

January 8, 2019

Steve Christensen  
Coal Program Supervisor  
Utah Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
Salt Lake City, Utah 84114-5801

C/007/0005  
Received 1/9/19  
Task #5846

RE: Swens Pad Interim Design, Canyon Fuel Company, LLC, Skyline Mine, C/007/005 Task ID 5828

Dear Mr. Christensen:

Attached are modifications to the Swens Canyon Ventilation shaft to include an emergency hoist, fuel storage, rescue building, and gravel storage. This layout has been presented to Jeff Salow and other USFS personnel without receiving any concerns. Included are modifications to address deficiencies outlined in Task ID 5828. Based on recommendations by Mr. Storrar text in the MRP have been modified to identify that the cuttings pond was not constructed. Note that the cuttings pond has been removed from the plates. Based on recommendations by Mr. Eatchel, the earthwork for reclamation on the shaft has been clarified in addition to the modifications originally submitted to address demolition of the proposed structures. The existing reclamation bond adequately covers the additional costs of the proposed increase in demolition. The cost associated with the earthwork and revegetation of the cuttings pond have not been removed from the reclamation bond. Once the site is completely constructed an As-built drawing of the site will be submitted.

Attached to this cover letter are completed C1 and C2 forms and the modification materials. The information is being submitted electronically. Two (2) hard copies will be sent upon Division approval.

If you have any questions, please call me at (435) 448-2636.

Sincerely,



Gregg A. Galecki  
Sr. Environmental Engineer, Skyline Mine  
Canyon Fuel Company, LLC

# APPLICATION FOR COAL PERMIT PROCESSING

Permit Change  New Permit  Renewal  Exploration  Bond Release  Transfer

**Permittee:** Canyon Fuel Company, LLC

**Mine:** Skyline Mine

**Permit Number:** C/007/005

**Title:** Swens Pad Interim Design Task 5828

**Description,** Include reason for application and timing required to implement:

Modifications to the Swens Pad to construct additional features.

**Instructions:** If you answer yes to any of the first eight (gray) questions, this application may require Public Notice publication.

- Yes  No 1. Change in the size of the Permit Area? Acres: \_\_\_\_\_ Disturbed Area: \_\_\_\_\_  increase  decrease.
- Yes  No 2. Is the application submitted as a result of a Division Order? DO# \_\_\_\_\_
- Yes  No 3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area?
- Yes  No 4. Does the application include operations in hydrologic basins other than as currently approved?
- Yes  No 5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond?
- Yes  No 6. Does the application require or include public notice publication?
- Yes  No 7. Does the application require or include ownership, control, right-of-entry, or compliance information?
- Yes  No 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
- Yes  No 9. Is the application submitted as a result of a Violation? NOV # \_\_\_\_\_
- Yes  No 10. Is the application submitted as a result of other laws or regulations or policies?  
*Explain:* \_\_\_\_\_
- Yes  No 11. Does the application affect the surface landowner or change the post mining land use?
- Yes  No 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2)
- Yes  No 13. Does the application require or include collection and reporting of any baseline information?
- Yes  No 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
- Yes  No 15. Does the application require or include soil removal, storage or placement?
- Yes  No 16. Does the application require or include vegetation monitoring, removal or revegetation activities?
- Yes  No 17. Does the application require or include construction, modification, or removal of surface facilities?
- Yes  No 18. Does the application require or include water monitoring, sediment or drainage control measures?
- Yes  No 19. Does the application require or include certified designs, maps or calculation?
- Yes  No 20. Does the application require or include subsidence control or monitoring?
- Yes  No 21. Have reclamation costs for bonding been provided?
- Yes  No 22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream?
- Yes  No 23. Does the application affect permits issued by other agencies or permits issued to other entities?

**Please attach four (4) review copies of the application. If the mine is on or adjacent to Forest Service land please submit five (5) copies, thank you.** (These numbers include a copy for the Price Field Office)

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

Rick Poulson  
Print Name

[Signature]  
Sign Name, Position, Date

Subscribed and sworn to before me this 9 day of Jan., 2019

[Signature]  
Notary Public

My commission Expires: Utah 3-19, 2019 } ss:  
Attest: State of \_\_\_\_\_  
County of Carbon



|                             |                                  |  |
|-----------------------------|----------------------------------|--|
| <b>For Office Use Only:</b> | <b>Assigned Tracking Number:</b> | <b>Received by Oil, Gas &amp; Mining</b> |
|                             |                                  |  |



**Note for the following Report:**

**Skyline Mine**

**Swens Canyon Ventilation Shaft Pad**

**Design Report**

The Operational and Reclamation Designs were calculated based on the assumption a Blind-bore technique was to be implemented for the construction of the shaft, which required the designs of a cuttings pond to contain the cuttings from the shaft. A Raised-bore technique was used to construct the shaft which enabled the cuttings to remain underground with no cuttings pond being required.

Calculations for sections of the report addressing Reclamation, Hydrology, Geotechnical Analysis, and the Sheets (drawings), still reflect the impacts using the Blind-bore technique. Division personnel has reviewed the soils, hydrology, and engineering sections of the report and determined no additional studies are necessary with the change in plan as there is less impact with the Raised-bore design.

Sec. 3.2

# Pages 3-21

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Skyline Mine

Swens Canyon Ventilation Facility

(DRAFT—Will be re-submitted at completion of construction)

~~I certify that the roads, cuttings pond, sediment basin, and pad at the Skyline Mine—Swens Canyon Ventilation Facility were constructed under the supervision of a registered, professional engineer. It was constructed in a prudent manner and field-fit to meet design specifications. Designs as outlined in the Skyline Mine—Swens Canyon Ventilation Shaft Pad Design Report (Appendix Volume A-5, Section 24) were followed.~~

~~The final construction of the shaft cuttings pond adequately accommodates the designed volume of cuttings from the drilling of the two (2) shafts on site, and the storm run-off from the disturbance associated with the pond. The pond has been designed to contain stormwater runoff from the 100-year, 24-hour storm event, one year of accumulated sediment, and the cuttings from the creation of the shafts. It is not designed as a sediment control structure for the Ventilation Facility. The pond is significantly oversized and is designed not to discharge.~~

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Craig W. Brown

Date

Revised ~~5-27-16~~

1-8-20193-21

The emergency spillway will not normally discharge during the design runoff events. However, assuming the primary spillway was not functioning and the pond was assumed full to the emergency spillway crest (8075.55 ft) prior to the occurrence of a 25-year, 6-hour storm event, the emergency spillway is calculated to discharge 2.06 cfs with a velocity of 4.69 fps at the crest. This velocity is considered non-erosive.

The required volume for annual sediment storage has been estimated at 1,108 cubic feet. The 60 percent sediment volume is at an elevation of 8071.7 feet. The 100 percent sediment 'clean-out' marker is at an elevation of 8072.1 feet which corresponds to the elevation of the 6-inch diameter decant pipe.

### **Swens Canyon** Ventilation Facility Cuttings Pond

The cuttings pond was not built as a Raised-bore drilling technique was used for drilling the shaft which did not require a cuttings pond.

~~The function of the Swens Canyon Ventilation Facility cuttings pond is to collect the cuttings from the construction of the shaft. The pond is not designed as a sediment control structure for the site. After the deposition of shaft cuttings, the only runoff reporting to the pond will be the area immediately upstream of the pond and the pond itself—watersheds DW 2 and UW 2; see Plate 3.2.4 4D for details. The total maximum volume of cuttings contributing to the pond will be approximately 13,000 CY. The total runoff area contributing to the pond, including the pond itself, is 2.0 acres. The pond will contain the runoff from a 100 year, 24 hour storm event in addition to sediment yielded from its catchment area. The pond has been designed to contain the storm water runoff from the required 10-year, 24 hour storm event (430 CY), one year of accumulated sediment (320 CY), and cuttings from the creation of the shafts. As the water from the cuttings evaporates or infiltrates, the volume will likely decrease to approximately 6,500 CY. With the 6,500 CY of available sediment storage after cuttings have dried, the 60% sediment cleanout elevation will be 8,698.2 asl (4,100 CY). In addition, the pond has been designed to safely convey the peak flow from a 25 year, 6 hour storm event immediately following a 10 year, 24 hour storm event via the design emergency spillway and a prudent engineering feature (See Plate 3.2.4 4C for design details). The pond is not intended to discharge, and Division of Water Quality personnel was contacted and indicated a discharge permit was not necessary as the cuttings pond was exempt under the '2005 Energy Act'. Although not a sedimentation pond, the cuttings pond will be inspected quarterly and PE-certified as the sedimentation ponds.—~~

### 3.2.2 Overburden and Topsoil Handling

A comprehensive discussion pertaining to this operational component of the mine plan is presented in Section 4.6 - TOPSOIL AND SUBSOIL HANDLING PLAN.

Revised: 5-27-161-08-2019

3-23(a)

Bond Summary Page

## Bonding Calculations

### Direct Costs

|                                  |                    |
|----------------------------------|--------------------|
| Subtotal Demolition and Removal  | \$2,141,966        |
| Subtotal Backfilling and Grading | \$1,512,720        |
| Subtotal Revegetation            | \$313,143          |
| <b>Direct Costs Subtotal</b>     | <b>\$3,967,829</b> |

### Indirect Costs

|                                |                    |              |
|--------------------------------|--------------------|--------------|
| Mob/Demob                      | \$396,783          | 10.0%        |
| Contingency                    | \$198,391          | 5.0%         |
| Engineering Redesign           | \$99,196           | 2.5%         |
| Main Office Expense            | \$269,812          | 6.8%         |
| Project Management Fee         | \$99,196           | 2.5%         |
| <b>Subtotal Indirect Costs</b> | <b>\$1,063,378</b> | <b>26.8%</b> |

|                        |                    |
|------------------------|--------------------|
| <b>Total Cost 2014</b> | <b>\$5,031,207</b> |
|------------------------|--------------------|

|                   |           |       |
|-------------------|-----------|-------|
| Escalation factor |           | 5     |
| Number of years   |           | 0.019 |
| Escalation        | \$479,715 |       |

|                            |             |
|----------------------------|-------------|
| Reclamation Cost Escalated | \$5,510,922 |
|----------------------------|-------------|

|  |                    |
|--|--------------------|
| <b>Reclamation Bond Amount (rounded to nearest<br/>\$1,000) 2019 Dollars</b> | <b>\$5,511,000</b> |
|--|--------------------|

|                            |             |
|----------------------------|-------------|
| Posted Bond March 18, 2015 | \$5,799,000 |
|----------------------------|-------------|

|   |           |
|---|-----------|
| Difference Between Cost Estimate and Bond | \$288,000 |
| Percent Difference                        | 4.97%     |

Errors in permittee's total sheet: indirect should be updated, escalation should be held constant at \$479,715, TOTAL rec bond amount in 2019 \$5,455,000

Demolition

| Ref. | Description                           | Materials Reference Number | Unit | Unit Cost | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit Swell Factor | Quantity | Unit Cost        |
|------|---------------------------------------|----------------------------|------|-----------|--------|-------|--------|----------|------|--------|--------|---------|------|--------|-------------------|----------|------------------|
|      | Shop Warehouse 01                     |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 299852           |
|      | Administration Bld 02                 |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 27154            |
|      | Mine No. 1 Transfer Tower 03          |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 44106            |
|      | BC 2 Drive House 04                   |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 9422             |
|      | BC 3 Drive House 05                   |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 42220            |
|      | Crusher Raw Coal 06                   |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 20778            |
|      | Truck Loadout 07                      |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 4807             |
|      | Railcar Loadout 08                    |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 23377            |
|      | Conveyors 8 total 09                  |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 114289           |
|      | Water Tanks Two 10                    |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 2252             |
|      | Pump House 11                         |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 1601             |
|      | Wall House Three 12                   |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 4756             |
|      | Water Treatment Bld 13                |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 17830            |
|      | Misc Storage Bld 14                   |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 8386             |
|      | Overland Conveyor 15                  |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 95092            |
|      | Guard Rail 18                         |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 18289            |
|      | Rock Dust Bld 17                      |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 7075             |
|      | Overland Dust Collector 18            |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 1525             |
|      | Substation 19                         |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 2609             |
|      | Power Line 20                         |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 528              |
|      | Cap Magazine 21                       |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 38               |
|      | Fuel Storage 22                       |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 1347             |
|      | Propane Tanks 23                      |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 1820             |
|      | Stacking Tube 24                      |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 7346             |
|      | Recclaim Tunnel 25                    |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 60762            |
|      | Slope Protection Apron 26             |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 29345            |
|      | Concrete Lined Ditch 27               |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 1175             |
|      | Raw Coal Silo 28                      |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 21081            |
|      | Parking Area Middle 29                |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 3262             |
|      | Truck Loadout Foundation 30           |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 310              |
|      | Road Pad Lower 31                     |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 5054             |
|      | Silo Rail Loadout 32                  |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 186868           |
|      | Loadout Foundation RR 33              |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 7683             |
|      | Pavement Rail Loadout 34              |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 48718            |
|      | Steel 35                              |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 11075            |
|      | James Canyon 36                       |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 126205           |
|      | Culvert Backfilling 37                |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 9041             |
|      | Channel Construction 38               |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 528548           |
|      | Equipment 39                          |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 237900           |
|      | Portal Face Door 40                   |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 6295             |
|      | Concrete Building 41                  |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 2274             |
|      | Winter's Quarters Ventilation 42      |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 54782            |
|      | North of Grabon Bleeder Shaft 43      |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 17181            |
|      | Swains Canyon Ventilation Facility 44 |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | 41927            |
|      | <b>Total</b>                          |                            |      |           |        |       |        |          |      |        |        |         |      |        |                   |          | <b>2,141,966</b> |

| Ref. | Description                                    | Materials   | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |       |
|------|--|---|------------------------|-----------|------|--------|-------|--------|----------|------|--------|--------|---------|------|--------|------|--------------|----------|------|------|-------|
|      | Sweens Canyon Vent Facility 44                 |   |                        |           |      |        |       |        |          |      |        |        |         |      |        |      |              |          |      |      |       |
|      | Steel Substation Transformers Structure's demo | Steel Bld. Large                                      | 02 41 16 13 0020       | 0.27 /CF  | CF   |        |       |        |          |      | 1000   |        |         |      |        | CF   |              | 1000     | CF   | 270  |       |
|      | Fuel Containment cover Structure's demo        | Steel Bld. Large                                      | 02 41 16 13 0020       | 0.27 /CF  | CF   |        |       |        |          |      | 19600  |        |         |      |        | CF   |              | 19600    | CF   | 3402 |       |
|      | Fencing  | Fencing barbed wire 3 strand chain link remove 8'-10' | 02 41 13 60 1600       | 2.1 /LF   | LF   | 1050   |       |        |          |      |        |        |         |      |        |      |              |          |      |      |       |
|      | Topsoil pile                                   | Fencing barbed wire 3 strand                          | 02 41 13 60 1700       | 4.22 /LF  | LF   | 1000   |       |        |          |      |        |        |         |      |        |      |              |          |      |      |       |
|      | ventilation pad                                | Cutting Pond  | 02 41 13 60 1600       | 2.1 /LF   | LF   | 1100   |       |        |          |      |        |        |         |      |        |      |              |          |      |      |       |
|      | Cutting Pond                                   |   |                        |           |      |        |       |        |          |      |        |        |         |      |        |      |              |          |      |      |       |
|      | Subtotal                                       |   |                        |           |      |        |       |        |          |      |        |        |         |      |        |      |              |          |      |      | 12407 |
|      | substation pad                                 | Nielson Concrete <15"                                 | Nielson Quote          | 13.75 /CY | CY   |        |       |        |          |      | 38     |        |         |      |        |      |              |          |      |      | 405   |
|      | Hoist pad                                      | Nielson Concrete <15"                                 | Nielson Quote          | 13.75 /CY | CY   |        |       |        |          |      | 45     |        |         |      |        |      |              |          |      |      | 619   |
|      | Fuel Bay                                       | Nielson Concrete <15"                                 | Nielson Quote          | 13.75 /CY | CY   |        |       |        |          |      | 54     |        |         |      |        |      |              |          |      |      | 743   |
|      | Shaft collar and pad                           | Nielson Concrete <15"                                 | Nielson Quote          | 13.75 /CY | CY   |        |       |        |          |      | 100    |        |         |      |        |      |              |          |      |      | 1375  |
|      | misc (gravel bin)                              | Nielson Concrete <15"                                 | Nielson Quote          | 13.75 /CY | CY   |        |       |        |          |      | 30     |        |         |      |        |      |              |          |      |      | 413   |
|      | Concrete's vol                                 | Nielson Concrete <15"                                 | Nielson Quote          | 13.75 /CY | CY   |        |       |        |          |      | 25     |        |         |      |        |      |              |          |      |      | 344   |
|      | Loading Cost                                   |   |                        |           |      |        |       |        |          |      |        |        |         |      |        |      | 1.3          |          |      |      |       |
|      | Demol Cost                                     | Front end Loader 3 CY                                 | 31 23 16 42 1300       | 1.87 /CY  | CY   |        |       |        |          |      |        |        |         |      |        |      |              |          |      |      | 434   |
|      | Loading Cost                                   | On site disposal                                      | 02 41 16 17 4200       | 8.65 /CY  | CY   |        |       |        |          |      |        |        |         |      |        |      |              |          |      |      | 2249  |
|      | Subtotal                                       |   |                        |           |      |        |       |        |          |      |        |        |         |      |        |      |              |          |      |      | 6572  |
|      | Transmission line removal demo cost            | DGR Series II (8-54) (1st14)                          | (9-54) at 14           | 190.4 /HR | HR   |        |       |        |          |      |        |        |         | 120  |        | HR   |              |          |      |      | 22848 |
|      | Subtotal                                       |   |                        |           |      |        |       |        |          |      |        |        |         |      |        |      |              |          |      |      | 22848 |
|      | Subtotal                                       |   |                        |           |      |        |       |        |          |      |        |        |         |      |        |      |              |          |      |      |       |
|      | Total  |   |                        |           |      |        |       |        |          |      |        |        |         |      |        |      |              |          |      |      | 41827 |



|                                      | Equipment Cost | Hourly Operating Costs | Equipment Overhead | Operator's Hourly Wage Rate | Hourly Cost of Men or Eq. | Number of Men or Eq. | Total Eq. & Lab. Costs | Units Quantity | Units | Production Rate | Units | Equip. + Labor Time/Dls. | Units | Cost           |
|--------------------------------------|----------------|------------------------|--------------------|-----------------------------|---------------------------|----------------------|------------------------|----------------|-------|-----------------|-------|--------------------------|-------|----------------|
| Portal 01                            |                |                        |                    |                             |                           |                      |                        |                |       |                 |       |                          |       | 68244          |
| Water Tank 02                        |                |                        |                    |                             |                           |                      |                        |                |       |                 |       |                          |       | 12151          |
| Lower Terrace 03                     |                |                        |                    |                             |                           |                      |                        |                |       |                 |       |                          |       | 487.3          |
| Middle Bench 04                      |                |                        |                    |                             |                           |                      |                        |                |       |                 |       |                          |       | 251938         |
| Upper Bench West Fork 05             |                |                        |                    |                             |                           |                      |                        |                |       |                 |       |                          |       | 134158         |
| Southwest Fork 06                    |                |                        |                    |                             |                           |                      |                        |                |       |                 |       |                          |       | 5003           |
| Loadout Facilities 07                |                |                        |                    |                             |                           |                      |                        |                |       |                 |       |                          |       | 181475         |
| South Fork Portal Area 08            |                |                        |                    |                             |                           |                      |                        |                |       |                 |       |                          |       | 67975          |
| Waste Rock Disposal 09               |                |                        |                    |                             |                           |                      |                        |                |       |                 |       |                          |       | 382987         |
| Pond Enlargement Interim 10          |                |                        |                    |                             |                           |                      |                        |                |       |                 |       |                          |       | 17             |
| Pond Diversion DU2 Interim 11        |                |                        |                    |                             |                           |                      |                        |                |       |                 |       |                          |       | 392            |
| Interim Sediment Control 12          |                |                        |                    |                             |                           |                      |                        |                |       |                 |       |                          |       | 4615           |
| Overland Conveyor 13                 |                |                        |                    |                             |                           |                      |                        |                |       |                 |       |                          |       | 1678           |
| James Canyon 14                      |                |                        |                    |                             |                           |                      |                        |                |       |                 |       |                          |       | 0              |
| Winter Quarters 15                   |                |                        |                    |                             |                           |                      |                        |                |       |                 |       |                          |       | 153982         |
| North of Groben Bleeder Shaft 16     |                |                        |                    |                             |                           |                      |                        |                |       |                 |       |                          |       | 68897          |
| Swens Canyon Ventilation Facility 17 |                |                        |                    |                             |                           |                      |                        |                |       |                 |       |                          |       | 178721         |
| <b>Total</b>                         |                |                        |                    |                             |                           |                      |                        |                |       |                 |       |                          |       | <b>1512720</b> |

Notes: Revised operator wages 6/21/16



| Earthwork                       |             |          |                |                        |                    |                             |             |                      |
|---------------------------------|-------------|----------|----------------|------------------------|--------------------|-----------------------------|-------------|----------------------|
| ITEM                            |             |          | Equipment Cost | Hourly Operating Costs | Equipment Overhead | Operator's Hourly Wage Rate | Hourly Cost | Number of Men or Eq. |
| ST-15Z 15CY                     | (21-10)     | (1st14)  | 19140          | 118.25                 | 0.1                | 55.4                        | 305.1       | 1                    |
| CLAB                            |             |          |                |                        |                    |                             | 36.65       | 0.5                  |
| 988G EROPS                      | (9-37)      | (1st14)  | 21000          | 119.32                 | 0.1                | 52.25                       | 314.75      |                      |
| 769D                            | (20-11)     | (1st14)  | 21000          | 119.32                 | 0.1                | 49.15                       | 311.65      |                      |
| Pickup Truck Crew 4x4 1 ton     | (20-17)     | (1st14)  | 1105           | 15.55                  | 0.1                | 41.95                       | 65.96       |                      |
| Foreman Average, Outside        |             |          |                |                        |                    |                             | 51.9        |                      |
| D8R Series II                   | (9-54)      | (1st14)  | 19000          | 352.27                 | 0.1                | 55.4                        | 561.65      |                      |
| 410G EROPS 4WD EXTEN            | (9-28)      | (1st14)  | 3620           | 27.05                  | 0.1                | 55.4                        | 107.78      |                      |
| 631G                            | (9-51)      | (1st14)  | 16500          | 93.75                  | 0.1                | 55.4                        | 261.65      |                      |
| 14H EROPS                       | (9-11)      | (2H2014) | 14500          | 82.39                  | 0.1                | 55.4                        | 236.65      |                      |
| CAT 345BL II                    | (10-23)     | (1st14)  | 17095          | 113.1                  | 0.1                | 55.4                        | 286.65      |                      |
| 6X4 70,000lbs 12-18 CY          | (20-11)     | (1st14)  | 4410           | 63.45                  | 0.1                | 55.4                        | 152.76      |                      |
| D6R Series II                   | (9-54)      | (1st14)  | 10800          | 61.36                  | 0.1                | 55.4                        | 190.4       |                      |
| 980G Series II EROPS            | (9-37)      | (1st14)  | 13000          | 73.86                  | 0.1                | 55.4                        | 217.9       |                      |
| D10                             | (9-54)      | (1st14)  | 31000          | 352.27                 | 0.1                | 55.4                        | 636.65      |                      |
| Eq Op , Medium Equipment (Eqmd) |             | Eqmd     |                |                        |                    |                             | 48.9        |                      |
| General fill by dozer           | 31 23 23.17 | 0320     |                |                        |                    |                             | 1.87        |                      |

Swens Material 2014 Rates

Supplied by Nelco Contractors

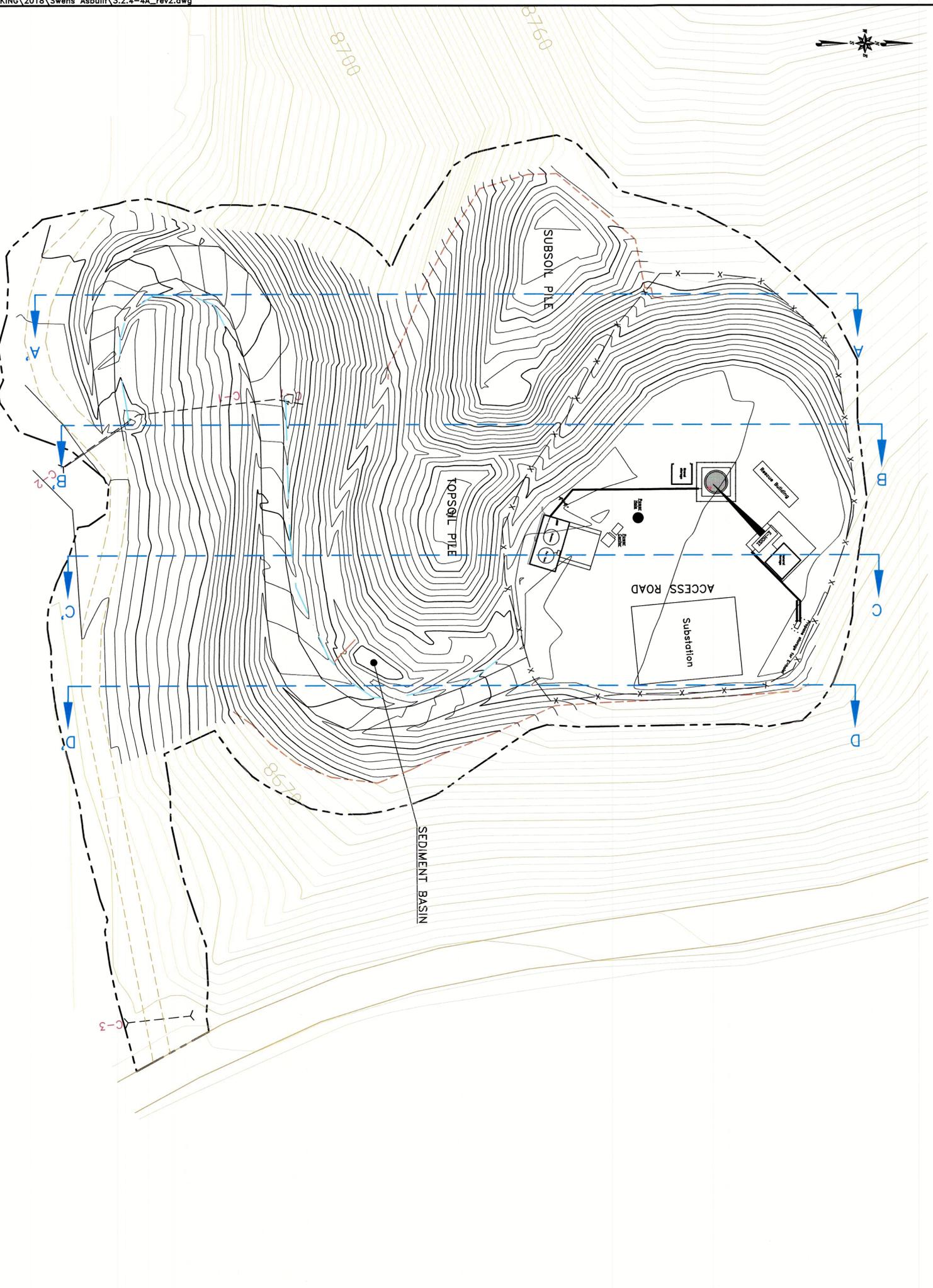
| Material          | Quan. | UM | Freight  | Per ton Material | Material Price | FOB Material Price |
|-------------------|-------|----|----------|------------------|----------------|--------------------|
| 6" Rock Screened  | 226   | CY | \$ 15.81 | \$ 5.00          | \$ 7.50        | \$ 23.31           |
| 2-4" Rock Crushed | 76    | CY | \$ 15.81 | \$ 9.00          | \$ 13.50       | \$ 29.31           |
| Gravel Crushed    | 491   | CY | \$ 15.81 | \$ 9.00          | \$ 13.50       | \$ 29.31           |
| Sand              | 38    | CY | \$ 15.81 | \$ 15.00         | \$ 22.50       | \$ 38.31           |
| Bentonite         | 102   | CY | \$ 15.81 | \$ 20.00         | \$ 22.00       | \$ 37.81           |
| Crushed Concrete  | 91    | CY | \$ 15.81 | \$ 25.00         | \$ 41.25       | \$ 57.06           |

Christensen Ready Mix

2014 Rates

6-bag concrete per yard \$117  
 Delivery per 10-yard load \$50

# SWENS CANYON SHAFT PAD LAYOUT



### INDEX OF DRAWINGS

| TITLE                                       | SHEET NO. |
|---|-----------|
| COVER SHEET AND FINAL OPERATIONAL PLAN      | SHEET 1   |
| OPERATIONAL CROSS-SECTIONS AND ROAD PROFILE | SHEET 2   |
| POND AND SEDIMENT BASIN DRAINAGE PLAN       | SHEET 3   |
| WATERSHED AND DRAINAGE DETAILS              | SHEET 4   |
| DRAINAGE DETAILS                            | SHEET 5   |
| TOPSOIL REMOVAL PLAN                        | SHEET 6   |
| RECLAMATION PLAN                            | SHEET 7   |
| RECLAMATION CROSS-SECTIONS                  | SHEET 8   |

### LEGEND

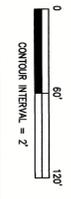
- 8140 ——— EXISTING GROUND MAJOR CONTOUR (10 FOOT)
- EXISTING GROUND MINOR CONTOUR (2 FOOT)
- 8140 ——— OPERATIONAL GROUND MAJOR CONTOUR (10 FOOT)
- OPERATIONAL GROUND MINOR CONTOUR (2 FOOT)
- PRE-EXISTING ROAD
- PRE-EXISTING PAVED ROAD
- ROAD
- DISTURBED AREA BOUNDARY
- BRM OR SILT FENCE
- DITCH
- X — X — FENCE
- C-1 — Culvert
- OPERATIONAL CROSS SECTION LOCATION (SEE SHEET 2 FOR CROSS-SECTIONS)

| OPERATIONAL (CUBIC YARDS) |             |              |                 |
|---------------------------|-------------|--------------|-----------------|
| SOIL                      | CIVILSD CUT | CIVILSD FILL | TOPSOIL REMOVED |
| PAD                       | 27,800      | 100          | 5,700           |
| ACCESS ROAD               | 5,000       | 1,600        | 3,500           |
| TOTAL                     | 51,700      | 32,100       | 15,100          |

DISTURBED AREA = 4.2 ACRES

CUT AREAS ALONG THE ACCESS ROAD AND PAD ARE DESIGNED AT 1.5:1 (HORIZONTAL:VERTICAL), WHERE BEDROCK IS ENCOUNTERED THE SLOPE MAYBE AS STEEP AS 0.5:1, AS APPROVED BY ENGINEER.  
THE D.A.B ALLOWS FOR VARIATIONS IN CUT SLOPE

**EarthFax**  
EarthFax Engineering, Inc.  
Engineers/Scientists



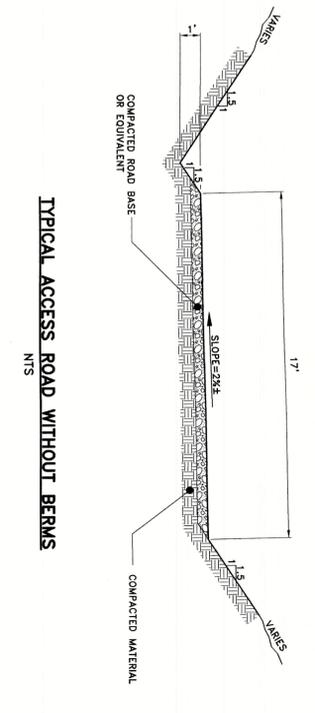
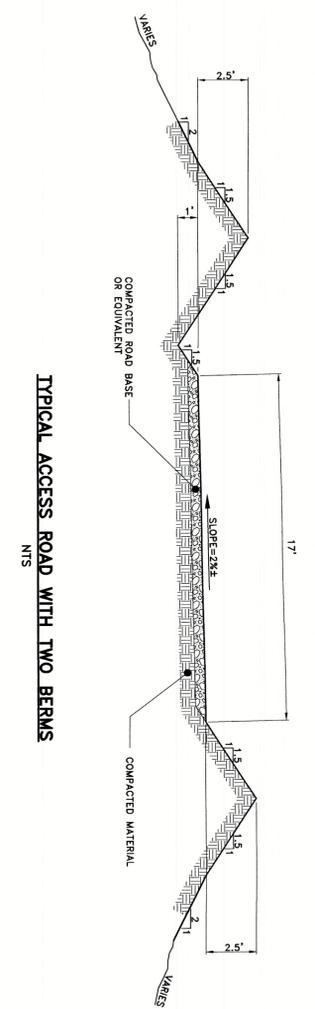
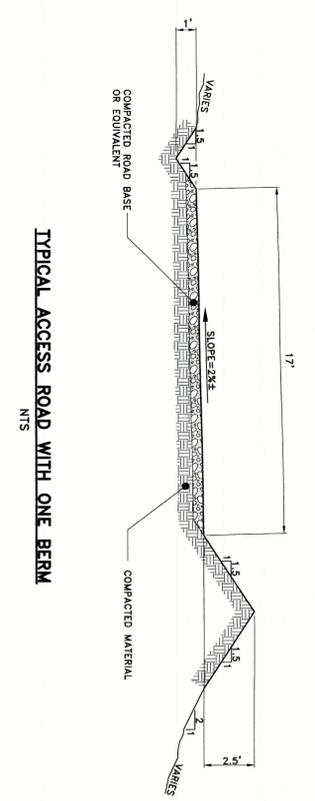
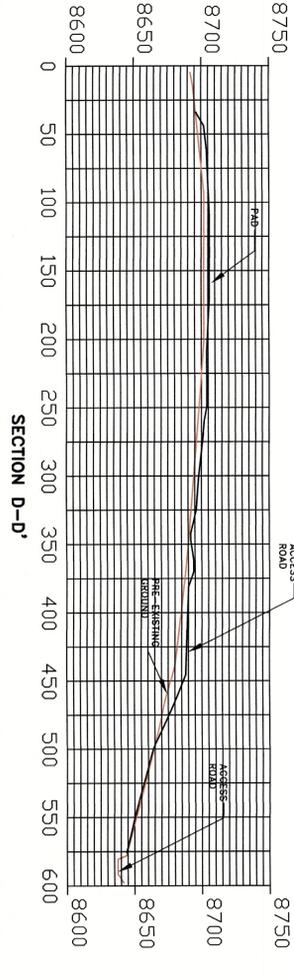
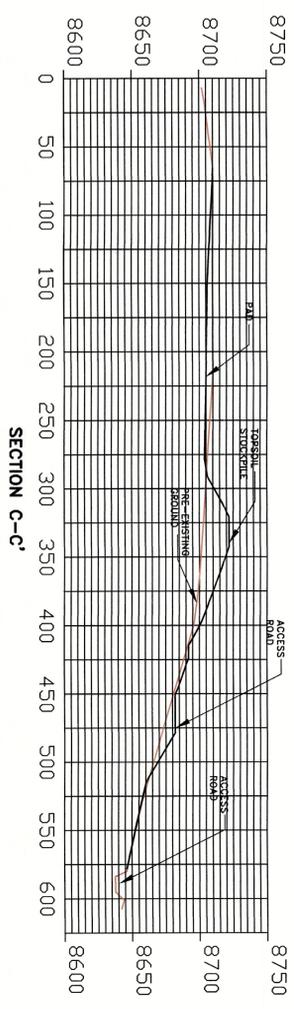
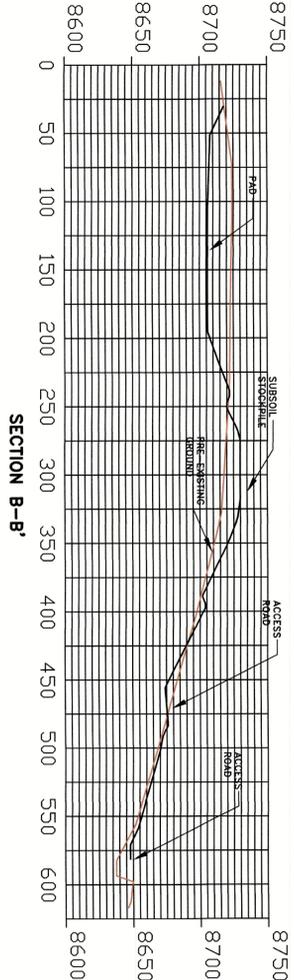
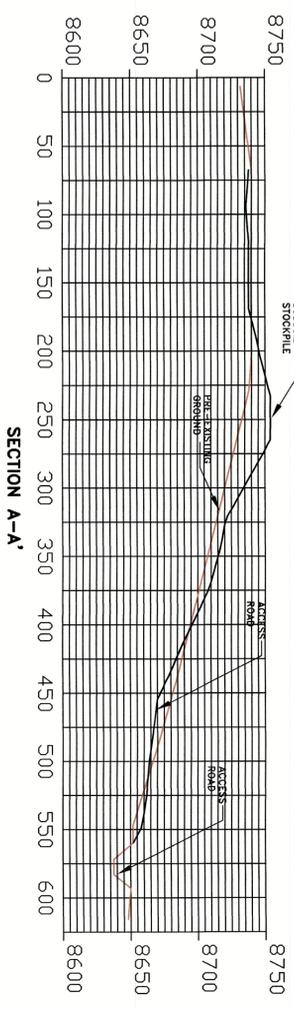
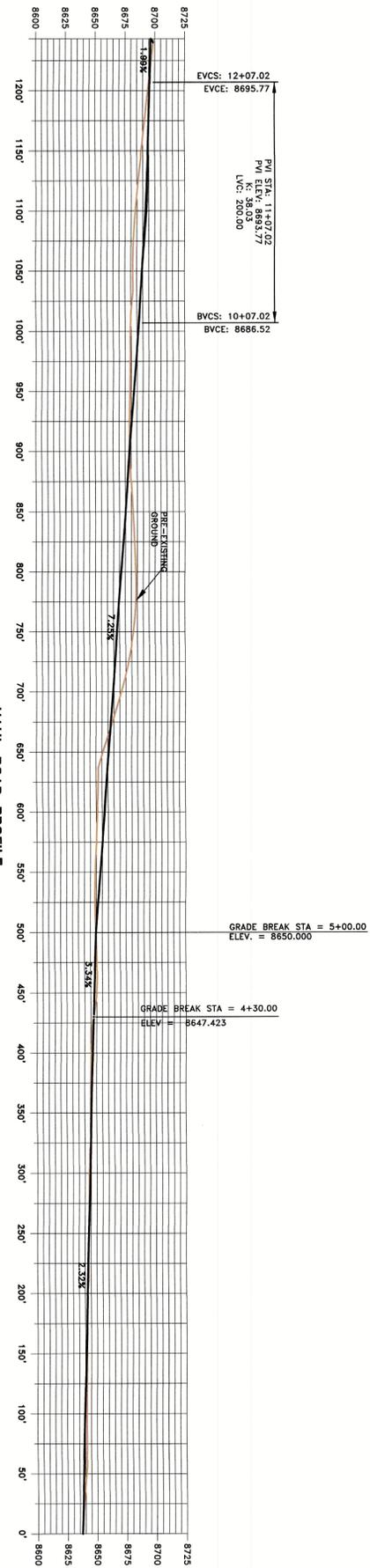
SEAL: 

| DATE    | No. | REVISIONS   |
|---------|-----|---|
| 1/7/16  | 1   | Original Map  |
| 11/7/18 | 2   | Removal of Pond and proposed location of added structures |

Skyline Mine  
Swens Canyon Shaft  
Interim Facility Layout

**Canyon Fuel Company, LLC**  
Skyline Mines

DATE: JAN, 2016  
SCALE: 1" = 60'  
DWG. NO.: 3.2.4-4A  
SHEET 1 of 11/29/18



SEAL:



| DATE  | NO. | REVISIONS       |
|-------|-----|-----------------|
| 1/16  | 1   | Original Map    |
| 11/18 | 2   | Removal of Pond |

SWENS CANYON  
SHAFT  
CROSS SECTIONS AND ROAD PROFILE

**Canyon Fuel Company, LLC**  
Skyline Mines

DATE: Jan 2016  
SCALE: AS SHOWN  
DWG. NO.: 3.2.4-4B  
SHEET 2