

#5846

March 4, 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

RECEIVED

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DIV OF OIL, GAS & MINING

RE: Swens Pad Interim Design, CLEAN COPIES, Canyon Fuel Company, LLC, Skyline Mine,
C/007/005 Task ID 5846

Dear Mr. Christensen:

Attached are clean copies for Task ID 5828 to incorporate modifications to the Swens Canyon Ventilation shaft to include an emergency hoist, fuel storage, rescue building, and gravel storage as part of the interim design of the site. 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 two (2) clean hard copies of the modification materials for incorporation into the M&RP. The information is being submitted electronically. Two (2) hard copies are included for 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. CLEAN COPIES

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.

Jason D Layton
Print Name

Jason D Layton Engineering 3/4/19
Sign Name, Position, Date
Manager

Subscribed and sworn to before me this 4th day of MARCH, 20 19

Kathleen Atwood
Notary Public

My commission Expires: 12-02-2019
Attest: State of Utah } ss:
County of Carbon



For Office Use Only:

Assigned Tracking
Number:

Received by Oil, Gas & Mining

Pages 3-21
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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.

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.

3.2.3 Coal Processing

Maps 3.2.3-1 and 3.2.3-1A are flow diagrams of the entire coal handling system. Designated capacities represent maximum design capabilities necessary to handle surges in the system. The average throughput, a substantially lower figure, is reflected in the annual production schedule.

Run of Mine (R.O.M.) coal is brought out of the mines by conveyor belts and it is temporarily stored in an 8,000 ton capacity concrete silo or the open coal storage area. As the coal is needed, it is transported by conveyor belts to a crushing system and then to the overland conveyor that transports it to the railroad loadout facility. Coal transported to the railroad loadout facility may go directly into the storage silos or may be placed in the RLO open coal storage area. Some coal is still shipped by truck direct from the truck loadout area. In the event of an emergency situation coal can be transported from the truck loadout area to the railroad loadout facility.

Stoker Coal

A stoker coal circuit is located on the coal storage silos at the train loadout area. A stoker loadout storage tank is located on

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Bonding Calculations

Direct Costs

Subtotal Demolition and Removal	\$2,141,966
Subtotal Backfilling and Grading	\$1,512,720
Subtotal Revegetation	\$313,143
Direct Costs Subtotal	\$3,967,829

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%
Subtotal Indirect Costs	\$1,063,378	26.8%

Total Cost 2014	\$5,031,207
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<i>Escalation factor</i>		5
<i>Number of years</i>		0.019
<i>Escalation</i>	\$479,715	

Reclamation Cost Escalated	\$5,510,922
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Reclamation Bond Amount (rounded to nearest \$1,000) 2019 Dollars	\$5,511,000
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Posted Bond March 18, 2015	\$5,799,000
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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

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	Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	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
Total															1512720

Notes: Revised operator wages 6/21/16

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	Reference		Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. Labor Time/Disc.	Units	Cost
	Page	Year															
Swens Canyon Ventilation Facility 17																	
Sealing Shaft 16ft D																	
(+) 6 inch rock			\$ 7.50				\$ 15.81	1	\$ 23.31	226 CY	226 CY				226 CY		5269
2 inch - 4inch Rock			\$ 13.50				\$ 15.81	1	\$ 29.31	76 CY	76 CY				76 CY		2228
Gravel			\$ 13.50				\$ 15.81	1	\$ 29.31	38 CY	38 CY				38 CY		1114
Sand			\$ 22.50				\$ 15.81	1	\$ 38.31	38 CY	38 CY				38 CY		1456
Bentonite			\$ 22.00				\$ 15.81	1	\$ 37.81	74 CY	74 CY				74 CY		2798
Concrete			\$ 117.00				\$ 5.00	1	\$ 122.00	37 CY	37 CY				37 CY		4514
Pit Run or Relect fill							\$ 15.81		\$ 15.81	7100 CY	7100 CY				7100 CY		112269
General fill by dozer		31, 23, 23, 17, 0320							\$ 1.87	7589 CY	7589 CY				7589 HR		14191
Subtotal																	143839
Subtotal																	
Subtotal																	
Backfilling and grading																	
CAT 345BL II	(10-23)	(1st14)	17095	113.1	0.1	55.4	292.97	1	292.97	12 HR	12 HR				12 HR		3516
D8R Series II	(9-54)	(1st14)	19000	352.27	0.1	55.4	642.97	1	642.97	16 HR	16 HR				16 HR		10288
Pickup Truck Crew 4x4 1 ton	(20-17)	(1st14)	1105	15.55	0.1	41.95	83.28	1	83.28	20 HR	20 HR				20 HR		1666
CLAB							36.65	1.5	54.98	20 HR	20 HR				20 HR		1100
Foreman Average, Outside							51.9	1	76.35	20 HR	20 HR				20 HR		1527
Subtotal																	18097
Topsoil																	
D8R Series II	(9-54)	(1st14)	19000	352.27	0.1	55.4	642.97	1	642.97	20 HR	20 HR				20 HR		12859
Pickup Truck Crew 4x4 1 ton	(20-17)	(1st14)	1105	15.55	0.1	41.95	83.28	1	83.28	20 HR	20 HR				20 HR		1666
CLAB							36.65	1	36.65	20 HR	20 HR				20 HR		733
Foreman Average, Outside							51.9	1	76.35	20 HR	20 HR				20 HR		1527
Subtotal																	16785
TOTAL																	178721

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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

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Demolition Costs

Skyline Mine
Swens Pad Design Update

Item #	Description	Mainplant Reference Number	Unit Cost	Unit Length	Width	Height	Density	Time	Volume	Weight	Unit Price	Quantity	Unit Cost
	Shop Warehouses 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 Houses 11												1601
	Well House Three 12												4756
	Water Treatment Bld 13												17630
	Misc Storage Bld 14												8366
	Overland Conveyor 15												95092
	Guard Rail 16												18269
	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
	Reclaim Tunnel 25												60762
	Slope Protection Apron 26												23345
	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												520548
	Equipment 39												237900
	Portal Face Door 40												6295
	Concrete Building 41												2274
	Winter's Quarters Ventilation 42												54782
	North of Graben Bleeder Shaft 43												17181
	Swens Canyon Ventilation Facility 44												41927
	Total												2,141,565

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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	
	Sveens Canyon Vent Facility 44																				
	Steel																				
	Substation Transformers Structure's demo	Steel Blk. Large	02.41.16.13.0020	0.27 /CF	CF						1000							1000	CF	270	
	Fuel Containment cover Structure's demo	Steel Blk. Large	02.41.16.13.0020	0.27 /CF	CF						12600							12600	CF	3402	
	Fencing																				
	Topsoil pile ventilation pad	Fencing barbed wire 3 strand chain link, remove 6'-10"	02.41.13.60.1600	2.1 LF	LF	1050													1050	LF	2205
	Cuttings Pond	Fencing barbed wire 3 strand	02.41.13.60.1700	4.22 LF	LF	1000													1000	LF	4220
	Subtotal					1100													1100	LF	2310
																					12407
	substation pad	Nielson Concrete <15"	Nielson Quote	13.75 /CY	CY						36								36	CY	485
	Host pad	Nielson Concrete <15"	Nielson Quote	13.75 /CY	CY						45								45	CY	610
	Fuel Bay	Nielson Concrete <15"	Nielson Quote	13.75 /CY	CY						54								54	CY	743
	Shift collar and pad	Nielson Concrete <15"	Nielson Quote	13.75 /CY	CY						100								100	CY	1375
	misc (gravel bin)	Nielson Concrete <15"	Nielson Quote	13.75 /CY	CY						30								30	CY	413
	Concrete's vol	Nielson Concrete <15"	Nielson Quote	13.75 /CY	CY						25								25	CY	344
	Loading Cost																1.3				
	Disposal Costs	Front end Loader 3 CY	31.23.16.42.1300	1.67 /CY	CY														260	CY	434
	Loading Cost	On site disposal	02.41.16.17.4200	8.95 /CY	CY														260	CY	2249
	Subtotal																				5672
	Transmission line removal																				
	demo cost	DGR Series II (9-54) (1st14)	(9-54) of 14	190.4 /HR	HR									120					120	HR	22848
	Subtotal																				22848
	Subtotal																				22848
	Total																				41927

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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.



Revised: 1/8/19

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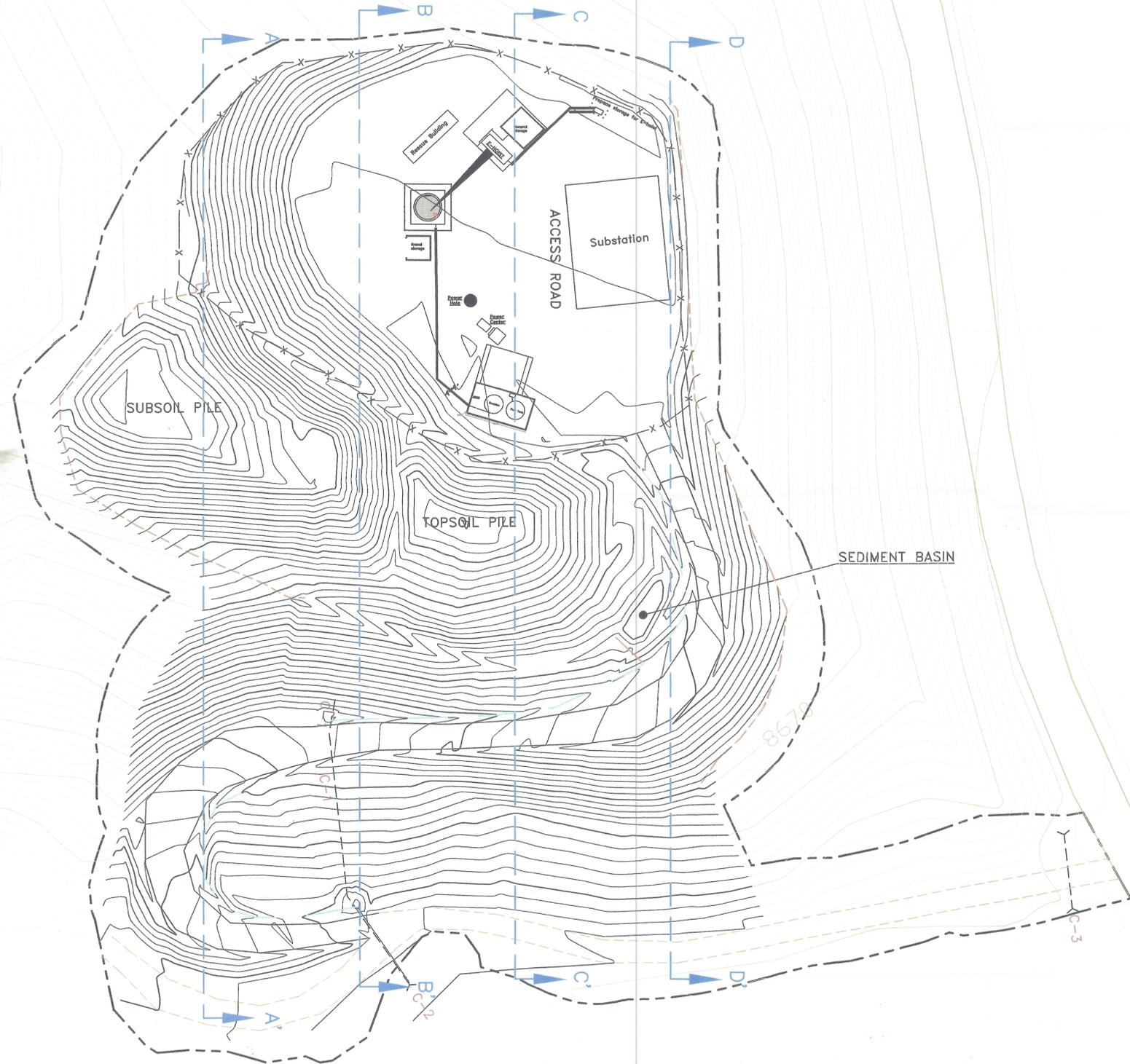
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SWENS CANYON SHAFT PAD LAYOUT



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
	BERM OR SILT FENCE
	DITCH
X-X	FENCE
C-1	Culvert
	OPERATIONAL CROSS SECTION LOCATION (SEE SHEET 2, FOR CROSS-SECTIONS)

OPERATIONAL (CUBIC YARDS)			
SOIL	CIVIL3D CUT	CIVIL3D 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

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Skyline Mine
Swens Canyon Shaft
Interim Facility Layout

Canyon Fuel Company, LLC
Skyline Mines

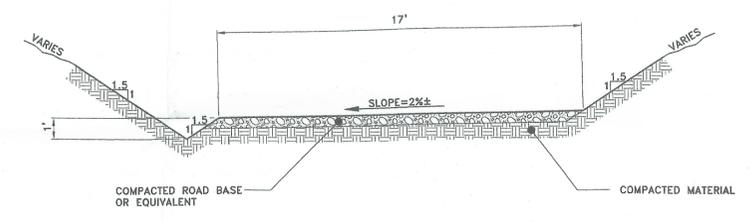
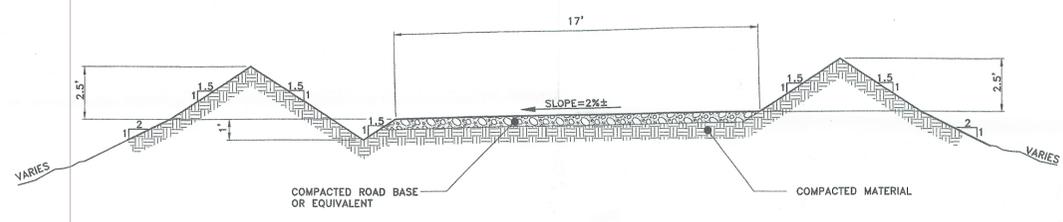
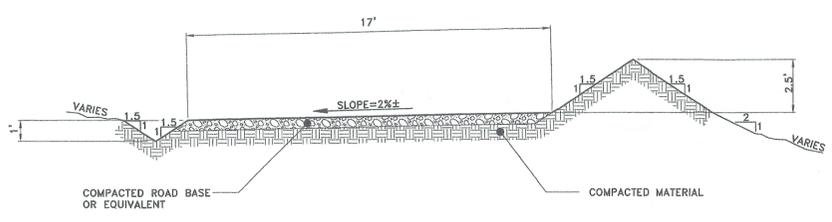
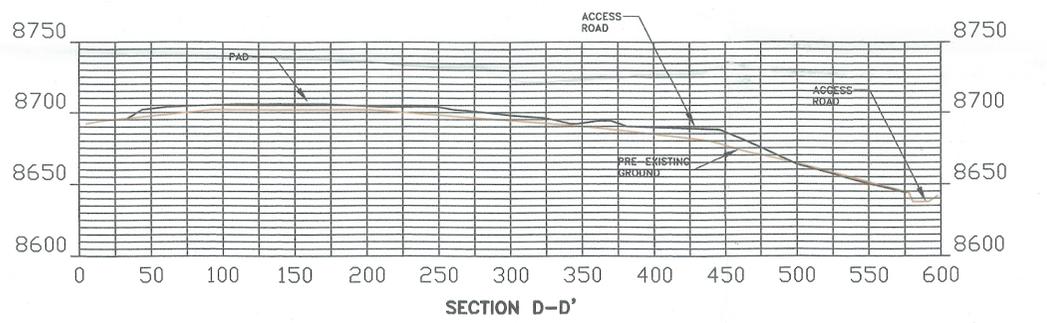
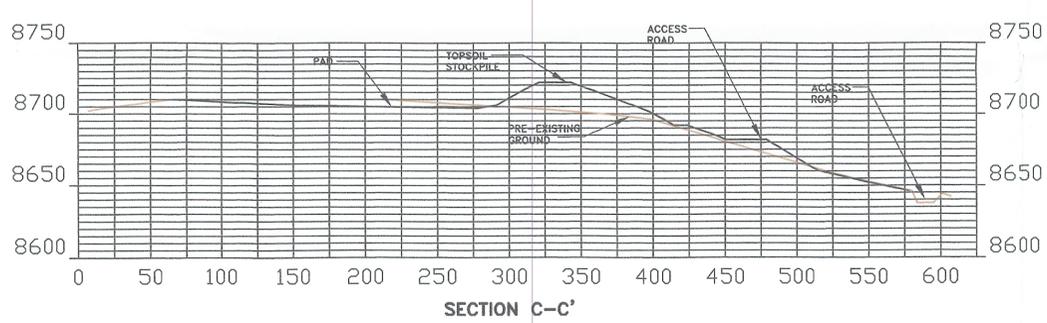
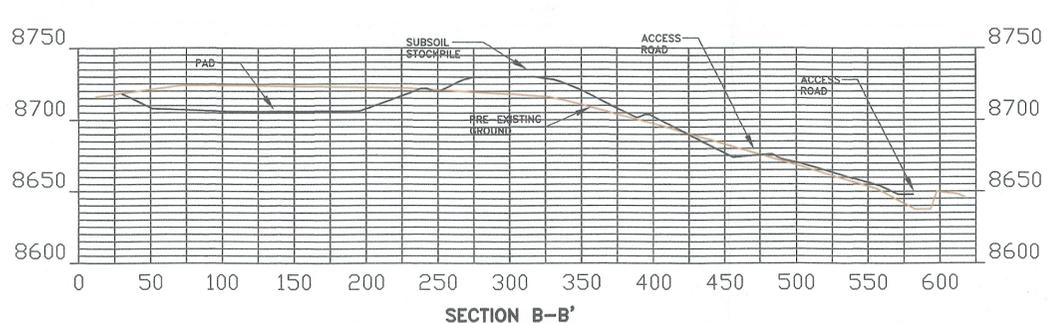
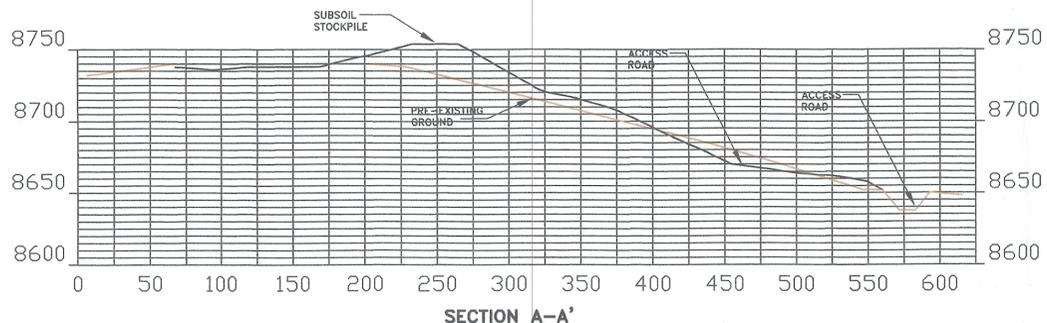
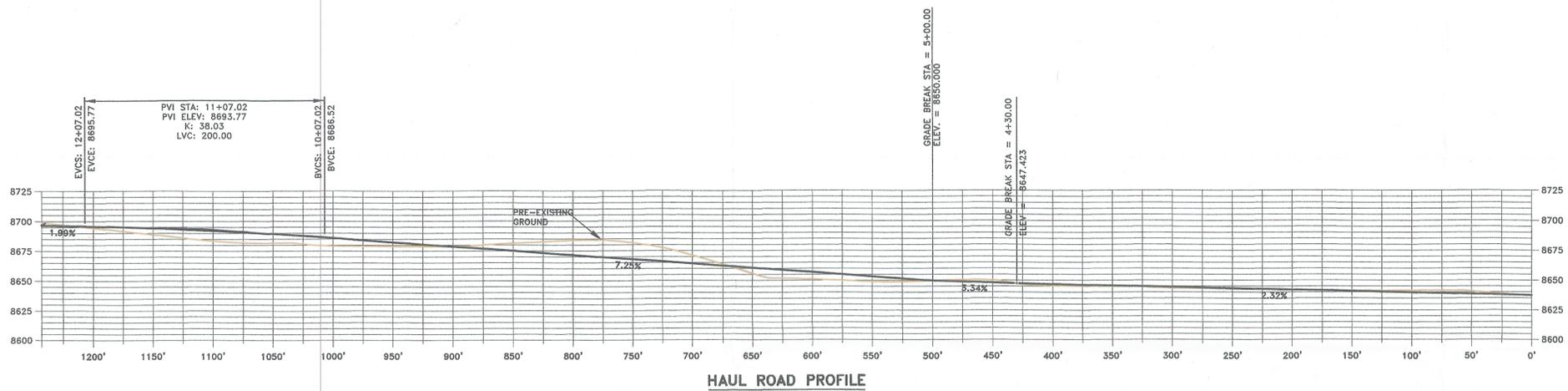
P.O. BOX 719 HELPER, UTAH 84326 DATE: JAN, 2016 CK.BY:Ggalecki REVISION:
 801-537-7925
 DWG FILE: SAUC1547/01/DWG/SHEET 1 SCALE: 1" = 60' DR.BY:Tearl 2
 DWG. NO.: 3.2.4-4A SHEET 1 11/28/18

SEAL:



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





TYPICAL ACCESS ROAD WITH ONE BERM
NTS

TYPICAL ACCESS ROAD WITH TWO BERMS
NTS

TYPICAL ACCESS ROAD WITHOUT BERMS
NTS

DATE	No.	REVISIONS
1/16	1	Original Map
11/18	2	Removal of Pond

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