine disturbed area elevation is high for the willow flycatcher, but it may occur in the general area during the summer months. The loggerhead shrike is a yearlong inhabitant of the Wasatch Plateau and is most likely found in the mine area (UDWR, 1990).

If any endangered or threatened species are found in the permit area Horizon has committed to report them to UDOGM and the UDWR.

Information or conclusions provided by the Section 7 consultation with the U.S. Fish and Wildlife Service is included in Attachment D.

Floodplains and Wetlands

A reconnaissance investigation of the permit and adjacent areas was conducted to delineate alluvial deposits which might be considered to be alluvial valley floors (AVF). Identification of locations where unconsolidated stream-laid deposits occur was performed using surficial geology and soils maps of the area. Further, field reconnaissance and an analysis of aerial photographs of the mine permit and adjacent areas were conducted. Locations of stream-laid deposits thus identified are the same as those identified on Plate 6-1 as Qal (Recent Alluvium and Qoa (Older Alluvium).

From a geomorphic standpoint, the rugged mountainous terrain of the permit and adjacent areas has resulted in drainages still in a youthful stage of development. The streams are confined in narrow, steep-sided, V-shaped valleys with steep channel gradients. Meanders normally associated with AVF development are absent except in a few isolated locations.

Alluvial deposits along Beaver Creek exhibit minor stream meandering and contain numerous beaver ponds. Some of the stream-laid deposits along Beaver Creek, particularly at the mouths of small tributary canyons, appear to be debris flows. Soils in the valley exhibit localize signs of being flooded or water logged during a field visit to the site.

Alluvial deposits were also identified at the mouth of Jewkes Creek and along North Fork Gordon Creek. The alluvial deposits at these locations are below the coal outcrop and thus, could not be directly impacted by mine subsidence.

Agricultural developments are not found along North Fork Gordon Creek, Jump Creek, Beaver Creek, or their tributaries in the permit and "lease" areas. The agricultural potential of the valley floors in the area is limited by the soil capability and the short growing season. The narrow valleys are occupied by the stream and the road and both break up the narrow valley so that development of hay meadows or improved pasture is impractical.

The valley floor along Beaver Creek, Jump Creek, North Fork Gordon Creek, and their tributaries would be incapable of supporting agricultural activities without proper drainage. Even with adequate drainage, agricultural development would be restricted to grasses and pasture because of the high elevations and short growing seasons. Hence, given the extensive prior disturbance in the proposed disturbed area, the narrowness of the valleys, and climactic conditions in the area, the stream-laid deposits in the permit and lease areas are not considered to be alluvial valley floors. This conclusion is supported by the opinion of Mr. T.B. Hutchings, State Soil Scientist with the U.S. Soil Conservation Service (see Appendix 7-6, Horizon M&RP).

Since no surface disturbance is planned in the lease area, the government agencies required to make a wetland determination were not contacted. However riparian vegetation is prominent along Beaver Creek and Jump Creek.

Surface and Groundwater Impacts

Potential impacts of coal mining on the quantity and quality of surface and groundwater flow may include:

- o Increased sediment yield from disturbed areas;
- o Diminution of springs in perched aquifers overlying the mine area;
- o Decreased availability of groundwater in the regional aquifer system;

Impacts to the Perched Aquifer System. The hydrologic data indicate an absence of significant perched aquifers within the Blackhawk Formation overlying the coal to be mined. The geology of the area and the occurrence of springs in the Blackhawk Formation indicate the presence of small, laterally discontinuous perched aquifers in the Blackhawk. These small perched aquifers within or adjacent to the mine plan area may be impacted as a result of mining related subsidence.

The perched aquifers of the Blackhawk Formation characteristically produce water from channel sandstones bounded by impervious shale beds at their bases. If subsidence fractures do intersect these perched aquifers, clay minerals contained within these shale beds will likely seal the fracture planes. Sealing of the fracture planes may allow spring discharge to continue uninterrupted.

According to the Cumulative Hydrologic Impact Assessment prepared for the area by UDOGM (Attachment C), "Subsidence impacts are largely related to extension and expansion of the

existing fracture system and upward propagation of new fractures." Vertical and lateral migration of water is partially controlled by fracture conduits. Potential changes include increased flow rates along fractures and diverting flow along new fractures or within permeable lithologies. Subsurface flow diversion may result in diminution and/or loss of flow to springs that are undermined.

Retreat mining also results in uniform downwarping and lowering of strata above the mined interval. This uniform downward movement is generally not accompanied by a significant degree of fracturing. As a result, the original attitude and integrity of the strata are maintained. Little impact on the perched aquifers of the overburden are expected to result from downwarping.

The probable consequences of mining on the hydrologic resources associated with perched aquifers are considered minimal due to: 1) small number of springs, 2) low and/or erratic spring flow, 3) absence of municipal water use rights, 4) water loss experienced at one location may be accompanied in an increased flow at another location, and 5) possible sealing of subsidence fractures by clay minerals.

Impacts to the Regional Aquifer System. It is anticipated that the coal in the Horizon No. 1 Mine will be saturated essentially from the beginning of mining. It is assume that groundwater inflow to the mine workings will occur primarily as a result of porous-medium flow rather than fracture flow. Historically, large amounts of the Hiawatha Coal seam have been mined out to the southwest of the permit area by Sweet Coal Company's Sweet Mine, Blue Blaze Company's No. 1 Mine, National Coal Company's No. 1 Mine, and Beaver Creek Coal Company's No. 3 Mine. Based on a review of mine records (Skaggs, 1992), many faults have been mined through in the Hiawatha seam with only insignificant/minor amounts of water being encountered.

Only one fault has produced significant quantities of water when mined through. This fault lies in the east portion of the permit area and was intersected in mining of the Beaver Creek Coal Company No. 3 Mine. Inflows of approximately 400 gpm occurred when this fault was encountered (Skaggs, 1992).

Surface mapping and mining experience in the overlying Castlegate "A" seam within the permit area indicate that fracturing within the permit area is not significant. Therefore, the previous estimates of potential groundwater inflow rates to the mine workings are considered adequate.

Impacts to the Hydrologic System Resulting From Subsidence. Stream buffer zones will be maintained for a distance of 100 feet on either side of Beaver Creek, within which second mining will not occur. According to Gentry and Abel (1978), topographic lows (e.g., stream channels) tend to be protected by upwarping of adjacent slopes during subsidence. Therefore, mining-induced surface fracturing should be very limited (or nonexistent) within the Beaver Creek stream channel area. Any fracturing that does occur in the stream channel is likely to fill rapidly as a result of sedimentation.

It is also not anticipated that subsidence will affect springs within the permit and adjacent areas. Von Schonfeldt et al. (1980) found that uniform subsidence "rarely causes problems

to renewable resources such as aquifers, streams, and ranch lands." Since second mining will occur uniformly across the permit area except in buffer zones, the resulting subsidence should also be uniform, minimizing the potential impacts to overlying springs.

As noted in the Cumulative Hydrologic Impact Assessment, mining in the area adjacent to the Horizon permit area has not resulted in hydrologic impacts due to subsidence. Given the lack of extensive aquifer systems in lithologic units that overlie the coal within the permit and adjacent areas, it is not anticipated that groundwater will be affected by subsidence. Thus, subsidence caused as a result of mining by HCC should not cause significant surface or groundwater impacts within the permit or adjacent areas.

Wilderness Values

The surface above the coal lease is privately owned with the exception of 120 acres managed by the BLM. At the discretion of the owners the area has been used for hunting, grazing, and timbering (1995 - 1996). Recreational properties exist on the lease (a cabin on approximately 1 acre) as well as north and west of the "lease" area. Portions of the BLM managed subsurface acreage is presently leased to Horizon as a right-of-way.

Since the BLM managed lands within the "lease" have been used by livestock under the assignment of various grazing allotments and due to the continuous use of the privately owned lands, the value of classifying the area as wilderness is questionable.

Visual Resources

No surface disturbance will occur in the "lease" area except indirectly in the form of limited mine-related subsidence. This should not result in discernable aesthetic impacts. The access roads on the "lease" are pre-existing.

Air Quality

Since no construction is planned for the lease area, air quality concerns would be confined to the mine yard area which is south of the lease area. Dust caused by the existing roads within the "lease" would be minimal, due primarily to travel to water monitoring locations.

Wild and Scenic River

To the best of the applicants knowledge the permit area does not contain any public parks, cemeteries, archeological sites, units of the National System of Trails or of the Wild and Scenic River System.

Grazing

The lands adjacent to the mine portal area are used for grazing by both cattle and sheep. The extent of use varies from year to year and season to season. The southern portion of Beaver Creek runs through private lands used for grazing, with BLM grazing allotments scattered through the Jump Creek, northern Beaver Creek and North Fork of Gordon Creek areas. Plate 4-1 outlines land uses in the area including grazing.

Recreation

The mine area has no established parks or recreation areas. The majority of camping and recreation vehicle activity in the area is done during the fall when hunting season begins. However the majority of the surface area in the lease is privately owned and is behind locked gates.

Land Uses

The land on which the Horizon No. 1 Mine is located has long been used for coal mining. Areas adjacent to the mine and lease area are used for the monitoring of previous mining operations, mining reclamation activities, wildlife habitat, recreation, and grazing. The mine area has been classified as M & G (mining and grazing) by Carbon County.

Private landowners presently administer the lands in the lease area for livestock forage and timbering. Cattle and sheep are herded along the county road running adjacent to the mine site in spring and fall. Wildlife habitat, watershed, dispersed recreation, and coal mining are also land uses in the area. There are no range improvements in the area. Access to the grazing lands is limited to jeep trails into the higher elevations leading to Beaver Creek. There are no plans to alter this access situation.

Carbon County owns and maintains two roads, one runs parallel to the permit boundary on the south (Consumers Canyon-County Road 290), the second runs parallel to the disturbed area (for approximately 1250') enabling access to higher elevations for grazing and recreational activities.

It is not projected that the mining operation will affect the land use within and adjacent to the it's boundary. Efforts will be made to minimize the area of disturbance so the environmental impacts will remain minimal. No utilities are planned for installation on the "lease".

Once mining has ceased, the disturbed areas will be reclaimed to a degree acceptable to UDOGM and the land will once again support its principle pre-mining use: i.e., undeveloped land.

The land owners of record and their addresses are recorded in Attachment D along with Figure 4-1 showing the location of their property.

Residual Impacts

First and foremost the coal resource will be removed which will result in changes in the geology and hydrology of the area. The impacts could include minor surface subsidence and an alteration of groundwater flow patterns. Although the area near Beaver Creek has been mined south of the "lease", detailed records were not kept of the operation. Therefore the impacts which may have been caused by mining in the immediate area are not documented.

Alluvial deposits were identified at the mouth of Jewkes Creek and along North Fork Gordon Creek. The alluvial deposits at these locations are below the coal outcrop and thus, could not be directly impacted by mine subsidence.

The removal of the coal within the proposed "lease" should cause no residual impacts of a long-term nature to man or the environment.

Public Interest

The economy of Carbon and Emery counties is dependent on the stimulus provided by coal mining. The general public and the business community encourage the development of coal mining in the area.

The impact and need for area housing, utilities, educational, medical, and social services will remain consistent throughout the life of the mine.

Roads

The county road connecting Carbon County Road 290 (Consumers Canyon) to Utah State Highway 96 at Clear Creek has been used for recreation and the movement of livestock since the early 1900. This road parallels Horizon's disturbed area boundary. During 1995 and 1996 the road was graded, realigned, and widened by a logging operation removing timber along Beaver Creek. The constant change in the road caused a substantial increase of erosion and siltation in the both Jewkes and Beaver Creeks. This county road provides access to the "lease" area where all roads are privately owned and gated.

Traffic will increase on U.S. Highway 6, Consumers Road and various associated county roads (having no associated numbering or labeling). The existing transportation routes should be sufficient to handle the additional traffic. As is common in the mining industry the majority of the employees will car pool to the mine site.

Native American Religious Concerns

Horizon is unaware of any cause for concern by native americans. Archeological and paleontological studies have been done for the area with no concerns being voiced by SHPO upon the submittal of the studies findings. A letter from the Ute Tribe confirms the lack of concern for the disturbance or destruction of cultural or historical artifacts in the proposed coal lease area (Attachment D).

Solid and Hazardous Wastes

Any waste produced by the mine will be disposed of as defined in the Horizon M&RP. Wildlife will be restricted from contact with any hazardous wastes stored on the mine site.

5.0 REFERENCES

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6.0 AGENCIES AND PERSONS CONSULTED

Larry Dalton
Utah Division of Wildlife Resources

Bill Bates
Utah Division of Wildlife Resources
Southeastern Regional Habitat Manager

Kevin Christopherson
Utah Division of Wildlife Resources
Southeastern Regional Aquatic Manager

Mark Page
Utah Division of Water Rights
Regional Engineer

Dan Guy
Blackhawk Engineering
Civil Engineer

Patrick Collins
Mt. Nebo Scientific
Biologist/Reclamation Specialist

Steve Stamatakis
Land Owner

Roger and Margaret Skaggs
Blue Blaze Coal Company

Utah Division of Oil, Gas and Mining
Salt Lake Office

Steve Falk
Bureau of Land Management
Price River Resource Area
Mining Engineer

Tom Rasmussen
Bureau of Land Management
Price River Resource Area
Geologist

Dave Levanger
Carbon County
Director of Planning

Ray Hansen
Carbon County Road Department

Chris Hansen
EarthFax Engineering, Inc.

Brad Lengas
Biologist

0006

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

TAKE PRIDE IN AMERICA

IN REPLY PLEASE REFER TO:
3482, UTU-74804, (UT-923)

Certified Mail--Return Receipt Requested
Certificate No.

Derrel Curtis
General Manager
Hidden Splendor Resources
P.O. Box 32
Helper, Utah 84526

2/07/0030
FAX PFO
Copy Wayne H, W, and PAM

Re: Modification to the Resource Recovery and Protection Plan (R2P2), Horizon Mine, Federal Coal Lease UTU-74804

Dear Mr. Curtis:

The Bureau of Land Management (BLM) has received a modification to the R2P2 from Hidden Splendor for the subject mine. The modification revises the timing and layout of the mining plan now that Hidden Splendor has restarted the Horizon Mine after acquisition from the previous lessee. The revision is for the only Federal coal lease, UTU-74804 and associated fee coal lands.

The Hidden Splendor mining plan is based on a north-west/south-east orientation. Hidden Splendor states that the orientation will allow for panels to parallel the prevalent faulting trend and to probe/cross the faults with submains.

The BLM agrees with the proposal. The new layout will avoid multiple fault crossings in mining panels and, in turn, provide for better delineation of the faults. Remaining recoverable reserves are projected by Hidden Splendor to be 5.9 million tons and they report that 0.52 million tons have been recovered as of 10 Jan 2005. BLM has independently confirmed that 5.9 million remaining recoverable tons is reasonable.

BLM last inspected the mine on 22 September 2004. Some changes have been made to the overall plan approved by this letter and attached map. Hidden Splendor is requested to provide modifications to this approved mine plan on or before 28 February 2005.

This approval of a minor modification to an existing R2P2 is Categorically Excluded from the National Environmental Policy Act (NEPA) analysis in that no new surface disturbance will occur from this action as stated in Overview of BLM's NEPA Process, February 1997, Appendix 2, page 2-7 (F)(7).

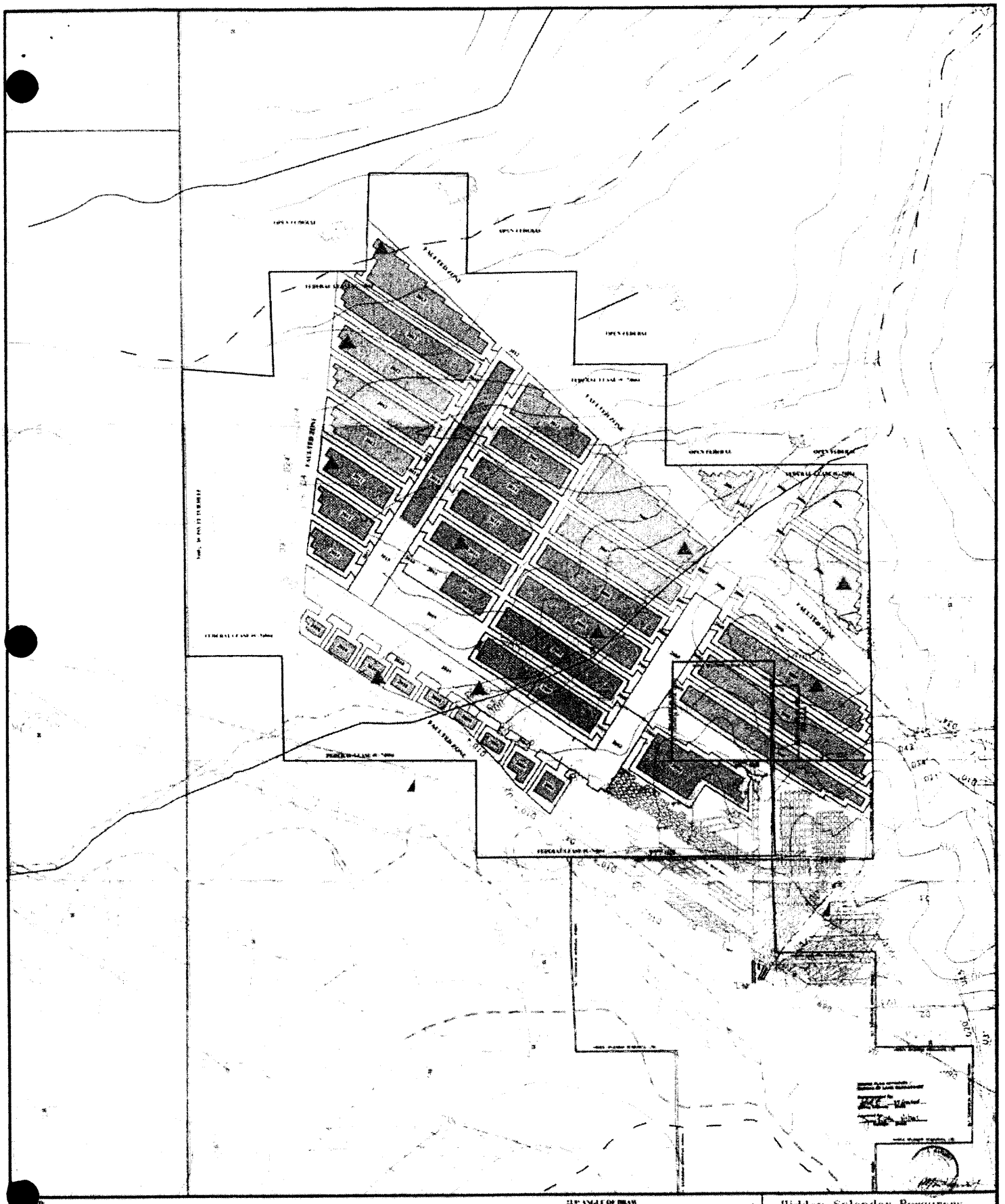
The modification of the R2P2 complies with the Mineral Leasing Act of 1920, as amended, the regulations at 3480, and the lease terms and conditions and will achieve maximum economic recovery of the Federal coal. The revised R2P2 for the Horizon Mine is approved as submitted. A copy of the approved mine map is enclosed. If you have any questions, please contact Stephen Falk at the Price Field Office (435) 636-3605 or Jeff McKenzie of my staff at (801) 539-4038.

Sincerely,

J.F. Kohler
Branch Chief, Solid Minerals

Enclosures:
Approved Mine Map

cc: UT-070, Price Field Office (w/encl.)
Utah Division of Oil Gas and Mining (w/encl.)
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84114-5801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2014 RETREAT
2015 ADVANCE
2015 RETREAT
21.8° ANGLE OF DRAW
35° ANGLE OF DRAW
PROPOSED MONITORING STATION
MONITORING STATION-VERTICAL, HORIZONTAL AND CONVERGENCE CONTROL (BRAWATON SCAN)
BASE STATION-ELEVATION AND HORIZONTAL CONTROL (PERMANENT)
Hidden Splendor Resources
MINE PLAN (10 YEAR) WITH SEAM HEIGHT AND OVERBURDEN & SUBSIDENCE MONITORING POINTS
PLATE 5-8
FEDERAL COAL LEASE NO. U74404
UTAH D.O.G.M. PERMIT NO. C/007/0020

0024

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

TAKE PRIDE IN AMERICA

RECEIVED
JUN 0 6 2005
DIV. OF OIL, GAS & MINING

IN REPLY PLEASE REFER TO:
3482, UTU-74804, (UT-923)

JUN 0 1 2005

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

C/007/020

Re: Surface Managing Agency Response, Federal Coal Lease Addition, UTU-74804, Horizon Mine, Hidden Splendor Resources, Inc., C/007/020

Dear Ms. Grubaugh-Littig:

The Bureau of Land Management (BLM) has reviewed the subject permit application package for adding the remaining portion of Federal coal lease UTU-74804 to the approved Horizon Mine Permit. This letter documents the Bureau's findings for post-mining land uses as required by the laws governing the Federal coal lease and the public lands.

There is one 40 acre tract of public land inside the permit area that is managed by the BLM. The rest of the surface lands are under private ownership. The public lands inside the permit area are designated open for coal leasing under the current land use plan. There is no planned surface disturbing activities on the public lands and non-mineral resources will not be affected. Hence, the BLM concurs with the submitted Horizon Mine Plan with regards to post-mining land use on public lands and the protection of non-mineral resources. Also, our previous recommendation for the approval of the resource recovery and protection plan (R2P2) for the area to be added to the permit, is still valid.

If you have any questions, please contact Jeff McKenzie of my staff at 801-539-4038 or Stephen Falk at the Price Field Office 435-636-3605.

Sincerely

Chief, Solid Minerals

cc: Office of Surface Mining
1999 Broadway, Suite 3320
Denver, Colorado 80202-5733
Price Field Office, UT-070
Hidden Splendor Resources, Inc.
P. O. Box 32
Helper, Utah 84526

0017

United States Department of the Interior
FISH AND WILDLIFE SERVICE
UTAH FIELD OFFICE
2369 WEST ORTON CIRCLE, SUITE 50
WEST VALLEY CITY, UTAH 84119

In Reply Refer To
FWS/R6
ES/UT
04-1483

April 19, 2005

D. Wayne Hedberg
Permit Supervisor
Division of Oil, Gas, and Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801

RE: Informal section 7 Endangered Species Consultation, Permit Boundary Expansion, Hidden Splendor Resources, Inc., Horizon Mine, C/007/0020

Dear Mr. Hedberg:

The U.S. Fish and Wildlife Service (Service) has reviewed your letter of September 21, 2004 and e-mails of April 15 & 18, 2005, from Joe Helfrich of your office. Potential impacts to proposed or listed species from mining activities have been previously addressed in the Service's September 24, 1996 Biological Opinion and Conference Report on Surface Coal Mining and Reclamation Operations under the Surface Coal Mining and Reclamation Act of 1977. As part of the terms and conditions of this BO, the regulatory authority must implement and require compliance with any species-specific protective measures developed by the Service field office and the regulatory authority.

We concur with your "no effect" determination for the following candidate, threatened and endangered species and critical habitat included in the species list for Carbon County: Graham beardtongue, Uintah Basin hookless cactus, bald eagle, Mexican spotted owl, Western yellow-billed cuckoo, Black-footed ferret, bonytail, humpback chub, Colorado pikeminnow, and razorback sucker. No endangered species-specific protective measures for these species are considered necessary for the subject project.

Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

Only a Federal agency can enter into formal Endangered Species Act section 7 consultation with the Service. A Federal agency may designate a non-Federal representative to conduct informal consultation or prepare a biological assessment by giving written notice to the Service of such a designation. The ultimate responsibility for compliance with ESA section 7, however, remains with the Federal agency.

We appreciate your interest in conserving endangered species. If further assistance is needed or you have any questions, please contact Diana Whittington, at (801) 975-3330 extension 128.

Sincerely,

Henry R. Maddux
Utah Field Supervisor

cc: OSM - Denver (Attn: Ranvir Singh)

0028

State of Utah

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

Department of Community and Culture
YVETTE DONOSSO DIAZ
Executive Director

Division of State History / Utah State Historical Society
PHILIP F. NOTARIANNI
Division Director

June 10, 2005

C/007/0020

Pamela Grubaugh-Littig
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
P. O. Box 145801
Salt Lake City UT 84114-5801

RE: Federal Lease Addition #74804, Hidden Splendor Resources, Inc., Horizon Mine, C/007/0020, task ID #2249

In Reply Please Refer to Case No. 00-1633

Dear Ms. Grubaugh-Littig:

The Utah State Historic Preservation Office received the referenced information. After consideration of the consultation request in behalf of DOGM, the Utah Preservation Office provides the following comments per 36 CFR 800.

Section 106 Consultation DOGM; USHPO concurs with the determination of No Historic Property Affected; §36 CFR 800.4(d)(1) for entire lease.

This information is provided on request to assist with state law responsibilities. As specified in 36 CFR 800, final determinations concerning cultural resources are the State Lead Agency's. If you have questions, please contact me at (801) 533-3555. My email address is: jdykman@utah.gov

As ever,

James L. Dykmann
Deputy State Historic
Preservation Officer - Archaeology

JLD:00-1633 DOGM/NPA

UNITED STATES

DEPARTMENT OF THE INTERIOR

This mining plan approval document is issued by the United States of America to:

Hidden Splendor Resources, Inc.
57 West 200 South, Suite 400
Salt Lake City, Utah 84101

for a mining plan modification for Federal lease UTU-74804 at the Horizon Mine. The approval is subject to the following conditions. Hidden Splendor Resources, Inc. is hereinafter referred to as the operator.

1. Statutes and Regulations.--This mining plan approval is issued pursuant to Federal lease UTU-74804; the Mineral Leasing Act of 1920, as amended (30 U.S.C. 181 et seq.); and in the case of acquired lands, the Mineral Leasing Act for Acquired Lands of 1947, as amended (30 U.S.C. 351 et seq.). This mining plan approval is subject to all applicable regulations of the Secretary of the Interior which are now or hereafter in force; and all such regulations are made a part hereof. The operator shall comply with the provisions of the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.), the Clean Air Act (42 U.S.C. 7401 et seq.), and other applicable Federal laws.

2. This document approves the mining plan modification for Federal lease UTU-74804 at the Horizon Mine and authorizes coal recovery operations only on the Federal lease within the area of mining plan approval. This mining plan modification authorization will not be valid beyond the following Federal coal lands;

Township 13 South, Range 8 East SL Meridian Utah

Section 6, E½SW¼, SE¼SW¼, SE¼SE¼;
Section 7, N½, N½S½, SE¼SW¼, SE¼SE¼;
Section 8, SW¼NW¼; NW¼NW¼;
NE¼NW¼ That Portion Lying Northwest of Beaver Creek;
SW¼NE ¼ That Portion Lying Northwest of Beaver Creek;
SE¼NW¼ That Portion Lying Northwest of Beaver Creek;
NW¼SW¼ That Portion Lying Northwest of Beaver Creek.

These lands encompass approximately 866 acres and are found on the USGS 7.5 minute Quadrangle map of Jump Creek, Utah, and as shown on the map appended hereto as Attachment A.

3. The operator shall conduct coal development and mining operations only as described in the complete permit application package, and approved by the Utah Division of Oil, Gas and Mining, except as otherwise directed in the conditions of this mining plan approval.

4. The operator shall comply with the terms and conditions of the lease, this mining plan approval, and the requirements of the Utah State Permit No. C/007/020 issued under the Utah State program, approved pursuant to the Surface Mining Control and Reclamation Act of 1977 (30 U.S.C. 1201 et seq.).

5. This mining plan approval shall be binding on any person conducting coal development or mining operations under the approved mining plan and shall remain in effect until superseded, canceled, or withdrawn.

6. If during mining operations unidentified prehistoric or historic resources are discovered, the operator shall ensure that the resources are not disturbed and shall notify Utah Division of Oil, Gas and Minerals and the Office of Surface Mining Reclamation and Enforcement (OSM). The operator shall take such actions as are required by Utah Division of Oil, Gas, and Minerals in coordination with OSM.

7. The Secretary retains jurisdiction to modify or cancel this approval, as required, on the basis of further consultation with the U.S. Fish and Wildlife Service pursuant to section 7 of the Endangered Species Act, as amended, 16 U.S.C. 1531 *et seq.*

FOR Chad Calvert
Assistant Secretary,
Land and Minerals Management

8/3/05
Date

T 12 S R 8 E

T 12 S R 7 E

Proposed Mine Plan Modification (Pink cross hatched area Federal Leases)

UTU-74804

T 13 S R 8 E

T 13 S R 7 E

Horizon Mine

UTU-74804

Previous Mine Plan Approval Area (blue cross hatched area Federal Leases)

Horizon Mine
Mining Plan Approval Area

ACT0070020

Carbon County, Utah

March 2005

Township 12 South Range 7 & 8 East
Township 13 South Range 7 & 8 East

File: N:/gis/coal/coalareamaps/C0070020Fed.pdf

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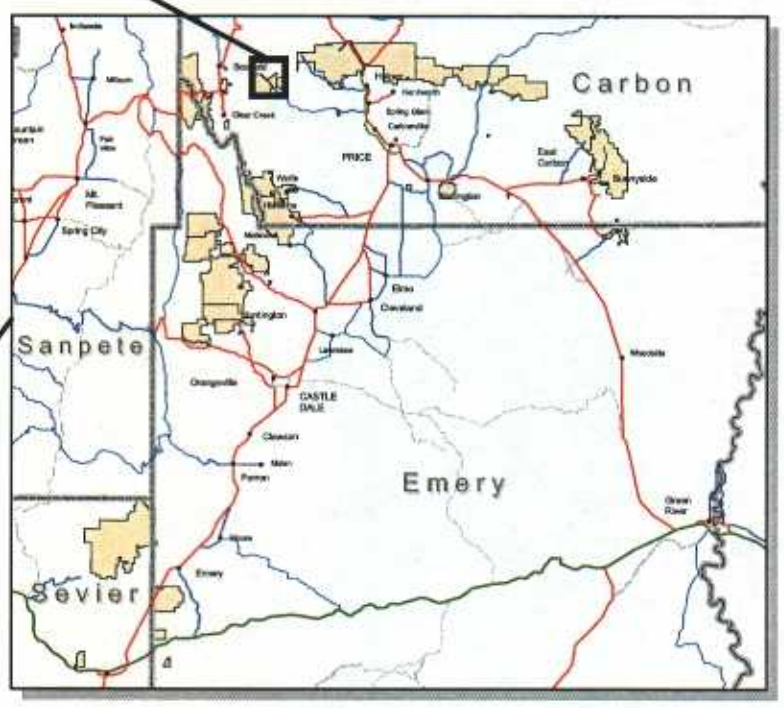
State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining



Locator Map

FEDERAL PERMIT July 1, 2005

C/007/0020

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
1594 West North Temple
Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

This permit, C/007/0020, is issued for the State of Utah by the Utah Division of Oil, Gas and Mining (Division) to:

Hidden Splendor Resources, Inc.
50 West Liberty Street, Suite 880
Reno, Nevada 89501
(775) 322-0626

for the Horizon No. 1 Mine. A financial assurance in the form of an Irrevocable Letter of Credit and Collateral (Real Estate) is filed with the Division in the amount of $342,000.00, payable to the State of Utah, Division of Oil, Gas and Mining and the Office of Surface Mining Reclamation and Enforcement (OSMRE). The Division must receive a copy of this permit signed and dated by the permittee.

Sec. 1 STATUTES AND REGULATIONS - This permit is issued pursuant to the Utah Coal Mining and Reclamation Act of 1979, Utah Code Annotated (UCA) 40-10-1 et seq, hereafter referred to as the Act.

Sec. 2 PERMIT AREA - The permittee is authorized to conduct coal mining and reclamation operations on the following described lands within the permit area at the Horizon Mine situated in the State of Utah, Carbon County, as shown on Plate 1-1 (Permit Boundary Map) in the approved Horizon Mine mining and reclamation plan and located in:

Township 13 South, Range 8 East, SLM

Section 6 : NW1/4SE1/4, SE1/4SW1/4, SW1/4SE1/4. SE1/4SE1/4

Section 7: NW1/4, NE1/4, SE1/4, E1/2SW1/4, NW1/4SW1/4

Section 8: S1/2NW1/4, NW1/4NW1/4, SW1/4NE1/4, SW1/4, W1/2SE1/4

Section 17: NW1/4, W1/2NE1/4, NE1/4SW1/4, N1/2SE1/4SW1/4, N1/2NW1/4SW1/4, NW1/4SE1/4, N1/2SW1/4SE1/4

Section 18: NE1/4NE1/4

The permittee is authorized to conduct coal mining and reclamation operations on the foregoing described property subject to the conditions of all applicable conditions, laws and regulations.

Sec. 3 **COMPLIANCE** - The permittee will comply with the terms and conditions of the permit, all applicable performance standards and requirements of the State Program.

Sec. 4 **PERMIT TERM** - This permit expires on October 11, 2006.

Sec. 5 **ASSIGNMENT OF PERMIT RIGHTS** - The permit rights may not be transferred, assigned or sold without the prior written approval of the Division Director. Transfer, assignment or sale of permit rights must be done in accordance with applicable regulations, including but not limited to 30 CFR 740.13{e} and R645-303-300.

Sec. 6 **RIGHT OF ENTRY** - The permittee shall allow the authorized representative of the Division, including but not limited to inspectors, and representatives of the Office of Surface Mining Reclamation and Enforcement (OSM), without advance notice or a search warrant, upon presentation of appropriate credentials and without delay to:

(a) Have the rights of entry provided for in 30 CFR 840.12, R645-400-220, 30 CFR 842.13 and R645-400-110;

(b) Be accompanied by private persons for the purpose of conducting an inspection in accordance with R645-400-100 and R645-400-200 when the inspection is in response to an alleged violation reported to the Division by a private person.

Sec. 7 **SCOPE OF OPERATIONS** - The permittee shall conduct underground coal mining activities only on those lands specifically designated as within the permit area on the maps submitted in the approved plan and approved for the term of the permit and which are subject to the performance bond.

Sec. 8 **ENVIRONMENTAL IMPACTS** - The permittee shall take all possible steps to minimize any adverse impact to the environment or public health and safety resulting from noncompliance with any term or condition of the permit, including, but not limited to:

(a) Any accelerated or additional monitoring necessary to determine the nature of noncompliance and the results of the noncompliance;

(b) Immediate implementation of measures necessary to comply; and

(c) Warning, as soon as possible after learning of such noncompliance, any person whose health and safety is in imminent danger due to the noncompliance.

Sec. 9 **DISPOSAL OF POLLUTANTS** -The permittee shall dispose of solids, sludge, filter backwash or pollutants in the course of treatment or control of waters or emissions to the air in the manner required by the approved Utah State Program and the Federal Lands Program which prevents violation of any applicable state or federal law.

Sec. 10 **CONDUCT OF OPERATIONS** - The permittee shall conduct its operations:

(a) In accordance with the terms of the permit to prevent significant, imminent environmental harm to the health and safety of the public; and

(b) Utilizing methods specified as conditions of the permit by the Division in approving alternative methods of compliance with the performance standards of the Act, the approved Utah State Program and the Federal Lands Program.

Sec. 11 **EXISTING STRUCTURES** - As applicable, the permittee will comply with R645-301 and R645-302 for compliance, modification, or abandonment of existing structures.

Sec. 12 **RECLAMATION FEE PAYMENTS** - The operator shall pay all reclamation fees required by 30 CFR Part 870 for coal produced under the permit, for sale, transfer or use.

Sec. 13 **AUTHORIZED AGENT** - The permittee shall provide the names, addresses and telephone numbers of persons responsible for operations under the permit to whom notices and orders are to be delivered.

Sec. 14 COMPLIANCE WITH OTHER LAWS - The permittee shall comply with the provisions of the Water Pollution Control Act (33 USC 1151 et seq.), and the Clean Air Act (42 USC 7401 et seq.), UCA 26-11-1 et seq., and UCA 26-13-1 et seq.

Sec. 15 PERMIT RENEWAL - Upon expiration, this permit may be renewed for areas within the boundaries of the existing permit area in accordance with the Act, the approved Utah State Program and the Federal Lands Program.

Sec. 16 CULTURAL RESOURCES - If, during the course of mining operations, previously unidentified cultural resources are discovered, the permittee shall ensure that the site(s) is not disturbed and shall notify the Division. The Division, after coordination with OSM, shall inform the permittee of necessary actions required. The permittee shall implement the mitigation measures required by the Division within the time frame specified by the Division.

Sec. 17 APPEALS - The permittee shall have the right to appeal as provided for under R645-300-200.

Sec. 18 SPECIAL CONDITIONS - The permittee shall comply with the special conditions in Attachment A.

The above conditions (Secs. 1-18) are also imposed upon the permittee's agents and employees. The failure or refusal of any of these persons to comply with these conditions shall be deemed a failure of the permittee to comply with the terms of this permit and the lease. The permittee shall require his agents, contractors and subcontractors involved in activities concerning this permit to include these conditions in the contracts between and among them. These conditions may be revised or amended, in writing, by the mutual consent of the Division and the permittee at any time to adjust to changed conditions or to correct an oversight. The Division may amend these conditions at any time without the consent of the permittee in order to make them consistent with any federal or state statutes and any regulations.

THE STATE OF UTAH

By: Paula Dupin-Zahn for John Baza

Date: 7/1/05

I certify that I have read, understand and accept the requirements of this permit and any special conditions attached.

PERMITTEE (Authorized Representative)

By:_____

Date:_____

Attachment A
Conditions

Condition #1	Hidden Splendor Resources, Inc. will submit water quality data for the Horizon Mine in an electronic format through the Electronic Data Input web site, http://hlunix.hl.state.ut.us/cgi-bin/appx-ogm.cgi.
Condition #2	Hidden Splendor Resources, Inc. may not commence coal mining and reclamation operations in federal coal lease U-74804 (north of Beaver Creek) until approval of the mining plan is authorized by the Assistant Secretary of the Lands and Minerals Management (ASLMM) in the Department of the Interior.

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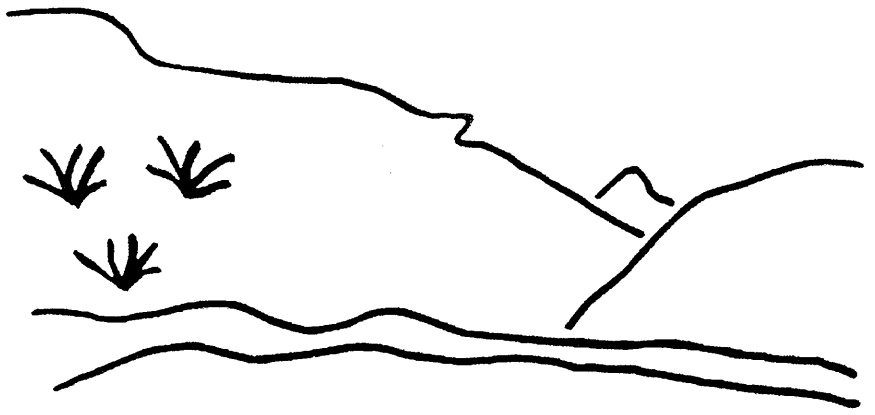
State of Utah



Utah Oil Gas and Mining

Coal Regulatory Program

Horizon Mine
Hidden Splendor Resources, Inc.
Technical Analysis
June 13, 2005

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TECHNICAL ANALYSIS DESCRPTION

The Division ensures that coal mining and reclamation operations in the State of Utah are consistent with the Coal Mining Reclamation Act of 1979 (Utah Code Annotated 40-10) and the Surface Mining Control and Reclamation Act of 1977 (Public Law 95-87). The Utah R645 Coal Mining Rules are the procedures to implement the Act. The Division reviews each permit or application for permit change, renewal, transfer, assignment, or sale of permit right for conformance to the R645-Coal Mining Rules. The Applicant/Permittee must comply with all the minimum regulatory requirements as established by the R645 Coal Mining Rules.

The regulatory requirements for obtaining a Utah Coal Mining Permit are included in the section headings of the Technical Analysis (TA) for reference. A complete and current copy of the coal rules can be found at http://ogm.utah.gov

The TA is organized into section headings following the organization of the R645-Coal Mining Rules. The Division analyzes each section and writes findings to indicate whether or not the application is in compliance with the requirements of that section of the R645-Coal Mining Rules.

GENERAL CONTENTS

IDENTIFICATION OF INTERESTS

Regulatory Reference: 30 CFR 773.22; 30 CFR 778.13; R645-301-112

Analysis:

Chapter 1 of the federal lease application is an introduction describing where mining activities are currently located, and the location of the proposed federal lease addition, (plate 1-1). Over all changes to the current operation and reclamation plan are relatively minor.

Ownership and control information is in Chapter 2 and Appendix 2-4. Hidden Splendor Resources, Inc. is incorporated under the laws of the state of Nevada and is in good standing with legal corporate existence. Hidden Splendor Resources is also the Permittee and mine operator. Alexander H. Walker III is the resident agent and Cecil Ann Walker will pay the abandoned mine land reclamation fee. Officers of the Permittee are listed on page 2-2 of the permit. The MRP includes the MSHA numbers for the Horizon # 1 and Horizon # 2 Mines. (6/2/2005)

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations. When the application is at or near final approval an AVS check is recommended.

VIOLATION INFORMATION

Regulatory Reference: 30 CFR 773.15(b); 30 CFR 773.23; 30 CFR 778.14; R645-300-132; R645-301-113

Analysis:

Neither the Permittee nor any of its subsidiaries, affiliates or persons controlled by or under common control with the Permittee has had a federal or state permit revoked or suspended or revoked, nor forfeited a bond in the last five years as noted on page 2-6 of the permit. There are no outstanding notices of violation.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

RIGHT OF ENTRY

Regulatory Reference: 30 CFR 778.15; R645-301-114

Analysis:

The U. S. Bankruptcy Court for the Eastern District of Kentucky assigned the right, title, and interest to the Horizon Mine to Hidden Splendor on March 24, 2003. Hidden Splendor has the right to enter and undertake coal mining based on the assignment from Lodestar by its Chapter 11 trustee, the designation of Operator executed by Lodestar and the federal coal lease. The Horizon mine was issued a Right-of Way SL 063011 through the BLM lands in 1966 to facilitate mining coal from fee lands. Documents pertinent to these actions are included in appendices 2-1 and 2-3. (6/2/2005)

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

LEGAL DESCRIPTION AND STATUS OF UNSUITABILITY CLAIMS

Regulatory Reference: 30 CFR 778.16; 30 CFR 779.12(a); 30 CFR 779.24(a)(b)(c); R645-300-121.120; R645-301-112.800; R645-300-141; R645-301-115.

Analysis:

The application includes the legal description and this matches the areas shown on the permit area maps. Copies of the leases for the areas proposed to be added to the permit area are located in Appendix 2-3. Page 2-7 of Chapter 2 describes the legal description of the permit boundary. On July 6, 2004 the Division received an "E" mail from Mr. Pappas noting the corrected legal description for the proposed public notice. The second parcel in Section 17 was changed from E1/2NE1/4 to W1/2NE1/4. The legal description in the application has been corrected also. Page 2-8 of Chapter 2 describes the status of unsuitability claims. The remaining portion of the lease is not within an area under study as an area designated as unsuitable for mining. There are no petitions filed with the D. O. G. M. that could affect the proposed lease application. As there is no surface disturbance associated with the mining of the additional lease

area there will be no activities within 300 feet of an occupied dwelling or 100 feet from a cemetery. (6/2/2005)

The proposed operations will neither be within 100 feet of a public road nor within 300 feet of an occupied dwelling. Coal haulage at the existing mine is within 100 feet of a public road, but the plan contains approval letters from Carbon County regarding use of the public road. The letters are included in Appendix 3-1 and discussed in Chapter 3.

According to the current MRP and application, no portion of the area to be permitted is within an area designated as unsuitable for mining, (plate 1-1).

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

PERMIT TERM

Regulatory References: 30 CFR 778.17; R645-301-116.

Analysis:

The permit term is five years and the current permit expires October 1, 2006.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

PUBLIC NOTICE AND COMMENT

Regulatory References: 30 CFR 778.21; 30 CFR 773.13; R645-300-120; R645-301-117.200.

Analysis:

The application includes a copy of the proof of publication containing the required information. The advertisements ran from October 31, through November 21, 2000, in The Sun Advocate. A copy of the affidavit of publication was received December 4, 2000. On July 6, 2004 the Division received an "E" mail from Mr. Pappas noting the corrected legal description for the proposed public notice. For proof of publication a copy of the notice as published in the

newspaper has been included in the application as Appendix 2-2 for the addition of the remaining portion of the federal lease. (6/2/2005)

No facilities would be used in common with any other permitted operation.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

FILING FEE

Regulatory Reference: 30 CFR 777.17; R645-301-118.

Analysis:

A copy of the filing fee is currently on file with the Division, there is no fee required for this revision to the operation and reclamation plan.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

PERMIT APPLICATION FORMAT AND CONTENTS

Regulatory Reference: 30 CFR 777.11; R645-301-120.

Analysis:

The application format and contents are in concert with the requirements and guidelines of the Utah Coal Regulatory Program.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

REPORTING OF TECHNICAL DATA

Regulatory Reference: 30 CFR 777.13; R645-301-130.

Analysis:

Explicit citations in the References identify sources cited in the text. All referenced materials are available to the Division, although some must be obtained through the UGS library. (6/2/2005)

The Permittee's technical data have been analyzed under the requirements of the regulations.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

MAPS AND PLANS

Regulatory Reference: 30 CFR 777.14; R645-301-140.

Analysis:

The maps and plans provided in the application as required are prepared by a certified professional engineer to appropriate scale.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

COMPLETENESS

Regulatory Reference: 30 CFR 777.15; R645-301-150.

Analysis:

The information in the application was determined to be administratively complete on October 11, 2000. The Permittee has also stated in the application that the information is

believed to be complete and correct. The application for the federal lease addition was determined Administratively Complete by the Division on June 28, 2004. (6/2/2005)

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

GENERAL

Regulatory Reference: 30 CFR 783.12; R645-301-411, -301-521, -301-721.

Analysis:

The MRP includes a description of the existing, pre-mining environmental resources within the proposed permit area and adjacent areas that may be affected or impacted by the proposed underground mining activities. (6/2/2005)

Surface impacts are discussed but are not expected. As with all mining there exists the potential of mine subsidence that can migrate to upper geologic units and effect surface- and ground-water systems, which can in turn affect land use. The Permittee has submitted information that considers potential impacts and describes means and methods to prevent or mitigate impacts. Information pertaining to the surface disturbance, structures, and their reclamation is provided in the Horizon MRP.

Findings:

The Permittee has submitted information sufficient to evaluate the proposed area of mining and mining techniques and methods to conduct mining operations.

PERMIT AREA

Regulatory Requirements: 30 CFR 783.12; R645-301-521.

Analysis:

The permittee shows the new and old permit boundaries on Plate 1-1. Plate 1-1 shows the following:

- The old and new permit boundaries
- The disturbed area boundary
- Township, range and sections
- Topography (80-foot contours)

- Roads and stream

The permittee included a legal description of the permit area in Section 114 of the MRP. The legal description is identical to the leases areas. The permit area contains 1,577 acres. (6/2/2005)

In Section 117 of the MRP the permittee included a legal description of the disturbed area and acreage. The actual disturbed area contains 8.23 acres. The reclamation bond amount was calculated using 9.15 disturbed acres. The permittee agreed to continue to list 9.15 acres as the official disturbed acreage.

Findings:

Information provided in the proposed amendment is considered adequate to meet the requirements of this section.

HISTORIC AND ARCHEOLOGICAL RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.12; R645-301-411.

Analysis:

Appendix 5-1 contains the September 1995 "Historical, Cultural, and Paleontological Resource Study" by Baseline Data, Inc., and copies letters of concurrence from SHIPO dated May and October 1995. The Division has also received letters of concurrence from SHIPO dated June 10, 2005 in conjunction with mining in federal lease UTU-74804.

Findings:

Information provided in the proposed amendment is considered adequate to meet the requirements of this section.

CLIMATOLOGICAL RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.18; R645-301-724.

Analysis:

Climate is discussed in Chapter 11. The climate information in the plan was gathered the monitoring site of nearby Skyline Mine. The plan puts the respective average annual temperatures for 1993, at the Skyline Mine at 37.7°F. The respective cumulative annual

precipitation amounts for these same locations at 27.37 inches. The coldest month of 1993 was January, with an average temperature of -9°F, while the warmest month was August, with an average temperature of 80°F.

In the past the Division has recommended that the operator set up a weather station at the site so that precipitation events can be correlated with other monitoring data: this has not been done. (6/2/2005)

Findings:

The plan contains no site-specific climatological data, but an approximate range of data can be determined from the information scattered throughout the plan. The Division finds that this information meets the minimum regulatory requirements. The Division recommends, however, that the operator set up a weather station at the site so that precipitation events can be correlated with other monitoring data.

VEGETATION RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.19; R645-301-320.

Analysis:

Chapter 9 of the current operation and reclamation plan provides the vegetation resource information. Plate 9-1 depicting the vegetative communities and acreage has been updated to include the proposed permit area expansion. Vegetative communities include Oakbrush, Salina Wildrye, Maple/Oakbrush/Aspen, Fir/aspen, Alpine Herb/Grassland, Manzanita, and Sagebrush/grass/ Rabbitbrush. This information is adequate to predict the potential for reestablishing vegetation. Because there is no surface disturbance proposed with the mining in this area it is unlikely that there will be a need for reclamation practices to occur.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

FISH AND WILDLIFE RESOURCE INFORMATION

Regulatory Reference: 30 CFR 784.21; R645-301-322.

Analysis:

The Fish and Wildlife Information in the application is referenced in Section 3.6 et sec, and discussed in Chapter 10 of the current plan. Plate 10-1 has been revised to include the proposed addition to the permit area. This map shows the proposed permit boundary, the location of two raptor nests and big game habitat. The map has been revised to show the identification and location of the three nests located during the May 12, 2000 raptor survey. The proposed addition to the permit area is divided into critical year-long elk habitat and critical summer deer and elk habitats. There is an additional map labeled 2000 Raptor Survey Jump Creek Quad. The map has been identified as Appendix 10-3 in the table of contents of Chapter 10. There are three digit numbers associated with each of the nests shown on the map, 482-Golden Eagle-inactive, 484-Golden Eagle-old/dilapidated, 936-American Kestrel-active. The 2001 raptor survey is included in the 2001 annual report. It is labeled 2001 Raptor Survey-Horizon Mine, Jump Creek UT Quad. The map depicts the flight path of the survey that extends into and covers the majority of the proposed lease area. There were no nests identified in this area. The Division of Wildlife Resources (DWR) has provided the Permittee with a letter indicating that raptor surveys within the Horizon permit area were no longer necessary, (Appendix 10-3), Typically the Division requires a raptor survey current to the year of the permitting activity. In this case, because previous surveys have also shown no evidence of nesting raptors in the proposed lease area and the DWR supports no additional surveys, the 2001 survey would be sufficient. A copy of the letter from the DWR is included in the application. (6/2/2005)

Findings:

The information contained in this section of the application is adequate to meet the requirements of the regulations.

SOILS RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.21; 30 CFR 817.22; 30 CFR 817.200(c); 30 CFR 823; R645-301-220; R645-301-411.

Analysis:

Section 2.117 states that the disturbed area contains 8.23 acres. The bond covers 9.15 acres. The permit and disturbed area boundaries are shown in Plate 1-1.

Chapter 8 covers soil survey information. A soil survey was conducted in 1990. The survey was conducted by Richard Foster, of the SCS. A disturbed area soils map Plate 8-1 was drawn by Patrick Collins (Mt Nebo, Scientific).

Plate 8-2 is a revised permit area soil map. The permit area boundary has been redrawn on this map to include federal lease UTU-74804.

Findings:

Information provided in the proposed amendment is considered adequate to meet the requirement of this section.

LAND-USE RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.22; R645-301-411.

Analysis:

The land use information is located in Chapter 4. Current land uses consist of grazing, logging, mining , mining reclamation activities, recreation and wildlife habitat. This permit application lies beneath an area that is undeveloped. The names, and addresses of the surface owners are provided and identified on plate 4-2. Plate 4-3 shows the ownership and location of the mineral tracts. The Permittee's legal right to enter is shown on plate 1-1 and discussed in the lease documentation located in Chapter 2.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

ALLUVIAL VALLEY FLOORS

Regulatory Reference: 30 CFR 785.19; 30 CFR 822; R645-302-320.

Analysis:

Alluvial Valley Floor Determination

There is a letter in Appendix 7-6 from SCS dated 6/13/80 stating that there are no Alluvial Valley Floors in the area of Section 17, Township 13 South, Range 8 East. As this letter does not cover the revised permit area and as the Alluvial Valley Floor determination is the responsibility of the Division, the issue will be addressed here, on the basis of the information provided in the application. The additional lease area falls within Sections 7 and 8 on the north and Sections 18 and 17 on the south. The additional lease area is at an elevation of 7600 - 8400 feet and is bordered by Beaver Creek on the north. Beaver Creek lies in Sections 7 and 8.

The soil type along Beaver Creek at 8,300 ft elevation is #109 Silas-Brycan loams. The following soil description comes from the SCS Soil Survey[1]: these soils are found in low areas adjacent to stream channels or on alluvial fans adjacent to narrow alluvial valleys. The water table fluctuates between 20 - 25 inches.

Surface mining will not be conducted in the area. The premining land use has been undeveloped rangeland utilized for grazing and the deposits of alluvium are small and do not support farms.

In accordance with R645-302-323, the Division finds that the premining land use is undeveloped rangeland which is not significant to farming and that the area of alluvium is small.

Applicability of Statutory Exclusions

Findings:

The permittee has submitted sufficient information to address this section.

PRIME FARMLAND

Regulatory Reference: 30 CFR 785.16, 823; R645-301-221, -302-270.

Analysis:

The additional lease area is at an elevation of 7,600 – 8,400 ft and is bordered by Beaver Creek on the north, Gordon Creek on the south and is bisected by Jewkes Creek. In Figure 8-1, the prime farmland determination dated 9/12/1990 by the Soil Conservation Service states that there are no prime farmlands within Sections 7, 8, 17, 18 or 20 of Township 13 South, Range 8 East. The area covered in the lease application extends into Sections 7 and 8 on the north and Section 18 on the south.

The soils within the lease are were designated #107 (Shupert-Winetti complex) along Jewkes Creek , and #72 (Pathead/Curecanti family association) on the south facing slopes, #63 (Midfork family Podo association) on the north facing slopes and #109 (Silas-Brycan loams) in the Beaver Creek drainage with #124 on the north facing slopes and #72 on the south facing slopes.

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[1]USDA. SCS. 1988. Soil Survey of Carbon Area, Utah.

Soil type #107 is deep and well drained. The mine surface facilities are located within this soil type.

Findings:

The application provides the required information.

GEOLOGIC RESOURCE INFORMATION

Regulatory Reference: 30 CFR 784.22; R645-301-623, -301-724.

Analysis:

Chapter 6 includes the geologic information for the Horizon Mine area in accordance with the requirements set forth in R645-301-600. The permittee has submitted a stratigraphic column in Table 6-1. (6/2/2005)

Previously assembled geologic data obtained from Beaver Creek Coal Co. has been used as a basis for this chapter. The data from Beaver Creek Coal Co. included drill logs generated during their mining efforts. Information from recent geologic publications and in-house reports is also included to supplement the information obtained from Beaver Creek Coal Co. (6/2/2005)

The current coal mining plan includes geologic information in sufficient detail to assist in determining: the probable hydrologic consequences (PHC) for the operation. The PHC determination is required from the operator to identify potential impacts to the quality and quantity of surface and ground water in the permit and adjacent areas. identify where surface- and ground-water monitoring is necessary; whether reclamation can be accomplished; whether the proposed operation has been designed to prevent material damage to the hydrologic balance outside the permit area; and provide information to prepare a subsidence control plan. (6/2/2005)

The minable seams for the area are found in the lower 350 feet of the Blackhawk Formation. Plates 6-2 and 6-3 are geologic cross-sections that illustrate the stratigraphic relationships of the Blackhawk and Star Point Formations and the mappable coal beds present in the Horizon No. 1 Mine area. (6/2/2005)

A total of eight coal seams can be identified in the Gordon Creek region; however, Hidden Splendor has plans to mine only the Hiawatha seam. Four of the eight seams are present in the mine area and outcrop on the walls of the North Fork of Gordon Creek Canyon, Coal Canyon, and Bryner Canyon. Weathering, burning and vegetation obscures the majority of coal outcrops of the Hiawatha, Gordon, Castlegate "A", and Bob Wright seams. Only the Hiawatha and Castlegate "A" Seams have been economically mined in the area. The Hiawatha seam marks the base of the Blackhawk Formation. The Castlegate "A" seam overlies the Aberdeen

Sandstone. The Aberdeen is a marine sandstone sequence that coarsens upward, and is similar in character to the Star Point Sandstone. The Aberdeen measures over 120 feet at Price Canyon (Sec. 12, T13S, R9E) and thins to the west. In the vicinity of the Horizon No. 1 Mine and the National Mine (Sec. 17, T13S, R8E), the Aberdeen Sandstone is apparently discontinuous and not easily recognizable on outcrop. The westward pinch-out of the Aberdeen Sandstone is illustrated on the west-east stratigraphic section between drill hole LMC-4 and the Arco measured section near the National Mine as illustrated on Plate 6-3. (6/2/2005)

Acid- and Toxic-forming Materials

Table 6-5 summarizes the quality of the Hiawatha coal seam. The analyses were performed on core samples from drill hole LMC-4 as well as the HZ drill holes. Supporting laboratory data sheets are provided in Appendix 6-2. (6/2/2005)

According to data provided in Table 6-5, the average moisture content of the Hiawatha coal seam is 7.99 percent. The pyritic sulfur content of the coal is low, with a maximum of 0.07 percent and an average of 0.05 percent. (6/2/2005)

Data presented in Appendix 6-2 and summarized in Table 6-6 indicate that the Hiawatha coal seam does not possess toxic-forming characteristics. Boron and selenium concentrations, as well as sodium adsorption ratios, are all within a range classified as "good" by Leatherwood and Duce (1988). However, the acid-base potential of each of the three coal samples, which were collected from the HZ-series drill holes suggest that the coal has a potential to be acid-forming. (6/2/2005)

The acid-forming potential of the coal will be tempered by its slightly alkaline nature (with a pH that varies from 7.3 to 7.8, according to Appendix 6-2). Furthermore, impacts to the environment of the permit and adjacent areas resulting from this acid-forming potential will be minimized by two factors. First, coal will be stored on the surface for only short periods of time before being shipped off site, thus reducing the potential for weathering, oxidation, and generation of acid drainage. Second, runoff from the coal stockpile will be routed through the facility sedimentation pond, where it will mix with more-alkaline runoff from additional areas, thus neutralizing any acidic drainage, which might form. (6/2/2005)

Table 6-6 lists the analytical results of tests performed to determine the acid- and toxic-forming potential of floor and roof samples collected adjacent to the Hiawatha coal seam from LMC-4 and from the HZ holes. Comparing the data in Table 6-6 with the guidelines presented by Leatherwood and Duce (1988) indicates the roof and floor materials should be neither acid-generating nor toxic-forming. One sample (LMC-4 roof material) did contain an anomalous-high pyritic sulfur content of 0.24 percent. However, comparison with other samples collected in the area indicates that this high pyritic sulfur content is likely of limited areal extent. This is further verified by the high neutralization potential of the remaining roof and floor materials (with acid/base potentials varying from 20.3 to 64.0 tons of $CaCO_3$ per 1000 tons of material). (6/2/2005)

To monitor conditions of the overburden and underburden, samples will be taken at 2,000 ft intervals throughout the mine and will be tested according to the Divisions requirements. (6/2/2005)

Roof and Floor Properties

As discussed in Section 6.5.2, the roof and floor rock of the Castlegate "A" and Hiawatha seams varies from shale to competent sandstone. Information obtained from the LMC drill holes and selected drill holes from the Beaver Creek Coal Company permit application for their mines in the area have been utilized to determine roof and floor conditions that can be anticipated while mining the Hiawatha seam. The location of the of the Beaver Creek drill holes are included on Plate 3-3. Logs of the wells used to determine the properties of the roof and floor rock are included in Appendix 6-1. (6/2/2005)

The logs of drill hole LMC-3 and LMC-4 indicate the floor rock of the Hiawatha consists of five feet of carbonaceous silty shale and silty sandstone overlying the massive sandstone of the Spring Canyon Member of the Star Point Formation. No cores were obtained from LMC-3 and LMC-4 to determine the geotechnical properties of roof or floor rock. Uniaxial strength tests were performed by Beaver Creek Coal Company on samples of shales and sandstones obtained from drill holes GCD-4, 7, and 10. These drill holes are located approximately one mile west-southwest of the Horizon Mine portals. The results of the tests are provided in Table 6-7. (6/2/2005)

The logs from drill hole LMC 1 indicate the roof of the uppermost split of the Castlegate "A" seam is approximately 35 feet of sandstone. The floor of the seam consists of four feet of shale overlying approximately 30 feet of sandstone. In LMC-2, the upper split roof rock consists of 42 feet of carbonaceous shale and the floor consists of 38 feet of shaley silty sandstone. In LMC-3, the upper split roof rock consists of 4.5 feet of shale overlain by 19 feet of silty sandstone and the floor rock consists of four feet of shale overlying 8.5 feet of sandstone. In LMC-4, the roof rock consists of 15 feet of sandstone and the floor rock is five feet of siltstone overlying 26 feet of sandstone. Information from Beaver Creek Coal Company GCD-4 indicates that the roof rock of the Castlegate "A" seam in the area of the drill hole consists of sandstones interbedded with shales and the floor consists of shale. The results of uniaxial strength tests for samples obtained from the roof and floor rock of the Castlegate "A" seam in drill hole GCD-4 is provided in Table 6-7. (6/2/2005)

Drill Holes

The Permittee has provided information from several boreholes on and adjacent to the permit area. Drill holes were drilled by Beaver Creek Coal Company to garner data for coal reserves. Drill Hole logs are provided in Appendix 6-1.

Stratigraphy

The Permittee has described the stratigraphy in Section 6.4 of the MRP. The description includes the area on and adjacent to the mine. The stratigraphy consists of:

Star Point Sandstone

The Star Point Sandstone is the oldest stratigraphic unit exposed in the lease areas. It is the basal unit of the Mesaverde Group and is approximately 440 feet thick. The formation contains the Panther, Storrs, and Spring Canyon Sandstone Members which consist of coarsening upward littoral sequences of white to light gray, fine to medium grained, tight, quartzose sandstone (Blanchard 1981). The Star Point Formation overlies and intertongues with the marine Mancos Shale. The Star Point is the lowest cliff-forming unit over most of the east side of the Wasatch Plateau.

Blackhawk Formation

The Blackhawk Formation measures approximately 900 feet thick in the Gordon Creek area and consists of interbedded fluvial and marine sandstone, siltstone, and shale. The Blackhawk Formation conformably overlies the Star Point Sandstone and the boundary between the two formations is sharp; the massive Spring Canyon Sandstone member of the Star Point Sandstone is overlain by an erodible, shaley sandstone.

In the lease area, the Blackhawk Formation is the principal surficial bedrock unit. The Blackhawk disconformably overlain by the massive coarse grained, fluvial Castlegate Sandstone. A total of eight coal seams can be identified in the Gordon Creek region. Four of the eight seams are present in the mine area and outcrop on the walls of the North Fork of Gordon Creek Canyon, Coal Canyon, and Bryner Canyon.

Weathering, burning and vegetation obscures the majority of coal outcrops of the Hiawatha, Gordon, Castlegate "A", and Bob Wright seams. Only the Hiawatha and Castlegate "A" seams have been economically mined in the area. The Hiawatha seam marks the base of the Blackhawk Formation. The Castlegate "A" seam overlies the Aberdeen Sandstone. The Aberdeen is a marine sandstone sequence that coarsens upward, and is similar in character to the Star Point Sandstone. The Aberdeen measures over 120 feet at Price Canyon (Sec. 12, T13S, R9E) and thins to the west. In the vicinity of the Horizon No. 1 Mine and the National Mine (Sec. 17, T13S, R8E), the Aberdeen Sandstone is apparently discontinuous and not easily recognizable on outcrop. The westward pinch-out of the Aberdeen Sandstone is illustrated on the west-east stratigraphic section between drill hole LMC-4 and the Arco measured section near the National Mine as illustrated on Plate 6-3.

Castlegate Sandstone

The Castlegate Sandstone is exposed in the central and northeastern portion of the lease block (Plate 6-1). The formation consists of a white to gray, coarse grained to conglomeratic fluvial sandstone. Exposures of the Castlegate Sandstone typically form cliffs to steep slopes. The Castlegate Sandstone is approximately 300 feet thick in the Gordon Creek area.

Price River Formation

The Price River Formation occurs in the northeastern portion of the lease block (Plate 6-1). The Price River is also a fluvial deposit and contains gray to white silty sandstones with interbedded subordinate shale and conglomerate. The formation typically forms ledges and slopes. The Price River formation ranges from 600 to 1,000 feet in thickness.

Unconsolidated Deposits

Unconsolidated deposits composed of silt and fine-grained sand, alluvial sediments and talus debris occur along valley floors and at the base of steep slopes. The thickness of these sediments is variable. In the Horizon No. 1 Mine area, the thickest alluvial deposits occur along Beaver Creek. Based on field observations, the alluvial sediments appear to exceed 10 feet in thickness.

Structure

Figure 6-3 shows data of a dipslope from the top of the Spring Canyon Member of the Star Point Sandstone to the north-northeast. The area around the minesite is dissected by several faults. There are two graben zones, the Gordon Creek Graben and the Fish Creek Graben. These grabens run parallel and converge into N-S trending faults of the North Gordon Fault zone. The proposed mine expansion will take place in the Fish Creek Graben Zone. According to Figure 6-3 any buildup of mine water may flow out the portal.

Several igneous dikes have been reported in area mines including the Beaver Creek Coal Mines #2 and #3. The dikes are reported to be Miocene age and are a mica peridotite (Tingey, 1986). The dikes are typically associated with faults that bisect the area and trend east-west to northwest-southeast.

Faults

The area of the permit is heavily faulted (Plate 6-1). Two major fault zones affect the lease block: the North Gordon and Fish Creek fault zones (Figure 6-2). The North Gordon fault zone measures three miles wide and five miles in length and is located east of the lease. The Fish Creek fault zone averages two miles wide and enters the lease from the northwest.

The permit area contains essentially two major fault trends. They are the N60 degree west trending faults (Range N50-75W) associated with the Fish Creek fault zone, and the N-S trending faults associated with the North Gordon fault zone. Sympathetic faulting also occurs within the mine area. Displacements of the faults in the mine area are variable ranging from a few feet to as much as 200 feet. (6/2/2005)

The permittee has not requested that the Division wave in whole or in part the requirements of the borehole information or analysis required of this section.

Findings:

The Permittee has submitted sufficient Geologic Resource Information to meet the minimum requirements if the regulations.

HYDROLOGIC RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 701.5, 784.14; R645-100-200, -301-724.

Analysis:

Sampling and Analysis

The operator is required to perform all sampling and analysis in a manner that meets the requirements of R645-301-723.

The ground-water, surface-water, and point-source discharge site monitoring will be conducted in accordance with 40 CFR Parts 122 and 123, R645-301-751 and as required by the Utah Division of Water Quality for Utah Pollutant Discharge Elimination System (UPDES) permits. A UPDES discharge permit application has been secured from the Division of Environmental Health for the sediment pond and mine water discharge for the Horizon Mine operation. The UPDES permit for the Horizon Mine is provided in Appendix 3-6.

When analysis of any surface water sample indicates non-compliance with the permit conditions, the company will promptly notify the Division and immediately take actions to identify the source of the problem, correct the problem and, if necessary, to provide warning to any person whose health and safety is in imminent danger due to the non-compliance.

Baseline Information

Baseline hydrology was based on the Permittee's review of literature and available data obtained from the USGS, the US Forest Service, the State of Utah, Beaver Creek Coal Company, Blue Blaze Coal Company, and mine permit applications for the surrounding mines. Water quality data have been collected from the permit and adjacent areas since 1989. Water monitoring points are shown on Plate 7-1. Ground-water baseline data are in Appendix 7-2 and surface-water baseline data are in Appendix 7-3. Operational water monitoring data are in the Division's database. (6/2/2005)

Within the permit area, the surface water resources consist of streams, springs, wells and ponds. The mine is established in Portal Canyon, an ephemeral drainage, yielded only occasionally flows until the mine started discharging water. Portal Canyon drains into Jewkes

Creek. The undisturbed runoff generated above the disturbed area is directed into a 36-in culvert, UC-2, that runs the length of the disturbed area in Portal Canyon. Mine water is discharged directly into the Portal Canyon culvert.

Jewkes Creek is a perennial stream which receives its flow from rainfall, snowmelt and springs SP-1 and SP-4.Spring Two Canyon, a tributary to Jewkes Creek occasionally contributes flow. Part of the disturbed area lies along Jewkes Creek. Another set of undisturbed 36-inch drainage culverts, UC-1 and UC-3, directs flows from Jewkes Creek under the disturbed area and under the sedimentation pond. Drainage diversions are shown on Plate 7-4.

Beaver Creek is a perennial stream which lies in a drainage opposite the ridge of Jewkes Creek. Its flow path bisects the federal coal lease. Although the current mine plan does not extend across Beaver Creek, the operator has intentions of conducting future mining operations in the federal coal lease beyond Beaver Creek. The area surrounding Beaver Creek is privately owned and some concerns regarding subsidence and water interception have been expressed by the landowner.

There are several springs in the vicinity of Beaver Creek. Perennial and intermittent springs appear above of the mine area. Springs occur where the recharge potential from alluvium and sandstone units in the Price River Formation and Castlegate Sandstone is high or from fractures created by faulting. Ephemeral springs tend to be linked to shallow aquifers consisting of soils, alluvium or colluvium.

Generally, there is flow in Jewkes Creek and Beaver Creek throughout the year. Several of the adjacent canyons contain flows during the spring snowmelt runoff period and also as a result of isolated summer thunderstorms. Due to the limited drainage area and high elevation of some of the canyons the duration of the snowmelt flow is short and limited to the very early spring. Locations of all baseline water data points are shown on Plate 1. Baseline data information is included in Appendix 7-1.

Plate 7-1 shows numerous springs and seeps exist within, and adjacent to, the permit area, especially in the Beaver and Jump Creek area. Based on results of the PHC determination, base-line study and other available information, the operator will monitor the significant surface water sources, including drainages above and below the disturbed mine site area, and all point-source discharges.

The operator has provided information on water rights included in Appendix 3-5. The points of diversion for water rights near the mine operations are presented on Plate 7-3. Designated uses and season of use for some water rights are not included in the water rights table provided. The operator has indicated that the area is almost exclusively used for stock watering.

Figures 7-2, -2A, and –2B represent the potentiometric surface as it was in December 1995, September 1996, and June 2002. (6/2/2005)

Ground-water information

Seeps, springs and potential mine water discharge will be monitored in accordance with the Ground-water Monitoring Plan in Chapter 7.

Section 6.4.1 discusses site stratigraphy and provides information relative to ground water in relation to the mine operations. Section 7.1.2 discusses the ground-water resources. The operator provides Figure 7-4 to delineate potential recharge areas.

Local Drilling Information and Occurrence of Ground Water

Information regarding baseline ground-water data collection is discussed in Chapter 7, Section 7.1.2.2. Four exploratory holes drilled in 1970's and 1980's were monitored for water in 1995. Drill logs of Holes LMC 1, LMC 2, LMC 3, and LMC 4 are found in Appendix 3A. Also, three wells were drilled and completed in the Star Point Spring Canyon Sandstone in 1995. Documentation of the LMC drilling procedure was provided in a notarized letter from Mr. Joseph A. Harvey to Rich White, Engineering Consultant for Horizon Mine, on March 24, 1992 (Appendix 7-1). Section 6.5.1.1 states that Drill holes LMC-1, LMC-2 and LMC-3 will be plugged and abandoned following State approved methods. [06/02/2005]

Previous Mining History

Plates 3-9 and 3-10 show the location and extent of known workings of active, inactive, or abandoned underground workings, including openings to the surface, within the permit and adjacent areas; also, areas within these mines that have been second mined. [06/02/2005]

Springs

The PAP indicates baseline reconnaissance information was gathered in the field with an Oil, Gas and Mining employee named Darin Worden from 1988 to 1990. Other information was derived from state and federal published open file reports. A complete spring and seep survey in the proposed permit and adjacent area was not conducted. Currently the PAP does not contain a map showing spring locations in the permit and adjacent area.

The baseline sampling information is gathered form springs that issue from the Blackhawk Formation and were characterized as Calcium Bicarbonate type waters.

Table 2.3

Baseline Spring Sampling Summary
(Summary of information from Plate 7-1, Figure 7-3 and Sections 7.1.3, 7.1.5 and 7.2.6)

Sampling Point	Monitoring History	Location (Formation)	Water Quality	Water Quantity	Comments
SP-1 1989 to present	Station #1 1989 through 1993	Issues from Hillside and flows into Jewkes Creek (Blackhawk Sandstone unit above coal seams 8195 ft msl.)	TDS 230-330 mg/l pH 7.5 - 8.5	Late Spring 10-15 gpm High flow on 5/89 was 45 gpm Late Summer/Fall 5 to 6 gpm	
SP-2 1989 to present	Station #2 1989 through 1993 (This description matches the station number 1 previously; Channel in North Fork of Gordon Creek.)	Issues from Hillside and usually flows approximately 100 feet (Blackhawk, 8005 ft msl)	TDS 480-540 mg/l pH 7.5 - 8.5	Flow in Late Spring 1-2.5 gpm Flow in Late Summer/Fall <1 gpm Dry 7/1991, 8/1991, through 12/1992	Spring flows through alluvium below the point of origin.
SP-4 1989 to present	#4 1989 through 1993	Jewkes Creek Drainage flows along road empties into Jewkes Creek (Blackhawk, 8102 ft msl)	TDS 350-480 mg/l pH 7.5 - 8.5	Flow in Late Spring 1-2.25 gpm Flow in Late Summer/Fall <1 gpm	Location not clearly mapped
SP-6 1989 to 1995	#6 1989 to 1995	Upstream from the proposed mine portal (Blackhawk)	N/A	dry from 1989 through 1995	This location is not a spring and will not be included in future monitoring

not found	**Gunnison Homestead Spring/Tributary to Beaver Creek near confluence of spring discharge channel and Beaver Creek**	**(Blackhawk)**	**not discussed**	**3-136 gpm the 136 gpm included snowmelt runoff.**	**Location removed from Figure 7-3**
SP-9	**Jewkes Spring U.S.G.S. 1979-1983 Station 2-5-W Beaver Creek Coal Company 1985-1995**	**Near Beaver Creek Channel, south west corner of proposed LOM permit area. (Blackhawk, 8550 ft msl)**	**TDS 240-300 mg/l pH 7.5 - 8.5**	**Typical Late Spring flow 20 to 60 gpm decreasing late fall 1.10 to 38 gpm (Maximum flow on 7/85 was 1372 gpm considered inaccurate)**	**Location mapped on Figure 7-3 Information on flow discussion in Section 7.2.2.2 varies from Section 7.1.2.2**

In Section 6.4.2 the operator has indicated a series of springs in the North Fork of Gordon Creek in the northwest corner of Section 18 T13S R8 E may be related to faults bisecting the area. The North Fork drainage may have formed subsequent or contemporaneously with the movement along the Gordon Creek Fault Zone.

The operator has stated the Homestead Spring is one of the main contributing springs to Beaver Creek. However, the operator has not included this spring in the baseline or operational monitoring regime. The operator has identified this spring as important to Beaver Creek flows, but has not indicated why the spring should not be part of a sampling point (i.e.; why is this spring considered outside the zone of potential impact?).

Ground-water Quality

Two water quality samples were collected in the Blue Blaze No. 1 Mine workings, one in May 1992 and one in November 1995. The water was determined to be a calcium bicarbonate type with TDS ranging from 414 to 452 mg/l and pH from 6.8 to 7.66.

Ground water collected from the HZ wells in December 1995, November 1996, and January 1996 may have been somewhat affected from the foam drilling fluid used during installation. Data analyses indicate TDS ranged from 380 to 680 mg/l. Due to the potential effects from the foam drilling additional water quality data is necessary.

Surface-water information

The Horizon Mine lies within the headwater streams of the Price River Basin. Major drainages within the permit and adjacent area are; Beaver Creek north of the mine site, and the North Fork of Gordon Creek and Gordon Creek south of the mine site. The disturbed area drains into the North Fork of Gordon Creek. The State Division of Water Quality classifies Gordon Creek as Class 3C and Class 4 waters. These classifications are designated as non-game and aquatic life, and agricultural uses, respectively. Beaver Creak, located over the future proposed mine workings, is classified as 1C and 3A, designated as domestic and agricultural uses respectively. Down stream of the proposed disturbed area in Gordon Creek there are fisheries. Information on the fisheries is lacking in the plan. For further discussions see the **Fish and Wildlife** sections in this TA.

Drainages adjacent to the proposed disturbed area are named for referencing purposes as shown on Plate 7-4. The following designated names are assigned for the drainages flowing through the proposed disturbed area:

1) Jewkes Creek - the main drainage through the site which joins the North Fork of Gordon Creek's main stem at the southern boundary of the permit area.

2) Portal Canyon - this drainage is the first drainage entering from the west after crossing the permit area boundary and joins Jewkes Creek. The portal entries are located in this drainage.

3) Spring Two Canyon - is the second drainage entering from the west after crossing the permit area boundary and joins Jewkes Creek. This drainage is upstream of the disturbed area.

Streams within the permit area receive their maximum flows in late spring and early summer as a result of snowmelt runoff. Flows decrease significantly during the autumn and winter months. Jewkes Creek has experienced no flow during the winter and late summer months.

Beaver Creek is a perennial stream with base flow maintained by seeps and springs. Beaver ponds are common in Beaver Creek and also play a part in providing perennial flows. Springs contributing to base flow include the Gunnison Homestead Spring, within one mile west of the proposed additional lease area, and Jewkes Springs one mile west of the permit area near the north west corner. Discharges from these springs vary between 3 to 136 gpm and 1.1 to 38 gpm respectively.

The USGS maintains a gauging station (09312700) near the mouth of Beaver Creek several miles northeast of the permit area with a period of record from 1960 through 1989. The

minimum annual discharge for this period was 338 acre-feet in 1961. The maximum annual discharge of 1,610 occurred in 1973. The average annual discharge for the 29-year period of record was 3,310 acre-feet. Decreases in downstream flow are observed in Beaver Creek between monitoring stations SS-7 and SS-8. The decrease is most prevalent during the low flow season. This losing stream section may occur due to either alluvium, fracture and fault systems or other unknown factors.

The operator discusses the annual variability of flow in Beaver Creek. Although there is annual variability, the variability in base flow related to snowfall and possibly spring run off would provide more significant information. Snowmelt survey and precipitation information, where available, should be used to compare annual base flow changes with the precipitation rates.

Jewkes Creek drains a watershed area slightly greater than 1 square mile and discharges to the North Fork of Gordon Creek. The operator has referred to this stream as intermittent. The flow data submitted indicate that normally the creek flows all year at Sampling Point 5, but becomes intermittent at Sampling Point 3. The flow diminishes in a downstream direction beyond sampling point SS-5, infiltrates into the alluvium and does not reappear immediately downstream according to information in the PAP. Water may reappear one half mile down stream in the North Fork Gordon Creek where the Mancos shale outcrops. A potential reason for the diminished flows in this area may be due to recharge of subsurface soils in the riparian area near this monitoring site. Characterization, by collecting water quantity data and by observation in the North Fork of Gordon Creek, to determine whether this stream re-emerges as constant flow downstream should be made.

The North Fork of Gordon Creek flows along County Road 290 southeast of the permit area. The elevation of the creek is lower than the Hiawatha coal seam. The operator suggests the mining of the Hiawatha would not affect the quantity or quality of flow in the North Fork of Gordon Creek. However, the operator has shown the Spring Canyon Aquifer below the Hiawatha coal seam contains water and mining might reduce the piezometric water elevation potentially affecting the surface water in this stream. Discharge from the Star Point Sandstone to this stream section should be determined. Losing and gaining reaches in this section of the stream should be identified.

The proposed Five Year Mine Plan as shown on Plate 3-3, illustrates a proposed lease area to the north and east of the currently designated permit area. The surface water descriptions and baseline information for the permits adjacent area have not been presented. The Operator's future mining operations are proposed to take place under Sand Gulch and an unnamed drainage to the north. No baseline information was collected for this area. In addition, Plate 3-3 shows the major fault systems which run northeast and southwest of the proposed mine operations. This fault system should be used to describe the geologically defined adjacent area. The graben and fault system appears to extend all the way up to Jump Creek. Additional baseline

information will be necessary to permit this site in the future and may be necessary to complete the CHIA. Further baseline sampling should focus on the springs and surface waters potentially impacted through intercepting water from faults and fractures and diverting. Baseline information should extend to Jump Creek until adequate information is supplied to the Division to consider Jump Creek outside of the adjacent area.

Table 2.4

Baseline Surface Water Sampling

Sampling Point	Location	Flow	Water Quality	Comments
#3 1993 through 1995	Channel in Jewkes Creek /below disturbed area upstream of the intersection with the North Fork of Gordon Creek and below the surface facilities.	Intermitten t	TDS 388 to 799 mg/l. Total Fe <0.02 to 8.7 mg/l Total Mn <0.01 to 0.05 mg/l TSS <1 to 72 mg/l pH 6.25 to 9.5	Information presented in the text does not match the data in appendices
#5 1993 through 1995	Jewkes Creek upstream of disturbed area but downstream of the confluence with Spring Two Canyon.	Perennial	TDS 198 to 550 mg/l. Total Fe .05 to 3.9 mg/l Total Mn 0.05 to 1.0 mg/l TSS 1 to 245 mg/l pH 6.7 to 8.99	Information presented in the text does not match the data in appendices
#6 1991 through present	Right Fork North Fork Gordon Creek In the east Drainage above proposed portals and disturbed area	Ephemeral	Removed from proposed monitoring schedule. Samples were never obtained.	This should be monitored on the same day as sites 3 and 7 when sampling during a precipitation event or snowmelt period

#7 1991 through present	**Beaver Creek above pond upstream of the proposed future permit area outside of potential subsidence zone?.**	**Perennial**	**TDS 216 to 353 mg/l. Total Fe 0.05 to 5.19 mg/l Total Mn <0.1 to 0.19 mg/l TSS <1 to 297 mg/l pH 6.0 to 8.54**	**Beaver Creek tends to have a lower TDS than Jewkes Creek.**
#8 1991 through present	**Beaver Creek station downstream, does not appear to be downstream of potential impact area for future mine plan.(see Plate 3-3 and 7-1).**	**Perennial**	**TDS 192 to 357 mg/l. Total Fe <0.02 to 1.3 mg/l Total Mn <0.01 to 0.078 mg/l TSS 4.0 to 52 mg/l pH 6.6 to 8.69**	**Flows tend to be lower than the upstream Beaver Creek station. Located near the Fault system.**
2-2-W	**Gordon Creek above confluence of North Fork Gordon Creek below the Hiawatha**	**Perennial**	**Not discussed.**	**Impact more likely to be below confluence because of fracture system.**
2-3-W	**Beaver Creek**	**Perennial**	**Not discussed**	**Monitored by Beaver Creek Coal. Not found on any map**
2-4-W 1982-	**Beaver Creek 1 -1/2 mile west of permit area**	**Perennial**	**Not discussed**	**Monitored by Beaver Creek Coal.**

The operator has not adequately discussed the variation in the data presented as baseline information. Data presented in the text does not reflect data presented in the appendices.

Baseline Cumulative Impact Area Information

The Utah Division of Oil, Gas, and Mining has prepared a CHIA. The last CHIA for the area was prepared February 23, 2001, then updated September 2004 and again in June 2005. In addition to reference sources cited, information has been garnered from the Horizon, Gordon Creek #2, #7 and #8, and Gordon Creek #3 and #6 Mining and Reclamation Plan (MRP), as well as U. S. Geological Survey and Utah Geological Survey hydrologic and geologic reports. [06/02/2005 JDS]

Modeling

Actual surface- and ground-water information is supplied in this application; therefore, modeling is not proposed. No surface water modeling has been conducted.

Alternative water source information

In Section 7.1.6 the operator purports no significant impacts are foreseen to ground water as a result of mining in the permit area. In Section 3.4.3, page 3-18, the operator states, "As noted in Section 7.1.6, alternative sources will be developed and provided if water rights or uses are affected by mining operations", however, no discussion on alternative sources were presented in this section. Section 3.4.3 states, "Should Horizon's mining activities cause an adverse impact on the areas water supply, the operator intends to mitigate the effects. The mitigation will be negotiated between Horizon and the injured party".

Because "Alternative Water Source Information" applies to Surface Mining and Reclamation activities under R645-301-727 there are no requirements under this regulation as it applies to underground mining. However, the operator is required to notify the Division of Oil Gas and Mining when analysis of any ground-water or surface-water sample indicates non-compliance with the permit conditions, which include the performance standards under 752.220 through 752.250. The Division of Water Rights and other agencies may also request notification should a water use be disrupted.

Information provided in the PAP indicates the water rights applied for are a leased right and not an acquired right. Therefore, the operator would not be able to replace a right with these sources should diminution or quality of a water right be impacted through mining activities.

In the MRP, Section 3.4.3, the operator should remove the reference to discussions found in Section 7.1.6, regarding replacement of water rights, because there are no such discussions. The operator should cross reference Section 3.4.3, which describes the actions to be taken should loss of a water right use result from mining activities under Section 7.1.6 in order to provide a clear plan. The requirements under R645-301- 731.223 and 731.212 should be addressed. The operator should provide a plan which clarifies who will be notified should it be known that a water resource has been impacted by mining activities

Probable Hydrologic Consequences Determination

Impacts to the Perched Aquifer System

Small perched aquifers within or adjacent to the mine plan area may be impacted as a result of mining related subsidence (Section 7.3.2 - Determination, Impacts to the Perched Aquifer System). (6/2/2005)

Impacts to the "Regional" Aquifer System

(The term *regional aquifer* is commonly used to describe the saturated portions of the Blackhawk Formation and Star Point Sandstone - and sometimes other strata - in the Book Cliffs and Wasatch Plateau Coal Fields. However, ground-water storage and movement in these areas is typically of a local or intermediate nature and the Division feels there is little or no basis for generally describing these as regional systems.) (6/2/2005)

It is likely that ground water will be discharged from the mine, approximately 300 gpm during average operating periods and exceeding 500 gpm for short periods of time after mining intercepts water-bearing faults (7.3.2 - PHC Determination, Impacts to the Regional Aquifer System). (6/2/2005)

Approximately 25 gpm (41 acre-feet per year) of ground water will be removed with the mined coal based on average moisture content of 7.99 percent in the coal and maximum production of 700,000 tons per year. Dust suppression and similar uses will consume 6 gpm. Data in Appendix 7-9 indicate that the net loss of water by evaporation due to mine ventilation will be approximately 6 gpm (10 acre-feet per year), so the total consumptive loss to the hydrologic system will be 37 gpm (60 acre-feet per year) (7.3.2 - PHC Determination, Impacts to the Regional Aquifer System). (6/2/2005)

The influence of the water-bearing fault extends at least as far north as Beaver Creek, and may extend at least to the northern permit boundary. Mining will depress the aquifer to the maximum depth of the mined entries, and due to the large amount of water being transported by faulting, the potentiometric surface will be depressed in an area much larger than the permit area. The impact to the "regional" aquifer is expected to be temporary and the potentiometric surface will return to pre-mining conditions as soon as pumping ceases (7.3.2 - PHC Determination, Impacts to the Regional Aquifer System). (6/2/2005)

Impacts to the Hydrologic System Resulting From Subsidence

Projected limits of subsidence are shown on Plate 3-3. This map also shows the relationship of the planned mine workings and projected subsidence to the faulted zones bounding the graben. Mining-induced surface fracturing should be very limited (or nonexistent) within the Beaver Creek stream channel area. Appendix 7-13 contains a copy of the US Forest Service study of the impacts of subsidence caused by full-extraction mining beneath Burnout Canyon at the Skyline Mine. Based on the Burnout Canyon study, the Permittee has concluded that with 800 feet of cover or more, with panels oriented perpendicular to the stream, and with

full extraction of the coal, some short-term effects can occur to the streams but the stream should revert to pre-mining configuration after three years (7.3.2 - PHC Determination, Impacts to the Hydrologic System Resulting From Subsidence). (6/2/2005)

The Permittee anticipates that subsidence will not significantly affect springs within the permit and adjacent areas, and that, because second mining will occur uniformly across the permit area, the resulting subsidence should also be uniform, minimizing the potential impacts to overlying springs (7.3.2 - PHC Determination, Impacts to the Hydrologic System Resulting From Subsidence). (6/2/2005)

Mining in the area adjacent to the Horizon permit area has not resulted in hydrologic impacts due to subsidence. Without extensive aquifer systems in units that overlie the coal in and adjacent to the permit area, it is anticipated that subsidence should not cause significant surface- or ground-water impacts within the permit or adjacent areas (7.3.2 - PHC Determination, Impacts to the Hydrologic System Resulting From Subsidence). (6/2/2005)

Acid- and Toxic-Forming Material

Operational Monitoring and Identification of Acid- and Toxic-Forming Materials

The operator has not provided a specific discussion for the potential for acid and toxic forming materials under the Probable Hydrologic impacts. However, the operator provided the following in other sections of the plan:

> •Disposal of waste rock from partings and splits will be in underground workings. No acid or toxic forming materials are present in the overburden or underburden for samples analyzed (Section 6.5.7.1), suggesting no acid or toxic forming materials will be in the partings. The waste rock will be backfilled and compacted after second mining subsidence occurs and the waste rock will not be saturated, thus, water quality would not be impacted (Section 3.3).
>
> •If underground waste cannot be blended, sold, or gobbed, arrangements will be made to dispose of this material in permitted refuse piles at a nearby mine.
>
> •Noncoal waste rock from initial development will be incorporated as fill in the mine yard (Section 3.3).

Table 6-5 summarizes the quality of the Hiawatha Coal seam. The acid base potential of each of the three coal samples collected from the HZ-series holes indicate the coal has a potential to be acid-forming (Section 6.5.6). Coal will be stored on the surface for short periods and run off from the coal stockpile will be routed through the sedimentation pond where it will mix with run off water that is more alkaline.

Tests for acid and toxic forming materials were conducted on roof and floor samples in LMC-4 and HZ drill holes. One sample contained a high pyritic sulfur content of 0.24 percent. The operator suggests this pyritic sulfur content is likely of limited areal extent. This information conflicts with the statement in Section 6.5.7.1.

In Section 6.5.6, the operator has presented analysis from a core sample of the coal obtained from the Hiawatha Seam, drill hole LMC-4. The presented analyses has a sulfur content of 0.47% of which 0.04% is pyrite sulfur with marcasite, 0.038% pyrite and 0.002% is marcasite.

All of the coal will not be removed from underground. Much of this coal will be in contact with air and water during the mining operations and may cause a lowering in the pH of those waters. Currently water from the old Blue Blaze No.1 Mine workings are shown to have a pH of 6.8 to 7.66. In general, these are lower than the surrounding area pH values.

Acid forming discharges have been uncommon and are generally not regionally extensive. Should the presence of pyrite in the mine area cause a decreased pH locally the mixing with higher pH waters in the system would result in localized affects due to downstream buffering.

Where material is trucked to permitted refuse piles at a nearby mine, the acid and toxic characteristic of this material should be known at the permitted mine receiving the waste.

Potential Ground-water Impacts

The operator indicates inter basin transfer out of the Price River drainage cannot occur in this region. However, inter basin transfer between Beaver Creek and Gordon Creek could occur. Because the coal seams dip away from the portal entrance, flow is likely to be sumped underground and could be directed toward the fault systems to the northwest, however, the Operators information indicates the Piezometric surface for the Star Point aquifer is to the east southeast. Flow will occur in the direction influenced by the prevailing geologic controls which are not definitively known at this time.

The control of faulting on ground-water flow can be seen by comparing the potentiometric surface map to the geologic structure. The operator indicates that due to low permeability, and due to the plan to avoid mining into faulted zones, in flow to the mine from faulted zones is projected to be minimal (Section 7.1.2.2). Discussions on how the faults will be avoided were not presented.

The operator has concluded that the Hiawatha coal seam will be saturated from the beginning of mining operations. The rate of inflow will depend primarily on whether a faulted

zone is encountered that contains ground water in storage or that is in connection with an overlying perched aquifer. Although the possibility of a significant sustained inflow occurring is probably low to moderate, the actual potential impact from intercepting a fracture reservoir and depleting or intercepting the flow is moderate to high. A resulting loss of head could disrupt stream and spring flows and possibly recharge the fracture zone down dip to the north east or in the direction of regional flow to the east-southeast. Changes in quantity and quality to spring and surface water discharges associated with the faults could be the result.

Waste rock from the mining procedure is proposed to be gobbed underground and backfilled. Because the materials will have an increased surface area due to removal the potential impacts, should water and air come in contact with the materials, would be increased TDS (ions in solution) and potential acid and toxic formation. Data from a recent underground mine water sample from the No. 1 Mine is found in Chapter 7 and may be indicative of some potential water quality changes. See the section above on **Acid and Toxic Forming Materials** in this TA.

Section 3.3.1, Plate 3-3, does not show all known and existing mine workings in the permit and adjacent area. These areas are critical to supporting documentation regarding the Probable Hydrologic Consequences of mining as it might relate to other mines vs. the proposed Horizon Mine. The operator must include this information in the plan for all seams and mining in the permit adjacent area.

The operator states, "It is not anticipated that large quantities of ground water will be encountered throughout the duration of mining". The Division believes the potential for impact increases if water is intercepted by mining through paleochannels associated with fractures, or a water-bearing fault or fracture system is intercepted by mining activities. The potential for impact appears to be highest if fracture associated flows in the Hiawatha Seam are intercepted as occurred in the Beaver Creek Coal Mine.

The operator has estimated the "worst case" potential inflow through a porous formation (exclusive of fracture flows) to be $2.6\ X10^{-4}$ and to have an average potential inflow of $1.5X10^{-4}$, or a flow rate of 9 and 5 gpm per section. Assuming six sections the total potential inflow would vary between 30 and 54 gpm. This information assumes a worst-case scenario between 270 to 130 feet of head. Therefore, the potential is that a decrease of head in the Star Point Sandstone of between 270 and 130 feet could occur over time. The extent to which this affects the adjacent area is limited to the interaction of the members along the fault zones and determination of discharge areas. The aquifer may be dewatered within the graben with out interaction with the fracture/fault related waters or, may affect the waters associated with the fault system.

Potential Surface Water Impacts

On page 7-22, the operator states that proposed mining operations will occur north of Gordon Creek and should not affect the quantity or quality of water in this drainage. However, it

was noted that approximately 400 gpm inflow was produced from the floor when mining the Hiawatha Seam. This information, along with the dewatering estimates discussed above under the *Potential Ground-water Impacts* of this T.A., indicate there may be a potential to intercept ground-water flow from below the Star Point Sandstone, below the Hiawatha Seam. This flow interception could impact base flow to Gordon Creek, or relocate the source of the flow. Supporting information can be determined by assuming the control point for the piezometric surface would likely be at the elevation related to the dip. With a dip of 5.3% to the northwest an outcrop elevation of approximately 7,600 and a maximum linear distance down dip of 5,000 feet the zone of influence most likely to be impacted below the Hiawatha Seam would be from approximately 7,600 ft to 7,335 ft. This is also within the range of the piezometric surface of 7,500 and is in the general direction of the assumed ground-water flow. Water quantity, water quality, and losing and gaining sections for reach segments should be determined for Gordon Creek above and below this section. A continuous recording flume is recommended for operational monitoring if the characteristic of the stream is determined to be potentially impacted.

The operator indicates the water associated with the Beaver Creek Coal Company No. 3 Mine is believed to be in communication with Beaver Creek and will be avoided when mining the proposed Horizon No. 1 Mine. Avoidance will occur by closely monitoring the activities in the fault area. The operator has not demonstrated why they believe the communication with Beaver Creek exists and has not provided a monitoring plan, which addresses this potential impact.

Subsidence Control and Renewable Resource Protection

The Stream Buffer Zones will be maintained beneath Beaver Creek and the North Fork of Gordon Creek should mining proceed beneath either creek (Section 3.3.2.2).

The proposed stream channel buffer zone is shown on Plates 3-3. Retreat mining will not occur under those areas shown to be within the buffer zone. A discussion on the width of the buffer zone was not found. The operator has stated that mining is designed to preclude subsidence of perennial and intermittent steam reaches. Specifics to the statements regarding these buffer zone areas could not be located. However, comments made by the operator suggest that massive sandstone units make it unlikely that subsidence will reach the surface, and swelling shales in the overburden would have a tendency to heal fractures.

According to the Operators subsidence plan a measurable subsidence effect would include a marked decrease in flow of 30%. In order to determine whether a marked decrease in flow occurred frequent monitoring would be required. The operator should describe how the monitoring plan monitors for this potential impact.

The operator suggests the following reasons indicate potential for damage due to subsidence will be low because no noticeable mining subsidence has occurred in the Gordon Creek #2 area (mined over 40 years ago) and in the Consumers No. 3 Mine, Section 3.2.3. The following areas were previously mined beneath Beaver Creek

- Swisher Coal Company mined under Beaver Creek in the northern most west panel of the Castlegate "A" seam in January 1978. Overburden is approximately 650 ft.

- Beaver Creek Coal Company mined under Beaver Creek in the "A" panel in September 1981. Overburden was approximately 425 feet.

Although longwall mining subsidence occurs immediately following mining, room and pillar subsidence may not occur for a long period of time. The proposal to monitor subsidence annually for two years following cessation of mining is probably adequate for determining immediate subsidence response. However, prior to bond release the lack of, or presence of, subsidence should be confirmed.

Statements in the PAP indicate that if significant inflow of ground water occurs mitigation measures may include; attempts to seal the inflow, increased monitoring program, lining the stream bed through an effected area, and replacement of water, should it be indicated through monitoring to be mining related (Section 3.4.8.2). In Section 3.4.8.4, the operator commits to notify the Division in writing and begin implementation of the approved mitigation plan if adverse impacts to Beaver Creek are noted as a result of mining. The operator will be encouraged to complete short-term mitigation measures such as sealing the flow from in the mine. However, Division notification should occur as soon as possible and coordination with concerned parties may be necessary prior to approval of a site-specific mitigation plan.

Water Use

"Water will be pumped from the North Fork of Gordon Creek into the mine for use in dust abatement". Based on the predicted inflow information the operator has estimated approximately 31 acre feet per year will need to be pumped into the mine, while it is estimated that 41 acre feet will be removed with the coal each year. The water rights applied for by the operator exceed the predicted water needs.

Sediment Yield

The potential for increased suspended solids and sediment loading to Gordon Creek is probably highest during the construction phase of operation and reclamation. The operator has committed to monitor for turbidity of the water upstream and downstream of the site during the construction phases. A criteria for Class 3C allows a turbidity increase of 15 (NTU).

Increases in sediment during the operational period will be minimized through the use of a sedimentation pond and drainage controls. The operator has also committed to store snow in sites that will directly drain to the sedimentation pond (Section 3.3). During the reclamation period it is not clear whether alternate sediment control measures or sedimentation pond measures will be used.

During the past four years logging activities have taken place in the Beaver Creek area on Stamatakis property. Logging and transport activities have disturbed substantial areas along the roads and riparian areas of Beaver Creek, the North Fork of Gordon Creek and Jewkes Creek. Trees are removed from the property and transported out over the county road which connects to State road 139, the North Fork of Gordon Creek. There have been no Best Management Practices for logging conducted on this logging site. Sediment yield from the logging sites and roads has been substantial. During the summer of 1997 the team conducting a subsidence noticed areas logged down to the Beaver Creek without a protection barrier. Sediments from the logging sites and access road flowed directly into the creek. Trees and branches littered the side of the creek. The dirt road along Beaver Creek was ground to a fine powder, in some places as much as 1 foot deep. The point bars and bottom of Beaver were covered with silt.

Logging continued during the winter months. As roads became muddy the logging company used a graders and bulldozers to excavate the muddy layers which were pushed in mounds above the roads and creeks, where they could easily flush into the creeks (Beaver Creek, a tributary to the North Fork of Gordon Creek and Jewkes Creek. Sediment loading into the creeks will likely continue until logging is completed. Operational monitoring could show significant changes in water quality and aquatic wildlife levels as a result of the logging practices.

Surface Water Quality

Currently coal mining waste may exist near Test Pit No. 8. This waste (potentially 9,718 cubic yards) is proposed to be stockpiled adjacent to the coal stockpile and blended (Section 3.3.2.7). The operator has stated that if acid and toxic materials remain on site they will be buried by 4 feet of cover. Currently water moves through the fill and seeps toward Jewkes Creek. The water quality of this site is likely to be improved with the proposed reclamation measures.

The operator should provide a discussion on potential changes in water quality based on data obtained from the Blue Blaze in mine waters. Based on impacts from other mining operations the potential for increased TDS is likely in the permit area. The operator sites downstream increases in TDS when flowing over Mancos as a factor in considering impact as minimal. Because downstream waters are naturally degraded the use and quality of the upstream waters retains its importance. However, impacts to downstream waters would probably not be notable.

The road to the mine is maintained as a gravel road therefore the use of road salting is not likely to affect water quality.

Hydrocarbons

Loadstar Energy Inc. indicates Diesel fuel, oils, greases, and hydrocarbon products will be stored above-ground and may be spilled in the mine and on the surface during mining operations. An above ground 5,000-gallon diesel fuel tank will be located between the coal stockpile and the truck turn around as indicated on Plate 3-1 (review plate for proximity to surface water). A shop maintenance area will be located next to the mine office area.

The operator proposes the berm surrounding the tank will be adequate to contain the total volume of the tank, in the event water needs to be drained from the berm. The operator indicates spills will be handled in accordance with the Spill Prevention Control and Countermeasure (SPCC) Plan. This plan is provided in draft form without a certified signature in the PAP under Appendix 7-8. Elements of the plan include:

- Visual inspection of all tanks, associated valves piping and containment areas.
- Notification to the Mine Manager and containment of the spill
- Reporting requirements for spills.
- Procedures for preventing spills during filling tanks.
- A copy will be maintained on file in the Mine Manager's Office and the Mine Engineer's office.

The Operator's proposal uses accepted practices for their SPCC plan. The operator should include clean up procedures for small scale spills, commit to retain absorbent materials on site and, should provide either a concrete containment structure with a drain or provide for disposal and sampling of the earth material below the fuel tanks and areas of hydrocarbon use.

The operator can provide additional reasonable operation measures to minimize hydrologic impacts on and off the permit area.

In addition to the discussion on containment of spills, the Permittee has added a statement that there is no intention of abandoning equipment underground. Should it be necessary to abandon any equipment underground, the Permittee commits to drain all petroleum products from the equipment, and show locations of abandoned equipment on a mine map that will be submitted to the Division (7.3.2 - PHC Determination, Potential Hydrocarbon Contamination). (6/2/2005)

Flooding or Streamflow Alteration.

All disturbed-area runoff will flow through the sedimentation pond or other sediment-control device. The sedimentation pond is designed to contain the 10-year, 24-hour storm event (Section 7.2.3.2 - Sedimentation Control Structures and Diversions, Disturbed Area Runoff and Sediment Control). (6/2/2005)

The operator discusses the potential for flooding as being diminished due to the sedimentation pond reducing peak flows. In addition to the Operators comments, it is likely that the water flowing through the culvert will have increased flow velocity over the natural velocities for the same discharge rates. A potential impact includes downstream erosion. The operator has provided riprap channel designs for the velocities than may occur from a 100-year, 6-hour event, which meets the minimum regulatory requirements. Other potentials for streamflow alteration are discussed under Potential Surface-Water Impacts and Potential Ground-water Impacts.

Sediment-control devices are designed to be stable, minimizing the potential for breaches that could cause downstream flooding; sediment is retained on-site, so bottom elevations of stream channels downstream from the disturbed areas are not artificially raised and the hydraulic capacity of the stream channels is not altered; and flow routing through the sediment control devices reduces peak flows from the disturbed areas, precluding flooding impacts to downstream areas. Following reclamation, stream channels will be returned to a stable state, minimizing detrimental effects that may result from flooding (7.3.2 - PHC Determination, Flooding Potential of Downstream Areas). (6/2/2005)

The addition of the discharged mine water is not expected to alter the natural channel and the potential for stream channel alteration is minimal. Maximum discharge is expected to occur only for short periods of time, when water-bearing faults are intercepted. Even the maximum discharge from the mine during the 100-year 6-hour storm event would not cause Jewkes Creek below the mine facilities to exceed its channel capacity (7.3.2 - PHC Determination, Flooding Potential of Downstream Areas). (6/2/2005)

Projected limits of subsidence are shown on Plate 3-3, which also shows the relationship of the planned mine workings and projected subsidence to the faulted zones bounding the graben. If subsidence does occur, the Permittee expects it to be uniform with little to no impact on Beaver Creek or other drainages in the area. The Permittee commits that if sharp drops occur at the faults at the edges of the graben that bounds the mine workings, the impacted sections will be reconstructed to prevent erosion and loss of topsoil. To stop flow being lost into the fault, the channel area would be excavated and backfilled with clay prior to reconstructing the channel. If subsidence fractures occur in Beaver Creek without vertical displacement but flow is lost into the fracture, a mixture of soil and bentonite will be used to seal the fracture. In the event that stream channel mitigation is required, the Permittee commits to submitting designs to the Division for approval prior to commencing any construction activities (7.3.2 - PHC Determination, Flooding Potential of Downstream Areas). (6/2/2005)

Groundwater Monitoring Plan

Seeps and springs in the permit and adjacent areas are shown on Plate 7-1. (6/2/2005)

The mine operators conducted surveys for watercourses, seeps, and springs in the federal lease and surrounding areas. Areas evaluated included Sand Gulch, Coal Canyon, and several unnamed drainages that contribute to Jump Creek. Flow and temperature for each seep or spring are summarized in Appendix 7-2 (Section 7.1.1 - Method of Study). (6/2/2005)

Water levels in the piezometers have been measured quarterly and results are tabulated in Table 7-of the MRP and in the Division's database. (6/2/2005)

Surface-Water Monitoring Plan

Surface water resources and locations from which samples have been collected in the permit and adjacent areas are shown on Plate 7-1. Baseline hydrology was based on review of literature and available data obtained from the USGS, the US Forest Service, the State of Utah, Beaver Creek Coal Company, Blue Blaze Coal Company, and mine permit applications for the surrounding mines. Field reconnaissance was performed to confirm the location and characteristics of surface watercourses, springs, and seeps (Section 7.2.1 - Methodology). (6/2/2005)

Findings:

The operator has submitted sufficient information to address this section.

MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.24, 783.25; R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

Analysis:

Affected Area Boundary Maps

The affected area, as defined by R645-100-200, includes both the area of actual surface disturbance and the area above the underground mine workings, which might be affected by subsidence resulting from the underground mining operation.

The affected area boundary not only contains the permit boundary but additional subareas where additional permit would be sought. The Permittee did not indicate that they planned to seek additional acreage. On Plate 3-3, the Permittee shows that most of the surrounding area is faulted making a simple expansion unlikely. Therefore, the Division considers the affected area

boundary map to be the same as the permit area boundary map. See Plate 1-1, Permit Boundary. (6/2/2005)

The boundary of the disturbed area of the Horizon Coal operation, which includes proposed as well as previous disturbance, is shown on Plate 3-1--Surface Facilities. The boundaries of all areas that are to be newly disturbed by this operation are also shown on Plate 3-6--Premining Topography and Plate 3-7--Post Mining Topography.

Archeological Site Maps

No archeological sites have been identified on Federal Lease UTU-74804 .

Coal Resource and Geologic Information Maps

Figure 6-2 in the text section identifies the general regional geology. There are no coordinates or boundary lines to provide specific reference on the map, however it does give an idea of the relationship between surface stratigraphy and faulted areas. Plate 6-1 provides more detail of the geology and permit area. The map shows a layout for the geologic cross sections, shown in Plate 6-2 (N-S cross section) and 6-3 (E-W cross section). The streams are not shown on Plate 6-1. Figure 6-3 provides information of the regional structure. Generally the structure is to the north-northeast; however, due to the multitude of fault in the area the slope could change in any fault block. (6/2/2005)

Overburden isopach thickness and coal seam thickness are shown on Plate 3-3. Projected limits of subsidence are shown on Plate 3-3, which also shows the relationship of the planned mine workings and projected subsidence to the faulted zones bounding the graben. (6/2/2005)

Additional information on lithologic characteristics for the permit and adjacent areas is shown on geologic cross sections on Plates 6-2 and 6-3. Approximate locations of the boreholes and measured sections used to make these cross sections are shown on small index maps and tabulated in Tables 6-3 and 6-4. [06/02/2005]

Cultural Resource Maps

An evaluation of cultural resources has been conducted and a negative findings is presented in Appendix 5-1 of the MRP. [06/02/2005]

Existing Structures and Facilities Maps

No new structures will be developed above Federal Lease UTU-74804. All surface facilities and structures are described in the MRP.

The term existing structures and facilities is defined as:

"A structure or facility used in connection with or to facilitate coal mining and reclamation operations for which construction began prior to January 21, 1981."

The Permittee does not propose to use any existing structures or facilities in connection with the permit boundary expansion. (6/2/2005)

Existing Surface Configuration Maps

Pre-mining, operational and reclamation surface configuration maps are located in the MRP.

Mine Workings Maps

Old mine workings are shown on Plates 3-9 and 3-10. Projected mine workings are on Plate 3-3. There has been no surface mining within the permit and adjacent areas. [06/02/2005]

Monitoring and Sampling Location Maps

The permit application package identifies that the location of all known seeps and springs, as well as watering ponds or tanks are shown on Plate 7-1. There are no lakes or ponds or irrigation ditches known to exist within the proposed permit or adjacent areas. The locations of bore holesare shown on Plate 6-1-Geology and Plate 7-1-Water Monitoring Locations. [06/02/2005]

Permit Area Boundary Maps

The permittee shows the new and old permit boundaries on Plate 1-1. That plate was certified by a registered professional engineer. Plate 1-1 shows the following:

- The old and new permit boundaries
- The disturbed area boundary
- Township, range and sections
- Topography (80-foot contours)
- Roads and stream. [06/02/2005]

Subsurface Water Resource Maps

Surface and Subsurface Manmade Features Maps

Surface and Subsurface Ownership Maps

The topography of the proposed disturbed area is shown by contours on Plate 3-6--Premining Topography and by profiles on Plate 3-2--Premining and Operational Cross Sections. Plate 3-6 also shows the extent and nature of existing disturbance and all existing manmade structures.

Representatives of the Division visited this site several times in 1991 and 1992, in connection with the Division's review of the original Blue Blaze proposal, in order to observe the site and check the accuracy and completeness of the maps, which are identical to the maps found in the present plan. The Division found that the maps cited in this section--Plate 3-6--Premining Topography and Plate 3-2--Premining and Operational Cross Sections--accurately show the existing surface configuration of the proposed disturbed area, as defined in this section, and thus fulfill the requirements of this section.

Surface Water Resource Maps

The aquifers associated with the Castlegate "A" and Hiawatha Seams were determined to be discontinuous over the area to be mined and therefore have not been mapped.

Potentiometric surface maps on Figures 7-2, 7-2A, and 7-2B show seasonal and longer-term variations in the potentiometric surface for water in the Star Point Sandstone. (6/2/2005)

Surface and Subsurface Manmade Features Maps

All surface and subsurface manmade features within and adjacent to the permit area are shown on Plate 3-1- Surface Facilities and Plate 1-1- Permit Boundary. There are no major electric transmission lines, pipelines, agricultural drainage tile fields, or occupied buildings in or within 1,000 feet of the permit area.

Land Use is shown on Plate 4-1. Present owners of record of surface lands are shown on Plate 4-2, and Coal Ownership is shown on Plate 4-3. [06/02/2005]

Vegetation Reference Area Maps

Well Maps

Plate 6-1 identifies the wells and drill holes on and adjacent to the permit area. There are no gas or oil wells within, and no water wells within or adjacent to, the proposed permit area, as shown by Plate 3-1--Surface Facilities and Plate 1-1--Permit Boundary. These maps, as stated

above, show all surface and subsurface manmade features within and adjacent to the permit area. Three water-monitoring wells were drilled in the area, IPA #1, IPA #2 and IPA #3, to monitor mine water levels. These wells are shown on Plate 7-1. (6/2/2005)

Findings:

The Permittee has submitted sufficient Maps, Plans and Cross Section information to meet the minimum requirements if the regulations. (6/2/2005)

OPERATION PLAN

MINING OPERATIONS AND FACILITIES

Regulatory Reference: 30 CFR 784.2, 784.11; R645-301-231, -301-526, -301-528.

Type and Method of Mining Operations

Analysis:

The permittee proposes to do all mining with room-and-pillar mining methods. First mining only will be done to protect all entries, mains and no subsidence areas. Second mining will be done to maximize coal recovery when possible. [06/02/2005)

Findings:

The requirements of this section of the regulations are considered adequate in regard to the proposed permit changes for the addition of the permit boundary to include part of the federal coal lease UTU-74804.

EXISTING STRUCTURES:

Regulatory Reference: 30 CFR 784.12; R645-301-526.

Analysis:

Existing structure means a structure or facility used in connection with or to facilitate coal mining and reclamation operations for which construction began prior to January 21, 1981. There are no existing structures involved with the permit boundary expansion. (6/2/2005)

Findings:

Sufficient information has been submitted to address this section.

PROTECTION OF PUBLIC PARKS AND HISTORIC PLACES

Regulatory Reference: 30 CFR784.17; R645-301-411.

Analysis:

No public parks or historic places will be impacted as a result of adding Federal Lease UTU-74804 to the permit area.

Findings:

The Permittee has submitted information in the previous permit application to address this section.

RELOCATION OR USE OF PUBLIC ROADS

Regulatory Reference: 30 CFR 784.18; R645-301-521, -301-526.

Analysis:

No new roads will be developed or relocated in relation to developing Federal Lease UTU-74804

Findings:

Sufficient material has been submitted to make a determination on this matter.

AIR POLLUTION CONTROL PLAN

Regulatory Reference: 30 CFR 784.26, 817.95; R645-301-244, -301-420.

Analysis:

Chapter 3 Section 3.4.7 of the current operation and reclamation provides for the protection of air quality. Because there is no surface disturbance associated with Federal Lease UTU-74804, the current air pollution control plan is adequate. [06/02/2005)

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

COAL RECOVERY

Regulatory Reference: 30 CFR 817.59; R645-301-522.

Analysis:

Because the permittee proposed to add a federal coal lease to the permit area they must get approval for the coal recovery plan from the BLM. The BLM has approved the R2P2 (resource recovery and protection plan) for the additional lease area. The Division relies on the findings in the R2P2 when evaluating the coal recovery plan. The permittee requirements of this section have been addressed within the approved mining and reclamation plan, Chapter 5. (6/2/2005)

Findings:

The Permittee has submitted sufficient Coal Recovery information to meet the minimum requirements if the regulations. (6/2/2005)

SUBSIDENCE CONTROL PLAN

Regulatory Reference: 30 CFR 784.20, 817.121, 817.122; R645-301-521, -301-525, -301-724.

Analysis:

Renewable Resources Survey

Hydrologic and vegetative renewable resources are the in the permit boundary. Seeps and springs also exist in the permit area. Beaver Creek is the only perennial stream near the permit area. [06/02/2005)

Subsidence Control Plan

The subsidence control plan must contain the following:

- *A description of the method of coal removal, including the size, sequence, and timing for the development of underground workings.* The Permittee commits to conduct all mining operations using room-and-pillar methods. When possible the Permittee will extract pillars as part of retreat mining. The size, sequence and timing for the Horizon Mine were shown on Plate 3-3. (6/2/2005)

A map of underground workings which describes the location and extent of areas in which planned-subsidence mining methods will be used and which included all areas where measures would be taken to prevent or minimize subsidence and subsidence related damage and where appropriate, to correct subsidence-related material damage. The Permittee shows the subsidence area on Plate 3-3. The Permittee shows the subsidence zone based on two different angels of draw. The first angle was 35-degree and the second was 22.5 degree. Dunrud considered it the maximum angle of draw in the U.S. The 22.5-degree angle of draw is based on subsidence studies from local mines. (6/2/2005)

The only subsidence protection addressed in the amendment was for Beaver Creek. The Permittee stated they will protect Beaver Creek by orienting the panels perpendicular to the stream and use full extraction mining. This layout is similar to that of Burnout Canyon at the Skyline Mine. Results from the Burnout Creek study suggest that subsidence will not have a significant impact on Beaver Creek. (6/2/2005)

The Permittee shows in Section 3.4.8.4 the equations that they used to calculate that the maximum subsidence amount would be 2.3 feet. Also see Figure 3-5. (6/2/2005)

The Permittee will not take specific actions to prevent subsidence damage to roads. The roads in the area are dirt. Should subsidence damage the roads the Permittee commits to repair the roads. (6/2/2005)

- *A description of the physical conditions, such as depth of cover, seam thickness, and lithology, which affect the likelihood or extent of subsidence and subsidence-related damage.* The Division addressed those requirements in the geology sections of the TA. (6/2/2005)

- *A description of monitoring, if any, needed to determine the commencement and degree of subsidence so that, when appropriate, other measures can be taken to prevent, reduce, or correct material damage.* The Permittee describes the monitoring program in Section 3.4.8.5 of the MRP. The plan called for placing survey monuments inside and outside the subsidence zone. The Permittee committed to take readings at each station once a year until two years after cessation of mining operations. (6/2/2005)

The survey monuments and monitoring points are shown on Plate 3-3. The Permittee committed to: 1) install enough station so that at least one station will be subsided every year, 2) establish a draw line on panels 2nd Right 1st North, 3rd Right 1st North or 4th Right 1st North (the information from the subsided draw line will be used to establish a local angle of draw) and 3) conduct a land survey over each panel no sooner than six months after the panel was mined out but no more that 1 year especially in critical areas such as areas of maximum tension and compression. (6/2/2005)

The Permittee also included monitoring points for Beaver Creek and the seeps and springs in the area. Those monitoring points are needed to determine if subsidence caused damage to water rights. (6/2/2005)

- *A description of monitoring, if any, needed to determine the commencement and degree of subsidence so that, when appropriate, other measures can be taken to prevent, reduce, or correct material damage.* The Permittee does not propose any additional monitoring methods. (6/2/2005)

- *Except for those areas where planned subsidence is projected to be used, a detailed description of the subsidence control measures that will be taken to prevent or minimize subsidence and subsidence-related damage, including, but not limited to: backstowing or backfilling of voids; leaving support pillars of coal; leaving areas in which no coal is removed, including a description of the overlying area to be protected by leaving the coal in place; and taking*

measures on the surface to prevent material damage or lessening of the value or reasonably foreseeable use of the surface. The Permittee shows the areas where subsidence would occur on Plate 3-3. (6/2/2005)

- *A description of the anticipated effects of planned subsidence, if any.* The Permittee states in Section 3.2 that they do not anticipate any damage to Beaver Creek because of subsidence. (6/2/2005)

- *A description of the measures to be taken to mitigate or remedy any subsidence-related material damage to, or diminution in value or reasonably foreseeable use of the land, or structures or facilities to the extent required under State law.* (6/2/2005)

In Section 3.4.8.2 of the MRP, the Permittee addressed two types of subsidence mitigation. For surface cracks and depressions, they committed to filling in fractures. For damage to larger areas the Permittee committed to grade and planting the areas and intensify monitoring. (6/2/2005)

In Section 3.4.8.2, Renewable Resources, the Permittee states that water replacement was addressed in Section 7.1.6. In that section the Permittee committed to replace State appropriated water rights as follows:

Specific methods to promptly replace a water supply impacted by mining operations would include (but not limited to): repair or replacing a pond damaged by mining operations, hauling water by truck to replace water impacted by mining operations, drilling a new water well or transfer of water rights to the damaged party. (6/2/2005)

The Permittee's water-replacement commitments address elements of both R645-301-731.530 and R645-301-525.480, but the Permittee's commitments to replace water supplies and the methods described to carry out such replacement are sufficient to meet the requirements of the Coal Mining Rules. (6/2/2005)

The Permittee talks about ground-water loses that could occur if water entered the mine. The remediation methods include sealing underground cracks, lining the streambed and additional monitoring. The Permittee also commits to replace water after mining is completed. (6/2/2005)

Other information specified by the Division as necessary to demonstrate that the operation will be conducted in accordance with the performance standards for subsidence control. The Permittee commits to remediation for subsidence damage any the roads. (6/2/2005 WHW

Performance Standards For Subsidence Control

The Permittee must maintain the subsidence performance standards. (6/2/2005)

Notification

In the amendment, the Permittee removed the commitment to notify property owners six months prior to undermining their property. R645-301- 525.700 requires the permittee to notify at least six months prior to mining the water conservancy district, if any, in which the mine is located and to all owners and occupants of surface property and structures above the underground workings. The notification will include, at a minimum, identification of specific areas in which mining will take place, dates that specific areas will be undermined, and the location or locations where the operator's subsidence control plan may be examined. The Permittee does not have to have that commitment in the MRP. However, they are required to observe that regulation. (6/2/2005)

Findings:

Information provided in the proposed amendment is considered adequate to meet the requirements of this section.

SLIDES AND OTHER DAMAGE

Regulatory Reference: 30 CFR Sec. 817.99; R645-301-515.

Analysis:

Federal Lease UTU-74804 extends the underground operations. There is no change to the approved reclamation plans.

Findings:

The Permittee has submitted sufficient information to address this section.

FISH AND WILDLIFE INFORMATION

Regulatory Reference: 30 CFR Sec. 784.21, 817.97; R645-301-322, -301-333, -301-342, -301-358.

Analysis:

Protection and Enhancement Plan

A description of the wildlife mitigation and management plan is located in Section 10.5 of the current operation and reclamation plan. Potential impacts from mining would be best characterized as habitat loss. Because there will be no surface disturbance the only potential impact would be habitat loss resulting from subsidence. The 2000 raptor survey provided by the Permittee shows the existence of one active Kestrel nest, one inactive Golden Eagle nest and one Golden Eagle old/dilapidated nest. Plate 10-1 also identifies two unoccupied Golden Eagle nests. The Permittee has proposed to verify the

status of the identified raptor nests prior to full pillar extraction being completed within 500' of an active nest. Should a nest be active, mining practices will provide for a 200' barrier around the nest location. A 100' barrier will be provided around inactive nest locations. Nests lost or damaged due to subsidence or other mine related causes will be replaced under the guidelines and assistance from The Division of Wildlife Resources. The current plan, (Chapter 10, plate 10-1), identifies the proposed lease area as critical summer habitat for deer and elk. The 2001 raptor survey included in the application does not show the existence of any raptor nests in the proposed lease area. However the portion of Beaver Creek and associated riparian areas that extends through the proposed lease area from Southwest to Northeast would be considered high value and or crucial habitats as well as any springs in the area. The application indicates that these areas will be mined under and uniformly subsided. Hidden Splendor Resources has committed to developing a protection and enhancement plan in conjunction with the Division of Wildlife Resources and the Division of Oil Gas and Mining prior to any secondary or retreat mining under Beaver Creek, page 10-40. The Protection and Enhancement plan for these habitat areas that may be impacted by subsidence should include the following criteria for inclusion in the plan:

- A monitoring schedule for the macroinvertebrates in Beaver Creek,
- Color infrared aerial photo monitoring of the riparian and meadow areas associated with Beaver Creek once every three years,
- Channel characteristics, Cross Sections, Longitudinal profiles, and
- Riparian Surveys as described in the Skyline Mine Subsidence Study. The plan should be developed in cooperation with the Division of Wildlife Resources and the Division of Oil, Gas and Mining. (6/2/2005)

Endangered and Threatened Species

The list of threatened, endangered and candidate species that may occur within the proposed lease area are the Bald Eagle, Black-Footed Ferret, Bonytail Chub, Colorado Pike Minnow, Humpback Chub, and Razorback Sucker. They are listed in table 10-1 of Chapter 10 of the current operation and reclamation plan. The text on page 10-25 and table 10-1has been updated to reflect the current status of Threatened, Endangered and Candidate species. Most threatened or endangered species that could occur in Carbon County occur at lower elevations than the mine and have no habitat in the proposed permit area expansion. There have been no confirmed sightings of Black-Footed Ferrets in Carbon County in several years. However, the mine has potential, through water depletions, of adversely affecting four listed threatened and endangered fish species of the upper Colorado River drainage. The Fish and Wildlife Service requires mitigation when water depletions exceed 100 acre-feet annually. Chapter 7, Section 7.3.2 (PHC Determination), provides for the criteria and volumes used to calculate an estimate of 60 acre-feet of water per year. (6/2/2005)

Bald and Golden Eagles

Bald eagles are common in the area during the winter and could occasionally fly through or roost in the proposed addition to the permit area. Mining would have negligible effects on these birds.

Wetlands and Habitats of Unusually High Value for Fish and Wildlife

Beaver Creek and several springs and ponds are adjacent to or lie within the proposed permit area revision. The Permittee is currently monitoring Beaver Creek and certain springs, and wells in the proposed addition to the permit area (plate7-1). The Permittee has proposed to maintain a 100' Buffer zone along beaver Creek to prevent impacts to the stream. Subsidence monitoring points are identified on plate 3-3. The portion of Beaver Creek and associated riparian areas that extend through the proposed lease area from Southwest to Northeast would be considered high value and or crucial habitats as well as any springs in the area. The application indicates that these areas will be mined under and may be subsided. Therefore the application needs to include a Protection and Enhancement plan for these habitat areas in the event they are impacted by subsidence. Suggested criteria are noted in the Protection and Enhancement Plan section of this document. (6/2/2005)

Findings:

The information contained in this section of the application is adequate to meet the requirements of the regulations.

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

Analysis:

Plate 3-1 shows the planned surface facilities. Section 3.5.2 states that during any future disturbance, topsoil will be stockpiled, contoured, fertilized and vegetated with seed mix #1 (Table 3-2). The piles will protected with markers and berms or strawbales. And (Section 3.4.4) that disturbed soils will be carefully handled for use as substitute topsoil materials.

Topsoil Removal and Storage

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

VEGETATION

Regulatory Reference: R645-301-330, -301-331, -301-332.

Analysis:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES

Regulatory Reference: 30 CFR Sec. 784.24, 817.150, 817.151; R645-301-521, -301-527, -301-534, -301-732.

Analysis:

Road Classification System

Plans and Drawings

Performance Standards

Primary Road Certification

Other Transportation Facilities

Findings:

SPOIL AND WASTE MATERIALS

Regulatory Reference: 30 CFR Sec. 701.5, 784.19, 784.25, 817.71, 817.72, 817.73, 817.74, 817.81, 817.83, 817.84, 817.87, 817.89; R645-100-200, -301-210, -301-211, -301-212, -301-412, -301-512, -301-513, -301-514, -301-521, -301-526, -301-528, -301-535, -301-536, -301-542, -301-553, -301-745, -301-746, -301-747.

Analysis:

Disposal Of Noncoal Mine Wastes

Section 3.2.3 *Surface Facilities* indicates that there will be no disposal of non-coal waste on site other than rock type construction materials. And further that the disposal of rock-type construction

materials will be disposed of in underground workings within the Horizon Mine, not on the surface. Garbage will be hauled to the state-approved landfill (Section 3.2.3.8).

Coal Mine Waste

Section 3.2.3.100 states that no coal mine waste disposal facilities will exist on the surface in the permit area. Section 3.2.600 indicates that coal mine waste will be handled as outlined in this section and previously in this MRP. Section 3.2.3 *Surface Facilities*. Indicates that underground development waste will be disposed of underground with the Horizon Mine. If waste is brought to the surface, a permanent stockpile will be permitted.

Section 3.3.2.5 states that approximately 2,500 CY of coal mine waste was buried in the facilities pad during construction. Appendix 3-8 contains a plate showing approximate locations of buried coal mine waste.

There is no intention of abandoning equipment underground. Should it be necessary to abandon any equipment underground, the Permittee commits to drain all petroleum products from the equipment, and show locations of abandoned equipment on a mine map that will be submitted to the Division (7.3.2 - PHC Determination, Potential Hydrocarbon Contamination). [06/02/2005)

Refuse Piles

Section 3.2.3.500 no refuse piles will exist in the permit area. Section 3.2.600 *Coal Mine Waste* indicates that underground development waste will be disposed of underground in a dry state. The acid-toxic nature of the material is discussed in Chapter 6.

Plate 3-1 shows the location of the sediment pond and ditch clean out material (behind the substation and behind the fan). The designated areas can hold 260 CY. The material may be sampled for use as substitute topsoil or fill material.

Impounding Structures

Burning And Burned Waste Utilization

Return of Coal Processing Waste to Abandoned Underground Workings

Excess Spoil:

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

Analysis:

General

Steve and Pete Stamitakis stated in their letter to the Division that monitoring had not been done "since Horizon left"; it isn't clear what date or event this refers to, but some of the monitoring was not done in 2000. There have also been quarters when there was no access for some monitoring sites because of snow cover. Data in the Division's database indicate that the monitoring plan described in the MRP has basically been followed and reporting to the Division is up-to-date. (6/2/2005)

The Permittee has committed to monitor significant surface- and ground-water sources, including drainages above and below the disturbed mine site area, and all point-source discharges. (6/2/2005)

Soils at the site tend to be silty clay loam to loam within the Shupert-Winetti Complex and gravelly loam to loam within the Brycan, Rabbitex, Senchert and Curecanti Series. The SCS information the use of hydrologic groups B and C (undisturbed soils) are considered adequate. In cases where the soil phases were in group B or C the operator used group B.

The operator has used a CN of 89 for the undisturbed areas. This number is adequate at this time. However, should the operator propose additional buildings, road surfacing or pad surfacing the design CN would require re-analysis. The operator used a CN of 70 for the additional areas draining to the pond considered "undisturbed" by the operator. Some of these areas are disturbed from previous mining operations.

Groundwater Monitoring

The Ground-water Monitoring Plan is in Section 7.1.5. Operational and reclamation ground-water monitoring parameters are in Table 7-2. Ground-water monitoring during operation of the mine will be conducted in accordance with R645-301-723. (6/2/2005)

Water levels in the piezometers have been measured quarterly; results are tabulated in Table 7-1 of the MRP and are in the Division's database. (6/2/2005)

The operator committed to submit quarterly and annual reports. The operator includes a commitment to notify the Division if data indicate non-compliance with permit conditions.

The operator has stated that springs monitoring data will provide information or impacts to localized perched aquifers within the Blackhawk Formation. It is established that these aquifers are associated with fault systems. Similar information will be obtained by monitoring inflows. The HZ

monitoring wells will assist in evaluation potential losses of ground water from the Blackhawk and Star Point formations.

Environmental Resource Description, Hydrology

Specifics in monitoring during the construction period were included and the operator has committed to collect weekly samples during the operational and reclamation construction period up stream and downstream of construction. The parameter is to be analyzed in the field is turbidity.

[06/02/2005)Surface Water Monitoring

Surface-water quality data have been collected from the permit and adjacent areas since 1989. Table 7-5 lists the operational and reclamation surface water monitoring parameters. The baseline data collected from the monitored sites, together with tables outlining the parameters that have been monitored, are presented in Appendix 7-3. Data are also in the Division's database. (6/2/2005)

Discharges of water from this operation will be made in compliance with all Utah and federal water quality laws and regulations and with effluent limitations for coal mining promulgated by the U. S. Environmental Protection Agency set forth in 40 CFR Part 434. See Sections 731 and 742.

Acid- and Toxic-Forming Materials and Underground Development Waste

Drainage from acid- and toxic-forming materials and underground development waste into surface water and ground water will be avoided by implementation of a Spill Prevention Control and Countermeasure (SPCC) Plan and by the following:

Potentially acid- or toxic-forming materials will be identified by use of Material Safety Data Sheets (MSDS), or by direct sampling and analysis in the case of underground development waste.

The operator has indicated that overburden and underburden samples will be gathered at 2,000-ftintervals throughout the mine and tested according to the Division requirements (Section 6.5.7.1). The Division understands this statement to mean the operator will test the materials according to current Division guidelines for acid and toxic forming materials. See further discussions under **Acid and Toxic** headings of this T.A.

Any material which exhibits acid- or toxic-forming characteristics will be properly stored, protected from runoff, removed to an approved disposal site or buried on site beneath a minimum of 4' of non-acid, non-toxic material.

Storage of potentially acid- or toxic-forming materials, such as fuel, oils, solvents and non-coal waste will be in a controlled manner, designed to contain spillage and prevent runoff to surface or ground-water resources.

All oils and solvents will be stored in proper containers within enclosed structures. Fuels will be stored in appropriate tanks, enclosed within concrete or earthen bermed areas designed to contain any spillage.

Non-coal waste (garbage) will be stored in a designated location, in dumpsters, and removed to an approved landfill (East Carbon Development Contractors - ECDC) on a regular, as-needed basis.

Transfer of Wells

There are presently three monitoring wells on this permit. When these wells are no longer required, they will be sealed in a safe, environmentally sound manner in accordance with regulations.

Discharges Into An Underground Mine

There are no plans to discharge any water into an underground mine.

Gravity Discharges From Underground Mines

Based on historical data from other mines in the area, some mine water can be expected to be encountered during the mining operation. Typically, such water is stored in "sumps" or designated areas in the mine and used for mining operations or discharged to the surface.

Water-Quality Standards And Effluent Limitations

Any discharge will be made in compliance with all Utah and federal water quality laws and regulations and with effluent limitations for coal mining promulgated by the U.S. Environmental Protection Agency set forth in 40 CFR Part 434.

A copy of the UPDES general discharge permit UTG 040019 is in Appendix 3-6. Temporary mine discharge quantities will be reported monthly and submitted to the Division with quarterly monitoring data. Reports will contain the period of pumping and the daily flow rate - unless flow is continuous. A continuous flow meter was installed in 2001 and has been used to report mine discharge since that time (Section 7.1.5). (6/2/2005)

Two sites are identified under the permit, outfall 001, minewater discharge from the sedimentation pond to Jewkes Creek and 002, mine discharge outfall to Jewkes Creek, which indicates the Department of Environmental Quality (DEQ) accepted the use of sumps for treatment of minewater.

With the minewater being directly discharged to the bypass culvert. It will be difficult to determine the visual permitting requirements, as the discharge will mix with Jewkes Creek water before exiting the bypass culvert. Additional monitoring requirements required by the Division included: 1) collecting quarterly monitoring data from locations upstream and downstream from the disturbed area within a reasonable time on the same day, the minewater discharge sample is obtained, and 2) monitoring for the monthly maximum discharge flow rate as well as providing in-mine water consumption estimates.

The operator included a commitment to monitor discharge 002 on the same day during the quarterly sampling of surface water sites SS-3 and SS-5 according to the monthly UPDES discharge

permit to meet the Divisions Requirement. The maximum flow for the discharge point each month required by the UPDES permit.

Information on mine consumption was provided as an estimate for full production. Information providing an estimate of use for each month during production was what was intended by the requirement to get a better idea on total minewater inflow. The monthly estimates can be incorporated during future mine plan amendment changes.

Diversions: General

Undisturbed

All diversions will be constructed and maintained to comply with the requirements of R645-301-742.100 and R645-301-742.300. Details are described under those respective sections of this chapter.

Culvert details are provided in Chapter 7. Undisturbed area culvert UC-1 will receive bypass drainage from culverts UC-2 and UC-3, Portal Canyon and Jewkes Creek. The culverts are designed to pass the peak flow resulting from the 100 yr.- 6 hr. precipitation event. Calculations supporting these designs are presented in Appendix 7-4. The combined discharge for the two drainages that will be passed through UC-1 is 27.9 cfs. The 100 yr.-6 hr. peak flow to reach UC-2 is calculated to be 8.3 cfs, and the peak flow calculated at UC-2 is 19. 6 cfs. Culverts

Calculations indicate that the flow capacity of the unaltered Jewkes Creek is 27.7 cfs above culvert UC-3 and 38.7 cfs below UC-1. The design capacities of the two culverts are 69.5 cfs and 100 cfs, respectively. The capacities of the culverts exceed the expected high capacity of Jewkes Creek. Culvert capacity for UC-2 is calculated to be 83 cfs. This capacity exceeds the Portal Canyon capacity of 13.1 cfs above the culvert in its unaltered state.

A trash rack has been installed on culvert UC-2. A generalized drawing of the trash rack is shown in Figure 7-8. There is no mention of a trash rack installed on UC-2 and no mention of a face protection at the culvert inlet. These culverts are temporary and will be removed during the reclamation phase.

All undisturbed and disturbed diversions are designed to carry the flow from a 10-year, 6-hour event. Culverts UC-4 and UC-5 receive drainage coming from the Jewkes Creek, an intermittent stream, designed to carry the flow from a 100-year, 6-hour event. The operator provided culvert sizes that may carry greater flows than the designed flow for the 10-year, 6-hour event.

Disturbed area diversions are designed to handle the 10-year, 6-hour event. The operator has provided a general channel configuration in Figure 7-7. The operator has stated that channel configuration may vary but the minimum cross sectional area will remain the same. The operator has met minimum design requirements. [06/02/2005)

Disturbed

There are five diversion ditches that collect the disturbed area runoff. Most disturbed area runoff will be directed to the sedimentation pond. Only two small areas at the upper end of the disturbed area

will use alternative sediment control. Disturbed area culverts are used in conjunction with diversions to convey runoff beneath roadways and to the lower minepad. [06/02/2005)

Drainages are developed by the operator to route undisturbed drainage around the site channels. Drainages with slopes up to 0.5 ft/ft have failed when riprapped. Riprap design procedures were not based on slopes of this steepness. Adequate grading, fill and angular riprap and filter blanket designs are necessary. The operator has provided sizing for graded riprap but no filter blanket designs. It is the opinion of the Division that the operator has not minimized potential impacts to the adjacent area and undisturbed drainage slopes should be reduced where possible.

The proposed topsoil pile directs drainage from DD-3 to DC-2 into the sedimentation pond. No drainage designs specific to road drainage could be located.

Diversions: Perennial and Intermittent Streams

Diversions: Miscellaneous Flows

Stream Buffer Zones

The operator has submitted a stream alteration permit to the Division of Water Rights. The submittal proposes a 3 foot and 2 foot culvert respectively in Jewkes and Portal Canyon. Comments on the proposal were due by May 19, 1996.

There will be no surface mining activity in the Beaver Creek watershed, so no stream buffer zone is needed along Beaver Creek to protect structures from surface activity. No diversion of Beaver Creek or other streams to the north is planned. Mining is planned beneath Beaver Creek, a perennial stream. (6/2/2005)

Subsidence protection is planned for Beaver Creek by orienting the panels perpendicular to the stream and using full extraction pillaring (3.2 - Surface Facilities Construction Plans, Subsidence Protection). Retreat mining results in uniform downwarping and lowering of strata, generally not accompanied by a significant degree of fracturing, and the original attitude and integrity of the strata are maintained. Little impact on the perched aquifers of the overburden is expected to result from downwarping (7.3.2 - PHC Determination, Impacts to the Perched Aquifer System). (6/2/2005)

Overburden isopach and coal seam thickness are shown on Plate 3-3. Table 6-2 lists depths to the top of the Hiawatha Seam as measured in five bore holes. Plate 3-3 and the cross section on Plate 6-2 indicate a thickness greater than 800 feet. Appendix 7-13 contains a copy of the US Forest Service study of the impacts of subsidence caused by full extraction mining beneath Burnout Canyon at the Skyline Mine. The conclusions from Burnout Creek, which relate to overburden being over 800 feet thick, have been used to predict that subsidence will cause only minor and temporary impacts to Beaver Creek (7.3.2 - PHC Determination, Impacts to the Hydrologic System Resulting From Subsidence). (6/2/2005)

No surface structures exist within the zone of potential subsidence (Section 3.3.2.2). There are, however, private unpaved roads adjacent to Beaver Creek, in Sand Gulch, and in an unnamed side canyon to Jump Creek that could be affected by subsidence. Subsidence of roads is allowed by the Coal Mining Rules, but it is reasonably foreseeable that damage to these roads from subsidence could result in diminished use. Section 3.2.3.4 discusses potential damage to these roads and includes a commitment to maintain and repair these roads. (6/2/2005)

Sediment Control Measures

Horizon Coal Company has committed to limit construction to periods when the stream is not flowing to the extent possible. The proposed measures for culvert construction are acceptable practices. Appendix 3.3 indicates the road will be sloped toward the disturbed drainage ditches. [06/02/2005)

Ditch UD-2 receives extensive drainage from cut slopes as shown in Plate 3-7A, cross sections E, F, and G. These slopes are steep and can be significant sources of sediment. The operator has committed to provide erosion control matting and seeding according to Table 3-2, for all cut slopes which will drain directly to an undisturbed area diversion. As presented in Section 3.3.5.3 mulching and roughening will occur on areas before seeding where slopes are 2½:1 or less. The matting will be applied on slopes 2½:1 or steeper. It should be noted that where competent bedrock is exposed matting might not be practicable.

Currently this road is located on the east side of the stream and outside the permit area, and therefore is a potential source of additional sediment to the stream flow. The fan portal road is to be considered an ancillary road and will be cut into native materials without an engineered surface.

The topsoil is also proposed to be vegetated with interim cover as discussed in Sections 3.4.4.1, page 3-19 and Section 3.5.2. The piles will be contoured, fertilized and seeded. A berm will be placed around each topsoil pile to minimize soil transport. Prior to achieving adequate vegetation establishment other measures are necessary to control erosion.

Siltation Structures: General

Sediment ponds and all other treatment facilities are defined as siltation structures. The two siltation structures at this site include Sweets Pond, a pond developed for water rights use, and the sedimentation pond. For a discussion of the mine site sedimentation pond, see the **Sedimentation Ponds** heading below.

Sweets Pond currently is associated with the Gordon Creek Mines 2, 7, and 8. This site would be double permitted until Gordon Creek has obtained bond release. Because this is an impoundment to be associated with the Horizon Mine appropriate regulatory requirements must be addressed.

Sweets Pond also has an existing pumphouse and a water gate to control inlet flows. The operator has proposed to build a water line from the pond to the mine. This should be included in the permit area as part of the disturbed area. The pond itself need not be part of the permit area for which

bonding is required as described under the "Disturbed Area" and "Permit Area" definition in R645-100, as long as the structures are constructed and maintained in accordance with R645-301 and R645-302.

Siltation Structures: Sedimentation Ponds

There will be only one sediment pond. The sediment pond will be a non-MSHA structure. The sediment pond will be inspected during and after construction by a qualified, registered, professional engineer. The pond will be inspected after each storm and cleaned as necessary. Its embankments will be vegetated, to control erosion, with a temporary seed mix as described in Section 3.5.5.2.

The operator has analyzed the pond embankment designs for stability. Using a standard, circular failure model and the Hoeck Circular Failure Charts, the operator has found that the pond embankments have a static safety factor of 4.81 for dry conditions and 4.44 for saturated conditions (Appendix 3).

The operator proposes to divert all disturbed area run off to the sedimentation pond, including the proposed north return air fan, receiving runoff from 10.7 acres (Appendix 7-4). The sedimentation pond will be mostly incised except at the downstream face, which will be an earthen embankment. The pond has been designed to contain the runoff from a 10-year, 24-hour precipitation event calculated to be 0.83 acre-feet. The permit area surfacing is described as a gravel parking lot. The full extent of gravel is not defined.

The operator has assumed sediment production of 0.05 acre-feet/acre from the disturbed area. The operator has not provided a technical method or calculation to determine where the 0.05 acre feet/ acre comes from, Appendix 7-4. However, the final design allowed 1.48 acre-feet for maximum sediment storage, which is closer to 0.1 acre-foot/acre per year sediment production for disturbed areas and is considered a conservative estimate. Although the maximum sediment storage is considered adequate at this time, if the operator should need additional increases in the sedimentation pond capacity the 0.05 acre feet/ acre will not be considered valid until demonstrated to meet standard through accepted design methods. The operator must remove the discussions of excess design capacity or provide technical design information.

The total capacity of the pond below its emergency spillway will be 2.3 acre-feet. The sediment will be cleaned out of the pond at 60% of the total sediment volume, or 0.88 acre-feet. The cleanout volume will be marked by a calibrated pole. One pole is generally not adequate to determine sediment capacity because the sediment tends to be deposited in deltaic form at the inlets. The operator will be expected to maintain the capacity required for runoff volume.

The pond will also have a 2" decant pipe with a locking valve. Twenty-four hours after a storm, the pond is to be drained by opening the valve on the two inch decant line in the pond. This valve is to remain locked at all times except when decanting storm runoff. The inlet of the decant line is to be located at an elevation of 7576.0 feet, which is 24 inches above the 60% cleanout level and 3.4 feet below the elevation of the spillway.

Should the quantity of water encountered in mining exceed the amount required by the underground operations the operator proposes the water be treated by the sediment pond in order to meet effluent standards. This action may be used as an emergency measure but is not an approved design.

The use of the pond for this purpose would need to be approved prior to handling any runoff which might exceed the design requirements.

The sediment pond's spillway is designed to pass the peak flow of the 25-year, 6-hour precipitation event. Calculations for the spillway assume the pond is full to the elevation of the spillway prior to the onset of the event. With a depth of 2.3 feet, a width of 10 feet and side slopes of 2h:1v, the spillway will have 2 foot of freeboard between the top of the pond embankment and the maximum flow elevation. The operator designed a non-erodible, open channel emergency spillway for which the outlet will have a riprap with a D50 of 4 inches. However, no filter blanket designs were included.

Although the spillway designs meet the requirements of a single -open channel spillway design under R645-301-743.00, the spillway does not provide the protection of aquatic life through providing an oil skimmer. Because this pond will be receiving oils and grease from the site the pond should provide for some type of oil skimmer.

Pond designs, maps and calculations have been prepared under the direction and certification of Richard H. White (State of Utah, Registered Professional Engineer #7102). The information and calculations contained in Appendix 6E are also certified by Mr. White.

The pond safety factor calculations assume an 11-ft embankment height and a slope angle of 2H:1V (26.56 degrees). The soils are assumed to have soil cohesion and friction angle of 35 psi and 30 degrees respectively, which results in a safety factor of 4.81 dry and 4.44 saturated conditions.

Siltation Structures: Other Treatment Facilities

There are no Other Treatment facilities as defined in the R645 Coal Rules. Two small areas above the disturbed area have been proposed for alternate sediment control. Appropriate sediment control measures will be designed, constructed and maintained using the best technology currently available to prevent, to the extent possible, additional contributions of sediment to stream flow or to runoff outside the permit area and meet the effluent limitations under R645-301-751. [06/02/2005)

Siltation Structures: Exemptions

No exemptions requested by the operator.

Discharge Structures

The sedimentation pond discharge structure is discussed under Siltation Structures.

Impoundments

The sedimentation ponds are the only impoundments planned for this operation. [06/02/2005)

Ponds, Impoundments, Banks, Dams, and Embankments

Casing and sealing of wells

The operator has stated that approvals and permits to drill wells will be received from the Division of Water Rights and appropriate Government agencies. The final casing and sealing of wells is discussed in more detail in the section entitled **MINE OPENINGS** under **RECLAMATION PLAN** below.

Water Replacement

The Permittee's water-replacement commitments address elements of both R645-301-731.530 and R645-301-525.480, but the Permittee's commitments to replace water supplies and the methods described to carry out such replacement are sufficient to meet the requirements of the Coal Mining Rules. (6/2/2005)

Findings:

Operation Plan Hydrologic Information is adequate to meet the requirements of the Coal Mining Rules. (6/2/2005)

SUPPORT FACILITIES AND UTILITY INSTALLATIONS

Regulatory Reference: 30 CFR Sec. 784.30, 817.180, 817.181; R645-301-526.

Analysis:

All support facilities are described in the MRP

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

SIGNS AND MARKERS

Regulatory Reference: 30 CFR Sec. 817.11; R645-301-521.

Analysis:

Surfaces above the Federal Lease UTU-74804 are private or inaccessible lands. No signs or markers other than water monitoring location markers will be installed. The Permittee has supplied sufficient information for this section.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

USE OF EXPLOSIVES

Regulatory Reference: 30 CFR Sec. 817.61, 817.62, 817.64, 817.66, 817.67, 817.68; R645-301-524.

Analysis:

General Requirements

The Permittee will submit blasting plans prior to blasting. (6/2/2005)

Preblasting Survey

General Performance Standards

Blasting Signs, Warnings, And Access Control

Control of Adverse Effects

Records of Blasting Operations

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

Analysis:

Affected Area Maps

Plate 1-1 shows the permit boundaries. The Division considers the permit boundary to be identical to the affected area. The Division reviewed the Plate 1-1 and found it to be adequate.

The boundaries of the disturbed area, as well as those of its component areas of previous and proposed disturbance, are shown adequately on Plates 3-1, 3-6, and 3-7.

Mining Facilities Maps

The locations and approximate dimensions of all mine facilities are shown on Plate 3-1--Surface Facilities. InThis plate was certified by a professional engineer registered in the state of Utah.

Design details of the sediment pond are shown on Plate 7-6--Sedimentation Pond Detail Map. This plate was certified by a professional engineer registered in the state of Utah.

Mine Workings Maps

The mine-workings map, Plate 3-3, shows the projected angle-of-draw and the positions of the bounding faults of the graben. Plates 3-9 and 3-10 show the location and extent of known workings of active, inactive, or abandoned underground workings, including openings to the surface, within the permit and adjacent areas; also, areas within these mines that have been second mined. No previously surface-mined areas are known to exist within the permit area. (6/2/2005).

Monitoring and Sampling Location Maps

Both geologic and ground-water information were obtained from test borings done at sites designated LMC-1, LMC-2, LMC-3, and LMC-4. The locations of these sites are shown on Plate 6-1--Geology and Plate 7-1--Water Monitoring Locations.

Information on water quality and quantity was obtained from monitoring stations designated 1, 2, 3, 4, 5, 6, and 7. The elevations and locations of these sites are shown on Plate 7-1--Water Monitoring Locations.

Certification Requirements

Findings:

The Permittee has submitted sufficient information to address this section.

RECLAMATION PLAN

GENERAL REQUIREMENTS

Regulatory Reference: PL 95-87 Sec. 515 and 516; 30 CFR Sec. 784.13, 784.14, 784.15, 784.16, 784.17, 784.18, 784.19, 784.20, 784.21, 784.22, 784.23, 784.24, 784.25, 784.26; R645-301-231, -301-233, -301-322, -301-323, -301-331, -301-333, -301-341, -301-342, -301-411, -301-412, -301-422, -301-512, -301-513, -301-521, -301-522, -301-525, -301-526, -301-527, -301-528, -301-529, -301-531, -301-533, -301-534, -301-536, -301-537, -301-542, -301-623, -301-624, -301-625, -301-626, -301-631, -301-632, -301-731, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-732, -301-733, -301-746, -301-764, -301-830.

Analysis:

The only surface disturbance that has occurred on Federal Lease UTU-74804 is the development of water monitoring wells. Plans have been presented in the MRP that describe how the wells will be reclaimed.

Findings:

The Permittee has submitted sufficient information to address this section.

POSTMINING LAND USES

Regulatory Reference: 30 CFR Sec. 784.15, 784.200, 785.16, 817.133; R645-301-412, -301-413, -301-414, -302-270, -302-271, -302-272, -302-273, -302-274, -302-275.

Analysis:

No surface disturbance other than minimal subsidence will take place on the Federal Lease UTU-74804 . The post mining land use for the area included in this application will remain the same as premining conditions, i.e. grazing, logging, mining, recreation and wildlife habitat.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

PROTECTION OF FISH, WILDLIFE, AND RELATED ENVIRONMENTAL VALUES

Regulatory Reference: 30 CFR Sec. 817.97; R645-301-333, -301-342, -301-358.

Analysis:

No surface disturbance on Federal Lease UTU-74804 is anticipated other than minimal subsidence. Beaver Creek and several springs and ponds are adjacent to or lie within the proposed permit area. The Permittee is currently monitoring Beaver Creek and certain springs, and wells in the proposed addition to the permit area (plate 7-1). The Permittee has proposed to maintain a 100' Buffer zone along beaver Creek to prevent impacts to the stream. Subsidence will be monitored during mining and for a period of two years following final cessation of mining practices. The subsidence monitoring points are identified on plate 3-3 of the application. The Permittee has been requested to develop and implement a mitigation and protection plan under the Fish and Wildlife Information section of this document. (6/2/2005)

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

APPROXIMATE ORIGINAL CONTOUR RESTORATION

Regulatory Reference: 30 CFR Sec. 784.15, 785.16, 817.102, 817.107, 817.133; R645-301-234, -301-412, -301-413, -301-512, -301-531, -301-533, -301-553, -301-536, -301-542, -301-731, -301-732, -301-733, -301-764.

Analysis:

The Federal Lease UTU-74804 proposal extends the underground operations. There is no change to the approved reclamation plans. AOC will be met.

Findings:

The Permittee has submitted sufficient information to address this section.

BACKFILLING AND GRADING

Regulatory Reference: 30 CFR Sec. 785.15, 817.102, 817.107; R645-301-234, -301-537, -301-552, -301-553, -302-230, -302-231, -302-232, -302-233.

Analysis:

General

Plate 3-1 shows the location of the sediment pond and ditch clean out material (behind the substation and behind the fan). The designated areas can hold 260 CY. The material may be sampled for use as substitute topsoil or fill material.

Contemporaneous reclamation is discussed in Section 3.5. Plate A of Appendix 8-1 shows areas, which were contemporaneously reclaimed in 1997. This work is discussed in Section 8-8.

General plans for backfilling and grading are found in Section 3.5.4. Plates 3-7 and 3-7A show the topography post-mining. Cut and fill calculations are in Table 3-1. There is a 4,240 CY deficit, which will require lowering the site 5 inches.

Previously Mined Areas

Backfilling and Grading On Steep Slopes

Special Provisions for Steep Slope Mining

Findings:

There is no change from the approved reclamation plan.

MINE OPENINGS

Regulatory Reference: 30 CFR Sec. 817.13, 817.14, 817.15; R645-301-513, -301-529, -301-551, -301-631, -301-748, -301-765, -301-748.

Analysis:

No new mine openings are proposed under the addition of Federal Lease UTU-74804 . Closure and reclamation of mine openings is discussed in Section 3.5.3.1.

Findings:

Mine Openings information for the Reclamation Plan is adequate to meet the requirements of this section.

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

Analysis:

Twenty inches of topsoil will be placed over 8.23 acres of graded fill (Section 2.117). The figure of 9.15 acres was used for bonding purposes and is listed in (Section 3.5.4 and Table 3-1). This amounts to approximately 14,417 CY of topsoil (Section 3.5.4 and Appendix 8-1). There is mo change from the approved reclamation plan.

Redistribution

Findings:

Sufficient information has been provided to meet this section of the regulations.

ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES

Regulatory Reference: 30 CFR Sec. 701.5, 784.24, 817.150, 817.151; R645-100-200, -301-513, -301-521, -301-527, -301-534, -301-537, -301-732.

Analysis:

Reclamation

No roads or transportation facilities will be affected as a result of the addition of Federal Lease UTU-74804 to the permit area. The plan contains information to show that no roads or transportation facilities overly Federal Lease UTU-74804.

Retention

Findings:

Sufficient information has been submitted to address this section.

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 784.14, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-301-512, -301-513, -301-514, -301-515, -301-532, -301-533, -301-542, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-733, -301-742, -301-743, -301-750, -301-751, -301-760, -301-761.

Analysis:

Hydrologic Reclamation Plan

The reclamation plan is discussed in detail in Section 3.5 of this permit application. The Permittee has provided information in the MRP to show they will conduct reclamation activities on the minesite at completion of mining. Reclamation plans dealing with ground water are identified in the approved permit. The reclamation criteria extend to the Federal Lease UTU-74804 area. (6/2/2005)

All surface and ground-water monitoring will continue throughout the reclamation period. The permittee will monitor for acid or toxic materials and provide treatment if adverse conditions occur. Wells will be sealed and the sites reclaimed. There will be no discharges into the underground mine. The mine will be sealed and no gravity discharge is expected. All diversions will removed and flow distributed over the surface. Sediment control measured will be implemented using the best technology available during reclamation. Sediment pond will remain until vegetation is established and effluent limitations are met.

Four holes have been (HZ-1, HZ-2, HZ-3, and HZ-3HZ01-6-1) drilled and completed as monitoring wells within the uppermost saturated zone beneath the Hiawatha coal seam to better predict the potential of inflow into the mine. When no longer needed for monitoring or other use approved by the UDOGM and upon a finding of no adverse environmental or health and safety effects, or unless approved for transfer as a water well, each well or boring will be capped, sealed, backfilled, or otherwise properly managed, as required by regulations. (6/2/2005)

No oil and gas exploration or production wells are located in the permit area.

Subsidence of the sediments overlying the mining area will be monitored. A detailed description of the subsidence monitoring plan, including a map illustrating the location of monitoring stations, is presented in Section 3.4.8. (6/2/2005)

Findings:

The Permittee has submitted sufficient Reclamation Plan information to meet the minimum requirements if the regulations. (6/2/2005)

CONTEMPORANEOUS RECLAMATION

Regulatory Reference: 30 CFR Sec. 785.18, 817.100; R645-301-352, -301-553, -302-280, -302-281, -302-282, -302-283, -302-284.

Analysis:

General

No surface disturbance in Federal Lease UTU-74804 is anticipated other than minimal subsidence. Mining practices would have a minimal effect on the vegetation resources. Potential impacts to vegetation caused by subsidence during active mining operations may be mitigated by implementing Contemporaneous reclamation practices as described in Section 3.5.1 of the reclamation plan.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

REVEGETATION

Regulatory Reference: 30 CFR Sec. 785.18, 817.111, 817.113, 817.114, 817.116; R645-301-244, -301-353, -301-354, -301-355, -301-356, -302-280, -302-281, -302-282, -302-283, -302-284.

Analysis:

No surface disturbance in Federal Lease UTU-74804 is anticipated other than minimal subsidence. Mining practices would have a minimal effect on the vegetation resources. Potential impacts to vegetation caused by subsidence during active mining operations may be mitigated by implementing Contemporaneous reclamation practices as described in Section 3.5.1 of the reclamation plan.

Revegetation: General Requirements

The general requirements for revegetation are provided for in Section 3.5 of the reclamation plan.

Revegetation: Timing

The approximate schedule for reclamation activities is outlined in table 3-4 of Section 3.5.7.1 of the reclamation plan.

Revegetation: Mulching and Other Soil Stabilizing Practices

Sections3.5.4.3, 4, 5.1,2, and 3 of the reclamation portion of the plan and proposal describe the mulching and other stabilizing practices to be implemented during reclamation.

Revegetation: Standards For Success

The standards for success are provided for in Section 3.5.6 of the reclamation plan.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

STABILIZATION OF SURFACE AREAS

Regulatory Reference: 30 CFR Sec. 817.95; R645-301-244.

Analysis:

The backfilling and grading schedule is detailed in Section 3.5.7.1 and outlined in Table 3-4.

All acid-toxic material, exposed coal or refuse will be covered with 4 feet of material. The regraded surface will be scarified. Topsoil will be replaced.

Silt fences will be used at the bottom of fill slopes and along the reclamation channel during topsoil placement. The site will be seeded and mulched as described in Section 3.5.5.3 (1 ton mulch/acre) and Section 3.5.4. Erosion control matting on slopes 2½H:1V or greater and sediment controls will be placed as needed (Plate 7-7a; Section 3.5.4.3).

Findings:

There has been no change to the approved reclamation plan

CESSATION OF OPERATIONS

Regulatory Reference: 30 CFR Sec. 817.131, 817.132; R645-301-515, -301-541.

Analysis:

Federal Lease UTU-74804 extends the underground operations. There is no change to the approved reclamation plans.

Findings:

Federal Lease UTU-74804 extends the underground operations. There is no change to the approved reclamation plans.

Ground-water monitoring

Analysis:

Both geologic and ground-water information were obtained from test borings done at sites designated LMC-1, LMC-2, LMC-3, and LMC-4. The locations of these sites are shown on Plate 6-1--Geology and Plate 7-1--Water Monitoring Locations.

Information on water quality and quantity was obtained from monitoring stations designated 1, 2, 3, 4, 5, 6, and 7. The elevations and locations of these sites are shown on Plate 7-1--Water Monitoring Locations.

Findings:

The Permittee has submitted sufficient information to address this section.

MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-323, -301-512, -301-521, -301-542, -301-632, -301-731.

Analysis:

Affected Area Boundary Maps

Plate 1-1 shows the permit boundaries. The Division considers the permit boundary to be identical to the affected area. [06/02/2005)

Bonded Area Map

Plate 1-1

Reclamation Backfilling And Grading Maps

Plate 7-7A

Reclamation Facilities Maps

Federal Lease UTU-74804 extends the underground operations. There is no change to the approved reclamation plans.

Final Surface Configuration Maps

Plate 3-7 and 3-7A

Reclamation Monitoring And Sampling Location Maps

Both geologic and ground-water information were obtained from test borings done at sites designated LMC-1, LMC-2, LMC-3, and LMC-4. The elevations and locations of these sites are shown on Plate 6-1--Proposed No. 1 & 2 Mine Geologic/Structure Map, Plate 7-1--Hydrology Map, and Plate 7-2--Drill Hole Data of the Horizon Mine Area. These plates were certified by a professional engineer registered in the state of Utah.

Information on water quality and quantity was obtained, and will continue to be obtained through final reclamation, from monitoring stations designated 1, 2, 3, 4, 5, 6, and 7. The elevations and locations of these sites are shown on Plate 7-1--Hydrology Map. This plate was certified by a professional engineer registered in the state of Utah.

Vegetation information was obtained, and will continue to be obtained through final reclamation, from transects done at locations designated A through E. These locations are shown on Plate 9-2--Vegetation Map No. 2. This plate was certified by a professional engineer registered in the state of Utah.

A network of subsidence monitoring stations will be established, subsidence data from which will be submitted to the Division with each Annual Report. Monuments will be steel rebar with aluminum caps. There will be a total of 26 stations: four base stations and 22 monitoring stations, five of which will be above Beaver Creek. The locations of all subsidence monitoring stations are shown on Plate 3-5--Subsidence Monitoring Plan. Plate 3-5 was certified by a professional engineer registered in the state of Utah.

Reclamation Surface And Subsurface Manmade Features Maps

Plate 3-1 shows surface contours of undisturbed areas adjacent to disturbed areas that are indicative of the original land slopes in the vicinity of the disturbed area and which were used to create the reclamation final contour maps Plates 3-7 and 3-7A. Plate 3-6 shows conditions prior to disturbance by Horizon.

Reclamation Treatments Maps

Plate 7-7A

Certification Requirements.

Findings:

There has been no change to the approved reclamation plan.

BONDING AND INSURANCE REQUIREMENTS

Regulatory Reference: 30 CFR Sec. 800; R645-301-800, et seq.

Analysis:

General

Form of Bond

Federal Lease UTU-74804 extends the underground operations. There is no change to the approved reclamation plans.

Determination of Bond Amount

The Division reviewed the reclamation and found that no additional surface disturbance would take place. Therefore, the Division found that the bond does not have to be adjusted at this time.

Terms and Conditions for Liability Insurance

Federal Lease UTU-74804 extends the underground operations. There is no change to the approved reclamation plans. Liability insurance will continue.

Findings:

The Permittee has submitted sufficient information to address this section.

REQUIREMENTS FOR PERMITS FOR SPECIAL CATEGORIES OF MINING

INTRODUCTION

Regulatory Reference: 30 CFR Sec. 785; R645-302, et seq.

Analysis:

Findings:

EXPERIMENTAL PRACTICES MINING

Regulatory Reference: 30 CFR Sec. 785.13; R645-302-210, -302-211, -302-212, -302-213, -302-214, -302-215, -302-216, -302-217, -302-218.

Analysis:

Findings:

MOUNTAINTOP REMOVAL MINING

Regulatory Reference: 30 CFR Sec. 785.14, 824; R645-302-220, et. seq.

Analysis:

Special Permanent Program Performance Standards--Mountaintop Removal

Findings:

STEEP SLOPE MINING

Regulatory Reference: 30 CFR Sec. 785.15; R645-302-230 et. seq.

Analysis:

Findings:

PRIME FARMLAND

Regulatory Reference: 30 CFR Sec. 785.16, 823; R645-301-221, -302-300 et seq.

Analysis:

Prime Farmland Application Contents.

Consultation with Secretary of Agriculture.

Issuance of Permit.

Soil Removal and Stockpiling

Soil Replacement

Revegetation and Restoration of Soil Productivity

Findings:

COAL PREPARATION PLANTS NOT LOCATED WITHIN THE PERMIT AREA OF A MINE

Regulatory Reference: 30 CFR Sec. 785.21, 827; R645-302-260, et seq.

Analysis:

Findings:

OPERATIONS IN ALLUVIAL VALLEY FLOORS

Regulatory Reference: 30 CFR Sec. 822; R645-302-324.

Analysis:

Essential Hydrologic Functions

Protection of Agricultural Activities

Monitoring

Findings:

IN SITU PROCESSING

Regulatory Reference: 30 CFR Sec. 828; R645-302-254.

Analysis:

Findings:

AUGER MINING

Regulatory Reference: 30 CFR Sec. 785.20, 819; R645-302-240 et. seq.

Analysis:

Findings:

CUMULATIVE HYDROLOGIC IMPACT ASSESSMENT (CHIA)

Regulatory Reference: 30 CFR Sec. 784.14; R645-301-730.

Analysis:

The CHIA was updated when the south part of Federal Lease UTU-74804 was added to the permit in 2001. That revision included assessment of the entire federal lease UTU-74804. The Division has updated the CHIA for the 2005 Permit Boundary Expansion amendment, a significant revision, but there were no major changes. [06/02/2005 JDS]

Findings:

The Division has updated the CHIA as needed for the 2005 Permit Boundary Expansion amendment, a significant revision to the mine plan.

APPENDICES

APPENDICES

SUMMARY OF COMMITMENTS

The summary below presents a list of commitments stated within the mining and reclamation plan (MRP). This list provides the following information for each commitment, when applicable:

- Title.
- Objective.
- Frequency.
- Status.
- Reports.
- Citation.

BEGIN COMMITMENT LIST BELOW

PERMIT INFORMATION TABLE

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United States Department of the Interior

OFFICE OF SURFACE MINING
Reclamation and Enforcement
P.O. Box 46667
Denver, Colorado 80201-6667

IN REPLY REFER TO:

August 15, 2005

UT-0077

Mr. Alexander H. Walker, III
General Manager
Hidden Splendor Resources, Inc.
57 West 200 South, Suite 400
Salt Lake City, Utah 84101

Dear Mr. Walker:

On August 3, 2005, the Department of the Interior approved a mining plan modification for Federal lease UTU-74804 at Hidden Splendor Resources, Inc.'s Horizon Mine. This mining plan action relates to Federal lands associated with the Utah Department of Natural Resources, Division of Oil, Gas and Mining (UT-DOGM) State Decision Document, Hidden Splendor Resources, Inc., Permit Boundary Expansion, Horizon Mine, C/007/020, approved on July 1, 2005.

I have enclosed a copy of the mining plan approval document and associated map for this new mining plan. Please read the terms and conditions of the mining plan approval document carefully. Mining and reclamation operations must be conducted in accordance with both the Utah state permit and the approved mining plan.

The August 3, 2005, approval allows you to initiate coal mining operations in Federal lease UTU-74804 within the area of mining plan approval.

If you have any questions, please contact me at (303) 844-1400, extension 1500.

Sincerely,

Carl R. Johnston
Utah Federal Lands Coordinator

Enclosure

cc: BLM - Utah State Office
BLM - Price Field Office
Utah Department of Natural Resources
OSM - Denver Field Division