

July 15, 2016

Mr. Daron Haddock
Division of Oil, Gas and Mining (DOGGM)
P.O. Box 145801
Salt Lake City, Utah 84114

Dear Mr. Haddock:

As required by R645-301-880.300, I have enclosed a copy of the application for Phase III Bond Release on select Methane Degasification Sites at Dugout Canyon Mine, Carbon County, Utah, C/007/039.

- C1 and C2 Forms
- Revised Bond Calculations
- Updated M&RP files
- Public Notice Letter for Bond Release Application
- Copies of letters sent to adjoining property owners, local government bodies, planning agencies, sewage and water treatment authorities and water companies
- Notarized statement, stating that all applicable reclamation has been accomplished
- Affidavit of Publication

Public notice for Phase III Bond Release has been published in the Sun Advocate and appeared in the paper on May 26th, June 2nd, June 9th and June 16th, 2016. The Affidavit of Publication was submitted to the Division on 6/27/2016.

Please contact me at (435) 636-2872 should you have any questions or comments regarding the enclosed information.

Sincerely,



David G. Spillman, P.E.
Technical Services Manager

APPLICATION FOR COAL PERMIT PROCESSING

Permit Change New Permit Renewal Exploration Bond Release Transfer

Permittee: Canyon Fuel Company, LLC

Mine: Dugout Canyon Mine

Permit Number: C/007/039

Title: Methane Degasification Site Bond Release C/007/039

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

Application for Phase III Bond Release on Methane Degasification Sites G-3 and G-4.

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

- | | |
|---|--|
| <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | 1. Change in the size of the Permit Area? Acres: <u>1.82</u> Disturbed Area: <u>1.82</u> <input type="checkbox"/> increase <input checked="" type="checkbox"/> decrease. |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 2. Is the application submitted as a result of a Division Order? DO# _____ |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 4. Does the application include operations in hydrologic basins other than as currently approved? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond? |
| <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | 6. Does the application require or include public notice publication? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 7. Does the application require or include ownership, control, right-of-entry, or compliance information? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 9. Is the application submitted as a result of a Violation? NOV # _____ |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 10. Is the application submitted as a result of other laws or regulations or policies?
<i>Explain:</i> _____ |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 11. Does the application affect the surface landowner or change the post mining land use? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2) |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 13. Does the application require or include collection and reporting of any baseline information? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 15. Does the application require or include soil removal, storage or placement? |
| <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | 16. Does the application require or include vegetation monitoring, removal or revegetation activities? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 17. Does the application require or include construction, modification, or removal of surface facilities? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 18. Does the application require or include water monitoring, sediment or drainage control measures? |
| <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | 19. Does the application require or include certified designs, maps or calculation? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 20. Does the application require or include subsidence control or monitoring? |
| <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | 21. Have reclamation costs for bonding been provided? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 23. Does the application affect permits issued by other agencies or permits issued to other entities? |

Please attach one (1) review copy of the application.

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.

David Spillman David Spillman Engineering Manager
 Print Name Sign Name, Position, Date 7/14/16

Subscribed and sworn to before me this 14 day of July, 2016

Carmen Humphrey
 Notary Public

My commission Expires: NOV 16, 2018

Attest: State of Utah) ss:
 County of Carbon



NOTARY PUBLIC
CARMEN HUMPHREY
 Commission No. 680114
 Commission Expires
NOVEMBER 16, 2018
 STATE OF UTAH

For Office Use Only:	Assigned Tracking Number:	Received by Oil, Gas & Mining
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APPLICATION FOR COAL PERMIT PROCESSING

Detailed Schedule Of Changes to the Mining And Reclamation Plan

Permittee: Canyon Fuel Company, LLC

Mine: Dugout Canyon Mine

Permit Number: C/007/039

Title: Application for Phase III Bond Release on Methane Degasification Sites G-3 and g-4. Page 1 of 2.

Provide a detailed listing of all changes to the Mining and Reclamation Plan, which is required as a result of this proposed permit application. Individually list all maps and drawings that are added, replaced, or removed from the plan. Include changes to the table of contents, section of the plan, or other information as needed to specifically locate, identify and revise the existing Mining and Reclamation Plan. Include page, section and drawing number as part of the description.

DESCRIPTION OF MAP, TEXT, OR MATERIAL TO BE CHANGED

<input type="checkbox"/> Add	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> Remove	DESCRIPTION
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dugout M&RP, Chapter 1, Page 1-9 & 1-10
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dugout M&RP, Chapter 1, Plate 1-4
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dugout M&RP, Chapter 5, Appendix 5-6, Reclamation Bond
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dugout M&RP, Methane Degasification Amendment, Chapter 1, Page 1-2
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dugout M&RP, Methane Degasification Amendment, Chapter 1, Page 1-7
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dugout M&RP, Methane Degasification Amendment, Figure 1-1
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dugout M&RP, Methane Degasification Amendment, Chapter 2, Page 2-2
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dugout M&RP, Methane Degasification Amendment, Chapter 2, Page 2-4
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dugout M&RP, Methane Degasification Amendment, Chapter 2, Page 2-5
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dugout M&RP, Methane Degasification Amendment, Chapter 2, Page 2-11
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dugout M&RP, Methane Degasification Amendment, Chapter 2, Page 2-14
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dugout M&RP, Methane Degasification Amendment, Chapter 2, Page 2-19
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dugout M&RP, Methane Degasification Amendment, Chapter 2, Page 2-20
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dugout M&RP, Methane Degasification Amendment, Chapter 2, Page 2-23
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dugout M&RP, Methane Degasification Amendment, Chapter 2, Attachment 2-4
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dugout M&RP, Methane Degasification Amendment, Chapter 3, Page 3-2
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dugout M&RP, Methane Degasification Amendment, Chapter 3, Page 3-4
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dugout M&RP, Methane Degasification Amendment, Chapter 3, Page 3-5
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dugout M&RP, Methane Degasification Amendment, Chapter 3, Page 3-13
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dugout M&RP, Methane Degasification Amendment, Chapter 3, Page 3-17
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dugout M&RP, Methane Degasification Amendment, Chapter 3, Page 3-25
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dugout M&RP, Methane Degasification Amendment, Chapter 5, Page 5-vi
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dugout M&RP, Methane Degasification Amendment, Chapter 5, Page 5-2
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dugout M&RP, Methane Degasification Amendment, Chapter 5, Page 5-17
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Dugout M&RP, Methane Degasification Amendment, Chapter 5, Figure 5-10
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Dugout M&RP, Methane Degasification Amendment, Chapter 5, Figure 5-11
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Dugout M&RP, Methane Degasification Amendment, Chapter 5, Figure 5-12
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Dugout M&RP, Methane Degasification Amendment, Chapter 5, Figure 5-17

Any other specific or special instruction required for insertion of this proposal into the Mining and Reclamation Plan.

Received by Oil, Gas & Mining

Dugout M&RP

Chapter 1

Pages 1-9, 1-10

Plate 1-4

Dugout Canyon Mine Permit Number C/007/039

Canyon Fuel Company

Redline Strikeout

Title page for reference only

Page 1-10 and Plate 1-4 are also under redline strikeout changes for Dugout's IBC application.



Section 19: NE1/4SE1/4, S1/2SE1/4
Section 20: W1/2W1/2W1/2, W1/2E1/2W1/2W1/2

T13 S., R13 E., SLBM, Utah (Added to Permit Area in 2005, approximately 2,360 acres)

Section 17: E1/2SW1/4, SW1/4SE1/4, E1/2E1/2W1/2SW1/4
Section 20: E1/2W1/2, E1/2, E1/2E1/2W1/2W1/2
Section 21: SW1/4NW1/4, SW1/4
Section 28: NW1/4, N1/2SW1/4, SW1/4SW1/4
Section 29: All
Section 30: E1/2, E1/2W1/2

State Lease ML-50582-OBA - (320 acres)

T13 S., R13 E., SLBM, Utah
Section 16: W1/2

Waste Rock Storage Facility - Fee land owned by CFC

T. 14 S., R. 12 E., SLBM, Utah (Approximately 26.8 acres)
Section 18: Portions of NE1/4, SW1/4 and SE1/4 of the NE1/4

All of Lease ML-42648, except the E1/2 of Section 8 and the NE1/4 of Section 17, is included within the Dugout Canyon Mine permit boundary. However, only the S1/2 SE1/4 of Section 9 from Lease ML-42649 is within the permit boundary. The ten acres described in UTU-76601 are also described in UTU-77985. The U.S. Department of Interior, Bureau of Land Management (BLM) right-of-way application UTU-76601 is included in Appendix 1-3.

The disturbed area encompasses 20.80 acres (Mine Facility area, including Gilson well pad and small substation), ~~41.5~~ 39.7 (G-2, ~~G-3, G-4~~, G-5, G-6, G-7, G-9, G-10, G-11, G-12, G-13, G-14, G-15, G-16, G-17, G-18, G-19, G-22 (including access road), G-25, G-26, G-29, G-30 and G-31 Degas Well), 14.25 acres (AMV Road) 0.85 (Topsoil Stockpile), 1.8 acres (Leach field/pipeline area), 2.7 acres (Pace Canyon Fan Facility) and 26.8 acres (Refuse Pile area) totaling approximately ~~108.7~~ 106.9 acres. That acreage includes a pre- and post mining road with an area of 1.6 acres and 2.03 acres of

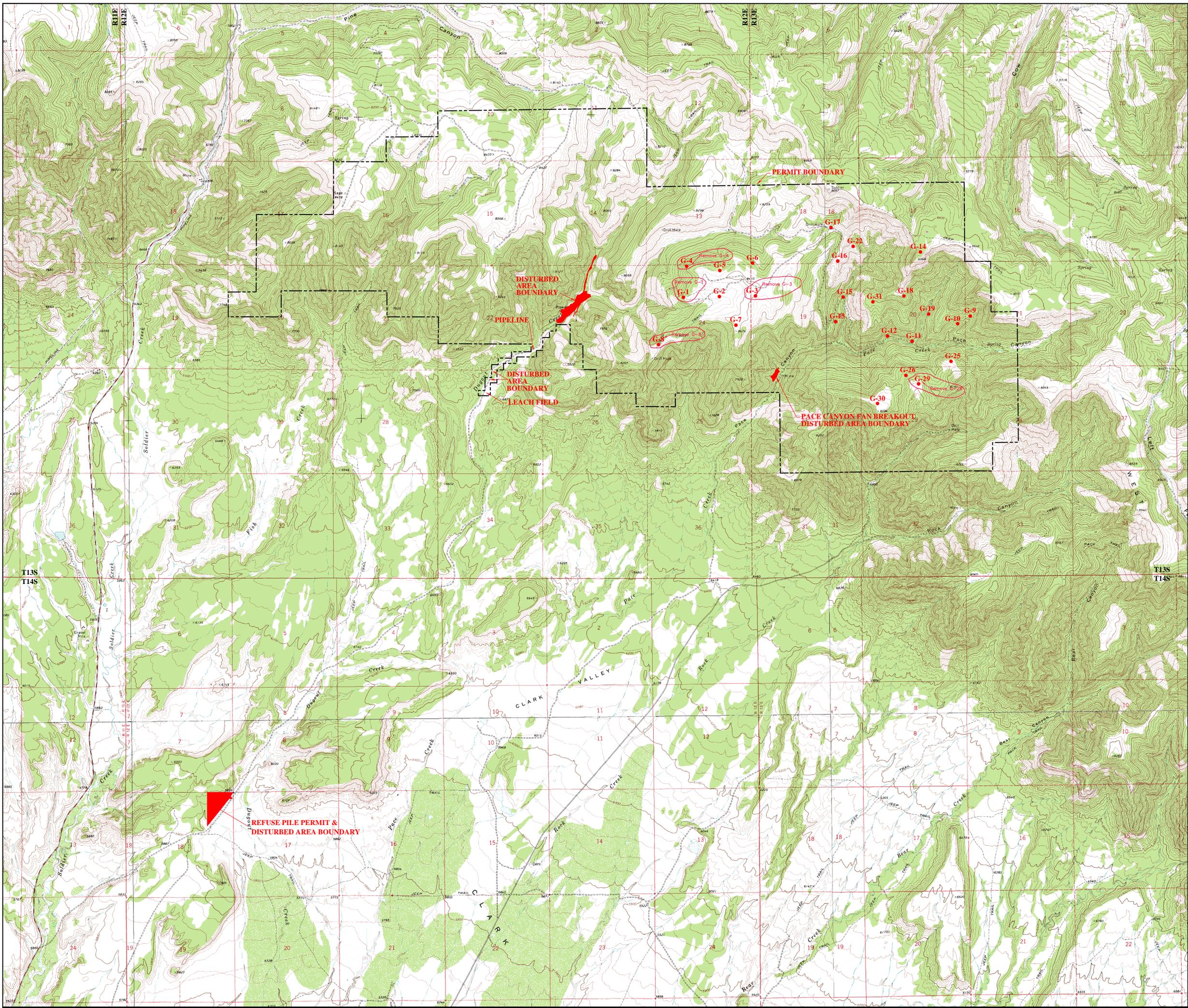
undisturbed land within the mine facilities disturbed area and 11.2 acres within the refuse pile disturbed area.

The permit boundary encompasses approximately 9,751 acres which includes the acreage as presented in the table below, also refer to Plate 1-1 and RA Plate 1-1 for additional information.

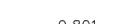
Coal ownership acreage within the permit area includes approximately 3134 acres of federal coal, approximately 5840 acres of state coal, and 827 acres of fee coal as shown in the table below (Plate 1-2 and RA1-1B). Approximately 745 acres which include the surface subsidence area, refuse pile and leach field areas will not be mined although their acreage is included in the surface and coal ownership acreage totals.

Acreage Table
(all acreage is approximate)

Disturbed Area	Acreage	Surface Ownership	Acreage	Coal Ownership	Acreage
Dugout Cyn. Facility	20.8	Federal	627	Federal	3134
Degas (3/24/10)	41.5 39.7	State of Utah	920	State	5840
AMV Road	14.25	Fee	8254	Fee	827
Topsoil Stockpile	0.85				
Leachfield	1.8				
Fan Portal	2.7				
Refuse Pile	26.8				
Total	108.7 106.9		9801		9801
Acres of Land Within Permit Area under Lease and Fee Lands					
State Leases	Acres	Federal Leases	Acres	BLM	Acres
ML-42648	3160	U-07064-027821	2953.71	ROW UTU-76601	10
ML-42649	80			ROW UTU-77985	47.5
ML-48435-OBA	2720			Parcel	2.5
ML-50582-OBA	0	Fee Acreage	827		



LEGEND

-  PERMIT AREA BOUNDARY
-  9,801 PERMITTED ACRES
-  108.7-106.9 DISTURBED ACRES



REVISIONS	
DATE	BY
07/05/07	SC
09/04/07	SC
10/02/07	SC
02/21/08	VSM
10/01/08	VSM/SWF
04/23/09	VSM/SWF
06/16/09	VSM/SWF
08/05/09	VSM/SWF
03/25/10	VSM/SWF
03/02/12	JKS
07/14/16	BK



DUGOUT CANYON MINE PERMIT AREA

Dugout Canyon Mine

DRAWN BY: RR	DATE: FEBRUARY 26, 2003	SCALE: 1" = 2000'
APPROVED BY: VSM	FILE NAME: PLATE 1-4.DWG	DRAWING OR MAP NUMBER: PLATE 1-4

Dugout M&RP

Chapter 5

Appendix 5-6, Reclamation Bond

Dugout Canyon Mine Permit Number C/007/039

Canyon Fuel Company

Redline Strikeout

Title page for reference only

The Bond Amount on Page A was updated.

Under Demolition page 1 of 66 the total was corrected as line item 65 was not summing correctly, adding an increase to the demolition bond. Reference #'s 45 and 46, Degas Wells G-3 and G-4 were removed.

Under Earthwork nothing changed

Under Vegetation reference #'s V-5 and V-6, Degas Wells G-3 and G-4 were removed.



Direct Costs

Subtotal Demolition and Removal	\$690,650		\$728,253
Subtotal Backfilling and Grading	\$1,049,995		\$1,049,995
Subtotal Revegetation	\$440,478		\$435,566
Direct Costs	\$2,181,123		\$2,213,814

Indirect Costs

Mob/Demob	\$218,112	10.0%	\$221,381	10.0%
Contingency	\$109,056	5.0%	\$110,691	5.0%
Engineering Redesign	\$54,528	2.5%	\$55,345	2.5%
Main Office Expense	\$148,316	6.8%	\$150,539	6.8%
Project Management Fee	\$54,528	2.5%	\$55,345	2.5%
Subtotal Indirect Costs	\$584,544	26.8%	\$593,301	26.8%

Total Reclamation Cost 2015 Dollars	\$2,765,663		\$2,807,115
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Escalation factor for 2015		0.012		0.012
Number of years to next review		5		5
Escalation	\$169,970.00		\$172,518.00	

Escalated Reclamation Cost to 2020	\$2,935,633.15		\$2,979,633.23
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Reclamation Cost (rounded to nearest \$1,000)	\$2,936,000.00		\$2,980,000.00
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Bond Amount in 2009 Dollars	\$3,550,000.00		\$3,550,000.00
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Difference Between Cost Estimate and Bond	\$614,000.00		\$570,000.00
Percent Difference	17.30%		16.06%

$$Escalated\$ = (\$ \times [1 + Rate]^{Years})$$

Demo Line Item Subtotals

Ref.	Description	Cost 2015 Dollars
1	Mine Belt BC-1	\$ 11,120
2	Transfer Building	\$ 22,460
3	Feed Belt BC 2	\$ 7,524
4	Stack Tubes 2	\$ 4,686
5	Head House 1	\$ 4,098
6	Transfer Belt BC 2	\$ 5,019
7	Head House 2	\$ 1,376
8	Reclaim Tunnel	\$ 38,640
9	Reclaim Belt BC 4	\$ 7,033
10	Escape Tunnel 60 inch	\$ 1,119
11	Crusher Building	\$ 18,507
12	Truck Loadout Belt BC 5	\$ 6,306
13	Truck Loadout and Scale	\$ 16,232
14	Bathhouse	\$ 76,623
15	Substation	\$ 2,281
16	Power Lines and Poles	\$ 2,828
17	Retaining Wall	\$ 891
18	Gabion Wall	\$ 21,314
19	Pump House	\$ 3,474
20	Paved Road	\$ 150,348
21	Stream Culvert 72 inch	\$ 28,588
22	Water Tanks	\$ 2,466
23	Rock Dust Bin	\$ 1,396
24	Fuel Tank and Fuel Station	\$ 1,830
25	Holding Tank	\$ 3,198
26	Ventilation Fan	\$ 1,714
27	Magnet	\$ 3,953
28	Water System	\$ 27,407
29	Sewage System	\$ 9,185
30	Storage Containers (8)	\$ 11,257
31	Gilson Well	\$ 2,901
32	Switch House	\$ 6,364
33	Portals No	\$ 28,326
34	Storage & Bolts Bin	\$ 2,955
35	Storage Building	\$ 2,183
36	Sampling System	\$ 1,270
37	Stoker Storage Bin	\$ 1,039
38	Substation No 2	\$ 2,524
39	Gabion Baskets	\$ 1,488
40	Pace Fan Culvert	\$ 1,691
41	Pace Fan & Generators	\$ 52,618
42	Pace Fan Portal	\$ 5,766
43	Refuse Pile	\$ 30,704
44	Refuse Site	\$ 14,463
45	Degas Well G2	\$ 10,759
46	Degas Well G3	\$ 5,588
47	Degas Well G4	\$ 5,850
48	Degas Well G-5	\$ 7,972
49	Degas Well G 6	\$ 3,242
50	Degas Well G-7	\$ 6,109
51	Degas Well G-9	\$ 7,912
52	Degas Well G-10	\$ 8,143
53	Degas Well G-11	\$ 4,077
54	Degas Well G-12	\$ 5,783
55	Degas Well G-13	\$ 9,262
56	Degas Well G-14	\$ 7,463
57	Degas Well G-15	\$ 5,464
58	Degas Well G-16	\$ 7,385
59	Degas Well G-17	\$ 7,200
60	Degas Well G-18	\$ 15,158
61	Degas Well G-19	\$ 9,142
62	Degas Well G-22 & Access Road	\$ 15,993
63	Degas Well G-25	\$ 9,067
64	Degas Well G-26	\$ 8,441
65	Degas Well G-30	\$ 8,917
66	Degas Well G-31	\$ 18,881
67	AMV Road	\$ 47,689
Total		\$ 824,974

~~\$ 824,974~~
\$ 871,225

Phase I & II Bond Release of Degas Wells Breakout

Description	Phase I Bond Release 60%	Phase II Bond Release 40%	Total
Degas Well G2	\$ 6,455	\$ 4,304	\$ 10,759
Degas Well G3	\$ 3,363	\$ 2,225	\$ 5,588
Degas Well G4	\$ 3,510	\$ 2,340	\$ 5,850
Degas Well G-5	\$ 4,783	\$ 3,189	\$ 7,972
Degas Well G 6	\$ 1,945	\$ 1,297	\$ 3,242
Degas Well G-7	\$ 3,665	\$ 2,444	\$ 6,109
Degas Well G-9	\$ 4,747		\$ 4,747
Degas Well G-10	\$ 4,886	\$ 3,257	\$ 8,143
Degas Well G-11			
Degas Well G-12	\$ 3,470	\$ 2,313	\$ 5,783
Degas Well G-13	\$ 5,557	\$ 3,705	\$ 9,262
Degas Well G-14	\$ 4,478	\$ 2,985	\$ 7,463
Degas Well G-15			
Degas Well G-16	\$ 4,431		\$ 4,431
Degas Well G-17			
Degas Well G-18	\$ 9,095	\$ 6,063	\$ 15,158
Degas Well G-19	\$ 5,485		\$ 5,485
Degas Well G-22 & Access Road	\$ 9,596		\$ 9,596
Degas Well G-25	\$ 5,440		\$ 5,440
Degas Well G-26	\$ 5,065		\$ 5,065
Degas Well G-30	\$ 5,350		\$ 5,350
Degas Well G-31	\$ 11,329	\$ 7,552	\$ 18,881
AMV Road	\$ 10,086		\$ 10,086
Total	\$ 102,640	\$ 41,684	\$ 144,324

~~\$ 102,640~~ ~~\$ 41,684~~ ~~\$ 144,324~~
\$ 105,863 **\$ 37,109** **\$ 142,972**

TOTAL with Phase I & II Bond Release Applied

Total with Phase I & II Bond Release	\$ 690,650
	\$ 728,253

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
1	Mine Belt BC-1																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0020	0.28	/CF						62800					CF		62800	CF	
	No interior Wall Deduct		02 41 16 13 0750	50%														0.5	31400	\$ 8,792
	Structure's Vol. Demolished																		1163	CY
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight																			
	Truck's Capacity										12	52								
	Haulage										3.3	16								
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	691	/day															
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	Trhv	40.05	HR															
	Disposal Cost Steel																			
	Subtotal																			\$ 10,526
	Equipment's Disposal Cost																			
	Dismantling Cost																			
	Equipment's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			\$ -
	Concrete Demolition																			
	Demolition Cost	Foundations <15"	Nielson '14	13.75	/CY						20									
	Concrete's Vol. Demolished																			
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY															
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	31 23 23.20 3014	2.26	/CY						26									
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY															
	Subtotal																			\$ 594
	Total																			\$ 11,120

NOTES

Assumes 6" thick concrete unreinforced slab
 Assumes no interior walls

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
2	Transfer Building																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0020	0.28	/CF						104618					CF		104618	CF	
	Structure's Vol. Demolished	No interior Wall Deduct	02 41 16 13 0750	50%													0.5	52309		\$ 14,647
	Rubble's Weight (exclude steel)																	1937.37037	CY	
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight											50				TON				
	Truck's Capacity										12	16			3	CY Trips				
	Haulage										3.1					CY				
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	691	/day										1	DAY		1	DAY	\$ 691
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	Trhv	40.05	HR										8	HR		8	HR	\$ 320
	Disposal Cost Steel																			
	No interior Wall Deduct																			\$ -
	Subtotal																			\$ 15,658
	Equipment's Disposal Cost																			
	Dismantling Cost																			
	Equipment's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			\$ -
	Concrete Demolition																			
	Demolition Cost	Foundations <15"	Nielson '14	13.75	/CY						229					CY		229	CY	\$ 3,149
	Concrete's Vol. Demolished																1.3	298	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY													298	CY	\$ 286
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. tri	31 23 23.20 3014	2.26	/CY						298							298	CY	\$ 673
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY													298	CY	\$ 2,694
	Subtotal																			\$ 6,802
	Total																			\$ 22,460

NOTES

Assumes 6" thick concrete unreinforced slab
 Assumes no interior walls

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
3	Feed Belt BC 2																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0020	0.28	/CF						47438					CF		47438	CF	
	Structure's Vol. Demolished	No interior Wall Deduct	02 41 16 13 0750	50%													0.5	23719		\$ 6,641
	Rubble's Weight (exclude steel)																	878.5	CY	
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight											30				TON				
	Truck's Capacity										12	16			3	CY Trips				
	Haulage										1.9					CY				
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	691	/day									0.6		DAY		1	DAY	\$ 691
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	Trhv	40.05	HR									4.8		HR		4.8	HR	\$ 192
	Disposal Cost Steel																			
	No interior Wall Deduct																			
	Subtotal																			\$ 7,524
	Equipment's Disposal Cost																			
	Dismantling Cost																			
	Equipment's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			\$ -
	Total																			\$ 7,524

NOTES
Assumes no interior walls

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	
4	Stack Tubes 2																				
	Structure's Demolition Cost																				
	Structure's Vol. Demolished																				
	Rubble's Weight (exclude steel)																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Steel Truck																				
	Transportation Cost Steel Truck Drive																				
	Disposal Cost Steel																				
	Subtotal																			\$ -	
	Equipment 's Disposal Cost																				
	Dismantling Cost																				
	Equipment 's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																			\$ -	
	Concrete Demolition																				
	Demolition Cost	Foundations <15"	Nielson '14	13.75	/CY						158					CY		158	CY	\$ 2,173	
	Concrete's Vol. Demolished																	1.3	205	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY														205	CY	\$ 197
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 3014	2.26	/CY						205								205	CY	\$ 463
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY														205	CY	\$ 1,853
	Subtotal																				\$ 4,686
	Total																				\$ 4,686

NOTES

Assumes 6" thick concrete unreinforced slab

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
5	Head House 1																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0020	0.28	/CF						23878					CF		23878	CF	
	Structure's Vol. Demolished	No interior Wall Deduct	02 41 16 13 0750	50%													0.5	11939		\$ 3,343
	Rubble's Weight (exclude steel)																	442.2	CY	
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight											10				TON				
	Truck's Capacity										12	16			3	CY Trips				
	Haulage										0.6					CY				
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	691	/day									0.2		DAY		1	DAY	\$ 691
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	Trhv	40.05	HR									1.6		HR		1.6	HR	\$ 64
	Disposal Cost Steel																			
	No interior Wall Deduct																			
	Subtotal																			\$ 4,098
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			\$ -
	Total																			\$ 4,098

NOTES

Assumes no interior walls

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	
6	Transfer Belt BC 2																				
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0020	0.28	/CF						30000					CF		30000	CF		
	Structure's Vol. Demolished	No interior Wall Deduct	02 41 16 13 0750	50%													0.5	15000		\$ 4,200	
	Rubble's Weight (exclude steel)																	555.6	CY		
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight											20				TON		20	TON		
	Truck's Capacity										12	16			3	CY Trips					
	Haulage										1.3					CY					
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	691	/day									0.4		DAY		1	DAY	\$ 691	
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	TRHV	40.05	HR									3.2		HR		3.2	HR	\$ 128	
	Disposal Cost Steel																				
	Subtotal																			\$ 5,019	
	Equipment 's Disposal Cost																				
	Dismantling Cost																				
	Equipment 's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																			\$ -	
	Total																			\$ 5,019	

NOTES

Assumes no interior walls

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
7	Head House 2																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0020	0.28	/CF						4436					CF		4436	CF	
	Structure's Vol. Demolished	No interior Wall Deduct	02 41 16 13 0750	50%														0.5	2218	\$ 621
	Rubble's Weight (exclude steel)																		82.1	CY
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight											10				TON				
	Truck's Capacity										12	16			3	CY Trips				
	Haulage										0.6					CY				
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	691	/day									0.2		DAY		1	DAY	\$ 691
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	trhv	40.05	HR									1.6		HR		1.6	HR	\$ 64
	Disposal Cost Steel																			
	No interior Wall Deduct																			
	Subtotal																			\$ 1,376
	Equipment's Disposal Cost																			
	Dismantling Cost																			
	Equipment's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			\$ -
	Total																			\$ 1,376

NOTES
Assumes no interior walls

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	
8	Reclaim Tunnel																				
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0020	0.28	/CF						18774					CF		18774	CF		
	Structure's Vol. Demolished	No interior Wall Deduct	02 41 16 13 0750	50%													0.5	9387		\$ 2,628	
	Rubble's Weight (exclude steel)																	347.7	CY		
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight											32				TON					
	Truck's Capacity										12	16			3	CY Trips					
	Haulage										2					CY					
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	691	/day									0.7		DAY		1	DAY	\$ 691	
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	TRHV	40.05	HR									5.6		HR		5.6	HR	\$ 224	
	Disposal Cost Steel																				
	No interior Wall Deduct																				
	Subtotal																			\$ 3,543	
	Equipment 's Disposal Cost																				
	Dismantling Cost																				
	Equipment 's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																			\$ -	
	Concrete Demolition																				
	Demolition Cost	Foundations <15"	Nielson '14	13.75	/CY						1182					CY		1182	CY	\$ 16,253	
	Concrete's Vol. Demolished																1.3	1537	CY	\$ -	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY													1537	CY	\$ 1,476	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 3014	2.26	/CY						1537					CY		1537	CY	\$ 3,474	
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY													1537	CY	\$ 13,894	
	Subtotal																			\$ 35,097	
	Total																			\$ 38,640	

NOTES

Assumes 6" thick concrete unreinforced slab
 Assumes no interior walls

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
9	Reclaim Belt BC 4																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0020	0.28	/CF						35180					CF		35180	CF	
	Structure's Vol. Demolished	No interior Wall Deduct	02 41 16 13 0750	50%													0.5	17590		\$ 4,925
	Rubble's Weight (exclude steel)																	651.5	CY	
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight											40				TON				
	Truck's Capacity										12	16			3	CY Trips				
	Haulage										2.5					CY				
	Transportation Cost Steel Tru	Truck dump 16 ton payload	01 54 33 20 5300	691	/day										0.8	DAY		1	DAY	\$ 691
	Transportation Cost Steel Tru	Truck Driver, Heavy	TRHV	40.05	HR										6.4	HR		6.4	HR	\$ 256
	Disposal Cost Steel																			
	No interior Wall Deduct																			
	Subtotal																			\$ 5,872
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			\$ -
	Concrete Demolition																			
	Demolition Cost	Foundations <15"	Nielson '14	13.75	CY						39					CY		39	CY	\$ 536
	Concrete's Vol. Demolished																1.3	51	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY													51	CY	\$ 49
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	31 23 23.20 3014	2.26	/CY						51					CY		51	CY	\$ 115
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY													51	CY	\$ 461
	Subtotal																			\$ 1,161
	Total																			\$ 7,033

NOTES
 Assumes 6" thick concrete unreinforced slab
 Assumes no interior walls
 Truck rental totaled for entire sheet

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
10	Escape Tunnel 60 inch																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0020	0.28	/CF						2827					CF		2827	CF	
	Structure's Vol. Demolished	No interior Wall Deduct	02 41 16 13 0750	50%													0.5	1413.5		\$ 396
	Rubble's Weight (exclude steel)																	52.4	CY	
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight											4				TON				
	Truck's Capacity										12	16				CY Trips				
	Haulage										0.3					CY				
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	691	/day									0.1		DAY		1	DAY	\$ 691
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	TRHV	40.05	HR									0.8		HR		0.8	HR	\$ 32
	Disposal Cost Steel																			
	No interior Wall Deduct																			
	Subtotal																			\$ 1,119
	Total																			\$ 1,119

NOTES

Assumes no interior walls

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	
11	Crusher Building																				
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0020	0.28	/CF						93305					CF		93305	CF		
	Structure's Vol. Demolished	No interior Wall Deduct	02 41 16 13 0750	50%														0.5	46652.5	\$ 13,063	
	Rubble's Weight (exclude steel)																		1727.9	CY	
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight											100				TON		100	TON		
	Truck's Capacity	12 CY (16 Ton) Dump Truck									12	16			3	CY Trips					
	Haulage										6.3										
	Transportation Cost Steel Tru	Truck dump 16 ton payload	01 54 33 20 5300	691	/day										2.1	DAY		3	DAY	\$ 2,073	
	Transportation Cost Steel Tru	Truck Driver, Heavy	TRHV	40.05	HR										16.8	HR		16.8	HR	\$ 673	
	Disposal Cost Steel																				
	No interior Wall Deduct																				
	Subtotal																			\$ 15,809	
	Equipment's Disposal Cost																				
	Dismantling Cost																				
	Equipment's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																			\$ -	
	Concrete Demolition																				
	Demolition Cost	Foundations <15"	Nielson '14	13.75	/CY						91					CY		91	CY	\$ 1,251	
	Concrete's Vol. Demolished																	1.3	118	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY														118	CY	\$ 113
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	31 23 23.20 3014	2.26	/CY						118								118	CY	\$ 267
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY														118	CY	\$ 1,067
	Subtotal																			\$ 2,698	
	Total																			\$ 18,507	

NOTES
 Assumes 6" thick concrete unreinforced slab
 Assumes no interior walls

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	
12	Truck Loadout Belt BC 5																				
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0020	0.28	/CF						30899					CF		30899	CF		
	Structure's Vol. Demolished	No interior Wall Deduct	02 41 16 13 0750	50%													0.5	15449.5		\$ 4,326	
	Rubble's Weight (exclude steel)																	572.2	CY		
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight											20				TON		20	TON		
	Truck's Capacity										12	16		3		CY Trips					
	Haulage										1.3					CY					
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	691	/day									0.4		DAY		1	DAY	\$ 691	
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	TRHV	40.05	HR									3.2		HR		3.2	HR	\$ 128	
	Disposal Cost Steel																				
	No interior Wall Deduct																				
	Subtotal																			\$ 5,145	
	Equipment 's Disposal Cost																				
	Dismantling Cost																				
	Equipment 's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																			\$ -	
	Concrete Demolition																				
	Demolition Cost	Foundations <15"	Nielson '14	13.75	/CY						39					CY		39	CY	\$ 536	
	Concrete's Vol. Demolished																1.3	51	CY		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY													51	CY	\$ 49	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 3014	2.26	/CY						51					CY		51	CY	\$ 115	
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY													51	CY	\$ 461	
	Subtotal																			\$ 1,161	
	Total																			\$ 6,306	

NOTES

Assumes 6" thick concrete unreinforced slab
 Assumes no interior walls

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
13	Truck Loadout and Scale																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0020	0.28	/CF						74976					CF		74976	CF	
	Structure's Vol. Demolished	No interior Wall Deduct	02 41 16 13 0750	50%													0.5	37488		\$ 10,497
	Rubble's Weight (exclude steel)																	1388.4	CY	
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight											50				TON		50	TON	
	Truck's Capacity										12	16			3	CY Trips				
	Haulage										3.1					CY				
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	691	/day										1	DAY		1	DAY	\$ 691
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	TRHV	40.05	HR										8	HR		8	HR	\$ 320
	Disposal Cost Steel																			
	No interior Wall Deduct																			
	Subtotal																			\$ 11,508
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			\$ -
	Concrete Demolition																			
	Demolition Cost	Foundations <15"	Nielson '14	13.75	/CY						159					CY		159	CY	\$ 2,186
	Concrete's Vol. Demolished																1.3	207	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY													207	CY	\$ 199
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd. trip	31 23 23.20 3014	2.26	/CY						207					CY		207	CY	\$ 468
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY													207	CY	\$ 1,871
	Subtotal																			\$ 4,724
	Total																			\$ 16,232

NOTES

Assumes 6" thick concrete unreinforced slab
 Assumes no interior walls

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	
14	Bathhouse																				
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0020	0.28	/CF						416365					CF		416365	CF		
	Structure's Vol. Demolished	No interior Wall Deduct	02 41 16 13 0750	50%														0.5	208182.5	\$ 58,291	
	Rubble's Weight (exclude steel)																		7710.5	CY	
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight											107									
	Truck's Capacity										12	16			3	CY Trips					
	Haulage										6.7					CY					
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	691	/day									2.2		DAY		3	DAY	\$ 2,073	
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	TRHV	40.05	HR									17.6		HR		17.6	HR	\$ 705	
	Disposal Cost Steel																				
	Subtotal																				\$ 61,069
	Equipment 's Disposal Cost																				
	Dismantling Cost																				
	Equipment 's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																				\$ -
	Concrete Demolition																				
	Demolition Cost	Foundations <15"	Nielson '14	13.75	/CY						524					CY		524	CY	\$ 7,205	
	Concrete's Vol. Demolished																	1.3	681	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY														681	CY	\$ 654
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. md. trip	31 23 23.20 3014	2.26	/CY						681					CY		681	CY	\$ 1,539	
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY														681	CY	\$ 6,156
	Subtotal																				\$ 15,554
	Total																				\$ 76,623

NOTES

Assumes 6" thick concrete unreinforced slab
 Assumes no interior walls

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	
15	Substation																				
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0020	0.28	/CF						4000					CF		4000	CF		
	Structure's Vol. Demolished	No interior Wall Deduct	02 41 16 13 0750	50%														0.5	2000	\$ 560	
	Rubble's Weight (exclude steel)																		74.1	CY	
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight											50				TON			50	TON	
	Truck's Capacity										12	16			3	CY Trips					
	Haulage										3.1					CY					
	Transportation Cost Steel Truck	Truck dump 16 ton Payload	01 54 33 20 5300	691	/day										1	DAY			1	DAY	\$ 691
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	TRHV	40.05	HR										8	HR			8	HR	\$ 320
	Disposal Cost Steel																				
	No interior Wall Deduct																				
	Subtotal																				\$ 1,571
	Equipment 's Disposal Cost																				
	Dismantling Cost																				
	Equipment 's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																				\$ -
	Concrete Demolition																				
	Demolition Cost	Foundations <15"	Nielson '14	13.75	/CY						24					CY			24	CY	\$ 330
	Concrete's Vol. Demolished																	1.3	31	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY														31	CY	\$ 30
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 3014	2.26	/CY						31					CY			31	CY	\$ 70
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY														31	CY	\$ 280
	Subtotal																				\$ 710
	Total																				\$ 2,281

NOTES

Assumes 6" thick concrete unreinforced slab
 Assumes no interior walls

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
16	Power Lines and Poles																			
	Structure's Demolition Cost	Dugout Power line	26 05 05 10 1900	19.6	/CLF	1937										CLF		19.37	CLF	\$ 380
	Structure's Vol. Demolished																			
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			\$ 380
	Power Poles																			
	Equipment 's Disposal Cost	Dugout Power Poles	02 41 13.80 0100	204	/EA										12	EA		12	EA	\$ 2,448
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			\$ 2,448
	Total																			\$ 2,828

NOTES

CLF=100 linear ft

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
17	Retaining Wall																			
	Structure's Demolition Cost																			
	Structure's Vol. Demolished																			
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			\$ -
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			\$ -
	Concrete Demolition																			
	Demolition Cost	Foundations <15"	Nielson '14	13.75	/CY						30					CY		30	CY	\$ 413
	Concrete's Vol. Demolished																1.3	39	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY													39	CY	\$ 37
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 3014	2.26	/CY						39					CY		39	CY	\$ 88
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY													39	CY	\$ 353
	Subtotal																			\$ 891
	Total																			\$ 891

NOTES
 Assumes 6" thick concrete unreinforced slab
 4/23/15 Dugout states concrete retaining wall

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
18	Gabion Wall																			
	Structures Volume	Gabion Removal	02 41 13 90 1300	17.83	ea						880							880	ea	\$ 15,690
	Demolition Time 60 CY/ DAY																			
	Structure's Demolition Cost																			
	Structure's Vol. Demolished																			
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive	Truck Driver, Heavy	Trhv	40.05	HR									117		HR		117	HR	\$ 4,686
	Disposal Cost Non Steel																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Hilfiker Mesh	Select Demo disposal loading and haul	02 41 19.19 5000	0.87	/CY													513	CY	\$ 446
	Load Mesh into Dumpster	Front End Loader 3 CY	31 23 16 42 1601	0.96	/CY													513	CY	\$ 492
	Disposal Cost Steel																			
	Subtotal																			\$ 21,314
	Total																			\$ 21,314
	NOTES																			

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	
19	Pump House																				
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0020	0.28	/CF						2219					CF		2219	CF		
	Structure's Vol. Demolished	No interior Wall Deduct	02 41 16 13 0750	50%														0.5	1109.5	\$ 311	
	Rubble's Weight (exclude steel)																		41.1	CY	
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight											5				TON		5	TON		
	Truck's Capacity										12	16			3	CY Trips					
	Haulage										0.3					CY					
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	691	/day									0.1		DAY		1	DAY	\$ 691	
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	TRHV	40.05	HR									0.8		HR		0.8	HR	\$ 32	
	Disposal Cost Steel																				
	No interior Wall Deduct																				
	Subtotal																			\$ 1,034	
	Equipment 's Disposal Cost																				
	Dismantling Cost																				
	Equipment 's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																			\$ -	
	Concrete Demolition																				
	Demolition Cost	Foundations <15"	Nielson '14	13.75	/CY						82					CY		82	CY	\$ 1,128	
	Concrete's Vol. Demolished																	1.3	107	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY														107	CY	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 3014	2.26	/CY						107					CY		107	CY	\$ 242	
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY														107	CY	
	Subtotal																			\$ 2,440	
	Total																			\$ 3,474	

NOTES

Assumes 6" thick concrete unreinforced slab
 Assumes no interior walls

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	
20	Paved Road																				
	Structure's Demolition Cost																				
	Structure's Vol. Demolished																				
	Rubble's Weight (exclude steel)																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Steel Truck																				
	Transportation Cost Steel Truck Drive																				
	Disposal Cost Steel																				
	Subtotal																				\$ -
	Equipment's Disposal Cost																				
	Dismantling Cost																				
	Equipment's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																				\$ -
	Asphalt Demolition																				
	Demolition Cost	Pavement Removal 4-6"	02 41 13 17 5050	7.12	/SY					19500						SY		19500	SY	\$ 138,840	
	Concrete's Vol. Demolished																				
	Loading Cost																				
	Transportation Cost																				
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY						1273					CY		1273	CY	\$ 11,508	
	Subtotal																				\$ 150,348
	Total																				\$ 150,348

NOTES

4/23/15 Dugout is burying the concrete in place, no haul cost associated with demo

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
21	Stream Culvert 72 inch																			
	Excavate Culvert	Excavation Bulk Bank 3 CY	31 23 16 42 1601	0.96	/CY	2350	12	12								CF		12533	CY	\$ 12,032
	Backfill Culvert	Backfill structural 300 HP	31 23 23 14 5020	0.84	/CY	2350	12	12								CF		12533	CY	\$ 10,528
	Structure's Vol. Demolished																	464.2	CY	
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight											94				TON		94	TON	
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	691	/day									5.9		DAY		6	DAY	\$ 4,146
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	TRHV	40.05	HR									47		HR		47	HR	\$ 1,882
	Disposal Cost Steel																			
	No interior Wall Deduct																			
	Subtotal																			\$ 28,588
	Total																			\$ 28,588

NOTES

Assumes no interior walls

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
22	Water Tanks																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0020	0.28	/CF						241					CF		241	CF	
	Structure's Vol. Demolished	No interior Wall Deduct	02 41 16 13 0750	50%													0.5	120.5		\$ 34
	Rubble's Weight (exclude steel)																	4.5	CY	
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight											39				TON		39	TON	
	Truck's Capacity										12	16			3	CY Trips				
	Haulage										2.4					CY				
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	691	/day									0.8		DAY		1	DAY	\$ 691
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	TRHV	40.05	HR									6.4		HR		6.4	HR	\$ 256
	Disposal Cost Steel																			
	No interior Wall Deduct																			
	Subtotal																			\$ 981
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			\$ -
	Concrete Demolition																			
	Demolition Cost	Foundations <15"	Nielson '14	13.75	/CY						50					CY		50	CY	\$ 688
	Concrete's Vol. Demolished																1.3	65	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY													65	CY	\$ 62
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 3014	2.26	/CY						65					CY		65	CY	\$ 147
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY													65	CY	\$ 588
	Subtotal																			\$ 1,485
	Total																			\$ 2,466

NOTES

Assumes 6" thick concrete unreinforced slab
 Assumes no interior walls

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	
23	Rock Dust Bin																				
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0020	0.28	/CF						2265					CF		2265	CF		
	Structure's Vol. Demolished	No interior Wall Deduct	02 41 16 13 0750	50%													0.5	1132.5		\$ 317	
	Rubble's Weight (exclude steel)																	41.9	CY		
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight											5				TON		5	TON		
	Truck's Capacity										12	16			3	CY Trips					
	Haulage										0.3					CY					
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	691	/day									0.1		DAY		1	DAY	\$ 691	
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	TRHV	40.05	HR									0.8		HR		0.8	HR	\$ 32	
	Disposal Cost Steel																				
	No interior Wall Deduct																				
	Subtotal																			\$ 1,040	
	Equipment 's Disposal Cost																				
	Dismantling Cost																				
	Equipment 's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																			\$ -	
	Concrete Demolition																				
	Demolition Cost	Foundations <15"	Nielson '14	13.75	/CY						12					CY		12	CY	\$ 165	
	Concrete's Vol. Demolished																1.3	15.6	CY		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY													15.6	CY	\$ 15	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 3014	2.26	/CY						15.6					CY		15.6	CY	\$ 35	
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY													15.6	CY	\$ 141	
	Subtotal																			\$ 356	
	Total																			\$ 1,396	

NOTES

Assumes 6" thick concrete unreinforced slab
 Assumes no interior walls

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	
24	Fuel Tank and Fuel Station																				
	Structure's Demolition Cost	Steel Bid. Large	02 41 16 13 0020	0.28	/CF						3945					CF		3945	CF		
	Structure's Vol. Demolished	No interior Wall Deduct	02 41 16 13 0750	50%													0.5	1972.5		\$ 552	
	Rubble's Weight (exclude steel)																	73.1	CY		
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight											7				TON		7	TON		
	Truck's Capacity										12	16			3	CY Trips					
	Haulage										0.4					CY					
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	691	/day											DAY		1	DAY	\$ 691	
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	TRHV	40.05	HR											HR		0.8	HR	\$ 32	
	Disposal Cost Steel																				
	Subtotal																			\$ 1,275	
	Equipment's Disposal Cost																				
	Dismantling Cost																				
	Equipment's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																			\$ -	
	Concrete Demolition																				
	Demolition Cost	Foundations <15"	Nielson '14	13.75	/CY						18.66					CY		18.66	CY	\$ 257	
	Concrete's Vol. Demolished																1.3	24.3	CY		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY													24.3	CY	\$ 23	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 3014	2.26	/CY						24.3					CY		24.3	CY	\$ 55	
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY													24.3	CY	\$ 220	
	Subtotal																			\$ 555	
	Total																			\$ 1,830	

NOTES

Assumes 6" thick concrete unreinforced slab
 Assumes no interior walls

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
25	Holding Tank																			
	Structure's Demolition Cost	Septic Tanks & Related Components	02 41 13 44 0600	2015	EA													1		\$ 2,015
	Structure's Vol. Demolished																			
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel	On site disposal	02 41 16 17 4200	9.04	CY						50					CY		50	CY	\$ 452
	Steel's Weight											2				TON		2	TON	
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	691	/day									0.1	51.76	HR		1	day	\$ 691
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	Trhv	40.05	HR									1		HR		1	HR	\$ 40
	Disposal Cost Steel																			
	Subtotal																			\$ 3,198
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			\$ -
	Total																			\$ 3,198

NOTES

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	
26	Ventilation Fan																				
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0020	0.28	/CF						6850					CF		6850	CF		
	Structure's Vol. Demolished	No interior Wall Deduct	02 41 16 13 0750	50%														0.5	3425		\$ 959
	Rubble's Weight (exclude steel)																		126.9	CY	
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight											10				TON			10	TON	
	Truck's Capacity										12	16			3	CY Trips					
	Haulage										0.6					CY					
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	691	/day									0.2		DAY			1	DAY	\$ 691
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	Trhv	40.05	HR									1.6		HR			1.6	HR	\$ 64
	Disposal Cost Steel																				
	No interior Wall Deduct																				
	Subtotal																				\$ 1,714
	Equipment's Disposal Cost																				
	Dismantling Cost																				
	Equipment's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																				\$ -
	Total																				\$ 1,714

NOTES

Assumes no interior walls

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
27	Magnet																			
	Structure's Demolition Cost	Steel Building Small	02 41 16 13 0500	0.3	CF						35					CF		35		
	Structure's Vol. Demolished	No interior Wall Deduct	02 41 16 13 0750	50%													0.5	17.5		\$ 5
																		0.6	CY	
	Rubble's Weight (exclude steel)	Truck Mounted Crane 55 ton	01 54 33 60 2600	76.8	HR										2	HR		2	HR	\$ 154
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel	Dump Charges	02 41 19.20 0100	74	CY													35	CY	2590
	Steel's Weight											2				TON		2	TON	
	Truck's Capacity										12	16			3	CY Trips				
	Haulage										0.1					CY				
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	691	/day									0.03		DAY		1	DAY	\$ 691
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	Trhv	40.05	HR									0.2		HR		0.2	HR	\$ 8
	Disposal Cost Steel																			
	Subtotal																			\$ 3,448
	Equipment's Disposal Cost																			
	Dismantling Cost																			
	Equipment's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			\$ -
	Concrete Demolition																			
	Demolition Cost	Foundations <15"	Nielson '14	13.75	/CY						17					CY		17	CY	\$ 234
	Concrete's Vol. Demolished																1.3	22.1	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY													22.1	CY	\$ 21
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. md. trip	31 23 23.20 3014	2.26	/CY						22.1					CY		22.1	CY	\$ 50
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY													22.1	CY	\$ 200
	Subtotal																			\$ 505
	Total																			\$ 3,953

NOTES
 Assumes 6" thick concrete unreinforced slab
 Assumes no interior walls

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
28	Water System																			
	Excavate Pipe	Excavation Bulk Bank 3 CY	31 23 16 42 1601	0.96	/CY	8450	2	4								FT		2504	CY	\$ 2,404
	Pipe Removal	Pipe removal	02 41 13.38 1700	2.71	/LF	8450										FT		8450		\$ 22,900
	Backfill Trench	Backfill structural 300 HP	31 23 23 14 5020	0.84	/CY	8450	2	4								FT		2504	CY	\$ 2,103
	Structure's Vol. Demolished																			
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			\$ 27,407
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			\$ -
	Total																			\$ 27,407
NOTES																				

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
29	Sewage System																			
	Excavate Pipe	Excavation Bulk Bank 3 CY	31 23 16 42 1601	0.96	/CY	2832	2	4								FT		839	CY	\$ 805
	Pipe Removal	Pipe removal	02 41 13.38 1700	2.71	/FT	2832										FT		2832		\$ 7,675
	Backfill Trench	Backfill structural 300 HP	31 23 23 14 5020	0.84	/CY	2832	2	4								FT		839	CY	\$ 705
	Structure's Demolition Cost																			
	Structure's Vol. Demolished																			
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			\$ 9,185
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			\$ -
	Total																			\$ 9,185

NOTES

See Dugout Canyon Mine Leach Field Amendment pg 5-13 states sewer pipeline and leach field piping and concrete boxes will be left in place as part of the final reclamation.

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	
30	Storage Containers (8)																				
	Load, Transport, and Return Trip	Truck Mounted Crane 55 ton	01 54 33 60 2600	76.8	HR										16	HR		16		\$ 1,229	
	Structure's Demolition Cost	Mixed Materials Bld. Large	02 41 16 13 0100	0.3	/CF	40	10	10								8 EA		32000	CF	\$ 9,600	
	Structure's Vol. Demolished																	0.35	415	CY	
	Rubble's Weight (exclude steel)																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel	Building Construction Materials	02 41 19.19 0400	4	/CY							107							107	CY	\$ 428
	Steel's Weight																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Steel Truck																				
	Transportation Cost Steel Truck Drive																				
	Disposal Cost Steel																				
	Subtotal																				\$ 11,257
	Equipment's Disposal Cost																				
	Dismantling Cost																				
	Equipment's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																				\$ -
	Total																				\$ 11,257

NOTES

All Storage Containers will be salvaged

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
31	Gilson Well																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0020	0.28	/CF						800					CF		800	CF	
	Structure's Vol. Demolished	No interior Wall Deduct	02 41 16 13 0750	50%													0.5	400		\$ 112
	Rubble's Weight (exclude steel)																	14.8	CY	
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight											0.5				TON		0.5	TON	
	Truck's Capacity										12	16			3	CY Trips				
	Haulage										1					CY				
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	691	/day									0.3		DAY		1	DAY	\$ 691
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	TRHV	40.05	HR									2.4		HR		2.4	HR	\$ 96
	Disposal Cost Steel																			
	Subtotal																			\$ 899
	Plug Well Casing	Concrete Ready Mix 8000 PSI	03 31 13.35 0412	123	CY						3					CY		3	CY	\$ 369
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			\$ 369
	Concrete Demolition																			
	Demolition Cost	Foundations <15"	Nielson '14	13.75	/CY						55					CY		55	CY	\$ 756
	Concrete's Vol. Demolished																1.3	71.5	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY													71.5	CY	\$ 69
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. md. trip	31 23 23.20 3014	2.26	/CY						71.5					CY		71.5	CY	\$ 162
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY													71.5	CY	\$ 646
	Subtotal																			\$ 1,633
	Total																			\$ 2,901

NOTES

Assumes 6" thick concrete unreinforced slab
 Assumes no interior walls

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
32	Switch House																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0020	0.28	/CF						14400					CF		14400	CF	\$ 4,032
	Structure's Vol. Demolished																	533.3	CY	
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight											1				TON		1	TON	
	Truck's Capacity										12	16			3	CY Trips				
	Haulage										0.1					CY				
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	691	/day									0.03		DAY		1	DAY	\$ 691
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	TRHV	40.05	HR									0.2		HR		0.2	HR	\$ 8
	Disposal Cost Steel																			
	Subtotal																			\$ 4,731
	Equipment's Disposal Cost																			
	Dismantling Cost																			
	Equipment's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			\$ -
	Concrete Demolition																			
	Demolition Cost	Foundations <15"	Nielson '14	13.75	/CY						55					CY		55	CY	\$ 756
	Concrete's Vol. Demolished																	1.3	71.5	CY
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY														71.5	CY
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. md. trip	31 23 23.20 3014	2.26	/CY						71.5					CY		71.5	CY	\$ 162
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY														71.5	CY
	Subtotal																			\$ 1,633
	Total																			\$ 6,364

NOTES

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
33	Portals No																			
	Structure's Demolition Cost	Foundations <15"	Nielson '14	13.75	CY						34				5	EA		170	CY	\$ 2,338
	Loading Cost																			
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Concrete Unit Masonry	Concrete Block, Back Up	04 22 10.14 1250	10.96	/SF						400				5	EA		2000	CY	\$ 21,920
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY						90				5	EA		450	CY	\$ 4,068
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			\$ 28,326
	Total																			\$ 28,326

NOTES

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
34	Storage & Bolts Bin																			
	Structure's Demolition Cost	LG Steel Bldg/include 20 mi haul	02 41 16 13 0020	0.28	/CF						3272					/CF		3272	/CF	\$ 916
	Structure's Vol. Demolished																			
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	691	/day									0.44		DAY		1	DAY	\$ 691
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	Trhvv	40.05	HR										4	HR		4	HR	\$ 160
	Disposal Cost Steel																			
	Subtotal																			\$ 1,767
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			\$ -
	Concrete Demolition																			
	Demolition Cost	Foundations <15"	Nielson '14	13.75	/CY						39.99					CY		39.99	CY	\$ 550
	Concrete's Vol. Demolished																1.3	52	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY													52	CY	\$ 50
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 3014	2.26	/CY						52					CY		52	CY	\$ 118
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY													52	CY	\$ 470
	Subtotal																			\$ 1,188

Total																			\$ 2,955
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NOTES
Assumes 6" thick slab concrete

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
35	Storage Building																			
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0020	0.28	/CF						2284					CF		2284	CF	
	Structure's Vol. Demolished	No interior Wall Deduct	02 41 16 13 0750	50%													0.5	1142		\$ 320
	Rubble's Weight (exclude steel)																	42.3	CY	
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight											6				TON		6	TON	
	Truck's Capacity										12	16				CY Trips				
	Haulage										0.4					CY				
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	691	/day										0.1	DAY		1	DAY	\$ 691
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	TRHV	40.05	HR										0.8	HR		0.8	HR	\$ 32
	Disposal Cost Steel																			
	No interior Wall Deduct																			
	Subtotal																			\$ 1,043
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			\$ -
	Concrete Demolition																			
	Demolition Cost	Foundations <15"	Nielson '14	13.75	/CY						38.4					CY		38.4	CY	\$ 528
	Concrete's Vol. Demolished																1.3	49.9	CY	
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY													49.9	CY	\$ 48
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 3014	2.26	/CY						49.9							49.9	CY	\$ 113
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY													49.9	CY	\$ 451
	Subtotal																			\$ 1,140
	Total																			\$ 2,183

NOTES
Assumes 6" thick slab concrete

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	
36	Sampling System																				
	Structure's Demolition Cost																				
	Structure's Vol. Demolished																				
	Rubble's Weight (exclude steel)																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	691	/day									0.14		DAY		1	DAY	\$ 691	
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	TRHV	40.05	HR									1.1		HR		1.1	HR	\$ 44	
	Disposal Cost Steel																				
	Subtotal																			\$ 735	
	Equipment 's Disposal Cost																				
	Dismantling Cost																				
	Equipment 's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																			\$ -	
	Concrete Demolition																				
	Demolition Cost	Foundations <15"	Nielson '14	13.75	/CY						18					CY		18	CY	\$ 248	
	Concrete's Vol. Demolished																1.3	23.4	CY		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY														23.4	CY	\$ 22
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 3014	2.26	/CY						23.4					CY		23.4	CY	\$ 53	
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY														23.4	CY	\$ 212
	Subtotal																			\$ 535	
	Total																			\$ 1,270	

NOTES
Assumes 6" thick slab concrete

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	
37	Stoker Storage Bin																				
	Structure's Demolition Cost																				
	Structure's Vol. Demolished																				
	Rubble's Weight (exclude steel)																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Steel Truck																				
	Transportation Cost Steel Truck Drive																				
	Disposal Cost Steel																				
	Subtotal																				\$ -
	Equipment 's Disposal Cost																				
	Dismantling Cost																				
	Equipment 's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																				\$ -
	Concrete Demolition																				
	Demolition Cost	Foundations <15"	Nielson '14	13.75	/CY						35					CY		35	CY	\$ 481	
	Concrete's Vol. Demolished																1.3	45.5	CY		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY													45.5	CY	\$ 44	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 3014	2.26	/CY						45.5					CY		45.5	CY	\$ 103	
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY													45.5	CY	\$ 411	
	Subtotal																				\$ 1,039
	Total																				\$ 1,039

NOTES
Assumes 6" thick slab concrete

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	
38	Substation No 2																				
	Structure's Demolition Cost	Mixed Materials Bld. Large	02 41 16 13 0100	0.3	/CF						4000					CF		4000	CF		
	Structure's Vol. Demolished	No interior Wall Deduct	02 41 16 13 0750	50%													0.5	2000		\$ 600	
	Rubble's Weight (exclude steel)																	74.1	CY		
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel	6000 gal. to 8000 gal. tank	02115 200 0310	232	Ea.										1	EA		1	EA	232	
	Steel's Weight																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Steel Truck																				
	Transportation Cost Steel Truck Drive																				
	Disposal Cost Steel																				
	No interior Wall Deduct																				
	Subtotal																			\$ 832	
	Equipment 's Disposal Cost																				
	Dismantling Cost																				
	Equipment 's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																			\$ -	
	Concrete Demolition																				
	Demolition Cost	Foundations <15"	Nielson '14	13.75	/CY						57					CY		57	CY	\$ 784	
	Concrete's Vol. Demolished																1.3	74.1	CY		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY													74.1	CY	\$ 71	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 3014	2.26	/CY						74.1					CY		74.1	CY	\$ 167	
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY													74.1	CY	\$ 670	
	Subtotal																			\$ 1,692	
	Total																			\$ 2,524	

NOTES

Assumes 6" thick slab concrete

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
39	Gabion Baskets																			
	Excavate	Excavation Bulk Bank 3 CY	31 23 16 42 1601	0.96	/CY						88					CY		88		\$ 84
	Support	CLAB	Clab	37.6	HR									8		hr		8 hr		\$ 301
	Disposal	On site disposal	02 41 16 17 4200	9.04	/CY						122					CY		122 CY		\$ 1,103
	See Earthwork																			
	Subtotal																			\$ 1,488
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			\$ -
	Total																			\$ 1,488

NOTES

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
40	Pace Fan Culvert																			
	Excavate Culvert	Excavation Bulk Bank 3 CY	31 23 16 42 1601	0.96	/CY	585	3	8										520	CY	\$ 499
	Backfill Culvert	Backfill structural 300 HP	31 23 23 14 5020	0.84	/CY	585	3	8										520	CY	\$ 437
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Cost Non Steel																			
	Steel's Weight											8.5				ton				
	Truck's Capacity										12	16			3	CY Trips				
	Haulage										0.5					CY				
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	691	/day									0.2		DAY		1	DAY	\$ 691
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	TRHV	40.05	HR									1.6		HR		1.6	HR	\$ 64
	Disposal Cost Steel																			
	Subtotal																			\$ 1,691
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			\$ -
	Total																			\$ 1,691

NOTES

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	
41	Pace Fan & Generators																				
	Structure's Demolition Cost	Steel Bld. Large	02 41 16 13 0020	0.28	/CF	25	25	12								CF		7500	CF		
	Structure's Vol. Demolished	No interior Wall Deduct	02 41 16 13 0750	50%													0.5	3750		\$ 1,050	
	Rubble's Weight (exclude steel)																	138.9	CY		
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	691	/day									1		DAY		1	DAY	\$ 691	
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	TRHV	40.05	HR									8		HR		8	HR	\$ 320	
	Disposal Cost Steel																				
	No interior Wall Deduct																				
	Subtotal																			\$ 2,061	
	Equipment 's Disposal Cost																				
	Ducting	Mechanical equipment heavy	23 05 05.10 3600	780	/ton							35				ton		35	ton	\$ 27,300	
	Fan	Mechanical equipment heavy	23 05 05.10 3600	780	/ton							10				ton		10	ton	\$ 7,800	
	Hilfiker Mesh	Mechanical equipment heavy	23 05 05.10 3600	780	/ton							0.7				ton		0.7	ton	\$ 546	
	Portal plate liner	Mechanical equipment heavy	23 05 05.10 3600	780	/ton							1.2				ton		1.2	ton	\$ 936	
	Total steel weight											46.9									
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01 54 33 20 5300	691	/day									0.6		DAY		0.6	DAY	\$ 415	
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	TRHV	40.05	HR									5		HR		5	HR	\$ 200	
	Subtotal																			\$ 37,197	
	Portal plate liner																				
	Concrete Demolition																				
	Demolition Cost	Foundations <15"	Nielson '14	13.75	/CY							70				CY		70	CY	\$ 963	
	Concrete's Vol. Demolished																1.3	91	CY		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY													91	CY	\$ 87	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 3014	2.26	/CY							91				CY		91	CY	\$ 206	
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY													91	CY	\$ 823	
	Subtotal																			\$ 2,079	
	Generator Pad																				
	Concrete Demolition																				
	Demolition Cost	Foundations <15"	Nielson '14	13.75	/CY							128				CY		128	CY	\$ 1,760	
	Concrete's Vol. Demolished																1.3	166.4	CY		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY													166.4	CY	\$ 160	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 3014	2.26	/CY							166.4				CY		166.4	CY	\$ 376	
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY													166.4	CY	\$ 1,504	
	Subtotal																			\$ 3,800	
	Fan Building																				
	Concrete Demolition																				
	Demolition Cost	Foundations <15"	Nielson '14	13.75	/CY							252				CY		252	CY	\$ 3,465	
	Concrete's Vol. Demolished																1.3	327.6	CY		
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY													327.6	CY	\$ 314	
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rnd. trip	31 23 23.20 3014	2.26	/CY							327.6				CY		327.6	CY	\$ 740	
	Disposal Costs	On site disposal	02 41 16 17 4200	9.04	/CY													327.6	CY	\$ 2,962	
	Subtotal																			\$ 7,481	
	Total																			\$ 52,618	

NOTES

Assume 6" thick slab none reinforced concrete

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
42	Pace Fan Portal																			
	Structure's Demolition Cost	Foundations <15"	Nielson '14	13.75	/CY						90				1	EA		1	EA	\$ 1,238
	Loading Cost	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY						150				1	EA		1	EA	\$ 144
	Rubble's Weight (exclude steel)																			
	Truck's Capacity																			
	Concrete Unit Masonry	Concrete Block, Back Up	04 22 10.14 1250	10.96	/SF						400				1	EA		400		\$ 4,384
	Transportation Cost Non Steel Truck																			
	Transportation Cost Non Steel Drive																			
	Disposal Costs																			
	Steel's Weight																			
	Truck's Capacity																			
	Haulage																			
	Transportation Cost Steel Truck																			
	Transportation Cost Steel Truck Drive																			
	Disposal Cost Steel																			
	Subtotal																			\$ 5,766
	Total																			\$ 5,766

NOTES

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	
43	Refuse Pile																				
	Structure's Demolition Cost																				
	Structure's Vol. Demolished																				
	Rubble's Weight (exclude steel)																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Steel Truck																				
	Transportation Cost Steel Truck Drive																				
	Disposal Cost Steel																				
	Subtotal																				\$ -
	Erosion Control																				
	Riprap	Machine placed rip-rap slope protection	31 37 13 10 0100	52.9	CY						561					CY		561	CY	\$ 29,677	
	Polypropylene Mesh	Polypropylene mesh	31 25 14.16 0100	0.61	SY					1683						SY		1683	SY	\$ 1,027	
	Subtotal																				\$ 30,704
	Concrete Demolition																				
	Demolition Cost																				
	Concrete's Vol. Demolished																				
	Loading Cost																				
	Transportation Cost																				
	Disposal Costs																				
	Subtotal																				\$ -
	Total																				\$ 30,704

NOTES

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
45	Degas Well G2																			
	Grade and Backfill	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY						378					CY		378	CY	\$ 363
	Fill in Mud Pit	Backfill Trench minimal Haul 2 1/4 CY	31 23 16 13 3080	1.8	/CY						1246					CY		1246	CY	\$ 2,243
	Subtotal																			\$ 2,606
	Plug Well Casing	Concrete Ready Mix 8000 psi	03 31 13.35 0412	123	/CY						20					CY		20	CY	\$ 2,460
	Subtotal																			\$ 2,460
	Spread Topsoil	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY						3104					CY		3104	CY	\$ 2,980
	Subtotal																			\$ 2,980
	Fence																			
	Remove Barbed Wire	Fencing Barbed wire 3 strand	02 41 13 60 1600	1.4	/LF	1200										FT		1200	FT	\$ 1,680
	Subtotal																			\$ 1,680
	Support																			
	Foreman	Foreman Average, Outside	Foreman	50.65	per HR									16		hr		16	hr	\$ 810
	4X4 Pickup	Equipment Rental	01 54 33 40 7200	13.95	/HR									16		hr		16	hr	\$ 223
	Subtotal																			\$ 1,033
	Total																			\$ 10,759

NOTES

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
46	Degas Well G3 No 46																			
	Grade and Backfill	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY						412					CY		412	CY	\$ 396
	Fill in Mud Pit	Backfill Trench minimal Haul 2 1/4 CY	31 23 16 13 3080	1.8	/CY						110					CY		110	CY	\$ 198
	Subtotal																			\$ 594
	Plug Well Casing	Concrete Ready Mix 8000 psi	03 31 13.35 0412	123	/CY						21					CY		21	CY	\$ 2,583
	Subtotal																			\$ 2,583
	Spread Topsoil	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY						1182					CY		1182	CY	\$ 1,135
	Subtotal																			\$ 1,135
	Fence																			
	Remove Barbed Wire	Fencing Barbed wire 3 strand	02 41 13 60 1600	1.4	/LF	542										FT		542	FT	\$ 759
	Subtotal																			\$ 759
	Support																			
	Foreman	Foreman Average, Outside	Foreman	50.65	per hr										8	hr		8	hr	\$ 405
	4X4 Pickup	Equipment Rental	01 54 33 40 7200	13.95	/hr										8	hr		8	hr	\$ 112
	Subtotal																			\$ 517
	Total																			\$5,588

NOTES

Remove Page

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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
47	Degas Well G4 No 47																			
	Grade and Backfill	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY						218					CY		218	CY	\$ 209
	Fill in Mud Pit	Backfill Trench Mini Haul 2 1/4 CY	31 23 16 13 3080	1.8	/CY						110					CY		110	CY	\$ 198
	Subtotal																			\$ 407
	Plug Well Casing	Concrete Ready Mix 8000 psi	03 31 13.35 0412	123	/CY											CY		21	CY	\$ 2,583
	Subtotal																			\$ 2,583
	Spread Topsoil	Front end loader 3 CY	31 23 16 42 1601	0.96	/CY						1100					CY		1100	CY	\$ 1,056
	Subtotal																			\$ 1,056
	Fence																			
	Remove Barbed Wire	Fencing, barbed wire, 3 strand - 2011	02 41 13 60 1600	1.4	/LF	551										FT		551	FT	\$ 771
	Subtotal																			\$ 771
	Support																			
	Foreman	Foreman Average, Outside	Foreman	50.65	per HR									16		hr		16	HR	\$ 810
	4X4 Pickup	Equipment Rental	01 54 33 40 7200	13.95	/HR									16		hr		16	HR	\$ 223
	Subtotal																			\$ 1,033
	Total																			\$ 5,850

NOTES

Remove Page

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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
46	Degas Well G-5																			
	Grading and Backfill	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						818					CY		818	CY	\$ 785
	Fill Mud Pit	Backfill Trench Minimal Haul 2 1/4 CY	31 23 16 13 3080	1.8	/CY						110					CY		110	CY	\$ 198
	Plug well Casing	Concrete ready Mix 8000 psi	03 31 13.35 0412	123	/CY						21					CY		21	CY	\$ 2,583
	Spread Topsoil	Front End Loader 3 CY	31 23 16 42 1601	0.96	/CY						1909					CY		1909	CY	\$ 1,833
	Remove Barbed Wire	Fencing Barbed wire 3 strand	02 41 13 60 1600	1.4	/LF	1100										LF		1100	LF	\$ 1,540
	Support																			
	Foreman	Foreman Average, Outside	Foreman	50.65	per HR										16	HR		16	HR	\$ 810
	4X4 Pickup	Equipment Rental	01 54 33 40 7200	13.95	/HR										16	HR		16	HR	\$ 223
	Subtotal																			\$ 7,972
	Equipment's Disposal Cost																			
	Dismantling Cost																			
	Equipment's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			\$ -
	Total																			\$ 7,972
	NOTES																			

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
47	Degas Well G 6																			
	Grading and Backfill	Front End Loader 3 CY	31 23 16 42 1601	0.96							682					CY		682	CY	\$ 655
																CY				
	Fill Mud Pit	Backfill Trench Minimal Haul 2 1/4	31 23 16 42 1601	0.96	/CY						110					CY		110	CY	\$ 106
	Plug Well Casing																			
	Spread Topsoil	Front End Loader 3 CY	31 23 16 42 1601	0.96	/CY						792					CY		792	CY	\$ 760
	Remove Barbed Wire	Fencing Barbed wire 3 strand	02 41 13 60 1600	1.4	/LF	860										LF		860	LF	\$ 1,204
	Support																			
	Foreman	Foreman Average, Outside	Foreman	50.65	per HR									8		HR		8	HR	\$ 405
	4X4 Pickup	Equipment Rental	01 54 33 40 7200	13.95	/HR									8		HR		8	HR	\$ 112
	Subtotal																			\$ 3,242
	Equipment 's Disposal Cost																			
	Dismantling Cost																			
	Equipment 's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			\$ -

Total **\$ 3,242**

NOTES

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
48	Degas Well G-7																			
	Grading and Backfill	Front End Loader 3 CY	31 23 16 42 1601	0.96	/CY						908					CY		908	CY	\$ 872
	Fill Mud Pit	Backfill trench minimal haul 21/4 CY	31 23 16 42 1601	0.96	/CY						430					CY		430	CY	\$ 413
	Plug Well Casing																			
	Spread Topsoil	Front End Loader	31 23 16 42 1601	0.96	/CY						2345					CY		2345	CY	\$ 2,251
	Remove Barbed Wire	Fencing Barbed wire 3 strand	02 41 13 60 1600	1.4	/LF	1100										LF		1100	LF	\$ 1,540
	Subtotal																			\$ 5,076
	Foreman	Foreman Average, Outside	Foreman	50.65	hr									16		hr		16	hr	\$ 810
	4X4 Pickup	Equipment Rental	01 54 33 40 7200	13.95	/HR									16		hr		16	hr	\$ 223
	Dismantling Cost																			
	Equipment's Vol. Demolished																			
	Loading Costs																			
	Transport Costs																			
	Disposal Costs																			
	Subtotal																			\$ 1,033
	Total																			\$ 6,109
NOTES																				

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
49	Degas Well G-9																			
	Grading and Backfill	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						575					CY		575	CY	\$ 552
	Fill Mud Pit	Backfill Trench Minimal Haul 2 1/4 CY	31 23 16 42 1601	0.96	CY						430					CY		430	CY	\$ 413
	Plug Well Casing	Concrete Ready Mix	03 31 13.35 0412	123	CY						21					CY		21	CY	\$ 2,583
	Subtotal																			\$ 3,548
	Spread Topsoil	Front End Loader 3 CY	31 23 16 42 1601	0.96							1574					CY		1574	CY	\$ 1,511
	Subtotal																			\$ 1,511
	Remove Fence	Fencing Barbed Wire 3 Strand	02 41 13 60 1600	1.4	per LF	1300										LF		1300	LF	\$ 1,820
	Subtotal																			\$ 1,820
	Support																			
	Foreman	Foreman Average, Outside	Foreman	50.65	HR									16		HR		16	HR	\$ 810
	4X4 Pickup	Equipment Rental	01 54 33 40 7200	13.95	/HR									16		HR		16	HR	\$ 223
	Subtotal																			\$ 1,033
	Total																			\$ 7,912

NOTES

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
50	Degas Well G-10																			
	Grading and Backfill	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						922					CY				\$ -
	Fill Mud Pit	Backfill Trench Minimal Haul 2 1/4 CY	31 23 16 42 1601	0.96	CY						622					CY		622	CY	\$ 597
	Subtotal																			\$ 597
	Plug Well Casing	Concrete Ready Mix 8000 psi	03 31 13.35 0412	123	CY						21					CY		21	CY	\$ 2,583
	Subtotal																			\$ 2,583
	Spread Topsoil	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						2344					CY		2344	CY	\$ 2,250
	Subtotal																			\$ 2,250
	Remove Fence	Fencing Barbed Wire 3 Strand	02 41 13 60 1600	1.4	LF	1200										LF		1200	LF	\$ 1,680
	Subtotal																			\$ 1,680
	Support																			
	Foreman	Foreman Average, Outside	Foreman	50.65	HR									16		HR		16	HR	\$ 810
	4X4 Pickup	Equipment Rental	01 54 33 40 7200	13.95	/HR									16		HR		16	HR	\$ 223
	Subtotal																			\$ 1,033
	Total																			\$ 8,143
NOTES																				

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
51	Degas Well G-11																			
	Grade and Backfill	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						882					CY		882	CY	\$ 847
	Fill in Mud Pit	Backfill Trench Minimal Haul 2 1/4 CY	31 23 16 42 1601	0.96	CY						430					CY		430	CY	\$ 413
	Subtotal																			\$ 1,260
	Plug Well Casing																			
	Subtotal																			\$ -
	Spread Topsoil	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						254					CY		254	CY	\$ 244
	Subtotal																			\$ 244
	Remove Fence	Fencing Barbed Wire 3 Strand	02 41 13 60 1600	1.4	CY	1100										FT		1100	FT	\$ 1,540
	Subtotal																			\$ 1,540
	Support																			
	Foreman	Foreman Average, Outside	Foreman	50.65	HR									16		HR		16	HR	\$ 810
	4X4 Pickup	Equipment Rental	01 54 33 40 7200	13.92	/HR									16		HR		16	HR	\$ 223
	Subtotal																			\$ 1,033
	Total																			\$ 4,077

NOTES

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
52	Degas Well G-12																			
	Grading and Backfill	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						429					CY		429	CY	\$ 412
	Fill Mud Pit	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						430					CY		430	CY	\$ 413
	Subtotal																			\$ 825
	Plug Well Casing	Concrete Ready Mix 8000 psi	03 31 13.35 0412	123	CY						15					CY		15	CY	\$ 1,845
	Subtotal																			\$ 1,845
	Spread Topsoil	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						563					CY		563	CY	\$ 540
	Subtotal																			\$ 540
	Remove Fence	Fencing Barbed Wire 3 Strand	02 41 13 60 1600	1.4	CY	1100										FT		1100	LF	\$ 1,540
	Subtotal																			\$ 1,540
	Support																			
	Foreman	Foreman Average, Outside	Foreman	50.65	HR									16		HR		16	HR	\$ 810
	4X4 Pickup	Equipment Rental	01 54 33 40 7200	13.95	/HR									16		HR		16	HR	\$ 223
	Subtotal																			\$ 1,033
	Total																			\$ 5,783

NOTES

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
53	Degas Well G-13																			
	Grade and Backfill	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						1393					CY		1393	CY	\$ 1,337
	Fill in Mud Pit	Backfill Trench Minimal Haul 2 1/4 CY	31 23 16 42 1601	0.96	CY						430					CY		430	CY	\$ 413
	Subtotal																			\$ 1,750
	Plug Well Casing	Concrete Ready Mix 8000 psi	03 31 13.35 0412	123	CY						21					CY		21	CY	\$ 2,583
	Subtotal																			\$ 2,583
	Spread Topsoil	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						2162					CY		2162	CY	\$ 2,076
	Subtotal																			\$ 2,076
	Remove Fence	Fencing Barbed Wire 3 Strand	02 41 13 60 1600	1.4	LF	1300										LF		1300	LF	\$ 1,820
	Subtotal																			\$ 1,820
	Support																			
	Foreman	Foreman Average, Outside	Foreman	50.65	HR									16		HR		16	HR	\$ 810
	4X4 Pickup	Equipment Rental	01 54 33 40 7200	13.95	/HR									16		HR		16	HR	\$ 223
	Subtotal																			\$ 1,033
	Total																			\$ 9,262
NOTES																				

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
54	Degas Well G-14																			
	Grade and Backfill	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						429					CY		429	CY	\$ 412
	Fill in Mud Pit	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						430					CY		430	CY	\$ 413
	Subtotal																			\$ 825
	Plug Well Casing	Concrete Ready Mix 8000 psi	03 31 13.35 0412	123	CY						21					CY		21	CY	\$ 2,583
	Subtotal																			\$ 2,583
	Spread Topsoil	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						1544				1544	CY		1544	CY	\$ 1,482
	Subtotal																			\$ 1,482
	Remove Fence	Fencing Barbed Wire 3 Strand	02 41 13 60 1600	1.4	LF	1100										LF		1100	LF	\$ 1,540
	Subtotal																			\$ 1,540
	Support																			
	Foreman	Foreman Average, Outside	Foreman	50.65	HR									16		HR		16	HR	\$ 810
	4X4 Pickup	Equipment Rental	01 54 33 40 7200	13.95	/HR									16		HR		16	HR	\$ 223
	Subtotal																			\$ 1,033
	Total																			\$ 7,463
	NOTES																			

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
55	Degas Well G-15																			
	Grade and Backfill	Front end Loader 3 CY	31 23 16 42 1601	0.96	CY						1106					CY		1106	CY	\$ 1,062
	Fill in Mud Pit	Front end Loader 3 CY	31 23 16 42 1601	0.96	CY						430					CY		430	CY	\$ 413
	Subtotal																			\$ 1,475
	Plug Well Casing																			
	Subtotal																			\$ -
	Spread Topsoil	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						1475					CY		1475	CY	\$ 1,416
	Subtotal																			\$ 1,416
	Fence																			
	Remove Barbed Wire	Fencing Barbed Wire 3 Strand	02 41 13 60 1600	1.4	LF	1100										FT		1100	FT	\$ 1,540
	Subtotal																			\$ 1,540
	Support Foreman	Foreman Average, Outside	Foreman	50.65	HR									16		HR		16	HR	\$ 810
	4X4 Pickup	Equipment Rental	01 54 33 40 7200	13.95	/HR									16		HR		16	HR	\$ 223
	Subtotal																			\$ 1,033
	Total																			\$ 5,464
	NOTES																			

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
56	Degas Well G-16																			
	Grade and Backfill	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						800					CY		800	CY	\$ 768
	Fill in Mud Pit	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						430					CY		430	CY	\$ 413
	Subtotal																			\$ 1,181
	Plug Well Casing	Concrete Ready Mix 8000 psi	03 31 13.35 0412	123	/CY						21					CY		21	CY	2583
	Subtotal																			\$ 2,583
	Spread Topsoil	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						1092					CY		1092	CY	\$ 1,048
	Subtotal																			\$ 1,048
	Fence																			
	Remove Barbed Wire	Fencing Barbed Wire 3 Strand	02 41 13 60 1600	1.4	LF	1100										LF		1100	LF	\$ 1,540
	Subtotal																			\$ 1,540
	Support																			
	Foreman	Foreman Average, Outside	Foreman	50.65	HR									16		HR		16	HR	\$ 810
	4X4 Pickup	Equipment Rental	01 54 33 40 7200	13.95	/HR									16		HR		16	HR	\$ 223
	Subtotal																			\$ 1,033
	Total																			\$ 7,385

NOTES

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
57	Degas Well G-17																			
	Grade and Backfill	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						756					CY		756	CY	\$ 726
	Fill in Mud Pit	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						430					CY		430	CY	\$ 413
	Subtotal																			\$ 1,139
	Plug well Casing	Concrete Ready Mix 8000 psi	03 31 13.35 0412	123	/CY						21					CY		21	CY	2583
	Subtotal																			\$ 2,583
	Spread topsoil	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						797					CY		797	CY	\$ 765
	Subtotal																			\$ 765
	Fence																			
	Remove Barbed Wire	Fencing Barbed Wire 3 Strand	02 41 13 60 1600	1.4	LF	1200										LF		1200	LF	\$ 1,680
	Subtotal																			\$ 1,680
	Support																			
	Foreman	Foreman Average, Outside	Foreman	50.65	HR									16		HR		16	HR	\$ 810
	4X4 Pickup	Equipment Rental	01 54 33 40 7200	13.95	/HR									16		HR		16	HR	\$ 223
	Subtotal																			\$ 1,033
	Total																			\$ 7,200

NOTES

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
58	Degas Well G-18																			
	Grade and Backfill	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						6962					CY		6962	CY	\$ 6,684
	Fill in Mud Pit	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						430					CY		430	CY	\$ 413
	Subtotal																			\$ 7,097
	Plug Well Casing	Concrete Ready Mix 8000 psi	03 31 13.35 0412	123	/CY						21					CY		21	CY	2583
	Subtotal																			\$ 2,583
	Spread Topsoil	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						2195					CY		2195	CY	\$ 2,107
	Subtotal																			\$ 2,107
	Remove Barbed Wire Fence	Fencing Barbed Wire 3 Strand	02 41 13 60 1600	1.4	LF	1300												1300	LF	\$ 1,820
	Subtotal																			\$ 1,820
	Support																			
	Foreman	Foreman Average, Outside	Foreman	50.65	HR									24		HR		24	HR	\$ 1,216
	4X4 Pickup	Equipment Rental	01 54 33 40 7200	13.95	/HR									24		HR		24	HR	\$ 335
	Subtotal																			\$ 1,551
	Total																			\$ 15,158

NOTES

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
59	Degas Well G-19																			
	Grade and Backfill	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						1393					CY		1393	CY	\$ 1,337
	Fill in Mud Pit	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						430					CY		430	CY	\$ 413
	Subtotal																			\$ 1,750
	Plug Well Casing	Concrete Ready Mix 8000 psi	03 31 13.35 0412	123	/CY						21					CY		21	CY	2583
	Subtotal																			\$ 2,583
	Spread Topsoil	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						2037					CY		2037	CY	\$ 1,956
	Subtotal																			\$ 1,956
	Fence																			
	Remove Barbed Wire	Fencing Barbed Wire 3 Strand	02 41 13 60 1600	1.4	LF	1300										LF		1300	LF	\$ 1,820
	Subtotal																			\$ 1,820
	Support																			
	Foreman	Foreman Average, Outside	Foreman	50.65	HR									16		HR		16	HR	\$ 810
	4X4 Pickup	Equipment Rental	01 54 33 40 7200	13.95	/HR									16		HR		16	HR	\$ 223
	Subtotal																			\$ 1,033
	Total																			\$ 9,142

NOTES

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	
60	Degas Well G-22 & Access Road																				
	Grade and Backfill	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						7386					CY		7386	CY	\$ 7,091	
	Fill in Mud Pit	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						430					CY		430	CY	\$ 413	
	Subtotal																			\$ 7,504	
	Plug Well Casing	Concrete Ready Mix 8000 psi	03 31 13.35 0412	123	/CY						21					CY		21	CY	2583	
	Subtotal																			\$ 2,583	
	Spread Topsoil	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						2103							2103	CY	\$ 2,019	
	Subtotal																			\$ 2,019	
	Fence																				
	Remove Barbed Wire	Fencing Barbed Wire 3 Strand	02 41 13 60 1600	1.4	LF	1300										LF		1300	LF	\$ 1,820	
	Subtotal																			\$ 1,820	
	Support																				
	Foreman	Foreman Average, Outside	Foreman	50.65	HR										32	HR			32	HR	\$ 1,621
	4X4 Pickup	Equipment Rental	01 54 33 40 7200	13.95	/HR										32	HR			32	HR	\$ 446
	Subtotal																			\$ 2,067	
	Total																			\$ 15,993	

NOTES

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
61	Degas Well G-25																			
	Grade and Backfill	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						1406					CY		1406	CY	\$ 1,350
	Fill in Mud Pit	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						430					CY		430	CY	\$ 413
	Subtotal																			\$ 1,763
	Plug Well Casing	Concrete Ready Mix 8000 psi	03 31 13.35 0412	123	/CY						21					CY		21	CY	2583
	Subtotal																			\$ 2,583
	Spread Topsoil	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						1406					CY		1406	CY	\$ 1,350
	Subtotal																			\$ 1,350
	Fence																			
	Remove Barb Wire Fence	Fencing Barbed Wire 3 Strand	02 41 13 60 1600	1.4	CY	1300										FT		1300	LF	\$ 1,820
	Subtotal																			\$ 1,820
	Support																			
	Foreman	Foreman Average, Outside	Foreman	50.65	HR									24		HR		24	HR	\$ 1,216
	4X4 Pickup	Equipment Rental	01 54 33 40 7200	13.95	/HR									24		HR		24	HR	\$ 335
	Subtotal																			\$ 1,551
	Total																			\$ 9,067

NOTES

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
62	Degas Well G-26																			
	Grade and Backfill	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						1080					CY		1080	CY	\$ 1,037
	Fill in Mud Pit	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						430					CY		430	CY	\$ 413
	Subtotal																			\$ 1,450
	Plug Well Casing	Concrete Ready Mix 8000 psi	03 31 13.35 0412	123	/CY						21					CY		21	CY	2583
	Subtotal																			\$ 2,583
	Spread Topsoil	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						1080					CY		1080	CY	\$ 1,037
	Subtotal																			\$ 1,037
	Fence																			
	Remove Barbed Wire	Fencing Barbed Wire 3 Strand	02 41 13 60 1600	1.4	CY	1300										LF		1300	LF	\$ 1,820
	Subtotal																			\$ 1,820
	Support																			
	Foreman	Foreman Average, Outside	Foreman	50.65	HR									24		HR		24	HR	\$ 1,216
	4X4 Pickup	Equipment Rental	01 54 33 40 7200	13.95	/HR									24		HR		24	HR	\$ 335
	Subtotal																			\$ 1,551
	Total																			\$ 8,441

NOTES

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
63	Degas Well G-30																			
	Grade and Backfill	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						1479					CY		1479	CY	\$ 1,420
	Fill in Mud Pit	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						430					CY		430	CY	\$ 413
	Subtotal																			\$ 1,833
	Plug Well Casing	Concrete Ready Mix 8000 psi	03 31 13.35 0412	123	/CY						21					CY		21	CY	2583
	Subtotal																			\$ 2,583
	Spread Topsoil	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						1235					CY		1235	CY	\$ 1,186
	Subtotal																			\$ 1,186
	Fence																			
	Remove Barbed Wire	Fencing Barbed Wire 3 Strand	31 23 16 42 1601	0.96	LF	1300										LF		1300	LF	\$ 1,248
	Subtotal																			\$ 1,248
	Support																			
	Foreman	Foreman Average, Outside	Foreman	50.65	HR										32	HR		32	HR	\$ 1,621
	4X4 Pickup	Equipment Rental	01 54 33 40 7200	13.95	/HR										32	HR		32	HR	\$ 446
	Subtotal																			\$ 2,067
	Total																			\$ 8,917

NOTES

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
64	Degas Well G-31																			
	Grade and Backfill	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						8470					CY		8470	CY	\$ 8,131
	Fill in Mud Pit	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						430					CY		430	CY	\$ 413
	Subtotal																			\$ 8,544
	Plug Well Casing	Concrete Ready Mix 8000 psi	03 31 13.35 0412	123	/CY						21					CY		21	CY	2583
	Subtotal																			\$ 2,583
	Spread Topsoil	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						4624					CY		4624	CY	\$ 4,439
	Subtotal																			\$ 4,439
	Fence																			
	Remove Fencing	Barbed Wire 3 Strand	31 23 16 42 1601	0.96	LF	1300										LF		1300	LF	\$ 1,248
	Subtotal																			\$ 1,248
	Support																			
	Foreman	Foreman Average, Outside	Foreman	50.65	HR										32	HR		32	HR	\$ 1,621
	4X4 Pickup	Equipment Rental	01 54 33 40 7200	13.95	/HR										32	HR		32	HR	\$ 446
	Subtotal																			\$ 2,067
	Total																			\$ 18,881

NOTES

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
65	AMV Road																			
	Grade and Backfill	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						15207					CY		15207	CY	\$ 14,599
	Subtotal																			\$ 14,599
	Spread Topsoil	Front End Loader 3 CY	31 23 16 42 1601	0.96	CY						24374					CY		24374	CY	\$ 23,399
	Subtotal																			\$ 23,399
	Support																			
	Foreman	Foreman Average, Outside	Foreman	50.65	HR						150					HR		150	HR	\$ 7,598
	4X4 Pickup	Equipment Rental	01 54 33 40 7200	13.95	/HR						150					HR		150	HR	\$ 2,093
	Subtotal																			\$ 9,691
	Subtotal																			\$ -
	Total																			\$ 47,689
	NOTES																			

Earth Line Item Subtotals

		<i>COST</i>
<i>Ref.</i>	<i>Description</i>	<i>2015</i>
		<i>Dollars</i>
1	Facilities Area 01	\$ 420,784
2	Facilities Area 02	\$ 177,914
3	Stream Channel 03	\$ 48,919
5	Refuse Pile 05	\$ 389,748
6	Backfill Shaft	\$ 12,630
Total		\$1,049,995

Ref.	Description	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 2015 Dollars
	Dugout Mine															
1	Facilities Area 01															
	Cut and Fill at Mine Site															
	Equipment															
	Rough Grading															
	D9R Semi-U EROPS (9-37) (2H2015)	24400	125.2	0.1	55.4	345.62	1	345.62	\$/HR	118169	CY	184	CY/HR	642.2	HR	\$ 221,957
	Finished Grading															
	D9R Semi-U EROPS (9-37) (2H2015)	24400	125.2	0.1	55.4	345.62	1	345.62	\$/HR	19926	CY	680	CY/HR	29.3	HR	\$ 10,127
	825H ((6-12) (2H2015))	17710	97.6	0.1	55.4	273.45	1	273.45	\$/HR	58490	CY	876	CY/HR	66.8	HR	\$ 18,266
	CAT 345D L(10-20)(2nd2015)	16105	104.75	0.1	55.4	271.28	1	271.28	\$/HR	10000	CY	308	CY/HR	32.5	HR	\$ 8,817
	966H EROPS (9-26) (2nd2015)	8250	57.8	0.1	55.4	170.54	1	170.54	\$/HR	8342	CY	204	CY/HR	40.9	HR	\$ 6,975
	Support Personnel and Labor															
	CLAB				42.65	42.65	1	42.65	\$/HR					642.2	HR	\$ 27,390
	5,000 gal H2O truck Diesel (20-15) (2nd2015)	5280	45.8	0.1	43.3	126.68	1	126.68	\$/HR					642.2	HR	\$ 81,354
	Pickup Truck Crew 4x4 1 ton (20-16) (2nd2015)	325	17.6	0.1	43.3	64.69	1	11.57	\$/HR					642.2	HR	\$ 7,430
	Foreman Average, Outside					59.9	1	59.9	\$/HR					642.2	HR	\$ 38,468
	Subtotal															\$ 420,784

Ref.

	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 2015 Dollars
Dugout Mine														
2 Facilities Area 02														
Topsoil Distribution														
Move topsoil														
D9R Semi-U EROPS (9-37) (2H2015)	24400	125.2	0.1	55.4	345.62	1	345.62	\$/HR	21460	CY	184	CY/HR	116.6	HR \$ 40,299
Pocking Handled in Vegetation Section														
966H EROPS (9-26) (2nd2015)	8250	57.8	0.1	55.4	170.54	1	170.54	\$/HR	21460	CY	204	CY/HR	105.2	HR \$ 17,941
6X4 70,000lbs 12-18 CY (20-11) (2nd2015)	4430	57.4	0.1	43.3	134.13	6	804.78	\$/HR	21460	CY	204	CY/HR	105.2	HR \$ 84,663
Support Personnel and Labor														
CLAB					49	1	49	\$/HR					116.6	HR \$ 5,713
5,000 gal H2O truck Diesel (20-15) (2nd2015)	5280	45.8	0.1	43.3	126.68	1	126.68	\$/HR					116.6	HR \$ 14,771
Pickup Truck Crew 4x4 1 ton (20-16) (2nd2015)	325	17.6	0.1	43.3	64.69	1	64.69	\$/HR					116.6	HR \$ 7,543
Foreman Average, Outside					59.9	1	59.9	\$/HR					116.6	HR \$ 6,984
Subtotal														\$ 177,914

Ref.

	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 2015 Dollars
Dugout Mine															
3 Stream Channel 03															
Remove Culvert and Restore Channel															
CAT 345D L(10-20)(2nd2015)	16105	104.75	0.1	55.4	271.28	1	271.28	\$/HR	14400	CY	310	CY/HR	46.5	HR	\$ 12,615
CLAB					42.65	0.5	21.33	\$/HR					46.5	HR	\$ 992
966H EROPS (9-26) (2nd2015)	8250	57.8	0.1	55.4	170.54	1	170.54	\$/HR	1500	CY	204	CY/HR	7.4	HR	\$ 1,262
CLAB					42.65	0.5	21.33	\$/HR					7.4	HR	\$ 158
6X4 70,000lbs 12-18 CY (20-11) (2nd2015)	4430	57.4	0.1	43.3	134.13	1	134.13	\$/HR	7000	CY	50	CY/HR	140	HR	\$ 18,778
CLAB					49	0.5	24.5	\$/HR					140	HR	\$ 3,430
Support						1									\$ -
5,000 gal H2O truck Diesel (20-15) (2nd2015)	5280	45.8	0.1	43.3	126.68	1	126.68	\$/HR					46.5	HR	\$ 5,891
Pickup Truck Crew 4x4 1 ton (20-16) (2nd2015)	325	17.6	0.1	43.3	64.69	1	64.69	\$/HR					46.5	HR	\$ 3,008
Foreman Average, Outside					59.9	1	59.9	\$/HR					46.5	HR	\$ 2,785
Subtotal															\$ 48,919

Ref.

	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 2015 Dollars
Dugout Mine															
5 Refuse Pile 05															
Cut and Fill Refuse Site															
D9R Semi-U EROPS (9-37) (2H2015)	24400	125.2	0.1	55.4	345.62	1	345.62	\$/HR	27556	CY	102	CY/HR	270.2	HR	\$ 93,387
5,000 gal H2O truck Diesel (20-15) (2nd2015)	5280	45.8	0.1	43.3	126.68	1	126.68	\$/HR					270.2	HR	\$ 34,229
						1									
Foreman & 4X4 Pickup (20-16) (2nd2015)	325	17.6	0.1	50.65	72.04	1	72.04	\$/HR					270.2	HR	\$ 19,465
Doze On-site Subsoil/Topsoil															
D8R Series II (9-37) (2nd2015)	16865	89.55	0.1	55.4	213.03	1	213.03	\$/HR	23060	CY	480	CY/HR	48	HR	\$ 10,225
Borrow Area Soils															
Trucking Soil															
CAT 345D L (10-20)(2nd2015)	16105	104.75	0.1	55.4	271.28	1	271.28	\$/HR	57195		150	CY/HR	381.3	HR	\$ 103,439
6X4 70,000lbs 12-18 CY (20-11) (2nd2015)	4430	57.4	0.1	43.3	100.96	1.5	151.44	\$/HR	57195		150	CY/HR	381.3	HR	\$ 57,744
Doze Trucked Subsoil															
D8R Series II (9-37) (2nd2015)	16865	89.55	0.1	55.4	213.03	1	213.03	\$/HR	57195		171	CY/HR	334.5	HR	\$ 71,259
Subtotal															\$ 389,748

Ref.

	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 2015 Dollars
Pace Canyon Fan Portal															
6 Backfill Shaft															
CAT 345D L(10-20)(2nd2015)	16105	104.75	0.1	55.4	271.28	1	271.28	\$/HR	641	CY	216	CY/HR	3	HR	\$ 814
6X4 70,000lbs 12-18 CY (20-11) (2nd2015)	4430	57.4	0.1	43.3	100.96	3	302.88						3	HR	\$ 909
Backfill Portal															
D8R Series II (9-37) (2nd2015)	16865	89.55	0.1	55.4	213.03	1	213.03	\$/HR	331	CY	171	CY/HR	1.9	HR	\$ 405
Subsoil Placement															
D8R Series II (9-37) (2nd2015)	16865	89.55	0.1	55.4	213.03	1	213.03	\$/HR	4045	CY	90	CY/HR	44.9	HR	\$ 9,565
Doze On -site Topsoil															
D8R Series II (9-37) (2nd2015)	16865	89.55	0.1	55.4	213.03	1	213.03	\$/HR	2128	CY	480	CY/HR	4.4	HR	\$ 937
Subtotal															\$ 12,630

Vegetation Line Item Subtotals

Ref.	Description	Cost 2015 Dollars	
V-1	Dugout Mine Vegetation	\$ 169,874	
V-2	Dugout Mine Refuse Pile	\$ 115,534	
V-3	Pace Canyon Fan Portal	\$ 8,173	
V-4	Degas Well G2	\$ 2,478	
V-5	Degas Well G-3	\$ 2,783	
V-6	Degas Well G-4	\$ 2,128	
V-5	Degas Well G5	\$ 2,282	
V-6	Degas Well G6	\$ 3,233	
V-7	Degas Well G7	\$ 2,661	
V-8	Degas Well G9	\$ 1,711	
V-9	Degas Well G10	\$ 1,598	
V-10	Degas Well G11	\$ 1,731	
V-11	Degas Well G12	\$ 1,749	
V-12	Degas Well G13	\$ 2,395	
V-13	Degas Well G14	\$ 2,166	
V-14	Degas Well G15	\$ 4,230	
V-15	Degas Well G16	\$ 3,507	
V-16	Degas Well G17	\$ 2,738	
V-17	Degas Well G-18	\$ 3,801	
V-18	Degas Well G-19	\$ 2,850	
V-19	Degas Well G-22 and Access Road	\$ 9,769	
V-20	Degas Well G-25	\$ 5,949	
V-21	Degas Well G-26	\$ 3,270	
V-22	Degas Well G-30	\$ 5,095	
V-23	Degas Well G-31	\$ 3,886	
V-24	AMV Road	\$ 74,885	
	Total	\$ 440,477	\$ 435,566

Ref.	Description	Materials	Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost	
V-1	Dugout Mine Vegetation																				
	Soil Preparation	Ripping	31 23 16.32 2820	0.42	BCY					14.56						AC		23490	CY	\$ 9,866	
	Pocking	Excavation Bulk Bank 3 CY	31 23 16 42 1601	0.96	/CY					14.56						AC		23490	CY	\$ 22,550	
	Subtotal																			\$ 32,416	
	Fence																				
	Silt Fence	Wire Reinforced Silt Fence 3'x 100', 4' T Pd	Maxwell Quote	0.55	ft	6800										FT		6800	FT	\$ 3,740	
	Subtotal																			\$ 3,740	
	Seed Mix No 1																				
	Hydro seed Equipment and Labor	Hydro Seeding, Mulch & Fertilizer	32 92 19.14 5800	31.75	/MSF					13.9						AC		605	MSF	\$ 19,209	
	Hydro seed Material	Dugout Seed Mix No 1	Dugout Seed 1	526.5	/AC					13.9						AC		13.9	AC	\$ 7,318	
	Hay Mulch	Hay 1"	31 25 14.16 1200	633	TON					13.9						AC		1	ton/AC	\$ 8,799	
	Tackifier	Tackifier	Tackifier	52.5	/AC					13.9						AC		13.9	AC	\$ 730	
	Transplant Area No 1																				
	Area																				
	Transplant Materials	Dugout Transplant Mix No 1	Dugout Transp 1	984.5	/AC					13.9						AC		13.9	AC	\$ 13,685	
	Transplant Labor	Bare root seedlings, 11" to 16" med. soil	32 93 43 10 0130	0.81	Ea											550 #/AC		7645	EA	\$ 6,192	
	Seed Mix No 2																				
	Hydro seed Equipment and Labor	Hydro Seeding, Mulch & Fertilizer	32 92 19.14 5800	31.75	/MSF					2.45						AC		107	MSF	\$ 3,397	
	Hydro seed Material	Dugout Seed Mix No 2	Dugout Seed 2	414	/AC					2.45						AC		2.45	AC	\$ 1,014	
	Hay Mulch	Hay 1"	31 25 14.16 1200	633	TON					2.45						AC		1	ton/AC	\$ 1,551	
	Tackifier	Tackifier	Tackifier	52.5	/AC					2.45						AC		2.45	AC	\$ 129	
	Transplant Area No 2																				
	Area																				
	Transplant Materials	Dugout Transplant Mix #2	Dugout Transp 2	13,083	/AC					2.45						AC		2.45	AC	\$ 32,052	
	Transplant Labor	Bare root seedlings, 11" to 16" med. soil	32 93 43 10 0130	0.81	Ea											6500 #/AC		15925	EA	\$ 12,899	
	Subtotal																			\$ 106,975	
	Direct Vegetation																			\$ 143,131	
	Reseeding																				
	Assume 25% reveg rate																			\$ 26,744	
	Total																			\$ 169,874	

NOTE:

see maxwell supply quote

Ref.	Description	Materials	Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost	
V-2	Dugout Mine Refuse Pile																				
	Soil Preparation	Ripping	31 23 16.32 2820	0.42	/CY					16.34						AC		26362	CY	\$ 11,072	
	Pocking	Excavation Bulk Bank 3 CY	31 23 16 42 1601	0.96	/CY					16.34						AC		26362	CY	\$ 25,308	
	Subtotal																				\$ 36,380
	Seed Mix No 1																				
	Hydro seed Equipment and Labor	Hydro Seeding, Mulch & Fertilizer	32 92 19.14 5800	31.75	/MSF					16.34						AC		712	MSF	\$ 22,606	
	Hydro seed Material	Dugout Seed Mix No 1	Dugout Seed 1	526.5	/AC					16.34						AC		16.34	AC	\$ 8,603	
	Hay Mulch	Hay 1"	31 25 14.16 1200	633	TON					16.34						AC		15.6	ton/AC	\$ 9,875	
	Tackifier	Tackifier	Tackifier	52.5	/AC					16.34						AC		16.34	AC	\$ 858	
	Transplant Area No 1																				
	Area																				
	Transplant Materials	Dugout Transplant Mix No 1	Dugout Transp 1	984.5	/AC					16.34						AC		16.34	AC	\$ 16,087	
	Transplant Labor	Bare root seedlings, 11" to 16" med. soil	32 93 43 10 0130	0.81	Ea										400	#/AC		6536	EA	\$ 5,294	
	Subtotal																				\$ 63,323
	Reseeding																				
	Assume 25% reveg rate																				\$ 15,831
	Total																				\$ 115,534

NOTE:

Area reflects disturbed acreage as surveyed by Cody Ware of Ware Surveying

Ref.	Description	Materials	Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
V-3	Pace Canyon Fan Portal																			
	Soil Preparation	Ripping	31 23 16.32 2820	0.42	BCY					1.5						AC		2420	CY	\$ 1,016
	Pocking	Excavation Bulk Bank 3 CY	31 23 16 42 1601	0.96	/CY					1.5						AC		2420	CY	\$ 2,323
	Subtotal																			\$ 3,339
	Seed Mix No 1																			
	Hydro seed Equipment and Labor	Hydro Seeding, Mulch & Fertilizer	32 92 19.14 5800	31.75	/MSF					1.5						AC		65	MSF	\$ 2,064
	Hydro seed Material	Dugout Seed Mix No 1	Dugout Seed 1	526.5	/AC					1.5						AC		1.5	AC	\$ 790
	Hay Mulch	Hay 1"	31 25 14.16 1200	633	TON					1.5						AC		1.5	ton/AC	\$ 950
	Tackifier	Tackifier	Tackifier	52.5	/AC					1.5						AC		1.5	AC	\$ 79
	Subtotal																			\$ 3,883
	Direct Vegetation																			\$ 7,222
	Reseeding																			
	Assume 25% reveg rate																			\$ 951
	Total																			\$ 8,173

NOTE:

Area reflects disturbed acreage as surveyed by Cody Ware of Ware Surveying

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
V-19	Degas Well G-22 and Access Road																			
	Soil Preparation	Ripping	31 23 16.32 2820	0.42	BCY					1.79						AC		2888	CY	\$ 1,213
	Pocking	Excavation Bulk Bank 3CY	31 23 16 42 1601	0.96	CY					1.79						AC		2888	CY	\$ 2,772
	Subtotal																			\$ 3,985
	Seed Mix No 1																			
	Hydro seed Equipment and Labor	Hydro Seeding, Mulch & Fertilizer	32 92 19.14 5800	31.75	MSF					1.79						AC		78	MSF	\$ 2,477
	Hydro seed Material	Dugout Seed Mix No 1	Dugout Seed 1	526.5	AC					1.79						AC		1.79	AC	\$ 942
	Hay Mulch	Hay 1"	31 25 14.16 1200	633	TON					1.79						AC		1.79	TON/AC	\$ 1,133
	Tackifier	Tackifier	Tackifier	52.5	/AC					1.79						AC		1.79	AC	\$ 94
	Subtotal																			\$ 4,646
	Direct Vegetation																			\$ 8,631
	Reseeding																			
	Assume 25% Reveg Rate																			\$ 1,138
	Subtotal																			
	Total																			\$ 9,769

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Num	Unit	Swell Factor	Quantit	Unit	Cost
V-21	Degas Well G-26																			
	Soil Preparation	Ripping	31 23 16.32 2820	0.42	BCY					0.6						AC		968	CY	\$ 407
	Pocking	Excavation Bulk Bank 3 CY	31 23 16 42 1601	0.96	CY					0.6						AC		968	CY	\$ 929
	Subtotal																			\$ 1,336
	Seed Mix No 1																			
	Hydro seed Equipment and Labor	Hydro Seeding, Mulch & Fertilizer	32 92 19.14 5800	31.75	MSF					0.6						MSF		26	MSF	\$ 826
	Hay Mulch	Hay 1"	31 25 14.16 1200	633	TON					0.6						TON/AC		0.6	AC	\$ 380
	Hydro seed Material	Dugout Seed Mix No 1	Dugout Seed 1	526.5	AC					0.6						AC		0.6	AC	\$ 316
	Tackifier	Tackifier	Tackifier	52.5	/AC					0.6						AC		0.6	AC	\$ 32
	Subtotal																			\$ 1,553
	Direct Vegetation																			\$ 2,889
	Reseeding																			
	Assume 25 % Reveg Rate																			\$ 380
	Subtotal																			
	Total																			\$ 3,270

NOTE:

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	
V-22	Degas Well G-30																				
	Soil Preparation	Ripping	31 23 16.32 2820	0.42	BCY					0.93						AC		1500	CY	\$ 630	
	Pocking	Excavation Bulk Bank 3 CY	31 23 16 42 1601	0.96	CY					0.93						AC		1500	CY	\$ 1,440	
	Subtotal																			\$ 2,070	
	Seed Mix No1																				
	Hydro seed Equipment and Labor	Hydro Seeding, Mulch & Fertiliz	32 92 19.14 5800	31.75	MSF					0.93						AC		41	MSF	\$ 1,302	
	Hay Mulch	Hay 1"	31 25 14.16 1200	633	TON					0.93						AC		0.93	Ton/AC	\$ 589	
	Hydro seed Material	Dugout Seed Mix No 1	Dugout Seed 1	526.5	AC					0.93						AC		0.93	AC	\$ 490	
	Tackifier	Tackifier	Tackifier	52.5	/AC					0.93						AC		0.93	AC	\$ 49	
	Subtotal																			\$ 2,430	
	Direct Vegetation																			\$ 4,500	
	Reseeding																				
	Assume 25 % Reveg Rate																			\$ 595	
	Total																			\$ 5,095	

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
V-23	Degas Well G-31																			
	Soil Preparation	Ripping	31 23 16.32 2820	0.42	BCY					0.71						AC		1145	CY	\$ 481
	Pocking	Excavation Bulk Bank 3 CY	31 23 16 42 1601	0.96	CY					0.71					1.75	AC		1145	CY	\$ 1,099
	Subtotal																			\$ 1,580
	Seed Mix No 1																			
	Hydro seed Equipment and Labor	Hydro Seeding, Mulch & Fertilizer	32 92 19.14 5800	31.75	MSF					0.71					1.75	AC		31	MSF	\$ 984
	Hay Mulch	Hay 1 "	31 25 14.16 1200	633	TON					0.71					1.75	AC		0.71	TON/AC	\$ 449
	Hydro seed Material	Dugout Seed Mix No 1	Dugout Seed 1	526.5	AC					0.71					1.75	AC		0.71	AC	\$ 374
	Tackifier	Tackifier	Tackifier	52.5	/AC					0.71						AC		0.71	AC	\$ 37
	Subtotal																			\$ 1,844
	Direct Vegetation																			\$ 3,424
	Reseeding																			
	Assume 25 % Reveg Rate																			\$ 461
	Subtotal																			
	Total																			\$ 3,886

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
V-24	AMV Road																			
	Soil Preparation	Ripping	31 23 16.32 2820	0.42	BCY					13.72						AC		22135	CY	\$ 9,297
	Pocking	Excavation Bulk Bank 3 CY	31 23 16 42 1601	0.96	CY					13.72						AC		22135	CY	\$ 21,250
	Subtotal																			\$ 30,547
	Seed Mix No 1																			
	Hydro seed Equipment and Labor	Hydro Seeding, Mulch & Fertilizer	32 92 19.14 5800	31.75	MSF					13.72						AC		598	MSF	\$ 18,987
	Hydro seed Material	Dugout Seed Mix No 1	Dugout Seed 1	526.5	AC					13.72						AC		13.72	AC	\$ 7,224
	Hay Mulch	Hay 1 "	31 25 14.16 1200	633	TON					13.72						AC		13.72	Ton/AC	\$ 8,685
	Tackifier	Tackifier	Tackifier	52.5	/AC					13.72						AC		13.72	AC	\$ 720
	Subtotal																			\$ 35,615
	Direct Vegetation																			\$ 66,161.44
	Subtotal																			
	Reseeding																			
	Assume 25 % Reveg Rate																			\$ 8,724
	Total																			\$ 74,885

NOTE:

Area reflects disturbed acreage as surveyed by Cody Ware of Ware Surveying

Dugout M&RP, Methane Degasification Amendment

Chapter 1

Pages 1-2, 1-7

Figure 1-1

Dugout Canyon Mine Permit Number C/007/039

Canyon Fuel Company

Redline Strikeout

Title page for reference only

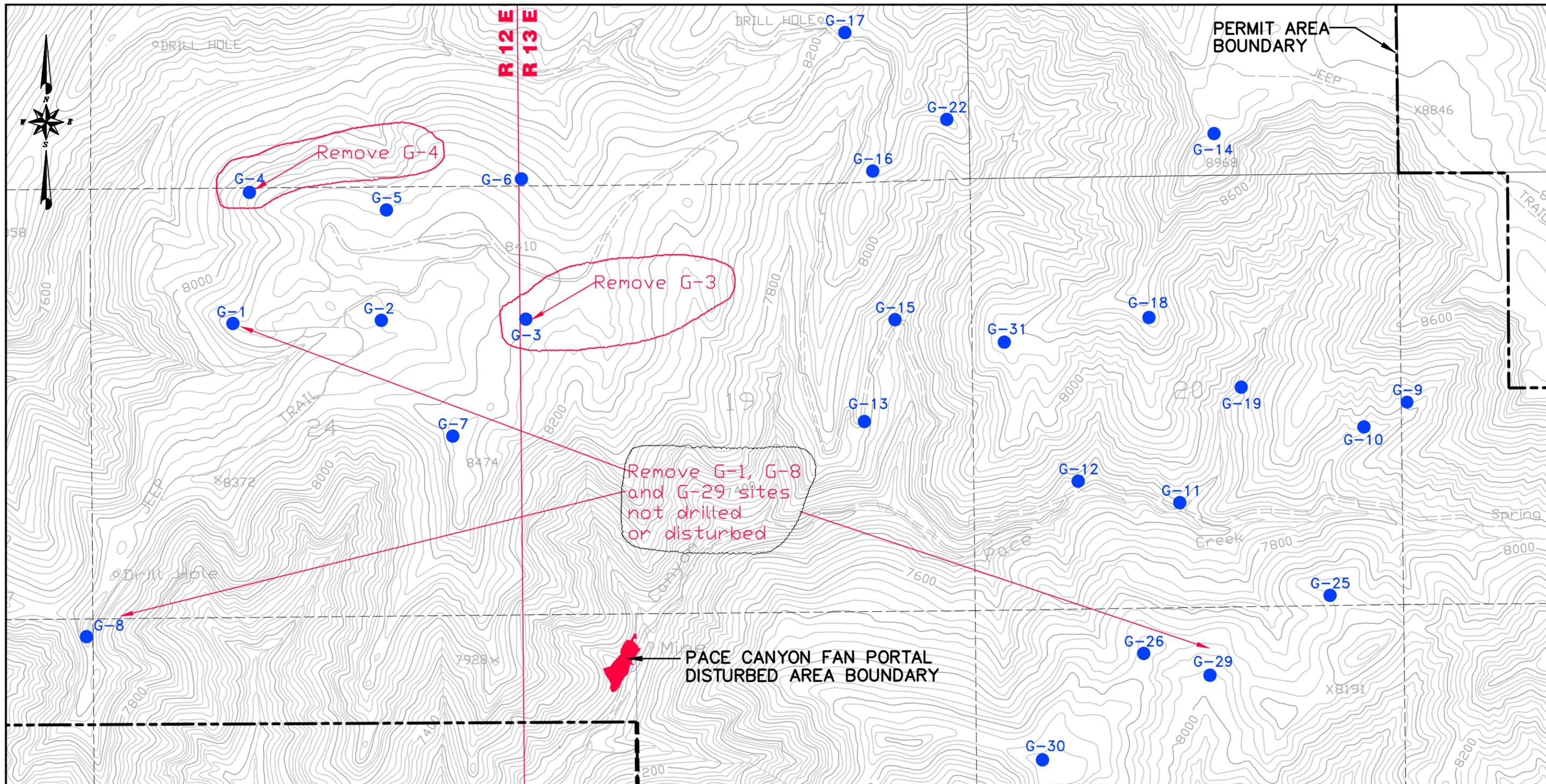


TABLE 1-1
Degas Well Locations
Pine Canyon, Utah Quadrangle, Salt Lake Meridian

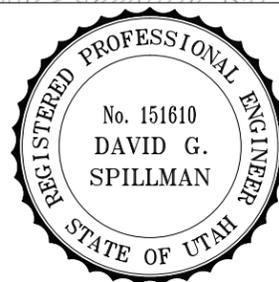
Hole Number	Section	Township and Range
G-1	Portion of N1/2SE1/4NW1/4 Section 24	Township 13 South, Range 12 East
G-2	Portion of N1/2SW1/4NE1/4 Section 24	Township 13 South, Range 12 East
G-3	Portion of N1/2SW1/4NW1/4 Section 19	Township 13 South, Range 13 East
G-4	Portion of N1/2NE1/4NW1/4 Section 24	Township 13 South, Range 12 East
G-5	Portion of N1/2NW1/4NE1/4 Section 24	Township 13 South, Range 12 East
G-6	Portion of S1/2SW1/4NW1/4 Section 18	Township 13 South, Range 13 East
G-7	Portion of SW1/4NE1/4SE1/4 Section 24	Township 13 South, Range 12 East
G-8	Portion of NE1/4NE1/4NE1/4 Section 26	Township 13 South, Range 12 East
G-9	Portion of NW1/4NW1/4SW1/4 Section 21	Township 13 South, Range 13 East
G-10	Portion of NE1/4NE1/4SE1/4 Section 20	Township 13 South, Range 13 East
G-11	Portion of NE1/4SE1/4SW1/4 Section 20	Township 13 South, Range 13 East
G-12	Portion of SE1/4NW1/4SW1/4 Section 20	Township 13 South, Range 13 East
G-13	Portion of NW1/4NE1/4SE1/4 Section 19	Township 13 South, Range 13 East
G-14	Portion of SW1/4SW1/4SE1/4 Section 17	Township 13 South, Range 13 East
G-15	Portion of NW1/4SE1/4NE1/4 Section 19	Township 13 South, Range 13 East
G-16	Portion of SW1/4SE1/4SE1/4 Section 18	Township 13 South, Range 13 East
G-17	Portion of SE1/4NW1/4SE1/4 Section 18	Township 13 South, Range 13 East
G-18	Portion of NE1/4SE1/4NW1/4 Section 20	Township 13 South, Range 13 East
G-19	Portion of SW1/4NW1/4SE1/4 Section 20	Township 13 South, Range 13 East
G-22	Portion of NE1/4SE1/4SE1/4 Section 18	Township 13 South, Range 13 East
Access Rd.	Portions of SE1/4 Section 18	Township 13 South, Range 13 East
G-25	Portion of SW1/4SE1/4SE1/4Section 20	Township 13 South, Range 13 East
G-26	Portion of NE1/4NE1/4NW1/4Section 29	Township 13 South, Range 13 East
G-29	Portion of NW1/4NW1/4NE1/4Section 29	Township 13 South, Range 13 East

TABLE 1-2
Disturbed Acres by Well Site

Well Site	Permitted Disturbed Acres	Surveyed Disturbed Acres*
G-1	0.6	Not Constructed
G-2	1.21	0.45
G-3	0.97	0.51
G-4	0.85	0.39
G-5	0.75	0.42
G-6	0.32	0.59
G-7	1.25	0.49
G-8	0.9	Not Constructed
G-9	2.2	0.31
G-10	1.7	0.29
G-11	1.6	0.32
G-12	2	0.32
G-13	2.75	0.44
G-14	2	0.40
G-15	2.5	0.77
G-16	2	0.64
G-17	1.25	Not surveyed
G-18	1.4	0.70
G-19	2.3	0.52
G-22 and Access Road	3.5	1.79
G-25	1.8	0.60
G-26	1.8	0.60
G-29	2	Not Constructed
G-30	2	0.93



TOWNSHIP 13 SOUTH



REVISIONS OR UP-DATES			DATE	
NO.	DATE	BY	DESIGNED BY:	
1	7/15/16	BK	DRAWN BY:	
			CHECKED BY:	
			SCALE:	
Fig1-1-MLD-g				



Canyon Fuel Company, LLC
Dugout Canyon Mine

Methane Degas Bore Hole Locations

P.O. BOX 1029
WELLINGTON, UTAH 84542

DRAWING OR MAP NUMBER
Figure 1-1

Dugout M&RP, Methane Degasification Amendment

Chapter 2

Pages: 2-2, 2-4, 2-5, 2-11, 2-14, 2-19, 2-20, 2-23

Attachment 2-4

Dugout Canyon Mine Permit Number C/007/039

Canyon Fuel Company

Redline Strikeout

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2004 and is incorporated into Attachment 2-1. Soil information for Well G-7 is incorporated into Attachment 2-1. A photograph of the G-7 site is included in Attachment 3-1. ~~Well site G-3 and the access road can be seen on the photograph.~~

The soils report prepared by Dan Larsen, Soil Scientist for wells G-8 thru G-13 is provided in Attachment 2-1. Wells are being permitted in groups: G-8 thru G-10, G-11 thru G-12 and G-13 thru G-17.

222.200 Soil Identification

<u>Well No.</u>	<u>Soil Map Unit</u>	<u>Soil Components</u>
G-1	62/88	Midfork-Comodore complex, Rabbitex-Datino Variant
G-2	7	Brycan, Beje-Trag complex, 3-30% slopes
G-3	7	Beje-Trag complex, 3-30% slopes
G-4	62/103	Midfork-Comodore complex, Senchert-Toze complex
G-5	103	Senchert-Croydon
G-6	62	Midfork-Comodore complex
G-7	7	Beje-Trag complex, 3-30% slopes
G-8	21	Croydon Loam, 8 to 30% slopes
G-9	97/62	Midfork-Comodore complex, Rottulee family-Trag complex
G-10	97	Rottulee family-Trag complex
G-11	11, 26	Cabba- family, 40 to 70 percent slopes, Doney family, 50 to 70 percent slopes
G-12	47, 88	Guben-Rock outcrop complex, Rabbitex family-Datino Variant complex
G-13	23	Curecanti family
G-14	62	Midfork family - Comodore complex

TABLE 2-1
Topsoil Volumes*

Well No.	Cubic Yards of Material
G-1	415
G-2	3,104
G-3	1,182
G-4	1,100
G-5	1,909
G-6	792
G-7	1251
G-8	543
G-9	1,574
G-10	2,344
G-11	254
G-12	563
G-13	2,162
G-14	1,544
G-15	1,475
G-16	1,092
G-17	797
G-18	2,195
G-19	2,037
G-22 & Access Road	2,103
G-25	1,081
G-26	927
G-29	1,363
G-30	1,235
G-31	4,624

Access Road	9,167
-------------	-------

* These total do not include soil salvaged from short roads accessing well sites which is bladed to the side of the road.

Figure 5-1 through Figure 5-25 show the layout and approximate size of well pads for G-1 thru G-6. Figures 5-27 thru 5-29 show the layout and size for well G-7. The figures for wells G-8 thru G-19, G-22 (Including access road), G-25, G-26, G-29, G-30 and G-31 are located in Attachment 5-1. Topsoil volume calculations can be found in Attachment 2-2.

Estimated topsoil salvage from the G-1 well site will average about 7". This site on a ridge top has previously been disturbed for exploration drilling. The site has pockets of fractured sandstone bedrock at the surface and stony subsoils, which are the limiting factors in the quantity of salvageable topsoil. The average topsoil depth at well site G-2 is 30". ~~The average topsoil thickness for well site G-3 is 10". However, enough soil will be stripped to allow 12" of soil to be placed during reclamation. Thus some subsoils will be stripped with the topsoil to generate the required volume. The estimated topsoil salvage from well site G-4 area will be 28" except on the area of the exiting road(s).~~ The average salvageable topsoil at well site G-5 is 22". Well site G-6 will be established on a pre-existing drill pad, with a portion of the new pad extending onto undisturbed area. Topsoil on the pre-existing drill pad ranges from 0 to 30 inches, on the north edge in from 20 to 28 inches and on the cut slope on the south edge from 6 to 30 inches. The slope will be restored to original contour with the application of topsoil, the entire site will receive at least 12 inches of topsoil. Twelve inches was used to calculate the volume of topsoil to be salvaged and to determine the size of the topsoil pile for drill site G-6. ~~Degas well G-7 will be developed on a site with soils consistent with G-3. There is a pre-existing road to well G-3 that continues on to the G-7 proposed site. There are signs of previous vehicle disturbance at the site, however the majority of the site is undisturbed.~~ Topsoil available for salvage at G-7 has been estimated to be 10 to 12 inches. Available topsoil will be salvaged and if necessary some subsoils will be stripped with the topsoil to generate the required volume to place a minimum of 12 inches during site reclamation. Available topsoil at each site will be salvaged, stockpiled and redistributed.

The approximate volume of subsoil to be salvaged and used to create berms around the perimeter of the well site including the topsoil stockpile perimeter is: G-1 - 161 CY; G-2 - 254 CY, ~~G-3 - 208 CY, G-4 - 165 CY~~, G-5 - 191 CY, G-6 - 156 CY, G-7 - 107 CY, G-8 - 143 CY, G-9 - 182 CY, G-10 - 137 CY, G-11 - 185 CY, G-12 - 260 CY, G-13 - 142 CY, G-14A - 123 CY, G-15 - 101 CY, G-16 - 98 CY, G-18 - 39 CY excludes topsoil pile, G-19 - 48 CY, G-22 and Access Road - 140 CY, G-25 - 136 and G-26 - 152, G-29 - 219 CY, G-30 - 244CY, G-31 - 62 CY excludes topsoil pile, Topsoil Stockpiles T-2 thru T10 - 300 CY and Access Road - 248 CY.

At the G-19 drill pad there is a variance between the disturbed area acreage and the acreage where topsoil will be salvaged. Portions of the site have no topsoil, due to previous disturbance by logging, these areas include roads, a gully and skid trails. In addition there is a perimeter buffer area that will not be disturbed and thus will not have topsoil removed from the area unless it becomes necessary due to unforeseen issues during construction, such as buried outcrops, large boulders, tree root systems, etc. An area within the northeastern portion of the disturbed area has two road forks extending from the end of the existing road, these two forks have no topsoil on them and the area between them will not be disturbed and therefore will not have topsoil salvaged. A sketch of these areas is located in Attachment 2-1.

There is a difference between the topsoil volumes totals and the estimated inches to be salvaged on pads G-18, G-31 and the AMV road. The topsoil volume totals assume that the entire disturbed area will be stripped of 12 inches of topsoil/growth medium. Any areas within the disturbed area boundary which can remain undisturbed will remain undisturbed. In addition, the soils to be salvaged are assumed to be the same depth as the test pit or 12 inches. The available soil for salvage is likely to vary throughout the areas to be salvaged. A commitment is made to salvage available topsoil or 12 inches of growth medium. Sketches of the well pads are included in Attachment 2-1.

The topsoil for the G-22 pad and access road is stored on the permitted pad of G-17. The soils are stored on a wide turnout on an existing road in an area immediately adjacent to an existing soil

TABLE 2-2
Topsoil Stockpile Dimensions*

Well No.	Length (ft)	Width (ft)	Height (ft)
G-1	55	35	16
G-2	156	50	20
G-3	70	60	17
G-4	110	35	17
G-5	90	65	21
G-6	105	30	13
G-7	80	70	6 to 12
G-8	168	60	6
G-9	160	90	30
G-10	170	80	65
G-11	40	50	12
G-12	60	80	18
G-13	120	100	17
G-14A	120	60	11
G-15	Pad	90	90
G-16	Pad	100	80
G-17	Pad	85	55
G-18	T-10	118	80
G-19	Lower Road	235	8
	Pad	140	52
G-22 and Access Road	Pad & Road	85	65
G-25	Pad	191	40

240 RECLAMATION PLAN

As-built cross section where both horizontal and vertical scales are equal and an as-built road profile were provided following completion of the AMV road construction. The AMV as-built road cross sections are provided on Plates 2 and 3 in Attachment 5-4.

241 General Information

Reclamation of the degassification sites (topsoil redistribution, amendments, and stabilization) is discussed in Sections 242, 243, and 244 respectively.

242 Soil Redistribution

242.100 Soil Redistribution Practices

The topsoil will be placed after recontouring of the site has occurred. Topsoil will be handled when they are loose or in a friable condition. The moisture content will be visually monitored and water will be added as needed to enhance the soil's condition for handling. The approximate amount of topsoil available for each site is shown in Table 2-1. The reclamation time line can be found on Figure 5-15 for sites G-2 ~~and G-3~~ and on Figure 5-26 for sites ~~G-4-G-5~~ thru G-19, G-22 (including access road), G-25, G-26, G-29 , G-30 and G-31. Figure 5-26 has been revised to include the access road (AMV).

The topsoil will be distributed in two phases at well site G-2, the first phase will be the contemporaneous reclamation of a portion of the pad area used during well construction (see Figures 5-4, 5-8 and 5-12). During contemporaneous reclamation topsoil from the stockpile will be distributed in the depths shown in Table 2-3.

Final reclamation will occur at all well sites after venting of the methane gas is complete, venting equipment has been removed and the well has been plugged. Well plugging will be delayed at well

sites G-2, G-5 and G-7, to allow additional time for venting of the gob behind the sealed panels and to provide surface access to the mine. The surface at well sites G-2 and G-5 will be reclaimed in 2007/2008, however the wells will not be plugged. The surface at well site G-7 will be reclaimed in 2008, but the wells will not be plugged. The topsoil stockpile storage area and access road (G-2 and G-5) will be reclaimed during this final phase. The access roads to ~~G-3, G-4~~, G-6, G-7, G-8, G-9, G-10, G-11, and G-12 are pre-existing and will not be reclaimed.

The topsoil stockpile storage area and access road (G-2, G-5 and G-22) will be reclaimed following the plugging of the wells. The access roads to ~~G-3, G-4~~, G-6, G-7, G-8, G-9, G-10, G-11, G-12, G-13, G-15, G-17, G-19, G-25, G-26, G-29 and G-30 are pre-existing and will not be reclaimed. The access road joining the pre-existing road to G-16 and the portion of the access road between the topsoil stockpile and the well site at G-14 will be pocked/gouged and seeded during final reclamation of the site.

The AMV access road will be reclaimed using the technology discussed in Section 240 of this amendment following the sealing and reclamation of well pads G-18 and G-31. The G-22 access road will be reclaimed using the technology discussed in Section 240 of this amendment following the sealing and reclamation of well pad G-22.

Refer to Section 341 for additional information.

Soil Thickness - The topsoil will be distributed during contemporaneous and final reclamation in the thickness shown in Table 2-3.

Compaction - Prior to the application of topsoil, compacted subsoils will be roughened or loosened for a depth of 18 to 24 inches. To prevent compaction of topsoil, soil moving equipment will refrain from unnecessary operation over spread topsoil. The topsoil will be in a loosened condition prior to seeding.

TABLE 2-3
Approximate Topsoil Distribution Thickness

Well Site No.	Topsoil Thickness (Inches)
G-1*	7
G-2	30
G-3	12
G-4	28
G-5	22
G-6	12
G-7	12
G-8*	12
G-9	12
G-10	18
G-11	12
G-12	15
G-13	14 - 16
G-14A	14 - 16
G-15	14
G-16	14
G-17	12
G-18	12
G-19	12
G-22, Access Road	10 - 13
G-25	12
G-26	12
G-29	12
G-30	10
G-31	15

Attachment 2-4

Well No.	Year Constructed		Year Plugged		Contemporaneous Reclamation		Final Reclamation		Bond Release Phases
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Actual
G-2		2004		2009	2007			2009	<u>Phase I & II</u>
G-3		2004		2005		2005		2005	<u>Phase I, II & III</u>
G-4		2004		2005				2005	<u>Phase I, II & III</u>
G-5		2004		2009	2007			2009	<u>Phase I & II</u>
G-6		2004		2005				2007	<u>Phase I & II</u>
G-7		2005		2008/2009	2007			2009	<u>Phase I & II</u>
G-9		2005		2008	2008		2010	2012	<u>Phase I</u>
G-10		2006		2008	2007		2010	2010	<u>Phase I & II</u>
G-11		2006		2008	2008		2015		
G-12		2006		2009	2007		2010	2011	<u>Phase I & II</u>
G-13		2006		2008	2008			2009	<u>Phase I & II</u>
G-14		2006	2010 (B)	2009 (A)	2008		2010	2010	<u>Phase I & II</u>
G-15*	N/A				2008		2015	2015	
G-16		2008					2011	2013	<u>Phase I & II</u>
G-17*	N/A						2014	2014	
G-18		2007	2010	2008 (A)	2009		2010	2012	<u>Phase I & II</u>
G-19		2007		2008	2008		2010	2010	<u>Phase I</u>
G-22		2008					2011	2013	<u>Phase I</u>
G-25		2009					2013	2013	<u>Phase I</u>
G-26		2009					2013	2013	<u>Phase I</u>
G-30	2010							2013	<u>Phase I</u>
G-31		2007	2010	2008 (A)	2009		2011	2013	<u>Phase I & II</u>

Dates are approximate, all events are subject to availability of contractors, weather, mining needs, etc.

Although permitted, wells G-1, G-8 and G-29 were never drilled/constructed

*Sites were not drilled but received minor disturbance

Attachment 5-2 and
Attachment 2-4

Dugout M&RP, Methane Degasification Amendment

Chapter 3

Pages: 3-2, 3-4, 3-5, 3-13, 3-17, 3-25

Dugout Canyon Mine Permit Number C/007/039

Canyon Fuel Company

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321.100 Plant Communities Within the Proposed Permit Area

During June 2003, the degassification well sites were surveyed by Patrick Collins, Mt. Nebo Scientific. The report and survey for the areas are included in Attachment 3-1. The site for G-6 was moved to a pre-disturbed exploration well pad, the plant communities described in Mr. Collins report reflect the undisturbed portions on the north and south edges of the well pad. Vegetation information for G-7 was obtained from a report prepared by the NRCS Range Management Specialist, Dean Stacy (refer to Attachment 2-1 and 3-1) and the Patrick Collins survey prepared for well site G-3 (Phase III Reclaimed). A photograph of the G-7 site is included in Attachment 3-1. ~~Well site G-3 and the access road can be seen on the photograph.~~

A vegetation survey of well sites G-8 thru G-12 was completed in July 2005 by Patrick Collins, Mt. Nebo Scientific. These sites have all been pre-disturbed, with a road running through the center of G-8 and remnants of logging activity at both G-9 and G-10. Approximately fifty percent of the well pads at sites G-11 and G-12 are existing roads which have no topsoil or vegetation. The remaining area at site G-11 has been disturbed, except for a small portion on the west side of the site. Well site G-12 has evidence of disturbance above the road cut however both soil and vegetation are intact. The reports and surveys for the areas will be included in Attachment 3-1.

The vegetation survey of well sites G-13 thru G-17 were completed between July and September 2005. The reports and surveys for the areas are included in Attachment 3-1. At well site G-13, the surface ranges from relatively smooth and non-stoney to very stoney. Portions along the southeast edge are too stoney for soil salvage. The G-14 well site has been disturbed by logging. The road to G-13 and G-14 are existing roads, however, the soil will be bladed to the side of the road at site G-14 and replaced during reclamation.

Well site G-15 is about 50 percent disturbed by a road, slope cut and fill. The undisturbed portion of the site is a slope with a southeast aspect (35 to 45 percent gradient). Well site G-16 was previously the site of an exploration hole, having been disturbed and reclaimed. The topsoil on

An area approximately 100 x 100 feet on drill pad G-18 was disturbed by logging activity and has experienced natural recovery.

Mountain brush/snowberry plant community is representative of well site G-22 and access road. Woody species, big sagebrush and snowberry dominated the drill site. The access road to pad G-22 woody species includes serviceberry. The vegetation report is provided in Attachment 3-1.

The vegetation report in Attachment 3-1 for degas well sites G-25 and G-26 were prepared by Patrick Collins, Mt. Nebo Scientific. Attachment 3-2 contains a letter dated June 16, 2008 from Dean Stacy of the NRCS which discusses vegetation production for sites G-25, G-25, G-29 and G-30.

321.200 Land Productivity Prior to Mining

Productivity of the well site lands, G-22 access road and the AMV road prior to mining are shown in Table 3-1. Refer to Appendix 3-1 for a copy of the NRCS letter pertaining to productivity.

**TABLE 3-1
 Land Productivity**

Well No.	Productivity (lbs.) Per Acre
G-1 (Previously Disturbed)	100
G-2	1,500*
G-3	1,500*
G-4 (Previously Disturbed)	150
G-5	1500*
G-6 (Majority Previously Disturbed)	300*
G-7	1200*
G-8 (Previously Disturbed)	1200

G-9 (Previously Disturbed)	1000*
G-10 (Previously Disturbed)	1000*
G-11 (Previously Disturbed)	1000*
G-12 (Previously Disturbed)	1000*
G-13	1000*
G-14 (Previously Disturbed)	1000*
G-15 (Previously Disturbed)	1000*
G-16 (Previously Disturbed)	1000*
G-17 (Previously Disturbed)	1000*
G-18	900 - 1200*
G-19 (Previously Disturbed)	500 - 800*
G-22 and Access Road	1000*
G-25 (Previously Disturbed)	1,500*
G-26 (Previously Disturbed)	1200*
G-29	1,800
G-30 (Previously Disturbed)	1500
G-31 (Previously Disturbed)	900 - 1200*
Access Road - AMV (Previously Disturbed)	900 - 1200*
Reference Areas	
Sagebrush/Snowberry/Grass (G-2, G-3, G-4, G-5, and G-7)	1500*
Aspen/Maple/Douglas Fir (G-1, G-6, and G-8)	300*
Mountain Brush/Conifer (G-9 thru G-11)	1200
Conifer/Mountain Brush/Pinyon Juniper (G-12, G-13 and G-15)	1100

Refer to Attachment 3-2 for a listing of Federal and State Listed, Threatened, Endangered and Candidate Species and Sensitive Species.

323.100 Location and Boundary of Proposed Reference Area

Reference areas for the degassification wells were established during the vegetative study conducted in the Summer of 2003. Well sites G-2, ~~G-3, G-4~~, G-5, and G-7 will be compared to the Sagebrush/Snowberry/Grass reference area and G-1, G-6, and G-8 to the Aspen/Maple/Douglas Fir reference area. Mountain Brush and Conifer is the reference area for well sites G-9 thru G-11. The reference area for Degas Well G-12 , G-13 and G-15 is Conifer, Mountain Brush and Pinyon Juniper. The reference area for Degas Well G-14, and G-19 is Aspen/Conifer, the reference area for G-16 thru G-18, G-22 (including access road), G-26 and G-31 and the AMV access road is Mountain Brush/Snowberry. Refer to Attachment 3-1 and Figure 3-1 for the location of the reference areas associated specifically with the degas wells. Reference areas are also shown on Plate 3-1 and 3-1E in the M&RP. Reference area for G-29 and G-30 is Mountain Brush/ Snowberry/Sagebrush.

323.200 Elevation and Locations of Monitoring Stations

Refer to Section 323.200 of the approved M&RP.

323.300 Facilities for Protection and Enhancement

Section 333.300 and 358.500 of the approved M&RP contain additional discussion pertaining to protective measures to be taken by Dugout Canyon on behalf of wildlife.

340 RECLAMATION PLAN

341 Revegetation

Revegetation of the sites will occur in two phases at drill site G-2. The first phase is to redistribute topsoil and seed the well area not needed for access and operation of the gas exhaust blower. The second phase will consist of plugging the well and distributing the remaining topsoil and seeding on the remaining pad area. Complete final reclamation at well sites G-2, G-5 and G-7 will be delayed, refer to Section 242.100 for additional detail and Attachment 5-2. Sites ~~G-3, G-4~~, G-6, G-8 (never constructed), G-9, G-10, G-11 thru G-19, G-22 (including access road) G-25, G-26, G-29, G-30 and G-31 will be reclaimed in one phase. A separate reclamation schedule has been proposed for the AMV road, it will be needed to access the degas wells during and following reclamation (Figure 5-26).

The short-term goal of this revegetation plan is the immediate stabilization of the disturbed sites through erosion control. This objective will be achieved through controlled grading practices, proper seedbed preparation to encourage rapid plant establishment, inclusion of rapidly establishing species in the seed mixture to be planted, and mulch application.

The long-term goals are to establish useful, and productive range. These goals will be attained through the selection and placement of desirable and productive plant species and a commitment to monitor and maintain revegetated areas throughout the bond liability period.

The well sites will be fenced to discourage wildlife and livestock from grazing the reclaimed areas until bond release.

341.100 Schedule and Timetable

The reclamation timetable is shown in Figures 5-15 (G-2) and 5-26 (G-3 thru G-19, G-22 (including access road), G-25, G-26, G-29, G-30 and G-31 and AMV access road) of this submittal and the reclamation monitoring schedule is found in Chapter 3, Table 3-3 of the approved M&RP.

356.200 Standards for Success

Standards of success will be applied in accordance with the approved postmining land use as described in this section.

Grazing Land and Pasture Land - The ground cover and production of living plants on the revegetated area will be at least equal to the reference area.

Cropland - There is no area designated as cropland within the degassification well sites, on associated access roads or the area of the AMV road.

Fish and Wildlife Habitat - The postmining land use for the degas well sites, G-22 access road and AMV road will be grazing, except on pre-existing roads or trails. Pre-existing roads will be returned to their approximate original contour and compacted.

Industrial, Commercial or Residential - The postmining land use for the permit area is not designated for industrial, commercial, or residential use.

Previously Disturbed Areas - Site G-1 (never constructed), ~~G-4~~, G-6, G-7, G-8 (never constructed), G-9, G-10, G-11, G-12, G-14, G-15, G-16, G-17, G-19, G-25, G-26, G-30, G-31 and AMV access road have been previously disturbed. The AMV access road was previously used for logging, as a trail for hunting and for cattle to access the site of degas well G-31, the road from G-31 to G-18 has not been disturbed. Sites G-2, ~~G-3~~, G-5, G-13, G-18, G-22 (including access road) and G-29 have not been previously disturbed. Standards of success for all sites will be applied in accordance with the postmining land use of grazing or as described in this section.

356.300 Siltation Structures

Siltation structures will be maintained until the disturbed areas have been stabilized and revegetated. For additional details on siltation structures, see Sections 542 and 763 of this amendment.

Dugout M&RP, Methane Degasification Amendment

Chapter 5

Pages: 5-vi, 5-2, 5-17

Figures: 5-10, 5-11, 5-12, 5-17, 5-18, 5-19, 5-26

Attachment 5-2 Table 1

Attachment 5-4 Plate 4

Dugout Canyon Mine Permit Number C/007/039

Canyon Fuel Company

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Title page for reference only



LIST OF FIGURES

Figures follow the text, unless noted otherwise

- Figure 5-1 Contour Map For G-1
- Figure 5-2 Typical Cross Sections For G-1
- Figure 5-3 Approximate Drilling Layout For G-1
- Figure 5-4 Approximate Operational Layout For G-1
- Figure 5-5 Contour Map For G-2
- Figure 5-6 Typical Cross Sections For G-2
- Figure 5-7 Approximate Drilling Layout For G-2
- Figure 5-8 Approximate Operational Layout For G-2
- ~~Figure 5-9 Contour Map For G-3~~
- ~~Figure 5-10 Typical Cross Sections For G-3~~
- ~~Figure 5-11 Approximate Drilling Layout For G-3~~
- ~~Figure 5-12 Approximate Operational Layout For G-3~~
- Figure 5-13 Typical Road Cross Section
- Figure 5-14 Typical Access Road Cross Section
- Figure 5-15 Reclamation Time Table
- Figure 5-16 Typical Well Design
- ~~Figure 5-17 Contour Map For G-4~~
- ~~Figure 5-18 Typical Cross Sections For G-4~~
- ~~Figure 5-19 Approximate Drilling Layout For G-4~~
- Figure 5-20 Contour Map For G-5
- Figure 5-21 Typical Cross Sections For G-5
- Figure 5-22 Approximate Drilling Layout For G-5
- Figure 5-23 Contour Map For G-6
- Figure 5-24 Typical Cross Sections For G-6
- Figure 5-25 Approximate Drilling Layout For G-6
- Figure 5-26 Reclamation Schedule - Wells ~~G-3, G-4~~, G-6 thru G-19, G-22, G-31 and
AMV Access Road
- Figure 5-27 Contour Map For G-7
- Figure 5-28 Typical Cross Sections For G-7
- Figure 5-29 Approximate Drilling Layout For G-7

512.200 Plans and Engineering Designs

Excess Spoil - No excess spoil will be generated from the well sites.

Durable Rock Fills - No durable rock fills will exist at the well sites.

Coal Mine Waste - No coal mine waste will exist at the well sites.

Impoundments - Refer to Section 733.200 of this submittal.

Primary Roads - Short sections of road are required to access well sites G-2, G-5, G-16 and G-22. The G-2 and G-5 road segments are within the footprint of the drill pad and therefore are included within the pads disturbed area boundary. Refer to Attachment 5-4, Plate 4 for the road system accessing the degas well sites. Well sites G-1 and G-8 (not drilled), well sites ~~G-3~~ G-5 thru G-14, G-15 and G-17 pads, G-19, G-25, G-26, G-29, and G-30 wells sites are on existing roads, no primary access roads will be constructed. Refer to Section 527.200 for additional information and a description of the AMV road.

Variance from Approximate Original Contour - No variance from approximate original contour is required for the well sites.

513 Compliance with MSHA Regulations and MSHA Approval

513.100 Coal Processing Waste Dams and Embankments

No coal processing waste dams and embankments will exist at the well sites.

542 Narratives, Maps, and Plans

542.100 Reclamation Timetable

A timetable for the completion of each major step in the reclamation plan is presented in Figure 5-15 (G-2 and G-5) and 5-26 (~~G-3, G-4~~, G-6 thru G-19, G-22, G-22 Access Road, G-25, G-26, G-29, G-30, G-31 and the AMV access road). In addition to the two figures referenced above, information pertaining to reclamation timing for methane degas wells is provided in Attachment 5-2 and Section 542.700 of this amendment.

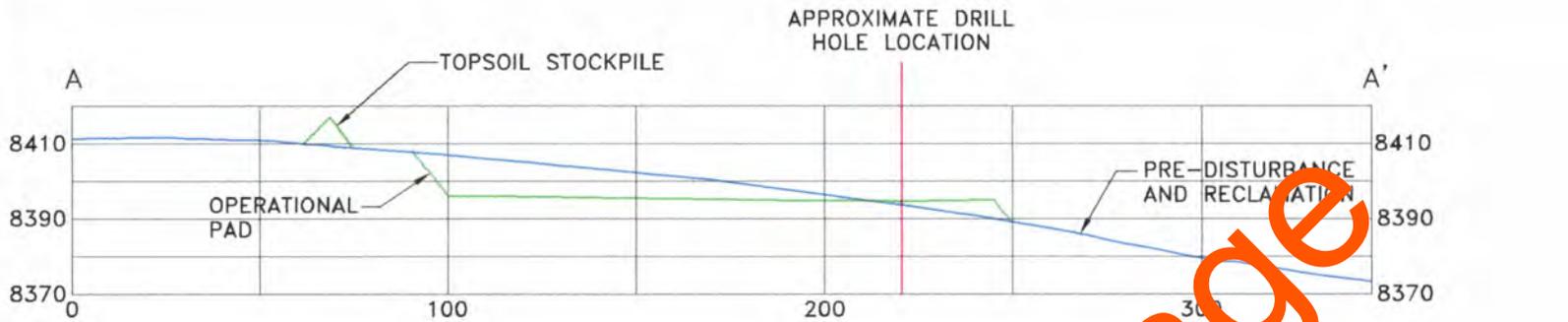
542.200 Plan for Backfilling, Soil Stabilization, Compacting, and Grading

Following completion of the venting activities, the well site will be prepared for contouring and soil distribution. Details regarding topsoil placement and revegetation are provided in Section 242 and Section 353, respectively.

Sedimentation Pond Removal and Interim Sediment Control - See Section 542.500 of this submittal.

542.300 Final Surface Configuration Maps and Cross Sections

The sites will be regraded to the approximate original contour, the contours representing the pre-disturbance topography also represent the reclamation topography. Refer to Figures 5-2, 5-6, 5-10, 5-18, 5-21, 5-24, 5-28 and Attachment 5-1 (G-8 thru G-19, G-22, G-22 access road, G-25, G-26, G-29, G-30 and G-31) to see cross sections representing the final surface configuration. Refer to Attachment 5-4, Plates 1 thru 3 for the surface configuration of the road and cross sections showing pre-mining, operational and post-mining contours.



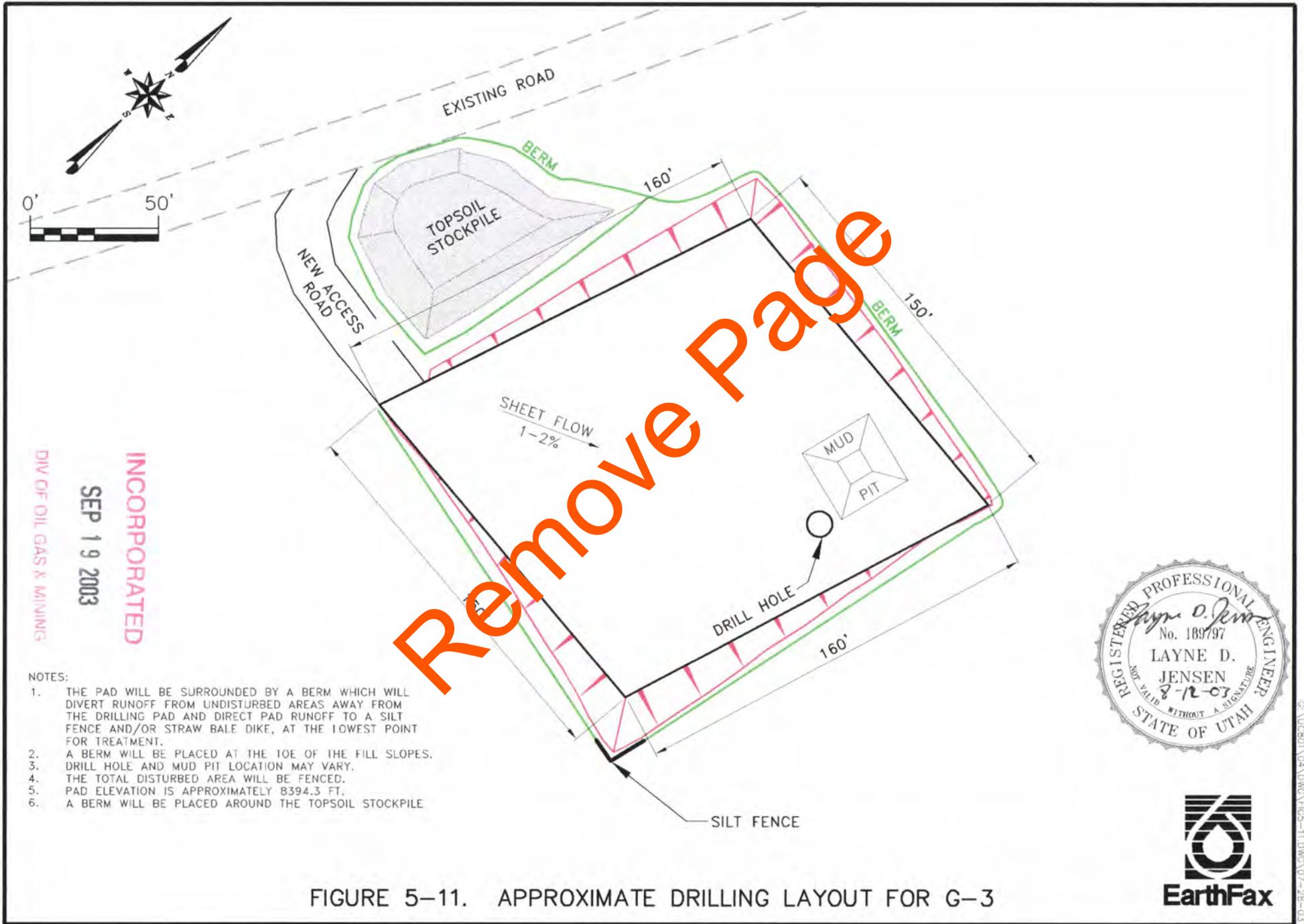
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INCORPORATED

FIGURE 5-10. TYPICAL CROSS-SECTIONS FOR G-3





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 SEP 19 2003
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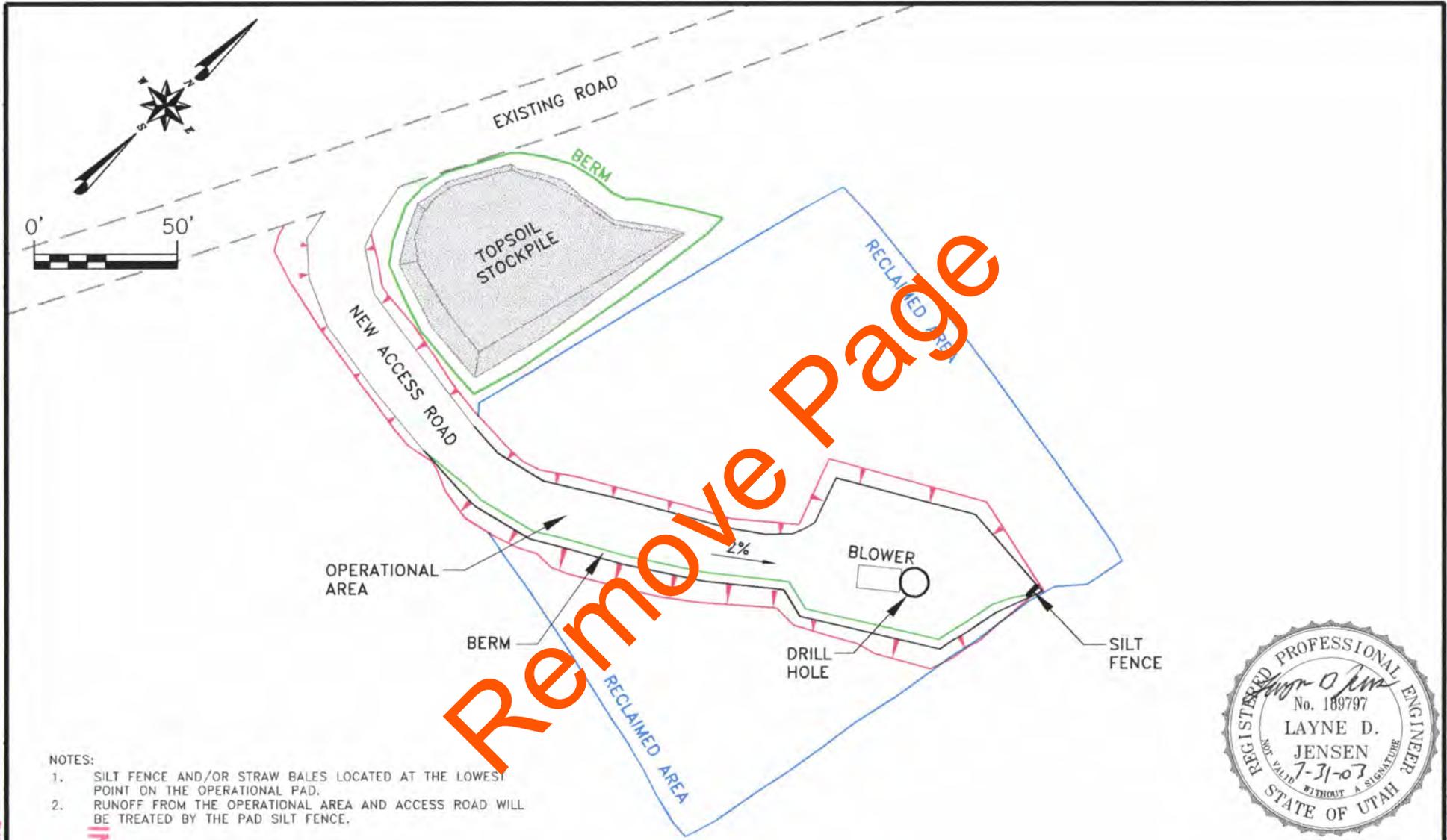
NOTES:

1. THE PAD WILL BE SURROUNDED BY A BERM WHICH WILL DIVERT RUNOFF FROM UNDISTURBED AREAS AWAY FROM THE DRILLING PAD AND DIRECT PAD RUNOFF TO A SILT FENCE AND/OR STRAW BALE DIKE, AT THE LOWEST POINT FOR TREATMENT.
2. A BERM WILL BE PLACED AT THE TOE OF THE FILL SLOPES.
3. DRILL HOLE AND MUD PIT LOCATION MAY VARY.
4. THE TOTAL DISTURBED AREA WILL BE FENCED.
5. PAD ELEVATION IS APPROXIMATELY 8394.3 FT.
6. A BERM WILL BE PLACED AROUND THE TOPSOIL STOCKPILE



FIGURE 5-11. APPROXIMATE DRILLING LAYOUT FOR G-3

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NOTES:

1. SILT FENCE AND/OR STRAW BALES LOCATED AT THE LOWEST POINT ON THE OPERATIONAL PAD.
2. RUNOFF FROM THE OPERATIONAL AREA AND ACCESS ROAD WILL BE TREATED BY THE PAD SILT FENCE.



FIGURE 5-12. APPROXIMATE OPERATIONAL LAYOUT FOR G-3



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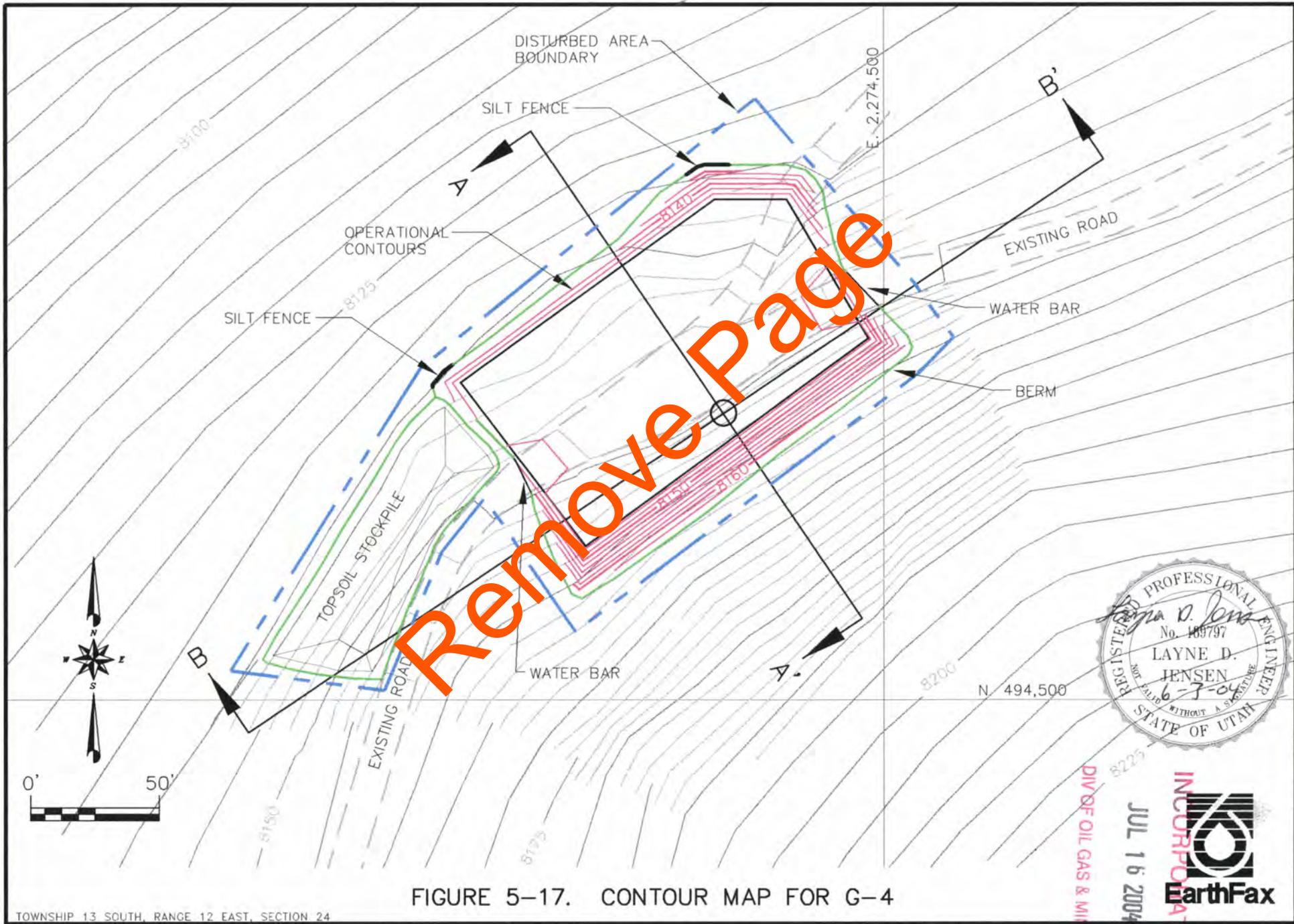
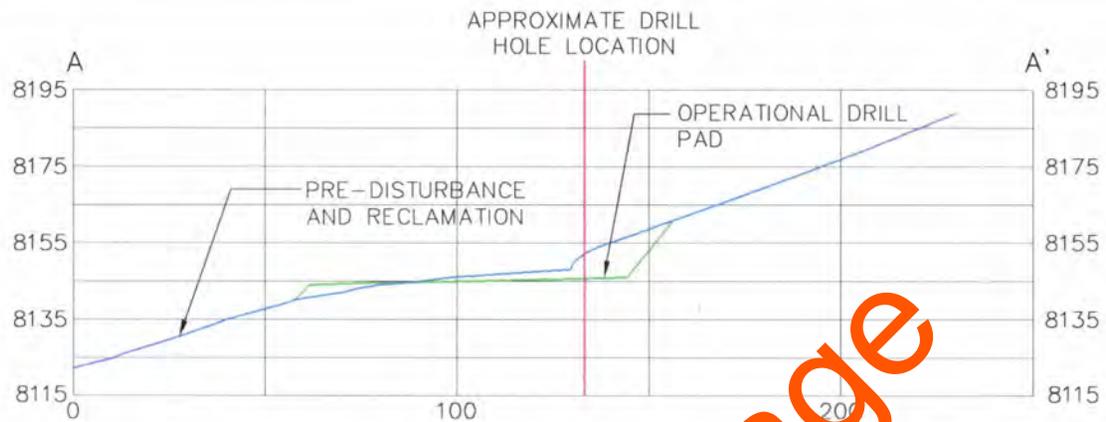


FIGURE 5-17. CONTOUR MAP FOR G-4



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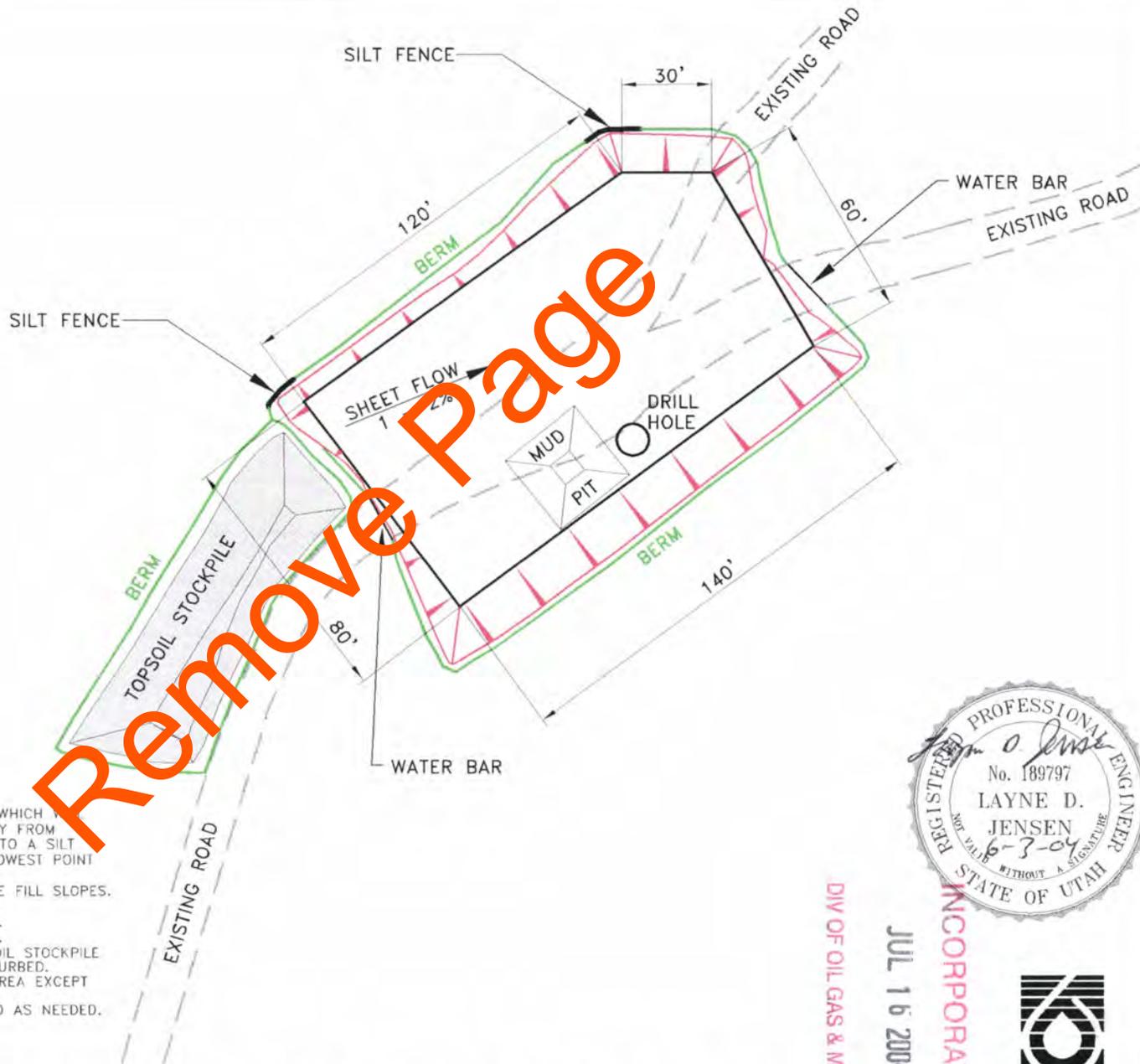
JUL 16 2004

DIV OF OIL GAS & IRON



FIGURE 5-18. TYPICAL CROSS-SECTIONS FOR G-4

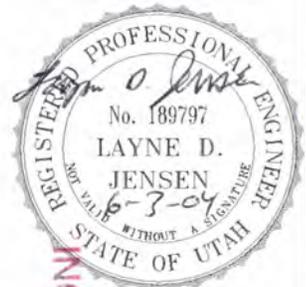




NOTES:

1. THE PAD WILL BE SURROUNDED BY A BERM WHICH DIVERT RUNOFF FROM DISTURBED AREAS AWAY FROM THE DRILLING PAD AND DIRECT PAD RUNOFF TO A SILT FENCE AND/OR STRAW BALE DIKE, AT THE LOWEST POINT FOR TREATMENT.
2. A BERM WILL BE PLACED AT THE TOE OF THE FILL SLOPES.
3. DRILL HOLE LOCATION MAY VARY.
4. THE TOTAL DISTURBED AREA WILL BE FENCED.
5. PAD ELEVATION IS APPROXIMATELY 8145.5 FT.
6. A BERM WILL BE PLACED AROUND THE TOPSOIL STOCKPILE
7. THE ENTIRE SITE HAS BEEN PREVIOUSLY DISTURBED.
8. TOPSOIL WILL BE REMOVED FROM THE PAD AREA EXCEPT IN AREAS OF EXISTING ROADS.
9. LOCATION OF WATER BARS WILL BE ADJUSTED AS NEEDED.

FIGURE 5-19. APPROXIMATE DRILLING LAYOUT FOR G-4



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FIGURE 5-26

**Reclamation Schedule - Wells ~~G-3, G-4~~, G-6 thru G-19, G-22, G-22 Access Road
 G-25, G-26, G-29 thru G-31**

Task	Weeks to Complete from Start of Reclamation Activities		
	1	2	3
Plug Well			
Regrade Site to Original Contour			
Rip Subsoil			
Place Topsoil and Roughen			
Seed and Mulch			

The schedule assumes that weather conditions are conducive. Schedule is for each individual well not wells collectively. The first task does not apply to the reclamation of the access road to well site G-22, the road will follow the schedule for completion of tasks 2 thru 5. If necessary the timing may be extended.

Reclamation Schedule - AMV Access Road

Task	Weeks to Complete from Start of Reclamation Activities		
	1	2	3
Regrade Road to Original Contour			
Rip Subsoil			
Place Topsoil and Roughen			
Seed and Mulch			
Move to Next Road Segment, Repeat First Four Tasks.			

The schedule assumes that weather conditions are conducive. Schedule is for individual segments of the road not the entire road. The road will be broken up into 3 to 4 segments, thus the reclamation will take from six to eight weeks. If necessary the timing may be extended.

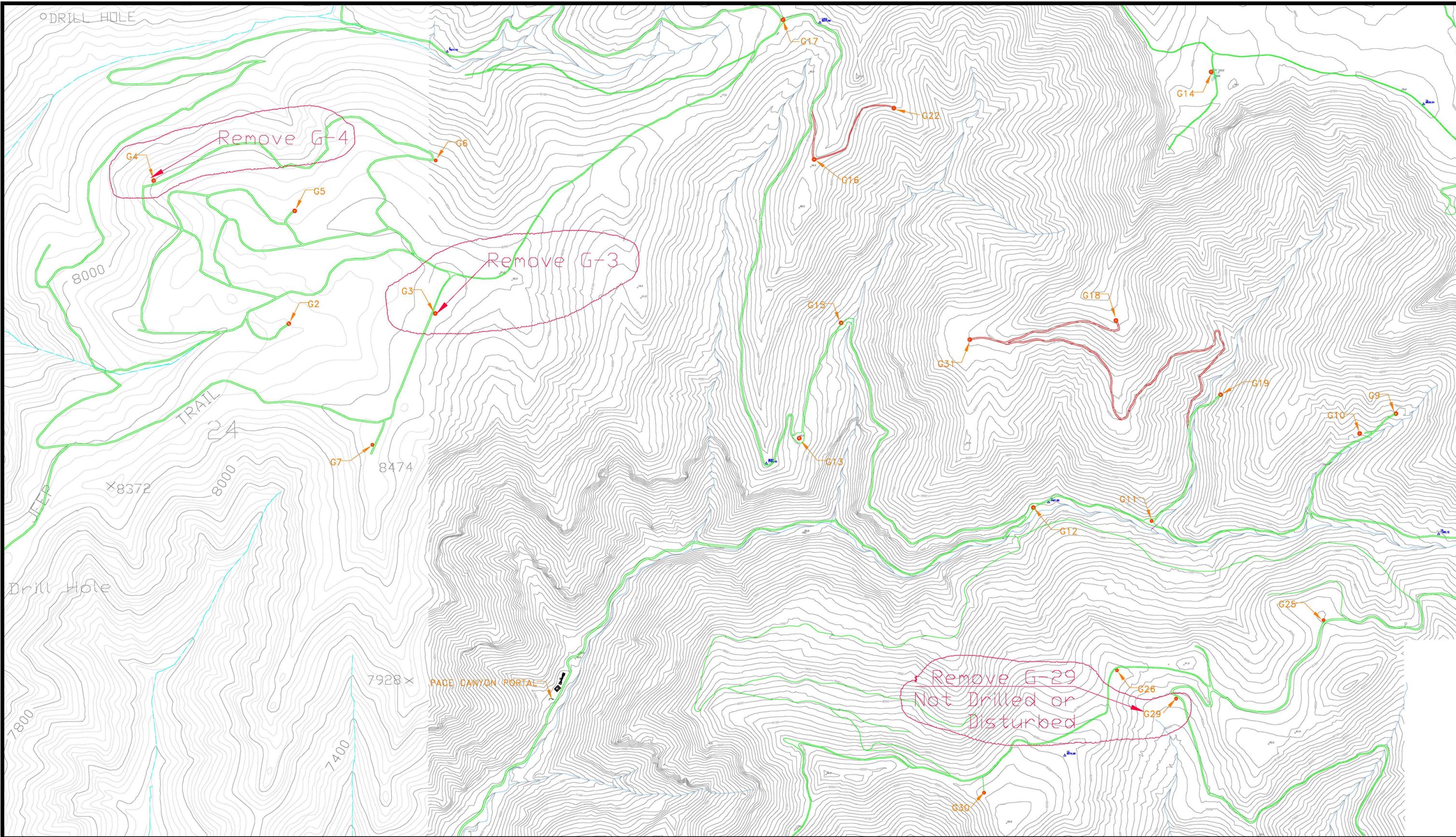
Attachment 5-2, Table 1

Well No.	Year Constructed		Year Plugged		Final Reclamation		Bond Release Phases
	Planned	Actual	Planned	Actual	Planned	Actual	Actual
G-2		2004		2009		2009	Phase I & II
G-3		2004		2005		2005	Phase I, II & III
G-4		2004		2005		2005	Phase I, II & III
G-5		2004		2009		2009	Phase I & II
G-6		2004		2005		2007	Phase I & II
G-7		2005		2008/2009		2009	Phase I & II
G-9		2005		2008	2010	2012	Phase I
G-10		2006		2008	2010	2010	Phase I & II
G-11		2006		2008	2015		
G-12		2006		2009	2010	2011	Phase I & II
G-13		2006		2008		2009	Phase I & II
G-14		2006	2010 (B)	2009 (A)	2010	2010	Phase I & II
G-15*	N/A				2015	2015	
G-16		2008			2011	2013	Phase I & II
G-17*	N/A				2014	2014	
G-18		2007	2010	2008 (A)	2010	2012	Phase I & II
G-19		2007		2008	2010	2010	Phase I
G-22		2008			2011	2013	Phase I
G-25		2009			2013	2013	Phase I
G-26		2009			2013	2013	Phase I
G-30	2010					2013	Phase I
G-31		2007	2010	2008 (A)	2011	2013	Phase I & II

Dates are approximate, all events are subject to availability of contractors, weather, mining needs, etc.

Although permitted, wells G-1, G-8 and G29 were never drilled/constructed

*Sites were not drilled but received minor disturbance



NOTE: NOT ALL ROADS IN THE AREA ARE SHOWN ON THIS DRAWING, BUT ALL ROADS USED FOR ACCESS TO THE DEGAS WELLS PERMITTED THROUGH 2008 ARE SHOWN.

CONTOUR INTERVAL: 40 FT | CONTOUR INTERVAL: 25 FT

LEGEND

- EXISTING ROADS
- EXISTING ROADS (LOCATION- FIELD SURVEY ONLY)
- ROADS CONSTRUCTED BY DUGOUT CANYON MINE
- Gxx - DEGAS WELL LOCATION



REVISIONS OR UP-DATES			DATE: 10/30/08	
NO.	DATE	BY	DESIGNED BY:	
2	09/01/09	STV/VSM	DRAWN BY:	STV
3	03/30/10	VSM	CHECKED BY:	
4	06/10/10	JKS		
5	07/27/10	JKS		
6	07/15/16	BK	SCALE: 1"=500 FT	

FILENAME: ATT5-4 PLATE4.DWG

CF Canyon Fuel Company, LLC
Dugout Canyon Mine

PACE CANYON ROAD SYSTEM

P.O. BOX 1029
WELLINGTON, UTAH 84542

DRAWING OR MAP NUMBER
ATTACHMENT 5-4 PLATE 4

Dugout M&RP, Methane Degasification Amendment

Chapter 7

Page: 7-27

Dugout Canyon Mine Permit Number C/007/039

Canyon Fuel Company

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763 Siltation Structures

763.100 Maintenance of Siltation Structures

All siltation structures will be maintained until removed in accordance with the approved reclamation plan.

763.200 Removal of Siltation Structures

When a siltation structure is removed, the land on which the siltation structure was located will be regraded and revegetated in accordance with the reclamation plan presented in Section 540.

764 Structure Removal

A timetable for the reclamation of the sites is presented in Figures 5-15 (G-2 and G-5) and 5-26 (~~G-3, G-4~~, G-6 thru G-19, G-22, G-22 access road, G-25, G-26, G-29, G-30, G-31 and AMV access road).

765 Permanent Casing and Sealing of Wells

Refer to Section 542.700 of this submittal.

Copies of Letters to Adjoining Property Owners etc.

Dugout Canyon Mine Permit Number C/007/039

Canyon Fuel Company

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Attached letters are included for information only. They are not proposed for incorporation into the Dugout M&RP.



May 23, 2016

Wellington City Hall/Public Works
150 W Main
PO Box 559
Wellington, UT 84542
(435) 637-5213

Dear Wellington City:

Notice is hereby given that Canyon Fuel Company has filed an application with the Utah Department of Natural Resources, Division of Oil, Gas and Mining for Phase III Bond Release. The Phase III Bond Release will be for two Methane Degasification Well sites accounting for 1.82 acres at the Dugout Canyon Mine.

All areas for bond release have met the regulation of the R645 Utah Coal Rules in regards to the vegetation standards for Phase III Bond Release (refer to R645-301-880). The Methane Degasification Well sites G-3 and G-4 are proposed for release. The locations of the areas are as follows:

Methane Degasification Well sites, the permit area is located in Carbon County, Utah as follows:

G-3 Portion of N1/2SW1/4NW1/4 Section 19 Township 13 South, Range 13 East

G-4 Portion of N1/2NE1/4NW1/4 Section 24 Township 13 South, Range 12 East

Reclamation of the noted areas above were completed in 2005.

The Phase III bond release application is to release the remaining surety bond held for the Dugout Canyon Mine, Methane Degasification Well sites G-3 and G4 in the amount of \$4,911. All areas within the Methane Degasification Well sites meet the requirements of the regulations for post mine land use of Wildlife Habitat, Recreational, Grazing and Vegetation establishment.

A copy of the Phase III bond release application may be examined at the office of Division of Oil, Gas and Mining, 1594 West North Temple, Suite 1210, Salt Lake City, Utah 84114-5801 and written comments, objections, or requests for an informal conference may be submitted to the Salt Lake City address. Said comments must be submitted thirty (30) days from the date of the last publication of this notice. This notice is being published to comply with the Surface Mining Control and Reclamation Act of 1977, and State and Federal regulations promulgated pursuant to said Act.

Published in the Sun Advocate of Carbon County Utah for four consecutive weeks beginning May 26, 2016.

Please contact me at (435) 636-2872 should you have any questions or comments regarding the enclosed information.

Sincerely,



David G. Spillman, P.E.
Technical Services Manager

May 23, 2016

Wellington Canal Company
1400 South 3250 East
Price, UT 84501
(435) 820-4590

Dear Wellington Canal Company:

Notice is hereby given that Canyon Fuel Company has filed an application with the Utah Department of Natural Resources, Division of Oil, Gas and Mining for Phase III Bond Release. The Phase III Bond Release will be for two Methane Degasification Well sites accounting for 1.82 acres at the Dugout Canyon Mine.

All areas for bond release have met the regulation of the R645 Utah Coal Rules in regards to the vegetation standards for Phase III Bond Release (refer to R645-301-880). The Methane Degasification Well sites G-3 and G-4 are proposed for release. The locations of the areas are as follows:

Methane Degasification Well sites, the permit area is located in Carbon County, Utah as follows:

G-3 Portion of N1/2SW1/4NW1/4 Section 19 Township 13 South, Range 13 East
G-4 Portion of N1/2NE1/4NW1/4 Section 24 Township 13 South, Range 12 East

Reclamation of the noted areas above were completed in 2005.

The Phase III bond release application is to release the remaining surety bond held for the Dugout Canyon Mine, Methane Degasification Well sites G-3 and G4 in the amount of \$4,911. All areas within the Methane Degasification Well sites meet the requirements of the regulations for post mine land use of Wildlife Habitat, Recreational, Grazing and Vegetation establishment.

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Please contact me at (435) 636-2872 should you have any questions or comments regarding the enclosed information.

Sincerely,



David G. Spillman, P.E.
Technical Services Manager

May 23, 2016

Milton and Ardith Thayn Trust
7730 East Hwy 6
Price, UT 84501

Dear Mr. Thayn:

Notice is hereby given that Canyon Fuel Company has filed an application with the Utah Department of Natural Resources, Division of Oil, Gas and Mining for Phase III Bond Release. The Phase III Bond Release will be for two Methane Degasification Well sites accounting for 1.82 acres at the Dugout Canyon Mine.

All areas for bond release have met the regulation of the R645 Utah Coal Rules in regards to the vegetation standards for Phase III Bond Release (refer to R645-301-880). The Methane Degasification Well sites G-3 and G-4 are proposed for release. The locations of the areas are as follows:

Methane Degasification Well sites, the permit area is located in Carbon County, Utah as follows:

G-3 Portion of N1/2SW1/4NW1/4 Section 19 Township 13 South, Range 13 East
G-4 Portion of N1/2NE1/4NW1/4 Section 24 Township 13 South, Range 12 East

Reclamation of the noted areas above were completed in 2005.

The Phase III bond release application is to release the remaining surety bond held for the Dugout Canyon Mine, Methane Degasification Well sites G-3 and G4 in the amount of \$4,911. All areas within the Methane Degasification Well sites meet the requirements of the regulations for post mine land use of Wildlife Habitat, Recreational, Grazing and Vegetation establishment.

A copy of the Phase III bond release application may be examined at the office of Division of Oil, Gas and Mining, 1594 West North Temple, Suite 1210, Salt Lake City, Utah 84114-5801 and written comments, objections, or requests for an informal conference may be submitted to the Salt Lake City address. Said comments must be submitted thirty (30) days from the date of the last publication of this notice. This notice is being published to comply with the Surface Mining Control and Reclamation Act of 1977, and State and Federal regulations promulgated pursuant to said Act.

Published in the Sun Advocate of Carbon County Utah for four consecutive weeks beginning May 26, 2016.

Please contact me at (435) 636-2872 should you have any questions or comments regarding the enclosed information.

Sincerely,



David G. Spillman, P.E.
Technical Services Manager

May 23, 2016

Price River Water Improvement District
265 S Fairgrounds Rd
Price, UT 84501
(435) 637-6350

Dear Price River Water Improvement District:

Notice is hereby given that Canyon Fuel Company has filed an application with the Utah Department of Natural Resources, Division of Oil, Gas and Mining for Phase III Bond Release. The Phase III Bond Release will be for two Methane Degasification Well sites accounting for 1.82 acres at the Dugout Canyon Mine.

All areas for bond release have met the regulation of the R645 Utah Coal Rules in regards to the vegetation standards for Phase III Bond Release (refer to R645-301-880). The Methane Degasification Well sites G-3 and G-4 are proposed for release. The locations of the areas are as follows:

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Sincerely,



David G. Spillman, P.E.
Technical Services Manager

May 23, 2016

Price Public Works Complex
432 West 600 South
Price, UT 84501

Dear Price Public Works:

Notice is hereby given that Canyon Fuel Company has filed an application with the Utah Department of Natural Resources, Division of Oil, Gas and Mining for Phase III Bond Release. The Phase III Bond Release will be for two Methane Degasification Well sites accounting for 1.82 acres at the Dugout Canyon Mine.

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Sincerely,



David G. Spillman, P.E.
Technical Services Manager

May 23, 2016

Price City Administration
City Hall
185 East Main Street
Price, UT 84501

Dear Price City:

Notice is hereby given that Canyon Fuel Company has filed an application with the Utah Department of Natural Resources, Division of Oil, Gas and Mining for Phase III Bond Release. The Phase III Bond Release will be for two Methane Degasification Well sites accounting for 1.82 acres at the Dugout Canyon Mine.

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Sincerely,



David G. Spillman, P.E.
Technical Services Manager

May 23, 2016

Bureau of Land Management
Price Field Office
125 South 600 West
Price, UT 84501
(435) 636-3600

Notice is hereby given that Canyon Fuel Company has filed an application with the Utah Department of Natural Resources, Division of Oil, Gas and Mining for Phase III Bond Release. The Phase III Bond Release will be for two Methane Degasification Well sites accounting for 1.82 acres at the Dugout Canyon Mine.

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Sincerely,



David G. Spillman, P.E.
Technical Services Manager

May 23, 2016

KFJ Ranch Partnership
Kerwin Jensen
Cleveland, UT 84518

Dear Mr. Jensen:

Notice is hereby given that Canyon Fuel Company has filed an application with the Utah Department of Natural Resources, Division of Oil, Gas and Mining for Phase III Bond Release. The Phase III Bond Release will be for two Methane Degasification Well sites accounting for 1.82 acres at the Dugout Canyon Mine.

All areas for bond release have met the regulation of the R645 Utah Coal Rules in regards to the vegetation standards for Phase III Bond Release (refer to R645-301-880). The Methane Degasification Well sites G-3 and G-4 are proposed for release. The locations of the areas are as follows:

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Please contact me at (435) 636-2872 should you have any questions or comments regarding the enclosed information.

Sincerely,



David G. Spillman, P.E.
Technical Services Manager

May 23, 2016

Glen L Wells
350 N 700 W
Wellington, UT 84542
(435) 630-6368

Dear Mr. Wells:

Notice is hereby given that Canyon Fuel Company has filed an application with the Utah Department of Natural Resources, Division of Oil, Gas and Mining for Phase III Bond Release. The Phase III Bond Release will be for two Methane Degasification Well sites accounting for 1.82 acres at the Dugout Canyon Mine.

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Please contact me at (435) 636-2872 should you have any questions or comments regarding the enclosed information.

Sincerely,



David G. Spillman, P.E.
Technical Services Manager

May 23, 2016

Gil H Conover
P.O. Box 83
Ferron, UT 84523

Dear Mr. Conover:

Notice is hereby given that Canyon Fuel Company has filed an application with the Utah Department of Natural Resources, Division of Oil, Gas and Mining for Phase III Bond Release. The Phase III Bond Release will be for two Methane Degasification Well sites accounting for 1.82 acres at the Dugout Canyon Mine.

All areas for bond release have met the regulation of the R645 Utah Coal Rules in regards to the vegetation standards for Phase III Bond Release (refer to R645-301-880). The Methane Degasification Well sites G-3 and G-4 are proposed for release. The locations of the areas are as follows:

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Please contact me at (435) 636-2872 should you have any questions or comments regarding the enclosed information.

Sincerely,



David G. Spillman, P.E.
Technical Services Manager

May 23, 2016

Carbon County Planning/Zoning
65 South 100 East
Price, UT 84501
(435) 636-3260

Dear Carbon County Planning/Zoning:

Notice is hereby given that Canyon Fuel Company has filed an application with the Utah Department of Natural Resources, Division of Oil, Gas and Mining for Phase III Bond Release. The Phase III Bond Release will be for two Methane Degasification Well sites accounting for 1.82 acres at the Dugout Canyon Mine.

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Please contact me at (435) 636-2872 should you have any questions or comments regarding the enclosed information.

Sincerely,



David G. Spillman, P.E.
Technical Services Manager

May 23, 2016

Bowie Resources Partners
Ryan Wilson
225 North 5th Street Suite 900
Grand Junction, CO 81501
(970) 263-5130

Dear Mr. Wilson:

Notice is hereby given that Canyon Fuel Company has filed an application with the Utah Department of Natural Resources, Division of Oil, Gas and Mining for Phase III Bond Release. The Phase III Bond Release will be for two Methane Degasification Well sites accounting for 1.82 acres at the Dugout Canyon Mine.

All areas for bond release have met the regulation of the R645 Utah Coal Rules in regards to the vegetation standards for Phase III Bond Release (refer to R645-301-880). The Methane Degasification Well sites G-3 and G-4 are proposed for release. The locations of the areas are as follows:

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Please contact me at (435) 636-2872 should you have any questions or comments regarding the enclosed information.

Sincerely,



David G. Spillman, P.E.
Technical Services Manager

Notarized Statement of Completion
Dugout Canyon Mine Permit Number C/007/039

Canyon Fuel Company

Redline Strikeout

Title page for reference only

The notarized Statement of Completion is included for information only. It is not proposed for incorporation into the Dugout M&RP.



May 25, 2016

Mr. Daron Haddock
Division of Oil, Gas and Mining (DOGM)
P.O. Box 145801
Salt Lake City, Utah 84114

Dear Mr. Haddock:

Notice is hereby given to the Utah Department of Natural Resources, Division of Oil, Gas and Mining that Canyon Fuel Company, P.O. Box 1029, Wellington, Utah 84542, has completed the reclamation work for Phase III Bond Release on select Methane Degasification Sites of the Dugout Canyon Mine Permit C/007/039. The Phase III bond release applies to 1.82 acres used for Methane Degasification Well Sites where reclamation was completed in 2005. Canyon Fuel Company has completed Phase III of the approved reclamation plan and all areas have met the regulation of the R645 Utah Coal Rules.

The location of the areas are as follows:

- G-3 Portion of N1/2SW1/4NW1/4 Section 19 Township 13 South, Range 13 East
- G-4 Portion of N1/2NE1/4NW1/4 Section 24 Township 13 South, Range 12 East

The Phase III bond release application is for a surety bond reduction of \$4,911 on the current bond for Dugout Canyon Mine. All areas within the Methane Degasification Well sites meet the requirements of the regulations for post mine land use of Wildlife Habitat, Recreational, Grazing and Vegetation establishment.

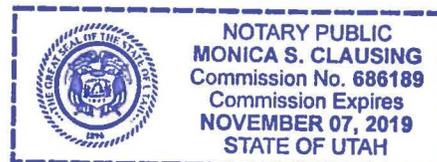
Please contact me at (435) 636-2872 should you have any questions or comments regarding the enclosed information.

Sincerely,



David G. Spillman, P.E.
Technical Services Manager

STATE OF UTAH
COUNTY OF: Carbon
ON THE 25th DAY OF May 2016
PERSONALLY APPEARED BEFORE ME
Mon S. Claus SIGNER(S) OF THE ABOVE
INSTRUMENT, WHO DULY ACKNOWLEDGED TO ME THAT
HE/SHE/THEY EXECUTED THE SAME




NOTARY PUBLIC

Public Notice Letter for Bond Release Application
Dugout Canyon Mine Permit Number C/007/039

Canyon Fuel Company

Redline Strikeout

Title page for reference only

The Public Notice Letter is included for information only. It is not proposed for incorporation into the Dugout M&RP.



Public Notice Phase III Bond Release Application Dugout Canyon Mine, Canyon Fuel Company LLC.

**Public Notice
Phase III Bond Release Application
Dugout Canyon Mine
Canyon Fuel Company
P.O. Box 1029
Wellington, UT 84542
MSHA # 42-01890
Permit # C/007/039
Permit Renewed 3/16/2013**

Notice is hereby given that Canyon Fuel Company has filed an application with the Utah Department of Natural Resources, Division of Oil, Gas and Mining for Phase III Bond Release. The Phase III Bond Release will be for two Methane Degasification Well sites accounting for 1.82 acres at the Dugout Canyon Mine.

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Affidavit of Publication

Dugout Canyon Mine Permit Number C/007/039

Canyon Fuel Company

Redline Strikeout

Title page for reference only

The Affidavit of Publication is included for information only. It is not proposed for incorporation into the Dugout M&RP.



AFFIDAVIT OF PUBLICATION

STATE OF UTAH)

ss.

County of Carbon,)

I, Jenni Fasselin, on oath, say that I am the Publisher of the Sun Advocate, a twice-weekly newspaper of general circulation, published at Price, State of Utah a true copy of which is hereto attached, was published in the full issue of such newspaper for 4 (Four) consecutive issues, and on the Utah legals.com website, the first publication was on the 26th day of May, 2016, and that the last publication of such notice was in the issue of such newspaper dated the 16th day of June 2016

Jenni Fasselin

Jenni Fasselin – Publisher

Subscribed and sworn to before me this 16th day of June, 2016.

Linda Thayne

Notary Public My commission expires January 10, 2019 Residing at Price, Utah

Publication fee, \$ 504.00



**PUBLIC NOTICE PHASE III BOND RELEASE
APPLICATION DUGOUT CANYON MINE,
CANYON FUEL COMPANY LLC.**

**Canyon Fuel Company
P.O. Box 1029
Wellington, UT 84542
MSHA # 42-01890
Permit # C/007/039
Permit Renewed 3/16/2013**

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Published in the Sun Advocate May 26, June 2, 9 and 16, 2016.