SAMDAHL CONSULTING SERVICES, LLC
12 WILLOWBROOK CLOSE - WHITEFISH, MONTANA 59937 – (406) 862-5910 (406) 212-5303
Email: samdahl99@bresnan.net

May 7, 2015

Department of Environmental Quality
Hard Rock Mining Program
PO Box 200901
Helena, MT 59620-0901

RE: Amendment Application Deficiency Response
Multiple Quarry Operating Permit #00179
Fort Shaw, Chinook and Green Coulee Sites

Dear DEQ:

This revised set of documents is submitted by Shumaker Trucking in response to your deficiency letter dated 12/31/2014 from Herb Rolfes. We consider this to be our final application.

As previously stated, Shumaker Trucking wishes to amend the above MQOP to add the Green Coulee quarry and to reduce the total acreage of the overall MQOP permit by reducing acreage in both the Fort Shaw and Chinook quarries. Other than a reduction in permitted area, the Chinook and Fort Shaw sites have no other changes and previously submitted documents including water well logs, Landowner Consultations, Spill Management Plans, SHPO Reports, soil data and Animal and Plant Species of Concern from the Natural Heritage Program would remain unchanged. Those documents are on file with the Hard Rock Program and are not duplicated here. The Green Coulee quarry is a new addition to this MQOP and a new Plan of Operation, maps and other documents for that site are attached. Maps are also included to show reductions in the Fort Shaw and Chinook sites.

Please find herewith the appropriate revised application documents to amend the above permit. The following items are enclosed:

GREEN COULEE

1. This cover letter
2. Project Summary
3. Revised Plan of Operations
4. Revised Site Map showing 5-year plan.
5. Panoramic photos with index numbers
6. Panoramic photo location map with coordinates
7. Access Road and Culvert Map
8. Green Coulee Coordinates
9. Revised Bond Spreadsheet for $21,666
10. NRCS Soil Map and Descriptions
11. Sensitive Species Map
12. Sensitive Plants

13. Sensitive Animals
14. Fuel Storage Guideline

FORT SHAW

15. Revised Site Map showing 5-year plan and deleted areas
16. Fort Shaw Coordinates

CHINOOK

17. Revised Site Map showing 5-year plan and deleted areas
18. Chinook Coordinates

The three sites are calculated separately for reclamation bonds. In total, their bonds would be $71,456. When the final amount is approved, a Letter of Credit in that amount will be provided.

Items previously submitted, which did not appear to have deficiencies and which are not duplicated in this submission include:

GREEN COULEE

1. Area Location Topo Map
2. Cross Sections
3. Lot Map of surrounding landowners
4. Cultural Report from Gar Wood
5. Green Coulee Landowner Consent
6. DEQ Seed Mix Guideline

FORT SHAW

1. Fort Shaw Bond Calculation - $25,041 (no change)

CHINOOK

1. Chinook Bond Calculation - $23,609 (no change)

Please advise us if you will require anything further in order to reduce the total acreage for the Fort Shaw and Chinook sites and to add the Green Coulee site to the MQOP. Thank you.

Respectfully,

Rod Samdahl

cc: Joe Aline, Shumaker Trucking

SUMMARY OF PROPOSED PROJECT

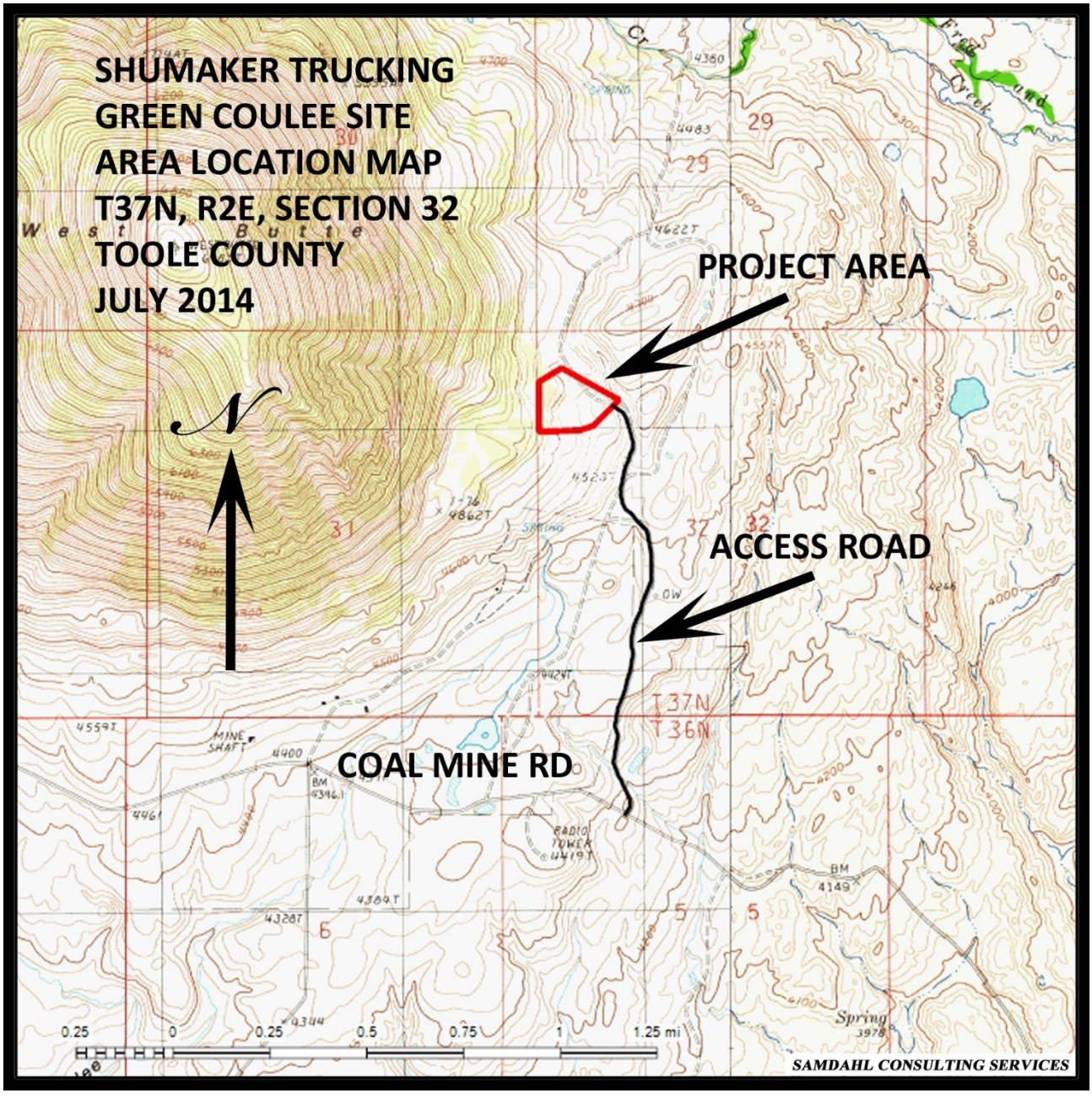
MULTIPLE QUARRY OPERATING PERMIT (MQOP) #00179 – THREE SITES
CHINOOK – SECTION 27, T31N, R19E, BLAINE COUNTY
FORT SHAW- SECTION 35, T20N, R2W, CASCADE COUNTY
GREEN COULEE – SECTION 32, T37N, R2E, TOOLE COUNTY

OPERATOR: Shumaker Trucking & Excavating Contractors, Inc.
PO Box 1279
Great Falls, MT 59403
406-727-3537

Shumaker Trucking & Excavating Contractors, Inc. proposes to amend its existing Multiple Quarry Operating Permit (MQOP) to reduce the size of the Chinook and Fort Shaw sites and to add the Green Coulee site. The reason for the reduction in size at the Chinook and Fort Shaw sites is to eliminate unused or unusable acreage from the original estimated areas where no disturbance has occurred. No other changes are being made to the two existing site permits. The Green Coulee site was opened as a Small Miner's Exclusion Statement (SMES) but will be deleted as an SMES and added to the MQOP.

The Chinook Site will be reduced from 52.5 acres with 22.3 acres disturbed down to 39.4 acres with 22.4 acres disturbed and bonded. The Fort Shaw Site will be reduced from 79.6 acres with 35.6 acres disturbed down to 33.5 acres permitted with 30.0 acres disturbed and bonded. The reductions in these site permits is being done to eliminate unused areas that will likely not be needed in the foreseeable future. Operations at these sites are still small and still slowly expanding. No substantial reclamation work has been done except for minor safety clean up.

The Green Coulee is a crusher site located at the foot of a talus slope below the West Butte of the Sweetgrass Hills that would be used intermittently over the next 50 years. It is accessed via a 1.1-mile long unimproved ranch road connecting the site to Coal Mine Road. The amendment will add this site to the MQOP as 15.0 acres with 11.4 acres bonded for disturbance. Material is taken directly from the exposed loose rock, crushed and stockpiled for consumption as road surfacing material. There is no waste product. Excavation into the loose talus rock created a steepened slope approximately 100 feet high and 650 feet long, standing at the angle of repose, which will be graded down to a 2:1 slope for public safety. Soils were stripped and salvaged from the flatter grassy area that extends out from the toe of the slope to form a facility area for the crusher and stockpiles of product and reclamation soils. Some excavation in the facility area has left a gentle depression sloped at a 3:1. The talus slope is void of soil but the flatter facility area has approximately nine inches of good, organic-rich topsoil, which has all been salvaged and replaced during this first entry under the SMES. The site would be stripped again for any future entry. Equipment that could move in and out includes a crusher, screen and grizzly, conveyors and a pugmill supported by dozers, excavators, scrapers, haul trucks, road watering and other equipment typical of road construction. A temporary asphalt batch plant could be set up on site to provide hot mix to highway projects nearby.


SHUMAKER TRUCKING
GREEN COULEE SITE
AREA LOCATION MAP
T37N, R2E, SECTION 32
TOOLE COUNTY
JULY 2014
PROJECT AREA
ACCESS ROAD
COAL MINE RD
N
West Butte
T37N
T36N
MINE SHAFT
RADIO TOWER
Spring
0.25 0 0.25 0.5 0.75 1 1.25 mi
SAMDAHL CONSULTING SERVICES

PLAN OF OPERATION

Operator: Shumaker Trucking & Excavating Contractors, Inc.

Site: Green Coulee Quarry

Landowner: Green Coulee Ranch, PO Box 390, Sunburst, MT 59482

SECTION I – PREMINE INFORMATION

I-A DIRECTIONS TO SITE

From Sunburst, follow Nine Mile Road east 17.5 miles to Coal Mine Road. Follow Coal Mine Road east 2.6 miles and turn north onto the access road. Go 1.1 miles to the site. See attached maps.

Shumaker Trucking leases this parcel of land from the Green Coulee Ranch. The operating permit boundary would be 15.0 acres. The permitted disturbance area would be 11.4 acres. The total acres disturbed to date is 11.4. The total disturbed acreage within the first 5 years would be +/-11.4 acres. See attached maps.

Landowners within a mile of the quarry are shown on an attached map.

I-B TOPOGRAPHY

The terrain in and within 1,000 feet of the mine area of the site generally slopes toward the southeast and consists of rolling hills and ephemeral draws at the base of a talus slope below the southeast side of West Butte of the Sweetgrass Hills (See attached maps). It is a well-drained, rocky area with no groundwater detectable. The site comprises both a rolling grassy area where the crusher and stockpiles will set up, and a steeper, soil-free talus slope where the majority of the material is mined.

I-C SURFACE DISTURBANCES

1. The surface disturbances along access roads are minimal, consisting mainly of two-track ranch roads.
2. The surface disturbances in and within 1,000 feet of the main permit include a previous source for talus rock located 100' west of this site used at an unknown time in the past but no definitive boundaries have been established. There are old dozer tracks along the slope west of the currently used quarry site, but appear to be random and disconnected. No quarry sites appear on the 1960 USGS topographic map, but the old quarry face is still visible. The area in this permit has been recently quarried under a Small Miner Exclusion Statement (SMES). The existing disturbance consists of the access road, stockpile areas, and quarry area. Soil was saved where available, mainly from the access road and grassy pasture area that extends out from the toe of the talus slope. The site has been reclaimed from the initial SMES activity and soils were replaced nearly within two seasons.

I-D LAND USES

1. Land use along the access road is dryland grazing.
2. Land use surrounding the site is dryland grazing and wildlife habitat.

I-E STRUCTURES AND FACILITIES

1. No non-operation-related structures and facilities exist within 500 feet of the access road.
2. No non-operation-related structures and facilities exist in and within 1,000 feet of the main permit area.

I-F SURFACE WATER FEATURES

1. Surface water features within 500 feet of access road include a small ephemeral drainage near the entry point along Coal Mine Road and a wetland to the east. The drainage is dry most of the time and the access road has been used historically to cross it for access to pastures by the landowner. Two culverts have been installed to cross the drainage. A wetland is located 150' east of the access road near the entry point at Coal Mine Road. This wetland is also dry most of the year and the separate drainage that feeds it runs parallel along the east side of the access road.
2. There are no surface water features in or within 1,000 feet of the site. The closest water features are a spring located 1,450' south of the site and the wetland located 4,500' southeast of the site and 550' north of the entrance gate of the access road at Coal Mine Road. The spring flows south, parallel to the access road on the west side, and collects stock water in a small earthen pond. There is a 5-acre pond known as Moltz Lake located 8/10ths of a mile east of the mine site at an elevation of 4,130' MSL. Substantial distance with highly variable terrain separates the mine site from the lake and we do not expect the mine or the access road to have any hydrological communication. The proposed final depth and elevation of the floor of the reclaimed quarry will be 20' below the native grassland surrounding the toe of the talus slope at an approximate elevation of 4,660', well above the elevation of Moltz Lake.

I-G WATER WELLS

1. There are no water wells within 1,000 feet of this site.
2. The information source used was the Montana Bureau of Mines and Geology (MBMG), Ground Water Information Center at 406-496-4336 or http://mbmggwic.mtech.edu; landowners and field observations.

I-H WATER TABLE LEVELS

1. The following seasonal water table information is estimated for this site:
   a. The estimated maximum depth of mining is 20 feet below ground surface.
   b. The estimated seasonal high water table level in the main permit area is greater than 50 feet below ground surface.
   c. The estimated seasonal low water table level in the main permit area is greater than 50 feet below ground surface.
2. There are no water wells with logs located in the vicinity. Depth to the water table was derived from discussions with landowners and equipment operators working near the site and field observations of the drainage bottoms compared to the floor of the site, not from well data. The closest low point in the mine area is the draw to the east with a bottom elevation of 4,580' whereas the toe of the talus slope where extraction will occur is 100' higher at 4,680'. Mining is not expected to go deeper than 20' below the toe of the talus slope. Exploratory test pits dug approximately 15' to 20' deep in the floor of the facility area were dry at the bottom. There is no detectable water table, and we do not expect to encounter water at any time of the year.

I-I SOIL AND OVERBURDEN THICKNESS

1. Soil and overburden thicknesses are as follow:
   (a) Access road soils vary between 8" and 10" and average 9" along the access road.

(b) Facility area soils vary between 8” and 10” and average 9” throughout the site.
(c) Mine area soils vary between 8” and 10” and average 9” throughout the site.
(d) No mine area overburden has been detected.

2. Sources used for the above information were estimates from field observations from backhoe test holes, mining and road cuts.

I-J VEGETATION

The site is dominated by Western wheatgrass, needleandthread and blue gramma native rangeland including Western, thickspike and bluebunch wheatgrasses and rough fescue, with dryland sedges such as threadleaf and needleleaf and 4 to 10% perennial forbs. Swales and upland drainages support Western snowberry and roses. Conifers include Douglas fir and lodgepole pine with occasional spruce trees. No noxious weed species were noticed at the site. A Toole County Noxious Weed Control Plan is attached.

I-K WILDLIFE

The area is dominated by deer and elk habitat. Common species that utilize the area include mule and white tailed deer, elk, pronghorn antelope, sharp-tailed grouse and other song and game birds. Federally listed Threatened or Endangered species that occur in Toole County include the Sprague's pipit (a bird), Black-footed ferret and the Gray Wolf. None of these species have been reported at this location. According to the Montana Natural Heritage Program, Animal Species of Concern which may occur in the general area include the Ferruginous Hawk, Golden Eagle and the Clark's Nutcracker. The only plant species which may also occur in the area is the Heart-leaved Buttercup. (See the attached Natural Heritage report). None of these plants or animals have been reported at this location.

Habitats vary in the area from talus and conifer forested rubble out into open spaces of grassland. There is no water within 1,000 feet of the site.

I-L ADDITIONAL INFORMATION

1. The Sweetgrass Hills are igneous stocks, having been forced up as magma through fault zones in the overlying sedimentary rocks and solidified. Erosion of the softer sedimentary rocks surrounding the stocks has left the harder, igneous hills protruding up above the modern prairie. The dominant rock type of the igneous butte is a diorite porphyry, intruded into the Cretaceous Eagle sandstone formation. The diorite porphyry rock is hard and crushes into very good road construction material.
2. Soils data is contained in the attached Green Coulee Soil Survey from the Natural Resources Conservation Service for Toole County, Montana, Version 10 dated September 2, 2014.

SECTION II – OPERATIONS

II-A MARKERS

The access road has been constructed approximately 6,000 feet X 24 feet wide. The road utilized existing ranch roads where available and constructed new road where needed. The road will be reduced to 20 feet wide and will remain intact following reclamation to provide the landowner access to the remaining product piles. Steel fence posts will be used to mark the permit boundary approximately every 300 feet to ensure that equipment operators do not cross over the permit boundary. The access road is already in place and needs no markers.

II-B ACCESS ROADS

1. The operator will:
   a. Properly establish and use access roads. The existing roads built to access the SMES will be used throughout quarry life. The access road will remain at closure to allow the landowner to access the leftover products for use on the ranch.
   b. Reclaim or downsize constructed or improved roads to pre-mine condition, except as provided in 3, by:
      (1) Retrieving and properly using, stockpiling, or disposing of materials used for road construction or improvement (materials include gravel and pavement).
      (2) Backfilling and grading in a manner that leaves stable surfaces blended into the surrounding topography and drainageways.
      (3) Ripping, re-soiling, and re-vegetating.
2. Approximately 1 mile of access road was constructed between the site and Coal Mine Road. Some of it was existing farm two-track and some was new construction. The road was constructed with a dozer by blading back the topsoil, exposing a surface free of vegetation and soils, cutting and filling through undulating terrain to form a level roadway for truck traffic. No gravel was used to surface the road and two culverts were installed. Soil berms were seeded with the approved seed mix.
3. The access road will remain open following reclamation for the landowner's use. The road will be left approximately 6,000' X 20' with culverts, cuts and fills to remain. See the attached Landowner's Consent Form.

II-C MINING, FACILITIES, AND HAULING

1. The operator has salvaged soil where available from all disturbed facility or quarry areas within the SMES area, and will continue salvage as mining progresses into new permitted areas. Soil was stockpiled in several locations around the perimeter of site for reclamation of flatter areas when mining and finished grading is complete. Soil volumes will be reported in the annual reports to DEQ. Soil material was ripped, loaded into trucks and hauled to stockpile areas or pushed up in piles with a dozer. The piles will be seeded after each episode of salvage. The soil will be re-spread with loaders, trucks, excavators, or dozers during reclamation.

   Excavation of mine material is from gravity fed talus or water-lain glacial deposits and no blasting is anticipated at this time. Continued mining excavation would take place within the permitted quarry area deepening the existing site. Rock would typically be mined with but not limited to loaders, dozers, articulated haul trucks and excavators, which transport the material to onsite dry portable screen/crushing plants. Crusher fines will be collected and stockpiled to augment overburden volumes during final reclamation. An area of approximately 15 acres will be used over the life of the quarry. A total of +/-11.4 acres would be disturbed within the next 5 years depending on market conditions.

2. Quarrying will occur as necessary and as market conditions and contracts dictate. Crushers brought to the site would be cleaned before entry to remove noxious weed seeds. Crushers brought to the site will have an existing approved Air Quality Permit from DEQ. Materials may be stockpiled for future use. After each campaign, disturbed areas in the quarry and facility area would be seeded to limit noxious weed growth.

   Upon completion of the quarry operations the site would be closed. Unused rock and earthen waste would be pushed against highwalls to minimize safety risks, overburden and soil would be spread as much as possible based on volumes recovered over the life of the quarry, and reclaimed.

Remaining product stockpiles would be left for subsequent use by the landowner. The operator assumes 9,000 cubic yards of overburden and soil could be stockpiled in the first 5 years of operation.

3. The primary processing equipment that would typically be used over the life of the mine has been, but would not be limited to: feeders, grizzlies, conveyors, screening plants, crushers, and a pugmill, used to process and grade the rock materials within the permit area. Water may be added to the screening process and to control road dust if dust becomes a problem. Water would be hauled to the site with a 4,000 gallon water truck from a source provided by the landowner located several miles to the southwest.

   Depending on contracts, the operator may set up a temporary asphalt batch plant on site. These would be portable batch plants brought to the site for the duration of the project. After the project is done, the batch plant would be removed and any remaining asphalt products would be removed from the quarry site. All materials used to produce the asphalt would be placed in containment areas to prevent loss of product on the facility area. Asphalt production would be limited from 6 AM to 7 PM to minimize disturbances to the neighbors. The wind in the area would minimize impacts from asphalt production odors.

4. We anticipate multiple setups in and out of the quarry over the life of the mine, depending upon market conditions and contracts. There would be no mobile or permanent structures (storage units, administrative offices, etc.) constructed on the site.

5. Trucks used to haul mine material from the quarry will typically be, but not limited to: Semi-tractors with belly dump trailer and pup trailer combinations; Semi-tractors with side dump and pup trailer combinations; Tandem dump trucks with pup trailers; and or all of the previously named without pup trailers. Hauling will occur during daytime hours, typically between 6:00 a.m. and 7:00 p.m. Truck traffic for typical projects would run 8 to 10 belly dump trucks per day hauling 18 cubic yards of material each for a total of 144 to 180 cubic yards per day. Hauling 9,000 cubic yards of material to a project at this rate could take two months. There are no outstanding features of the hauling plan.

II-D HOURS OF OPERATION

Generally Monday through Saturday 6 a.m. to 7 p.m. during the spring, summer and fall. This is a seasonal operation only. As each mining and crushing session concludes, all equipment is removed before the deep winter snow coverers the site and would contain only stockpiles of soil and product. All highwalls would be graded down to at least the angle of repose or shallower for public safety.

II-E WATER PROTECTION AND MANAGEMENT

1. **The operator will:**

   (a) Protect on- and off-site surface and ground water from adverse changes in quality and quantity that could be caused by mining and processing operations.
   (b) Prevent, minimize, or mitigate adverse impacts to on- and off-site surface and ground water structures and systems that could be caused by mining operations.
   (c) Properly establish, use, and reclaim hydrologic structures and systems used for mining operations.
   (d) Keep waste, concrete with protruding metal, asphalt, and stationary equipment above the seasonal high water level of surface and ground water.
   (e) Manage fuel storage as follows:

(1) Install or construct secondary containment structures for stationary, single-wall, fuel storage tanks in accordance with the current codes adopted by the State Fire Marshall.
(2) Routinely inspect and maintain tanks to prevent leaks and spills.
(3) Retrieve, handle, and dispose of spilled fuel and contaminated materials in a lawful manner.
(4) Report a fuel spill that reaches state waters or is greater than 25 gallons to the Montana Spill Hotline (406-841-3911; "state waters" means surface water, ditch water with return, and ground water).

2. Water for quarry operations to perform dust abatement and road maintenance will be hauled in as necessary by tanker trucks from a landowner water source located over three miles southwest of this site, and stored in a water tank. Operations already conducted at the site occurred during snowy or freezing winter conditions and no water was used. Water to control road dust during a typical day could use three 4,000 gallon watering trucks for an estimated daily consumption of 12,000 gallons.

3. No solvents, wash water, and wastes associated with asphalt plant, concrete plant, and trucks will be used on site.

4. Fuel storage containment will be in above ground tanks to eliminate underground leakage. Fuel may be stored and dispensed from tanker trailers or other service equipment onsite.

5. Any permanent fuel tanks will be of double walled construction or placed within a bermed containment as described in the attached Fuel Storage Guideline.

6. The operator will seed soil road berms and stockpiles to collect sediment and storm water from existing surface drainageways to prevent sediment and storm water discharges from leaving the operating permit boundary. Two culverts on the access road were installed across the small drainage, one near the access road entrance at Coal Mine Road and another further north toward the permit boundary.

7. No exposure or contact with groundwater is anticipated.

8. There will be no diversion of surface or ground water for this operation. Surface water runoff will be captured in soil and overburden berms to prevent loss of sediment and storm water discharges from the site. Operation and reclamation procedures would put water to a beneficial use during road dust control. This water will come from an off-site source and hauled to the site by tanker truck.

II-F SOIL HANDLING

Operator will:

1. Strip soil before other quarry operation disturbances occur. All available soil was salvaged under the SMES. The operator commits to save as much soil as possible over the life of the quarry. The volumes and stockpile locations will be reported to DEQ in the annual reports. The operator assumes 9,000 cy can be salvaged over the first 5 years of operating permit operation.
2. Handle soil and overburden separately and minimize the mixing of these materials (if possible, avoid handling soil and overburden when they are wet or frozen).
3. Strip soil from new road locations, new areas to be used for improvements to existing roads, and other facility areas to the thicknesses identified in I-I (soil need not be stripped from soil stockpile areas and existing roads; soil stripping may create low spots that collect water, necessitating the establishment of drainage or construction of raised roadbeds and work areas).

4. Strip soil and overburden from mine areas to the thickness identified in I-I as needed to satisfy the replacement thickness requirements given in III(F).
5. Maintain a minimum 10-foot buffer stripped of soil and needed overburden along the edges of highwalls.
6. Haul soil to areas prepared for re-soiling or stockpiles and protect them from erosion, contamination, compaction, and unnecessary disturbance.
7. Shape and seed to an approved mix any soil or overburden stockpile that will remain for 2 or more years at the first seasonal opportunity after soil or overburden stockpile completion. Crusher fines will be collected and stockpiled to augment overburden volumes during final reclamation. The site was reclaimed following the first entry under the SMES and all topsoil was in stockpile for less than two seasons. Therefore no seeding was done during this initial entry.
8. The operator will keep soil on site and accessible until the approved post mining land uses are established to the DEQ's satisfaction.

II-G MINE MATERIAL HANDLING

1. Operator will:

(a) Keep mine material stockpiles out of drainage bottoms and off of slopes steeper than 3:1.
(b) At the conclusion of quarry operations:
    (1) Remove from the permit area or bury excavated or processed mine material, except as provided in 2. Some minor product stockpiles would remain for use by the landowner. All other areas no longer needed for mining would be re-graded and soiled as much as possible.
    (2) Consolidate mine material to remain stockpiled into piles of similar type and grade.
    (3) All soils salvaged will be used for reclamation on site. Any captured crusher fines will be added to soil material to increase volume available for reclamation. No soils will be removed or sold from the site.
(c) Include on the Landowner Consent form a request describing the approximate quantity and expected use for each type and grade of mine material proposed to remain stockpiled at the conclusion of mining operations.

II-H OTHER MATERIAL HANDLING

Operator will:

1. Use only clean fill from any source and on-site-generated asphalt as mined area backfill ("clean fill" means dirt, soil, overburden, sand, fines, gravel, oversize, rock, and concrete with no protruding metal; unless otherwise approved, dispose of asphalt at least 25 feet above the seasonal high water table level; imported dirt, soil, overburden, sand, and fines may be used to augment surface reclamation). No areas will be backfilled and no material disposal sites are planned.

2. Bury clean fill unsuitable for plant growth, and on-site-generated asphalt, under at least 3 feet of material suitable for sustaining the post mining vegetation.

3. Place only on-site-generated overburden and fines in excess-material disposal sites such as filling low areas. Such areas would be graded and reclaimed as specified elsewhere in this plan.

4. Dispose of burn pile residue, metal, plastic, tires, and other wastes off site and in a lawful manner.

5. Remove from the permit area stockpiled asphalt, concrete, and clean fill that cannot or will not

be buried during final reclamation.

6. No backfill areas are planned at this site.

7. No backfill materials will be used.

8. No stockpiling and recycling of imported asphalt and concrete will occur.

II-I ADDITIONAL IMPACTS

1. Methods and materials to be used to mitigate impacts on the structures and facilities listed in I(E) would include: Dust control using water trucks and sprays would be utilized with quarrying, screening, processing, and hauling operations as necessary. The aim is to keep the dust generated by mining activity and vehicle travel from blowing off site. We will keep the open, un-reclaimed area to a minimum but still suitable for operations. Anticipated hours of operation are 6:00 am to 7:00 pm Monday through Saturday. The quarry area would not be visible from Coal Mine Road.
2. No other man-made features would be affected by quarry operations including fences, ditches, utilities, and non-access roads.
3. There are no other impacts that are not addressed in this plan.

II-J ADDITIONAL COMMITMENTS

1. Operator will:

a) Inform key personnel and subcontractors involved in quarry operations of the requirements of this plan.
b) Take proper precautions to prevent wildfires.
c) Provide appropriate protection for identified cultural resources that could be affected by opencut operations, and promptly notify the State Historic Preservation Office (406-444-7715) and the DEQ (406-444-4970) should additional resources be found. See attached SHPO report for the area. No known cultural sites exist in the proposed permit boundary.
d) Submit an Annual Progress Report to the DEQ within 30 days of the anniversary date of the operating permit issuance date.

SECTION III – RECLAMATION PLAN

III-A RECLAMATION TIMEFRAMES

Operator will:

1. Operator will complete reclamation work on an area no longer needed for quarry operations, or that the operator no longer has the right to use for quarry operations, within 2 years after the cessation of such operations or termination of such right.
2. The final reclamation of this quarry will be completed following full extraction of mineable materials. The operator assumes the quarry has a potential quarry life of 50 or more years; therefore, the final date of reclamation will be December, 2065. During the working life of the mine, the site will be cleaned up, graded, topsoiled and seeded, and steep talus faces will be reduced after each mining episode in order to protect soils from erosion, to control weeds and for public safety.

III-B POSTMINING LAND USES

Post mining land use within the main permit area is to return the land to pre-mining status as dryland agricultural grazing and use of the facility area for product storage as the landowner uses any leftover products stored on site. The access road will be reduced to a 20-foot dirt road, and the road and any cuts and fills or culverts will remain for ranch access. The post mine landscape will be graded fairly smooth and relatively flat, graded to drain internally. The material in the bottom of the pit floor is porous and well-drained, and there will not be areas of standing, stagnant water.

III-C SITE CLEANUP AND GRADING

Operator will:

1. Unless otherwise approved, remove machinery, equipment, and structures from the permit area upon closure of the site.
2. Retrieve and properly use, stockpile, or dispose of any rejected fines or gravel in the main permit area unless desired to be left by the ranch landowner.
3. Operator will leave reclaimed surfaces:
   (a) In a stable condition, graded internally to low areas, and blended into the surrounding topography and drainageways. The site would be graded to a 3:1 or flatter slope in the areas where topsoil is applied, below the talus slope. Talus slopes will be graded at 2:1 and no highwalls will remain. A portion of the facility area would remain for use by the landowner. Overburden and soil would be spread as available to reclaim as many acres as possible.
   (b) With 3:1 or flatter slopes for re-soiled pasture areas. The site would be graded to a 3:1 or flatter slope in the areas where topsoil is applied below the talus slope, and blended into the surrounding topography. Talus rock slopes remaining will be graded at 2:1 or gentler and no highwalls will remain. Soil would be spread as available to reclaim as many acres as possible.
   (c) At least 3 feet above the seasonal high water table level for dryland reclamation.

III-D SPECIAL RECLAMATION FEATURES

1. No ponds are planned for this site
2. No special reclamation features are planned for this site.

III-E RIPPING

Operator will alleviate compaction by ripping compacted surfaces to a depth of at least 12 inches before re-soiling.

III-F SOIL AND OVERBURDEN REPLACEMENT

Operator will:

1. Replace approximately 9 inches of soil on applicable access road reduction, facility and mine areas at the first seasonal opportunity, seed or plant the re-soiled surfaces to the approved vegetative species, or seed to a cover crop.
2. Replace a minimum of 9 inches of soil on lower graded mine and facility areas. No soil will be applied to the steeper, graded talus slopes. The operator will reclaim all areas including an area

less than 1 acre within the facility area that would not be topsoiled and seeded at closure, leaving a place for the landowner's remaining product piles.

III-G REVEGETATION

Operator will:

1. Establish vegetation that would adapt well to the site after the quarry is closed, and capable of sustaining the designated postmining land uses.
2. Use certified seed and comply with local weed district requirements.
3. Unless otherwise approved, seed during the late fall to early spring seeding season.
4. Ensure that areas seeded or planted to perennial species will be appropriately protected and managed from the time of seeding or planting until site stabilization and revegetation are achieved.
5. Apply fertilizer at the same time of seeding at the rate of 40 pounds of nitrogen (N) and 40 pounds of phosphorus (P2 O5) per acre.
6. Some soils would be replaced onto freshly graded overburden with a dozer as available, so no ripping of the overburden will be necessary to relieve soil compaction and prepare the seedbed in those areas. In areas where overburden is not available, disking, chisel plowing, and harrowing would be used to loosen the seedbed prior to application of soils. The area would be broadcast seeded with the seed mix below, into freshly placed soils. The surface could contain some rocks up to 12 inches in diameter when completed. This is similar to the surface rock found on the site prior to mining.
7. The site will be broadcast seeded.
8. The species of seeding will be planted at a rate of 24 lbs/acre using the following arid region Rangeland Mix:

RANGELAND MIX - For arid regions

Species	**Lbs PLS/Acre**
Slender wheatgrass	2
Thickspike wheatgrass	10
Western wheatgrass	6
Sandbergs bluegrass	4
Yellow prairie coneflower*	2
Total	**24**

* - Listed forbs may be substituted for other forb species depending on availability/pricing. Alternative forbs include but are not limited to Purple Coneflower, Yellow Prairie Coneflower, Western Yarrow, Lewis Flax, Rocky Mountain Bee Plant, Scarlet Globemallow, Alfalfa and Prairie Sagewort.

9. Erosion control measures to be used include: Replacing soils onto slopes graded to 3:1 or less, seeding soils as soon as they are replaced.
10. The operator would cooperate with the landowner to manage livestock and control grazing in the quarry pasture until the reclamation vegetation is established.

SECTION IV – RECLAMATION BOND

IV-A BOND CALCULATION

See the attached bond calculation based on the next 5-year plan. The 4.4 acre mine area is uncovered talus with no soil material available for reclamation. The 7.0 acre facility area is covered with an average of 9 inches of soil, all of which will be salvaged for reclamation. The non-bonded 3.6 acre area remaining represents a buffer surrounding the disturbed, bonded area. It is not planned to be disturbed at this time. There may be as much as a 400 foot working face open in the quarry during mining operations. All quarry highwalls will be reduced to a 2:1 slope or shallower after quarry activities are complete for each mining episode. Weeds would be controlled two times a year until the reclamation bond is released.

SECTION V – ADDITIONAL INFORMATION

V-A ADDITIONAL INFORMATION

The number of employees working at the site (not including truck drivers) will range from 1 to as many as 6 or 8 depending upon what type of operation is occurring. Most generally there will be no new employees working in the quarry.

We will provide protection for archaeological and historical sites if they are discovered.

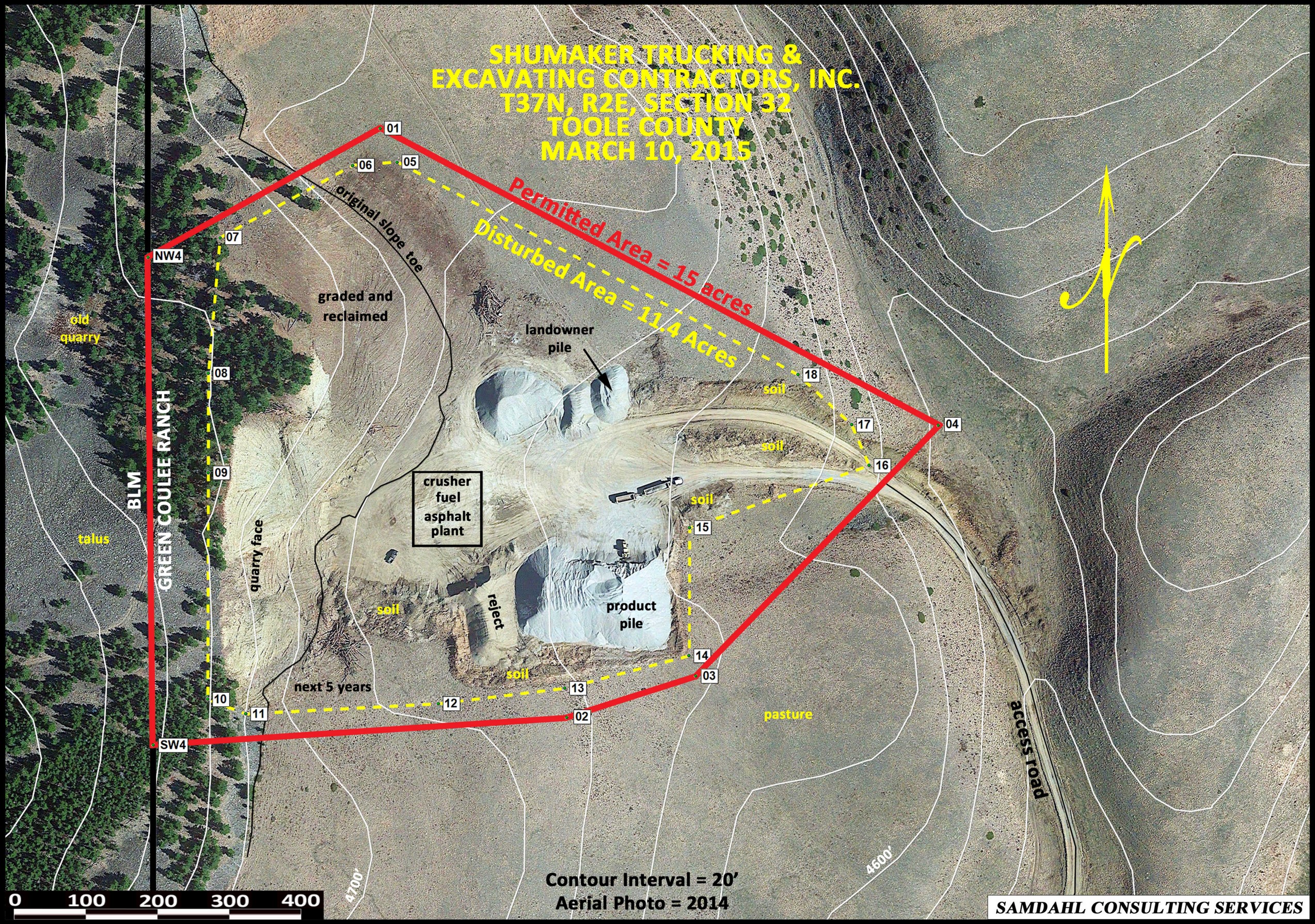
There are no landowners within one half a mile of the proposed permit boundary.

I have read and understand this plan. I certify that the statements, descriptions, and information given apply to the proposed permit area, applicable adjacent areas, and proposed opencut operations. I affirm that this plan will be followed unless officially amended through the DEQ.

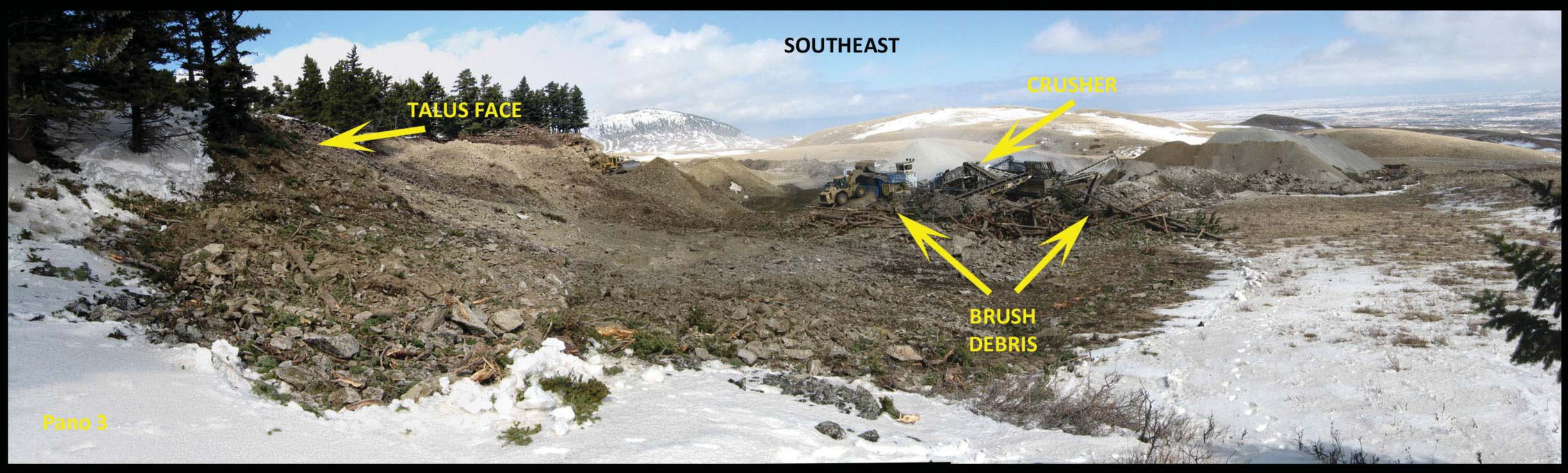
Operator: **Shumaker Trucking & Excavating Contractors, Inc.** **Site:** **Green Coulee Quarry**

Signature: _____ **Title:** Joseph G. Aline, Sec. /Treas.

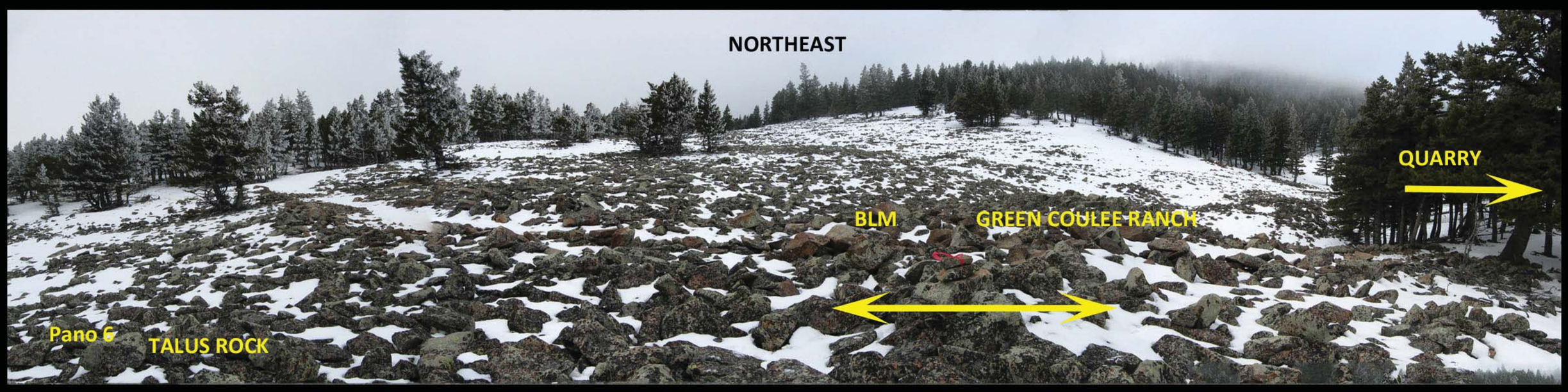
Date: **May 5, 2015**

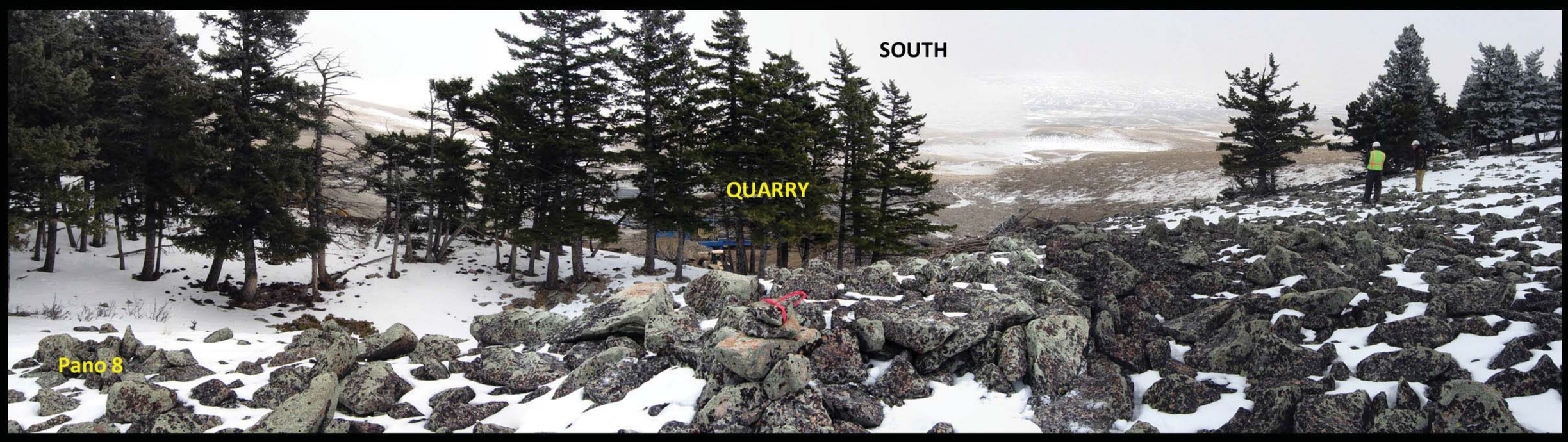

SHUMAKER TRUCKING &
EXCAVATING CONTRACTORS, INC.
T37N, R2E, SECTION 32
TOOLE COUNTY
MARCH 10, 2015
Permitted Area = 15 acres
Disturbed Area = 11.4 Acres
01
02
03
04
05
06
07
08
09
10
11
12
13
14
15
16
17
18
NW4
SW4
original slope toe
graded and reclaimed
landowner pile
crusher fuel asphalt plant
reject
product pile
quarry face
next 5 years
soil
pasture
access road
old quarry
talus
BLM
GREEN COULEE RANCH
4700'
4600'
0 100 200 300 400
Contour Interval = 20'
Aerial Photo = 2014
SAMDAHL CONSULTING SERVICES

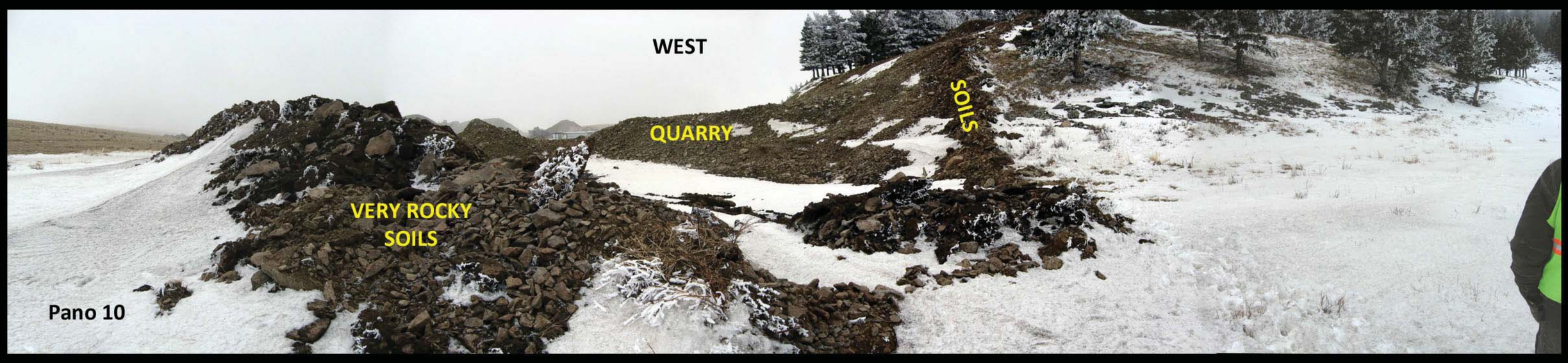
SHUMAKER TRUCKING GREEN COULEE SITE
APRIL 2, 2014



SHUMAKER TRUCKING GREEN COULEE SITE
APRIL 2, 2014







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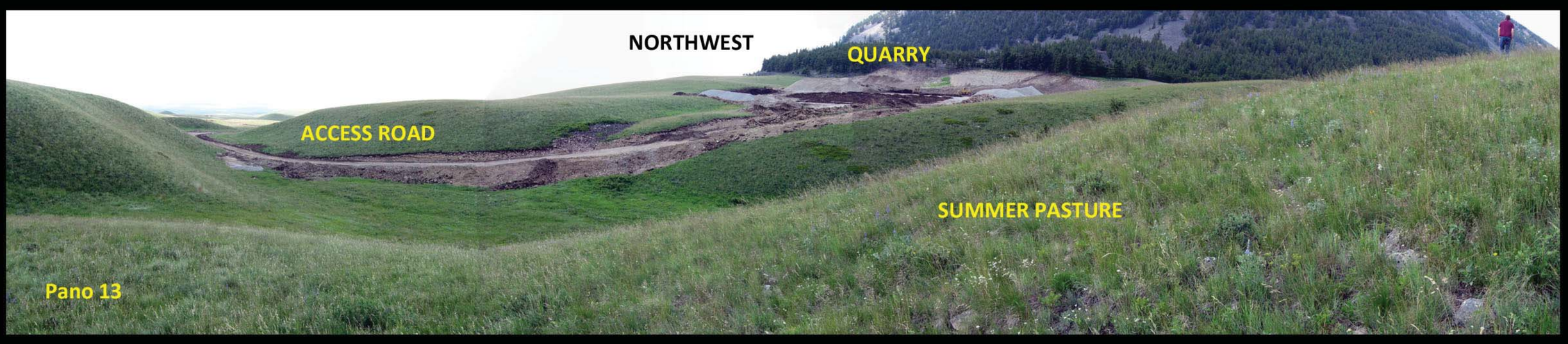
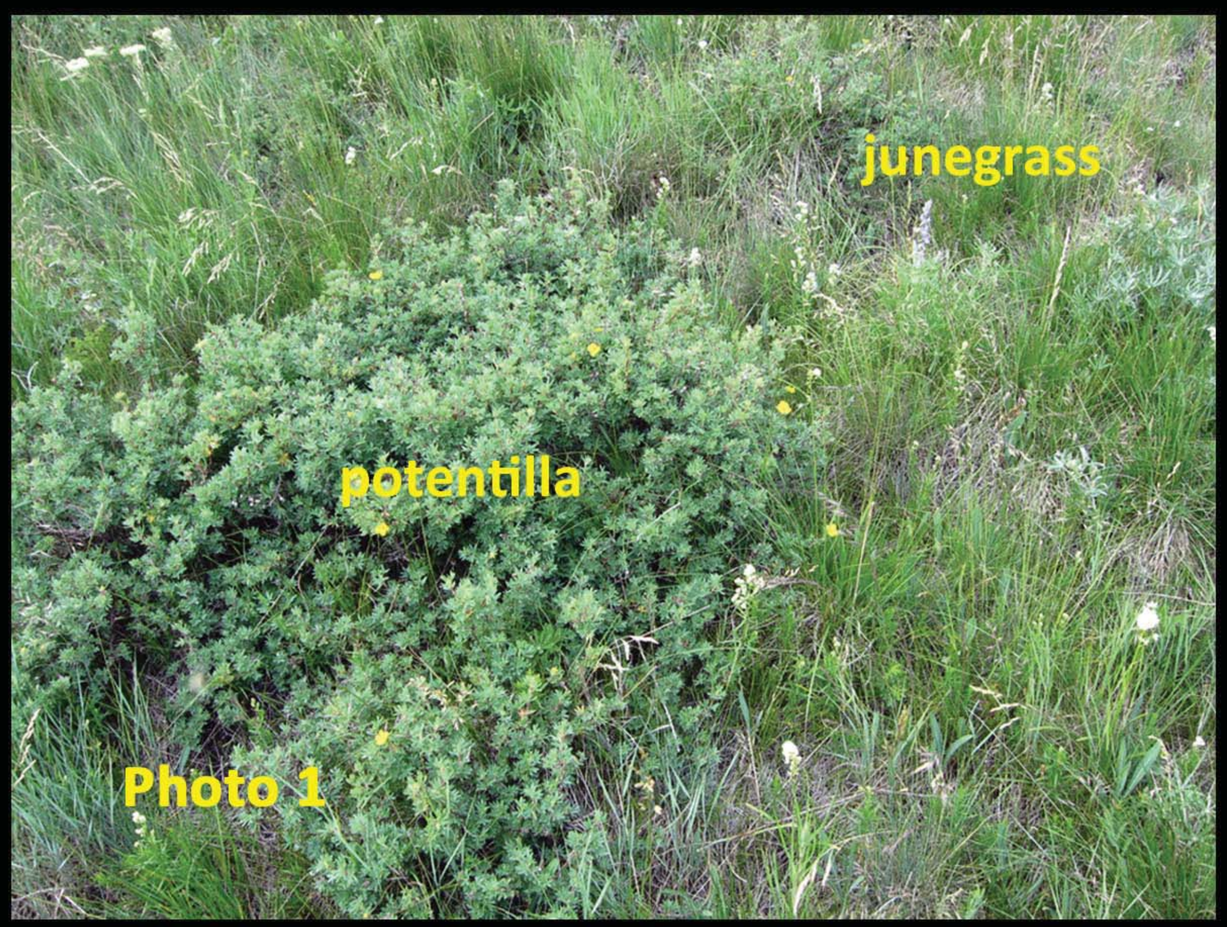
APRIL 2, 2014

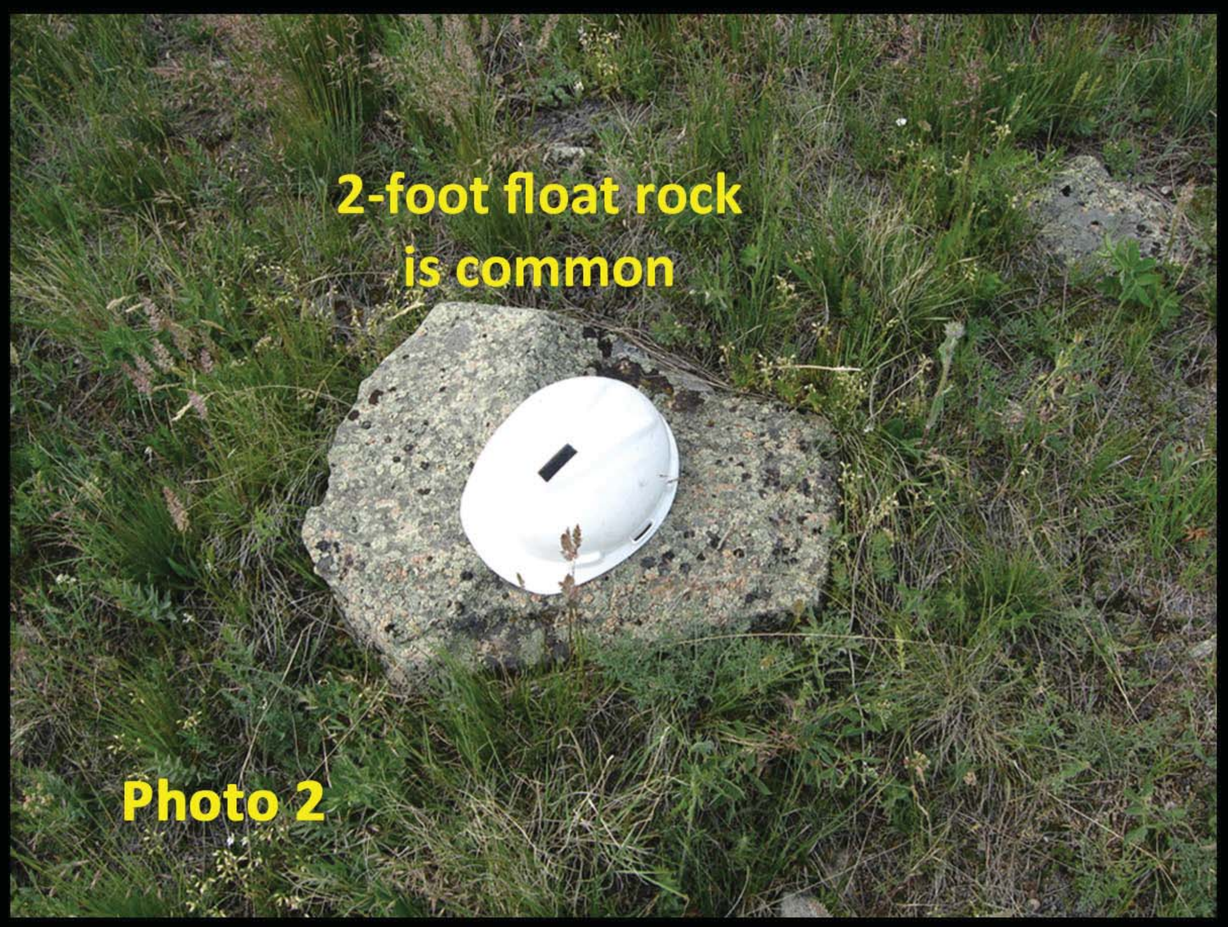


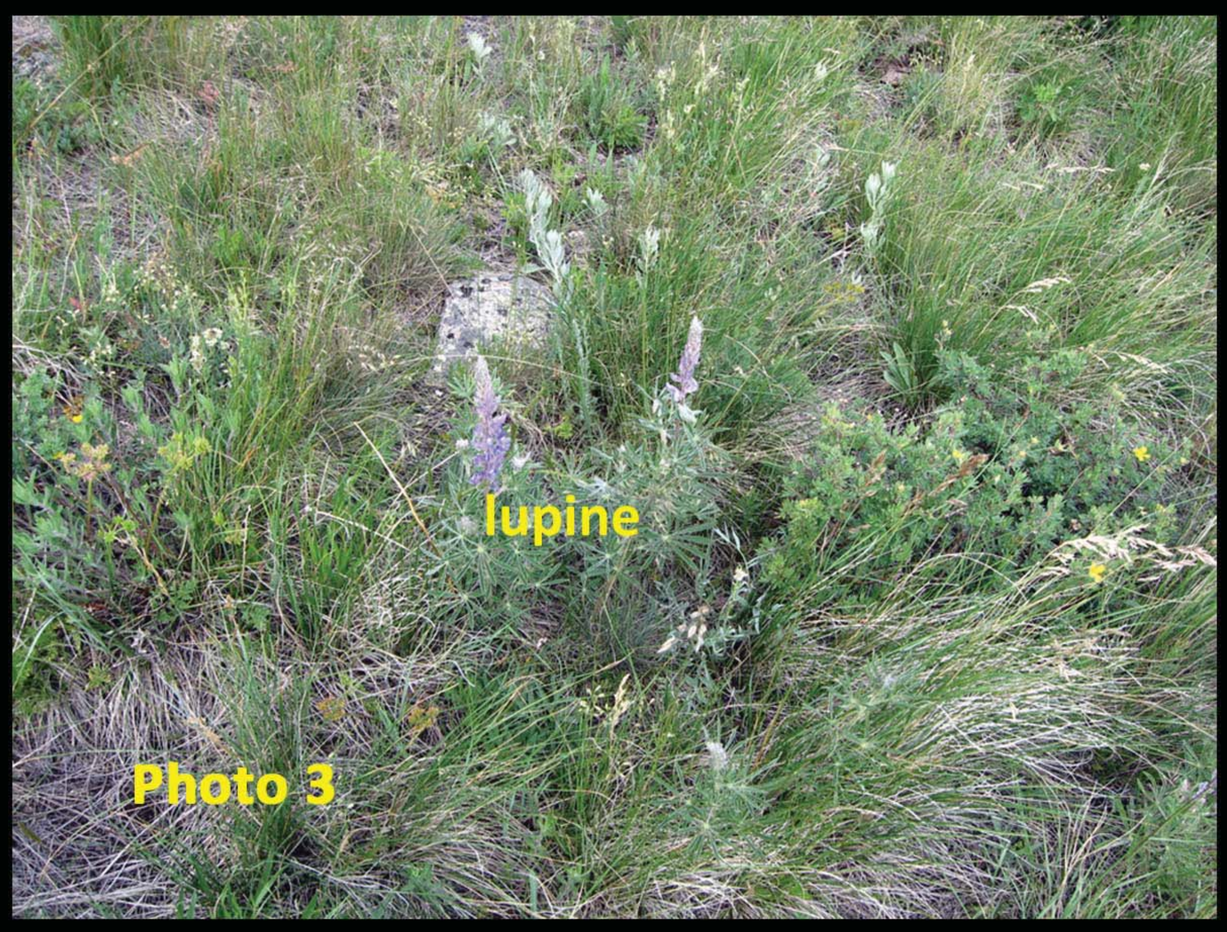
JULY 1, 2014

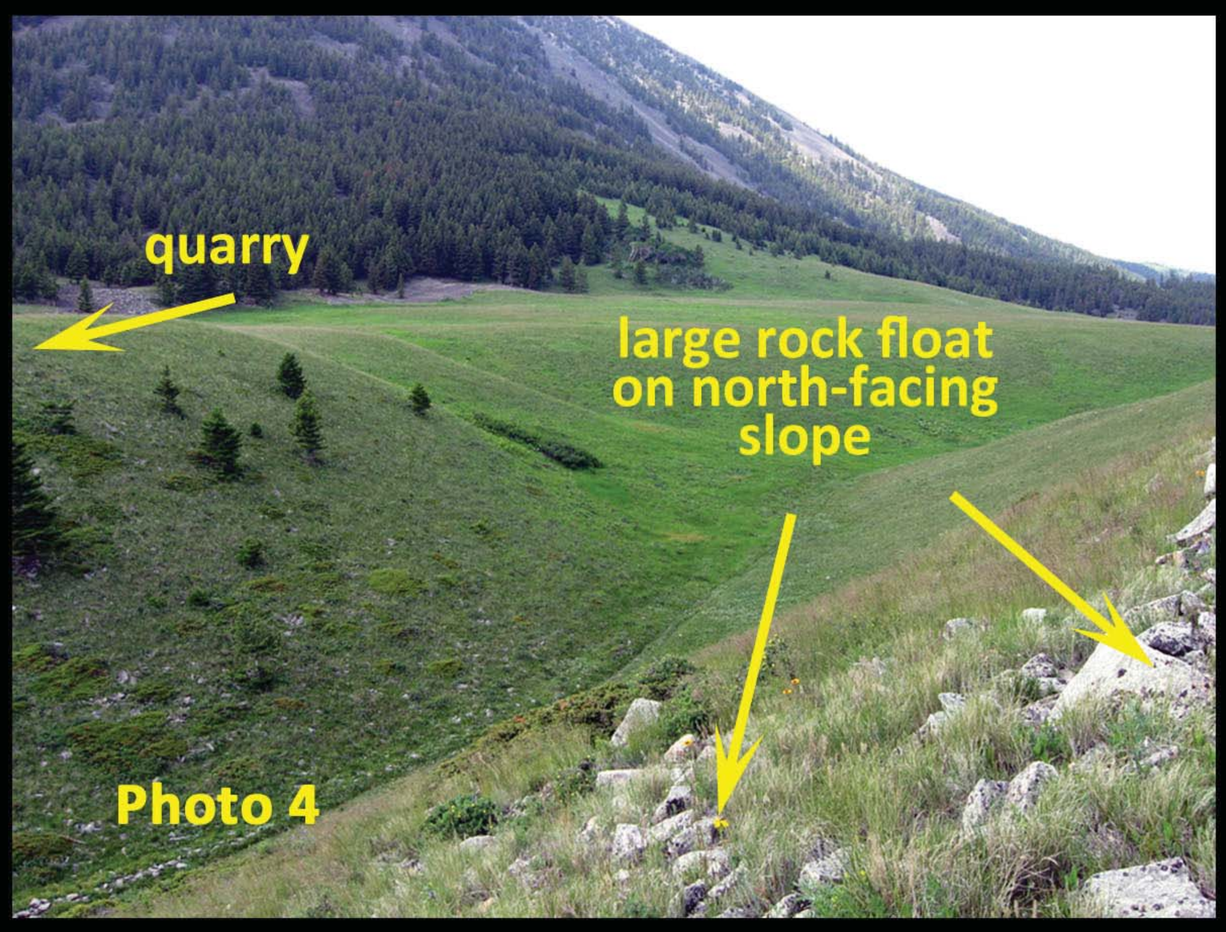
SHUMAKER TRUCKING GREEN COULEE SITE

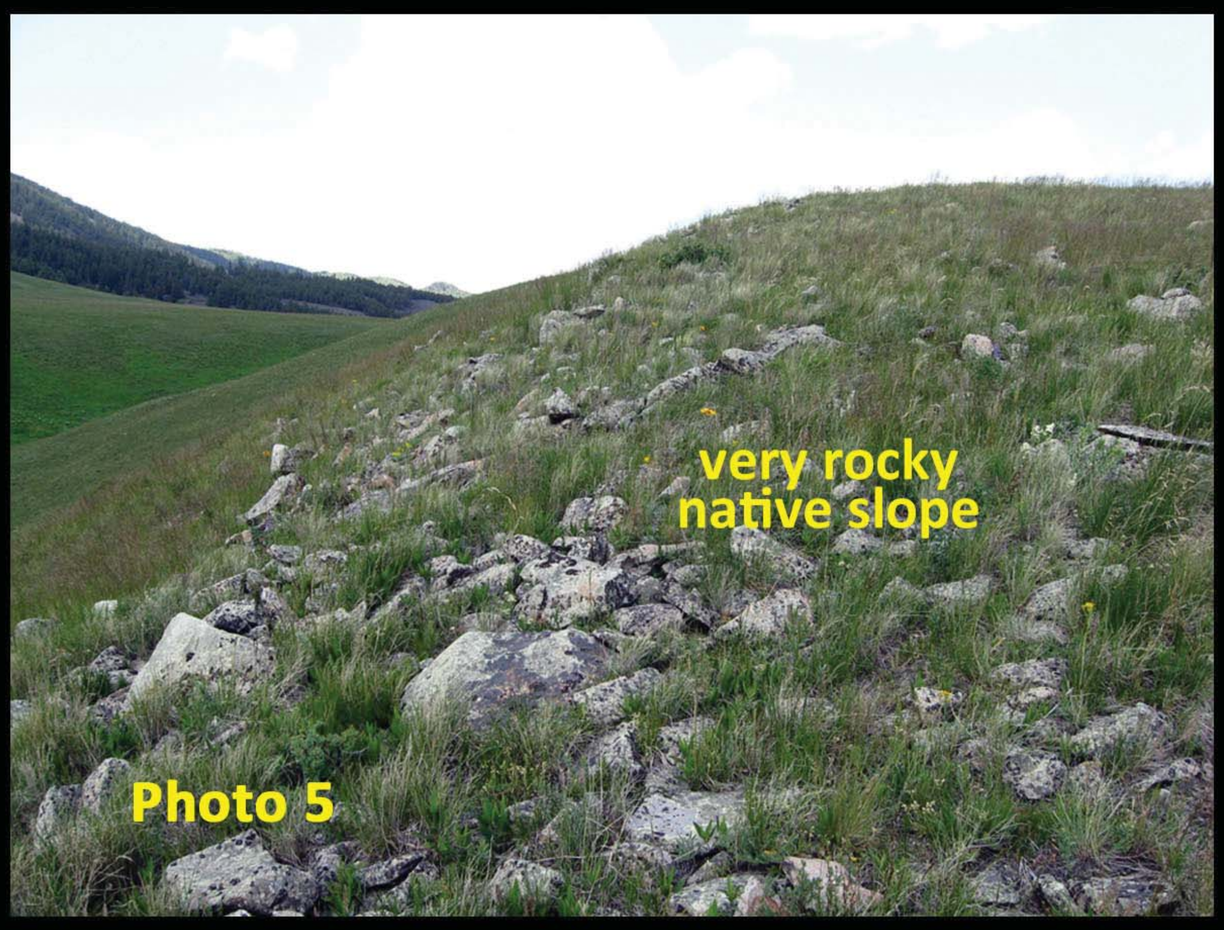
JULY 1, 2014

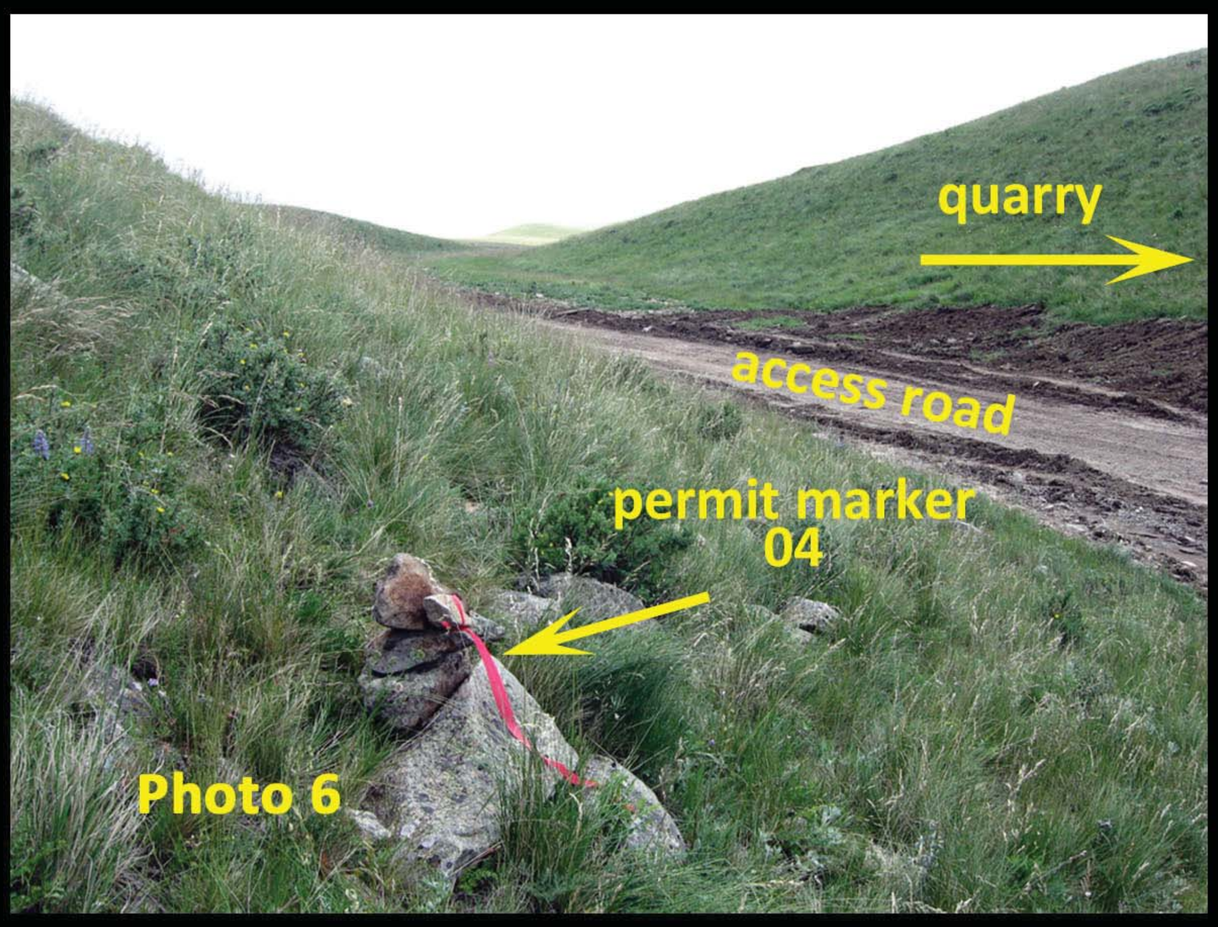


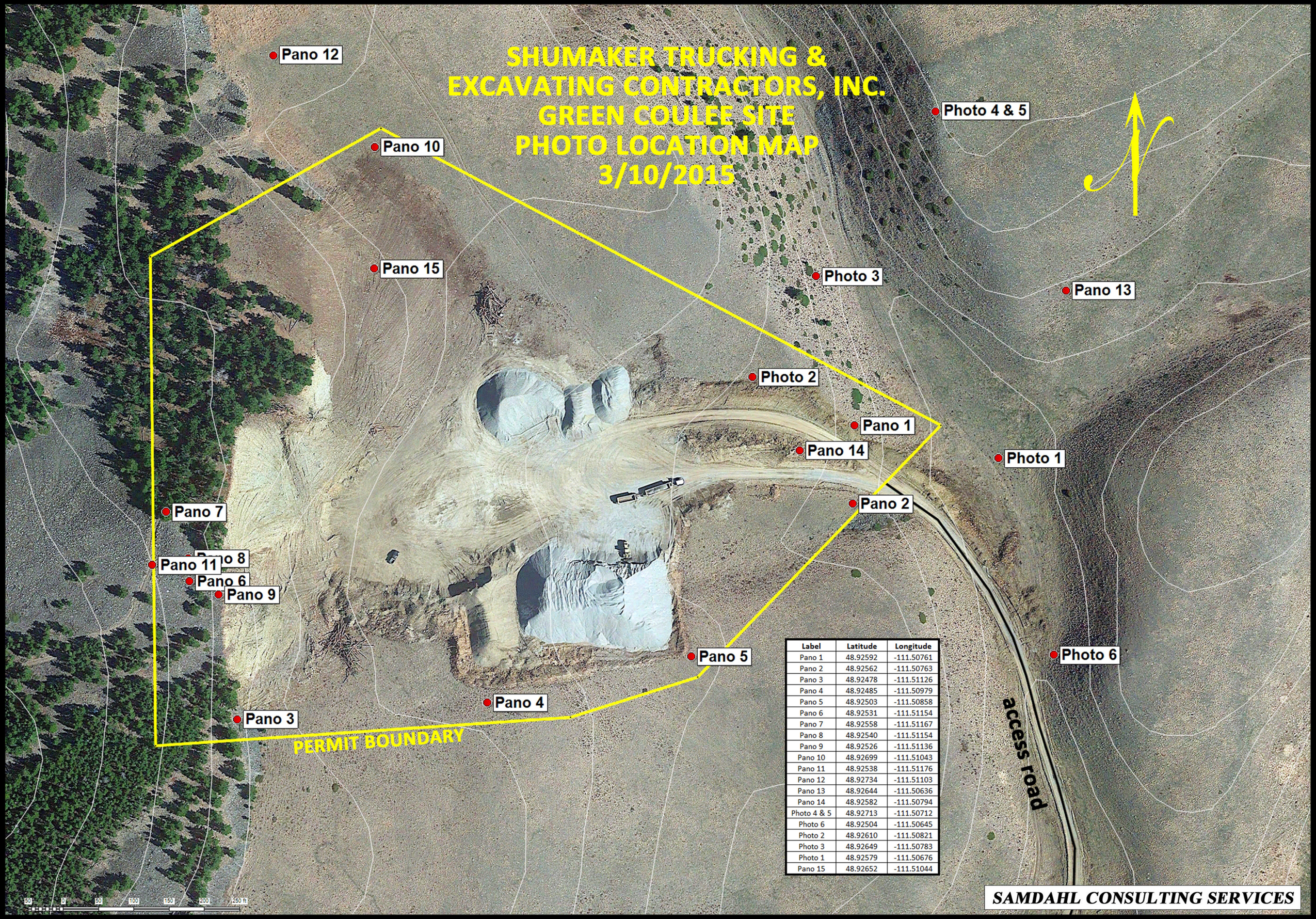












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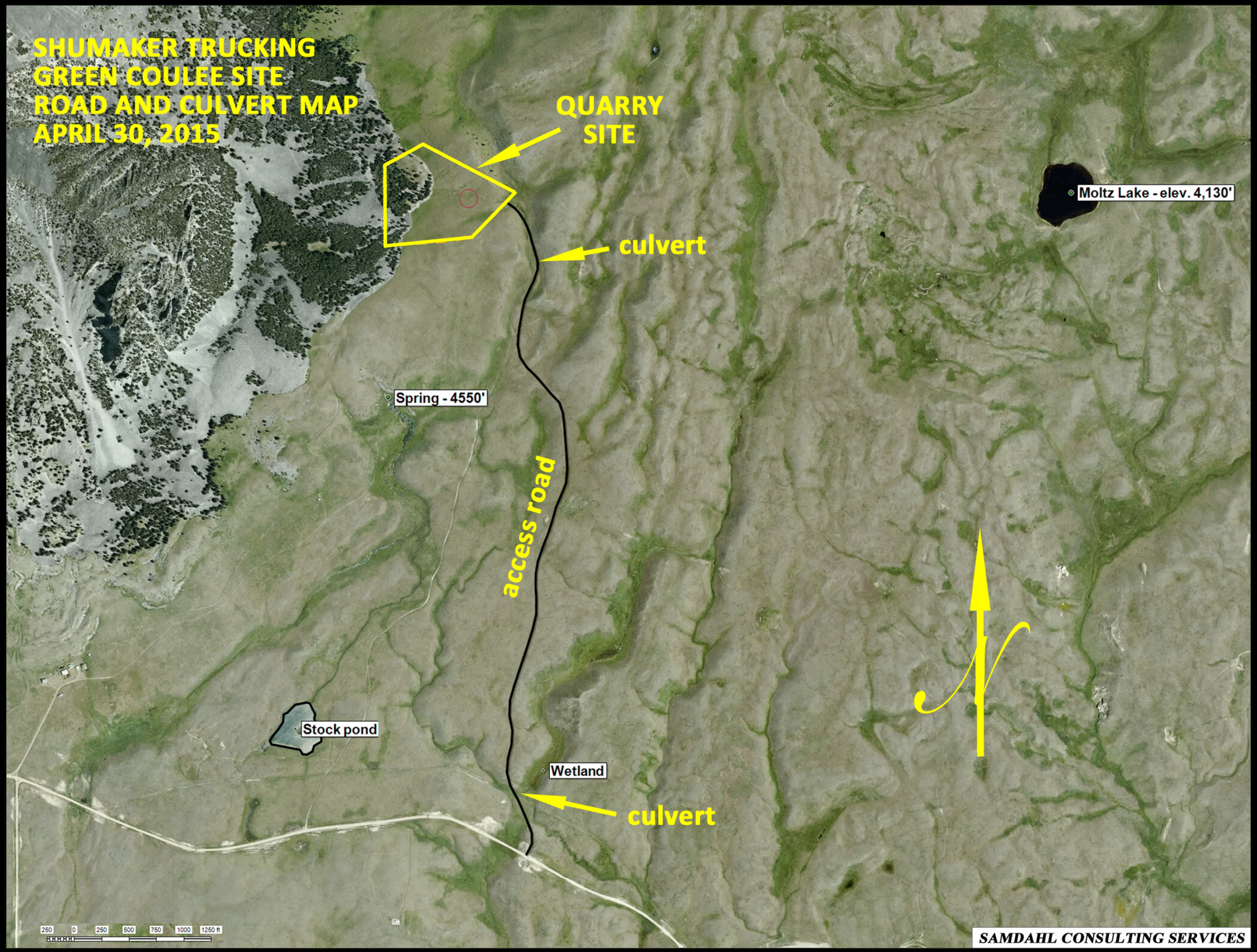
Pano 2	48.92562	-111.50763
Pano 3	48.92478	-111.51126
Pano 4	48.92485	-111.50979
Pano 5	48.92503	-111.50858
Pano 6	48.92531	-111.51154
Pano 7	48.92558	-111.51167
Pano 8	48.92540	-111.51154
Pano 9	48.92526	-111.51136
Pano 10	48.92699	-111.51043
Pano 11	48.92538	-111.51176
Pano 12	48.92734	-111.51103
Pano 13	48.92644	-111.50636
Pano 14	48.92582	-111.50794
Photo 4 & 5	48.92713	-111.50712
Photo 6	48.92504	-111.50645
Photo 2	48.92610	-111.50821
Photo 3	48.92649	-111.50783
Photo 1	48.92579	-111.50676
Pano 15	48.92652	-111.51044


SHUMAKER TRUCKING
GREEN COULEE SITE
ROAD AND CULVERT MAP
APRIL 30, 2015
QUARRY SITE
culvert
Moltz Lake - elev. 4,130'
Spring - 4550'
access road
Stock pond
Wetland
culvert
250 0 250 500 750 1000 1250 ft
SAMDAHL CONSULTING SERVICES

Green Coulee Coordinates		
Label	Latitude	Longitude
1	48.92706	-111.51040
2	48.92479	-111.50930
3	48.92495	-111.50854
4	48.92592	-111.50710
5	48.92693	-111.51029
6	48.92692	-111.51055
6	48.92692	-111.51055
7	48.92664	-111.51134
8	48.92611	-111.51141
9	48.92573	-111.51141
10	48.92486	-111.51143
11	48.92480	-111.51120
12	48.92484	-111.51007
13	48.92490	-111.50932
14	48.92503	-111.50859
15	48.92552	-111.50858
16	48.92576	-111.50752
17	48.92592	-111.50762
18	48.92611	-111.50794
Green Coulee	48.92580	-111.50991
Moltz Lake	48.92591	-111.48734
NW4	48.92656	-111.51176
Spring - 4550'	48.92111	-111.51163
Stock pond	48.91335	-111.51493
SW4	48.92468	-111.51174
Wetland	48.91237	-111.50611

Reclamation Bond Spreadsheet

INSTRUCTIONS: Enter your data in the shaded boxes. See page 3 for detailed instructions.

Operator:	Shumaker Trucking and Exvacating Contractors, Inc.
Site:	Green Coulee Quarry
Prepared by:	Samdahl Consulting Services
Date:	3/10/2014

Total Permitted Acres = 15.0 **acres***

*Must match the total permitted acres section in A7 of the Opencut Mining Plan of Operation & Application (Application).

Comments:

The un-bonded 3.6 acre area represents a buffer surrounding the disturbed, bonded area. It is not planned to be disturbed at this time. The mine area is uncovered talus with no soil material available for reclamation. The facility area is covered with an average of 9 inches of soil.

BONDED ACREAGE BREAKDOWN

Must match the "Bonded Acres" column in section A8 of the Opencut Mining Plan of Operation & Application.

Mine Area	4.4	**acres**
Facility Area	7.0	**acres**
Access Roads	0.0	**acres**
Partial Release Area	0.0	**acres**
Total Bonded Area =	**11.4**	**acres****

**The Total Bonded Area must be identical to the Bond submitted by the Operator to the Department.

Highwall reduction, backfilling, soil and overburden replacement

Lineal Feet & Height must match section D3-6 of Opencut Mining Plan of Operation & Application

Highwall cut/fill (describe)	linear feet	height	slope ratio		cubic yards	
Working face	400	20	2	:1	1,481	total
				:1	0	1,481

Highwall backfill (e.g. to reclaim highwalls that will not or cannot be cut and filled during mining, etc.)

Description	linear feet	height	slope ratio		cubic yards	
				:1	0	total
				:1	0	0

Pit backfill (e.g. bringing offsite material to the site for backfill, etc.)

Description	acres	depth		compaction %	cubic yards	
					0	total
					0	0

Mine soil and OB replacement	0	inches soil	0	inches overburde	total	0
Facility soil replacement	9	inches soil			total	9
Access road soil replacement		inches soil			total	0

ITEM	UNIT		AMOUNT		RATE		TOTAL
Highwalls and backfill			1,481	cu yds	$1	per cubic yard	$1,481
Mine area grading			4.4	acres	$200	per acre	$880
Mine area ripping			0.0	acres	$100	per acre	$0
Mine soil and OB replacement	0	inches	4.4	acres	$135	per inch/per acre	$0
Facility area grading			7.0	acres	$100	per acre	$700
Facility area ripping			0.0	acres	$100	per inch/per acre	$0
Facility soil replacement	9	inches	7.0	acres	$135	per inch/per acre	$8,505
Access road area grading			0.0	acres	$100	per acre	$0
Access road area ripping			0.0	acres	$100	per inch/per acre	$0
Access road soil replacement	0	inches	0.0	acres	$135	per inch/per acre	$0
Seeding or other revegetation			7.0	acres	$200	per acre	$1,400
Fencing			0	linear ft	$1	per linear foot	$0
Weed control			7.0	acres	$100	per acre	$700
Partially released acres			0.0	acres	$300	per acre	$0
Cost to crush onsite asphalt			0.0	cu yds	$4	per cubic yard	$0
							$0
							$0
							$0
							$0

Estimated Mobilization cost to move equipment to the site (DEQ's cost):	$3,000	$3,000
Estimated Administration Costs = 10% of total bond cost or $5,000 (whichever is greater)	$5,000	$5,000

Total Area Bonded =	11.4	Rate Per Bonded Acre =	$1,900.57	**TOTAL BOND =**	**$21,666**