

This Annual Report shows information the Division has for your mine. Please review the information to see if it is current. If the information needs to be updated please do so in this document. At the end of each section the operator is asked to verify if the information is correct. Please answer these questions and make all comments on this document. Submit the completed document and any additional information identified in the Appendices to the Division by April 30, 2010. During a complete inspection an inspector will check and verify the information. To enter text, click in the cell and type your response. You can use the tab key to move from one field to the next. To enter an X in a box, click next to the box, right click, and select properties, then the checked circle, then hit enter, or hit the unchecked circle if the X is to be removed.

GENERAL INFORMATION

Permittee Name	Canyon Fuel Company, LLC
Mine Name	SUFCO Mine
Operator Name (If other than permittee)	
Permit Expiration Date	March 20, 2012
Permit Number	C/041/0002
Authorized Representative Title	Kenneth E. May, General Manager
Phone Number	(435) 286-4400
Fax Number	(435) 286-4499
E-mail Address	kmay@archcoal.com or lroberts@archcoal.com
Mailing Address	597 South SR24, Salina, Utah 84654
Designated Representative	C.T. Corporation
Resident Agent	Corporation Trust Center
Resident Agent Mailing Address	1209 Orange Street, Wilmington, DE
Number of Binders Submitted	2

Operator, please update any incorrect information.

IDENTIFICATION OF OTHER PERMITS

Identify other permits that are required in conjunction with mining and reclamation activities.

Permit Type	ID Number	Description	Expiration Date
MSHA Mine ID(s)	420089	Minesite	
	1211UT090008901	Waste Rock Disposal	
MSHA Impoundment(s)			
NPDES/UPDES Permit(s)	UT0022918	Minesite Sediment Pond Major Industrial	April 30, 2011
	UTR000576	Multi-Sector Storm Water Permit	December 31, 2011
PSD Permit(s) (Air)	DAQE-AN0665008-06	Minesite Air Quality Approval Order	
	BAQE-126-88	Waste Rock Disposal Air Quality Approval Order	
Other			

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Operator, please update any incorrect information.

CERTIFIED REPORTS

Operator Comments:

Inspector:

Has the operator complied with this section? Yes No

Inspector Comments:

Certified Reports:	Required		Included Included	or	DOGM file location Vol, Chapter, Page
	Yes	No			
Excess Spoil Piles	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Refuse Piles	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Certified reports previously submitted
Impoundments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Certified reports previously submitted
Other					
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Operator Comments:

Inspector:

Has the operator complied with this section? Yes No

Inspector Comments:

COMMITMENTS AND CONDITIONS

The Permittee is responsible for ensuring annual technical commitments in the MRP and conditions accepted with the permit are completed throughout the year. The Division has identified these commitments below and has provided space for you to report what you have done during the past year for each commitment. If the particular section is blank, no commitment has been identified and no response is required for this report. If additional written response is required, it should be filed under Appendix B to this report.

Soils R645-301-200

Title: WASTE ROCK SAMPLING

Objective: To document chemical characteristics of waste rock and protect surface and groundwater.

Frequency: Quarterly, during periods of deposition at the waste rock site.

Status: Quarterly sampling. Sampling frequency (# samples/volume or ton) not described. Sampling parameters not described, refer to Tables 3 and 8 in the Division's 2008 Soils and Overburden Handling Guide.

Reports: Annual reporting. Indicate frequency of sampling (# samples/volume or ton).

Citation: Vol. 3, Section 3.1.5, pg. 3-4.

Operator: Has this commitment been acted on this year?

Yes No Not required this year. If yes, comment;

Operator Comments: Results are included in Appendix B.

Inspector:

Has the operator complied with this commitment? Yes No

Inspector Comments:

Biology R645-301-300

Title: RAPTOR SURVEYS

Objective: To determine if there are nest sites or active nest sites and the number of juveniles present within ½ mile of surface mining activities or areas that may be impacted by subsidence.

Frequency: Annually.

Status: Ongoing.

Reports: Annual.

Citation: Volume 1, chapter 3, page 3-9.

Operator: Has this commitment been acted on this year?

Yes No Not required this year. If yes, comment;

Operator Comments: Survey report is included in confidential file

Inspector:

Has the operator complied with this commitment? Yes No

Inspector Comments:

Title: PINES TRACT VEGETATION STUDY

Objective: To determine if longwall mining in the Pines Tract would potentially impact the Link Canyon Trail Columbine. The survey will include the portions of Box Canyon.

Frequency: Annually.

Status: Ongoing.

Reports: Annual.

Citation: Volume 1, chapter 3, page 3-45A.

Operator: Has this commitment been acted on this year?

Yes No Not required this year. If yes, comment;

Operator Comments: Report is included in Appendix B

Inspector:

Has the operator complied with this commitment? Yes No

Inspector Comments:

Title: LINK CANYON PORTAL VEGETATION STUDY

Objective: To determine if there are any impacts to the vegetation surrounding the portal area.

Frequency: Annually, June, September and November.

Status: Ongoing.

Reports: Annual.

Citation: Annual report.

Operator: Has this commitment been acted on this year?

Yes No Not required this year. If yes, comment;

Operator Comments: Report is included in Appendix B

Inspector:

Has the operator complied with this commitment? Yes No

Inspector Comments:

Title: CULTURAL RESOURCES

Objective: If during the course of mining operations, previously unidentified cultural resources are discovered, the Permittee shall ensure that the site(s) is not disturbed and shall notify the Division of Oil, Gas, and Mining. The Division, after coordination with OSM, shall inform the Permittee of necessary actions required. The Permittee shall implement the mitigation measures required by the Division within the time frame specified by the Division.

Frequency: As needed.

Status: Ongoing.

Reports: Annual.

Citation: Permit Condition **Sec. 16.**

Operator: Has this commitment been acted on this year?

Yes No Not required this year. If yes, comment;

Operator Comments: No previously unidentified cultural resource were discovered during mining operations in 2009

Inspector:

Has the operator complied with this commitment? Yes No

Inspector Comments:

Engineering R645-301-500

Title: SUBSIDENCE MONITORING

Objective: Document the amount of subsidence that has occurred.

Frequency: Annual.

Status: On going.

Reports: Annual report.

Citation: p 5-29.

Operator: Has this commitment been acted on this year?

Yes No Not required this year. If yes, comment;

Operator Comments: Report is included in Appendix B

Inspector:

Has the operator complied with this commitment? Yes No

Inspector Comments:

Title: MEASURE CRACKS.

Objective: Measure cracks in the West Fork of Box Canyon.

Frequency: Annually.

Status: On going.

Reports: Annual.

Citation: P5-30.

Operator: Has this commitment been acted on this year?

Yes No Not required this year. If yes, comment;

Operator Comments:

As stated on P5-30 of the M&RP this commitment was completed in 2008 and no further monitoring will take place.

Inspector:

Has the operator complied with this commitment? Yes No

Inspector Comments:

Geology R645-301-600

Hydrology R645-301-700

Title: Climatological Data

Objective: Collect climatological data to aid in determining effect of mining on runoff, stream flow, and local springs.

Frequency: Annually.

Status: Ongoing.

Reports: Annual.

Citation: Volume 2, P 7-51E.

Operator: Has this commitment been acted on this year?

Yes No Not required this year. If yes, comment;

Operator Comments: Data included in Appendix B

Inspector:

Has the operator complied with this commitment? Yes No

Inspector Comments:

Bonding & Insurance R645-301-800

Other Commitments

*Reminder: If equipment has been abandoned during 2009, an amendment must be submitted that includes a map showing its location, a description of what was abandoned, whether there were any hazardous or toxic materials and any revision to the PHC as necessary.

REPORTING OF OTHER TECHNICAL DATA

List other technical data and information as required under the approved plan, which must be periodically submitted to the Division. Specify whether the information is included as Appendix B to this report or currently on file with the Division.

Operator Comments: No other technical data to submit this year.

Inspector:

Has the operator complied with this section? Yes No

Inspector Comments

LEGAL, FINANCIAL, COMPLIANCE AND RELATED INFORMATION

Change in administration or corporate structure can often bring about necessary changes to information found in the mining and reclamation plan. The Division is Requesting that each Permittee review and update the legal, financial, compliance and related information in the plan as part of the annual report. Please provide the Department of Commerce, Annual Report of Officers, or other equivalent information as necessary to ensure that the information provided in the plan is current. Provide any other change as necessary regarding land ownership, lease acquisitions, legal results from appeals of violations, or other changes as necessary to update information required in the mining and reclamation plan. Include certified financial statements, audits or worksheets, which may be required to meet bonding requirements. Specify whether the information is currently on file with the Division or included as Appendix C to the report.

Legal / Financial Update	Required		Included	or	DOGM File location
	Yes	No			

Department of Commerce, Annual Report Officers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Submitted in Canyon Fuel General Chapter One Appendix 1-1
Other					
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Operator Comments:

Inspector:

Has the operator complied with this section? Yes No

Inspector Comments:

MINE MAPS

Copies of mine maps, current and up-to-date through at least December 31, 2009, are to be provided to the Division as Appendix D to this report in accordance with the requirements of R 645-301-525.240. The map copies shall be made in accordance with 30 CFR 75.1200 as required by MSHA. Mine maps are not considered confidential. (Please provide a CD.)

Confidential information is limited to:

R645-300-124.310. Information that pertains only to the analysis of the chemical and physical properties of the coal to be mined, except information on components of such coal which are potentially toxic in the environment.

R645-300-124.330. Information on the nature and location of archeological resources on public land and Indian land as required under the Archeological Resources Protection Act of 1979 (P. L. 96-95, 93 Stat. 721, 16 U.S.C. 470).

R645-301-322, Fish and Wildlife Information; R645-301-322.100, the scope and level of detail for such information will be determined by the Division in consultation with state and federal agencies with responsibilities for fish and wildlife and will be sufficient to design the protection and enhancement plan required under R645-301-333 and R645-301-322.230, other species or habitats identified through agency consultation as requiring special protection under state or federal law; R645-301-333.300, Include protective measures that will be used during the active mining phase of operation.

The Division will provide procedures, including notice and opportunity to be heard for persons both seeking and opposing disclosure.

Map Number(s) Map Title/ Description

Annual subsidence map	Sufco Mine Subsidence Map		
Mine map	LMU Mining Progress Map 2009-2010		
Other maps		Confidential	
		Yes	No
		<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>
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Operator Comments:

Inspector:

Has the operator complied with this section? Yes No

Inspector Comments:

APPENDIX A

Certified Reports

Excess Spoil Piles
Refuse Piles
Impoundments

As required under R645-301-514

CONTENTS

None, reports previously submitted

APPENDIX B

Reporting of Technical Data

Including monitoring data, reports, maps, and other information
As required under the approved plan or as required by the Division

In accordance with the requirement of R645-310-130 and R645-301-140

CONTENTS

Waste Rock Sampling Results 2009
2009 Pines Tract Vegetation Study
2009 Link Canyon Portal Vegetation Study
2009 Subsidence Monitoring Report
2009 Sufco Mine Climatological Data
2009 East Fork Box Canyon Climatological Data

Waste Rock Disposal Site Material Analyses

Year	Quarter	Lab	Lab ID	EC							Total	T.S.	Neutral.	T.S.	Alkalinity		Sulfate	Pyritic	Organic	PyrS	PyrS			
				pH	Saturation	@ 25 ^o C	Calcium	Magnesium	Sodium	SAR	Sulfur	AB	Pot.	ABP	Boron	Selenium	PE	Sulfur	Sulfur	Sulfur	Sulfur	AB	ABP	
				s.u.	%	dS/m	meq/L	meq/L	meq/L	%	t/1000t	t/1000t	t/1000t	ppm	ppm	meq/L	%	%	%	t/1000t	t/1000t			
2009	1	Int	S0903295-001	7.5	53.7	25.50	16.60	10.20	239.00	65.20	0.39	12.30	25.4	13.1	1.27	<	0.02	2.37	<	0.01	0.10	0.29	3.06	22.30
2009	2	Int	S0906115-001	7.7	61.4	1.26	4.53	3.35	5.60	2.82	0.47	14.60	25.1	10.5	3.15	0.02	2.37	0.04	0.09	0.34	2.85	22.30		
2009	3	Int	S0909249-001	9.6	47.1	7.41	53.10	4.43	39.40	7.35	0.37	11.60	155.0	143.0	8.94	0.12	2.37	0.05	0.09	0.23	2.91	152.00		
2009	4	Int	S0912145-001	7.4	50.9	4.80	29.50	21.40	18.90	3.75	0.40	12.60	61.3	48.7	4.47	<	0.02	1.48	0.02	0.12	0.26	3.73	57.60	
Minimum				7.4	47.1	1.26	4.53	3.35	5.60	2.82	0.37	11.60	25.10	10.50	1.27	<	0.02	1.48	<	0.01	0.09	0.23	2.85	22.30
Maximum				9.6	61.4	25.50	53.10	21.40	239.00	65.20	0.47	14.60	155.00	143.00	8.94		0.12	2.37		0.05	0.12	0.34	3.73	152.00
Average				8.1	53.3	9.74	25.93	9.85	75.73	19.78	0.41	12.78	66.70	53.83	4.46		0.05	2.15		0.03	0.10	0.28	3.14	63.55

PINES TRACT VEGETATION STUDY

**For
CANYON FUEL COMPANY, LLC
SUFCO MINE**

Prepared by
Keith W. Zobell
8684 South 400 West
Spanish Fork, Utah 84660
Phone (801) 798-8926

July 29, 2009

PINES TRACT VEGETATION STUDY

Prepared by
Keith W. Zobell, Environmental Specialist
July 29, 2009

The purpose of the “Pines Tract Vegetation Study” continues to be to determine if the under-mining of the coal reserves of the (“Pines Tract”) has had any affect on the “Link Canyon Trail Columbine (*Aquiligia flavescens var. rubicunda*) and the riparian area within the Pines Tract coal lease area.

On July 15, 2009, the Pines Tract Area was visited by Keith W. Zobell (Environmental Specialist), Mike Davis (Mining Engineer for Canyon Fuel Company, SUFCO Mine), and Leland Roberts (Environmental Engineer for Canyon Fuel Company, SUFCO Mine). The purpose of this trip was to revisit all of the original photographic points that have been established and to retake photographs at each of the sites and to determine the general vegetative growth, plant vigor, and plant condition at each of the established photographic sites. These sites are revisited each year at approximately the same date each year, so as to reduce any possible seasonal variations. Photographs of each site are identified and included in this report.

The weather records at the SUFCO Mine site show that approximately 70% of the normal moisture had been received through the end of June 2009 for this moisture year. The months of May and June received 94% and 101% respectively of the normal average precipitation for those months. The below average moisture for the past several years is still influencing the overall growth and vigor of the vegetative areas. The overall growth is fair and similar to that of last year. The stream in Box Canyon continues to be basically dry above monitoring station 090. The perennial flow starts just below station 090. There are some small intermittent flows above station 090 up to Pines monitoring station 219, with the creek being totally dry above this station. The small pond at the ”Grotto” continues to be dry, however there is seeping water on the cliff faces just above the pond area. The moisture appears to be less than that observed last year. The spring at station “Pines 105” and the area at photographic point 10 continue to be dry. However, the riparian area at Photo point 10 continues to be green and growing which indicates that the area is still receiving sufficient moisture for these riparian plants.

The “Pines Tract” grazing unit was the first unit to be grazed by cattle again this year. Many of the sites were so heavily grazed that growth could not be determined for some species of plants. This is the heaviest grazing that we have observed at all photo point since we started the study. The poor plant growth and vigor can be attributed to the lack of moisture in the past and heavy grazing this year as well as last year.

The stakes marking the location of stations 1, 2, 8, and 9 have been removed. Photos were taken at these stations from approximate original locations. New stakes need to be installed to restore these photo points.



Photo Point 1a

There are three columbine plants at this site. The plants have fair vigor. Two plants have some inflorescences, which are 10-12 inches in length,



Photo Point 1b

At photo point 1b there are still two columbine plants. One plant is in very poor condition and only has one small live branch. The second plant is healthy and has good vigor and has an inflorescence of 10-12 inches in length. These plants appear to be getting some moisture from the rock fractures that they are growing in.



Photo Point 1c

At this photo point there is only one columbine plant and it is located approximately 20-25 feet up on the cliff face, so not measurements can be made. There has only been one plant at this site in the past and it now appears that the plant may be dead.



Photo Point 2

At this photo point there is only one plant still alive. Originally there were three. The one plant this is still alive is small and has poor vigor, with no inflorescence. The plant is located approximately 20-25 feet up on the cliff face so exact measurements cannot be made. There does not appear to be any moisture coming from the rock fracture where the plant is located. The lack of moisture is probably the cause of these plants dieing.



Photo Point 3

At this photo point there is still one small columbine plant growing. Last year this plant appeared to be a seedling. This year it is still small but has an inflorescence 8 inches long.



Photo Point 4

At this photo point there are still several columbine plants. Only one of the columbine plants has inflorescence which is 7 inches long. All of the other columbine plants have been grazed. This is the first time we have observed grazing at this site. The ungrazed plant has fair vigor. *Carex* plants continue to be sparse and have been grazed, and have regrowth of 1 inch. Wood Rose has new twig growth of 1-1/2 inches with no flower or seed heads. The *Potentilla* plant has new growth of 2-3 inches. The Aspen has a current growth 1-2 inches. This is a very dry site and the overall site has low vigor, which is probably due to lack of moisture.



Photo Point 5

At this photo point there are still three columbine plants. All three of the columbine plants have been grazed down to ground level. The columbine plants have a regrowth of 3-4 inches with no inflorescence. Bluegrass is sparse and has been grazed down to ground level and has a regrowth of 3-4 inches. *Carex* has been heavily grazed and has a regrowth of 2-3 inches. Yarrow has a basal growth of 3-4 inches with no inflorescence. Hairgrass is sparse and has been heavily grazed with a regrowth of 4-5 inches with no seed heads. Geranium has 3 inches of regrowth. All of the plants at this site have been heavily grazed and are in poor condition. The site has 40% bare ground with very little litter on the ground. There is no water in the creek at this site.



Photo Point 6

At this photo point the site is very dry and has been heavily grazed by livestock. Ocular estimate shows that the site to have approximate 40-50% bare ground with very little ground litter. The Aspen has been heavily grazed and has 2-3 inches of regrowth. There are some 10 inch basal sprouts on some of the Aspen plants. Blue grass has regrowth of 4-6 inches. *Carex* has a regrowth of 2-3 inches. Yarrow has 3 inch basal leaves with no seed heads. Big Sage has current growth of 2-3 inches. Geranium has basal leaves of 2-3 inches, Wiregrass has regrowth of 4 inches, Herbaceous sage has regrowth of 3-4 inches. Over all condition of this site is very poor. There is no water in the creek.



Photo Point 7

At this photo point there are still no columbine plants. The site has been heavily grazed by livestock, with none of the existing plants having any inflorescence. Geranium has 2-3 inches of basal growth, Yarrow has 2-3 inches of regrowth, and *Carex* has 2 inches of regrowth. There is no bluegrass. The site has 90% bare ground with no litter. There is no water in the creek at this site.



Photo Point 8

This photo point is hanging fern garden area located in the “Grotto” area. The ferns and the lichens receive moisture that is coming from the fractures in the cliff face. The fern and lichen density is less than that of last year. The current fern growth is 2-3 inches. There is some moisture of the face of the cliff face but no flowing or dripping moisture.



Photo Point 9a

At this photo point there is no dripping or flowing moisture in the cliff faces. The cliff face is moist and is considerably less than last year. There is good lichen growth. The ferns have a current growth of 4-6 inches.



Photo Point 9b

At this photo point the rock faces are moist but there is no flowing or dripping water as there was last year. Both the lichen and fern density is less than last year. The current fern growth is 4-6 inches.



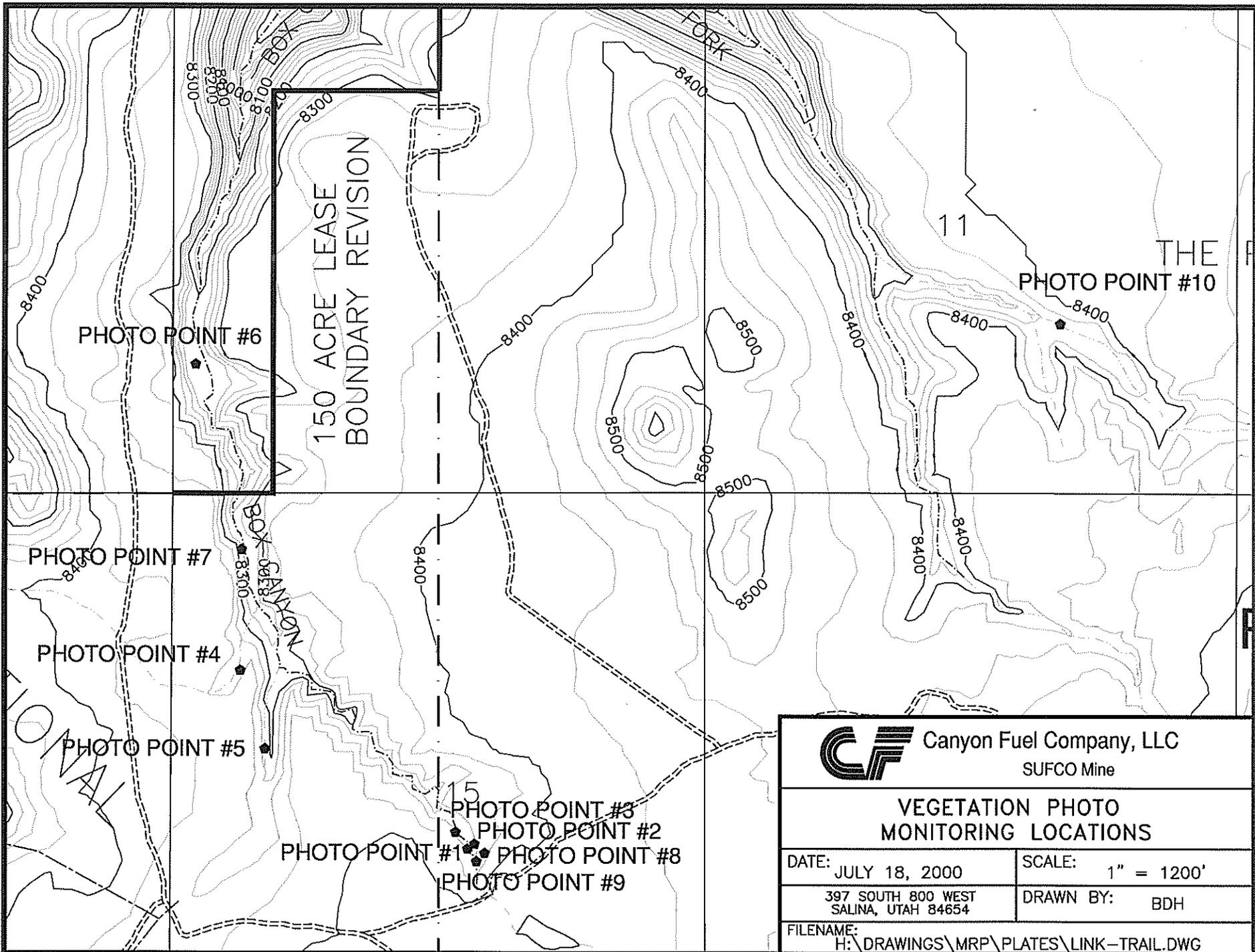
Photo Point 10

At this photo point the overall vegetative condition and vigor is very poor. The trend for the site continues to be down. This site has been heavily grazed. The site has 95% bare ground with very little (if any) ground litter. The Aspen has been heavily grazed and has no regrowth. Big Sage has 3-5 inches of new growth, Woods Rose has 1-2 inches of regrowth, and Wire grass is sparse and has 3-5 inches of growth.



Riparian Area adjacent to Photo Point 10

This photo shows a fence line contrast between the protected area and the grazed area. The grazed area has had 95-100% utilization. The livestock were removed from the area July 1-4. Since that time the riparian area has 4-6 inches of regrowth. Although spring "Pines 105" is not flowing the riparian area is still remaining green and showing good vigor and density in the protected area.



LINK CANYON MINE PORTAL VEGETATION STUDY

Prepared by
Keith W Zobell, Environmental Specialist
July 14, 2009

Photographs were retaken at the Link Canyon Mine Portal area on June 27, 2009. The area received light moisture during the early part of the year, however good moisture was received during the past month. The overall moisture is still below average.



Link Canyon West Portal Photo Point

There is no water discharging from this portal and there is no evidence that there has been any this spring. The only plants that are still surviving of the original vegetation is the

Squawbush (*Rhus aramatica var trilobata*), and one willow plant (*Salix spp.*). The squawbush is sprouting from the base of the plant and has 5-6 inches of new growth. There is one willow sprout coming from the base of the original plant and has 10 inches of new growth. There is one small current bush (*Ribes spp.*) growing on the site with 4 inches of new growth. This current bush was not observed in earlier examinations. Some of the grass that was seeded last year is starting to germination on the disturbed area. It is estimated that there is only poor to fair germination at this time. This could improve over time.



Link Canyon East Portal Photo Point

There is no water discharging from this portal and there is no evidence that there has been any this spring. The wiregrass (*Juncus balticus*) is starting to recover from last years flood. The wiregrass area has approximately 50% ground cover with 8-9 inches of new growth. Only one branch of the Dogwood bush (*Cornus stolonifera*) is still alive. However there are numerous sprouts coming up from the base of the bush with 4-5 inches of new growth. The Clematis (*Clematis liquisticifolia*) is just starting to grow with 3-4 inches of new growth. The Rabbitbrush (*Chrysothamnus nauseosus*) has 3-4 inches of new growth. There is no evidence of any Bluegrass plants. There some Cheatgrass (*Bromus tectorum*) growing on the site. Both sites continue to be very dry.

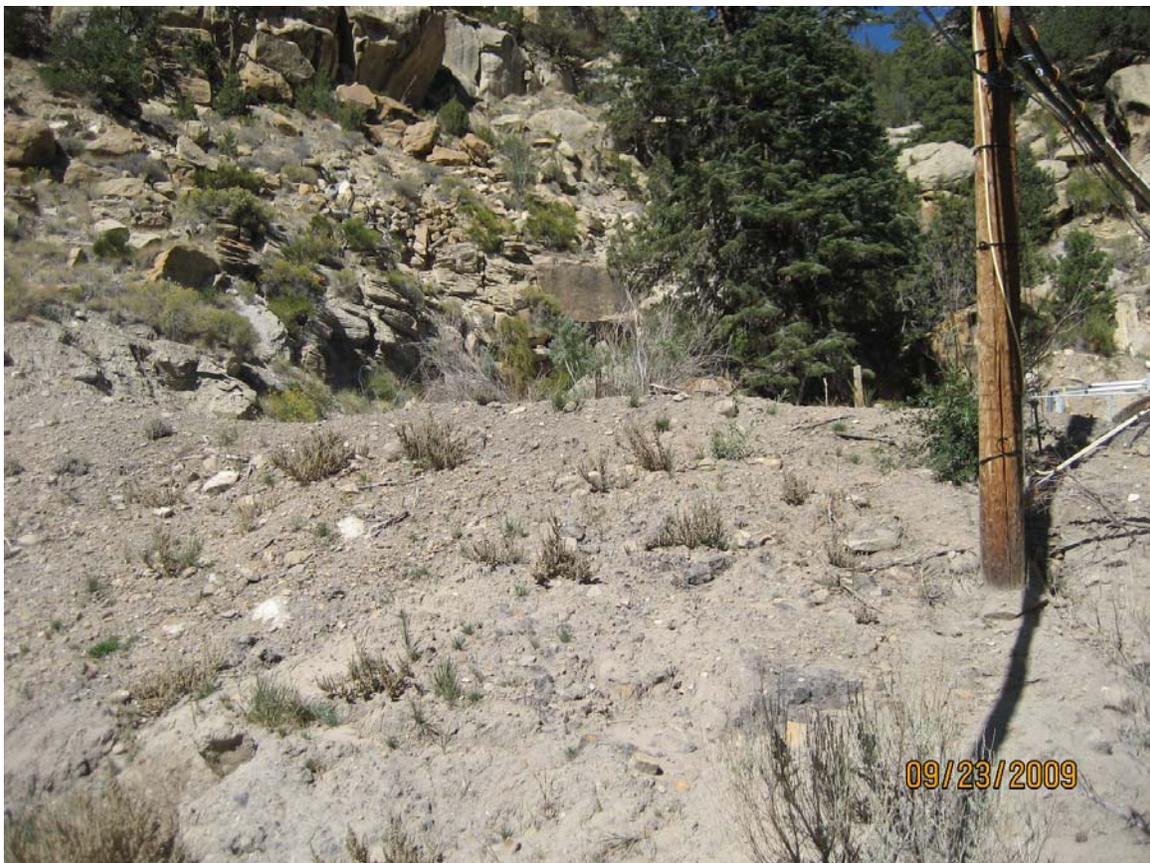




LINK CANYON MINE PORTAL VEGETATIVE STUDY

Prepared by
Keith W. Zobell, Environmental Specialist
October 10, 2009

Photographs were retaken at the Link Canyon Mine Portal area on September 23, 2009. The area has only received intermittent rainfall during this summer. The overall moisture for the area continues to be below normal.



Link Canyon West Portal Photo Point

There is no water discharging from this portal and there is no evidence that there has been any this summer. At this point in time there is only fair germination of the seeded species that were broadcast on the disturbed area a year ago. The surviving Squawbush plant (*Rhus aramatica* var. *trilobata*) has good growth with current growth of 18 to 24 inches. The surviving willow plant (*Salix spp.*) also has good growth of 30 to 36 inches.

A second willow plant has come up this summer and has good growth of 18 to 24 inches. The current growth of the seeded grasses is 4 to 6 inches. There are several Halogeton (*Halogeton glomeratus*) plants growing on the revegetation area. The Halogeton plants are also growing on other areas within the permitted area.



Link Canyon East Portal Photo Point

There is no water discharging from this portal and there is no evidence that there has been any this summer. The Wiregrass (*Juncus balticus*) continues to struggle. The area has approximately 30% density of wiregrass and has a current growth of 6 to 8 inches. The old Dogwood bush (*Cornus stolonifera*) continues to sprout from the base and has current growth of 6 to 8 inches. Some of the Clematis (*Clematis liquisticifolia*) has survived last years flood and has some seed heads on it. There is still no evidence of any Bluegrass plants. There is one willow plant at the mouth of the portal. It has poor vigor with 4 to 6 inches of new growth.

LINK CANYON MINE PORTAL VEGETATIVE STUDY

Prepared by
Keith W. Zobell, Environmental Specialist

November 12, 2009

Photographs were retaken at the Link Canyon Mine Portal area on November 9, 2009. There has been no new growth since the last photographs were taken in September due to the end of the growing season and cold freezing weather.



Link Canyon West Portal Photographic Point

The site is completely dormant and almost all of the leaves of the vegetation have been shed. The site continues to be very dry. There is no water discharging from this portal.



Link Canyon East Portal Photographic Point

All the vegetation at this site is dormant. The Rabbitbrush and the Clematis plants did set some seeds. Most of these seeds have been disseminated. There is no water being discharged from this portal.

2009 SUBSIDENCE REPORT

CANYON FUEL COMPANY, LLC

SUFCO MINE

by

Keith B. Bigelow P.L.S.

INTRODUCTION

Canyon Fuel Company LLC, SUFCO Mine's 2009 subsidence report is an update of annual subsidence data that has been accumulated since 1976 as the former Southern Utah Fuel Company. Prior to 1985, the data was derived from conventional survey methods. Since then, photogrammetric surveys have been employed to monitor the ground movement.

During 1985, the entire SUFCO Mine property was flown to establish a set of baseline photography and a grid of surface elevations. Where possible, an elevation was photogrammetrically determined on an approximate 200-foot grid. These original x, y and z locations serve as a comparative base for determining ground movement in the succeeding years. Other lease holdings that are acquired are flown for similar baseline information. Lease U-63214 was flown in 1991 and the 150-acre modification to lease U-63214 and lease UTU-76195 were flown in 1999. Lease ML 49443-OBA was flown in 2006.

Once each year around the end of August, another set of aerial photography is obtained. A new elevation is then found at the same x and y coordinates as all the originals within all areas considered to be active. The new, or current, elevations are compared to the originals and the difference between the two is used to generate a contour map. The result is the subsidence contour map included with each annual subsidence report.

The mine subsidence map accompanying this report shows surface control monuments, overburden contours, subsidence contours, surface tension cracks, a current outline of the mine, a one year mining projection and other miscellaneous items as explained in the legend.

SUBSIDENCE HISTORY

SUFCO Mine began operations that cause surface subsidence in June 1976. Continuous miners were used to extract coal from pillars that were developed as part of a retreating panel. The panels were approximately 650 feet wide and varied in length up to 2,500 feet. The average mining height approached 11 feet and the extraction ratio averaged about 80%.

The resulting subsidence from these continuous miner panels averaged 4 feet in the plateau areas where overburden was 900 feet thick. In areas where panel boundaries were outside the escarpment and beyond the Castlegate Sandstone, subsidence increased with decreasing overburden thickness. The maximum subsidence measured in a continuous miner panel to date, 8.5 feet, occurred in one of these areas. The overburden was only 600 feet thick.

Retreat mining continued in this manner until October, 1985, when a retreating longwall system was added. Longwall panels have ranged from 550 feet to 1,110 feet wide and up to 18,500 feet in length. Mining heights have varied from 8.5 feet to 12.5 feet.

Subsidence above the longwall panels has averaged 5 to 6 feet in the center of the panels. The overburden thickness has been from 1,000 feet to 1,800 feet (except outside the escarpment where overburden rapidly decreases). The maximum measured subsidence caused by longwall mining until 2009 was seven feet. This occurred in two cases: 1. An area outside the escarpment very similar to the one mentioned above for the continuous miner panel and 2. Down the center of panels that are under plateaus with 1,000 feet of overburden, but this is not typical. In 2009 there was a small area on the north end of the last longwall panel in area 12 that maximum subsidence measured nine feet. This area has overburden of approximately 900 feet, and is relatively close to the escarpment.

DORMANT AND ACTIVE AREAS

Dormant areas are those areas that have shown little or no movement for several consecutive years. Yearly digitizing of these areas will not be done, but photographic coverage can be obtained should the need arise for reevaluation. These areas may not be shown on the current subsidence map.

Active areas are those currently being mined or that have evidence of movement within a reasonable time period. Active areas are digitized and evaluated for subsidence yearly, until they meet the parameters of a dormant area.

2009 SUBSIDENCE

The 2008 subsidence map (Map 1) was updated using data from current photogrammetric monitoring. Each subsidence area is labeled as an independent block. A brief description of each follows:

AREA 1

This was SUFCO Mine's first subsidence area. Undermining began in June 1976, and continued into 1979. The area is composed of five continuous miner panels that averaged 650 feet in width. Mining height averaged 11 feet with about an 80% extraction ratio.

Subsidence ranged from 4.5 feet to a maximum of 8.5 feet. It was first detected in 1976 and continued until 1985. No surface movement was detected in this entire area from 1986 to 1989. Area 1 has not been digitized since the 1990 subsidence report and is considered dormant.

AREA 2

This is another continuous miner area. The panels here were irregular shaped and the extraction ratio was modest. Undermining ceased in 1984.

Maximum subsidence has been measured at 2 feet. The area has been stable since 1985 and has not been monitored since 1989. This area is dormant.

AREA 3

This area is another continuous miner section, but the extracted area is a portion of mains with protective barriers instead of a panel. Coal recovery was moderate with mined areas which were subcritical. Undermining ceased in 1983.

Maximum subsidence was measured at 2 feet. Because of the limited extraction and subcritical areas, the subsidence occurred slowly with small changes noticeable until 1987. The area appeared stable in 1988 and 1989. It has not been monitored since 1989 and is considered dormant.

AREA 4

This subsidence area is comprised of three continuous miner panels. The mining height averaged 11 feet with a good extraction ratio. Undermining ceased in 1985.

Maximum subsidence was 5 feet with no detectable change in 1989. This area was monitored

again in 1993, 1994 and 1995 with no detectable changes. This area was monitored for ten years after undermining ceased. The last detectable subsidence was in 1988. Therefore, this area is considered dormant.

AREA 5

The four continuous miner panels that make up this area were mined from September 1978, to November 1981. Mining height averaged 11 feet with an 80% extraction ratio.

Maximum subsidence was 5 feet with no detectable changes from 1985 through 1991. This area has not been monitored since 1991, and will also remain dormant.

AREA 6

Area 6 is SUFCO Mine's first longwall induced subsidence area. It is comprised of nine longwall panels varying from 540 feet to 700 feet in width and 1,700 feet to 3,900 feet in length. Also, there is a section of recovered mains between two of the longwall blocks. Undermining began in Area 6 during October, 1985, and continued through the mains recovery in March, 1990.

Maximum subsidence measured in areas bounded by the plateau is five feet. There is a location on the map that shows seven feet; but this area is outside the escarpment where the overburden is only 600 feet thick. The subsided escarpment is intentional and is part of a study agreed upon by SUFCO Mine, the Division of Oil, Gas and Mining, the Bureau of Land Management and the U.S. Forest Service. This particular section of escarpment was removed from the "no subsidence zone" to study the effects of longwall mining on the escarpment.

Area 6 has shown no significant changes since 1992. It has been determined that this area is dormant.

AREA 7

Area 7 was originally planned for no subsidence. Pillars were made to support the overburden but began to fail in the north end in 1984 when the underground workings were flooded. The failure progressed towards the south and by 1986 subsidence was detected over the area.

The map shows up to seven feet of subsidence. There was no additional subsidence movement detected from 1988 to 1994. Therefore, this area will also be considered dormant.

AREA 8

Undermining this area began in June 1983, and was sporadic until 1992. Continuous miners were used with extraction ratios over 80% and average mining heights of 10 feet. This area stayed active longer than most due to its proximity to an adjacent active longwall block.

Maximum subsidence is five feet. No noticeable vertical movement has been detected since 1993. This area is dormant.

AREA 9

This area is a longwall mining area that is composed of four panels. The first began in June 1989 and the block was finished in January 1992. The mining height averaged about 11 feet and the maximum subsidence is five feet. There has been no indication of movement since 1996. This area is determined to be dormant.

AREA 10

Area ten is a longwall mining block that began in January 1992. Mining was completed in August 2001. The entire surface area above this block was digitized for base-line elevations during 1991. Maximum subsidence shown to date is seven feet. This area has been mined out since 2001, and monitoring suggests that it has settled. It is now assumed to be dormant.

The experimental mining practice area discussed under "Area 6" was extended, with regulatory approval, to the east side of the canyon under the Southwest corner of "Area 10". An extensive pre-mining survey of this location was conducted late in 1992. A detailed survey of the post-mining subsidence effects was provided in the 1993 report.

AREA 11

Area eleven is an extension of the last longwall panel in Area ten. It extends into a 150-acre modification to lease U-63214. An elevation baseline was established in 1999. Mining under this area began in January 1999 with gateroad development. Longwall mining took place from May 2000 thru September 2000. Subsidence to date shows a maximum of six feet. This area has shown no significant movement since 2003 and is considered dormant.

AREA 12

Area twelve is the first longwall mining block on the acquired lease UTU-76195. Due to a mine plan change at the start of 2003, this area now consists of six longwall panels. An elevation baseline was established in 1999, and gateroad development began in March 2000. Longwall mining began in September 2001 and ended in February 2007. There has been no significant movement detected in this area since 2007. This area appears to have stabilized and is considered dormant.

AREA 13

Area thirteen is a longwall mining block that originally consisted of seven panels on lease U-63214 and lease ML 49443-OBA. Due to a mine plan change near the end of 2008, this area now consists of eight longwall panels. An elevation baseline for the area included on lease U-63214 was established in 1991 and the elevation baseline for the area included on lease ML

49443-OBA was established in 2006. Longwall mining began in March 2007 and will continue until 2012. This area was considered active in 2007 and will continue to be monitored for several years.

DRAW ANGLE SURVEYS

Several draw angle surveys have been performed during the past years. Completed surveys have been over continuous miner areas and have been oriented both parallel and perpendicular to the long axis of the panel. The average of all measurements is 15°. Individual measurements ranged from 10° to 21°.

New longwall draw angle data was obtained in 1995. Draw angle points were installed in May 1986, on the southern end of the first panel in "Area 6". As shown on the subsidence map, survey lines were placed parallel and perpendicular to the axis of the panel. Undermining of this panel was completed in June 1986. Measurements were taken in 1995 and indicate an angle 15.25° for the perpendicular line. An angle for the parallel line was not obtained because the mains underlying the survey line were partially extracted. These findings coincide with the average of 15° as stated above.

SUBSIDENCE TENSION CRACKS

Tension cracks have occurred above most of the subsidence areas. Most have been located by survey and are shown on the map. Their lengths vary from a few feet to a couple thousand feet. Most are oriented either parallel to the natural jointing pattern or to the boundaries of the underground excavation. Vertical displacement along the cracks is uncommon and horizontal displacement varies from hairline to several inches in width depending on the surface topography (rock, hard packed or loose soil).

The U. S. Forest Service completed a tension crack study in 1978. They monitored twenty-two different cracks (located in Area 1) with widths varying from 1/8 inch to six inches. Results show that most cracks self-heal, or close, from 13% to 100% of their original width.

Longwall mining at the top of the 13L4E longwall panel caused some cracking in the escarpment sandstone of upper Box Canyon. The panel was mined parallel and down the center of a portion of the canyon. Subsidence thus created an inward pull on the canyon walls. These cracks are in the rock along the edge of the escarpment and vary in width and displacement. A monitoring program was initiated in 2004 to observe the behavior of these cracks. These cracks were checked in 2005 and again for the final time in 2008 and show no significant change in width or displacement.

DETAILED LONGWALL SUBSIDENCE PROFILE

In 1998 a project was initiated to monitor longwall subsidence in relation to the advancing face. Preparation consisted of first installing two monitoring points outside the subsidence area. Then two base lines were established one 3000 feet long running parallel down the center and the second 1300 feet long perpendicular across the 967 feet wide panel. Markers were installed along these lines on 100 feet spacing using approximately 2.5 feet long rebar with an aluminum cap or a hardened nail drilled into the exposed rock. Initial horizontal and vertical readings were obtained by shooting each marker with a Topcon GTS-3 distance meter from the monitoring points.

Monitoring was done weekly to gather new readings on markers behind and up to 500 feet ahead of the advancing face. The data collected reveals that vertical movement starts approximately 150 feet ahead of the face with 15 hundredths of a foot of subsidence at the face. It then drops off quickly to 4 feet at 600 feet behind the face and gradually levels off at 4 to 5 feet. Horizontal readings indicate the ground initially moves about 30 hundredths of a foot away from the face, then back toward the face 80 hundredths of a foot.

CONCLUSION

Areas 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12, are all considered to be dormant. Photographic coverage for these areas can be obtained if circumstances deem it necessary. There was active longwall mining in Area 12 until February of 2007 causing subsidence. Area 12 showed only a small amount of settling at the north end of the last longwall panel mined in this area between the 2007, 2008, and 2009 flights. Area 12 appears to have stabilized, and is now considered dormant. The baseline elevations for the new longwall panels on lease ML 49443-OBA in Area 13 were established in 2006, and longwall mining in this area began in March 2007. Subsidence monitoring in this area was started in 2007 and will continue for several years.

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<u>DD/MM/YY</u>	<u>--Temp--</u>		<u>----Pptn----</u>	
	<u>Max</u>	<u>Min</u>	<u>Moist.</u>	<u>Snow</u>
1-Jan-09	42	22		
2-Jan-09	37	17	0.20	4
3-Jan-09	17	-9		
4-Jan-09	15	-5		
5-Jan-09	24	9		
6-Jan-09	34	23	0.20	4
7-Jan-09	39	27		
8-Jan-09	39	21		
9-Jan-09	28	17		
10-Jan-09	32	20		
11-Jan-09	37	26		
12-Jan-09	31	26		
13-Jan-09	40	27		
14-Jan-09	39	20		
15-Jan-09	42	17		
16-Jan-09	42	16		
17-Jan-09	43	18		
18-Jan-09	50	21		
19-Jan-09	49	26		
20-Jan-09	44	21		
21-Jan-09	41	23		
22-Jan-09	39	30		
23-Jan-09	42	30	0.14	
24-Jan-09	41	29		
25-Jan-09	38	18		
26-Jan-09	25	8	0.30	2
27-Jan-09	23	8		
28-Jan-09	29	18		
29-Jan-09	30	19		
30-Jan-09	42	17		
31-Jan-09	46	19		
1-Feb-09	36	18		
2-Feb-09	42	22		
3-Feb-09	45	21		
4-Feb-09	41	23		
5-Feb-09	38	26		
6-Feb-09	40	24		
7-Feb-09	36	24		
8-Feb-09	35	19		
9-Feb-09	30	8	0.02	
10-Feb-09	24	15		
11-Feb-09	31	17		
12-Feb-09	22	3		
13-Feb-09	22	14	0.27	4
14-Feb-09	24	3	0.10	1
15-Feb-09	25	16		
16-Feb-09	31	22		
17-Feb-09	31	20	0.06	1

<u>DD/MM/YY</u>	<u>--Temp--</u>		<u>----Pptn----</u>	
	<u>Max</u>	<u>Min</u>	<u>Moist.</u>	<u>Snow</u>
18-Feb-09	29	7		
19-Feb-09	38	12		
20-Feb-09	46	15		
21-Feb-09	40	23		
22-Feb-09	38	31		
23-Feb-09	42	26		
24-Feb-09	55	27	0.16	
25-Feb-09	51	32		
26-Feb-09	47	23		
27-Feb-09	28	14	0.01	
28-Feb-09	38	23		
1-Mar-09	42	28		
2-Mar-09	50	36		
3-Mar-09	54	31		
4-Mar-09	49	21		
5-Mar-09	37	20	0.06	1
6-Mar-09	33	19		
7-Mar-09	27	15		
8-Mar-09	44	18		
9-Mar-09	40	10		
10-Mar-09	32	10	0.19	3
11-Mar-09	39	21		
12-Mar-09	45	18		
13-Mar-09	45	19		
14-Mar-09	48	26		
15-Mar-09	50	30		
16-Mar-09	60	31		
17-Mar-09	58	34		
18-Mar-09	56	32		
19-Mar-09	58	35		
20-Mar-09	61	34		
21-Mar-09	57	39		
22-Mar-09	46	23		
23-Mar-09	26	22	0.08	1
24-Mar-09	33	23		
25-Mar-09	36	18	0.03	
26-Mar-09	22	10	0.35	5
27-Mar-09	33	17		
28-Mar-09	45	28		
29-Mar-09	49	13		
30-Mar-09	26	16	0.12	3
31-Mar-09	35	18	0.05	1
1-Apr-09	33	19	0.10	1
2-Apr-09	45	28	0.19	1
3-Apr-09	30	19		
4-Apr-09	28	14		
5-Apr-09	39	19		
6-Apr-09	46	24		
7-Apr-09	53	33		

<u>DD/MM/YY</u>	<u>--Temp--</u>		<u>----Pptn----</u>	
	<u>Max</u>	<u>Min</u>	<u>Moist.</u>	<u>Snow</u>
8-Apr-09	46	27		
9-Apr-09	42	31	0.09	1
10-Apr-09	50	31		
11-Apr-09	37	30	0.12	1
12-Apr-09	44	28	0.29	2
13-Apr-09	59	37		
14-Apr-09	50	32		
15-Apr-09	34	13	0.15	1
16-Apr-09	33	23	0.02	
17-Apr-09	42	28		
18-Apr-09	52	28		
19-Apr-09	59	31		
20-Apr-09	63	36		
21-Apr-09	64	39		
22-Apr-09	68	40		
23-Apr-09	66	40		
24-Apr-09	61	34		
25-Apr-09	47	27	0.16	1
26-Apr-09	42	20	0.05	1
27-Apr-09	48	31		
28-Apr-09	59	34		
29-Apr-09	62	34		
30-Apr-09	65	33		
1-May-09	60	38		
2-May-09	48	37		
3-May-09	57	32	0.35	
4-May-09	56	38	0.07	
5-May-09	62	35		
6-May-09	70	45		
7-May-09	64	35		
8-May-09	56	31		
9-May-09	67	35		
10-May-09	62	40		
11-May-09	72	42		
12-May-09	71	35		
13-May-09	71	34		
14-May-09	57	36		
15-May-09	64	35		
16-May-09	63	38		
17-May-09	71	39		
18-May-09	77	47		
19-May-09	81	53		
20-May-09	74	44	0.01	
21-May-09	69	45		
22-May-09	59	43		
23-May-09	54	41	0.65	
24-May-09	62	41	0.20	
25-May-09	62	37	0.35	
26-May-09	61	37	0.03	

<u>DD/MM/YY</u>	<u>--Temp--</u>		<u>----Pptn----</u>	
	<u>Max</u>	<u>Min</u>	<u>Moist.</u>	<u>Snow</u>
27-May-09	63	40	0.11	
28-May-09	68	43		
29-May-09	68	42	0.01	
30-May-09	64	43		
31-May-09	68	48	0.38	
1-Jun-09	67	44		
2-Jun-09	62	42	0.29	
3-Jun-09	73	45	0.05	
4-Jun-09	72	52		
5-Jun-09	65	33		
6-Jun-09	60	36		
7-Jun-09	60	39		
8-Jun-09	59	40		
9-Jun-09	60	44		
10-Jun-09	60	39		
11-Jun-09	59	39		
12-Jun-09	64	39		
13-Jun-09	62	46		
14-Jun-09	57	40		
15-Jun-09	65	39	0.24	
16-Jun-09	62	46	0.01	
17-Jun-09	59	42	0.06	
18-Jun-09	61	46	0.10	
19-Jun-09	68	39	0.03	
20-Jun-09	58	43		
21-Jun-09	69	41	0.55	
22-Jun-09	74	40		
23-Jun-09	81	45		
24-Jun-09	84	49		
25-Jun-09	80	54		
26-Jun-09	65	48	0.12	
27-Jun-09	77	43		
28-Jun-09	80	47		
29-Jun-09	81	50		
30-Jun-09	82	51		
1-Jul-09	69	56		
2-Jul-09	74	53	0.01	
3-Jul-09	77	52	0.06	
4-Jul-09	80	50		
5-Jul-09	84	50	0.09	
6-Jul-09	84	53		
7-Jul-09	80	49		
8-Jul-09	80	49		
9-Jul-09	84	51		
10-Jul-09	83	50		
11-Jul-09	78	59		
12-Jul-09	76	52	0.37	
13-Jul-09	84	53		
14-Jul-09	81	50		

<u>DD/MM/YY</u>	<u>--Temp--</u>		<u>----Pptn----</u>	
	<u>Max</u>	<u>Min</u>	<u>Moist.</u>	<u>Snow</u>
15-Jul-09	83	50		
16-Jul-09	86	52		
17-Jul-09	88	54		
18-Jul-09	86	58		
19-Jul-09	85	61		
20-Jul-09	83	60		
21-Jul-09	82	60		
22-Jul-09	81	58		
23-Jul-09	84	52		
24-Jul-09	57	56		
25-Jul-09	81	61		
26-Jul-09	79	59		
27-Jul-09	81	60	0.11	
28-Jul-09	79	55		
29-Jul-09	78	54		
30-Jul-09	77	51		
31-Jul-09	76	55		
1-Aug-09	82	51		
2-Aug-09	81	56		
3-Aug-09	82	57		
4-Aug-09	81	45		
5-Aug-09	80	55		
6-Aug-09	80	57	0.05	
7-Aug-09	72	44		
8-Aug-09	67	38		
9-Aug-09	71	40		
10-Aug-09	79	45		
11-Aug-09	82	49		
12-Aug-09	76	52		
13-Aug-09	74	54		
14-Aug-09	73	47	0.15	
15-Aug-09	68	46		
16-Aug-09	71	40		
17-Aug-09	77	41		
18-Aug-09	71	49		
19-Aug-09	76	48		
20-Aug-09	82	48		
21-Aug-09	85	53		
22-Aug-09	85	56		
23-Aug-09	75	58		
24-Aug-09	69	50		
25-Aug-09	74	47	0.02	
26-Aug-09	80	48		
27-Aug-09	80	50		
28-Aug-09	81	52		
29-Aug-09	85	56		
30-Aug-09	84	57		
31-Aug-09	80	50		
1-Sep-09	79	50		

<u>DD/MM/YY</u>	<u>--Temp--</u>		<u>----Pptn----</u>	
	<u>Max</u>	<u>Min</u>	<u>Moist.</u>	<u>Snow</u>
2-Sep-09	78	56		
3-Sep-09	74	51		
4-Sep-09	77	49		
5-Sep-09	65	55	0.01	
6-Sep-09	72	45	0.02	
7-Sep-09	78	47		
8-Sep-09	75	52		
9-Sep-09	77	48		
10-Sep-09	76	48		
11-Sep-09	77	50		
12-Sep-09	76	48		
13-Sep-09	64	50		
14-Sep-09	59	43	0.15	
15-Sep-09	58	39	0.34	
16-Sep-09	62	39	0.14	
17-Sep-09	67	43	0.02	
18-Sep-09	68	44		
19-Sep-09	71	45		
20-Sep-09	68	48		
21-Sep-09	60	44		
22-Sep-09	59	31		
23-Sep-09	52	36		
24-Sep-09	66	40		
25-Sep-09	73	42		
26-Sep-09	74	44		
27-Sep-09	76	48		
28-Sep-09	74	46		
29-Sep-09	74	49		
30-Sep-09	52	28	0.08	
1-Oct-09	45	24	0.03	0.5
2-Oct-09	52	26		
3-Oct-09	50	30		
4-Oct-09	53	39		
5-Oct-09	42	24		
6-Oct-09	46	17		
7-Oct-09	54	27		
8-Oct-09	57	26		
9-Oct-09	58	24		
10-Oct-09	55	30		
11-Oct-09	59	33		
12-Oct-09	57	34		
13-Oct-09	56	36		
14-Oct-09	56	44	0.01	
15-Oct-09	58	38		
16-Oct-09	61	33		
17-Oct-09	52	36		
18-Oct-09	62	38		
19-Oct-09	52	32		
20-Oct-09	49	30	0.02	

<u>DD/MM/YY</u>	<u>--Temp--</u>		<u>----Pptn----</u>	
	<u>Max</u>	<u>Min</u>	<u>Moist.</u>	<u>Snow</u>
21-Oct-09	48	31	0.02	
22-Oct-09	50	30		
23-Oct-09	54	34		
24-Oct-09	51	29		
25-Oct-09	40	18	0.10	
26-Oct-09	43	19		
27-Oct-09	34	17		
28-Oct-09	23	17	0.05	1
29-Oct-09	24	18	0.18	1.5
30-Oct-09	36	22	0.02	1
31-Oct-09	49	31		
1-Nov-09	56	30		
2-Nov-09	58	31		
3-Nov-09	56	30		
4-Nov-09	54	30		
5-Nov-09	54	31		
6-Nov-09	61	30		
7-Nov-09	56	27		
8-Nov-09	47	27		
9-Nov-09	48	27		
10-Nov-09	50	31		
11-Nov-09	51	32		
12-Nov-09	52	33		
13-Nov-09	40	18	0.10	1
14-Nov-09	38	16		
15-Nov-09	36	16		
16-Nov-09	36	17	0.11	2.5
17-Nov-09	37	17		
18-Nov-09	37	16		
19-Nov-09	43	23		
20-Nov-09	41	20		
21-Nov-09	39	19		
22-Nov-09	35	16		
23-Nov-09	40	15	0.10	1
24-Nov-09	35	9		
25-Nov-09	41	15		
26-Nov-09	44	24		
27-Nov-09	42	17		
28-Nov-09	37	25		
29-Nov-09	41	18		
30-Nov-09	43	17		
1-Dec-09	42	24		
2-Dec-09	39	18		
3-Dec-09	25	4		
4-Dec-09	33	4		
5-Dec-09	31	7		
6-Dec-09	27	5	0.05	0.7
7-Dec-09	18	4	0.16	2
8-Dec-09	22	8		

<u>DD/MM/YY</u>	<u>--Temp--</u>		<u>----Pptn----</u>	
	<u>Max</u>	<u>Min</u>	<u>Moist.</u>	<u>Snow</u>
9-Dec-09	15	4		
10-Dec-09	16	0		
11-Dec-09	15	0		
12-Dec-09	18	8		
13-Dec-09	29	13		
14-Dec-09	29	20	0.75	8
15-Dec-09	28	7		
16-Dec-09	27	11		
17-Dec-09	41	18		
18-Dec-09	39	16		
19-Dec-09	34	18		
20-Dec-09	32	14		
21-Dec-09	23	12		
22-Dec-09	21	12		
23-Dec-09	24	18	0.05	2
24-Dec-09	20	10	0.05	2.5
25-Dec-09	22	7		
26-Dec-09	23	-1		
27-Dec-09	22	3		
28-Dec-09	19	4		
29-Dec-09	18	12	0.05	1.3
30-Dec-09	24	12	0.25	4
31-Dec-09	27	12	0.15	2
			<u>10.99</u>	

Sufco East Fork Box Canyon Weather Station Weather Data, 2009

Petersen Hydrologic, LLC

	Daily Precipity (inches)	Max Terily (°F)	Min Temp. (°F)
January 2009			
1/1/2009	0.00	41.1	11.9
1/2/2009	0.00	45.2	12.1
1/3/2009	0.01	27.2	-25.9
1/4/2009	0.03	20.1	-30.6
1/5/2009	0.00	23.9	-24.4
1/6/2009	0.01	28.2	19.1
1/7/2009	0.01	37.7	19.8
1/8/2009	0.00	47.3	10.2
1/9/2009	0.00	28.4	-1.6
1/10/2009	0.00	30.7	1.0
1/11/2009	0.00	34.9	22.4
1/12/2009	0.00	30.5	22.1
1/13/2009	0.00	40.3	22.7
1/14/2009	0.00	44.1	11.7
1/15/2009	0.00	44.7	4.2
1/16/2009	0.00	50.0	0.8
1/17/2009	0.00	44.1	-1.7
1/18/2009	0.00	49.3	-1.5
1/19/2009	0.00	48.9	4.1
1/20/2009	0.00	43.0	8.5
1/21/2009	0.00	49.6	3.7
1/22/2009	0.10	45.4	19.7
1/23/2009	0.18	38.4	26.9
1/24/2009	0.19	38.8	27.5
1/25/2009	0.06	35.9	20.3
1/26/2009	0.01	23.1	7.6
1/27/2009	0.01	20.2	3.0
1/28/2009	0.00	31.1	18.9
1/29/2009	0.00	33.5	11.9
1/30/2009	0.00	46.2	7.4
1/31/2009	0.00	48.0	2.5
January 2009 Summary	0.61*	50.0	-30.6

* Freezing conditions at precipitation gauge

February 2009

2/1/2009	0.00	39.0	5.0
2/2/2009	0.00	39.5	5.4
2/3/2009	0.00	48.7	6.1
2/4/2009	0.00	44.9	1.8
2/5/2009	0.00	39.0	7.3
2/6/2009	0.01	36.6	14.9
2/7/2009	0.00	33.5	12.0
2/8/2009	0.12	38.1	7.9

Daily Precipily Max Terily Min Temp.

	(inches)	(°F)	(°F)
2/9/2009	0.11	28.4	-9.2
2/10/2009	0.07	27.8	-12.4
2/11/2009	0.00	31.8	-2.8
2/12/2009	0.04	24.8	7.3
2/13/2009	0.16	27.1	-16.6
2/14/2009	0.18	24.3	-13.1
2/15/2009	0.00	30.5	-17.2
2/16/2009	0.02	35.2	3.9
2/17/2009	0.12	29.0	17.8
2/18/2009	0.00	29.6	1.5
2/19/2009	0.00	40.0	-16.4
2/20/2009	0.00	44.1	-9.0
2/21/2009	0.00	45.7	-4.5
2/22/2009	0.00	40.8	4.9
2/23/2009	0.19	41.2	23.2
2/24/2009	0.00	51.6	15.7
2/25/2009	0.00	48.3	12.1
2/26/2009	0.01	42.3	20.4
2/27/2009	0.00	31.2	2.8
2/28/2009	0.00	40.9	-1.8
February 2009 Summary	1.03*	51.6	-17.2

* Freezing conditions at precipitation gauge

March 2009

3/1/2009	0.00	48.2	10.7
3/2/2009	0.00	51.3	15.5
3/3/2009	0.00	54.8	23.7
3/4/2009	0.00	49.7	22.6
3/5/2009	0.03	35.4	12.4
3/6/2009	0.00	33.3	11.8
3/7/2009	0.00	29.8	10.2
3/8/2009	0.00	42.5	3.5
3/9/2009	0.00	38.7	7.6
3/10/2009	0.15	32.8	1.6
3/11/2009	0.00	42.5	-5.9
3/12/2009	0.00	44.5	8.5
3/13/2009	0.00	43.2	4.2
3/14/2009	0.00	46.7	5.3
3/15/2009	0.00	47.5	17.7
3/16/2009	0.00	55.9	19.9
3/17/2009	0.00	53.5	22.4
3/18/2009	0.00	53.1	25.8
3/19/2009	0.00	55.9	21.1
3/20/2009	0.00	59.3	25.6
3/21/2009	0.00	55.2	23.4
3/22/2009	0.00	49.1	22.6
3/23/2009	0.00	29.2	21.1
3/24/2009	0.00	33.3	17.6
3/25/2009	0.00	37.0	21.6

Daily Precipity Max Terily Min Temp.

	<u>(inches)</u>	<u>(°F)</u>	<u>(°F)</u>
3/26/2009	0.16	27.1	11.4
3/27/2009	0.00	36.6	-2.0
3/28/2009	0.00	45.9	13.8
3/29/2009	0.00	45.9	11.2
3/30/2009	0.00	24.2	11.5
3/31/2009	0.01	36.9	19.2
March 2009 Summary	0.35*	59.3	-5.9

* Freezing conditions at precipitation gauge

April 2009

4/1/2009	0.20	27.0	12.3
4/2/2009	0.00	43.8	10.9
4/3/2009	0.20	32.0	17.4
4/4/2009	0.00	30.4	18.1
4/5/2009	0.00	43.2	5.5
4/6/2009	0.00	49.5	12.4
4/7/2009	0.00	54.4	14.4
4/8/2009	0.01	45.4	23.4
4/9/2009	0.02	43.9	24.6
4/10/2009	0.00	48.9	24.9
4/11/2009	0.29	38.2	26.7
4/12/2009	0.10	47.1	29.5
4/13/2009	0.00	56.2	21.5
4/14/2009	0.00	45.9	29.0
4/15/2009	0.19	35.9	18.3
4/16/2009	0.26	34.8	-4.4
4/17/2009	0.00	42.3	22.7
4/18/2009	0.00	50.0	27.3
4/19/2009	0.00	58.5	21.7
4/20/2009	0.00	63.6	21.9
4/21/2009	0.00	64.3	24.6
4/22/2009	0.00	65.6	25.7
4/23/2009	0.00	65.9	26.7
4/24/2009	0.00	61.0	31.0
4/25/2009	0.08	46.8	25.2
4/26/2009	0.22	39.6	22.1
4/27/2009	0.00	48.9	12.7
4/28/2009	0.00	64.3	21.9
4/29/2009	0.00	59.6	28.8
4/30/2009	0.00	62.4	28.1
April 2009 Summary	1.57	65.9	-4.4

May 2009

5/1/2009	0.00	57.8	29.6
5/2/2009	0.52	46.8	35.8
5/3/2009	0.02	57.9	34.9
5/4/2009	0.01	54.6	31.4
5/5/2009	0.00	62.5	33.2

Daily Precipily Max Terily Min Temp.

	(inches)	(°F)	(°F)
5/6/2009	0.00	66.8	35.5
5/7/2009	0.00	63.9	32.2
5/8/2009	0.00	55.5	29.0
5/9/2009	0.00	65.2	22.4
5/10/2009	0.00	63.5	27.9
5/11/2009	0.00	69.9	26.1
5/12/2009	0.00	68.2	31.1
5/13/2009	0.00	59.6	31.3
5/14/2009	0.00	64.8	27.3
5/15/2009	0.00	63.4	28.5
5/16/2009	0.00	70.8	23.1
5/17/2009	0.00	77.2	24.6
5/18/2009	0.00	77.2	31.4
5/19/2009	0.00	65.6	36.4
5/20/2009	0.00	72.4	30.6
5/21/2009	0.00	66.8	31.8
5/22/2009	0.21	58.8	34.2
5/23/2009	0.30	49.3	42.2
5/24/2009	0.06	57.9	37.2
5/25/2009	0.00	60.4	36.7
5/26/2009	0.05	61.7	30.6
5/27/2009	0.03	61.9	28.8
5/28/2009	0.00	69.2	30.4
5/29/2009	0.08	66.9	31.5
5/30/2009	0.01	65.5	34.2
5/31/2009	0.00	67.6	35.3
May 2009 Summary	1.29	77.2	22.4

June 2009

6/1/2009	0.36	61.7	38.6
6/2/2009	0.15	62.9	38.2
6/3/2009	0.01	69.5	32.7
6/4/2009	0.00	67.4	32.9
6/5/2009	0.00	67.6	32.4
6/6/2009	0.00	60.5	25.9
6/7/2009	0.00	58.7	30.3
6/8/2009	0.00	62.5	28.4
6/9/2009	0.04	59.1	31.4
6/10/2009	0.03	58.2	33.2
6/11/2009	0.22	52.9	33.6
6/12/2009	0.00	61.9	31.1
6/13/2009	0.00	63.0	38.4
6/14/2009	0.02	58.0	32.6
6/15/2009	0.00	65.1	30.1
6/16/2009	0.01	60.4	39.0
6/17/2009	0.13	56.7	38.9
6/18/2009	0.00	60.7	31.7
6/19/2009	0.00	70.3	27.2

Daily Precipily Max Terily Min Temp.

	(inches)	(°F)	(°F)
6/20/2009	0.84	54.4	40.1
6/21/2009	0.00	69.8	34.5
6/22/2009	0.00	72.7	29.3
6/23/2009	0.00	78.2	33.7
6/24/2009	0.00	80.4	36.4
6/25/2009	0.02	77.7	45.0
6/26/2009	0.15	64.2	40.7
6/27/2009	0.00	73.6	33.3
6/28/2009	0.00	79.5	35.9
6/29/2009	0.00	79.6	36.6
6/30/2009	0.00	81.3	36.5
June 2009 Summary	1.98	81.3	25.9

July 2009

7/1/2009	0.00	77.1	46.6
7/2/2009	0.03	67.4	47.4
7/3/2009	0.00	74.7	42.5
7/4/2009	0.08	77.3	43.3
7/5/2009	0.00	80.3	42.1
7/6/2009	0.00	84.5	37.3
7/7/2009	0.00	83.0	41.2
7/8/2009	0.00	81.2	35.9
7/9/2009	0.00	82.9	37.8
7/10/2009	0.00	81.7	33.6
7/11/2009	0.07	77.4	46.4
7/12/2009	0.17	78.6	40.4
7/13/2009	0.00	83.2	42.4
7/14/2009	0.00	79.1	36.9
7/15/2009	0.00	82.4	35.5
7/16/2009	0.00	86.1	36.9
7/17/2009	0.00	88.6	38.6
7/18/2009	0.00	87.3	41.4
7/19/2009	0.00	84.7	48.3
7/20/2009	0.00	82.2	51.1
7/21/2009	0.00	81.2	48.6
7/22/2009	0.00	85.0	39.3
7/23/2009	0.00	86.7	40.2
7/24/2009	0.16	79.4	46.5
7/25/2009	0.00	78.2	52.1
7/26/2009	0.01	80.9	48.5
7/27/2009	0.00	84.1	39.7
7/28/2009	0.00	81.2	39.7
7/29/2009	0.00	79.7	41.8
7/30/2009	0.00	77.3	38.0
7/31/2009	0.00	77.9	42.3
July 2009 Summary	0.52	88.6	33.6

Daily Precipily Max Terily Min Temp.
(inches) (°F) (°F)

August 2009

8/1/2009	0.00	81.1	35.8
8/2/2009	0.00	78.1	38.9
8/3/2009	0.00	84.2	38.8
8/4/2009	0.00	86.0	44.6
8/5/2009	0.13	77.9	41.8
8/6/2009	0.03	76.2	44.7
8/7/2009	0.00	74.6	32.3
8/8/2009	0.00	67.8	28.8
8/9/2009	0.00	73.5	30.4
8/10/2009	0.00	79.4	31.0
8/11/2009	0.00	80.9	33.8
8/12/2009	0.01	76.0	34.9
8/13/2009	0.21	72.4	38.8
8/14/2009	0.00	74.0	40.1
8/15/2009	0.00	68.8	34.9
8/16/2009	0.00	72.6	27.2
8/17/2009	0.00	76.6	26.3
8/18/2009	0.00	70.9	35.0
8/19/2009	0.00	78.2	33.7
8/20/2009	0.00	85.3	32.6
8/21/2009	0.00	88.1	35.5
8/22/2009	0.00	86.9	37.9
8/23/2009	0.07	73.9	51.3
8/24/2009	0.15	66.8	41.4
8/25/2009	0.00	70.0	35.5
8/26/2009	0.00	76.2	33.4
8/27/2009	0.00	80.0	34.3
8/28/2009	0.00	82.7	35.0
8/29/2009	0.00	81.1	40.4
8/30/2009	0.00	83.8	43.4
8/31/2009	0.00	78.9	39.3
August 2009 Summary	0.60	88.1	26.3

September 2009

9/1/2009	0.00	79.5	35.0
9/2/2009	0.00	76.3	44.3
9/3/2009	0.00	74.3	36.5
9/4/2009	0.00	78.1	33.5
9/5/2009	0.04	64.4	47.5
9/6/2009	0.00	70.4	34.5
9/7/2009	0.00	78.4	33.0
9/8/2009	0.00	76.9	35.6
9/9/2009	0.00	78.4	34.7
9/10/2009	0.02	77.4	35.7
9/11/2009	0.00	78.3	34.2
9/12/2009	0.00	77.0	32.1
9/13/2009	0.26	59.9	39.7

Daily Precipity Max Terily Min Temp.

	<u>(inches)</u>	<u>(°F)</u>	<u>(°F)</u>
9/14/2009	0.31	58.4	33.6
9/15/2009	0.00	57.4	31.9
9/16/2009	0.01	63.8	33.8
9/17/2009	0.00	70.0	33.1
9/18/2009	0.00	70.4	34.7
9/19/2009	0.06	73.7	32.8
9/20/2009	0.04	68.3	37.9
9/21/2009	0.00	61.1	27.0
9/22/2009	0.00	62.2	21.6
9/23/2009	0.00	63.4	23.9
9/24/2009	0.00	67.7	27.0
9/25/2009	0.00	72.1	28.0
9/26/2009	0.00	76.3	28.9
9/27/2009	0.00	78.0	34.2
9/28/2009	0.00	78.2	28.5
9/29/2009	0.00	75.6	31.0
9/30/2009	0.05	49.5	24.5
September 2009 Summary	0.79	79.5	21.6

October 2009

10/1/2009	0.01	48.6	15.9
10/2/2009	0.00	55.3	13.5
10/3/2009	0.00	51.6	16.3
10/4/2009	0.01	51.8	28.6
10/5/2009	0.00	43.2	13.5
10/6/2009	0.00	46.2	7.4
10/7/2009	0.00	57.2	13.8
10/8/2009	0.00	44.7	18.7
10/9/2009	0.00	57.2	27.5
10/10/2009	0.00	56.5	21.5
10/11/2009	0.00	56.9	23.4
10/12/2009	0.00	56.6	27.1
10/13/2009	0.00	54.1	24.7
10/14/2009	0.01	54.9	33.2
10/15/2009	0.00	60.6	28.8
10/16/2009	0.00	66.2	20.1
10/17/2009	0.00	64.5	18.8
10/18/2009	0.00	68.8	21.3
10/19/2009	0.00	65.4	24.9
10/20/2009	0.08	48.7	23.1
10/21/2009	0.00	51.7	18.6
10/22/2009	0.00	50.1	21.2
10/23/2009	0.00	54.6	17.0
10/24/2009	0.03	52.9	33.5
10/25/2009	0.02	43.7	19.5
10/26/2009	0.00	48.8	6.0
10/27/2009	0.00	31.7	14.7
10/28/2009	0.00	22.8	11.6

Daily Precipily Max Terily Min Temp.

	<u>(inches)</u>	<u>(°F)</u>	<u>(°F)</u>
10/29/2009	0.32	27.8	0.8
10/30/2009	0.00	45.6	19.2
10/31/2009	0.01	53.9	11.2
October 2009 Summary	0.49	68.8	0.8

November 2009

11/1/2009	0.00	57.1	17.8
11/2/2009	0.00	56.8	18.2
11/3/2009	0.00	64.3	17.9
11/4/2009	0.00	53.5	15.6
11/5/2009	0.00	56.2	17.7
11/6/2009	0.00	58.3	18.3
11/7/2009	0.00	55.0	19.7
11/8/2009	0.00	51.0	17.7
11/9/2009	0.00	49.5	12.7
November 2009 Summary (0.00	64.3	12.7

APPENDIX C

Legal Financial, Compliance and Related Information

Annual Report of Officers
As submitted to the Utah Department of Commerce

Other change in ownership and control information
As required under R645-301-110

CONTENTS

None, Submitted in Canyon Fuel Company, LLC General Chapter One, Appendix 1-1

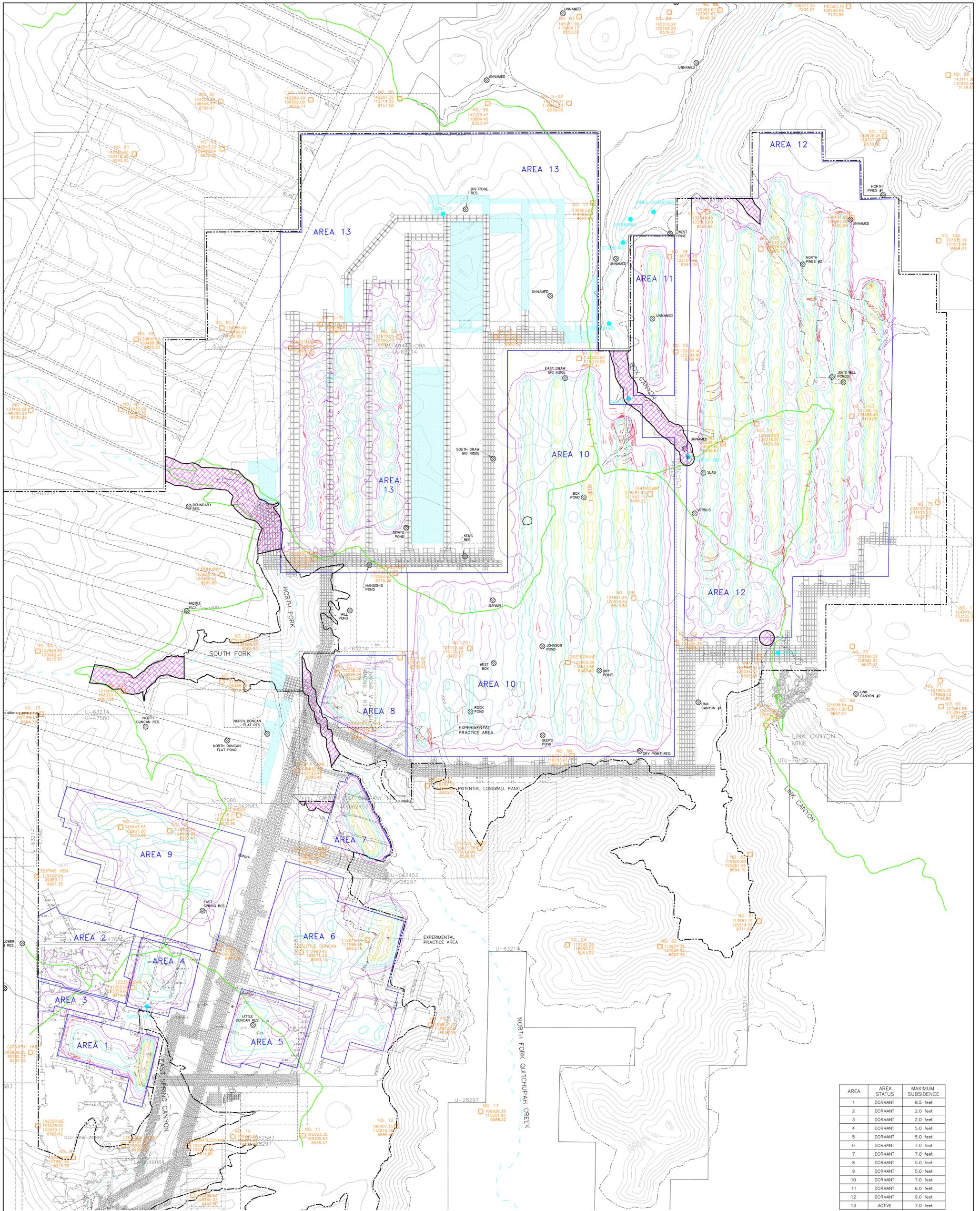
APPENDIX D

Mine Maps

As required under R645-302-525-270

CONTENTS

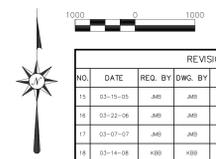
2009 Sufco Subsidence Map
LMU Mining Progress Map 2009-2010



AREA	AREA STATUS	MAXIMUM SUBSIDENCE
1	DORMANT	8.5 feet
2	DORMANT	2.0 feet
3	DORMANT	2.0 feet
4	DORMANT	5.0 feet
5	DORMANT	5.0 feet
6	DORMANT	7.0 feet
7	DORMANT	7.0 feet
8	DORMANT	5.0 feet
9	DORMANT	5.0 feet
10	DORMANT	7.0 feet
11	DORMANT	6.0 feet
12	DORMANT	9.0 feet
13	ACTIVE	7.0 feet

LEGEND

- COAL OUTCROP
- OVERBURDEN CONTOUR
- PERENNIAL STREAM
- ESCARPMENT
- FOREST ACCESS ROAD
- TENSION CRACKS
- SUBSIDENCE LIMITS
- EXTERIOR LEASE LINE
- INTERIOR LEASE LINE
- AERIAL TARGET
- DRAW ANGLE
- SURVEY STATION
- 1' SUBSIDENCE CONTOUR
- 2' SUBSIDENCE CONTOUR
- 3' SUBSIDENCE CONTOUR
- 4' SUBSIDENCE CONTOUR
- 5' SUBSIDENCE CONTOUR
- 6' SUBSIDENCE CONTOUR
- 7' SUBSIDENCE CONTOUR
- 8' SUBSIDENCE CONTOUR
- 9' SUBSIDENCE CONTOUR
- PERENNIAL STREAM BUFFER ZONE
- ONE YEAR PROJECTION
- MONITORED SPRING
- RUNOFF POND

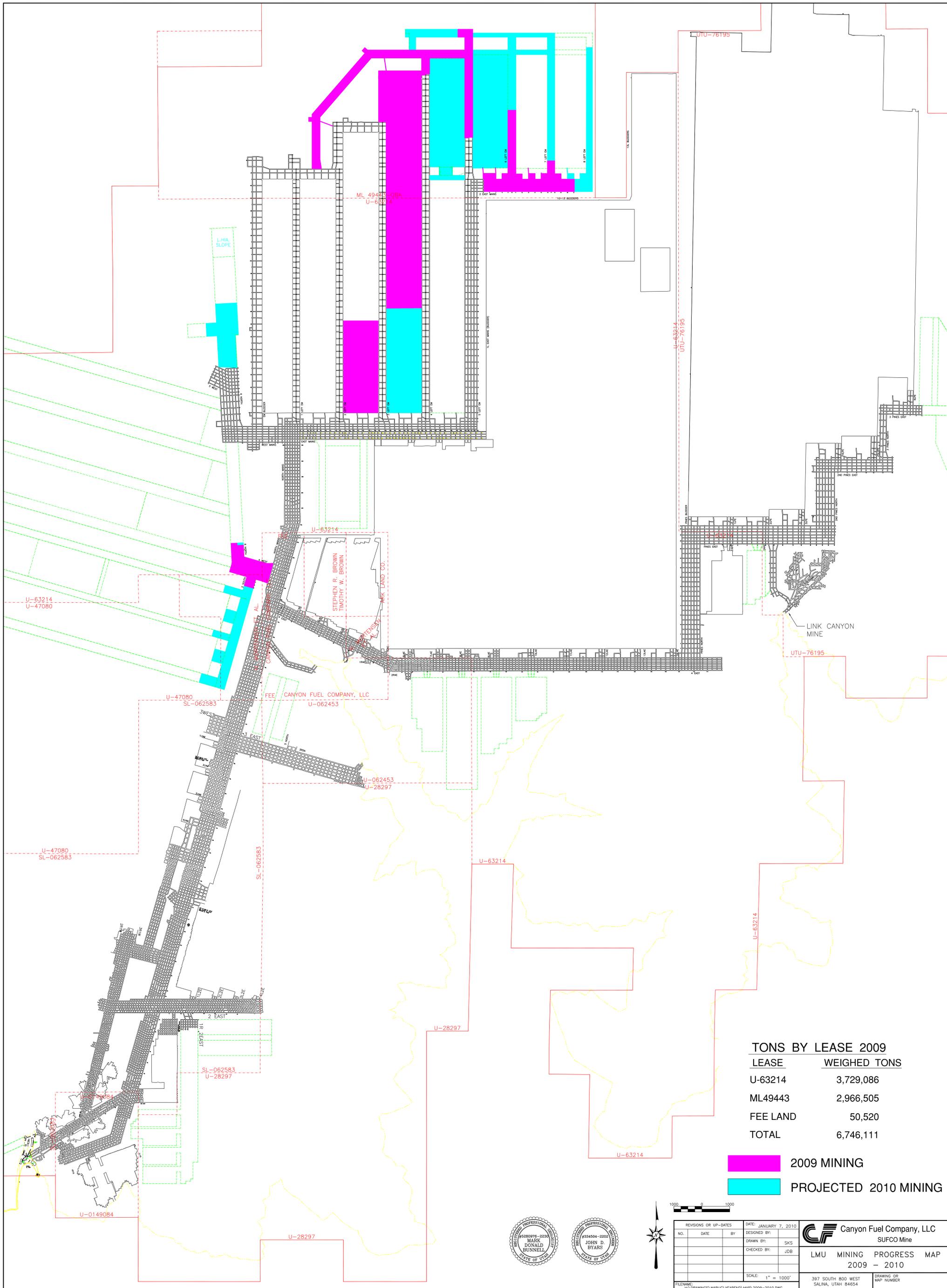


REVISIONS			
NO.	DATE	REQ. BY	DWG. BY
10	05-19-05	AMB	AMB
11	03-22-06	AMB	AMB
12	03-07-07	AMB	AMB
13	03-16-08	KBB	KBB
14	01-31-09	KBB	KBB
15	11-30-09	KBB	KBB

Canyon Fuel Company, LLC
SUFCO Mine
 597 South 9th St., Ste. 400, Salt Lake City, UT 84143
 (435) 286-4880 Phone
 (435) 286-4498 Fax

SUFCO Mine
Subsidence Map

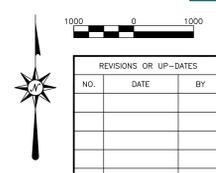
SCALE: 1" = 1000'
 DATE: 11/30/2009
 DRAWN BY: K.B.B.
 ENGINEER: K.B.B.
 SHEET NO.: MAP 1



TONS BY LEASE 2009

LEASE	WEIGHED TONS
U-63214	3,729,086
ML49443	2,966,505
FEE LAND	50,520
TOTAL	6,746,111

2009 MINING
 PROJECTED 2010 MINING



REVISIONS OR UP-DATES			DATE: JANUARY 7, 2010
NO.	DATE	BY	DESIGNED BY:
			JOHN D. BYARS
			DRAWN BY: SKS
			CHECKED BY: JDB
			SCALE: 1" = 1000'
FILENAME: H:\DRAWINGS\MAP\UG\YEAREND\MAP\2009-2010.DWG			

Canyon Fuel Company, LLC
 SUFCO Mine
LMU MINING PROGRESS MAP
 2009 - 2010
 387 SOUTH 800 WEST
 SALINA, UTAH 84554
 DRAWING OR
 MAP NUMBER

APPENDIX E

Other Information

In accordance with the requirements of R645-301 and R645-302

CONTENTS

None