

Federal Coal Exploration Plan
BULL MOUNTAINS EXPLORATION AREA
Musselshell County & Yellowstone County, Montana

Exploration License No. _____

Submitted by
Signal Peak Energy, LLC
100 Portal Drive
Roundup, MT 59072

August 23, 2013

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NAME, ADDRESS, AND TELEPHONE NUMBER OF APPLICANT:

Signal Peak Energy, LLC
100 Portal Drive
Roundup, MT 59072
406-323-4500
Contact: Dusty R. Weber, Permitting Manager
406-375-5254 dweber@signalpeakenergy.com

NAME & ADDRESS OF REPRESENTATIVE PRESENT DURING EXPLORATION:

Signal Peak Energy, LLC
100 Portal Drive
Roundup, MT 59072
406-323-4500
Contact: This will be provide to the BLM contact persons upon approval of exploration drilling application and prior to initiation of drilling activities

NARRATIVE DESCRIPTION

Coal exploration drilling is needed to determine coal quality for possible expansion of existing operations by Signal Peak Energy, LLC (SPE). The proposed exploration area is located on private and federal surface and is located in Musselshell County and Yellowstone County, Montana. This exploration program will help verify reliability of historic and adjacent drill holes and help identify extent and thickness of coal. The Exploration Area is adjacent to SPE's existing coal mining operation.

The Exploration License Area:

Signal Peak Energy, LLC (SPE) requests a Federal Coal Exploration License for the BULL MOUNTAINS EXPLORATION AREA (BMEA) located in Musselshell County and Yellowstone County, Montana. The BMEA includes federal surface overlying federal coal and private surface overlying federal coal. The Bull Mountains Exploration Area is located within the area described as follows and illustrated on the attached MAP 2: BULL MOUNTAINS EXPLORATION AREA. This area contains approximately **2,042 acres** more or less.

FEE SURFACE OVER FEDERAL COAL (1,560 AC)

TOWNSHIP 5 NORTH RANGE 27 EAST

SE4NE4, S2SE4, NE4SE4 SECTION 4 (161 AC)

TOWNSHIP 6 NORTH RANGE 27 EAST

W2, NE4, S2SE4, NW4SE4 SECTION 24 (601 AC)

SE4 SECTION 34 (159 AC)

TOWNSHIP 6 NORTH RANGE 28 EAST

ALL SECTION 18 (639 AC)

FEDERAL SURFACE OVER FEDERAL COAL (482 AC)

TOWNSHIP 5 NORTH RANGE 27 EAST

S2NW4, SW4, SW4NE4, NW4SE4 SECTION 4 (321 AC)

TOWNSHIP 6 NORTH RANGE 27 EAST

SW4 SECTION 32 (161 AC)

Additional Note:

The following federal lands overlying fee coal are not included in this the BMEA application, but part of the same general project and therefore referenced in this application: See *Federal Land Use Permit Application; BMLUA*

FEDERAL SURFACE OVER FEE COAL (565 AC) ---to receive federal authorization under separate application---

TOWNSHIP 5 NORTH RANGE 27 EAST

N2NW4 SECTION 4 (81 AC)

TOWNSHIP 6 NORTH RANGE 27 EAST

N2, SE4 SECTION 32 (484 AC)

Surface Topography:

The BMEA is located at the southern extremity of the Bull Mountains. Elevations within the exploration area vary from approximately 3,850 feet to approximately 4,250 feet. The exploration area terrain progresses from mildly sloped in the lower elevations to moderately hilly in the mid elevations to steep and rugged near the ridge tops.

Geologic Features:

The Exploration Area is located in the southern portion of the Bull Mountain Coal Field. Rocks exposed in the exploration area are from the Paleocene Age Fort Union Formation. The western part of the BMEA lies just south of Dunn Mountain and the eastern part of the BMEA lies east of Dunn Mountain. Clinker and sandstone outcrops are prevalent throughout the exploration area. Strata in the eastern part of the BMEA dips approximately one percent to the northwest. Strata in the western part of the BMEA dips approximately one percent to the north. No fault zones are known to exist within the exploration area.

Surface Water Features:

The BMEA includes portions of East Fork Razor Creek, Pompey's Pillar Creek, Railroad Creek and Dutch Oven Creek drainage basins. These drainages have intermittent flows with volumes varying in response to spring snowmelt and runoff from major rainfall events. Proposed drill holes will be located no closer than 200 feet from intermittent channels.

Other Physical Features; Soils:

The environmental resources and values occurring within the proposed area are projected to be consistent with those of surrounding areas. SPE does not anticipate any unique values or resources of special concern. Soils on the ridgelines and upper slopes are generally shallow with frequent rock outcrops. Moderately-deep to deep soils are located on lower slopes and in valley bottoms. Fine-loamy and coarse-loamy soil of variable thicknesses typically overlies clay, siltstone, and sandstone bedrock.

Vegetative Cover:

The topographic and edaphic diversity of the exploration area support a diversity of native vegetation communities. The dominant communities within the exploration area are expected to include woodland: Ponderosa Pine/Rocky Mountain juniper; shrub grassland: silver sagebrush/grass, and skunk bush sumac/grass; a variety of mixed grass communities, and other assemblages adapted to thin-breaks (steep, often barren, areas with prevalent rock outcrops). Prior to disturbance, dominant species will be documented during the ecological survey.

The state has defined two categories of noxious weeds. Category One noxious weeds are those that are currently established and occur throughout the state. Category Two noxious weeds have only recently been introduced to the state or their presence is rapidly increasing. Both categories of weeds can spread quickly, making the land unfit or greatly limited for beneficial uses. Prior to disturbance, all proposed drill sites and their access routes will be surveyed for the presence of invasive and noxious weeds.

Wildlife (including Endangered or Threatened Species):

A variety of game and non-game species occur in the BMEA. The number and species of wildlife present are expected to be typical of the local area, a substantial portion of which has been previously inventoried in conjunction with mine-related environmental studies. Species listed as threatened or endangered are not expected to occur in the BMEA. Should any occurrence of a threatened or endangered species or bald and golden eagle roost/concentration areas and breeding territories be observed, both the Department and the U.S. Fish and Wildlife Services will be notified as soon as possible. Some wildlife species of concern, as identified by the Montana Natural Heritage Program, are likely present in the area as least seasonally.

The Exploration Area will be evaluated for Endangered or Threatened Species before disturbance occurs.

National Register of Historic Places and; Known Cultural or Archaeological Resources:

The area will be evaluated for cultural resources before disturbance occurs.

Typical Drilling Methods and Activities that May Occur During the Exploration:

SPE expects to complete drilling at 43 exploration drill hole locations as shown on Table 1. Twin holes may be required at the exploration sites. This table provides a summary of the proposed exploration holes. The attached Map 2 illustrates the projected drilling locations. Drilling is projected to consist of one crew, drilling 10-12 hr. days with 2 days off. Drilling equipment is projected to consist of one drilling rig that can complete both rotary and coring activities with the same rig. All drilling equipment will be inspected to ensure that appropriate safety equipment is available should the need arise. Supporting that rig will be a water truck (Approximately 4000 gal), a flatbed truck with drilling supplies, and an E-log truck for running digital logs of each drill hole and one or two pickups for crew transportation

Excavated Earth- or Debris-Disposal Activities:

Sites, whenever possible, will be accessed using existing available light duty pre-existing ranch roads. When roads are not available, driving over existing ground as to not disturb any topsoil will be utilized. When terrain makes driving over existing ground unsafe, temporary roads will typically be constructed using a grader, which will blade using sidecast methods an approximate 15 foot wide running surface. Table 1 calculates both the anticipated disturbance and maximum disturbances. Road construction estimates are based upon currently available aerial photographs and field inspection. Drill hole locations maybe adjusted slightly in the field to optimize the placement of the drill pad or for leveling the drill rig. See Figure 2A.

Most existing road alignments will not require modification, but may require road maintenance consisting of grading the road to provide a smooth operating surface, clean-out and repair of any existing drainage ditches and application of temporary drainage control measures (berms, straw bales, silt fences, gravel surfacing, etc.) as necessary. New road construction will be kept to a minimum and will follow applicable specifications. Following the conclusion of drilling activities, the temporary roads will be reclaimed by grading to approximate original contour and distributing the rock, brush, soils, etc pushed along the sides of the road back across the road corridor. See Figure 2A and Map 2. SPE anticipates no disturbance will be required for the majority of the drilling locations; requiring an estimated disturbance of: 6.3 acres for nine temporary drill pads and 11.3 acres for approximately three miles of temporary roads for **a total estimated disturbance of 17.6 acres**. The maximum disturbance is calculated at: 30.1 acres for forty-three temporary drill pads and 29.5 acres for approximately eight miles of temporary roads for **a total maximum disturbance of 59.6 acres**.

Drilling Related Activities:

As much as possible drilling will be conducted with minimal site preparation, since the drill rig can be set-up and leveled using self-contained hydraulic jacks. Where site preparation is necessary due to the need to utilize drilling fluids or to create a level drilling area, a pad having maximum dimensions of approximately 200 feet by 150 feet will be established (approx. 0.7 acre disturbance per site). Pad preparation will involve the use of a tracked dozer approximately D6 sized or a utility type backhoe to establish a level drill site and dig a mud pit should the need require it. If topsoil exists, up to 12" will be salvaged and stored in a stockpile along one or more sides of the pad.

In order to avoid potential sample contamination, drill holes will be completed to the extent possible with air, air-foam, or water as the circulation medium. Due to the difficulty in keeping drill holes open, and sample contamination minimized, if drilling muds are necessary to maintain circulation the drill hole integrity, polymer muds that are free of metallic compounds will be utilized. It is estimated that approximately 4,000 gallons of water will be used for each drill hole under normal drilling conditions.

All drilling and related operations will be conducted by experienced exploration drillers in such a way as to minimize potential environmental impacts. During drilling operations, water levels and flows in the drill holes (if any) will be closely monitored in order to characterize hydrologic conditions in the seams intersected. Samples of immediate roof and floor rock materials and of each coal seam intersected will be logged and may be collected during drilling for subsequent analysis. Drill holes will be logged by the geologist as drilling occurs and will be e-logged to provide appropriate documentation. Transportation of these crews will be by one or two pickups per shift.

During drilling, SPE or its contractor will control dust from drilling and related activities, divert and control both natural runoff from disturbed areas and fluid loss from drilling, and will clean-up any trash or debris.

Methods for Plugging Drill Holes & Site Reclamation:

Upon completion of drilling and related activities, all drill holes will be backfilled, sealed and abandoned. During drilling, fluid return will be monitored to identify the depth and extent of any water-producing zones. Promptly after prospecting on a site is completed all drill holes will be abandoned in accordance with the following:

- Whenever circulation is lost to the formation or artesian conditions are encountered, a homogeneous cement grout will be slurried into the hole from the bottom to within two feet of the surface and topsoil placed in the remaining two feet.
- Whenever circulation is not lost, a swelling bentonitic clay grout with no less than 50% bentonite solids per unit volume will be placed in each abandoned drill hole, from the

bottom of the hole to within two feet of the land surface. Precautions will be taken to ensure that no bridging occurs between the bottom and top of the hole. The entire hole will be filled with the grout to form a continuous grout column from bottom of the hole to two feet below the natural land surface.

- A magnetic marker will be placed on the top of the grout. The remaining two feet of the hole will be backfilled with cuttings or suitable soil material;
- Accumulations of drill cuttings and mud will be backfilled into and buried in the mud pit (if mud pit is necessary) or otherwise buried.

All trash and debris will be removed from drill sites for disposal. Excavations, including mud pits, will be backfilled. Where mud pits are necessary, they may be temporarily fenced and allowed to dry and/or backfilled with drill cuttings and/or previously excavated material. During backfilling, the material will be mixed and compacted as it is replaced, by running the equipment over the backfilled area during placement of successive lifts. Following backfilling, disturbance areas will be graded to their approximate original configuration and surface drainage reestablished. Any salvaged topsoil materials will be re-spread onto the regraded surface and reseeded of the areas (pads and roads) will take place using the Table 2 seed mixture.

Estimated Size and Depth of Drill Holes, Trenches, and Test Pits:

Each drilling location will consist of a pilot and a core hole. Pilot holes will be drilled using 4 ¾ inch diameter rotary hole to a depth of up to 300 ft. Core holes will be drilled using a 6 inch diameter rotary hole and recover 3 inch diameter cores of the material above and below the coal seam, and the coal seam. See Table 1 for the approximate drill hole depths.

If drilling fluids are needed, drill mud pit(s) for the containment of drilling fluids and cuttings will be excavated with a backhoe within the pad area. The pit will be approximately 20 feet in length, 4 feet in width and 8 feet deep (23.7 cubic yards each). Drill mud pits are the only trenches planned if necessary. No test pits are planned during exploration.

Estimated Timetable:

Once the exploration application has been approved, drilling will commence as soon as weather and ground conditions allow. The drilling season is expected to last from late March to Mid November, but may vary depending upon weather and surface owner access agreements. Drilling is expected to take approximately one month.

Reclamation of drill holes, pads and any associated access is expected to begin as soon as drilling is completed and as weather and ground conditions allow. All exploration activities will be short term and will be conducted during a maximum two year period.

Estimated Amounts of Coal to be Removed During Exploration:

During the exploration drilling process an estimated **1.05 tons** of coal will be recovered from this area. This coal will occur in the form of coal core that is recovered, so that it can be analyzed to determine its physical, chemical, and energy related properties, this will allow for the determination of whether it is of sufficient quality, and quantity to allow for further investment. Coal tonnages removed were calculated by estimating the volume of coal to be removed from each exploration drill hole, times the typical weight of in place Mammoth Coal at 83 #/cu.ft. as shown below: The number of core drill holes X[volume of the core($\pi r^2 \times \text{length}$)] x coal density = coal weight

r = .125 ft., h = 12 ft. avg. Mammoth Coal (estimated from adjacent data)

43 total drill holes

Estimated tonnage = 1.05 tons of coal removed during exploration drilling process.

Measures to Comply with 815.15 and 3484.1(a):

SPE will comply with the standards of the rules of 30 CFR 815.15 and with all applicable requirements of the surface management agency.

SPE (*if required by the authorized officer*) will set and cement casing in the hole and install suitable blowout prevention equipment when drilling on lands valuable or prospectively valuable for oil, gas, or geothermal resources.

All exploration drill holes will be capped with at least 5 feet of cement (*if required*) and plugged with a permanent plugging material that is unaffected by water and hydrocarbon gases and will prevent the migration of gases and water in the drill hole under normal hole pressures. SPE will use suitable plugging material, and will plug the hole to the bottom of the drill hole. Exploration activities will be managed to prevent water pollution and mixing of ground and surface waters and ensure the safety of people, livestock, and wildlife.

SPE will retain for 1 year, all drill and geophysical logs and shall make such logs available for inspection or analysis by the authorized officer, if requested. SPE will retain representative samples of the cores for 1 year.

SPE plans to utilize some of the exploration drill holes as surveillance wells for the purpose of monitoring the effects of subsequent operations on the quantity, quality, or pressure of ground water or mine gases. The licensee will notify the BLM of which drill hole locations will be used as surveillance wells prior to drilling. The licensee also understands that the BLM may require completion of some exploratory drill holes as hydrologic observation sites. All surveillance wells are limited to surface access agreement rights.

Included Maps:

SPE has included Map 2 and Map 3 to address all the following requirements: The maps collectively show, at a scale of 1:24,000 or larger, the areas affected by the proposed exploration and reclamation. The maps show existing roads, occupied dwellings, and pipelines; proposed location of trenches, roads, and other access routes and structures to be constructed; applicable Federal lease and license boundaries; the location of land excavations to be conducted; coal exploratory holes to be drilled or altered; earth- or debris-disposal areas; existing bodies of surface water; and topographic and drainage features.

Miscellaneous Project-Specific Plans and Parameters:

Exploration activities are expected to be completed before winter weather makes roads impassable, however they may be extended depending upon when the exploration permit is approved.

Water hauled to the exploration sites will be obtained from local sources in accordance with existing water rights and permission.

All trash, debris, oily waste, filter waste, hazardous waste, etc will be removed from the drill site for proper disposal offsite. No hazardous waste materials are anticipated to be used on the project.

All drilling equipment will be provided with fire extinguishers and shovels which will be available for fighting small fires if necessary. Drilling crews will be available to control very small fires associated with drilling activities.

The exploration program will otherwise comply with the requirements of any stipulations or regulations required upon approval of the exploration application.

Reclamation Bonding:

As soon as the Exploration Application has been approved, all appropriate Bonds will be obtained before disturbance occurs.

Surface and Mineral Owners and Signal Peak Energy's Right to Enter and Explore Fee Coal:

SPE will submit all surface access agreement(s) required to conduct the proposed exploration activities prior to regulatory approval of this coal exploration plan.

Surface Owner Contact Information

Surface Owners with proposed drilling or related road or pad construction on their surfaces:

Ellen Pfister
Pfister Ranch
PO Box 330
Shepherd, MT 59079
(406) 947-5931
Number of Projected Drill Hole Locations: **3**

Steve Charter
Two Lazy Two Ranch Inc.
13838 US HWY 87 N
Shepherd, MT 59079
(406) 947-2151
Number of Projected Drill Hole Locations: **10**

Chuck Kerr
Great Northern Properties, LP
601 Jefferson Street, Suite 3600
Houston, TX 77002
(713) 751-7500
Number of Projected Drill Hole Locations: **10**

Phillip C. Perlewitz
Bureau of Land Management
Billings Field office
5001 Southgate Drive
Billings, MT 59101
Number of Projected Drill Hole Locations: **20**

Mineral Owner Contact Information

Mineral Owners with proposed drilling activity:

Phillip C. Perlewitz
Bureau of Land Management
Billings Field office
5001 Southgate Drive
Billings, MT 59101
Number of Projected Drill Hole Locations: **43**

Notice of Invitation

Appendix A includes a notice of invitation to be published.

TABLES

Table 1 Proposed Exploration Drill Holes

*Table 2 Seed Mix(es)

*to be submitted after field survey(s) and in consultation with applicable regulating authority(s) and private surface owners, where applicable

MAPS & FIGURES

Map 1: General Location

Map 2: Bull Mountains Exploration Area (surface ownership)

Figure 2A: Typical Drill Hole Road Design

Figure 2B: Typical Drill Hole Pad Design

Map 3: Coal Ownership

APPENDICES

Appendix A: Application & Public & Written Notices

APPENDIX A

Application & Public & Written Notices

Application for Federal Coal Exploration License
BULL MOUNTAINS EXPLORATION AREA
Musselshell County & Yellowstone County, Montana
August, 2013

In accordance with Title 43 of the Code of Federal Regulations, Part/Subpart 3410, §3410.2-1, the Applicant:

Signal Peak Energy, LLC
100 Portal Drive
Roundup, MT 59072
Contact: Dusty R. Weber, 406-323-4500

Signal Peak Energy, LLC (SPE) requests an Exploration License for the BULL MOUNTAINS EXPLORATION AREA (BMEA) located in Musselshell and Yellowstone Counties, Montana. The BMEA is located within the area described as follows. This area contains approximately **2,042 acres** more or less.

Location and Description of Lands

FEE SURFACE OVER FEDERAL COAL (1,560 AC)

TOWNSHIP 5 NORTH RANGE 27 EAST
SE4NE4, S2SE4, NE4SE4 SECTION 4 (161 AC)

TOWNSHIP 6 NORTH RANGE 27 EAST
W2, NE4, S2SE4, NW4SE4 SECTION 24 (601 AC)
SE4 SECTION 34 (159 AC)

TOWNSHIP 6 NORTH RANGE 28 EAST
ALL SECTION 18 (639 AC)

FEDERAL SURFACE OVER FEDERAL COAL (482 AC)

TOWNSHIP 5 NORTH RANGE 27 EAST
S2NW4, SW4, SW4NE4, NW4SE4 SECTION 4 (321 AC)

TOWNSHIP 6 NORTH RANGE 27 EAST
SW4 SECTION 32 (161 AC)

These lands can be found on USGS Quadrangle Maps: Park Coulee, Dunn Mountain North & Dunn Mountain South

Attachments

Three copies of the Bull Mountains Exploration Plan compiled in accordance with 43 CFR 3482.1(a) with Maps 1 through 3 depicting location, topography, surface and coal ownership, proposed drill hole locations, and access roads.

The Filing Fee of \$310.00 required by 43 CFR 3473.2(b) is included.

A Notice of Invitation will be published in the Roundup Record Tribune and Billings Gazette in accordance with 43 CFR 3410.2-1(c)(1) as soon as Signal Peak Energy, LLC receives notification from the BLM that this application is complete for the purposes of filing.

NOTICE OF INVITATION

Pursuant to the Mineral Leasing Act of February 25, 1920, as amended, and to Title 43, Code of Federal Regulations, Subpart 3410, members of the public are hereby invited to participate with Signal Peak Energy LLC in a program for the exploration of coal deposits under the jurisdiction of the Bureau of Land Management in the following described lands located in Musselshell and Yellowstone Counties, Montana.

The Prospecting sites are located in:

FEE SURFACE OVER FEDERAL COAL (1,560 AC)

TOWNSHIP 5 NORTH RANGE 27 EAST

SE4NE4, S2SE4, NE4SE4 SECTION 4 (161 AC)

TOWNSHIP 6 NORTH RANGE 27 EAST

W2, NE4, S2SE4, NW4SE4 SECTION 24 (601 AC)

SE4 SECTION 34 (159 AC)

TOWNSHIP 6 NORTH RANGE 28 EAST

ALL SECTION 18 (639 AC)

FEDERAL SURFACE OVER FEDERAL COAL (482 AC)

TOWNSHIP 5 NORTH RANGE 27 EAST

S2NW4, SW4, SW4NE4, NW4SE4 SECTION 4 (321 AC)

TOWNSHIP 6 NORTH RANGE 27 EAST

SW4 SECTION 32 (161 AC)

The federal application is available for inspection during normal business hours at the BLM, Billings Field Office, 5001 Southgate Drive, Billings, MT.

Written Notice of Intent to Participate should be addressed to the attention of all the following persons and must be received by them within 30 days after publication of the Notice of Invitation in the Federal Register:

Phillip C. Perlewitz
Chief, Branch of Solid Minerals
Bureau of Land Management
5001 Southgate Drive
Billings, MT 59101

John DeMichiei
Chief Executive Officer
Signal Peak Energy, LLC
100 Portal Drive
Roundup, MT 59072

Any Party electing to participate in this program must share all cost on a pro rata basis with the applicant and with any other parties who elect to participate.

Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment, including your personal identifying information may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

30 CFR 772.11
WRITTEN NOTICE OF INTENTION TO EXPLORE
SIGNAL PEAK ENERGY, LLC

Signal Peak Energy, LLC intends to conduct coal exploration operations outside a permit area during which 250 tons or less of coal will be removed.

Exploration which will **not** take place on lands designated as unsuitable for surface coal mining operations.

NAME, ADDRESS, AND TELEPHONE NUMBER OF APPLICANT:

Signal Peak Energy, LLC
100 Portal Drive
Roundup, MT 59072
406-323-4500
Contact: Dusty R. Weber, Permitting Manager
406-323-4500 dweber@signalpeakenergy.com

NAME & ADDRESS OF REPRESENTATIVE PRESENT DURING EXPLORATION:

Signal Peak Energy, LLC
100 Portal Drive
Roundup, MT 59072
406-323-4500
Contact: This will be provided to the BLM contact persons upon approval of exploration drilling application and prior to initiation of drilling activities

NARRATIVE DESCRIBING THE PROPOSED EXPLORATION AREA OR A MAP:

A map at a scale of 1:24,000, or greater, showing the proposed area of exploration and the general location of drill holes and trenches, existing and proposed roads, occupied dwellings, topographic features, bodies of surface water, and pipelines; has been included with this notice. See attached [Map 2: Bull Mountains Exploration Area](#)

STATEMENT OF THE PERIOD OF INTENDED EXPLORATION:

Once the exploration application has been approved, drilling will commence as soon as weather and ground conditions allow. The drilling season is expected to last from late March to Mid November, but may vary depending upon weather and surface owner access agreements. Drilling is expected to take approximately one month. Reclamation of drill holes, pads and any associated access is expected to begin as soon as drilling is completed and as weather and ground conditions allow. All exploration activities will be short term and will be conducted during a two year period.

30 CFR 772.11
WRITTEN NOTICE OF INTENTION TO EXPLORE
SIGNAL PEAK ENERGY, LLC
(continued)

A description of the method of exploration to be used and the practices that will be followed to protect the environment and to reclaim the area from adverse impacts of the exploration activities in accordance with the applicable requirements of part 815 of this chapter has been included with this written notice.

See attached Federal Coal Exploration Plan: Bull Mountains Exploration Area

TABLE 1

Approximate Proposed Exploration Drillholes

Drill Site Number	Northing	Easting	Collar	Temp New Road	Temp New Rd Disturb*	Temporary Pad Disturb**	Total Temp Disturb	Sec	Twn	Rng	Total DH Depth
	(FT; NAD83)	NAD83)	(FT; NGVD29)	Linear Feet	.0007 Ac/LF	(0.7 Ac Max)	RD+PAD				FT
BL-4	2,250,878	723,384	4,035	1,185	0.83	0.70	1.53	32	6N	27E	50
BL-8	2,253,449	722,892	4,031	488	0.34	0.70	1.04	32	6N	27E	45
BL-9	2,253,270	722,050	4,020	1,244	0.87	0.70	1.57	32	6N	27E	30
BL-10	2,253,052	720,985	4,030	1,170	0.82	0.70	1.52	32	6N	27E	30
BL-15	2,251,150	722,766	4,018	420	0.29	0.70	0.99	32	6N	27E	35
BL-16	2,251,436	722,553	4,010	391	0.27	0.70	0.97	32	6N	27E	25
BL-17	2,251,319	723,082	4,029	534	0.37	0.70	1.07	32	6N	27E	45
BL-19	2,252,813	722,013	3,995	300	0.21	0.70	0.91	32	6N	27E	20
BL-20	2,253,474	723,299	4,025	488	0.34	0.70	1.04	32	6N	27E	35
BL-25	2,259,947	717,858	4,065	2,370	1.66	0.70	2.36	4	5N	27E	40
BL-26	2,259,093	718,271	4,065	994	0.70	0.70	1.40	4	5N	27E	40
BL-27	2,258,748	717,892	4,070	569	0.40	0.70	1.10	4	5N	27E	45
BL-28	2,258,500	717,278	4,082	441	0.31	0.70	1.01	4	5N	27E	60
BL-29	2,258,466	716,920	4,068	1,613	1.13	0.70	1.83	4	5N	27E	40
BL-30	2,258,349	718,094	4,060	447	0.31	0.70	1.01	4	5N	27E	35
BL-31	2,259,253	719,201	4,110	939	0.66	0.70	1.36	4	5N	27E	100
BL-32	2,258,588	719,355	4,070	455	0.32	0.70	1.02	4	5N	27E	60
BL-33	2,258,373	718,954	4,050	1,310	0.92	0.70	1.62	4	5N	27E	35
BL-34	2,257,073	719,323	4,040	90	0.06	0.70	0.76	4	5N	27E	25
PF-29	2,260,061	717,433	4,065	675	0.47	0.70	1.17	4	5N	27E	35
PF-30	2,260,236	716,504	4,065	948	0.66	0.70	1.36	4	5N	27E	30
PF-11	2,265,146	721,434	4,041	2,435	1.70	0.70	2.40	34	6N	27E	45
PF-31	2,264,931	722,727	4,025	436	0.31	0.70	1.01	34	6N	27E	40
CH-1	2,272,560	733,281	3,975	0	0.00	0.70	0.70	24	6N	27E	65
CH-2	2,273,477	732,813	3,955	1,095	0.77	0.70	1.47	24	6N	27E	35
CH-3	2,272,823	734,410	4,014	156	0.11	0.70	0.81	24	6N	27E	110
CH-4	2,274,109	734,099	3,985	984	0.69	0.70	1.39	24	6N	27E	70
CH-5	2,274,907	733,617	3,996	0	0.00	0.70	0.70	24	6N	27E	75
CH-6	2,274,799	732,329	3,970	838	0.59	0.70	1.29	24	6N	27E	35
CH-7	2,275,968	734,409	3,995	442	0.31	0.70	1.01	24	6N	27E	75
CH-8	2,275,650	732,820	3,990	520	0.36	0.70	1.06	24	6N	27E	55
CH-9	2,276,063	731,653	3,978	1,249	0.87	0.70	1.57	24	6N	27E	30
CH-10	2,272,102	732,258	3,964	96	0.07	0.70	0.77	24	6N	27E	45
GNP-16	2,280,473	738,075	4,002	1,099	0.77	0.70	1.47	18	6N	28E	70
GNP-17	2,279,746	738,888	4,013	1,986	1.39	0.70	2.09	18	6N	28E	85
GNP-18	2,279,498	739,735	3,886	1,742	1.22	0.70	1.92	18	6N	28E	65
GNP-19	2,278,742	739,908	4,060	782	0.55	0.70	1.25	18	6N	28E	145
GNP-20	2,279,365	740,660	3,995	2,160	1.51	0.70	2.21	18	6N	28E	80
GNP-21	2,281,109	739,590	4,018	1,330	0.93	0.70	1.63	18	6N	28E	90
GNP-22	2,280,943	740,904	4,019	1,721	1.20	0.70	1.90	18	6N	28E	95
GNP-23	2,281,761	741,342	4,018	1,417	0.99	0.70	1.69	18	6N	28E	90
GNP-24	2,282,315	740,051	4,011	3,895	2.73	0.70	3.43	18	6N	28E	80
GNP-38	2,281,509	737,145	4,022	733	0.51	0.70	1.21	18	6N	28E	80
Max Totals				42,187	29.53	30.10	59.63				2,420
Anticipated Totals				16,132	11.29	6.30	17.59				2,420

* if highlighted then construction is anticipated; for all others, "drive over existing ground" planned; however road may be constructed if necessary

** if highlighted then construction is anticipated; for all others no pads are planned; however pad may be constructed if necessary

NOTES:

1. SEE MAP 1 FOR GENERAL LOCATION AND GENERAL ACCESS TO THE EXPLORATION AREA
2. SEE TABLE 1 FOR DRILL HOLE COORDINATES
3. MTM 97988 IS THE ONLY ACTIVE FEDERAL COAL LEASE NEAR THE EXPLORATION AREA



MINERAL OWNERSHIP

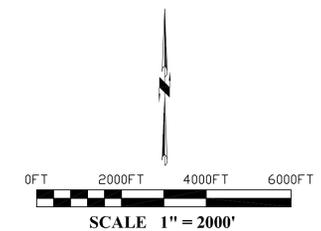
- BULL MOUNTAIN COAL PROPERTIES INC
- FEDERAL
- STATE OF MONTANA
- GREAT NORTHERN PROPERTIES (FEE)
- FREDERICK BILLINGS ESTATE (FEE)
- OTHER (FEE)
- FEDERAL COAL LEASE BOUNDARY MTM 97988

LEGEND

- BULL MOUNTAINS EXPLORATION AREA
- TEXT**
- PLANNED DRILL HOLE & ASSOCIATED PAD LOCATION SEE FIGURE 2B FOR TYPICAL DRILL HOLE PAD DESIGN
- OCCUPIED DWELLING
- PLANNED TRASH BIN LOCATION

NOTE: Property boundaries and ownership information on this map were created from The Natural Resource Information System. <http://nris.mt.gov/gis/> files: Cadastral land ownership data
 (Quote from NRS) "These data do not constitute a legal survey; inaccuracies exist with both the parcel boundaries and the attribute data; when seeking the definitive description or real property consult the deed."

REV.	DATE	BY	DESCRIPTION
0	8/11/13	D.R.W.	PREPARED FOR EXPLORATION PLAN



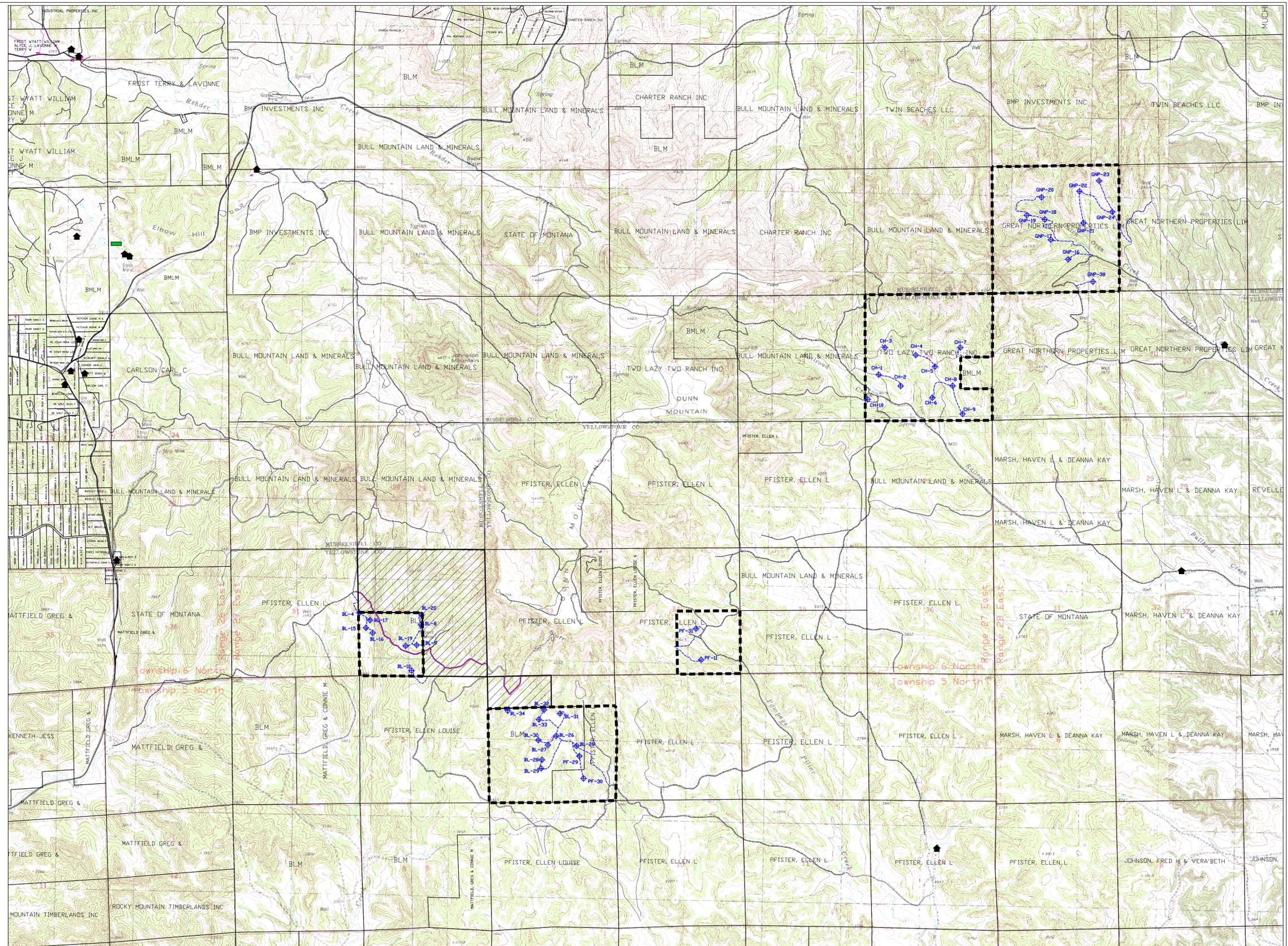
**SIGNAL PEAK ENERGY LLC
 MAP 3: COAL OWNERSHIP BMEA**

MUSSELSHELL COUNTY, MONTANA
 YELLOWSTONE COUNTY, MONTANA

August 11, 2013

NOTES:

1. NO PIPELINES ARE KNOWN TO EXIST IN EXPLORATION AREA
2. NO TRENCHES ARE PLANNED
3. NO STRUCTURES ARE PLANNED TO BE CONSTRUCTED
4. NO LAND EXCAVATIONS ARE PLANNED EXCEPT POSSIBLE MUD PITS ON DRILL HOLE PADS. SEE FIGURE 2B FOR DETAILS
5. NO EARTH OR DEBRIS DISPOSAL AREAS ARE PLANNED EXCEPT THE FOLLOWING
(A) TRASH DISPOSAL BINS ON DRILL HOLE PADS AND
(B) TRASH BIN LOCATION ILLUSTRATED ON THIS MAP
6. SEE MAP 3 FOR APPLICABLE FEDERAL LEASE AND LICENSE BOUNDARIES
7. SEE MAP 1 FOR GENERAL LOCATION AND GENERAL ACCESS TO THE EXPLORATION AREA



LEGEND

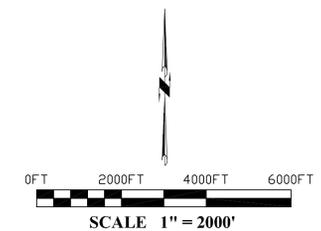
- BULL MOUNTAINS EXPLORATION AREA
- FEDERAL SURFACE OVERLYING FEE COAL*
- TEXT SURFACE OWNER
- EXISTING ROAD
- EXISTING MINOR ROAD OR TRAIL
- EXISTING RIGHT OF WAY
- APPROX PLANNED DRILL HOLE ACCESS ROAD
SEE FIGURE 2A FOR TYPICAL DRILL HOLE ROAD DESIGN
- ⊕ PLANNED DRILL HOLE & ASSOCIATED PAD LOCATION
SEE FIGURE 2B FOR TYPICAL DRILL HOLE PAD DESIGN
- ⬆ OCCUPIED DWELLING
- PLANNED TRASH BIN LOCATION

*FEDERAL AUTHORIZATION UNDER SEPARATE APPLICATION

NOTE: Property boundaries and ownership information on this map were created from The Natural Resource Information System.
<http://nris.mt.gov/gis/> files. Cadastral land ownership data.
Quote from NRIIS: "These data do not constitute a legal survey; inaccuracies exist with both the parcel boundaries and the attribute data; when seeking the definitive description or real property consult the deed."

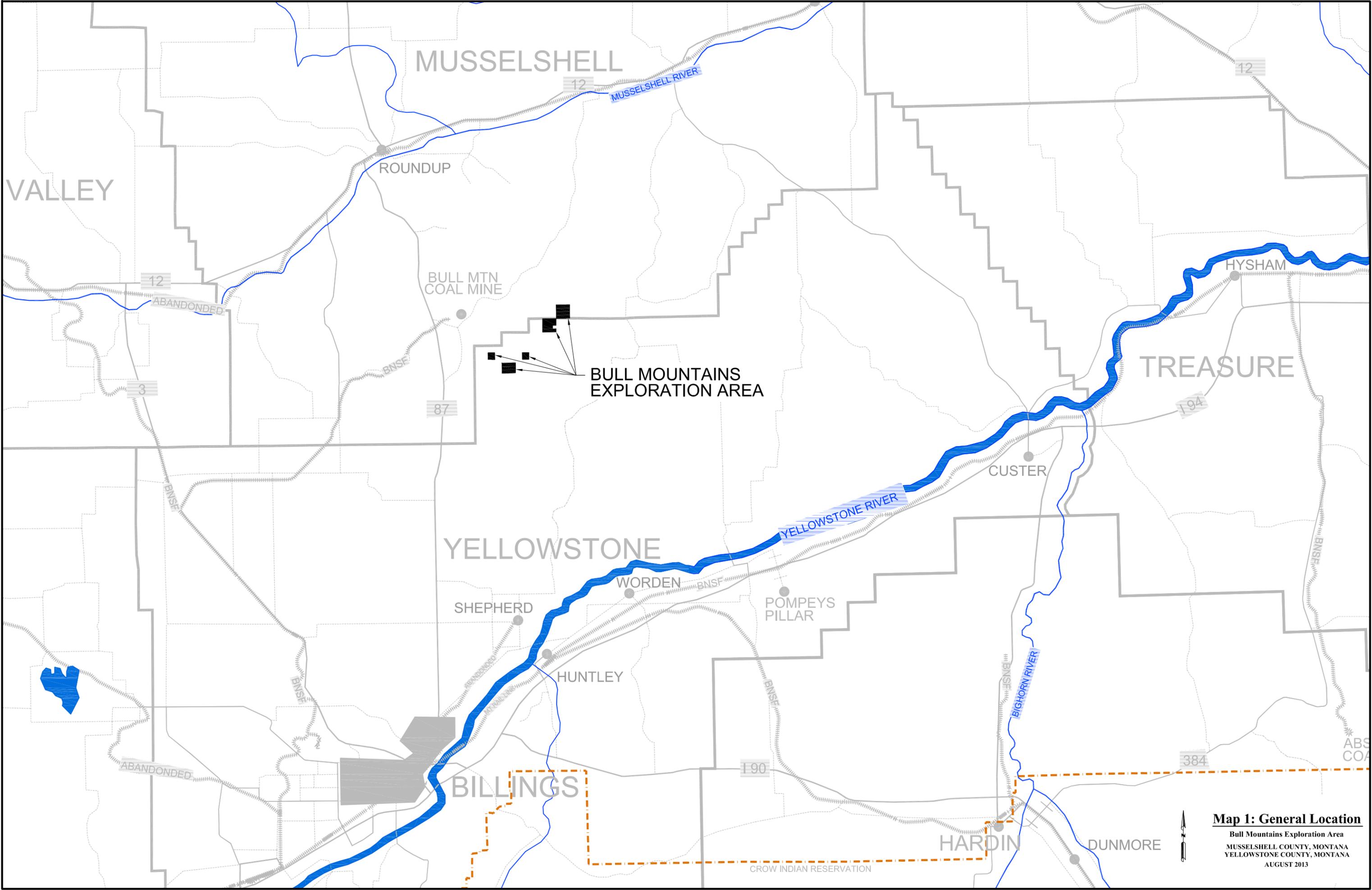
REV.	DATE	BY	DESCRIPTION
0	8/11/13	D.R.W.	PREPARED FOR EXPLORATION PLAN

CONTOUR INTERVAL - 20 FEET
SOURCE: TOPOGRAPHIC BASE MAP FROM USGS 7.5' QUADRANGLES:
PARK COULEE, DUNN MOUNTAIN SOUTH, DUNN MOUNTAIN NORTH



SIGNAL PEAK ENERGY LLC
MAP 2: BULL MOUNTAINS
EXPLORATION AREA
MUSSELSHELL COUNTY, MONTANA
YELLOWSTONE COUNTY, MONTANA

August 11, 2013



MUSSELSHELL

VALLEY

TREASURE

YELLOWSTONE

BILLINGS

HARDIN

BULL MOUNTAINS
EXPLORATION AREA

Map 1: General Location

Bull Mountains Exploration Area
MUSSELSHELL COUNTY, MONTANA
YELLOWSTONE COUNTY, MONTANA
AUGUST 2013



CROW INDIAN RESERVATION

MUSSELSHELL RIVER

YELLOWSTONE RIVER

BIGHORN RIVER

ROUNDUP

BULL MTN
COAL MINE

HYSHAM

CUSTER

WORDEN

POMPEYS
PILLAR

SHEPHERD

HUNTLEY

DUNMORE

12

12

12

3

87

194

190

384

ABANDONED

BNSF

BNSF

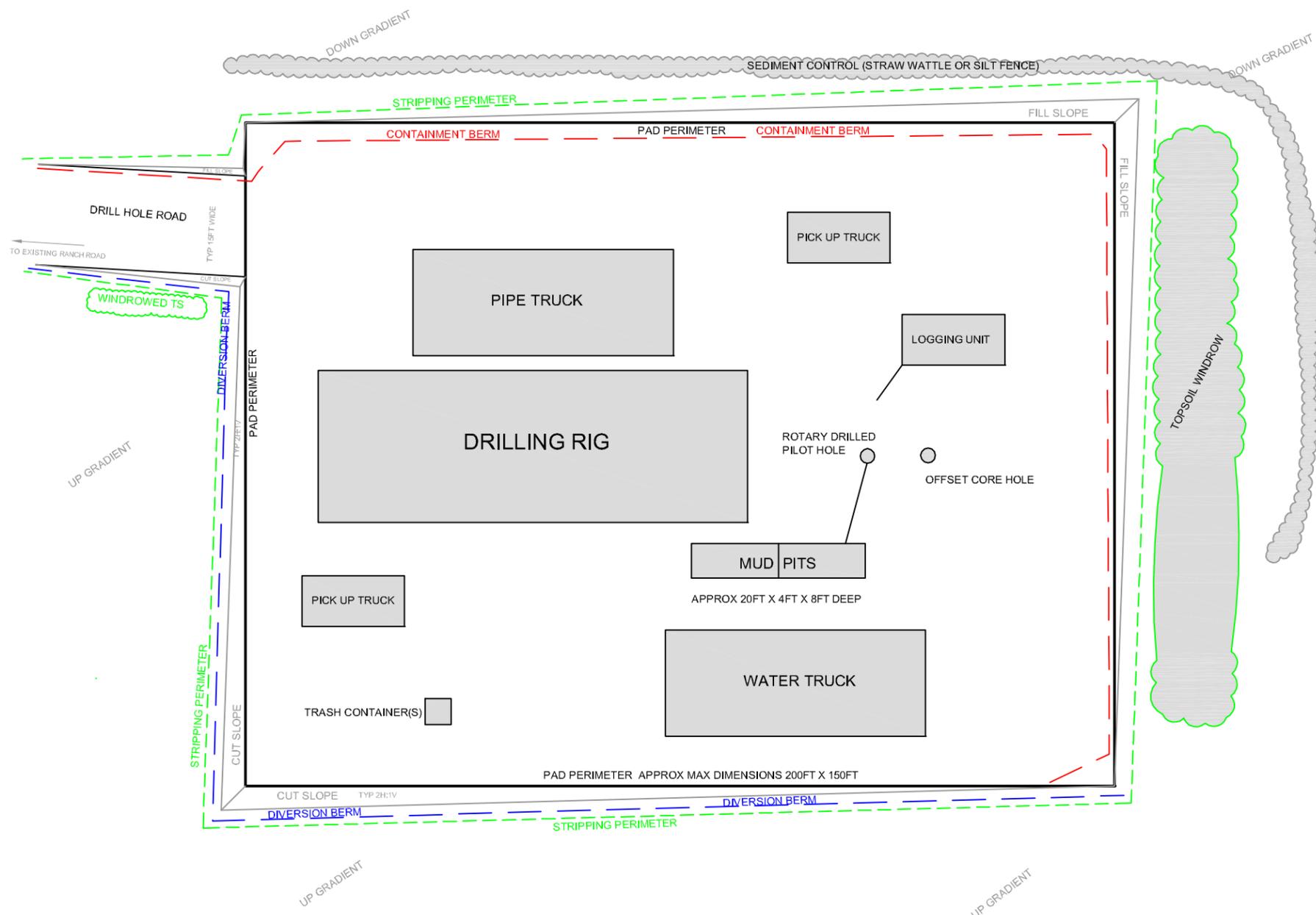
BNSF

ABANDONED

ABANDONED

ABANDONED

ABS
COA



**TYPICAL DRILL HOLE PAD DESIGN
(A) TYPICAL SITE CONFIGURATION
NOT-TO-SCALE**

SEDIMENT CONTROL PLAN

- 1) SEE ILLUSTRATION ON THIS FIGURE
- 2) ALL DRILL HOLE PADS ARE TEMPORARY DISTURBANCES
- 3) PADS WILL DIVERT RUN-ON WITH A BERM ON THE UPGRADIENT PORTION
- 4) PADS WILL CONTAIN RUN-OFF WITH A BERM ON THE DOWNGRADIENT PORTION
- 5) BERMS WILL NOT BE CONSTRUCTED OF TOPSOIL MATERIAL
- 6) STRAW WATTLE AND OR SILT FENCE WILL BE INSTALLED ADJACENT TO FILL SLOPES WHERE NECESSARY
- 7) TOE OF FILL WILL NOT EXTEND BEYOND STRIPPING PERIMETER; AN INTENTIONAL BUFFER WILL SEPARATE TOE OF FILL FROM THE STRIP PERIMETER FOR ADDED SEDIMENT CONTROL

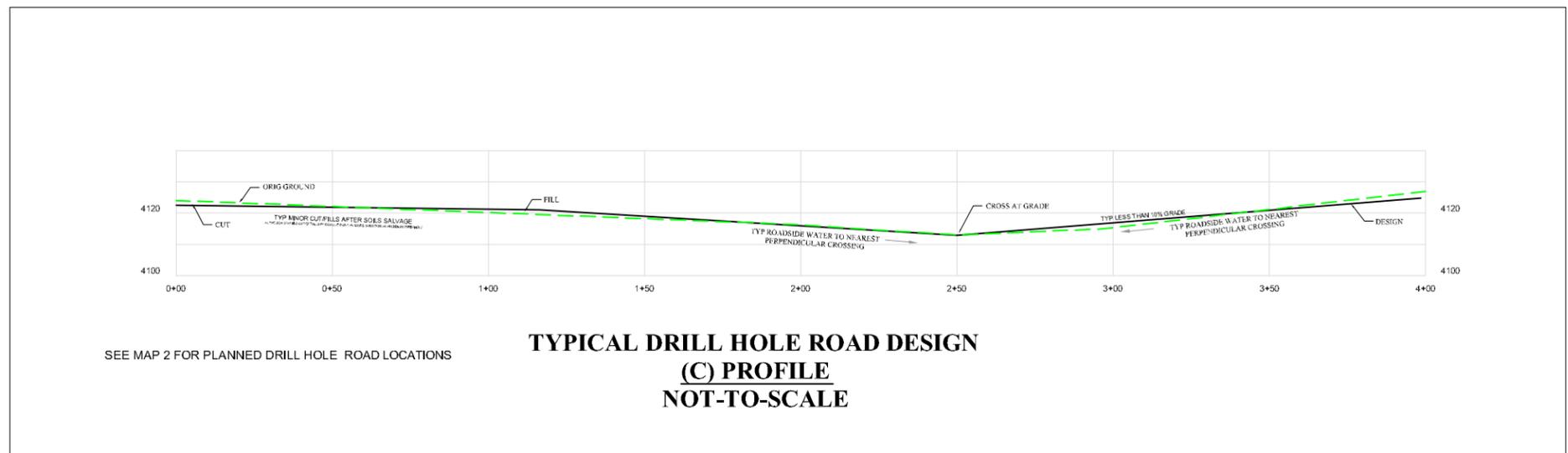
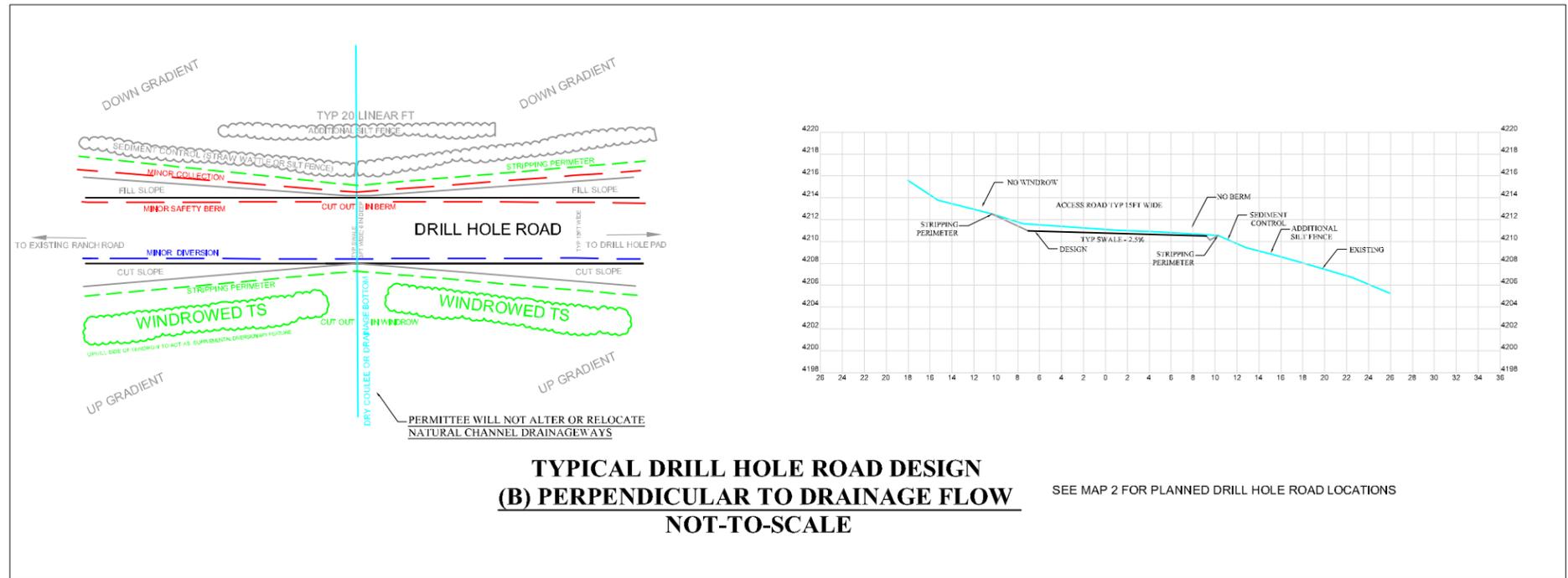
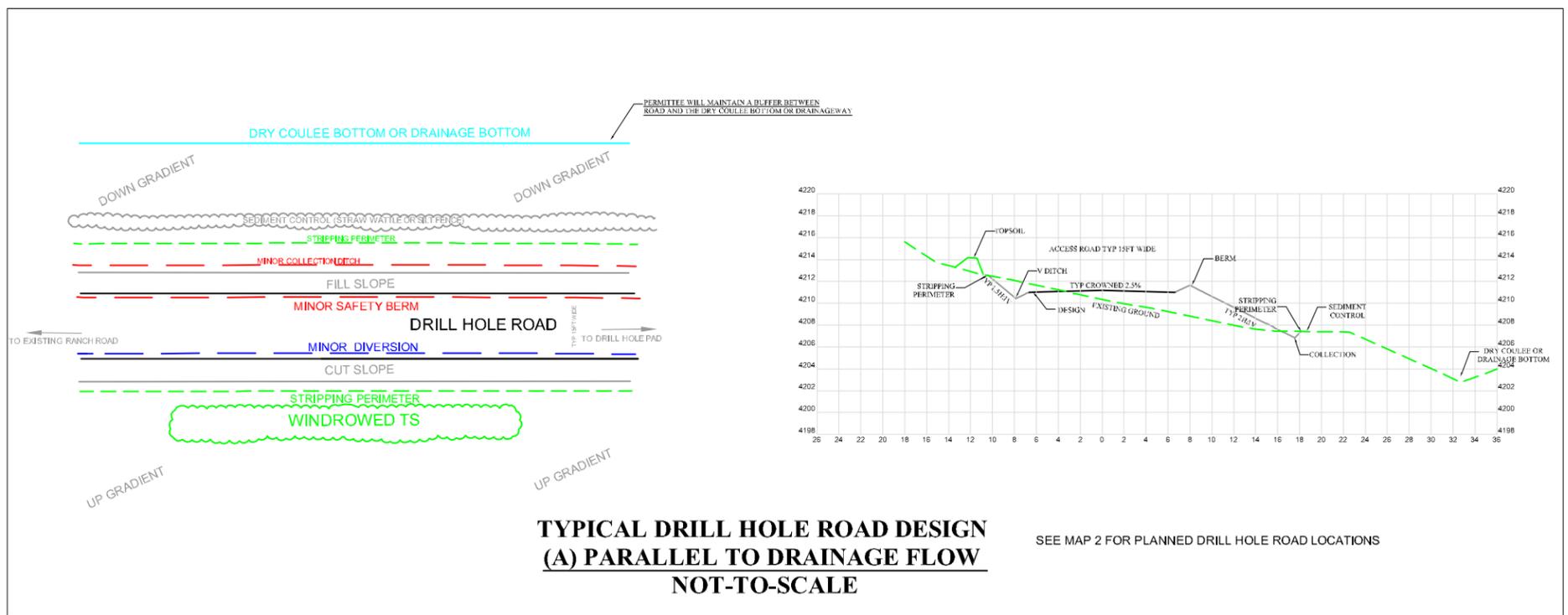
GENERAL NOTES

- 1) SEE PLAN FOR ADDITIONAL DETAILS
- 2) SEE MAP 2 FOR DRILL HOLE PAD LOCATIONS
- 3) SEE FIGURE 2A FOR TYPICAL DRILL HOLE ROAD DESIGN
- 4) PADS WILL NOT BLOCK DRAINAGE FLOW

REV.	DATE	BY	DESCRIPTION
0	7/19/13	D.R.W.	PREPARED FOR PLAN SUBMITTAL

SIGNAL PEAK ENERGY, LLC

**FIGURE 2B
TYPICAL DRILL HOLE PAD DESIGN**



SEDIMENT CONTROL PLAN

- 1) SEE ILLUSTRATION ON THIS FIGURE
- 2) ALL DRILL HOLE ROADS ARE TEMPORARY DISTURBANCES
- 3) ROADS WILL DIVERT RUN-ON WITH A BERM ON THE UPGRADIENT PORTION
- 4) ROADS WILL CONTAIN RUN-OFF WITH A BERM ON THE DOWNGRADIENT PORTION
- 5) BERMS WILL NOT BE CONSTRUCTED OF TOPSOIL MATERIAL
- 6) STRAW WATTLE AND OR SILT FENCE WILL BE INSTALLED ADJACENT TO FILL SLOPES WHERE NECESSARY
- 7) TOE OF FILL WILL NOT EXTEND BEYOND STRIPPING PERIMETER; AN INTENTIONAL BUFFER WILL SEPARATE TOE OF FILL FROM THE STRIP PERIMETER FOR ADDED SEDIMENT CONTROL

GENERAL NOTES

- 1) SEE PLAN FOR ADDITIONAL DETAILS
- 2) SEE MAP 2 FOR DRILL HOLE ROAD LOCATIONS
- 3) SEE FIGURE 2B FOR TYPICAL DRILL HOLE PAD DESIGN
- 4) ROADS WILL NOT BLOCK DRAINAGE FLOW

REV.	DATE	BY	DESCRIPTION
0	7/19/13	D.R.W.	PREPARED FOR PLAN SUBMITTAL

SIGNAL PEAK ENERGY, LLC

**FIGURE 2A
TYPICAL DRILL HOLE ROAD DESIGN**

Prepared By D. Weber
July 19, 2013

Signal Peak Energy, LLC

100 Portal Drive - Roundup MT 59072
Tel. 406-323-4500

August 23, 2013

Phillip C. Perlewitz
Bureau of Land Management, Billings Field office
5001 Southgate Drive
Billings, MT 59101

Subject: **Application for Federal Coal Exploration License; Bull Mountains Exploration Area**

Dear Mr. Perlewitz,

SPE is requesting permission to conduct prospecting activities on federal coal. Three copies of a complete Federal Coal Exploration Plan are included with this submittal. The lands proposed in the Federal Coal Exploration License Area are:

FEE SURFACE OVER FEDERAL COAL (1,560 AC)

TOWNSHIP 5 NORTH RANGE 27 EAST

SE4NE4, S2SE4, NE4SE4 SECTION 4 (161 AC)

TOWNSHIP 6 NORTH RANGE 27 EAST

W2, NE4, S2SE4, NW4SE4 SECTION 24 (601 AC)

SE4 SECTION 34 (159 AC)

TOWNSHIP 6 NORTH RANGE 28 EAST

ALL SECTION 18 (639 AC)

FEDERAL SURFACE OVER FEDERAL COAL (482 AC)

TOWNSHIP 5 NORTH RANGE 27 EAST

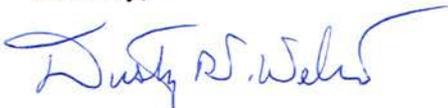
S2NW4, SW4, SW4NE4, NW4SE4 SECTION 4 (321 AC)

TOWNSHIP 6 NORTH RANGE 27 EAST

SW4 SECTION 32 (161 AC)

No information in this application is confidential. Under a separate cover, SPE is submitting a Federal Land Use Permit Application for lands adjacent to this application. According to discussion with the Bureau, NEPA process for both applications can be jointly conducted. Please contact me if you have any questions or concerns related to this submittal.

Sincerely,



Dusty R. Weber
Permitting Manager
Office: 406-375-5254
E-mail: dweber@signalpeakenergy.com

Attached: Fed Exploration Plan; Application Filing Fee (\$310 was submitted to Bureau on Aug 11, 2013)