



**Canyon Fuel
Company, LLC**

A Subsidiary of Wolverine Fuels, LLC

A5981

Sufco Mine

John D. Byars
General Manager
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Salina, Utah 84654
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August 12, 2019

Permit Supervisor
Utah Coal Regulatory Program
Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
PO Box 145801
Salt Lake City, UT 84114-5801

Re: Revision to M&RP to Add Longwall Mining of the Pines East Panels,
Canyon Fuel Company, LLC, Sufco Mine, C/041/002

Dear Sirs:

Please find enclosed with this letter an amendment to address the "longwall mining" of coal panels in the eastern region of the Pines Lease Tract (UTU-76195). The amendment for the proposed underground first-mining was previously submitted and approved.

If you have questions or need addition information please contact Vicky Miller at (435)286-4481.

CANYON FUEL COMPANY
SUFCO Mine

Jacob Smith
Engineering Manager

Encl.

cc: DOGM Correspondence File

RECEIVED

AUG 15 2019

DIV OF OIL, GAS & MINING

APPLICATION FOR COAL PERMIT PROCESSING

Permit Change New Permit Renewal Exploration Bond Release Transfer

Permittee: Canyon Fuel Company, LLC

Mine: Sufco Mine

Permit Number: C/041/002

Title: Revision to M&RP to Add Longwall Mining of Pines East Panels

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

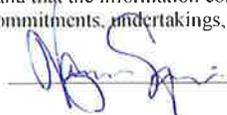
Instructions: If you answer yes to any of the first eight (gray) questions, this application may require Public Notice publication.

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

Please attach 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.

Wayne Squire
Print Name



HR Manager, 8/12/2019
Sign Name, Position, Date

Subscribed and sworn to before me this 12th day of August, 2019

Jill White
Notary Public

My commission Expires: 3/28, 2020

Attest: State of Utah ; ss: County of Sevier



For Office Use Only: 	Assigned Tracking Number: 	Received by Oil, Gas & Mining
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CHAPTER 4

LAND USE AND AIR QUALITY

The monitoring, treatment plans and mitigation of the cultural resource sites will be in accordance with the Memorandum of Agreement (MOA) 00-MU-11041000-017, and any amendment to it, between the USFS - Manti-La Sal, USHPO, the Advisory Council on Historic Places, UDOGM, and the SUFCA Mine located in Appendix 4-5.

Sufca intends to undermine portions of the East Fork of Box Canyon beginning in the Fall of 2003 as they extract coal from the 3LPE and 4LPE longwall panels. This change in the mining plan will change the required monitoring schedule in accordance with the Memorandum of Agreement for site 42SV2430/ML-3446 - Elusive Peacock which will be undermined under the 3LPE longwall panel. In accordance with pages 11-12 of the MOA the required monitoring schedule of this site will change from Monitor Schedule A (Sites in areas that will be mined using full-support methods) to Monitor Schedule B (Sites in areas which will be mined under and subsided) requiring the implementation of additional monitoring of the site. Monitoring results will be provided in DOGM Annual Reports. (2003, 2004, 2005, 2006, and indefinitely until movement ceases)

Historic properties documented in the Pines Tract area include 42SV2424, a sawmill, and site 42SV2391 a complex of trash scatters. Both sites are considered ineligible for the NRHP.

The Applicant agrees, however, to notify the regulatory authority and the Utah State Historical Preservation Office (SHPO) of previously unidentified cultural resources discovered in the course of mining operations. The Applicant also agrees to have any such cultural resources evaluated in terms of National Register of Historic Places eligibility criteria.

Pines East Panels - The area has been previously subject to many cultural resource inventories. Sites recorded within the search area are documented in inventories of the Pines Area located in Confidential-Appendix 4-2 (AERC, Pines Locality, 11/2/1997). SHPO clearance for the Pines East Panels is being sought in 2018/2019 following a review by the USFS and DOGM, see Appendix 4-2 for documentation of the clearance. **During an inventory in 2019, a sparse prehistoric lithic scatter (42SV3888) was located on the rim of the plateau. The integrity of the site is considered low to non-existent and is not eligible per SHPO for inclusion on the NRHP (Appendix 4-2).** Site 42SV2426 is the only prehistoric site in the immediate area of the panels and is considered insignificant. Site 42SV2426 consists of a lithic scatter of debitage (flakes, scraper, a projectile point fragment) on the rim of the Wasatch Plateau. As expected the artifacts scatter as encountered was isolated, sparse and of low complexity. In 2018 portions of Sections 13, 24 and 25 of T21S, R5E (Figure 2) were inventoried in association with an exploration drilling project, no artifacts or cultural resources were encountered. The inventory report has been incorporated into Appendix 4-2 (Tetra Tech July 2018).

Muddy Creek Coal Tract Area

Cultural and Historic Information. Cultural resource information and maps identifying cultural and historical study areas are located in Appendix 4-2. Cirrus Ecological Solutions, LC conducted

CHAPTER 5

ENGINEERING

Upper Hiawatha coal seam. Overburden ranges approximately from 300-900 feet. The projected subsidence across the 4R4E panel ranges from 1 -5 feet and the projected average subsidence is approximately 2 feet. See the 4R4E Projected Subsidence Map in Appendix 6-4. No surface disturbance, new surface facilities or infrastructure will be associated with the mining of the 4R4E panel therefore no bonding will be needed.

Pines East Panel(s)

Mining of these panels will occur in Lease UTU-76195 which is referred to as the Pines Tract throughout the M&RP in text, appendices and on drawings. This lease was issued to the permittee in October 1999 (Appendix 1-2), portions of the lease were relinquished in 2016 (Appendix 1-1). See Plate 5-6 and Plate 5-7 for the mine plan and respective timing. Mining will occur only in the Upper Hiawatha coal seam. Overburden ranges approximately from 750-1000 feet. **The projected subsidence across the panels is 5 feet or less. Subsidence control points have been previously established near the panels (Table 5-2).** The panels will be mined using the First Mining/Room & Pillar method, no subsidence is projected with this method. No surface disturbance, new surface facilities or infrastructure will be associated with the mining of the panels.

5.2.5.1 Subsidence Control Plan

Potential Areas of Subsidence. Structures that are present above the existing or planned mine workings that may be affected by mining are shown on Plate 5-5. Renewable resource lands within the lease and permit areas are shown on Plates 4-1 A, B, C, 5-10C, 7-2 and 7-3. Two subsidence monitoring locations were added in 2017, one west of the Greens Hollow lease(#2251), the second is within the Greens Hollow lease (#2250), additional subsidence monitoring locations will be added as mining progresses to the north.

Green Hollow. Various information for the Greens Hollow Lease is located in Appendix 7-27 and the renewable resource lands plates listed above. The Greens Hollow area contains troughs, stock and natural ponds which may be affected by subsidence. They are shown on drawing in this appendix under divider "Natural and Stock Ponds" The area of the Greens Hollow lease is not known to contain non-commercial buildings; public buildings and facilities; churches; schools; hospitals; occupied residential dwellings or related structures. The Rough Brothers cabin the only one known of in the area was demolished in 2016 according the USFS personnel owners of the cabin. See "Subsidence Control Measures" for repair and protection commitments and "Subsidence Monitoring" commitments below in this section.

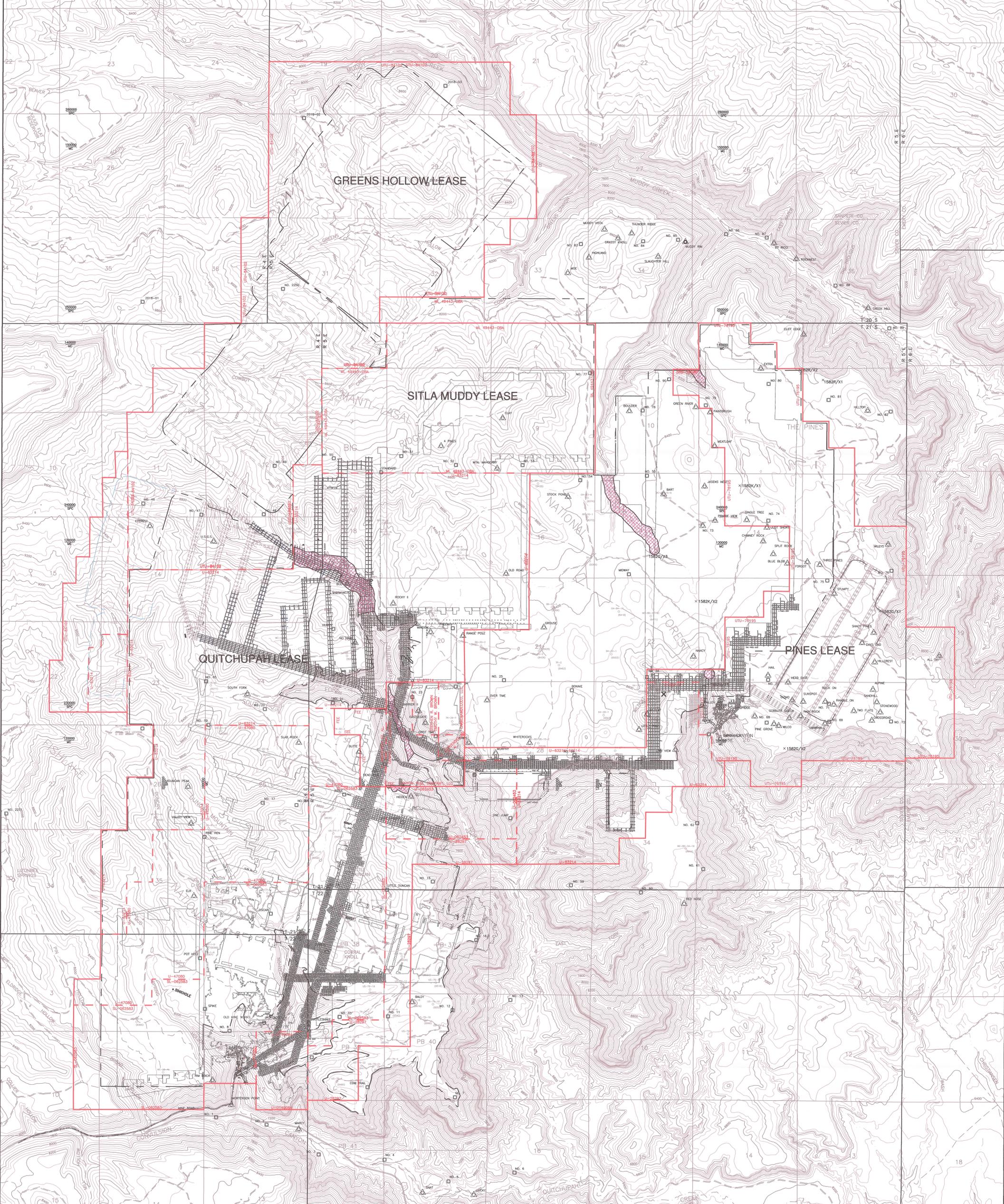
State appropriated water supply locations within the Greens Hollow Lease and adjacent area are shown on the Water Rights Plate 7-2. The water rights information is provided in Appendix 7-1.

TABLE 5-2 (Continued)
 Subsidence Control Point Survey Data

Station Name	Northing	Easting	Elevation
P.K. Nail	118833.45	109123.60	8380.36
Pot Hole	108988.85	099782.73	8294.55
Prairie View	131204.98	125857.42	8451.01
Rain Gauge	102916.00	101948.87	7558.53
Rain Rock	121342.03	130240.93	8691.08
Ramble On	121927.63	131923.04	8758.11
Range Pole	125342.96	113084.37	8356.94
Rattle Snake	105717.67	105315.88	8411.86
Red Nose	111823.28	124354.97	8667.55
Ridge	117278.21	107079.21	8630.86
Rim Rock	102804.40	100422.90	8367.60
Rocknest	144458.05	129952.07	7154.21
Rock On	122072.13	131499.36	8738.41
Rocky II	126969.22	109539.79	8320.28
Sage	128102.11	134164.59	8718.55
Sandhill	122060.12	134109.81	8811.25
Sandridge	121328.27	127907.98	8648.74
Scales	103185.47	101587.37	7548.18
Sedpond1	102002.12	101463.23	7562.73
Shady Pines	125570.58	133937.70	8766.82
Single Tree	131237.84	127470.34	8460.00
SKS	123193.35	135241.06	8832.12
Slab Rock	119915.33	104763.90	8549.06
Slaughter Hill	144554.25	122928.40	8560.94
South Fork	122360.32	102147.28	8217.44

TABLE 5-2 (Continued)
 Subsidence Control Point Survey Data

Station Name	Northing	Easting	Elevation
Spike	106426.93	100039.17	8325.62
Split Rock	129534.95	128829.31	8519.39
Standard	133589.26	108900.52	9139.56
Stock Pond	132382.89	118400.29	8390.90
Stonewood	121550.07	134283.71	8815.21
Stumpy	127542.00	131932.07	8660.21
Substation B.M.	102787.93	102081.34	7563.46
Sunspot	122068.81	130374.08	8705.83
Switchback	120172.62	126162.50	7826.13
Terrace	103533.00	101612.28	7598.64
That	134704.05	121439.83	8354.24
This	133853.23	122161.75	8385.37
Three Pines	128994.27	131195.32	8610.37
Thunder Ridge	145713.29	121585.36	8502.52
Two Flats	121612.91	132938.78	8783.19
U.S.G.S.	130065.44	100406.72	8648.16
Valley View	115797.62	099307.50	9054.37
Vanwinkle	120967.82	131485.30	8738.62
Wasatch2	176502.69	091318.15	11130.23
White Rocks	119944.80	116486.58	8530.16
White Rocks II	119945.83	116485.02	8526.53
Wilco	120846.31	129130.30	8685.09
Wildcat	121403.85	122435.42	9030.03
Wileys	130032.60	134664.80	8652.51
Window	125525.90	111439.67	8290.13

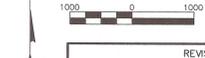


EXPLANATION

- SUFCO EXTERIOR LEASE BOUNDARY
- - - SUFCO INTERIOR LEASE BOUNDARY
- 0 MINE COORDINATES
- 0 STATE PLANE COORDINATES
- ▲ CONTROL POINT
- AERIAL TARGET
- LIMIT OF POTENTIAL SUBSIDENCE
- ▨ UNDERGROUND PERENNIAL STREAM AND PROTECTED CULTURAL SITE BUFFER CORRIDOR



I CERTIFY THE ITEMS SHOWN ON THIS DRAWING ARE ACCURATE TO THE BEST OF MY KNOWLEDGE



REVISIONS			
NO.	DATE	REV. BY	REMARKS
3	4/19/2017	VM, B.R.	GREENS HOLLOW
4	12/8/2017	VM, B.R.	ADD 3RD & 4TH
5	3/14/2018	VM, B.R.	GREENS HOLLOW TECHNICAL ANALYSIS
6	10/31/2018	VM, J.B.	SUB LIMITS FOR PINES EAST & SOUTH FORK
7	1/15/2019	VM, J.C.C.	REVISED SUB LIMITS FOR PINES EAST
8	8/7/2019	VM, J.C.C.	ADDED APRIL SITE

Canyon Fuel Company, LLC
SUFCO Mine
 597 South 300 East - Orderville, UT 84054
 (435) 286-4400 Phone
 (435) 286-4499 Fax

POTENTIAL SUBSIDENCE LIMITS

SCALE: 1" = 1000'	DATE: 08/13/09	DRAWN BY: JMB	TOWNSHIP: []	SHEET NO.:
FILE NAME: []	DESIGNED BY: []	CHECKED BY: []	DATE: []	PLATE 5-10