Lila Canyon Vegetation Survey - 2003

Submitted by

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Abstract

A vegetation inventory was conducted at site of the proposed Lila Canyon Extension to the Horse Canyon Mine property between June and September 2003. A reference area was selected close to the proposed mine site and data were collected regarding percent cover and shrub density for the proposed Reference Area and proposed Disturbance Site. The Reference Area and Disturbance Site were compared to determine similarity. Sites were similar with respect to species composition, percent cover of vegetation, and woody plant density.

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Introduction

In June of 2003, Dr. Mike King was contacted by UtahAmerican Energy about conducting a vegetation survey on the proposed site for the Lila Canyon extension of the Horse Canyon mine site located in eastern Emery county. Meetings were held between Dr. King and Utah American Energy and the Utah Division of Oil, Gas and Mining to discuss and determine the scope of the project. Fieldwork was initiated in July and continued through August 2003. The purpose of the study was to inventory vegetation on the proposed disturbed site, establish a reference area, inventory the reference site and compare the Reference area and the disturbance site and determine the level of similarity of the 2 sites. This baseline data is to be used in assisting with preparation of premining documents.

Data collection was to include percent cover, percent cover by species, woody plant density, species diversity, and productivity for each site as well as a simnilarity comparison between the 2 areas. The information below includes summary and analyses of these vegetation surveys.

Materials and Methods

Vegetation surveys were conducted in 2 areas. One site was included the area designated for disturbance when mining activities begin. The other was a reference area to be used for future vegetation comparisons after mining activities are initiated. The reference area was selected based on similarities to the proposed disturbed sites with respect to slope, aspect, and general topographic characteristics. On July 2, 2003 Dr. Jerriann Ernsten, DOGM Biologist, accompanied Jay Marshall, Lila Canyon Project Engineer, and Dr. Mike King, Principal Investigator to select the reference area for the Lila Canyon project. Dr. Ernsten also worked with Dr. King on July 9 in collecting cover data for the reference site.

The Reference Area that was selected and approved is located approximately .10 miles in a generally southwestern direction from the disturbance site. It is approximately 100 m^2 or roughly 2 acres in size. Maps of Reference Area and Disturbance Site including transect locations is in Appendix 1. See photographs of the 2 areas in Appendix 8.

Vegetation Surveys were carried out according to the Division of Oil, Gas and Mining (DOGM) vegetation sampling methods (February 1992 Revised DOGM Vegetation Information Guidelines). Data collected during the surveys were used to determine ground cover, cover by species, species diversity, and woody plant density. A comparison of the Reference area and the disturbed site was made to determine similarity of the 2 areas.

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Mr. Marshall, also requested that we conduct cursory surveys in the Lila Canyon area to determine the presence of 3 plant species of concern. The plants of concern were: 1) Creutzfeldt-flower (*Cryptantha creuzfeldtii* Welsh) a member of the Boraginacae family, 2) Coal-cliffs Sweet Vetch (*Hedysarum occidentale* var. *canone*) a member of the Fabaceae family, and 3) Horse Canyon Stickleaf (*Mentzeliea multicaulis* var. *librina* Thorne & F.G. Sm.). The results of these surveys are reported in Appendix 7.

Percent Cover

The point-intercept method was used to sample cover. A total of 15 - 100 ft sampling transects were run at each revegetation site to determine percent cover. Transects were located using coordinates selected from a random number table. Coordinates were paced off and a compass direction was selected using the random number table as well. Once transect start point and compass direction were established, investigators laid out a 100 ft tape in the appropriate direction and then walked the length of the tape to record vegetation. Investigators took samples at 2ft intervals along the length of the tape. A total of 50 points were recorded for each transect. Similar methods were used in the reference area.

Cover categories included: 1) Physical Features including a) bare ground (rock or soil material less < 12 inches in diameter), b) litter (dead plant material lying on ground surface), c) rock (rock material >12 inches in diameter), 2) Cryptobiotic Soil, 3) Vegetation including a) shrubs b) forbs and succulents (cactus species), c) grasses, and d) trees. When possible, plants were identified to species level. Points were selected by viewing the transect at 2 foot intervals with an ocular viewing device with cross hairs. When there was an overhead canopy, verticle projections were made above the 100 ft tape to include the highest level of vegetation in the sample.

Adequacy of sample size was determined as per DOGM guidelines (DOGM 1992); see Table 1. Sample adequacy for cover was met at the 90% confidence level with a 10% change in the mean as required by DOGM. For cover, 30 transects were run in the Disturbance Site (a total of 1500 points) and 20 samples (a total of 1000 points) were collected in the Reference Area.

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Table 1. **Minimum sample sizes** (based on 15 samples)				
	Disturbance Site		**Reference Area**	
	Cover	**Woody Plant Density**	**Cover**	**Woody Plant Density**
Mean	50.67	32.87	43.60	24.13
Standard Deviation	15.60	14.07	11.01	12.81
Minimum sample size	29.38	56.84	19.78	87.39

Woody Plant Density

Woody plant densities were estimated using the belt transect method (DOGM 1992). A total of 15 - 100 ft X 10ft transects were run in each area to determine woody plant density. Transects were located using coordinates selected from a random number table. Coordinates were paced off and a compass direction was selected using the random number table as well. Once transect start point and compass direction were established, investigators walked the length of the transect and recorded species of all individual shrubs rooted in each belt. Total number of plants per acre was calculated using DOGM guidelines (plants counted in the plot X 43,560 / 1000 sq. ft.). Minimum sample sizes were not followed for determining woody plant density. Minimum sample sizes were 57 and 87 respectively for Disturbance Site and Reference Area respectively. These numbers, particularly for the Reference Area, are high. Eighty-seven samples in a $100m^2$ area had the potential to be very disturbing to the plant community. Based on these considerations, 15 samples were taken to determine woody plant density for the 2 sites. These numbers were consistent with previous vegetation surveys done in the area.

Species Diversity

Species diversity lists were compiled based on data collected during cover sampling. Lists include total number of species and percent cover of each species.

Productivity

Productivity for the areas was determined through consultation with Natural Resources Conservation Service (NRCS) Biologists as per DOGM Guidelines

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(DOGM 1992). A visit was made by Mr. Dean Stacy, NRCS Biologist, on August 21, 2003 to determine Productivity. Ocular estimates were used to determine productivity for the 2 areas as per NRCS procedures.

Similarity

Similarity of the proposed Disturbance Site and the Reference Area with respect to species composition was determined using both the Jaccard's Community Coefficient and the Sorensen's Community Coefficient (DOGM 1992). Data was collected while inventorying the 2 sites for cover. Comparisons were also made between the 2 areas with respect to average percent cover and woody plant density. These parameters were tested statistically using the Two-tailed t Test.

Results

The proposed Lila Canyon Extension of the Horse Canyon Mine is located in an area dominated by Pinyon-Juniper (*Pinus edulis, Juniperus osteosperma*) and Grass-Shrub (especially Salina Wild Rye , *Elymus salinus* and Shadscale, *Atriplex confertifolia*) communities. All areas also have significant numbers of Snakeweed, *Gutierrezia sarothrae*, and Cheatgrass, *Bromus tectorum*, both invasive species.

The survey was conducted during a very dry year. Annual precipitation at the Sunnyside City Center weather station (approximately 10 miles north of Lila Canyon) and the Price Warehouses weather station (approximately 35 miles west of Lila Canyon) was below long-term averages for both sites. The precipitation for the 2003 water year (Oct 1, 2002-Sept 31,2003) was 10.53 inches compared to the 30 year average of 13.87 inches. Similarly annual precipitation for the Price Warehouses station for the 2003 water year was 5.96 inches compared to a 25 year average of 9.3 inches (See Table 2 - Utah Climate Center records, Utah State University, Logan, Utah).

Table 2. Precipitation by Month for Price Warehouses and Sunnyside City Center Weather Stations

Station	Precipitation in Inches (2003 Water Year)												
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Price	.50	.63	.51	.13	.48	.96	.28	.56	.12	.60	.78	.40	5.96
Sunnyside	.84	.94	.59	.18	1.40	1.20	.74	1.15	.71	1.07	1.34	.37	10.53

This pattern is typical of most regions in Utah due to several years of drought

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throughout the state. This prolonged period of reduced moisture has no doubt had an effect on plant production and survival throughout the state and the eastern Utah area.

Though plant growth was likely limited during the year, there were no signs of disease or insect damage and plants generally appeared to be in fair health. NRCS biologist, Mr. Dean Stacey, indicated that there area signs of decline in vigor of some of the bunch grass species in the area due to build up of litter and old growth at the base of the plants or near the soil surface (see NRCS report, Appendix 3). Both areas have no doubt been affected by the drought that has prevailed in Utah for the last several years, however, there was no evidence of a major vegetation die-off, particularly with sagebrush (*Artemisia tridentata*) as has been experienced in the Price, UT area approximately 35 miles to the west.

Evidence of livestock (cattle) from previous years was found in both the Disturbance Site and the Reference Area. Use of the area appeared to be minimal with plants showing no signs of overgrazing. Both areas were burned by a wild fire several years ago and evidence of dead or scarred Pinyon Pine (*Pinus edulis*) and Utah Juniper trees (*Juniperus osteosperma*). Mule deer sign was also observed in both areas. Moderate numbers of Mormon Crickets were observed in areas on the mountain above the mine site, but none were observed in either the Reference Area or the Disturbance Site proper.

Percent Cover

Reference Area

Cover data for the Lila Canyon reference area are included in Table 3 (percent cover data and relative vegetative cover by species for each transect are included in Appendix 2). The average vegetation cover for the Reference area was 45.33%. The vegetative component was comprised of 16.80% shrubs, 11.20% forbs and succulents, 67.63% grasses, and 4.36% trees.

Table 3. Lila Canyon Average Cover Summary

Cover Type	Area	
	Reference Area	Disturbance Site
Shrubs	8.10	5.00
Forbs	5.40	1.93

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Grasses	32.60	29.33
Trees	2.10	8.87
Total Vegetation	48.20	45.13
90% Confidence Interval	7.33	5.39
Cryptobiotic	14.50	7.13
Physical Features	37.10	47.49

Disturbance Site

The average vegetation cover for the Disturbance Site was 45.13% (Table 3). The vegetative component was comprised of 11.08% shrubs, 4.28% forbs and succulents, and 64.99% grasses, and 19.65% trees (Appendix 2).

Woody Plant Density

Woody plant density data for the Horse Canyon reference area are included in Table 4 (data for each transect are included in Appendix 3).

Table 4. Lila Canyon Woody Plant Densities

Area	Average	Std. Deviation	90% Confidence Interval	Interval Range
Reference	1051.25	558.05	237.00	814.25 - 1288.25
Disturbance Site	1248.34	473.09	200.92	1047.42 - 1449.26

Reference Area

The Reference Area, including tree species, had an average stems/acre of 1051.25 (Table 4; for complete data for each transect refer to Appendix 3). The number of

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stems/acre ranged from 304.92 to 2003.76. The site was dominated by Shadscale (*Atriplex confertifolia* - 476.26, 45.00%), Snakeweed (*Gutierrezia sarothrae* - 235.22 stems/acre, 22.00%), Fourwing saltbush (*Atriplex canescens* - 101.64 stems/acre, 10.00%), and Utah Juniper (*Juniperus osteosperma* - 60.98 stems/acre, 7.00%), Four Wing Saltbush (*Atriplex canescens* - 662.11 stems/acre, 33.8%), and Douglas Rabbitbrush (*Chrysothamnus viscidiflorus* - 482.06 stems/acre, 6.00%).

Disturbance Site

Woody stems/acre in the Disturbance Site, including tree species, ranged from 522.72 to 2134.44, with an average of 1248.72 (Table 4; for complete data for each transect refer to Appendix 3). The most predominant woody plants in the Disturbance Site were Snakeweed (*Gutierrezia sarothrae* - 534.34 stems/acre, 43.00%), Fourwing saltbush (*Atriplex canescens* - 165.53 stems/acre, 13.30%), Shadscale (*Atriplex confertifolia* - 191.66 stems/acre, 15.30%), Winterfat (*Ceratoides lanata* - 177.14 stems/acre, 14.20%), and Utah Juniper (*Juniperus osteosperma* - 92.93 stems/acre, 7.40%),

Species Diversity

A species list for the Lila Canyon Reference Area and the Disturbance Site are detailed in Table 5. These data are based on cover sampling done in both sites.

Table 5. Species Lists for Lila Canyon Inventory Area

Species	Common Name	Site	
		Reference Area	Disturbance Site
Shrubs			
Artemisia spinescens	Budsage	x	
Artemisia tridentata	Wyoming sagebrush	x	x
Atriplex canescens	Fourwing saltbush	x	x
Atriplex confertifolia	Shadscale	x	x
Ceratoides lanata	Winterfat	x	x
Chrysothamnus nauseosus	Big rabbitbrush	x	x

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Chrysothamnus albidus (unconfirmed)	Rabbitbrush	x	
Ephedra viridis	Green Ephedra	x	x
Gutierrezia sarothrae	Snakeweed	x	x
Sarcobatus vermiculatus	Greasewood	x	x
Leptodactylon pungens	Prickly gilia		x
Forbs & Succulents			
Cryptantha confertifolia	Yellow Cryptantha	x	x
Echinocereus triglochidiatus	Hedgehog cactus	x	x
Lygodesmia juncea	Skeleton weed	x	x
Machaeranthera canescens	Purple aster	x	
Opuntia compressa	Prickly pear cactus	x	x
Plantago patagonica	Indian wheat		x
Sphaeralcia coccinea	Scarlet globe mallow	x	x
Phacelia crenulata	Scorpion weed	x	
Euphorbia fendleri	Fendler spurge		x
Grasses			
Aristida logiseta	Three awn	x	x
Bouteloua gracilis	Blue gramma	x	x

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Elymus salinus	Salina wild rye	x	x
Hilaria jamesii	Galleta	x	x
Oryzopsis hymenoides	Indian rice grass	x	x
Sitanion hystrix	Suirreltail	x	x
Sporobolus cryptandrus	Sand drop seed		x
Stipa comata	Needle and thread	x	x
Vulpia octaflora	Six weeks fescue	x	x
Trees			
Juniperus osteosperma	Utah juniper	x	x
Pinus edulis	Pinyon pine		x
Total Species in each area		27	28

The Reference Area had a total of 27 species with 3 species, Salina wild rye (*Elymus salinus* - (11.30%), Cheat grass (*Bromus tectorum* - 6.30%), and Galleta grass (*Hilaria jamesii* - 5.60%) with percent cover greater than 5%. See Table 6 for complete listing of percent cover for species in Reference Area and Disturbance Site.

The Disturbance Site had a total of 28 species with 4 species, Salina wild rye (*Elymus salinus* - 9.42%), Cheat grass (*Bromus tectorum* - 9.29%), Utah juniper (Juniperus osteosperma - 7.68%, and Galleta grass (*Hilaria jamesii* - 6.01%) with percent cover greater than 5%.

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Table 6. Plant Species and Percent Cover Summary Table for the Reference Area and Disturbance Site

Reference Area		Disturbance Site	
	Species (% cover)		**Species (% cover)**
10 - 20%	*Elymus salinus (11.30)*	10 - 20%	
5 - 10 %	*Bromus tectorum (6.30)*	5 - 10 %	*Elymus salinus (9.42)*
	Hilaria jamesii (5.60)		*Bromus tectorum (9.29)*
			Juniperus osteosperma (7.68)
			Hilaria jamesii (6.01)
1 - 5%	*Atriplex confertifolia (4.40)*	1 - 5%	*Gutierrezia sarothrae (2.0)*
	Sphaeralcia coccinea (3.20)		*Stipa comata (1.54)*
	Stipa comata (2.90)		*Oryzopsis hymenoides (1.27)*
	Vulpia octaflora (2.40)		*Pinus edulis (1.20)*
	Juniperus osteosperma (2.20)		*Atriplex canescens (1.07)*
	Sitanion hystrix (2.00)		
	Oryzopsis hymenoides (1.80)		
	Atriplex canescens (1.30)		
< 1%	*Gutierrezia sarothrae (0.90)*	< 1%	*Vulpia octaflora (0.73)*
	Artemisia tridentata (0.60)		*Opuntia compressa (0.67)*
	Cryptantha flava (0.50)		*Sphaeralcia coccinea (0.67)*
	Opuntia compressa (0.40)		*Atriplex confertifolia (0.60)*
	Aristida longiseta (0.30)		*Ceratoides lanata (0.47)*
	Lygodesmia juncea (0.30)		*Sporobolus cryptandrus (0.47)*
	Machaeranthera canescens *(0.30)*		*Sitanion hystrix (0.33)*
	Artemisia spinescens (0.20)		*Sarcobatus vermiculatus (0.33)*
	Epehdra viridis (0.20)		*Leptodactylon pungens (0.27)*
	Echinocereus triglochidiatus (0.20)		*Euphoriba fendleri (0.27)*
	Bouteloua gracilis (0.20)		*Bouteloua gracilis (0.27)*

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	Chrysothamnus nauseosus (0.10)		*Artemisia tridentata (0.13)*
	Sarcobatus vermiculatus (0.10)		*Echinocereus triglochidiatus (0.13)*
	Phacelia crenulata (0.10)		*Chrysothamnus nauseosus (0.07)*
	Ceratoides lanata (0.10)		*Epehdra viridis (0.07)*
	Chrysothamnus albidus (0.10) unconfirmed		*Cryptantha flava (0.07)*
			Plantago patagonica (0.07)
			Lygodesmia juncea (0.07)
			Aristida longiseta (0.07)

Productivity

Productivity for the areas was estimated by Mr. Dean Stacy, NRCS biologist on August 21, 2003 per DOGM guidelines and NRCS procedures (See Appendix 4). Based on ocular estimates, Mr. Stacy estimated the productivity of the areas. He indicated that the overall productivity of the Disturbance Site and the Reference Area was lower than in previous years due to the drought conditions prevalent in the general area.

He estimated that productivity in the Disturbance Site to be approximately 350 pounds per acre (mid seral) in areas dominated by grasses and shrubs and approximately 250 pounds per acre (mid seral) in areas dominated by Pinyon-Juniper vegetation. The estimated productivity for the Reference Area was approximately 450 pounds per acre (high seral) in grass/shrub areas and approximately 250 pounds per acre (mid seral) for areas of Pinyon-Juniper.

Similarity

Species Comparisons

Comparisons of similarity with respect to plant species were made between the Reference Area and the Disturbance Site using Jaccard's and Sorensen's coefficients based on cover data. In the Reference Area, there were a total of 27 species, whereas in the Disturbance Site there were a total of 28 species. There were 23 species common to both areas (Table 5).

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Jaccard's Coefficient is calculated by:

$SI = C/(A + B - C) * 100$

Sorensen's Coefficient is calculated by:

$SI = (2C/A + B) * 100$

where: A = number of species in the Reference Area
B = number of species in the Disturbance Site
C = number of species common to both sites

The Jaccard's Similarity Coefficient was 71.9 (Table 7) and Sorensen's coefficient value was 83.6, both exceeding the required index value of 70. These data indicate that the communities are sufficiently similar, and that the proposed Reference Area should be acceptable.

Table 7. Species Similarity Comparison (based on cover data)

Site	Number of Species Present	Number of Species Common to Both	Jaccard's Coefficient	Sorensen's Coefficient
Reference Area	27			
Disturbance Site	28	23	**71.9**	**83.6**

Percent Cover and Woody Plant Density Comparisons

Statistical comparisons of vegetative cover were made between the Disturbance Site and the Reference area using the Two-tailed t Test (DOGM 1992). DOGM guidelines suggest that mean vegetative cover and woody plant density of the Reference Area and Disturbance Site should be equal with a 90% confidence. Calculations for these parameters are presented below.

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For a 90% Confidence Interval:

$t(Std)/n^{1/2} \leq \mathbf{X_0} \leq t(Std)/n^{1/2}$

Percent Vegetative Cover

Disturbance Site

Mean = X_0 = 45.13 %
Std = 17.26
n = 30
df = 29
t = 1.699 (from t distribution table, a=0.1, df = n -1)

Reference Area

Mean = X_0 = 48.20 %

Cover as a %: 39.98 $\leq$ **48.20** $\leq$ 50.68

Since X_0 of Percent Vegetative Cover is 48.20 and can be found between 39.98 and 50.68, it can be concluded that the Disturbance Site and the Reference Area are equal with 90% confidence.

Woody Plant Density

Disturbance Site

Mean = X_0 = 1248.72 stems/acre
Std = 473.09
n = 15
df = 14
t = 1.761 (from t distribution table, a=0.1, df = n-1)

Reference Area

Mean = X_0 = 1051.25 %

Woody plant density: 1033.61 $\leq$ **1051.25** $\leq$ 1463.82

Since X_0 of Woody Plant Density is 1051.25 and can be found between 1033.61 and 1463.82, it can be concluded that the Disturbance Site and the Reference Area are equal with 90% confidence.

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Appendix 1

Lila Canyon Maps

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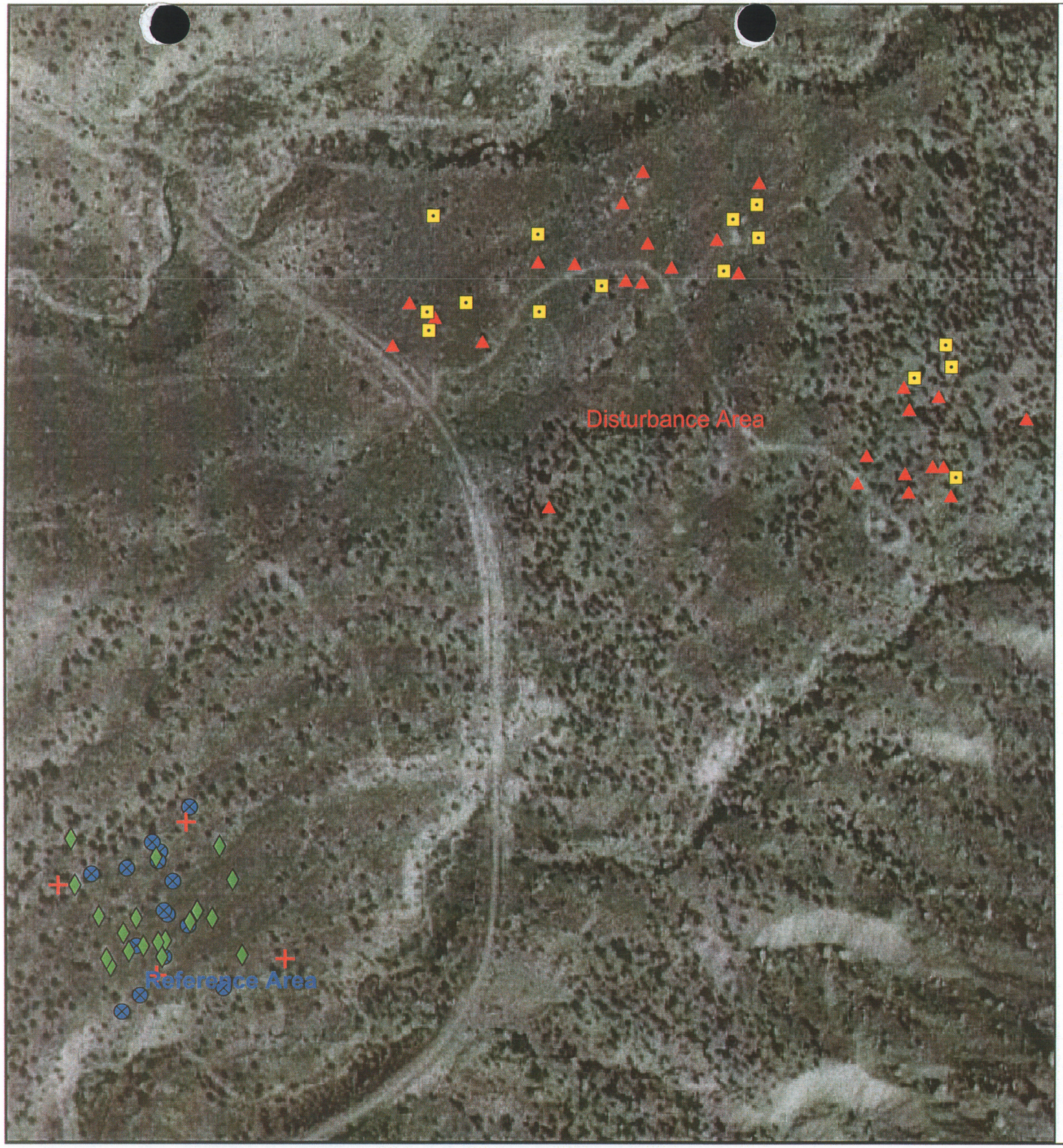
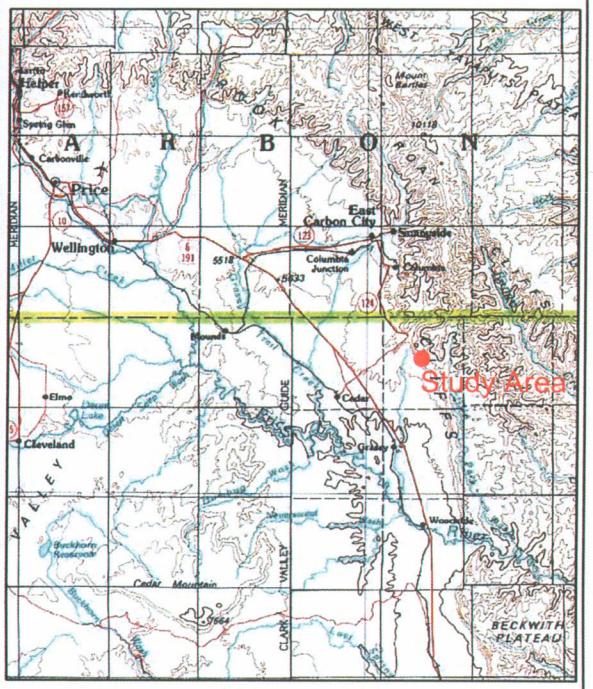
Lila Canyon Mine
Reference and Disturbance Sites





Legend

- Reference Corners
- Reference Cover
- Reference Area Shrub Density
- Disturbance Area Shrub Density
- Disturbance Cover

0 50 100 200 300 400 500 FT

1:3,000

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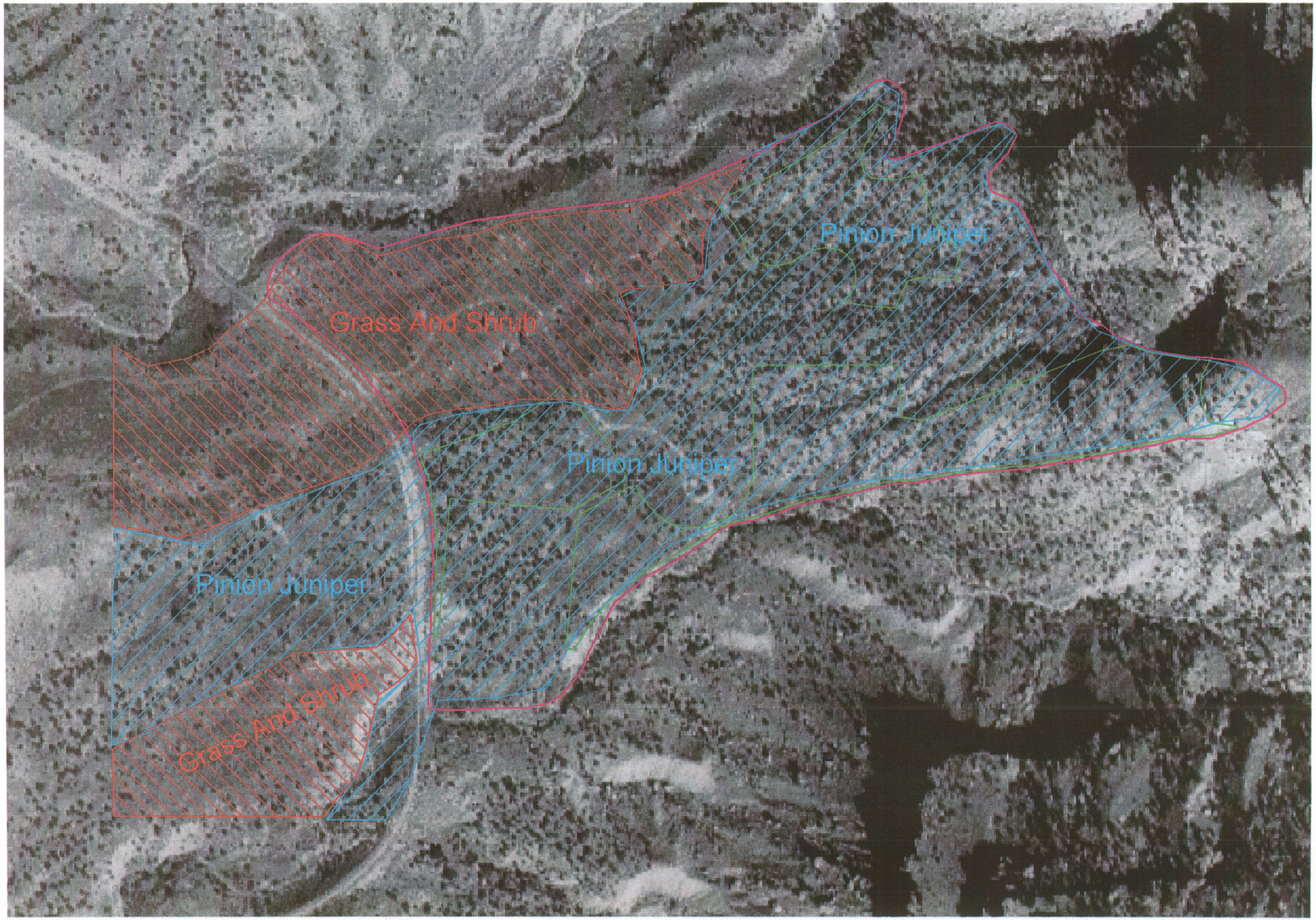

Fig 7

Appendix 2

Lila Canyon Cover Data

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Reference Cover Type Summary

Cover Type	Transect #														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Shrubs	2	8	6	4	6	20	0	2	12	10	0	4	8	2	14
Forbs	2	6	6	2	4	4	0	20	6	6	0	8	4	24	10
Grasses	24	40	36	24	18	18	26	22	18	44	22	26	40	36	16
Trees	2	0	0	2	10	0	0	0	0	0	22	0	6	0	2
Total Vegetation	30	54	48	32	38	42	26	44	36	60	44	38	58	62	42
Cryptobiotic	22	24	18	18	20	12	16	36	20	6	12	20	6	14	10
Physical Features	48	22	34	50	42	46	58	20	44	34	44	42	36	24	48

Cover Type	Transect #					Site Ave.	Relative Veg. Cover	Std. Dev.
	16	17	18	19	20			
Shrubs	14	10	8	10	22	8.10	16.80	6.14
Forbs	0	0	0	4	2	5.40	11.20	6.39
Grasses	46	54	56	44	42	32.60	67.63	12.65
Trees	0	0	0	0	0	2.10	4.36	5.31
Total Vegetation	60	64	64	58	66	48.20	100.00	12.70
Cryptobiotic	10	10	6	4	6	14.50		7.94
Physical Features	30	26	30	38	28	37.10		10.47

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Lila Canyon Species Cover Summary

Reference A

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	Percent Cover	Reletive Vegetative Cove
Shrubs																							
Atriplex canescens		3		2						2			4				2	1			14	1.40	2.90
Atriplex confertifolia	1		2		3	6			6	2		1		1	5	4	3	1	3	6	44	4.40	9.13
Artemisia tridentata tridentata						1														5	6	0.60	1.24
Artemisia spinescens						2															2	0.20	0.41
Chrysothamnus nauseosus		1																			1	0.10	0.21
Ceratoides lanata										1											1	0.10	0.21
Ephedra viridis								1							1						2	0.20	0.41
Sarcobatus vermiculatus			1																		1	0.10	0.21
Guterrezia sarothrae						1									1	3		2	2		9	0.90	1.87
Chrysothamnus albidus												1									1	0.10	0.21
Total Shrubs Cover	1	4	3	2	3	10	0	1	6	5	0	2	4	1	7	7	5	4	5	11	81	8.10	16.80
Forbs & Succulents																							
Cryptantha flava					1			1						1	2						5	0.50	1.04
Machaeranthera canescens		3																			3	0.30	0.62
Sphaeralcia coccinea	1		1			1		9	2	3		2	2	8	2				1		32	3.20	6.64
Echinocereus triglochidiatus			2																		2	0.20	0.41
Opuntia compressa				1	1														1	1	4	0.40	0.83
Lygodesmia juncea														3							3	0.30	0.62
Phacelia crenulata						1			1			2			1						5	0.50	1.04
Total Forb Cover	1	3	3	1	2	2	0	10	3	3	0	4	2	12	5	0	0	0	2	1	54	5.40	11.20
Grasses																							
Aristida longiseta		1										1			1						3	0.30	0.62
Bouteloua gracilis																			2		2	0.20	0.41
Bromus tectorum		9	8			2		1		6		2	11	8			2	2	6	6	63	6.30	13.07
Elymus salinus	8			12	7		12	4	2	11	11	2	6			7	12	14	1	4	113	11.30	23.44
Hilaria jamesii	2	3	5		2	2	1		2			2	2	2	4	8	5	8	4	2	54	5.40	11.20
Oryzopsis hymenoides						1		6		1		2		1		1	2		1	3	18	1.80	3.73
Sitanion hystrix		2	4			1				2		2				3	1	1	2	2	20	2.00	4.15
Stipa comata		5	1			2			3					5	3	2	1	2	2	3	29	2.90	6.02
Vulpia octaflora	2					1			2	2		2	1	2		2	4	1	4	1	24	2.40	4.98
Total Grass Cover	12	20	18	12	9	9	13	11	9	22	11	13	20	18	8	23	27	28	22	21	326	32.6	67.63
Trees																							
Juniper	1			1	5						10		3		1						20	2.00	4.15
Pinon											1										1	0.10	0.21
Total Tree Cover	1	0	0	1	5	0	0	0	0	0	11	0	3	0	1	0	0	0	0	0	21	2.10	4.36
Total Vegetation Cover	15	27	24	16	19	21	13	22	18	30	22	19	29	31	21	30	32	32	29	33	482	48.20	100.00
Criptobiotic	11	12	9	9	10	6	8	18	10	3	6	10	3	7	5	5	5	3	2	3	145	14.50	
Physical Features																							
Litter	5	7	8	6	5	10	4		6	2	1	15	6	10	10	2	3	1	3	2	106	10.60	
Rock	3			4	2		2	6	1	6	6				1		3		1	2	37	3.70	
Bare Ground	16	4	9	15	14	13	23	4	15	8	15	6	12	2	13	13	7	14	15	10	228	22.80	
Total Physical Features	24	11	17	25	21	23	29	10	22	16	22	21	18	12	24	15	13	15	19	14	371	37.10	
Comments:	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	1000		

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Lila Canyon Cover Sheet

Date:07/09/2003 | Area:Ref | Transect:1 | UTM:555814/4364018 | Heading:5 | Coordinates:

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																			0	0.00	0.00
Atriplex canescens																																																			1	2.00	6.67
Atriplex confertifolia	1																																																		0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ceratoides lanata																																																			0	0.00	0.00
Ephedra viridis																																																			0	0.00	0.00
Sarcobatus vermiculatus																																																			0	0.00	0.00
Guterezia sarothrae																																																					
Total Shrubs Cover	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2.00	6.67
																																																					0.00
																																																					0.00
Forbs & Succulents																																																			0	0.00	0.00
Machaeranthera canescens																						1																													1	2.00	6.67
Sphaeralcia coccinea																																																					
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2.00	6.67
																																																					0.00
Graminoid																																																			0	0.00	0.00
Bromus tectorum													1	1				1																												1	1	1	1	1	8	16.00	53.33
Elymus Salinus																																																			2	4.00	13.33
Hilaria Jamesii					1					1																																									0	0.00	0.00
Oryzopsis hymenoides																																																			0	0.00	0.00
Sitanion hystrix																																																			0	0.00	0.00
Stipa comata									1																																			1						2	4.00	13.33
Vulpia octaflora																																																					
Total Graminoid Cover	0	0	0	0	1	0	0	0	1	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	12	24.00	80.00
																																																					0.00
Trees																																																			1	2.00	6.67
Juniperus osteosperma															1																																				0	0.00	0.00
Pinus edulison																																																			0	0.00	0.00
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2.00	6.67
																																																					0.00
Total Vegetation Cover	1	0	0	0	1	0	0	0	1	1	0	0	1	1	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	15	30.00	100.00
																																																					0.00
cryptobiotic		1		1																	1	1					1			1	1				1		1	1			1										11	22.00	
Physical Features																																																					
Litter							1	1	1																1									1																5	10.00	
Rock													1							1				1																											3	6.00	
Bare Ground			1									1					1	1						1			1		1	1			1	1			1			1	1		1	1		1					16	32.00	
Total Physical Features	0	0	1	0	0	1	1	1	0	0	1	1	0	0	0	1	1	0	1	0	0	0	1	1	1	1	0	1	1	0	0	1	1	1	0	1	0	0	1	1	0	1	1	0	1	0	0	0	0	0	24	48.00	
																																																			50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

Lila Canyon Cover Sheet

Date:07/09/2003 | Area:Ref | Transect:2 | UTM:5558896/4364014 | Heading:47 | Coordinates:

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																						
Atriplex canescens											1		1							1																																3	6.00	11.11
Atriplex confertifolia																																																				0	0.00	0.00
Artemisia tridentata tridentata																																										1										0	0.00	0.00
Chrysothamnus nauseosus																																																				1	2.00	3.70
Chrysothamnus viscidiflorus																																																				0	0.00	0.00
Cowania mexicana																																																				0	0.00	0.00
Ceratoides lanata																																																				0	0.00	0.00
Ephedra viridis																																																				0	0.00	0.00
Sarcobatus vermiculatus																																																				0	0.00	0.00
Gutierrezia sarothrae																																																					0.00	0.00
																																																					0.00	0.00
																																																					0.00	0.00
																																																				0	0.00	0.00
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	4	8.00	14.81
																																																					0.00	0.00
																																																				0	0.00	0.00
Forbs & Succulents																																																1		1	3	6.00	11.11
Machaeranthera canescens																			1																																0	0.00	0.00
Sphaeralcia coccinea																																																					0.00	0.00
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1		3	6.00	11.11
																																																					0.00	0.00
																																																				0	0.00	0.00
Graminoid																																																				1	2.00	3.70
Aristida longiseta																																		1																		9	18.00	33.33
Bromus tectorum				1		1		1				1													1	1			1	1																		1				0	0.00	0.00
Elymus Salinus																																																				3	6.00	11.11
Hilaris Jamesii			1																					1																			1								0	0.00	0.00
Oryzopsis hymenoides																																																				2	4.00	7.41
Sitanion hystrix															1													1																								5	10.00	18.52
Stipa comata																																									1	1			1	1				1		0	0.00	0.00
Total Graminoid Cover	0	0	1	1	0	1	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	1	1	0	1	1	1	0	0	0	1	0	0	0	0	0	1	1	0	1	1	1	0	1	0	1	0	20	40.00	74.07
																																																					0.00	0.00
Trees																																																				0	0.00	0.00
Juniperus osteosperma																																																				0	0.00	0.00
Pinus edulison																																																				0	0.00	0.00
																																																				0	0.00	0.00
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
																																																					0.00	0.00
Total Vegetation Cover	0	0	1	1	0	1	0	1	0	0	1	1	1	0	1	0	0	0	1	1	0	0	0	1	1	1	0	1	1	1	0	0	0	1	0	0	0	0	0	1	1	1	1	1	1	0	1	1	1	1	27	54.00	100.00
																																																					0.00	
cryptobiotic		1							1	1						1							1	1									1		1	1	1		1						1					12	24.00	
																																																				0.00	
Physical Features																																																				0	0.00	
Litter					1									1			1	1			1						1										1													7	14.00	
Rock																																																				0	0.00	
Bare Ground	1						1																								1	1																				4	8.00	
																																																					0.00	
Total Physical Features	1	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	1	0	0	1	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	11	22.00	
																																																				50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

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Lila Canyon Cover Sheet

Date:07/09/2003 | Area:Ref | Transect:3 | UTM:555888/4364000 | Heading:76 | Coordinates:

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																			0	0.00	0.00
Atriplex canescens																																																			2	4.00	8.33
Atriplex confertifolia												1			1																																				0	0.00	0.00
Artemisia spineusis																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ceratoides lanata																																																			0	0.00	0.00
Ephedra viridis																																					1														1	2.00	4.17
Sarcobatus vermiculatus																																																			0	0.00	0.00
Gutierrezia sarothrae																																																					
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	6.00	12.50
Forbs & Succulent																																																			0	0.00	0.00
Opuntia compressa																																																			0	0.00	0.00
Machaeranthera canescens																																																			0	0.00	0.00
Lygodesmia juncea																									1																										1	2.00	4.17
Sphaeralcia coccinea																																								1		1									2	4.00	8.33
Echinocereus triglochidiatus																																																					
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	3	6.00	12.50
Graminoid																																																			0	0.00	0.00
Aristida longiseta																																																			8	16.00	33.33
Bromus tectorum		1			1	1	1		1					1		1										1																									0	0.00	0.00
Elymus salinus																																																1		1	5	10.00	20.83
Hilaria jamesii	1																	1	1																																0	0.00	0.00
Oryzopsis hymenoides																												1							1									1		1					4	8.00	16.67
Sitanion hystrix																																																			1	2.00	4.17
Stipa comata			1																																																		
Total Graminoid Cover	1	1	1	0	1	1	1	0	1	0	0	0	0	1	0	1	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	18	36.00	75.00
Trees																																																			0	0.00	0.00
Juniperus osteosperma																																																			0	0.00	0.00
Pinus edulison																																																			0	0.00	0.00
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Total Vegetation Cover	1	1	1	0	1	1	1	0	1	0	0	1	0	1	1	1	0	1	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	1	0	1	0	0	1	0	1	24	48.00	100.00
cryptobiotic										1	1												1	1									1	1	1										1				1	9	18.00	
Physical Features																																																			0	0.00	
Litter				1				1									1				1								1	1												1					1				8	16.00	
Rock																																																			0	0.00	
Bare Ground													1								1				1						1	1					1		1	1							1				9	18.00	
Total Physical Features	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	1	1	0	0	1	0	0	0	1	1	1	1	0	0	0	0	1	0	1	1	0	1	0	0	0	0	1	1	0	0	0	17	34.00	
																																																			50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

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MAY 18 2007
Oil, Gas & Mining

Lila Canyon Cover Sheet

Date:07/09/2003 | Area:Ref | Transect:4 | UTM:555858/4364033 | Heading:230 | Coordinates:

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																	1	1																	2	4.00	12.50
Atriplex canescens																																																			0	0.00	0.00
Atriplex confertifolia																																																			0	0.00	0.00
Artemisia spineusis																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ceratoides lanata																																																			0	0.00	0.00
Ephedra viridis																																																			0	0.00	0.00
Sarcobatus vermiculatus																																																			0	0.00	0.00
Gutierrezia sarothrae																																																					
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4.00	12.50
Forbs & Succulents																																				1															1	2.00	6.25
Opuntia compressa																																																			0	0.00	0.00
Machaeranthera canescens																																																			0	0.00	0.00
Lygodesmia juncea																																																			0	0.00	0.00
Sphaeralcia coccinea																																																					
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2.00	6.25
Graminoid																																																			0	0.00	0.00
Aristida longiseta																																																			0	0.00	0.00
Bromus tectorum																																						1								1		1			12	24.00	75.00
Elymus salinus	1					1									1	1		1						1	1	1	1																								0	0.00	0.00
Hilaria jamesii																																																			0	0.00	0.00
Oryzopsis hymenoides																																																			0	0.00	0.00
Sitanion hystrix																																																			0	0.00	0.00
Stipa comata																																																				0.00	0.00
Total Graminoid Cover	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	12	24.00	75.00
Trees																																																		1	1	2.00	6.25
Juniperus osteosperma																																																			0	0.00	0.00
Pinus edulison																																																					
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2.00	6.25
Total Vegetation Cover	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	1	1	1	1	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	1	16	32.00	100.00
cryptobiotic		1	1							1				1			1																				1		1			1		1							9	18.00	
Physical Features																																																					
Litter					1																1												1			1												1		1		6	12.00	
Rock									1		1	1																	1																						4	8.00	
Bare Ground				1			1	1					1							1	1		1	1				1		1	1										1	1		1		1					15	30.00	
Total Physical Features	0	0	0	1	1	0	1	1	1	0	1	1	1	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	1	1	1	1	1	0	0	1	0	0	0	0	1	1	0	1	0	1	0	1	0	1	25	50.00	
																																																			50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

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Div. of Oil, Gas & Mining

Lila Canyon Cover Sheet

Date:07/09/2003 | Area:Ref | Transect:5 | UTM:555833/4363974 | Heading:13 | Coordinates:61/93

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																					
Atriplex canescens																																																			0	0.00	0.00
Atriplex confertifolia					1					1					1																																				3	6.00	15.79
Artemisia spinescens																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ceratoides lanata																																																			0	0.00	0.00
Ephedra viridis																																																			0	0.00	0.00
Sarcobatus vermiculatus																																																			0	0.00	0.00
Gutierrezia sarothrae																																																			0	0.00	0.00
Total Shrubs Cover	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	6.00	15.79
Forbs & Succulents																																																					
Opuntia compressa																	1																																		1	2.00	5.26
Cryptantha flava																									1																										1	2.00	5.26
Machaeranthera canescens																																																			0	0.00	0.00
Lygodesmia juncea																																																			0	0.00	0.00
Sphaeralcia coccinea																																																			0	0.00	0.00
Echinocereus triglochidiatus																																																			0	0.00	0.00
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4.00	10.53
Graminoid																																																					
Aristida longiseta																																																			0	0.00	0.00
Bromus tectorum																																																			0	0.00	0.00
Elymus salinus																																				1		1	1	1	1		1	1							7	14.00	36.84
Hilaria jamesii														1									1																												2	4.00	10.53
Oryzopsis hymenoides																																																			0	0.00	0.00
Sitanion hystrix																																																			0	0.00	0.00
Stipa comata																																																			0	0.00	0.00
Total Graminoid Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	0	1	1	0	0	0	0	0	0	9	18.00	47.37
Trees																																																					
Juniperus osteosperma																										1	1	1																						1	1	5	10.00	26.32
Pinus edulison																																																				0	0.00	0.00
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	5	10.00	26.32
Total Vegetation Cover	0	0	0	0	1	0	0	0	0	1	0	0	0	1	1	0	1	0	0	0	0	0	1	0	1	1	1	1	0	0	0	0	0	0	0	1	0	1	1	1	1	0	1	1	0	0	0	0	1	1	19	38.00	100.00
cryptobiotic						1					1	1									1	1							1	1			1	1														1			10	20.00	
Physical Features																																																					
Litter							1		1							1									1																		1								5	10.00	
Rock																																1			1																2	4.00	
Bare Ground	1	1	1	1				1					1					1	1	1											1						1								1	1		1			14	28.00	
Total Physical Features	1	1	1	1	0	0	1	1	1	0	0	0	1	0	0	1	0	1	1	1	0	0	0	1	0	0	0	0	0	0	1	1	0	0	1	0	1	0	0	0	0	1	0	0	1	1	0	1	0	0	21	42.00	
																																																			50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

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Div. of Oil, Gas & Mining

Lila Canyon Cover Sheet

Date:07/09/2003 | Area:Ref | Transect:6 | UTM:555851/4363985 | Heading:37 | Coordinates:28/80

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																					
Atriplex canescens																																																			0	0.00	0.00
Atriplex confertifolia																	1												1															1	1	1	1				6	12.00	28.57
Artemisia spineusis																																				1			1												2	4.00	9.52
Artemisia tridentata tridentata															1																																				1	2.00	4.76
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ceratoides lanata																																																			0	0.00	0.00
Ephedra viridis																																																			0	0.00	0.00
Sarcobatus vermiculatus																																																			0	0.00	0.00
Gutierrezia sarothrae																						1																													1	2.00	4.76
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	1	1	1	0	0	0	10	20.00	47.62
Forbs & Succulents																																																			0	0.00	0.00
Opuntia compressa																																																			0	0.00	0.00
Cryptantha flava																																																			0	0.00	0.00
Machaeranthera canescens																																																			0	0.00	0.00
Lygodesmia juncea																			1																																1	2.00	4.76
Sphaeralcia coccinea																				1																															1	2.00	4.76
Phacelia crenulata																																																			2	4.00	9.52
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4.00	9.52
Graminoid																																																			0	0.00	0.00
Aristida longiseta																																																			2	4.00	9.52
Bromus tectorum																1																								1											0	0.00	0.00
Elymus salinus																																																			2	4.00	9.52
Hilaria jamesii			1						1																																										1	2.00	4.76
Oryzopsis hymenoides	1																																																		1	2.00	4.76
Sitanion hystrix							1																																												2	4.00	9.52
Stipa comata																														1				1																	1	2.00	4.76
Vulpia octaflora																																																					
Total Graminoid Cover	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	9	18.00	42.86
Trees																																																			0	0.00	0.00
Juniperus osteosperma																																																			0	0.00	0.00
Pinus edulison																																																					0.00
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Total Vegetation Cover	1	0	1	0	0	0	1	0	1	0	0	0	0	0	1	1	1	0	1	1	0	1	0	0	0	0	0	0	1	1	0	0	1	0	0	1	0	0	1	1	0	0	0	1	1	1	1	0	0	1	21	42.00	100.00
cryptobiotic													1										1			1		1				1																	1			6	12.00	
Physical Features																																																					
Litter		1		1		1						1													1			1							1		1				1								1		10	20.00	
Rock																																																				0	0.00	
Bare Ground					1			1		1	1			1				1			1					1						1		1				1				1	1							13	26.00	
Total Physical Features	0	1	0	1	1	1	0	1	0	1	1	1	0	1	0	0	0	1	0	0	1	0	0	1	1	0	1	0	0	0	0	1	0	1	1	0	1	1	0	0	1	1	1	0	0	0	0	0	1	0	23	46.00	
																																																			50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Cow dung is present																																																					

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Div. of Oil, Gas & Mining

Lila Canyon Cover Sheet

Date:07/09/2003 | Area:Ref | Transect:7 | UTM:555843/4363982 | Heading:282 | Coordinates:43/56

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																				0	0.00	0.00
Atriplex canescens																																																				0	0.00	0.00
Atriplex confertifolia																																																				0	0.00	0.00
Artemisia spineusis																																																				0	0.00	0.00
Artemisia tridentata tridentata																																																				0	0.00	0.00
Chrysothamnus nauseosus																																																				0	0.00	0.00
Chrysothamnus viscidiflorus																																																				0	0.00	0.00
Cowania mexicana																																																				0	0.00	0.00
Ceratoides lanata																																																				0	0.00	0.00
Ephedra viridis																																																				0	0.00	0.00
Sarcobatus vermiculatus																																																				0	0.00	0.00
Gutierrezia sarothrae																																																						
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Forbs & Succulents																																																				0	0.00	0.00
Opuntia compressa																																																				0	0.00	0.00
Cryptantha flava																																																				0	0.00	0.00
Machaeranthera canescens																																																				0	0.00	0.00
Lygodesmia juncea																																																				0	0.00	0.00
Sphaeralcia coccinea																																																				0	0.00	0.00
Echinocereus triglochidiatus																																																						
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Graminoid																																																				0	0.00	0.00
Aristida longiseta																																																				0	0.00	0.00
Bromus tectorum																																																				12	24.00	92.31
Elymus salinus														1			1									1		1	1										1			1	1	1	1	1	1				1	2.00	7.69
Hilaria jamesii			1																																																	0	0.00	0.00
Oryzopsis hymenoides																																																				0	0.00	0.00
Sitanion hystrix																																																				0	0.00	0.00
Stipa comata																																																						
Total Graminoid Cover	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	1	1	1	0	0	0	13	26.00	100.00
Trees																																																				0	0.00	0.00
Juniperus osteosperma																																																				0	0.00	0.00
Pinus edulison																																																						
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Total Vegetation Cover	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	1	1	1	0	0	0	13	26.00	100.00
cryptobiotic	1	1				1																	1		1									1	1						1										8	16.00	
Physical Features																																																						
Litter							1														1	1														1															4	8.00	
Rock								1												1																																2	4.00	
Bare Ground				1	1				1	1	1	1	1		1	1		1	1					1			1			1	1	1	1				1	1			1							1	1	1	23	46.00	
Total Physical Features	0	0	0	1	1	0	1	1	1	1	1	1	1	0	1	1	0	1	1	1	1	1	0	1	0	0	1	0	0	1	1	1	1	0	0	1	1	1	0	0	1	0	0	0	0	0	0	1	1	1	29	58.00	
																																																				50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

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Div. of Oil, Gas & Mining

Lila Canyon Cover Sheet

Date:07/09/2003 | Area:Ref | Transect:8 | UTM:555863/4363988 | Heading:248 | Coordinates:43/57

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																			0	0.00	0.00
Atriplex canescens																																																			0	0.00	0.00
Atriplex confertifolia																																																			0	0.00	0.00
Artemisia spinesus																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ceratoides lanata																																																			1	2.00	4.55
Ephedra viridis												1																																							0	0.00	0.00
Sarcobatus vermiculatus																																																			0	0.00	0.00
Gutierrezia sarothrae																																																					
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2.00	4.55
Forbs & Succulents																																																			0	0.00	0.00
Opuntia compressa																																																			1	2.00	4.55
Cryptantha flava																	1																																		0	0.00	0.00
Machaeranthera canescens																																																			0	0.00	0.00
Lygodesmia juncea																																																			9	18.00	40.91
Sphaeralcia coccinea		1							1										1		1					1	1											1					1					1			0	0.00	0.00
Echinocereus triglochidiatus																																																					
Total Forb Cover	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	10	20.00	45.45
Graminoid																																																			0	0.00	0.00
Aristida longiseta																																																			1	2.00	4.55
Bromus tectorum				1																																															4	8.00	18.18
Elymus salinus															1														1				1														1				0	0.00	0.00
Hilaria jamesii																																																			6	12.00	27.27
Oryzopsis hymenoides																			1																	1	1			1	1	1								0	0.00	0.00
Sitanion hystrix																																																			0	0.00	0.00
Stipa comata																																																					
Total Graminoid Cover	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	1	0	0	1	1	1	0	0	0	0	1	0	0	0	11	22.00	50.00
Trees																																																			0	0.00	0.00
Juniperus osteosperma																																																			0	0.00	0.00
Pinus edulison																																																					
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Total Vegetation Cover	0	1	0	1	0	0	0	0	1	0	0	1	0	0	1	0	1	1	1	0	1	0	0	0	0	1	1	0	1	0	0	0	1	0	0	1	1	1	0	1	1	1	1	0	0	0	1	1	0	0	22	44.00	100.00
cryptobiotic	1		1		1	1	1	1								1						1	1	1	1			1			1			1					1						1	1	1					18	36.00	
Physical Features																																																					
Litter																																																			0	0.00	
Rock										1	1									1										1		1			1																6	12.00	
Bare Ground													1	1																																			1	1	4	8.00	
Total Physical Features	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	10	20.00	
																																																			50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

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Div. of Oil, Gas & Mining

Lila Canyon Cover Sheet

Date:07/09/2003 | Area:Ref | Transect:9 | UTM:555847/4364000 | Heading:274 | Coordinates:22/73

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																						
Atriplex canescens																																																					0	0.00	0.00
Atriplex confertifolia						1	1							1	1		1		1																																	6	12.00	33.33
Artemisia spineusis																																																					0	0.00	0.00
Artemisia tridentata tridentata																																																					0	0.00	0.00
Chrysothamnus nauseosus																																																					0	0.00	0.00
Chrysothamnus viscidiflorus																																																					0	0.00	0.00
Cowania mexicana																																																					0	0.00	0.00
Ceratoides lanata																																																					0	0.00	0.00
Ephedra viridis																																																					0	0.00	0.00
Sarcobatus vermiculatus																																																					0	0.00	0.00
Gutierrezia sarothrae																																																							
Total Shrubs Cover	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	12.00	33.33
Forbs & Succulents																																																					0	0.00	0.00
Opuntia compressa																																																					0	0.00	0.00
Cryptantha confertifolia																																																					0	0.00	0.00
Machaeranthera canescens																																																					0	0.00	0.00
Lygodesmia juncea																																																			1	2	4.00	11.11
Sphaeralcis coccinea				1																																														1		1	2.00	5.56
Unknown forb #1																																																							
Total Forb Cover	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3	6.00	16.67
Graminoid																																																					0	0.00	0.00
Aristida																																																					0	0.00	0.00
Bromus tectorum																																							1		1												2	4.00	11.11
Elymus salinus																									1																												2	4.00	11.11
Hilaria jamesii					1																																																0	0.00	0.00
Oryzopsis hymenoides																																																					0	0.00	0.00
Sitanion hystrix																																																					3	6.00	16.67
Stipa comata	1	1								1																																											2	4.00	11.11
Vulpia octaflora								1	1																																														
Total Graminoid Cover	1	1	0	0	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	9	18.00	50.00
Trees																																																					0	0.00	0.00
Juniperus osteosperma																																																					0	0.00	0.00
Pinus edulison																																																						
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Total Vegetation Cover	1	1	0	1	1	1	1	1	1	1	0	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	1	18	36.00	100.00
cryptobiotic																	1					1		1							1		1		1				1				1					1	1			10	20.00	
Physical Features																																																						
Litter			1								1																		1			1		1							1										6	12.00	
Rock																											1																									1	2.00	
Bare Ground												1	1						1		1		1		1			1		1					1	1	1							1	1	1	1				15	30.00	
Total Physical Features	0	0	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0	1	0	1	0	1	0	1	0	1	1	1	1	0	1	0	1	0	1	1	1	0	0	1	0	0	1	1	1	1	0	0	0	0	22	44.00	
																																																				50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

Rabbit pellets present

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Div. of Oil, Gas & Mining

Lila Canyon Cover Sheet

Date:07/09/2003 | Area:Ref | Transect:10 | UTM:555861/4363779 | Heading:16 | Coordinates:

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																					
Atriplex canescens																			1															1																		2	4.00	6.67
Atriplex confertifolia							1									1																																			2	4.00	6.67
Artemisia spineusis																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ceratoides lanata						1																																													1	2.00	3.33
Ephedra viridis																																																			0	0.00	0.00
Sarcobatus vermiculatus																																																			0	0.00	0.00
Gutierrezia sarothrae																																																			0	0.00	0.00
Total Shrubs Cover	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	10.00	16.67
Forbs & Succulents																																																			0	0.00	0.00
Opuntia compressa																																																			0	0.00	0.00
Cryptantha flava																																																			0	0.00	0.00
Machaeranthera canescens																																																			0	0.00	0.00
Lygodesmia juncea																																														1		1				3	6.00	10.00
Sphaeralcia coccinea								1																																											0	0.00	0.00
Sisymbrium altissimum																																																					
Total Forb Cover	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	3	6.00	10.00
Graminoid																																																			0	0.00	0.00
Aristida longiseta																																												1							6	12.00	20.00
Bromus tectorum		1	1	1								1																1																							11	22.00	36.67
Elymus salinus													1	1	1										1		1			1	1					1	1			1		1									0	0.00	0.00
Hilaria jamesii																																													1						1	2.00	3.33
Oryzopsis hymenoides																																															1			1	2	4.00	6.67
Sitanion hystrix																																																			0	0.00	0.00
Stipa comata																																																			2	4.00	6.67
Vulpia octaflora																			1		1																																
Total Graminoid Cover	0	1	1	1	0	0	0	0	0	0	0	1	1	1	1	0	0	1	0	1	0	0	0	0	1	0	1	1	0	1	1	0	0	0	0	1	1	0	0	1	0	1	0	1	1	0	1	0	0	1	22	44.00	73.33
Trees																																																			0	0.00	0.00
Juniperus osteosperma																																																			0	0.00	0.00
Pinus edulison																																																					
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Total Vegetation Cover	0	1	1	1	0	1	1	1	0	0	0	1	1	1	1	1	0	1	1	1	0	0	0	0	1	0	1	1	0	1	1	0	0	1	0	1	1	0	0	1	0	1	0	1	1	1	1	1	0	1	30	60.00	100.00
cryptobiotic	1				1				1																																										3	6.00	
Physical Features																																																					
Litter											1							1											1			1				1						1							1		2	4.00	
Rock																							1	1																												6	12.00	
Bare Ground										1												1			1		1						1					1	1				1								8	16.00	
Total Physical Features	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	1	1	1	1	0	1	0	0	1	0	0	1	1	0	1	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	16	32.00	
																																																				0.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	50	100.00	
Prickly qlia present																																																					

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Div. of Oil, Gas & Mining

Lila Canyon Cover Sheet

Date:07/09/2003 | Area:Ref | Transect:11 | UTM:555876/4363998 | Heading:304 | Coordinates:

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																						
Atriplex canescens																																																				0	0.00	0.00
Atriplex confertifolia																																																				0	0.00	0.00
Artemisia spineusis																																																				0	0.00	0.00
Artemisia tridentata tridentata																																																				0	0.00	0.00
Chrysothamnus nauseosus																																																				0	0.00	0.00
Chrysothamnus viscidiflorus																																																				0	0.00	0.00
Cowania mexicana																																																				0	0.00	0.00
Ceratoides lanata																																																				0	0.00	0.00
Ephedra viridis																																																				0	0.00	0.00
Sarcobatus vermiculatus																																																				0	0.00	0.00
Gutierrezia sarothrae																																																				0	0.00	0.00
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Forbs & Succulents																																																						
Opuntia compressa																																																				0	0.00	0.00
Cryptantha flava																																																				0	0.00	0.00
Globe Mallow																																																				0	0.00	0.00
Machaeranthera canescens																																																				0	0.00	0.00
Lygodesmia juncea																																																				0	0.00	0.00
Sphaeralcia coccinea																																																				0	0.00	0.00
Sisymbrium altissimum																																																				0	0.00	0.00
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Graminoid																																																						
Aristida longiseta																																																				0	0.00	0.00
Bromus tectorum																																																				0	0.00	0.00
Elymus salinus		1	1		1	1		1				1							1	1					1	1																								1	11	22.00	50.00
Hilaria jamesii																																																				0	0.00	0.00
Oryzopsis hymenoides																																																				0	0.00	0.00
Sitanion hystrix																																																				0	0.00	0.00
Stipa comata																																																				0	0.00	0.00
Total Graminoid Cover	0	1	1	0	1	1	0	1	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	11	22.00	50.00
Trees																																																						
Juniperus osteosperma																															1	1	1	1	1	1	1	1						1	1						10	20.00	45.45
Pinus edulison																																														1						1	2.00	4.55
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	0	0	0	0	11	22.00	50.00
Total Vegetation Cover	0	1	1	0	1	1	0	1	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	0	0	0	1	22	44.00	100.00
cryptobiotic	1								1										1			1							1	1																						6	12.00	
Physical Features																																																						
Litter																																															1					1	2.00	
Rock															1	1	1	1												1														1							6	12.00	
Bare Ground				1			1			1	1		1									1	1	1			1												1	1	1	1						1	1	15	30.00	
Total Physical Features	0	0	0	1	0	0	1	0	0	1	1	0	1	1	1	1	1	1	0	0	0	0	1	1	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	1	1	1	0	22	44.00	
																																																				50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

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Div. of Oil, Gas & Mining

Lila Canyon Cover Sheet

Date:07/09/2003 | Area:Ref | Transect:12 | UTM:555859/4363987 | Heading:112 | Coordinates:

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																						
Atriplex canescens																																																				0	0.00	0.00
Atriplex confertifolia						1																																														1	2.00	5.26
Artemisia spinescens																																																				0	0.00	0.00
Artemisia tridentata tridentata																																																				0	0.00	0.00
Chrysothamnus nauseosus																																																				0	0.00	0.00
Chrysothamnus viscidiflorus																																																				0	0.00	0.00
Cowania mexicana																																																				0	0.00	0.00
Ceratoides lanata																																																				0	0.00	0.00
Ephedra viridis																																																				0	0.00	0.00
Sarcobatus vermiculatus																																																				0	0.00	0.00
Gutierrezia sarothrae																																																				0	0.00	0.00
Chrysothamnus albidus								1																																												1	2.00	5.26
Total Shrubs Cover	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4.00	10.53
Forbs & Succulents																																																						
Opuntia compressa																																																				0	0.00	0.00
Cryptantha flava																																																				0	0.00	0.00
Machaeranthera canescens																																																				0	0.00	0.00
Lygodesmia juncea																																																				0	0.00	0.00
Sphaeralcia coccinea									1				1																																							2	4.00	10.53
Phacelia crenulata																	1																			1																2	4.00	10.53
Total Forb Cover	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	8.00	21.05
Graminoid																																																						
Aristida longiseta																								1																												1	2.00	5.26
Bromus tectorum																										1		1																								2	4.00	10.53
Elymus salinus																													1																				1	2	4.00	10.53
Hilaria jamesii												1																					1																		2	4.00	10.53
Oryzopsis hymenoides											1																																				1				2	4.00	10.53
Sitanion hystrix		1																																					1												2	4.00	10.53
Stipa comata																																																				0	0.00	0.00
Vulpia octoflora																							1								1																				2	4.00	10.53
Total Graminoid Cover	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1	1	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	0	13	26.00	68.42
Trees																																																						
Juniperus osteosperma																																																				0	0.00	0.00
Pinus edulson																																																				0	0.00	0.00
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Total Vegetation Cover	0	1	0	0	0	1	0	1	1	0	1	1	1	0	0	0	1	0	0	0	0	0	1	1	0	1	0	1	1	0	1	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	1	0	19	38.00	100.00
cryptobiotic										1				1		1				1		1			1					1					1				1								1			10	20.00	
Physical Features																																																						
Litter	1		1	1	1		1												1													1		1			1				1	1	1		1	1				1	15	30.00	
Rock																																																				0	0.00	
Bare Ground															1			1			1						1													1				1						6	12.00	
Total Physical Features	1	0	1	1	1	0	1	0	0	0	0	0	0	0	1	0	0	1	1	0	1	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	1	0	0	1	1	1	1	1	1	1	0	0	0	1	21	42.00	
																																																				50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

INCORPORATED

MAY 1 8 2007

Environmental Planning

Lila Canyon Cover Sheet

Date:07/09/2003 | Area:Ref | Transect:13 | UTM:555880/4364004 | Heading:347 | Coordinates:

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																					
Atriplex canescens														1	1						1	1																														4	8.00	13.79
Atriplex confertifolia																																																				0	0.00	0.00
Artemisia spineusis																																																				0	0.00	0.00
Artemisia tridentata tridentata																																																				0	0.00	0.00
Chrysothamnus nauseosus																																																				0	0.00	0.00
Chrysothamnus viscidiflorus																																																				0	0.00	0.00
Cowania mexicana																																																				0	0.00	0.00
Cerstoides lanata																																																				0	0.00	0.00
Ephedra viridis																																																				0	0.00	0.00
Sarcobatus vermiculatus																																																				0	0.00	0.00
Gutierrezia sarothrae																																																				0	0.00	0.00
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	8.00	13.79
Forbs & Succulents																																																				0	0.00	0.00
Opuntia compressa																																																				0	0.00	0.00
Cryptantha confertifolia																																																				0	0.00	0.00
Machaeranthera canescens																																																				0	0.00	0.00
Lygodesmia juncea																																																				0	0.00	0.00
Sphaeralcia coccinea		1														1																																				2	4.00	6.90
Sisymbrium altissimum																																																				0	0.00	0.00
Total Forb Cover	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4.00	6.90
Graminoid																																																				0	0.00	0.00
Aristida																																																				11	22.00	37.93
Bromus tectorum	1					1	1	1				1	1						1				1				1	1		1																						6	12.00	20.69
Elymus salinus																																	1	1	1	1		1	1													2	4.00	6.90
Hilaria jamesii				1						1																																											0	0.00	0.00
Oryzopsis hymenoides																																																				0	0.00	0.00
Sitanion hystrix																																																				0	0.00	0.00
Stipa comata																																																				1	2.00	3.45
Vulpia octoflora																									1																												
Total Graminoid Cover	1	0	0	1	0	1	1	1	0	1	0	1	1	0	0	0	0	0	1	0	0	0	1	0	1	0	1	1	0	1	0	0	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	20	40.00	68.97
Trees																																																				3	6.00	10.34
Juniperus osteosperma																																																				0	0.00	0.00
Pinus edulison																																																						
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	3	6.00	10.34
Total Vegetation Cover	1	1	0	1	0	1	1	1	0	1	0	1	1	1	1	1	0	0	1	0	1	1	1	0	1	0	1	1	0	1	0	0	1	1	1	1	0	1	1	0	0	0	0	0	1	1	1	0	0	0	29	58.00	100.00
cryptobiotic																																					1					1							1		3	6.00	
Physical Features																																																						
Litter			1						1		1						1							1																	1										8	12.00	
Rock																																																				0	0.00	
Bare Ground					1													1		1						1			1		1	1								1			1	1				1		1	12	24.00	
Total Physical Features	0	0	1	0	1	0	0	0	1	0	1	0	0	0	0	0	1	1	0	1	0	0	0	1	0	1	0	0	1	0	1	1	0	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	1	0	18	36.00	
																																																				50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Skeleton weed																																																					

UNCORRECTED

MAY 13 2007

Div. of Oil, Gas & Mining

Lila Canyon Cover Sheet

Date:07/09/2003 | Area:Ref | Transect:14 | UTM:555831/4363978 | Heading:42 | Coordinates:9/96

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																						
Atriplex canescens																																																			0	0.00	0.00
Atriplex confertifolia																										1																									1	2.00	3.23
Artemisia spinescens																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ceratoides lanata																																																			0	0.00	0.00
Ephedra viridis																																																			0	0.00	0.00
Sarcobatus vermiculatus																																																			0	0.00	0.00
Gutierrezia sarothrae																																																			0	0.00	0.00
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2.00	3.23
Forbs & Succulents																																																			0	0.00	0.00
Opuntia compressa																																																			1	2.00	3.23
Cryptantha flava																1																																			8	16.00	25.81
Sphaeralcea	1		1															1										1				1	1				1											1			0	0.00	0.00
Machaeranthera canescens																																																			3	6.00	9.68
Lygodesmia juncea		1			1			1																																													
Total Forb Cover	1	1	1	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	12	24.00	38.71
Graminoid																																																					
Aristida longiseta																																																			0	0.00	0.00
Bromus tectorum										1	1	1		1	1					1			1							1																					8	16.00	25.81
Elymus salinus																																																			0	0.00	0.00
Hilaria jamesii																									1																								1		2	4.00	6.45
Oryzopsis hymenoides																															1																				1	2.00	3.23
Sitanion hystrix																																																			0	0.00	0.00
Stipa comata						1	1						1																															1		1					5	10.00	16.13
Vulpia octaflora				1																									1																							2	4.00	6.45
Total Graminoid Cover	0	0	0	1	0	1	1	0	0	1	1	1	1	1	1	0	0	0	0	1	0	0	1	1	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	18	36.00	58.06
Trees																																																					
Juniperus osteosperma																																																			0	0.00	0.00
Pinus edulison																																																			0	0.00	0.00
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Total Vegetation Cover	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	0	1	0	0	1	1	0	1	0	1	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0	1	0	1	0	1	1	0	31	62.00	100.00
cryptobiotic																	1								1		1											1		1	1						1				7	14.00	
Physical Features																																																					
Litter									1										1		1	1												1	1	1						1	1		1						10	20.00	
Rock																																																			0	0.00	
Bare Ground																																							1											1	2	4.00	
Total Physical Features	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1	0	0	1	1	0	1	0	0	0	0	1	12	24.00	
																																																			50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

INCORPORATED

MAY 16 2007

Mining

Lila Canyon Cover Sheet

Date:07/09/2003 | Area:Ref | Transect:15 | UTM:555827/4364001 | Heading:131 | Coordinates:48/82

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																					
Atriplex canescens																																																			0	0.00	0.00
Atriplex confertifolia														1								1							1	1																				1	5	10.00	23.81
Artemisia spinescens																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ceratoides lanata																																																			0	0.00	0.00
Ephedra viridis						1																																													1	2.00	4.76
Sarcobatus vermiculatus																																																			0	0.00	0.00
Gutierrezia sarothrae																									1																										1	2.00	4.76
Total Shrubs Cover	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7	14.00	33.33
Forbs & Succulents																																																					
Opuntia compressa																																																			0	0.00	0.00
Cryptantha flava																																							1		1										2	4.00	9.52
Machaeranthera canescens																																																			0	0.00	0.00
Lygodesmia juncea																																																			0	0.00	0.00
Sphaeralcia coccinea																											1																	1						2	4.00	9.52
Sisymbrium altissimum																																																			0	0.00	0.00
Phacelia crenulata																																															1				1	2.00	4.76
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	1	0	0	0	5	10.00	23.81
Graminoid																																																					
Aristida longiseta																																											1								1	2.00	4.76
Bromus tectorum																																																			0	0.00	0.00
Elymus salinus																																																			0	0.00	0.00
Hilaria jamesii								1			1																	1																				1			4	8.00	19.05
Oryzopsis hymenoides																																																			0	0.00	0.00
Sitanion hystrix																																																			0	0.00	0.00
Stipa comata															1																		1				1														3	6.00	14.29
																																																				0	0.00	0.00
Total Graminoid Cover	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	0	0	8	16.00	38.10
																																																				0.00	0.00
Trees																																																					
Juniperus osteosperma			1																																																1	2.00	4.76
Pinus edulison																																																			0	0.00	0.00
Total Tree Cover	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2.00	4.76
Total Vegetation Cover	0	0	1	0	0	1	0	1	0	0	1	0	0	1	1	0	0	0	0	0	0	1	0	0	1	0	1	1	1	1	0	0	1	0	0	0	1	0	1	0	1	0	1	1	0	0	1	1	0	1	21	42.00	100.00
cryptobiotic		1								1										1											1									1											5	10.00	
Physical Features																																																					
Litter												1				1		1						1								1		1	1			1							1				1		10	20.00	
Rock					1																																														1	2.00	
Bare Ground	1			1			1		1				1				1		1		1		1			1										1						1					1				13	26.00	
Total Physical Features	1	0	0	1	1	0	1	0	1	0	0	1	1	0	0	1	1	1	1	0	1	0	1	1	0	1	0	0	0	0	0	1	0	1	1	1	0	1	0	0	0	1	0	0	1	1	0	0	1	0	24	48.00	
																																																				50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

INCORPORATED

MAY 18 2007

Div. of Oil, Gas & Mining

Lila Canyon Cover Sheet

Date:07/09/2003 | Area:Ref | Transect:16 | UTM:555904/4363980 | Heading:314

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																						
Atriplex canescens																																																			0	0.00	0.00
Atriplex confertifolia																																															1	1	1	1	4	8.00	13.33
Artemisia spinescens																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ceratoides lanata																																																			0	0.00	0.00
Ephedra viridis																																																			0	0.00	0.00
Sarcobatus vermiculatus																																																			0	0.00	0.00
Gutierrezia sarothrae																																												1	1	1					3	6.00	10.00
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	7	14.00	23.33
Forbs & Succulents																																																					
Opuntia compressa																																																			0	0.00	0.00
Cryptantha flava																																																			0	0.00	0.00
Machaeranthera canescens																																																			0	0.00	0.00
Lygodesmia juncea																																																			0	0.00	0.00
Sphaeralcia coccinea																																																			0	0.00	0.00
Sisymbrium altissimum																																																			0	0.00	0.00
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Graminoid																																																					
Aristida longiseta																																																			0	0.00	0.00
Bromus tectorum																																																			0	0.00	0.00
Elymus salinus																																					1	1	1	1	1	1	1								7	14.00	23.33
Hilaria jamesii																													1	1	1	1	1	1	1	1															8	16.00	26.67
Oryzopsis hymenoides																												1																							1	2.00	3.33
Sitanion hystrix																									1	1	1																								3	6.00	10.00
Stipa comata																							1	1																											2	4.00	6.67
Vulpia octaflora																					1	1																													2	4.00	6.67
Total Graminoid Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	23	46.00	76.67
																																																					0.00	0.00
Trees																																																					
Juniperus osteosperma																																																			0	0.00	0.00
Pinus edulison																																																			0	0.00	0.00
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Total Vegetation Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	30	60.00	100.00
cryptobiotic	1	1	1	1	1																																														5	10.00	
Physical Features																																																					
Litter																			1	1																															2	4.00	
Rock																																																			0	0.00	
Bare Ground						1	1	1	1	1	1	1	1	1	1	1	1	1	1																														13	26.00	
Total Physical Features	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	30.00	
																																																			50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

INCORPORATED

MAY 1 8 2007

Consulting

Lila Canyon Cover Sheet

Date:07/09/2003 | Area:Ref | Transect:17 | UTM:555904/4363980 | Heading:314

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																	1	1	2	4.00	6.25
Atriplex canescens																																													1			1			3	6.00	9.38
Atriplex confertifolia	1																																																		0	0.00	0.00
Artemisia spinescens																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ceratoides lanata																																																			0	0.00	0.00
Ephedra viridis																																																			0	0.00	0.00
Sarcobatus vermiculatus																																																			0	0.00	0.00
Gutierrezia sarothrae																																																			0	0.00	0.00
Total Shrubs Cover	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	5	10.00	15.63
Forbs & Succulents																																																			0	0.00	0.00
Opuntia compressa																																																			0	0.00	0.00
Cryptantha flava																																																			0	0.00	0.00
Machaeranthera canescens																																																			0	0.00	0.00
Lygodesmia juncea																																																			0	0.00	0.00
Sphaeralcia coccinea																																																			0	0.00	0.00
Sisymbrium altissimum																																																			**Total Forb Cover**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Graminoid																																																			0	0.00	0.00
Aristida longiseta																																														1	1					2	4.00	6.25
Bromus tectorum																																	1	1	1	1	1	1	1	1	1	1	1	1							12	24.00	37.50
Elymus elinus																												1	1	1	1	1																			5	10.00	15.63
Hilaria jamesii																										1	1																								2	4.00	6.25
Oryzopsis hymenoides																									1																										1	2.00	3.13
Sitanion hystrix																								1																											1	2.00	3.13
Stipa comata																				1	1	1	1																												4	8.00	12.50
Vulpia octoflora																																																						
Total Graminoid Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	27	54.00	84.38
																																																				0.00	0.00
Trees																																																			0	0.00	0.00
Juniperus osteosperma																																																			0	0.00	0.00
Pinus edulisen																																																					
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Total Vegetation Cover	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	32	64.00	100.00
cryptobiotic									1	1	1	1	1																																						5	10.00	
Physical Features																																																					
Litter																	1	1	1																																3	6.00	
Rock															1	1	1																																		3	6.00	
Bare Ground		1	1	1	1	1	1	1	1																																									7	14.00	
Total Physical Features	0	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	26.00	
																																																			50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

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Div. of Oil, Gas & Mining

Lila Canyon Cover Sheet

Date:07/09/2003 | Area:Ref | Transect:18 | UTM:555899/4364021 | Heading:267

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																						
Atriplex canescens					1																																														1	2.00	3.13
Atriplex confertifolia												1																																							1	2.00	3.13
Artemisia spinescens																																																				0	0.00	0.00
Artemisia tridentata tridentata																																																				0	0.00	0.00
Chrysothamnus nauseosus																																																				0	0.00	0.00
Chrysothamnus viscidiflorus																																																				0	0.00	0.00
Cowania mexicana																																																				0	0.00	0.00
Ceratoides lanata																																																				0	0.00	0.00
Ephedra viridis																																																				0	0.00	0.00
Sarcobatus vermiculatus																											1																1								2	4.00	6.25
Gutierrezia sarothrae																																																						
Total Shrubs Cover	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	4	8.00	12.50
Forbs & Succulents																																																				0	0.00	0.00
Opuntia compressa																																																				0	0.00	0.00
Cryptantha flava																																																				0	0.00	0.00
Machaeranthera canescens																																																				0	0.00	0.00
Lygodesmia juncea																																																				0	0.00	0.00
Sphaeralcia coccinea																																																						
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Graminoid																																																						
Aristida longiseta																																																				0	0.00	0.00
Bromus tectorum		1	1																																																	2	4.00	6.25
Elymus salinus	1			1																								1	1				1	1	1	1	1	1				1		1	1					1	14	28.00	43.75
Hilaria jamesii										1	1		1	1					1	1					1	1																										8	16.00	25.00
Oryzopsis hymenoides																																																				0	0.00	0.00
Sitanion hystrix																						1																														1	2.00	3.13
Stipa comata																																																1	1			2	4.00	6.25
Vulpia octoflora																					1																															1	2.00	3.13
Total Graminoid Cover	1	1	1	1	0	0	0	0	0	1	1	0	1	1	0	0	0	0	1	1	1	1	0	0	1	1	0	1	1	0	0	0	1	1	1	1	1	1	0	0	0	1	0	1	1	0	0	1	1	1	28	56.00	87.50
																																																					0.00	0.00
Trees																																																				0	0.00	0.00
Juniperus osteosperma																																																				0	0.00	0.00
Pinus edulison																																																						
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Total Vegetation Cover	1	1	1	1	1	0	0	0	0	1	1	1	1	1	0	0	0	0	1	1	1	1	0	0	1	1	1	1	1	0	0	0	1	1	1	1	1	1	0	0	0	1	1	1	1	0	0	1	1	1	32	64.00	100.00
cryptobiotic																1								1																	1										3	6.00	
Physical Features																																																						
Litter									1																																											1	2.00	
Rock																																																				0	0.00	
Bare Ground						1	1	1							1		1	1						1						1	1	1							1	1						1	1				14	28.00	
Total Physical Features	0	0	0	0	0	1	1	1	1	0	0	0	0	0	1	0	1	1	0	0	0	0	0	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	15	30.00	
																																																				50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Ephedra																																																					

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Div. of Oil, Gas & Mining

Lila Canyon Cover Sheet

Date:07/09/2003 | Area:Ref | Transect:19 | UTM:555840/4363992 | Heading:93

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																					
Atriplex canescens																																																			0	0.00	0.00
Atriplex confertifolia				1																							1				1																				3	6.00	10.34
Artemisia spinescens																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Cercocarpus ledifolius																																																			0	0.00	0.00
Ephedra viridis																																																			0	0.00	0.00
Sarcobatus vermiculatus																																												1							2	4.00	6.90
Gutierrezia sarothrae															1																																						
Total Shrubs Cover	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	5	10.00	17.24
Forbs & Succulents																																																			1	2.00	3.45
Opuntia compressa																		1																																	0	0.00	0.00
Cryptantha flava																																																			0	0.00	0.00
Machaeranthera canescens																																																			0	0.00	0.00
Lygodesmia juncea																																																		1	1	2.00	3.45
Sphaeralcia coccinea																																																			0	0.00	0.00
Sisymbrium altissimum																																																					
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	4.00	6.90
Graminoid																																																			0	0.00	0.00
Aristida longiseta																																					1	1													2	4.00	6.90
Bouteloua gracilis																																									1	1									6	12.00	20.69
Bromus tectorum			1							1	1															1																									1	2.00	3.45
Elymus salinus																																1																			4	8.00	13.79
Hilaria jamesii		1																										1	1	1																					1	2.00	3.45
Oryzopsis hymenoides																																		1																	2	4.00	6.90
Sitanion hystrix																					1																						1							2	4.00	6.90
Stipa comata	1																								1																										4	8.00	13.79
Vulpia octoflora																1	1		1	1																																	
Total Graminoid Cover	1	1	1	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	1	1	1	0	0	1	0	1	0	1	1	1	0	1	0	1	0	0	1	1	0	0	1	1	1	0	0	0	0	0	0	0	22	44.00	75.86
																																																				0.00	0.00
Trees																																																			0	0.00	0.00
Juniperus osteosperma																																																			0	0.00	0.00
Pinus edulisen																																																					
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Total Vegetation Cover	1	1	1	1	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1	1	1	0	0	1	0	1	1	1	1	1	1	1	0	1	0	0	1	1	0	0	1	1	1	1	0	0	0	0	0	1	29	58.00	100.00
cryptobiotic															1																																		1		2	4.00	
Physical Features																																																					
Litter					1																							1																	1					3	6.00	
Rock									1																																										1	2.00	
Bare Ground						1	1	1				1	1										1	1		1								1		1	1				1					1	1		1		15	30.00	
Total Physical Features	0	0	0	0	1	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	1	0	1	1	0	0	1	1	0	0	0	0	1	1	1	1	0	0	19	38.00	
																																																			50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

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Div. of Oil, Gas & Mining

Lila Canyon Cover Sheet

Date:07/09/2003 | Area:Ref | Transect:20 | UTM:555904/4363980 | Heading:314

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																	1	1	2	4.00	6.25
Atriplex canescens																																													1			1			3	6.00	9.38
Atriplex confertifolia	1																																																		0	0.00	0.00
Artemisia spinescens																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ceratoides lanata																																																			0	0.00	0.00
Ephedra viridis																																																			0	0.00	0.00
Sarcobatus vermiculatus																																																			0	0.00	0.00
Gutierrezia sarothrae																																																			0	0.00	0.00
Total Shrubs Cover	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	5	10.00	15.63
Forbs & Succulents																																																			0	0.00	0.00
Opuntia compressa																																																			0	0.00	0.00
Cryptantha flava																																																			0	0.00	0.00
Machaeranthera canescens																																																			0	0.00	0.00
Lygodesmia juncea																																																			0	0.00	0.00
Sphaeralcia coccinea																																																			0	0.00	0.00
Sisymbrium altissimum																																																			0	0.00	0.00
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Graminoid																																																			0	0.00	0.00
Aristida longiseta																																														1	1					2	4.00	6.25
Bromus tectorum																																	1	1	1	1	1	1	1	1	1	1	1	1							12	24.00	37.50
Elymus salinus																												1	1	1	1	1																			5	10.00	15.63
Hilaria jamesii																										1	1																								2	4.00	6.25
Oryzopsis hymenoides																									1																										1	2.00	3.13
Sitanion hystrix																								1																											1	2.00	3.13
Stipa comata																				1	1	1	1																												4	8.00	12.50
Vulpia octoflora																																																							
Total Graminoid Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	27	54.00	84.38
																																																					0.00	0.00
Trees																																																			0	0.00	0.00
Juniperus osteosperma																																																			0	0.00	0.00
Pinus edulison																																																						
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Total Vegetation Cover	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	32	64.00	100.00
cryptobiotic									1	1	1	1	1																																						5	10.00	
Physical Features																																																						
Litter																		1	1	1																															3	6.00	
Rock															1	1	1																																		3	6.00	
Bare Ground		1	1	1	1	1	1	1	1																																									7	14.00	
Total Physical Features	0	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	26.00	
																																																				50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

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Disturbance Site Cover Type Summary

Cover Type	Transect #														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Shrubs	4	0	22	2	4	2	6	2	2	2	12	12	8	10	0
Forbs	2	2	0	8	4	0	2	2	2	4	2	0	4	4	42
Grasses	58	52	60	68	66	40	42	40	46	54	48	34	44	28	0
Trees	0	8	0	0	0	0	4	4	0	4	0	0	0	4	50
Total Vegetation	64	62	82	78	74	42	54	48	50	64	62	46	56	46	10
Cryptobiotic	6	12	2	2	8	10	0	8	8	4	6	8	6	8	40
Physical Features	30	26	16	20	18	48	4	44	42	32	32	46	38	46	

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Cover Type	Transect #															Site Ave.	Relative Veg. Cover	Std. Dev.
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30			
Shrubs	4	6	8	6	8	0	0	4	0	6	2	0	4	2	4	5.00	11.00	4.72
Forbs	2	0	0	0	4	4	2	0	0	2	12	0	0	0	2	1.93	4.00	1.96
Grasses	18	2	20	16	4	4	8	10	8	14	28	14	4	8	8	29.633	65.00	21.06
Trees	10	8	16	10	12	20	20	14	22	22	14	12	10	20	32	8.87	20.00	8.83
Total Vegetation	34	16	44	32	28	28	30	28	30	44	48	26	18	30	46	45.13	100.00	17.26
Cryptobiotic	12	0	6	4	8	10	12	14	4	8	4	16	12	8	0	7.27		4.16
Physical Features	54	60	50	64	64	54	58	58	66	48	48	58	70	62	54	47.49		14.68

Lila Canyon Species Cover Summary
Disturbance Area

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		Total	Percent C	Relative Vegetati
Shrubs																																		
Atriplex canescens			6		1						2		2			1				1	2					1						16	1.07	2.36
Atriplex confertifolia			1							1	2	1		3														1				9	0.60	1.33
Artemisia tridentata tridentata																										1				1		2	0.13	0.30
Chrysothamnus nauseosus															1																	1	0.07	0.15
Ceratoides lanata			2			1	1	1			1	1																				7	0.47	1.03
Ephedra																					1											1	0.07	0.15
Sarcobatus vermiculatus	2														3																	5	0.33	0.74
Gutierrezia sarothrae			2	1	1		2		1		1	4	2	2		1		2					1			2	2		4	2		30	2.00	4.43
Leptodactylon pungens																	1						1					2				4	0.27	0.59
Total Shrubs Cover	2	0	11	1	2	1	3	1	1	1	6	6	4	5	4	2	1	2	0	1	3	0	2	0	0	4	2	3	4	3	0	75	5.00	11.08
Forbs & Succulents																																		
Cryptantha flava																				1												1	0.07	0.15
Plantago patagonica	1																															1	0.07	0.15
Opuntia compressa		1		1	1		1	1								1				2						1	1					10	0.67	1.48
Sphaeralcia coccinea				3	1				1	1	1		2	1																		10	0.67	1.48
Echinocereus triglochidiatus										1											1											2	0.13	0.30
Lygodesmia juncea														1																		1	0.07	0.15
Euphorbia fendleri																								1	2	1						4	0.27	0.59
Total Forb Cover	1	1	0	4	2	0	1	1	1	2	1	0	2	2	0	1	0	0	0	3	1	0	0	1	2	2	1	0	0	0	0	29	1.93	4.28
Grass																																		
Aristida longiseta														1																		1	0.07	0.15
Boutelou gracilis										3				1																		4	0.27	0.59
Bromus tectorum	6	5	15	14	10	10	5	8	14	11	12	5	12	6	3	1													2			139	9.27	20.53
Elymus salinus	18	18	4	6	13	1		8		8		3	1	2	13	2	1		5	9	6	2	1	2	1	2	6	5	4			141	9.40	20.83
Hilaria jamesii	2	1	8	8	3	5	10	3	6	3	7	5	5	3	4		1	2	1	1		2	3	1	1		3	1	1			90	6.00	13.29
Oryzopsis hymenoides	1		1	1	2	1	1		2		5	1	2	1						1												19	1.27	2.81
Sitanion hystrix				1		2			1			1																				5	0.33	0.74
Stipa comata	1		1		5	1	5	1		1						1			1	2			1					2		1		23	1.53	3.40
Sporabolus cryptandrus			1	3						1			2																			7	0.47	1.03
Vulpia octaflora	1	2		1											1					1	1			1					3			11	0.73	1.62
Total Grass Cover	29	26	30	34	33	20	21	20	23	27	24	15	22	14	21	4	2	2	7	14	7	4	5	4	2	2	9	8	10	1	0	440	29.33	64.99
Trees																																		
Juniper		2						2		2				2		13	10	5	6	6	11	9	7	7	10	6	5	1	8	3		115	7.67	16.99
Pinon		2					2									3	0			1		2		3				4		1		18	1.20	2.66
Total Tree Cover	0	4	0	0	0	0	2	2	0	2	0	0	0	2	0	16	10	5	6	7	11	11	7	10	10	6	5	5	8	4	0	133	8.87	19.65
Total Vegetation Cover	32	31	41	39	37	21	27	24	25	32	31	21	28	23	25	23	13	9	13	25	22	15	14	15	14	14	17	16	22	8	0	677	45.13	100.00
Criptobiotic	3	6	1	1	4	6		4	4	2	3	4	3	4	5		4	6	8	2	4	2	7	6	5	4	6	2	3			109	7.27	
Physical Features																																		
Litter	3	1	1	1	1	0	3	1	3	2	3		1	2	1	0	2	1	1		2	0	2	4	1	1	3	2	2	4		48	3.20	
Rock	5	5	5	7	2	6	5	12	3	6	1	3	2	11	9	12	13	13	7	6	7	6	10	9	3	6	3	11	7	8		203	13.53	
Bare Ground	7	7	2	2	6	18	15	9	15	8	12	20	16	10	10	15	16	21	21	17	15	27	17	16	27	25	21	19	16	30		460	30.73	
Total Physical Features	15	13	8	10	9	24	23	22	21	16	16	23	19	23	20	27	31	35	29	23	24	33	29	29	31	32	27	32	25	42	0	711	47.49	
	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	1500	100	

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Div. of Oil, Gas & Mining

Lila Canyon Cover Tally Sheet

Date:7/15/03 | Disturbance Site | Transect:1 | UTM:0556121/4364405 | Heading:48

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																					
Atriplex canescens																																																			0	0.00	0.00
Atriplex confertifolia																																																			0	0.00	0.00
Artemisia nova																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ceratoides lanata																																																			0	0.00	0.00
Ephedra viridis																																																			0	0.00	0.00
Sarcobatus vermiculatus																																	1	1																	2	4.00	6.25
Gutierrezia sarothrae																																																			2	4.00	6.25
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4.00	6.25
Forbs & Succulents																																																					
Machaeranthera canescens																																																			0	0.00	0.00
Plantago patagonica																																										1									1	2.00	3.13
Penstemon palmeri																																																			0	0.00	0.00
Opuntia compressa																																																			0	0.00	0.00
Sphaeralcia coccinea																																																			0	0.00	0.00
Echinocereus triglochidiatus																																																			0	0.00	0.00
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	2.00	3.13
Grass																																																					
Agropyron smithii																																																			0	0.00	0.00
Agropyron spicatum																																																			0	0.00	0.00
Agropyron cristatum																																																			0	0.00	0.00
Agropyron trachycaulum																																																			0	0.00	0.00
Aristida longiseta																																																			0	0.00	0.00
Boutelou gracilis																																																			0	0.00	0.00
Bromus tectorum											1	1		1	1											1									1															6	12.00	18.75
Elymus salinus		1	1		1		1	1		1												1	1	1	1			1	1								1	1	1				1				1		1	18	36.00	56.25
Elymus cinereus																																																			0	0.00	0.00
Elymus giganteous																																																			0	0.00	0.00
Hilaria jamesii																	1															1																			2	4.00	6.25
Oryzopsis hymenoides																																																	1		1	2.00	3.13
Sitanion hystrix																																																			0	0.00	0.00
Stipa comata																																									1										1	2.00	3.13
Sporabolus cryptandrus																																																			0	0.00	0.00
Vulpia octoflora																																				1															1	2.00	3.13
Total Grass Cover	0	1	1	0	1	0	1	1	0	1	1	1	0	1	1	0	1	0	0	0	0	1	1	1	1	1	0	1	1	0	0	1	0	0	1	1	1	1	1	0	1	0	1	0	0	0	0	1	1	1	29	58.00	90.63
Trees																																																					
Juniperus osteosperma																																																			0	0.00	0.00
Pinus edulis																																																			0	0.00	0.00
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Total Vegetation Cover	0	1	1	0	1	0	1	1	0	1	1	1	0	1	1	0	1	0	0	0	0	1	1	1	1	1	0	1	1	0	0	1	1	1	1	1	1	1	1	0	1	1	1	0	0	0	0	1	1	1	32	64.00	100.00
cryptobiotic																																													1	1	1				3	6.00	
Physical Features																																																					
Litter				1																	1							1																							3	6.00	
Rock									1										1	1		1						1																							5	10.00	
Bare Ground	1					1							1				1														1									1					1						7	14.00	
Total Physical Features	1	0	0	1	0	1	0	0	1	0	0	0	1	0	0	1	0	1	1	1	1	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	15	30.00	
																																																			50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Lygodesmia juncea present																																																					

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Div. of Oil, Gas & Mining

Lila Canyon Cover Tally Sheet

Date: 7/15/03 | Disturbance Site | Transect: 2 | UTM: 0558174/4384350 | Heading: 65

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																						
Atriplex canescens																																																				0	0.00	0.00
Atriplex confertifolia																																																				0	0.00	0.00
Artemisia nova																																																				0	0.00	0.00
Artemisia tridentata tridentata																																																				0	0.00	0.00
Chrysothamnus nauseosus																																																				0	0.00	0.00
Chrysothamnus viscidiflorus																																																				0	0.00	0.00
Cowania mexicana																																																				0	0.00	0.00
Ceratoides lanata																																																				0	0.00	0.00
Ephedra viridis																																																				0	0.00	0.00
Sarcobatus vermiculatus																																																				0	0.00	0.00
Gutierrezia sarothrae																																																				0	0.00	0.00
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Forbs & Succulents																																																				0	0.00	0.00
Machaeranthera canescens																																																				0	0.00	0.00
Plantago patagonica																																																				0	0.00	0.00
Penstemon palmeri																																1																					1	2.00	3.23
Opuntia compressa																																																				0	0.00	0.00
Sphaeralcia coccinea																																																				0	0.00	0.00
Echinocereus triglochidiatus																																																				1	2.00	3.23
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Grass																																																				0	0.00	0.00
Agropyron smithii																																																				0	0.00	0.00
Agropyron spicatum																																																				0	0.00	0.00
Agropyron cristatum																																																				0	0.00	0.00
Agropyron trachycaulum																																																				0	0.00	0.00
Aristida longiseta																																																				0	0.00	0.00
Boutelou gracilis																																																				5	10.00	16.13
Bromus tectorum				1	1	1		1														1																														18	36.00	58.06
Elymus salinus	1	1	1				1			1							1	1								1	1					1			1	1						1	1					1	1	1	1	0	0.00	0.00
Elymus cinereus																																																				0	0.00	0.00
Elymus gigenteous																																	1																			1	2.00	3.23
Hilaria jamesii																																																				0	0.00	0.00
Oryzopsis hymenoides																																																				0	0.00	0.00
Sitanion hystrix																																																				0	0.00	0.00
Stipa comata																																																				0	0.00	0.00
Sporabolus cryptandrus																												1																								2	4.00	6.45
Vulpia octaflora																	1																																			26	52.00	83.87
Total Grass Cover	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	1	1	1	0	0	1	0	0	0	1	1	1	0	0	0	1	0	1	1	1	0	0	0	0	0	1	1	0	0	0	0	1	1	1	1			
Trees																																																				2	4.00	6.45
Juniperus osteosperma																								1	1																												2	4.00	6.45
Pinus edulis												1	1																																								4	8.00	12.90
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Total Vegetation Cover	1	1	1	1	1	1	1	1	1	0	1	1	1	0	0	0	1	1	1	0	0	1	0	1	1	1	1	1	0	0	0	1	1	1	1	1	0	0	0	0	0	1	1	0	0	0	0	1	1	1	1	31	62.00	100.00
cryptobiotic																1				1	1		1								1																	1				8	12.00	
Physical Features																																																				1	2.00	
Litter										1																			1	1								1			1			1							5	10.00	
Rock																																					1		1	1					1	1						7	14.00	
Bare Ground														1	1																																						13	26.00	
Total Physical Features	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	1	1	1	0	0	1	1	1	0	0	0	0	0	50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

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Div. of Oil, Gas & Mining

Lila Canyon Cover Tally Sheet

Date:7/15/03 | Disturbance Site | Transect:3 | UTM:05561221/4364345 | Heading:89

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																						
Atriplex canescens																		1	1			1			1				1						1																	6	12.00	14.63
Atriplex confertifolia								1																																												1	2.00	2.44
Artemisia nova																																																				0	0.00	0.00
Artemisia tridentata tridentata																																																				0	0.00	0.00
Chrysothamnus nauseosus																																																				0	0.00	0.00
Chrysothamnus viscidiflorus																																																				0	0.00	0.00
Cowania mexicana																																																				0	0.00	0.00
Ceratoides lanata			1				1																																													2	4.00	4.88
Ephedra viridis																																																				0	0.00	0.00
Sarcobatus vermiculatus																																																				0	0.00	0.00
Gutierrezia sarothrae									1																					1																						2	4.00	4.88
Total Shrubs Cover	0	0	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	1	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	22.00	26.83
Forbs & Succulents																																																				0	0.00	0.00
Machaeranthera canescens																																																				0	0.00	0.00
Plantago patagonica																																																				0	0.00	0.00
Penstemon palmeri																																																				0	0.00	0.00
Opuntia compressa																																																				0	0.00	0.00
Sphaeralcia coccinea																																																				0	0.00	0.00
Echinocereus triglochidiatus																																																				0	0.00	0.00
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Grass																																																				0	0.00	0.00
Agropyron smithii																																																				0	0.00	0.00
Agropyron spicatum																																																				0	0.00	0.00
Agropyron cristatum																																																				0	0.00	0.00
Agropyron trachycaulum																																																				0	0.00	0.00
Aristida longiseta																																																				0	0.00	0.00
Bouteloua gracilis																																																				15	30.00	36.59
Bromus tectorum		1				1				1	1			1			1			1					1		1						1	1					1						1	1		1			4	8.00	9.76
Elymus salinus	1																																			1	1							1								0	0.00	0.00
Elymus cinereus																																																				0	0.00	0.00
Elymus giganteous																																																				8	16.00	19.51
Hilaria jamesii												1	1		1							1		1								1						1													1	1	2.00	2.44
Oryzopsis hymenoides				1																																																0	0.00	0.00
Sitanion hystrix																																															1					1	2.00	2.44
Stipa comata																																																		1		1	2.00	2.44
Sporobolus cryptandrus																																																				0	0.00	0.00
Vulpia octoflora																																																				30	60.00	73.17
Total Grass Cover	1	1	0	1	0	1	0	0	0	1	1	1	1	1	1	0	1	0	0	1	1	0	1	1	0	1	0	0	0	0	0	1	1	1	0	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1			
Trees																																																				0	0.00	0.00
Juniperus osteosperma																																																				0	0.00	0.00
Pinus edulis																																																				0	0.00	0.00
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Total Vegetation Cover	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	41	82.00	100.00
cryptobiotic																													1																							1	2.00	
Physical Features																																																						
Litter																															1																					1	2.00	
Rock						1																																			1	1	1	1								5	10.00	
Bare Ground																	1											1																								2	4.00	
Total Physical Features	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	8	16.00	
																																																				50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Sphaeralcia parviflora present																																																					
coccinea present																																																					

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Lila Canyon Cover Tally Sheet

Date:7/15/03 | Disturbance Site | Transect:4 | UTM:0556185/4364399 | Heading:292

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																					
Atriplex canescens																																																			0	0.00	0.00
Atriplex confertifolia																																																			0	0.00	0.00
Artemisia nova																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ceratoides lanata																																																			0	0.00	0.00
Ephedra viridis																																																			0	0.00	0.00
Sarcobatus vermiculatus																																										1									1	2.00	2.56
Gutierrezia sarothrae																																																			1	2.00	2.56
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	2.00	2.56
Forbs & Succulents																																																					
Machaeranthera canescens																																																			0	0.00	0.00
Plantago patagonica																																																			0	0.00	0.00
Penstemon palmeri																																																			0	0.00	0.00
Opuntia compressa																												1																								1	2.00	2.56
Sphaeralcia coccinea	1															1	1																																			3	6.00	7.69
Echinocereus triglochidiatus																																																			0	0.00	0.00
Total Forb Cover	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	8.00	10.26
Grass																																																					
Agropyron smithii																																																			0	0.00	0.00
Agropyron spicatum																																																			0	0.00	0.00
Agropyron cristatum																																																			0	0.00	0.00
Agropyron trachycaulum																																																			0	0.00	0.00
Aristida longiseta																																																			0	0.00	0.00
Bouteloua gracilis																																																			0	0.00	0.00
Bromus tectorum		1	1	1						1		1	1	1										1								1				1	1						1	1				1			14	28.00	35.90
Elymus salinus																													1	1	1				1						1				1						6	12.00	15.38
Elymus cinereus																																																			0	0.00	0.00
Elymus giganteous																																																			0	0.00	0.00
Hilaria jamesii																		1	1	1	1		1		1	1	1																								8	16.00	20.51
Oryzopsis hymenoides															1																																				1	2.00	2.56
Sitanion hystrix																																																	1	1	2.00	2.56
Stipa comata																																																			0	0.00	0.00
Sporobolus cryptandrus					1	1			1																																										3	6.00	7.69
Vulpia octaflora																																							1												1	2.00	2.56
Total Grass Cover	0	1	1	1	1	1	0	0	1	1	0	1	1	1	1	0	0	1	1	1	1	0	1	1	1	1	1	0	1	1	1	1	0	0	1	1	1	0	1	0	1	0	1	1	1	0	0	1	1	0	34	68.00	87.18
Trees																																																					
Juniperus osteosperma																																																			0	0.00	0.00
Pinus edulis																																																			0	0.00	0.00
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Total Vegetation Cover	1	1	1	1	1	1	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	1	1	0	0	1	1	0	39	78.00	100.00
cryptobiotic																																	1																		1	2.00	
Physical Features																																																					
Litter									1																																										1	2.00	
Rock												1											1											1						1						1	1			1	7	14.00	
Bare Ground								1																														1													2	4.00	
Total Physical Features	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0	1	10	20.00	
																																																			50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

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Div. of Oil, Gas & Mining

Lila Canyon Cover Tally Sheet

Date: 7/15/03 | Disturbance Site | Transect: 5 | UTM: 0556162/4364368 | Heading: 137

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																			1	1	2.00	2.70
Atriplex canescens																																																				0	0.00	0.00
Atriplex confertifolia																																																				0	0.00	0.00
Artemisia nova																																																				0	0.00	0.00
Artemisia tridentata tridentata																																																				0	0.00	0.00
Chrysothamnus nauseosus																																																				0	0.00	0.00
Chrysothamnus viscidiflorus																																																				0	0.00	0.00
Cowania mexicana																																																				0	0.00	0.00
Cerstoides lanata																																																				0	0.00	0.00
Ephedra viridis																																																				0	0.00	0.00
Sarcobatus vermiculatus																																									1											1	2.00	2.70
Gutierrezia sarothrae																																									1	0	0	0	0	0	0	0	0	1		2	4.00	5.41
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1			
Forbs & Succulents																																																				0	0.00	0.00
Machaeranthera canescens																																																				0	0.00	0.00
Plantago patagonica																																																				0	0.00	0.00
Penstemon palmeri																																																				1	2.00	2.70
Opuntia compressa																			1																																	1	2.00	2.70
Sphaeralcia coccinea																					1																															0	0.00	0.00
Echinocereus triglochidiatus																																																				2	4.00	5.41
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Grass																																																				0	0.00	0.00
Agropyron smithii																																																				0	0.00	0.00
Agropyron spicatum																																																				0	0.00	0.00
Agropyron cristatum																																																				0	0.00	0.00
Agropyron trachycaulum																																																				0	0.00	0.00
Aristida longiseta																																																				0	0.00	0.00
Boutelou gracilis																																				1	1			1							1	1	1		10	20.00	27.03
Bromus tectorum	1	1	1	1																																										1	1					13	26.00	35.14
Elymus salinus										1		1	1							1		1				1				1	1	1			1			1													0	0.00	0.00
Elymus cinereus																																																				0	0.00	0.00
Elymus giganteous																																																				3	6.00	8.11
Hilaria jamesii									1															1		1																										2	4.00	5.41
Oryzopsis hymenoides																		1																					1													0	0.00	0.00
Sitanion hystrix																																																				5	10.00	13.51
Stipa comata					1						1					1	1								1																										0	0.00	0.00
Sporabolus cryptandrus																																																				0	0.00	0.00
Vulpia octaflora																																																				33	66.00	89.19
Total Grass Cover	1	1	1	1	1	1	0	0	0	1	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	1	1	0	0	0	1	1	1	0	0	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	0		0.00	0.00
Trees																																																				0	0.00	0.00
Juniperus osteosperma																																																				0	0.00	0.00
Pinus edulis																																																				0	0.00	0.00
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0.00	0.00
Total Vegetation Cover	1	1	1	1	1	0	0	0	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	0	0	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	37	74.00	100.00
cryptobiotic															1														1				1	1																		4	8.00	
Physical Features																																												1								1	2.00	
Litter																												1															1								2	4.00	
Rock																																													1							6	12.00	
Bare Ground							1	1	1						1													1																								9	18.00	
Total Physical Features		0	0	0	0	0	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

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Div. of Oil, Gas & Mining

Lila Canyon Cover Tally Sheet

Date: 7/15/03 | Disturbance Site | Transect: 6 | UTM: 0556110/4364388 | Heading: 161

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																						
Atriplex canescens																																																				0	0.00	0.00
Atriplex confertifolia																																																				0	0.00	0.00
Artemisia nova																																																				0	0.00	0.00
Artemisia tridentata tridentata																																																				0	0.00	0.00
Chrysothamnus nauseosus																																																				0	0.00	0.00
Chrysothamnus viscidiflorus																																																				0	0.00	0.00
Cowania mexicana																																																				1	2.00	4.76
Ceratoides lanata																										1																										0	0.00	0.00
Ephedra viridis																																																				0	0.00	0.00
Sarcobatus vermiculatus																																																				0	0.00	0.00
Gutierrezia sarothrae																																																				1	2.00	4.76
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Forbs & Succulents																																																				0	0.00	0.00
Machaeranthera canescens																																																				0	0.00	0.00
Plantago patagonica																																																				0	0.00	0.00
Penstemon palmeri																																																				0	0.00	0.00
Opuntia compressa																																																				0	0.00	0.00
Sphaeralcia coccinea																																																				0	0.00	0.00
Echinocereus triglochidiatus																																																				0	0.00	0.00
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Grass																																																				0	0.00	0.00
Agropyron smithii																																																				0	0.00	0.00
Agropyron spicatum																																																				0	0.00	0.00
Agropyron cristatum																																																				0	0.00	0.00
Agropyron trachycaulum																																																				0	0.00	0.00
Aristida longiseta																																																				0	0.00	0.00
Bouteloua gracilis																																																				10	20.00	47.62
Bromus tectorum			1	1	1			1	1			1															1												1					1							1	2.00	4.76
Elymus salinus		1																																																			0	0.00	0.00
Elymus cinereus																																																				0	0.00	0.00
Elymus giganteous																																																				5	10.00	23.81
Hilaria jamesii						1																						1													1			1						1		1	2.00	4.76
Oryzopsis hymenoides																						1																														2	4.00	9.52
Sitanion hystrix																									1													1														1	2.00	4.76
Stipa comata							1																																													0	0.00	0.00
Sporabolus cryptandrus																																																				0	0.00	0.00
Vulpia octaflora																																																				20	40.00	95.24
Total Grass Cover	0	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1	1	0	0	0	0	1	1			
Trees																																																				0	0.00	0.00
Juniperus osteosperma																																																				0	0.00	0.00
Pinus edulis																																																				0	0.00	0.00
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Total Vegetation Cover	0	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1	1	0	0	0	0	1	1			
cryptobiotic																		1																							1	1					1	1			5	10.00	
Physical Features																																																				0	0.00	
Litter																									1												1	1														6	12.00	
Rock	1												1	1																1	1	1	1	1	1	1										1	1				18	36.00	
Bare Ground										1	1				1	1			1	1	1	1		1																													
Total Physical Features	1	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	0	1	1	1	1	0	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	24	48.00	
																																																				50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

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Lila Canyon Cover Tally Sheet

Date:7/15/03 | Disturbance Site | Transect:7 | UTM:0556084/4364355 | Heading:3

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																					
Atriplex canescens																																																			0	0.00	0.00
Atriplex confertifolia																																																			0	0.00	0.00
Artemisia nova																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			1	2.00	3.70
Ceratoides lanata											1																																								0	0.00	0.00
Ephedra viridis																																																			0	0.00	0.00
Sarcobatus vermiculatus																																																			2	4.00	7.41
Gutierrezia sarothrae															1				1																																3	6.00	11.11
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Forbs & Succulents																																																			0	0.00	0.00
Machaeranthera canescens																																																			0	0.00	0.00
Plantago patagonica																																																			0	0.00	0.00
Penstemon palmeri																																																			1	2.00	3.70
Opuntia compressa												1																																							0	0.00	0.00
Sphaeralcia coccinea																																																			0	0.00	0.00
Echinocereus triglochidiatus																																																			1	2.00	3.70
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Grass																																																			0	0.00	0.00
Agropyron smithii																																																			0	0.00	0.00
Agropyron spicatum																																																			0	0.00	0.00
Agropyron cristatum																																																			0	0.00	0.00
Agropyron trachycaulum																																																			0	0.00	0.00
Aristida longiseta																																																			0	0.00	0.00
Bouteloua gracilis																1																	1							1	1			1							5	10.00	18.52
Bromus tectorum																																																			0	0.00	0.00
Elymus salinus																																																			0	0.00	0.00
Elymus cinereus																																																			0	0.00	0.00
Elymus giganteous																																																			10	20.00	37.04
Hilaria jamesii							1		1	1			1												1	1	1							1													1	1				1	2.00	3.70
Oryzopsis hymenoides																												1																								0	0.00	0.00
Sitanion hystrix																																																			5	10.00	18.52
Stipa comata																	1			1	1	1	1																												0	0.00	0.00
Sporabolus cryptandrus																																																			0	0.00	0.00
Vulpia octaflora																																																			21	42.00	77.78
Total Grass Cover	0	0	0	0	0	0	0	1	0	1	1	0	0	1	0	0	1	1	0	0	1	1	1	1	0	1	1	1	1	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	1	0	1	1	0	0	0		
Trees																																																			0	0.00	0.00
Juniperus osteosperma																																																			2	4.00	7.41
Pinus edulis	1	1																																																	2	4.00	7.41
Total Tree Cover	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Total Vegetation Cover	1	1	0	0	0	0	1	0	1	1	1	1	1	0	1	1	1	0	1	1	1	1	1	0	1	1	1	1	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	1	0	1	1	0	0	0	27	54.00	100.00
cryptobiotic																																																			0	0.00	
Physical Features																																																					
Litter							1																															1											1		3	6.00	
Rock			1						1																									1	1			1													5	10.00	
Bare Ground				1	1									1				1						1					1	1	1	1			1								1	1		1			1		1	15	30.00	
Total Physical Features	0	0	1	1	1	1	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	1	1	1	0	0	1	1	1	1	1	0	0	1	1	0	1	0	0	1	1	1	23	46.00	
																																																			50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

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Div. of Oil, Gas & Mining

Lila Canyon Cover Tally Sheet

Date: 7/15/03 | Disturbance Site | Transect: 8 | UTM: 0556137/4364353 | Heading: 304

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																					
Atriplex canescens																																																			0	0.00	0.00
Atriplex confertifolia																																																			0	0.00	0.00
Artemisia nova																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			1	2.00	4.17
Ceratoides lanata											1																																								0	0.00	0.00
Ephedra viridis																																																			0	0.00	0.00
Sarcobatus vermiculatus																																																			0	0.00	0.00
Gutierrezia sarothrae																																																			1	2.00	4.17
	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Total Shrubs Cover																																																					
																																																			0	0.00	0.00
Forbs & Succulents																																																			0	0.00	0.00
Machaeranthera canescens																																																			0	0.00	0.00
Plantago patagonica																																																			0	0.00	0.00
Penstemon palmeri																																																			1	2.00	4.17
Opuntia compressa							1																																												0	0.00	0.00
Sphaeralcia coccinea																																																			0	0.00	0.00
Echinocereus triglochidiatus																																																			1	2.00	4.17
Total Forb Cover	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Grass																																																			0	0.00	0.00
Agropyron smithii																																																			0	0.00	0.00
Agropyron spicatum																																																			0	0.00	0.00
Agropyron cristatum																																																			0	0.00	0.00
Agropyron trachycaulum																																																			0	0.00	0.00
Aristida longiseta																																																			0	0.00	0.00
Bouteloua gracilis																															1																				8	16.00	33.33
Bromus tectorum								1				1	1				1	1	1	1							1	1					1			1					1				1	1				1	8	16.00	33.33
Elymus salinus																																																			0	0.00	0.00
Elymus cinereus																																																			0	0.00	0.00
Elymus gigantecus																																																			3	6.00	12.50
Hilaria jamesii					1											1													1																						0	0.00	0.00
Oryzopsis hymenoides																																																			0	0.00	0.00
Sitanion hystrix																																																			1	2.00	4.17
Stipa comata															1																																				0	0.00	0.00
Sporobolus cryptandrus																																																			0	0.00	0.00
Vulpia octaflora																																																			20	40.00	83.33
Total Grass Cover	0	0	0	0	1	0	0	1	0	0	0	1	1	0	1	1	1	1	1	1	0	0	0	0	0	1	1	1	0	0	1	0	1	0	0	1	0	0	0	0	1	0	0	0	1	1	0	0	0	1			
Trees																														1		1																			2	4.00	8.33
Juniperus osteosperma																																																			0	0.00	0.00
Pinus edulis																																																			0	0.00	0.00
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4.00	8.33
Total Vegetation Cover	0	0	0	0	1	0	1	1	0	0	1	1	1	0	1	1	1	1	1	1	0	0	0	0	0	1	1	1	0	1	1	1	1	0	0	1	0	0	0	0	1	0	0	0	1	1	0	0	0	1	24	48.00	100.00
cryptobiotic																																		1	1		1					1									4	8.00	
Physical Features																																																					
Litter																								1																											1	2.00	
Rock	1						1			1	1				1											1												1	1	1				1	1					1	12	24.00	
Bare Ground		1	1	1																		1	1		1					1																	1	1			9	18.00	
Total Physical Features	1	1	1	1	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	1	1	1	0	0	1	1	0	0	1	1	1	0	22	44.00	
																																																			50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

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Div. of Oil, Gas & Mining

Lila Canyon Cover Tally Sheet

Date:7/15/03 | Disturbance Site | Transect:9 | UTM:0556124/4364366 | Heading:79

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																					
Atriplex canescens																																																			0	0.00	0.00
Atriplex confertifolia																																																			0	0.00	0.00
Artemisia nova																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ceratoides lanata																																																			0	0.00	0.00
Ephedra viridis																																																			0	0.00	0.00
Sarcobatus vermiculatus																																																			0	0.00	0.00
Gutierrezia sarothrae																									1																										1	2.00	4.00
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2.00	4.00
Forbs & Succulents																																																					
Machaeranthera canescens																																																			0	0.00	0.00
Plantago patagonica																																																			0	0.00	0.00
Penstemon palmeri																																																			0	0.00	0.00
Opuntia compressa																																																			0	0.00	0.00
Sphaeralcia coccinea										1																																									1	2.00	4.00
Echinocereus triglochidiatus																																																			0	0.00	0.00
Total Forb Cover	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2.00	4.00
Grass																																																					
Agropyron smithii																																																			0	0.00	0.00
Agropyron spicatum																																																			0	0.00	0.00
Agropyron cristatum																																																			0	0.00	0.00
Agropyron trachycaulum																																																			0	0.00	0.00
Aristida longiseta																																																			0	0.00	0.00
Bouteloua gracilis																																																			0	0.00	0.00
Bromus tectorum		1	1						1									1	1	1										1			1	1	1	1				1	1	1								14	28.00	56.00
Elymus salinus																																																			0	0.00	0.00
Elymus cinereus																																																			0	0.00	0.00
Elymus gigenteous																																																			0	0.00	0.00
Hilaria jamesii						1															1								1														1		1	1					6	12.00	24.00
Oryzopsis hymenoides							1																																					1							2	4.00	8.00
Sitanion hystrix																																					1														1	2.00	4.00
Stipa comata																																																			0	0.00	0.00
Sporabolus cryptandrus																																																			0	0.00	0.00
Vulpia octaflora																																																			0	0.00	0.00
Total Grass Cover	0	1	1	0	0	1	1	0	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	1	1	0	0	1	1	1	1	1	0	0	1	1	1	1	1	1	1	0	0	0	0	23	46.00	92.00
Trees																																																					
Juniperus osteosperma																																																			0	0.00	0.00
Pinus edulis																																																			0	0.00	0.00
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Total Vegetation Cover	0	1	1	0	0	1	1	0	1	1	0	0	0	0	0	0	0	1	1	1	1	0	0	0	1	0	0	0	1	1	0	0	1	1	1	1	1	0	0	1	1	1	1	1	1	1	0	0	0	0	25	50.00	100.00
cryptobiotic					1																										1	1																		1		4	8.00	
Physical Features																																																					
Litter												1	1																																						1	3	6.00	
Rock	1															1	1																																			3	6.00	
Bare Ground				1				1			1			1				1					1	1	1		1	1	1									1	1								1	1			15	30.00	
Total Physical Features	1	0	0	1	0	0	0	1	0	0	1	1	1	1	1	1	1	0	0	0	0	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	1	21	42.00	
																																																			50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

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Div. of Oil, Gas & Mining

Lila Canyon Cover Tally Sheet

Date: 7/15/03 | Disturbance Site | Transect: 15 | UTM: 0555994/4364334 | Heading: 200

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																					
Atriplex canescens																																																			0	0.00	0.00
Atriplex confertifolia																																																			0	0.00	0.00
Artemisia nova																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																		1	1	2.00	4.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cliff Rose																																																			0	0.00	0.00
Ceratoides lanata																																																			0	0.00	0.00
Ephedra																																																			3	6.00	12.00
Sarcobatus vermiculatus	1																											1	1																						0	0.00	0.00
Snake Weed																																																					
Total Shrubs Cover	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	8.00	16.00
Forbs & Succulents																																																			0	0.00	0.00
Machaeranthera canescens																																																			0	0.00	0.00
Plantago patagonica																																																			0	0.00	0.00
Penstemon palmeri																																																			0	0.00	0.00
Opuntia compressa																																																			0	0.00	0.00
Sphaeralcia coccinea																																																			0	0.00	0.00
Echinocereus triglochidiatus																																																			0	0.00	0.00
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Grass																																																			0	0.00	0.00
Agropyron smithii																																																			0	0.00	0.00
Agropyron spicatum																																																			0	0.00	0.00
Agropyron cristatum																																																			0	0.00	0.00
Agropyron trachycaulum																																																			0	0.00	0.00
Aristida longiseta																																																			0	0.00	0.00
Boutelou gracilis																																																			3	6.00	12.00
Bromus tectorum				1	1	1														1	1	1			1	1	1			1	1					1	1	1						1		1					13	26.00	52.00
Elymus salinus																																																			0	0.00	0.00
Elymus cinereus																																																			0	0.00	0.00
Elymus giganteous																																																			4	8.00	16.00
Hilaria jamesii							1			1									1																																	0	0.00	0.00
Oryzopsis hymenoides																																																			0	0.00	0.00
Sitanion hystrix																																																			0	0.00	0.00
Stipa comata																																																			0	0.00	0.00
Sporabolus cryptandrus																																																			1	2.00	4.00
Vulpia octaflora																		1																																	21	42.00	84.00
Total Grass Cover	0	0	0	1	1	1	1	0	0	1	0	0	0	0	0	0	0	1	1	1	1	1	0	0	1	1	1	0	0	1	1	0	0	0	0	1	1	1	0	0	0	0	0	1	0	1	1	0	0	0			
Trees																																																			0	0.00	0.00
Juniperus osteosperma																																																			0	0.00	0.00
Pinus edulis																																																			0	0.00	0.00
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	50.00	100.00
Total Vegetation Cover	1	0	0	1	1	1	1	0	0	1	0	0	0	0	0	0	0	1	1	1	1	1	0	0	1	1	1	1	1	1	1	0	0	0	0	1	1	1	0	0	0	0	0	1	0	1	1	0	0	1			
cryptobiotic			1										1	1	1	1																																			5	10.00	
Physical Features																																																						
Litter																																										1									1	2.00	
Rock																								1										1	1	1			1	1	1		1		1					9	18.00	
Bare Ground		1						1	1		1	1						1							1							1																1	1		10	20.00	
Total Physical Features	0	1	0	0	0	0	0	0	1	1	0	1	1	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	1	1	0	0	0	1	1	1	1	1	0	1	0	0	1	1	0	20	40.00	
																																																			50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

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Lila Canyon Cover Sheet

Date:09/05/2003 | Disturbance Site | Transect:16 | UTM:556071/4364223 | Heading:120

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																					
Atriplex canescens																																																			0	0.00	0.00
Atriplex confertifolia																																																			0	0.00	0.00
Atriplex cuneata																																																			0	0.00	0.00
Artemisia nova																																																			0	0.00	0.00
Artemisia spinescens																																																			0	0.00	0.00
Artemisia tridentata tridentata																														1																					1	2.00	12.50
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ceratoides lanata																																																			0	0.00	0.00
Ephedra viridis																																																			0	0.00	0.00
Leptodactylon pungens																																																			0	0.00	0.00
Sarcobatus vermiculatus																																																			0	0.00	0.00
Gutierrezia sarothrae																													1								1														2	4.00	25.00
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	6.00	37.50
																																																					0.00	0.00
Forbs & Succulents																																																			0	0.00	0.00
Cryptantha flava																																																			0	0.00	0.00
Machaeranthera canescens																																																			0	0.00	0.00
Echinocereus triglochidiatus																																																			0	0.00	0.00
Penstemon palmeri																																																			0	0.00	0.00
Opuntia compressa																																																			0	0.00	0.00
Lygodesmia juncea																																																			0	0.00	0.00
Sphaeralcia coccinea																																																			0	0.00	0.00
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
																																																					0.00	0.00
Grass																																																			0	0.00	0.00
Agropyron smithii																																																			0	0.00	0.00
Agropyron spicatum																																																			0	0.00	0.00
Agropyron cristatum																																																			0	0.00	0.00
Agropyron trachycaulum																																																			0	0.00	0.00
Aristida longiseta																																																			0	0.00	0.00
Bromus tectorum																																																			0	0.00	0.00
Elymus salinus																																																			0	0.00	0.00
Elymus cinereus																																																			0	0.00	0.00
Elymus gigenteous																																																			0	0.00	0.00
Hilaria jamesii																																																			0	0.00	0.00
Oryzopsis hymenoides																																																			0	0.00	0.00
Sitanion hystrix																																																			0	0.00	0.00
Stipa comata																																																			0	0.00	0.00
Vulpia octoflora																																																1			1	2.00	12.50
Total Grass Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2.00	12.50
																																																					0.00	0.00
Trees																																																			0	0.00	0.00
Juniperus osteosperma																			1																								1	1							3	6.00	37.50
Pinus edulis																		1																																	1	2.00	12.50
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	4	8.00	50.00
																																																					0.00	0.00
Total Vegetation Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	1	0	0	8	16.00	100.00
cryptobiotic																																																			0	0.00	
																																																				0.00	
Physical Features																																																			0	0.00	
Litter																									1								1												1	1					4	8.00	
Rock											1	1														1						1		1				1					1						1	8	16.00	
Bare Ground	1	1	1	1	1	1	1	1	1	1			1	1	1	1	1			1	1	1	1			1	1	1						1	1	1			1	1	1						1		1		30	60.00	
																																																				0.00	
Total Physical Features	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	0	1	1	1	1	1	0	0	1	1	1	0	1	1	42	84.00	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	50	100.00	
Comments:																																																					

Lila Canyon Cover Sheet

Date:09/05/2003 | Disturbance Site | Transect:17 | UTM:556266/4364241 | Heading:30

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																					
Atriplex canescens																																																			0	0.00	0.00
Atriplex confertifolia																																																			0	0.00	0.00
Atriplex cuneata																																																			0	0.00	0.00
Artemisia nova																																																			0	0.00	0.00
Artemisia spinescens																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ceratoides lanata																																																			0	0.00	0.00
Ephedra viridis																																																			0	0.00	0.00
Sarcobatus vermiculatus																																																			0	0.00	0.00
Gutierrezia sarothrae																									1	1					1						1														4	8.00	18.18
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4	8.00	18.18
Forbs & Succulents																																																					
Machaeranthera canescens																																																			0	0.00	0.00
Echinocereus triglochidiatus																																																			0	0.00	0.00
Penstemon palmeri																																																			0	0.00	0.00
Opuntia compressa																																																			0	0.00	0.00
Sphaeralcia coccinea																																																			0	0.00	0.00
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Grass																																																					
Agropyron smithii																																																			0	0.00	0.00
Agropyron spicatum																																																			0	0.00	0.00
Agropyron cristatum																																																			0	0.00	0.00
Agropyron trachycaulum																																																			0	0.00	0.00
Aristida longiseta																																																			0	0.00	0.00
Bromus tectorum				1	1																																														2	4.00	9.09
Elymus salinus																				1	1											1	1																			4	8.00	18.18
Elymus cinereus																																																			0	0.00	0.00
Elymus gigenteous																																																			0	0.00	0.00
Hilaria jamesii																													1																						1	2.00	4.55
Oryzopsis hymenoides																																																			0	0.00	0.00
Sitanion hystrix																																																			0	0.00	0.00
Stipa comata																																																			0	0.00	0.00
Vulpia octaflora	1												1											1																												3	6.00	13.64
Total Grass Cover	1	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	20.00	45.45
Trees																																																					
Juniperus osteosperma															1																					1		1	1	1	1								1	1	8	16.00	36.36
Pinus edulis																																																			0	0.00	0.00
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	0	0	0	0	0	0	0	1	1	8	16.00	36.36
Total Vegetation Cover	1	0	0	1	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0	0	1	1	1	0	0	1	0	1	1	1	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	1	1	22	44.00	100.00
cryptobiotic								1						1					1																																3	6.00	
Physical Features																																																					
Litter									1																									1																	2	4.00	
Rock		1	1													1	1						1	1																			1									7	14.00	
Bare Ground						1	1			1	1	1						1										1	1		1					1								1	1	1	1	1	1			16	32.00	
Total Physical Features	0	1	1	0	0	1	1	0	1	1	1	1	0	0	0	1	1	1	0	0	0	1	1	0	0	0	1	1	0	1	0	0	0	1	1	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	25	50.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	50	100.00	
Machaeranthe present																																																					

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MAY 18 2007
Div. of Oil, Gas & Mining

Lila Canyon Cover Sheet

Date:09/05/2003 | Disturbance Site | Transect:18 | UTM:556332/4364271 | Heading:288

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																					
Atriplex canescens																																																			0	0.00	0.00
Atriplex confertifolia	1																																																		1	2.00	6.25
Atriplex cuneata																																																			0	0.00	0.00
Artemisia nova																																																			0	0.00	0.00
Artemisia spinescens																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ceratoides lanata																																																			0	0.00	0.00
Ephedra viridis																																																			0	0.00	0.00
Leptodactylon pungens		1							1																																										2	4.00	12.50
Sarcobatus vermiculatus																																																			0	0.00	0.00
Gutierrezia sarothrae																																																			0	0.00	0.00
Total Shrubs Cover	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	6.00	18.75
Forbs & Succulents																																																			0	0.00	0.00
Opuntia compressa																																																			0	0.00	0.00
Machaeranthera canescens																																																			0	0.00	0.00
Echinocereus triglochidiatus																																																			0	0.00	0.00
Sphaeralcia coccinea																																																			0	0.00	0.00
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Grass																																																			0	0.00	0.00
Agropyron smithii																																																			0	0.00	0.00
Agropyron spicatum																																																			0	0.00	0.00
Agropyron cristatum																																																			0	0.00	0.00
Agropyron trachycaulum																																																			0	0.00	0.00
Aristida longiseta																																																			0	0.00	0.00
Bromus tectorum																		1	1								1	1	1																						5	10.00	31.25
Elymus salinus																																																			0	0.00	0.00
Elymus cinereus																																																			0	0.00	0.00
Elymus giganteous																																																			1	2.00	6.25
Hilaria jamesii								1																																											0	0.00	0.00
Oryzopsis hymenoides																																																			0	0.00	0.00
Sitanion hystrix																																																			0	0.00	0.00
Stipa comata										1					1																																				2	4.00	12.50
Vulpia octaflora																																																			0	0.00	0.00
Total Grass Cover	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	16.00	50.00
Trees																																																					
Juniperus osteosperma																1																																			1	2.00	6.25
Pinus edulis																														1	1	1																1			4	8.00	25.00
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	5	10.00	31.25
Total Vegetation Cover	1	1	0	0	0	0	0	1	1	1	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	16	32.00	100.00
cryptobiotic				1																																			1												2	4.00	
Physical Features																																																					
Litter																	1						1																												2	4.00	
Rock					1		1							1										1									1	1							1	1	1	1	1					11	22.00	
Bare Ground			1			1					1	1	1							1	1	1			1	1									1	1	1	1		1						1	1		1	1	19	38.00	
Total Physical Features	0	0	1	0	1	1	1	0	0	0	1	1	1	1	0	0	1	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	32	64.00	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	50	100.00	

Comments:

Euphorbia present

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Div. of Oil, Gas & Mining

Lila Canyon Cover Sheet

Date:09/05/2003 | Disturbance Site | Transect:19 | UTM:556294/4364239 | Heading:278

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																				0	0.00	0.00
Atriplex canescens																																																				0	0.00	0.00
Atriplex confertifolia																																																				0	0.00	0.00
Artemisia nova																																																				0	0.00	0.00
Artemisia spinescens																																																				0	0.00	0.00
Artemisia tridentata tridentata																																																				0	0.00	0.00
Chrysothamnus nauseosus																																																				0	0.00	0.00
Chrysothamnus viscidiflorus																																																				0	0.00	0.00
Cowania mexicana																																																				0	0.00	0.00
Ceratoides lanata																																																				0	0.00	0.00
Ephedra viridis																																																				0	0.00	0.00
Sarcobatus vermiculatus																																																	1			2	4.00	11.76
Gutierrezia sarothrae	1																																																			2	4.00	11.76
Total Shrubs Cover	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	4.00	11.76
Forbs & Succulents																																																				0	0.00	0.00
Machaeranthera canescens																																																				0	0.00	0.00
Echinocereus triglochidiatus																																																				0	0.00	0.00
Penstemon palmeri																																										1										1	2.00	5.88
Opuntia compressa																																																				0	0.00	0.00
Sphaeralcia coccinea																																																				0	0.00	0.00
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	2.00	5.88
Grass																																																				0	0.00	0.00
Agropyron smithii																																																				0	0.00	0.00
Agropyron spicatum																																																				0	0.00	0.00
Agropyron cristatum																																																				0	0.00	0.00
Agropyron trachycaulum																																																				0	0.00	0.00
Aristida longiseta																																																				0	0.00	0.00
Bromus tectorum																																					1	1			1		1		1		1				6	12.00	35.29
Elymus salinus																																																				0	0.00	0.00
Elymus cinereus																																																				0	0.00	0.00
Elymus giganteous																																												1					1	1	3	6.00	17.65
Hilaria jamesii																																																				0	0.00	0.00
Oryzopsis hymenoides																																																				0	0.00	0.00
Sitanion hystrix																																																				0	0.00	0.00
Stipa comata																																																				0	0.00	0.00
Vulpia octaflora																																																				0	0.00	0.00
Total Grass Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	1	1	1	0	1	0	1	1	9	18.00	52.94
Trees																																																				5	10.00	29.41
Juniperus osteosperma							1	1	1													1	1																														0	0.00	0.00
Pinus edulis																																																				5	10.00	29.41
Total Tree Cover	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	34.00	100.00
Total Vegetation Cover	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	1	1	1	0	1	1	1	1	6	12.00	
cryptobiotic				1																	1	1				1	1													1												
Physical Features																																																				3	6.00	
Litter														1	1														1																								3	6.00	
Rock		1				1													1																																	21	42.00	
Bare Ground			1							1	1	1	1			1	1	1		1					1			1		1	1	1	1	1	1	1	1				1						1					
Total Physical Features	0	1	1	0	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	27	54.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	50	100.00	

Single leaf ash present
prickly gilia present
6 weeks present
Sclerocactus present

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Lila Canyon Cover Sheet

Date:09/05/2003 | Disturbance Site | Transect:21 | UTM:556271/436293 | Heading:66

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																					
Atriplex canescens																																																			0	0.00	0.00
Atriplex confertifolia																																																			0	0.00	0.00
Atriplex cuneata																																																			0	0.00	0.00
Artemisia nova																																																			0	0.00	0.00
Artemisia spinescens																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ceratoides lanata																																																			0	0.00	0.00
Ephedra viridis																																																			0	0.00	0.00
Sarcobatus vermiculatus																																																			0	0.00	0.00
Gutierrezia sarothrae																																																			0	0.00	0.00
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Forbs & Succulents																																																					
Machaeranthera canescens																																																			0	0.00	0.00
Echinocereus triglochidiatus																																																			0	0.00	0.00
Penstemon palmeri																																																			0	0.00	0.00
Opuntia compressa																																																			0	0.00	0.00
Sphaeralcia coccinea																																																			0	0.00	0.00
Euphorbia fendleri																			1																													1			2	4.00	14.29
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	4.00	14.29
Grass																																																			0	0.00	0.00
Agropyron smithii																																																			0	0.00	0.00
Agropyron spicatum																																																			0	0.00	0.00
Agropyron cristatum																																																			0	0.00	0.00
Agropyron trachycaulum																																																			0	0.00	0.00
Aristida longiseta																																																			0	0.00	0.00
Bromus tectorum																																										1									1	2.00	7.14
Elymus salinus																																																			0	0.00	0.00
Elymus cinereus																																																			0	0.00	0.00
Elymus giganteous																																							1												1	2.00	7.14
Hilaria jamesii																																																			0	0.00	0.00
Oryzopsis hymenoides																																																			0	0.00	0.00
Sitanion hystrix																																																			0	0.00	0.00
Stipa comata																																																			0	0.00	0.00
Vulpia octaflora																																																			0	0.00	0.00
Total Grass Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	4.00	14.29
Trees																																																					
Juniperus osteosperma	1	1																		1	1								1	1	1												1						1	1	10	20.00	71.43
Pinus edulis																																																			0	0.00	0.00
Total Tree Cover	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	10	20.00	71.43
Total Vegetation Cover	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	1	1	1	14	28.00	100.00
cryptobiotic																																				1				1	1			1	1							5	10.00	
Physical Features																																																					
Litter						1																																													1	2.00	
Rock																										1			1						1																3	6.00	
Bare Ground			1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1				1	1	1		1	1				1	1	1			1	1								1	1			27	54.00	
Total Physical Features	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	0	0	0	1	1	1	1	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	31	62.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	50	100.00	

Cryptantha present, Echinocereus present

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Lila Canyon Cover Sheet

Date:09/05/2003 | Disturbance Site | Transect:20 | UTM:558281/4364245 | Heading:241

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																						
Atriplex canescens																						1																													1	2.00	7.14
Atriplex confertifolia																																																			0	0.00	0.00
Atriplex cuneata																																																			0	0.00	0.00
Artemisia nova																																																			0	0.00	0.00
Artemisia spinescens																																																			0	0.00	0.00
Artemisia tridentata tridentata																					1																														1	2.00	7.14
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ceratoides lanata																																																			0	0.00	0.00
Ephedra viridis																																																			0	0.00	0.00
Sarcobatus vermiculatus																																																			0	0.00	0.00
Gutierrezia sarothrae																			1											1																					2	4.00	14.29
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	8.00	28.57
Forbs & Succulents																																																						
Machaeranthera canescens																																																			0	0.00	0.00
Echinocereus triglochidiatus																																																			0	0.00	0.00
Penstemon palmeri																																																			0	0.00	0.00
Opuntia compressa																																													1						1	2.00	7.14
Sphaeralcia coccinea																																																			0	0.00	0.00
Euphorbia fendleri																																					1														1	2.00	7.14
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2	4.00	14.29
Grass																																																						
Agropyron smithii																																																			0	0.00	0.00
Agropyron spicatum																																																			0	0.00	0.00
Agropyron cristatum																																																			0	0.00	0.00
Agropyron trachycaulum																																																			0	0.00	0.00
Aristida longiseta																																																			0	0.00	0.00
Bromus tectorum																																																			0	0.00	0.00
Elymus salinus										1		1																																							2	4.00	14.29
Elymus cinereus																																																			0	0.00	0.00
Elymus giganteous																																																			0	0.00	0.00
Hilaria jameseii																																																			0	0.00	0.00
Oryzopsis hymenoides																																																			0	0.00	0.00
Sitanion hystrix																																																			0	0.00	0.00
Stipa comata																																																			0	0.00	0.00
Vulpia octoflora																																																			0	0.00	0.00
Total Grass Cover	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4.00	14.29
Trees																																																						
Juniperus osteosperma																																									1	1	1	1				1	1		6	12.00	42.86
Pinus edulis																																																			0	0.00	0.00
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	1	1	0	6	12.00	42.86
Total Vegetation Cover	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	1	1	1	1	0	0	1	1	0	14	28.00	100.00
cryptobiotic																			1									1						1																1	4	8.00	
Physical Features																																																						
Litter																					1																														1	2.00	
Rock																														1					1	1					1						1	1			6	12.00	
Bare Ground	1	1	1	1	1	1	1	1	1		1		1	1	1	1	1							1	1	1	1	1				1	1	1				1	1												25	50.00	
Total Physical Features	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	0	0	1	0	0	1	1	1	1	1	0	1	0	1	1	1	0	1	1	0	1	1	1	0	0	0	0	0	1	1	0	0	0	32	64.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	50	100.00	

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Lila Canyon Cover Tally Sheet

Date:7/15/03 | Disturbance Site | Transect:10 | UTM:0556112/4364346 | Heading:296

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																					
Atriplex canescens																																																			0	0.00	0.00
Atriplex confertifolia																																									1										1	2.00	3.13
Artemisia nova																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ceratoides lanata																																																			0	0.00	0.00
Ephedra viridis																																																			0	0.00	0.00
Sarcobatus vermiculatus																																																			0	0.00	0.00
Gutierrezia sarothrae																																																			0	0.00	0.00
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	2.00	3.13
Forbs & Succulents																																																					
Machaeranthera canescens																																																			0	0.00	0.00
Plantago patagonica																																																			0	0.00	0.00
Penstemon palmeri																																																			0	0.00	0.00
Opuntia compressa																																																			0	0.00	0.00
Sphaeralcia coccinea	1																																																		1	2.00	3.13
Echinocereus triglochidiatus																																													1						1	2.00	3.13
Total Forb Cover	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	4.00	6.25
Grass																																																					
Agropyron smithii																																																			0	0.00	0.00
Agropyron spicatum																																																			0	0.00	0.00
Agropyron cristatum																																																			0	0.00	0.00
Agropyron trachycaulum																																																			0	0.00	0.00
Aristida longiseta																																																			0	0.00	0.00
Boutelou gracilis														1	1	1																																			3	6.00	9.38
Bromus tectorum					1		1	1				1					1				1	1	1	1			1	1																							11	22.00	34.38
Elymus salinus																													1						1				1	1		1	1			1		1			8	16.00	25.00
Elymus cinereus																																																			0	0.00	0.00
Elymus giganteous																																																			0	0.00	0.00
Hilaria jamesii				1									1							1																															3	6.00	9.38
Oryzopsis hymenoides																																																			0	0.00	0.00
Sitanion hystrix																																																			0	0.00	0.00
Stipa comata																									1																										1	2.00	3.13
Sporobolus cryptandrus						1																																													1	2.00	3.13
Vulpia octaflora																																																			0	0.00	0.00
Total Grass Cover	0	0	0	1	1	1	1	1	0	0	0	1	1	1	1	1	1	0	0	1	1	1	1	1	1	0	1	1	1	0	0	0	0	0	1	0	0	0	1	1	0	1	1	0	0	1	0	1	0	0	27	54.00	84.38
Trees																																																					
Juniperus osteosperma																																																	1	1	2	4.00	6.25
Pinus edulis																																																			0	0.00	0.00
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	4.00	6.25
Total Vegetation Cover	1	0	0	1	1	1	1	1	0	0	0	1	1	1	1	1	1	0	0	1	1	1	1	1	1	0	1	1	1	0	0	0	0	0	1	0	0	0	1	1	1	1	1	0	1	1	0	1	1	1	32	64.00	100.00
cryptobiotic																																					1										1				2	4.00	
Physical Features																																																					
Litter																																1	1																		2	4.00	
Rock										1	1								1															1				1						1						6	12.00	
Bare Ground		1	1						1									1								1				1	1					1														8	16.00	
Total Physical Features	0	1	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	1	1	1	1	1	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	16	32.00	
																																																			50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

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Lila Canyon Cover Tally Sheet

Date:7/15/03 | Disturbance Site | Transect:0555985/4364311 | UTM: | Heading:60

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																					
Atriplex canescens																																									1		1								2	4.00	6.45
Atriplex confertifolia												1																1																							2	4.00	6.45
Artemisia nova																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ceratoides lanata																	1																																		1	2.00	3.23
Ephedra viridis																																																			0	0.00	0.00
Sarcobatus vermiculatus																																																			0	0.00	0.00
Gutierrezia sarothrae																																						1													1	2.00	3.23
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	6	12.00	19.35
Forbs & Succulents																																																			0	0.00	0.00
Machaeranthera canescens																																																			0	0.00	0.00
Plantago patagonica																																																			0	0.00	0.00
Penstemon palmeri																																																			0	0.00	0.00
Opuntia compressa																																																		1	1	2.00	3.23
Sphaeralcia coccinea																																																			0	0.00	0.00
Echinocereus triglochidiatus																																																			0	0.00	0.00
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2.00	3.23
Grass																																																			0	0.00	0.00
Agropyron smithii																																																			0	0.00	0.00
Agropyron spicatum																																																			0	0.00	0.00
Agropyron cristatum																																																			0	0.00	0.00
Agropyron trachycaulum																																																			0	0.00	0.00
Aristida longiseta																																																			0	0.00	0.00
Bouteloua gracilis																																																			12	24.00	38.71
Bromus tectorum	1					1				1						1		1	1	1							1										1					1					1		1		0	0.00	0.00
Elymus salinus																																																			0	0.00	0.00
Elymus cinereus																																																			0	0.00	0.00
Elymus giganteous																																																			7	14.00	22.58
Hilaria jamesii			1	1				1	1														1	1						1																					5	10.00	16.13
Oryzopsis hymenoides		1									1		1																				1			1															0	0.00	0.00
Sitanion hystrix																																																			0	0.00	0.00
Stipa comata																																																			0	0.00	0.00
Sporabolus cryptandrus																																																			0	0.00	0.00
Vulpia octoflora																																																			0	0.00	0.00
Total Grass Cover	1	1	1	1	0	1	0	1	1	1	1	0	1	0	0	1	0	1	1	1	0	0	1	1	0	0	1	0	0	1	0	0	1	0	0	1	1	0	0	0	0	1	0	0	0	0	1	0	1	0	24	48.00	77.42
Trees																																																			0	0.00	0.00
Juniperus osteosperma																																																			0	0.00	0.00
Pinus edulis																																																			0	0.00	0.00
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Total Vegetation Cover	1	1	1	1	0	1	0	1	1	1	1	1	1	0	0	1	1	1	1	1	0	0	1	1	0	0	1	1	0	1	0	0	1	0	0	1	1	1	0	0	1	1	1	0	0	0	1	0	1	1	31	62.00	100.00
cryptobiotic																																			1											1			1			3	6.00	
Physical Features																																																					
Litter					1																													1					1												3	6.00	
Rock																							1																												1	2.00	
Bare Ground							1							1	1							1				1	1			1		1	1								1				1		1				12	24.00	
Total Physical Features	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	1	1	0	0	1	0	1	1	0	1	0	0	0	0	1	1	0	0	0	1	0	1	0	0	0	0	16	32.00	
																																																			50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

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Div. of Oil, Gas & Mining

Lila Canyon Cover Tally Sheet

Date:7/15/03 | Disturbance Site | Transect:12 | UTM:0556034/4364313 | Heading:319

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																					
Atriplex canescens																																																			1	2.00	4.35
Atriplex confertifolia	1																																																		0	0.00	0.00
Artemisia nova																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			1	2.00	4.35
Ceratoides lanata									1																																										0	0.00	0.00
Ephedra viridis																																																			0	0.00	0.00
Sarcobatus vermiculatus																													1	1	1	1																			4	8.00	17.39
Gutierrezia sarothrae																																																			8	12.00	26.09
Total Shrubs Cover	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Forbs & Succulents																																																					
Machaeranthera canescens																																																			0	0.00	0.00
Plantago patagonica																																																			0	0.00	0.00
Penstemon palmeri																																																			0	0.00	0.00
Opuntia compressa																																																			0	0.00	0.00
Sphaeralcia coccinea																																																			0	0.00	0.00
Echinocereus triglochidiatus																																																			0	0.00	0.00
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Grass																																																					
Agropyron smithii																																																			0	0.00	0.00
Agropyron spicatum																																																			0	0.00	0.00
Agropyron cristatum																																																			0	0.00	0.00
Agropyron trachycaulum																																																			0	0.00	0.00
Aristida longiseta																		1	1																																2	4.00	8.70
Bouteloua gracilis																																																			0	0.00	0.00
Bromus tectorum				1																													1			1	1													1	5	10.00	21.74
Elymus salinus																									1	1	1																								3	6.00	13.04
Elymus cinereus																																																			0	0.00	0.00
Elymus giganteous																																																			0	0.00	0.00
Hilaria jamesii		1															1			1			1	1																											5	10.00	21.74
Oryzopsis hymenoides										1																																									1	2.00	4.35
Sitanion hystrix						1																																													1	2.00	4.35
Stipa comata																																																			0	0.00	0.00
Sporobolus cryptandrus																																																			0	0.00	0.00
Vulpia octaflora																																																			0	0.00	0.00
Total Grass Cover	0	1	0	1	0	1	0	0	0	1	0	0	0	0	0	0	1	1	1	1	0	0	1	1	1	1	1	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	17	34.00	73.91
Trees																																																					
Juniperus osteosperma																																																			0	0.00	0.00
Pinus edulis																																																			0	0.00	0.00
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Total Vegetation Cover	1	1	0	1	0	1	0	0	1	1	0	0	0	0	0	0	1	1	1	1	0	0	1	1	1	1	1	0	1	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	23	46.00	100.00
cryptobiotic							1									1																							1	1											4	8.00	
Physical Features																																																					
Litter																																																			0	0.00	
Rock																													1															1	1						3	6.00	
Bare Ground			1		1			1			1	1	1	1	1						1	1												1	1			1			1	1	1			1	1	1	1		20	40.00	
Total Physical Features	0	0	1	0	1	0	0	1	0	0	1	1	1	1	1	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	1	0	0	1	1	1	1	1	1	1	1	1	0	23	46.00	
																																																			50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

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Lila Canyon Cover Tally Sheet

Date:7/15/03 | Disturbance Site | Transect:13 | UTM:0556064/4364356 | Heading:236

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																							1	1											2	4.00	7.14
Atriplex canescens																																																			0	0.00	0.00
Atriplex confertifolia																																																			0	0.00	0.00
Artemisia nova																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ceratoides lanata																																																			0	0.00	0.00
Ephedra viridis																																																			0	0.00	0.00
Sarcobatus vermiculatus																																																			2	4.00	7.14
Gutierrezia sarothrae										1										1																																	
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	4	8.00	14.29
Forbs & Succulents																																																			0	0.00	0.00
Machaeranthera canescens																																																			0	0.00	0.00
Plantago patagonica																																																			0	0.00	0.00
Penstemon palmeri																																																			0	0.00	0.00
Opuntia compressa									1																		1																								2	4.00	7.14
Sphaeralcia coccinea																																																			0	0.00	0.00
Echinocereus triglochidiatus																																																			2	4.00	7.14
Total Forb Cover	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4.00	7.14
Grass																																																			0	0.00	0.00
Agropyron smithii																																																			0	0.00	0.00
Agropyron spicatum																																																			0	0.00	0.00
Agropyron cristatum																																																			0	0.00	0.00
Agropyron trachycaulum																																																			0	0.00	0.00
Aristida longiseta																																																			0	0.00	0.00
Boutelou gracilis	1	1						1			1	1	1								1	1						1						1							1					1					12	24.00	42.86
Bromus tectorum																			1																																	1	2.00	3.57
Elymus salinus																																																			0	0.00	0.00
Elymus cinereus																																																			0	0.00	0.00
Elymus giganteous					1	1																	1										1																	1	5	10.00	17.86
Hilaria jamesii																		1																											1						2	4.00	7.14
Oryzopsis hymenoides																																																			0	0.00	0.00
Sitanion hystrix																																																			0	0.00	0.00
Stipa comata				1																									1																						2	4.00	7.14
Sporabolus cryptandrus																																																			0	0.00	0.00
Vulpia octaflora																																																			22	44.00	78.57
Total Grass Cover	1	1	0	1	1	1	0	1	0	0	1	1	1	0	0	0	0	1	1	0	1	1	1	0	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	1			
Trees																																																			0	0.00	0.00
Juniperus osteosperma																																																			0	0.00	0.00
Pinus edulis																																																			0	0.00	0.00
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Total Vegetation Cover	1	1	0	1	1	1	0	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	0	0	0	1	1	1	0	0	0	1	1	0	0	0	0	1	1	1	0	0	0	0	1	1	0	0	1	28	56.00	100.00
cryptobiotic																	1									1						1																			3	6.00	
Physical Features																																																					
Litter																																							1												1	2.00	
Rock																																												1	1						2	4.00	
Bare Ground			1				1								1	1	1							1	1					1	1				1	1	1					1	1					1	1		16	32.00	
Total Physical Features	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	1	1	1	1	0	0	0	1	1	1	1	0	0	1	1	0	19	38.00	
																																																			50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

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City of St. Geo Building

Lila Canyon Cover Tally Sheet

Date: 7/15/03 | Disturbance Site | Transect: 14 | UTM: 0556008/4364326 | Heading: 275

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																					
Atriplex canescens																																																					
Atriplex confertifolia	1																									1										1															3	6.00	13.04
Artemisia nova																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ceratoides lanata																																																			0	0.00	0.00
Ephedra viridis																																																			0	0.00	0.00
Sarcobatus vermiculatus																																																			0	0.00	0.00
Gutierrezia sarothrae																									1																							1			2	4.00	8.70
Total Shrubs Cover	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	5	10.00	21.74
Forbs & Succulents																																																					
Machaeranthera canescens																																																			0	0.00	0.00
Plantago patagonica																																																			0	0.00	0.00
Penstemon palmeri																																																			0	0.00	0.00
Opuntia compressa																																																			0	0.00	0.00
Sphaeralcia coccinea																															1																				1	2.00	4.35
Leptodactylon juncea					1																																														1	2.00	4.35
Echinocereus triglochidiatus																																																			0	0.00	0.00
Total Forb Cover	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4.00	8.70
Grass																																																			0	0.00	0.00
Agropyron smithii																																																			0	0.00	0.00
Agropyron spicatum																																																			0	0.00	0.00
Agropyron cristatum																																																			0	0.00	0.00
Agropyron trachycaulum																																																			0	0.00	0.00
Aristida longiseta																																									1										1	2.00	4.35
Boutelou gracilis																																1																			1	2.00	4.35
Bromus tectorum				1																							1	1	1	1																		1			6	12.00	26.09
Elymus salinus												1	1																																						2	4.00	8.70
Elymus cinereus																																																			0	0.00	0.00
Elymus giganteous																																																			0	0.00	0.00
Hilaria jamesii							1	1	1																																										3	6.00	13.04
Oryzopsis hymenoides																																							1												1	2.00	4.35
Sitanion hystrix																																																			0	0.00	0.00
Stipa comata																																																			0	0.00	0.00
Sporabolus cryptandrus																																																			0	0.00	0.00
Vulpia octaflora																																																			0	0.00	0.00
Total Grass Cover	0	0	0	1	0	0	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	14	28.00	60.87
Trees																																																					
Juniperus osteosperma																		1	1																																2	4.00	8.70
Pinus edulis																																																			0	0.00	0.00
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4.00	8.70
Total Vegetation Cover	1	0	0	1	1	0	1	1	1	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	1	1	0	0	23	46.00	100.00
cryptobiotic							1				1												1	1																											4	8.00	
Physical Features																																																					
Litter																																				1							1							2	4.00	
Rock		1	1												1	1	1																					1			1		1		1	1	1				11	22.00	
Bare Ground										1								1			1	1			1								1	1				1										1	1	10	20.00	
Total Physical Features	0	1	1	0	0	0	0	0	0	1	0	0	0	1	1	1	1	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	1	1	1	0	1	1	0	1	0	1	1	1	1	1	0	0	1	1	23	46.00	
																																																			50	100.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			

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Lila Canyon Cover Sheet

Date:09/05/2003 | Disturbance Site | Transect:22 | UTM:556268/4364276 | Heading:173

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																						
Atriplex canescens																																																				0	0.00	0.00
Atriplex confertifolia																																																				0	0.00	0.00
Atriplex cuneata																																																				0	0.00	0.00
Artemisia nova																																																				0	0.00	0.00
Artemisia spinescens																																																				0	0.00	0.00
Artemisia tridentata tridentata																																																				0	0.00	0.00
Chrysothamnus nauseosus																																																				0	0.00	0.00
Chrysothamnus viscidiflorus																																																				0	0.00	0.00
Cowania mexicana																																																				0	0.00	0.00
Ceratoides lanata																																																				0	0.00	0.00
Ephedra viridis																																																				0	0.00	0.00
Sarcobatus vermiculatus																																																				0	0.00	0.00
Gutierrezia sarothrae																																																				0	0.00	0.00
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Forbs & Succulents																																																						
Machaeranthera canescens																																																				0	0.00	0.00
Echinocereus triglochidiatus																																																				0	0.00	0.00
Penstemon palmeri																																																				0	0.00	0.00
Opuntia compressa																																																				0	0.00	0.00
Sphaeralcia coccinea																																																				0	0.00	0.00
Euphorbia fendleri												1																																								1	2.00	6.67
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2.00	6.67
Grass																																																						
Agropyron smithii																																																						
Agropyron spicatum																																																				0	0.00	0.00
Agropyron cristatum																																																				0	0.00	0.00
Agropyron trachycaulum																																																				0	0.00	0.00
Aristida longiseta																																																				0	0.00	0.00
Bromus tectorum																																																				0	0.00	0.00
Elymus salinus													1																											1												2	4.00	13.33
Elymus cinereus																																																				0	0.00	0.00
Elymus giganteous																																																				0	0.00	0.00
Hilaris jamesii						1																																														1	2.00	6.67
Oryzopsis hymenoides																																																				0	0.00	0.00
Sitanion hystrix																																																				0	0.00	0.00
Stipa comata																																																				0	0.00	0.00
Vulpia octaflora																																												1								1	2.00	6.67
Total Grass Cover	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	4	8.00	26.67
Trees																																																						
Juniperus osteosperma				1	1																			1	1							1	1	1																7	14.00	46.67
Pinus edulis	1																																																	1	1	3	6.00	20.00
Total Tree Cover	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	10	20.00	66.67
Total Vegetation Cover	1	0	0	1	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	1	15	30.00	100.00
cryptobiotic																				1										1	1							1								1	1				6	12.00	
Physical Features																																																						
Litter											1															1	1													1											4	8.00	
Rock		1	1				1																					1							1	1					1	1	1								9	18.00	
Bare Ground								1	1	1				1	1	1	1	1	1		1	1	1						1								1							1				1			16	32.00	
Total Physical Features	0	1	1	0	0	0	1	1	1	1	1	0	0	1	1	1	1	1	1	0	1	1	1	0	0	1	1	1	1	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	1	0	0	1	0	0	29	58.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	50	100.00	

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Div. of Oil, Gas & Mining

Lila Canyon Cover Sheet

Date:09/05/2003 | Disturbance Site | Transect:23 | UTM:556240/4364236 | Heading:5

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																			0	0.00	0.00
Atriplex canescens																																																			0	0.00	0.00
Atriplex confertifolia																																																			0	0.00	0.00
Atriplex cuneata																																																			0	0.00	0.00
Artemisia nova																																																			0	0.00	0.00
Artemisia spinescens																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ceratoides lanata																																																			0	0.00	0.00
Ephedra viridis																																										1									1	2.00	7.14
Leptodactylon pungens																																																			0	0.00	0.00
Sarcobatus vermiculatus																																			1																	1	2.00	7.14
Gutierrezia sarothrae																																																			2	4.00	14.29
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0			
Forbs & Succulents																																																			0	0.00	0.00
Machaeranthera canescens																																																			0	0.00	0.00
Echinocereus triglochidiatus																																																			0	0.00	0.00
Opuntia compressa																																																			0	0.00	0.00
Sphaeralcia coccinea																																																			0	0.00	0.00
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Grass																																																			0	0.00	0.00
Agropyron smithii																																																			0	0.00	0.00
Agropyron spicatum																																																			0	0.00	0.00
Agropyron cristatum																																																			0	0.00	0.00
Agropyron trachycaulum																																																			0	0.00	0.00
Aristida longiseta																																																			0	0.00	0.00
Bromus tectorum																																																	1		1	2.00	7.14
Elymus salinus																																																			0	0.00	0.00
Elymus cinereus																																																			0	0.00	0.00
Elymus giganteous																																																			3	6.00	21.43
Hilaria jamesii															1																					1	1														0	0.00	0.00
Oryzopsis hymenoides																																																			0	0.00	0.00
Sitanion hystrix																																																	1		1	2.00	7.14
Stipa comata																																																			0	0.00	0.00
Vulpia octaflora																																																			0	0.00	0.00
Total Grass Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	5	10.00	35.71
Trees																																																			7	14.00	50.00
Juniperus osteosperma		1	1	1						1						1	1	1																																	0	0.00	0.00
Pinus edulis																																																			7	14.00	50.00
Total Tree Cover	0	1	1	1	0	0	0	0	0	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Total Vegetation Cover	0	1	1	1	0	0	0	0	0	1	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	1	0	0	0	0	0	1	1	0	14	28.00	100.00
cryptobiotic	1					1							1							1	1	1												1																	7	14.00	
Physical Features																																																			2	4.00	
Litter																														1																	1				10	20.00	
Rock									1					1															1		1	1	1						1					1			1			1	17	34.00	
Bare Ground					1		1	1			1	1											1	1	1	1	1	1							1					1	1	1		1		1							
Total Physical Features	0	0	0	0	1	0	1	1	1	0	1	1	0	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0	1	1	1	1	0	1	1	1	1	1	0	0	1	29	58.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	50	100.00	

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Lila Canyon Cover Sheet

Date:09/05/2003 | Disturbance Site | Transect:24 | UTM:556267/4364245 | Heading:52

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																					
Atriplex canescens																																																			0	0.00	0.00
Atriplex confertifolia																																																			0	0.00	0.00
Atriplex cuneata																																																			0	0.00	0.00
Artemisia nova																																																			0	0.00	0.00
Artemisia spinescens																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ephedra viridis																																																			0	0.00	0.00
Sarcobatus vermiculatus																																																			0	0.00	0.00
Gutierrezia sarothrae																																																			0	0.00	0.00
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Forbs & Succulents																																																					
Machaeranthera canescens																																																			0	0.00	0.00
Echinocereus triglochidiatus																																																			0	0.00	0.00
Penstemon palmeri																																																			0	0.00	0.00
Opuntia compressa																																																			0	0.00	0.00
Sphaeralcia coccinea																																																			0	0.00	0.00
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Grass																																																					
Agropyron smithii																																																			0	0.00	0.00
Agropyron spicatum																																																			0	0.00	0.00
Agropyron cristatum																																																			0	0.00	0.00
Agropyron trachycaulum																																																			0	0.00	0.00
Aristida longiseta																																																			0	0.00	0.00
Bromus tectorum																									1																						1				2	4.00	13.33
Elymus salinus																																																			0	0.00	0.00
Elymus cinereus																																																			0	0.00	0.00
Elymus gigantseus																							1										1																	2	4.00	13.33
Hilaris jamesii																																																			0	0.00	0.00
Oryzopsis hymenoides																																																			0	0.00	0.00
Sitanion hystrix																																																			0	0.00	0.00
Stipa comata																																																			0	0.00	0.00
Vulpia octaflora																																																			0	0.00	0.00
Total Grass Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	8.00	26.67
Trees																																																					
Juniperus osteosperma				1	1									1	1	1	1	1								1	1							1																	9	18.00	60.00
Pinus edulis													1																			1																				2	4.00	13.33
Total Tree Cover	0	0	0	1	1	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	22.00	73.33
Total Vegetation Cover	0	0	0	1	1	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	1	1	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	15	30.00	100.00
cryptobiotic																																																	1	1	2	4.00	
Physical Features																																																					
Litter																																																			0	0.00	
Rock												1							1			1	1						1			1																			6	12.00	
Bare Ground	1	1	1			1	1	1	1	1	1									1	1				1					1	1				1	1	1	1	1	1	1	1	1	1	1	1		1			27	54.00	
Total Physical Features	1	1	1	0	0	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	33	66.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	50	100.00	
Oryzopsis Hymenoides present																																																					

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Lila Canyon Cover Sheet

Date:09/05/2003 | Disturbance Site | Transect:25 | UTM:556268/436431 | Heading:187

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																					
Atriplex canescens																					1																										1				2	4.00	9.09
Atriplex confertifolia																																																			0	0.00	0.00
Atriplex cuneata																																																			0	0.00	0.00
Artemisia nova																																																			0	0.00	0.00
Artemisia spinescens																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ceratoides lanata																																																			0	0.00	0.00
Ephedra viridis													1																																						1	2.00	4.55
Sarcobatus vermiculatus																																																			0	0.00	0.00
Gutierrezia sarothrae																																																			0	0.00	0.00
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	6.00	13.64
Forbs & Succulents																																																					
Machaeranthera canescens																																																			0	0.00	0.00
Echinocereus triglochidiatus																																		1																	1	2.00	4.55
Penstemon palmeri																																																			0	0.00	0.00
Opuntia compressa																																																			0	0.00	0.00
Sphaeralcia coccinea																																																			0	0.00	0.00
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2.00	4.55
Grass																																																					
Agropyron smithii																																																			0	0.00	0.00
Agropyron spicatum																																																			0	0.00	0.00
Agropyron cristatum																																																			0	0.00	0.00
Agropyron trachycaulum																																																			0	0.00	0.00
Aristida longiseta																																																			0	0.00	0.00
Bromus tectorum																																																			0	0.00	0.00
Elymus salinus																																			1	1	1	1							1	1					6	12.00	27.27
Elymus cinereus																																																			0	0.00	0.00
Elymus gigenteous																																																			0	0.00	0.00
Hilaria jamesii																																																			0	0.00	0.00
Oryzopsis hymenoides																																																			0	0.00	0.00
Sitanion hystrix																																																			0	0.00	0.00
Stipa comata																																																			0	0.00	0.00
Vulpia octoflora																1																																			1	2.00	4.55
Total Grass Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	1	1	0	0	0	0	7	14.00	31.82
Trees																																																					
Juniperus osteosperma		1	1	1	1	1	1										1			1		1	1																								1			11	22.00	50.00
Pinus edulis																																																			0	0.00	0.00
Total Tree Cover	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0		11	22.00	50.00
Total Vegetation Cover	0	1	1	1	1	1	1	0	0	0	0	0	1	0	0	1	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	1	1	1	1	0	0	22	44.00	100.00
cryptobiotic																										1	1															1	1								4	8.00	
Physical Features																																																					
Litter																																1	1																		2	4.00	
Rock	1										1	1							1	1					1						1																				7	14.00	
Bare Ground								1	1	1				1	1											1			1	1	1								1	1	1				1				1	1	15	30.00	
Total Physical Features	1	0	0	0	0	0	0	1	1	1	1	1	0	1	1	0	0	1	1	0	0	0	0	1	1	0	0	1	1	1	1	1	1	0	0	0	0	0	1	1	1	0	0	1	0	0	0	0	1	1	24	48.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	50	100.00	

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Lila Canyon Cover Sheet

Date:09/05/2003 | Disturbance Site | Transect:26 | UTM:556265/4364288 | Heading:300

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																					
Atriplex canescens																																								1												1	2.00	4.17
Atriplex confertifolia																																																				0	0.00	0.00
Atriplex cuneata																																																				0	0.00	0.00
Artemisia nova																																																				0	0.00	0.00
Artemisia spinescens																																																				0	0.00	0.00
Artemisia tridentata tridentata																																																				0	0.00	0.00
Chrysothamnus nauseosus																																																				0	0.00	0.00
Chrysothamnus viscidiflorus																																																				0	0.00	0.00
Cowania mexicana																																																				0	0.00	0.00
Ceratoides lanata																																																				0	0.00	0.00
Ephedra viridis																																																				0	0.00	0.00
Sarcobatus vermiculatus																																																				0	0.00	0.00
Gutierrezia sarothrae																																																				0	0.00	0.00
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	2.00	4.17
Forbs & Succulents																																																						
Machaeranthera canescens																																																				0	0.00	0.00
Echinocereus triglochidiatus																																																				0	0.00	0.00
Penstemon palmeri																																																				0	0.00	0.00
Opuntia compressa															1																	1																				2	4.00	8.33
Sphaeralcia coccinea																																																				0	0.00	0.00
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4.00	8.33
Grass																																																						
Agropyron smithii																																																				0	0.00	0.00
Agropyron spicatum																																																				0	0.00	0.00
Agropyron cristatum																																																				0	0.00	0.00
Agropyron trachycaulum																																																				0	0.00	0.00
Aristida longiseta																																																				0	0.00	0.00
Bromus tectorum																																																				0	0.00	0.00
Elymus salinus								1	1	1						1	1								1	1															1			1							9	18.00	37.50
Elymus cinereus																																																				0	0.00	0.00
Elymus giganteous																																																				0	0.00	0.00
Hilaria jamesii																											1																									1	2.00	4.17
Oryzopsis hymenoides																												1																								1	2.00	4.17
Sitanion hystrix																																																				0	0.00	0.00
Stipa comata											1	1																																								2	4.00	8.33
Vulpia octaflora							1																																													1	2.00	4.17
Total Grass Cover	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	1	1	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	14	28.00	58.33
Trees																																																						
Juniperus osteosperma	1																						1	1									1									1	1								6	12.00	25.00
Pinus edulis																																							1													1	2.00	4.17
Total Tree Cover	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	7	14.00	29.17
Total Vegetation Cover	1	0	0	0	0	0	1	1	1	1	1	1	0	0	1	1	1	0	0	0	0	0	1	1	1	1	1	1	0	0	0	1	1	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	24	48.00	100.00
cryptobiotic																					1	1																														2	4.00	
Physical Features																																																						
Litter																																																				0	0.00	
Rock			1	1	1								1	1					1																																	6	12.00	
Bare Ground		1				1														1	1									1	1	1			1	1	1	1	1						1	1	1	1	1	1	18	36.00	
Total Physical Features	0	1	1	1	1	1	0	0	0	0	0	0	1	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1	24	48.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	50	100.00	

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Lila Canyon Cover Sheet

Date:09/05/2003 | Disturbance Site | Transect:27 | UTM:556865/4364329 | Heading:135

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																			0	0.00	0.00
Atriplex canescens																																																			0	0.00	0.00
Atriplex confertifolia																																																			0	0.00	0.00
Atriplex cuneata																																																			0	0.00	0.00
Artemisia nova																																																			0	0.00	0.00
Artemisia spinescens																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Cerstoides lanata																																																			0	0.00	0.00
Ephedra viridis																																																			0	0.00	0.00
Sarcobatus vermiculatus																																																			0	0.00	0.00
Gutierrezia sarothrae																																																			0	0.00	0.00
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Forbs & Succulents																																																			0	0.00	0.00
Machaeranthera canescens																																																			0	0.00	0.00
Echinocereus triglochidiatus																																																			0	0.00	0.00
Penstemon palmeri																																																			0	0.00	0.00
Opuntia compressa																																																			0	0.00	0.00
Sphaeralcia coccinea																																																			0	0.00	0.00
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Grass																																																			0	0.00	0.00
Agropyron smithii																																																			0	0.00	0.00
Agropyron spicatum																																																			0	0.00	0.00
Agropyron cristatum																																																			0	0.00	0.00
Agropyron trachycaulum																																																			0	0.00	0.00
Aristida longiseta																																																			0	0.00	0.00
Bromus tectorum										1																		1	1													1	1									5	10.00	38.46
Elymus salinus																																																			0	0.00	0.00
Elymus cinereus																																																			0	0.00	0.00
Elymus giganteous																																									1										1	2.00	7.69
Hilaria jamesii																																																			0	0.00	0.00
Oryzopsis hymenoides																																																			0	0.00	0.00
Sitanion hystrix																														1																					1	2.00	7.69
Stipa comata																																																			0	0.00	0.00
Vulpia octaflora																																																			0	0.00	0.00
Total Grass Cover	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	7	14.00	53.85
Trees																																																					
Juniperus osteosperma	1	1	1																																									1	1	1						6	12.00	46.15
Pinus edulis																																																			0	0.00	0.00
Total Tree Cover	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	6	12.00	46.15
Total Vegetation Cover	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	13	26.00	100.00
cryptobiotic					1	1															1	1	1											1						1								1			8	16.00	
Physical Features																																																					
Litter					1																																															1	2.00	
Rock											1	1																1							1	1					1								1			7	14.00	
Bare Ground							1	1	1				1	1	1	1	1	1	1					1	1	1	1					1	1				1	1	1							1			1	21	42.00	
Total Physical Features	0	0	0	1	0	0	1	1	1	0	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	0	0	0	1	1	0	1	1	1	1	1	0	1	0	0	0	0	0	0	1	0	1	1	29	58.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	50	100.00	
Bud sage present																																																					

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Lila Canyon Cover Sheet

Date:09/05/2003 | Disturbance Site | Transect:28 | UTM:556284/4364283 | Heading:91

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																					
Atriplex canescens																																																			0	0.00	0.00
Atriplex confertifolia																																																			0	0.00	0.00
Atriplex cuneata																																																			0	0.00	0.00
Artemisia nova																																																			0	0.00	0.00
Artemisia spinescens																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Ceratoides lanata																																																			0	0.00	0.00
Ephedra viridis																																																			0	0.00	0.00
Sarcobatus vermiculatus																																															1				2	4.00	22.22
Gutierrezia sarothrae																								1																													
Total Shrube Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	4.00	22.22
Forbs & Succulents																																																			0	0.00	0.00
Machaeranthera canescens																																																			0	0.00	0.00
Echinocereus triglochidiatus																																																			0	0.00	0.00
Penstemon palmeri																																																			0	0.00	0.00
Opuntia compressa																																																			0	0.00	0.00
Sphaeralcia coccinea																																																			0	0.00	0.00
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Grass																																																			0	0.00	0.00
Agropyron smithii																																																			0	0.00	0.00
Agropyron spicatum																																																			0	0.00	0.00
Agropyron cristatum																																																			0	0.00	0.00
Agropyron trachycaulum																																																			0	0.00	0.00
Aristida longiseta																																																			0	0.00	0.00
Bromus tectorum																																																			0	0.00	0.00
Elymus salinus																																																			0	0.00	0.00
Elymus cinereus																																																			0	0.00	0.00
Elymus gigenteous																																										1						1			2	4.00	22.22
Hilaria jamesii																																																			0	0.00	0.00
Oryzopsis hymenoides																																																			0	0.00	0.00
Sitanion hystrix																																																			0	0.00	0.00
Stipa comata																																																			0	0.00	0.00
Vulpia octaflora																																																			0	0.00	0.00
Total Grass Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	2	4.00	22.22
Trees																																																					
Juniperus osteosperma		1				1	1	1															1																												5	10.00	55.56
Pinus edulis																																																			0	0.00	0.00
Total Tree Cover	0	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	10.00	55.56
Total Vegetation Cover	0	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	9	18.00	100.00
cryptobiotic									1	1											1	1																							1					1	6	12.00	
Physical Features																																																					
Litter																								1																											1	2.00	
Rock												1	1	1	1	1	1	1	1	1																		1	1	1						1					13	26.00	
Bare Ground	1		1	1	1						1														1	1	1	1	1	1	1	1	1	1	1	1					1		1	1					1		21	42.00	
Total Physical Features	1	0	1	1	1	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	0	0	1	0	35	70.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	50	100.00	

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Lila Canyon Cover Sheet

Date:09/05/2003 | Disturbance Site | Transect:29 | UTM:556245/4364251 | Heading:119

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																					
Atriplex canescens																																																			0	0.00	0.00
Atriplex confertifolia																																																			0	0.00	0.00
Atriplex cuneata																																																			0	0.00	0.00
Artemisia nova																																																			0	0.00	0.00
Artemisia spinescens																																																			0	0.00	0.00
Artemisia tridentata tridentata																																																			0	0.00	0.00
Chrysothamnus nauseosus																																																			0	0.00	0.00
Chrysothamnus viscidiflorus																																																			0	0.00	0.00
Cowania mexicana																																																			0	0.00	0.00
Cerstoides lanata																																																			0	0.00	0.00
Ephedra viridis																																																			1	2.00	6.67
Leptodactylon pungens									1																																										0	0.00	0.00
Sarcobatus vermiculatus																																																			0	0.00	0.00
Gutierrezia sarothrae																																																					
Total Shrubs Cover	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2.00	6.67
Forbs & Succulents																																																			0	0.00	0.00
Machaeranthera canescens																																																			0	0.00	0.00
Echinocereus triglochidiatus																																																			0	0.00	0.00
Penstemon palmeri																																																			0	0.00	0.00
Opuntia compressa																																																			0	0.00	0.00
Sphaeralcia coccinea																																																			0	0.00	0.00
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Grass																																																			0	0.00	0.00
Agropyron smithii																																																			0	0.00	0.00
Agropyron spicatum																																																			0	0.00	0.00
Agropyron cristatum																																																			0	0.00	0.00
Agropyron trachycaulum																																																			0	0.00	0.00
Aristida longiseta																																																			0	0.00	0.00
Bromus tectorum																			1																																1	2.00	6.67
Elymus salinus																																																			0	0.00	0.00
Elymus cinereus																																																			0	0.00	0.00
Elymus giganteous														1																																	1			1	3	6.00	20.00
Hilaria jamesii																																																			0	0.00	0.00
Oryzopsis hymenoides																																																			0	0.00	0.00
Sitanion hystrix																																																			0	0.00	0.00
Stipa comata																																																			0	0.00	0.00
Vulpia octaflora																																																			0	0.00	0.00
Total Grass Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	4	8.00	26.67
Trees																																																					
Juniperus osteosperma																		1			1	1								1	1	1	1									1	1	1							10	20.00	66.67
Pinus edulis																																																			0	0.00	0.00
Total Tree Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	10	20.00	66.67
Total Vegetation Cover	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	1	0	1	1	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	0	0	1	0	0	1	15	30.00	100.00
cryptobiotic										1	1														1																1										4	8.00	
Physical Features																																																					
Litter																								1					1																						2	4.00	
Rock												1	1								1			1			1	1						1	1	1	1	1							1	1					13	26.00	
Bare Ground	1	1	1	1	1	1	1	1							1	1	1											1											1	1								1	1		16	32.00	
Total Physical Features	1	1	1	1	1	1	1	1	0	0	0	1	1	0	1	1	1	0	0	1	0	0	1	1	0	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	1	1	0	1	1	0	31	62.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	50	100.00	
Euphorbia present																																																					

INCORPORATED
MAY 18 2007

Lila Canyon Cover Sheet

Date:09/05/2003 | Disturbance Site | Transect:30 | UTM:556291/4364229 | Heading:315

Plant Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	Total	Percent Cover	Relative Vegetative Cover
Shrubs																																																					
Atriplex canescens											1																																									1	2.00	4.35
Atriplex confertifolia																																																					0	0.00	0.00
Atriplex cuneata																																																					0	0.00	0.00
Artemisia nova																																																					0	0.00	0.00
Artemisia spinescens																																																					0	0.00	0.00
Artemisia tridentata tridentata																																																					0	0.00	0.00
Chrysothamnus nauseosus																																																					0	0.00	0.00
Chrysothamnus viscidiflorus																																																					0	0.00	0.00
Cowania mexicana																																																					0	0.00	0.00
Ceratoides lanata																																																					0	0.00	0.00
Ephedra viridis																																																					0	0.00	0.00
Sarcobatus vermiculatus																																																					0	0.00	0.00
Gutierrezia sarothrae																																											1										1	2.00	4.35
Total Shrubs Cover	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	4.00	8.70
Forbs & Succulents																																																						
Macheeranthera canescens																																																					0	0.00	0.00
Echinocereus triglochidiatus																																																					0	0.00	0.00
Penstemon palmeri																																																					0	0.00	0.00
Opuntia compressa																																								1														1	2.00	4.35
Sphaeralcia coccinea																																																					0	0.00	0.00
Total Forb Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	2.00	4.35
Grass																																																						
Agropyron smithii																																																					0	0.00	0.00
Agropyron spicatum																																																					0	0.00	0.00
Agropyron cristatum																																																					0	0.00	0.00
Agropyron trachycaulum																																																					0	0.00	0.00
Aristida longiseta																																																					0	0.00	0.00
Bromus tectorum																			1																																		1	2.00	4.35
Elymus salinus																		1							1																												2	4.00	8.70
Elymus cinereus																																																					0	0.00	0.00
Hilaria jamesii																																																					0	0.00	0.00
Oryzopsis hymenoides																																																					0	0.00	0.00
Sitanion hystrix																																																					0	0.00	0.00
Stipa comata																					1																																1	2.00	4.35
Vulpia octoflora																																																					0	0.00	0.00
Total Grass Cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	8.00	17.39
Trees																																																						
Juniperus osteosperma				1	1	1	1	1	1														1	1									1	1	1										1	1					13	26.00	56.52
Pinus edulis																																																1	1	1	3	6.00	13.04
Total Tree Cover	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	16	32.00	69.57
Total Vegetation Cover	0	0	0	1	1	1	1	1	1	0	1	0	0	0	0	0	0	1	1	0	1	0	1	1	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0	1	0	0	1	0	1	1	0	1	1	1	23	46.00	100.00
cryptobiotic																																																					0	0.00	
Physical Factors																																																						
Litter																																																					0	0.00	
Rock												1	1	1	1							1				1	1	1	1	1	1									1												12	24.00	
Bare Ground	1	1	1							1						1	1			1												1				1	1	1			1	1		1			1				15	30.00	
Total Physical Features	1	1	1	0	0	0	0	0	0	1	0	1	1	1	1	1	1	0	0	1	0	1	0	0	0	1	1	1	1	1	1	1	0	0	0	1	1	1	1	0	1	1	0	1	0	0	1	0	0	0	27	54.00	
Comments:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	50	100.00	

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Appendix 3

Woody Plant Density Data

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Table A. Lila Canyon Woody Plant Density

Reference Area Totals

Date:	7/18/2003-9/5/2003																	
Area:	**Reference**																	
Transect:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total	Plants/acre by species	
UTM:	555760	555839	555859	555849	555864	555856	555823	555842	555876	555894	555847	555862	555867	555875	555862			
	4364046	4363949	4364031	4363958	4364002	4364041	4364024	4364027	4364060	4363962	4363985	4364004	4364020	4363996	4363979			
Heading:	216	302	307	34	248	42	131	81	139	237	1	94	246	257	5			
Shrubs																		
Atriplex canescens	1		2	5		3	2	5	5	2	1		3	5	1	35	101.64	
Atriplex confertifolia		17		8					7	17	32	33	1	26	23	164	476.26	
Artemisia tridentata tridentata												5				5	14.52	
Chrysothamnus nauseosus										2		2				4	11.62	
Ceratoides lanata		1				1	1	1					1			5	14.52	
Ephedra viridis		3											1			4	11.62	
Sarcobatus vermiculatus							4				3			4	3	14	40.66	
Gutierrezia sarothrae	2	4	6	1	5	3	13	6	2	3	4	4	11	2	15	81	235.22	
Artemisia spinescens	2	1	6	1	3						5			1		19	55.18	
Leptodactyton pungens					5				1							6	17.42	
Yucca harrmanea							2				1					3	8.71	
Total Shrubs Cover	5	26	14	15	13	7	22	12	15	24	46	44	17	38	42	340	987.36	
Trees																		
Juniper	1	2	4	1		3	1	3	3				2	1		21	60.98	
Pinyon	1															1	2.90	
Total Tree Cover	2	2	4	1	0	3	1	3	3	0	0	0	2	1	0	22	63.89	
Total Woody Plants	7	28	18	16	13	10	23	15	18	24	46	44	19	39	42	362	1051.25	
Plants/acre	304.92	1219.68	784.08	696.96	566.28	435.6	1001.88	653.4	784.08	1045.44	2003.76	1916.64	827.64	1698.84	1829.52			

Average Plants/acre	1051.25
Standard Deviation	558.05
90% Confidence Interval	237.00

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Table A. Lila Canyon Woody Plant Density

Disturbance Site Totals

Date:	7/18/2003-9/5/2003																
Area:	**Disturbance**																
Transect:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total	Plants/acre by species
UTM:	556184	556171	556185	556064	556099	556007	556004	556005	556025	556291	556166	556294	556271	556266	565865		
	4364387	4364379	4364369	4364371	4364343	4364381	4364329	4364319	4364334	4364299	4364351	4364239	4364293	4364311	4364329		
Heading:	47	230	207	187	248	307	154	45	108	315	57	278	66	187	135		
Shrubs																	
Atriplex canescens	1	16	19	1			3	1		2	3	3		3	5	57	165.53
Atriplex confertifolia		1		9	13	9	17	10	6		1					66	191.66
Artemisia tridentata tridentata	1															1	2.90
Chrysothamnus nauseosus			1			4	5		1							11	31.94
Ceratoides lanata	6	9		5	5	9	17	8	2							61	177.14
Ephedra viridis				1											1	2	5.81
Gutierrezia sarothrae	19	3	2	14	24	27		30	28	5	4	20	5	1	2	184	534.34
Leptodactylon pungens										1	1			3	1	6	17.42
																0	
Total Shrubs Cover	27	29	22	30	42	49	42	49	37	8	9	23	5	7	9	388	1126.75
Trees																	
Juniper										7	2	2	8	7	6	32	92.93
Pinyon		1				1				3	1				2	8	23.23
Fraxinus anomala										1			1			2	5.81
Total Tree Cover	0	1	0	0	0	1	0	0	0	11	3	2	9	7	8	42	121.97
Total Woody Plants	27	30	22	30	42	50	42	49	37	19	12	25	14	14	17	430	1248.72
Plants/acre	1176.12	1306.8	958.32	1306.8	1829.52	2178	1829.52	2134.44	1611.72	827.64	522.72	1089	609.84	609.84	740.52		
Average Plants/acre	1248.72																
Standard Deviation	473.09																
90% Confidence Interval	200.92																

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Appendix 4

NRCS Productivity Estimate Letter

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Appendix 5

Similarity Table

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Appendix 5

Lila Canyon Similarity Comparisons - Reference Area & Disturbance Site

Reference Area			Disturbance Site		
Species	Frequency (per 20 transects)	% Cover (per 1000 points)	Species	Frequency (per 30 transects)	% Cover (per 1500 points)
Salina wild rye	15	11.30	Salina wild rye	25	9.42
Cheat grass	12	6.30	Cheat grass	16	9.29
Galleta grass	16	5.30	Galleta grass	26	6.01
Shadscale	14	4.40	Shadscale	6	0.60
Globe mallow	11	3.20	Globe mallow	7	0.67
Needle and Thread	11	2.90	Needle and Thread	13	1.54
Six weeks fescue	12	2.40	Six weeks fescue	9	0.73
Utah juniper	6	2.10	Utah juniper	19	7.68
Squirreltail	10	2.00	Squirreltail	4	0.33
Indian rice grass	9	1.80	Indian rice grass	12	1.27
Fourwing saltbush	6	1.30	Fourwing saltbush	8	1.07
Snakeweed	5	0.90	Snakeweed	16	2.00
Big sagebrush	2	0.60	Big sagebrush	2	0.13
Yellow cryptantha	4	0.50	Yellow cryptantha	1	0.07
Prickly pear cactus	4	0.40	Prickly pear cactus	9	0.67
Three awn	3	0.30	Three awn	1	0.07
Skeleton weed	1	0.30	Skeleton weed	1	0.07
Purple aster	1	0.30	Purple aster	NOT OBSERVED	
Budsage	1	0.20	Budsage	NOT OBSERVED	
Green Ephedra	2	0.20	Green Ephedra	1	0.07
Hedgehog cactus	2	0.20	Hedgehog cactus	2	0.13
Blue gramma	1	0.20	Blue gramma	2	0.27
Winterfat	1	0.10	Winterfat	6	0.47
Big Rabbitbrush	1	0.10	Big Rabbitbrush	1	0.07
Greasewood	1	0.10	Greasewood	2	0.33
Scorpion weed	1	0.10	Scorpion weed		

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Chrysothamnus albidus (unconfirmed)	1	0.10	Chrysothamnus albidus (unconfirmed)	NOT OBSERVED	
Pinyon pine	NOT OBSERVED		Pinyon pine	8	1.20
Prickly Gilia	NOT OBSERVED		Prickly Gilia	3	0.27
Sand dropseed	NOT OBSERVED		Sand dropseed	4	0.47
Fendler spurge	NOT OBSERVED		Fendler spurge	3	0.27
Plantago	NOT OBSERVED		Plantago	1	0.07
27 Total species; 3 species >5% cover			28 total species; 4 species >5% cover		

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Appendix 6

Recommended Revegetation Seed Mixture

Previous vegetation studies of the Lila Canyon area produced a vegetation reseeding mixture. After reviewing the list, and considering that the post-mining land use will be wildlife/grazing, I recommend the list previously generated be use in post-mining revegetation projects. See attached list.

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INTERIM AND FINAL RECLAMATION SEED MIX

Recommended Seed Mix for Lila Canyon Mine

	Pounds PLS/Acre
GRASSES	
Needle and Thread Grass	2
Indian Ricegrass	2
Basin Wild Rye	1
Galleta	1
Bluebunch Wheatgrass	1
Slender Wheatgrass	2
Blue grama	1
FORBS	
Blue Flax	1
Palmer Penstemon	0.25
Globemallow (*Sphaeralcea ambigua*)	0.5
Indian Paintbrush (*Castilleja liniaeriaefolia*)	0.1
Fringed Sage	0.1
SHRUBS	
Wyoming Big Sage	0.25
Green Rabbitbrush	0.5
Fourwing Saltbush	3
Winterfat	1
Shadscale	1
Cliffrose	1
Black Sage	0.25

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Appendix 7

Presence of Plant Species of Concern

During the sampling period Mr. Jay Marshall, UtahAmerican Energy, requested that we conduct cursory surveys in the Lila Canyon area to determine the presence of 3 plant species of concern. The plants of concern were: 1) Creutzfeldt-flower (*Cryptantha creuzfeldtii* Welsh) a member of the Boraginacae family, 2) Coal-cliffs Sweet Vetch (*Hedysarum occidentale* var. *canone*) a member of the Fabaceae family, and 3) Horse Canyon Stickleaf (*Mentzeliea multicaulis* var. *librina* Thorne & F.G. Sm.). See attached letter to Mr. Marshall and plant description sheets.

No evidence was found of any of the 3 species in question.

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NRCS Natural Resources Conservation Service

NRCS Utah

United States Department of Agriculture

Natural Resources Conservation Service

Price F.O.
350 N. 400 E.
Price, UT
84501

Phone:
637-0041 x24

FAX
435-637-3146

August 22, 2003

Mr. Jay Marshall
UtahAmerican Energy, Inc.
375 S. Carbon Ave., #127
Price, UT 84501

Re: Productivity Estimate for Proposed Lila Canyon Mine

Dear Mr. Marshall,

Following our visit on August 21, 2003 to the proposed mine site in Lila Canyon I have the following determinations for vegetative production (dry weight) this year based on the existing physical characteristics of the landscape as well as climatic conditions of the area. The disturbed area has approximately 350 pounds per acre (mid seral) for the grass/shrub site while the pinyon-juniper sites on the disturbed area have approximately 250 (mid seral) pounds per acre (herbaceous/shrub). The grass/shrub site for the reference area has approximately 450 pounds per acre (high seral) and approximately 250 (mid seral) pounds per acre (herbaceous/shrub) in the pinyon-juniper area.

It is evident that the vegetation in the area is suffering from the effects of the current drought which is the reason for the lower production values we are experiencing. Many of the perennial bunchgrasses are declining in vigor due to the build up of litter/old growth at the base of the plant at or near the soil surface, ultimately affecting the plants productivity/vigor. It appears that the annual/perennial forbs as well as the shrub component are displaying the effects of the ongoing drought. The scattered pinyon-juniper trees within the area appear to be sustaining despite the drought conditions. Although the drought conditions appear to be affecting the vegetative productivity, it is apparent that the higher precipitation at this elevation allows for higher sustainability/productivity than the nearby valley floors. Furthermore, the area has experienced a high rate of cheatgrass invasion which may temporarily help increase ground cover and slightly increase vegetative biomass, but will ultimately decreases the overall health of the ecological site.

Please feel free to contact me at any time with any other questions or comments.

Respectfully yours,

M. Dean Stacy
Range Management Specialist

Cc: Dr. Mike King, CEU

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Appendix 7

Presence of Plant Species of Concern

During the sampling period Mr. Jay Marshall, UtahAmerican Energy, requested that we conduct cursory surveys in the Lila Canyon area to determine the presence of 3 plant species of concern. The plants of concern were: 1) Creutzfeldt-flower (*Cryptantha creuzfeldtii* Welsh) a member of the Boraginacae family, 2) Coal-cliffs Sweet Vetch (*Hedysarum occidentale* var. *canone*) a member of the Fabaceae family, and 3) Horse Canyon Stickleaf (*Mentzeliea multicaulis* var. *librina* Thorne & F.G. Sm.). See attached letter to Mr. Marshall and plant description sheets.

No evidence was found of any of the 3 species in question.

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MEMO

College of
Eastern
Utah

TO: **Jay Marshall**
Utah American Energy

FROM: Dr. Mike King

DATE: January 29, 2004

RE: Sensitive Species Surveys

As per your request, I conducted cursory surveys in the Lila Canyon area to determine the presence of 3 plant species of concern. The plants of concern were: 1) Creutzfeldt-flower (*Cryptantha creuzfeldtii* Welsh) a member of the Boraginacae family, 2) Coal-cliffs Sweet Vetch (*Hedysarum occidentale* var. *canone*) a member of the Fabaceae family, and 3) Horse Canyon Stickleaf (*Mentzeliea multicaulis* var. *librina* Thorne & F.G. Sm.). See attached plant description sheets.

Special efforts were made during the cover and woody plant density sampling efforts, July - September 2003, to detect the presence of these species. However, no individuals of any of the 3 were observed in the Reference Area during the collection of data from 35 transects, nor were the plants detected in any of 45 transects in the Disturbance Site. Also, none of the species were noted while traversing the study areas moving to and from transect locations.

Additionally, on July 18, 2003 a brief survey was conducted in the major drainage adjacent to the north boundary of the proposed disturbance area. I went up the drainage approximately 1 mile, but saw no evidence of any of the 3 species. I also spent approximately 2 hours walking through the Pinyon-Juniper area at the southeast edge of the Disturbance Site on September 5, 2003, but saw no evidence of any of the 3 species in question.

If you have questions, Please let me know.

Office of the Dean
Division of Arts & Sciences

Mike King, PhD

451 East 400 North
Price, Utah 84501

(435) 613-5232
Fax (435) 613-4102
E-Mail mking@ceu.edu

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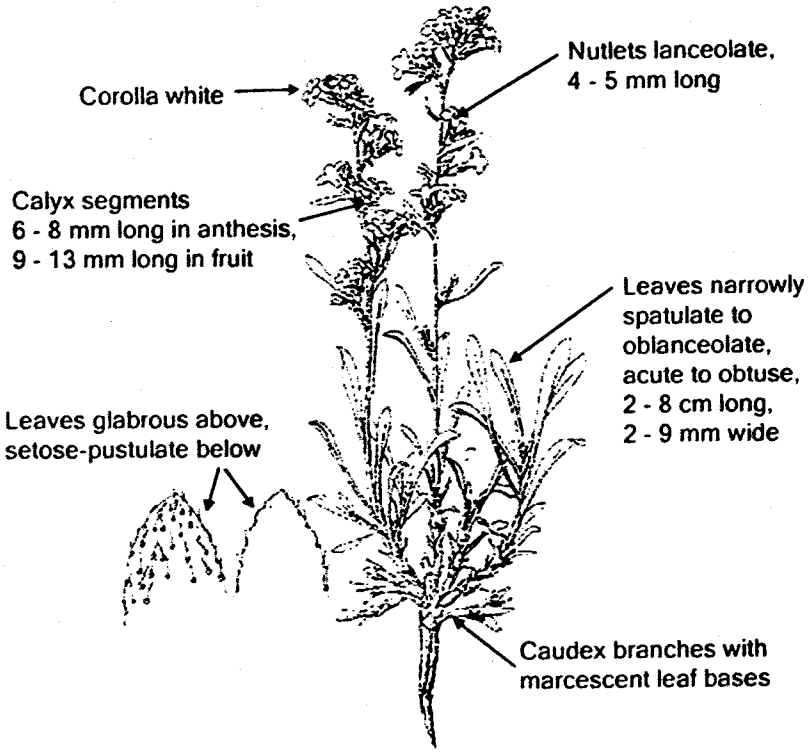

CRYPTANTHA CREUTZFELDTII

Scientific name: ***Cryptantha creutzfeldtii*** Welsh
(common name) Creutzfeldt-flower

Family: Boraginaceae
(common name) Borage family

Synonyms:
None

Global Distribution:
Endemic to central Utah in Carbon, Emery, and Sevier Counties

Land Ownership:
FS - Manti-LaSal NF, BLM - Price and Richfield Field Offices, and private

Habitat:
Shadscale and mat ***Atriplex*** communities on the Mancos Shale Formation between 5,250 and 6,500 feet elevation, late April - June.

Comments:
Close to ***C. jonesiana***, but with glabrous leaves above and the lower surface having mostly appressed, pustulate-based bristles, with few (or no) finer non-pustulate hairs, and basal leaves obtuse to acutish and more pointed, calyx 9 - 13 mm long in fruit, and nutlets 4 - 5 mm long.

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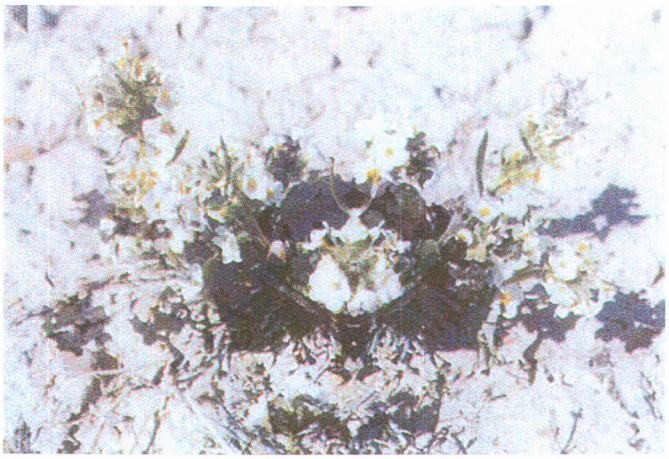
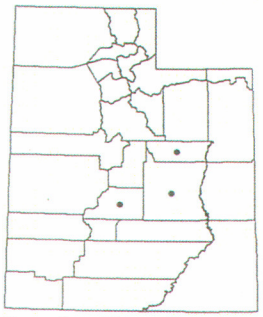
Cryptantha creutzfeldtii

Habitat (B. Thompson)



Closeup (B. Thompson)



Species Distribution

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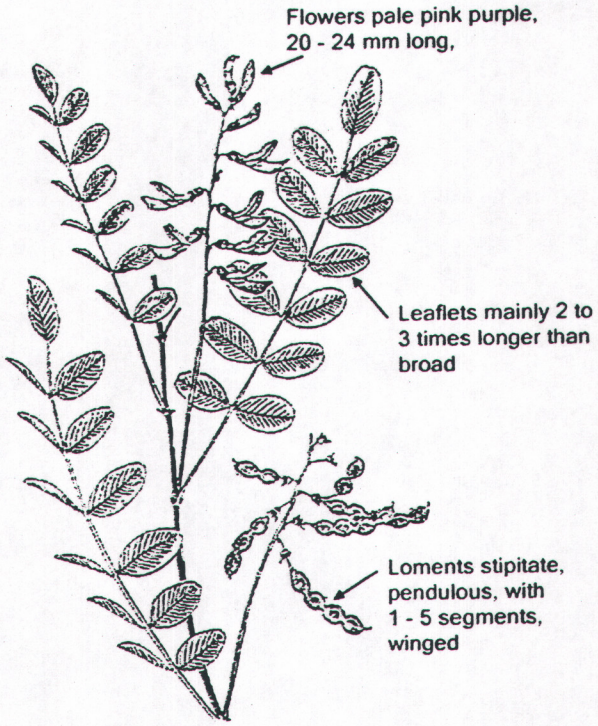

HEDYSARUM OCCIDENTALE VAR. *CANONE*

Scientific name: ***Hedysarum occidentale*** Greene var. ***canone*** Welsh
(common name) Coal-cliffs sweetvetch

Family: Fabaceae
(common name) Pea family

Synonyms:
None

Global Distribution:
Endemic to Carbon, Duchesne, and Emery Counties, Utah

Land Ownership:
FS - Manti LaSal NF, BLM - Price Field Office, State Land, and private

Habitat:
Pinyon-juniper, serviceberry, maple, mountain mahogany, and sagebrush communities between 6,400 and 8,300 feet elevation, late June - mid-August.

Comments:
Differs from var. ***occidentale*** in the broader leaflets, and pale flowers mainly 20 - 24 mm long, vs. dark pink purple flowers mainly less than 20 mm long..

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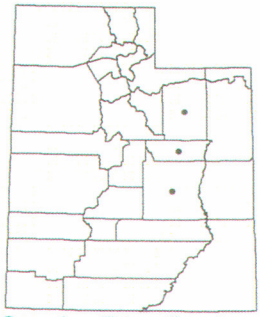
Hedysarum occidentale var. *canone*

Habitat (C. Delmatier)

Closeup (C. Delmatier)



Species Distribution

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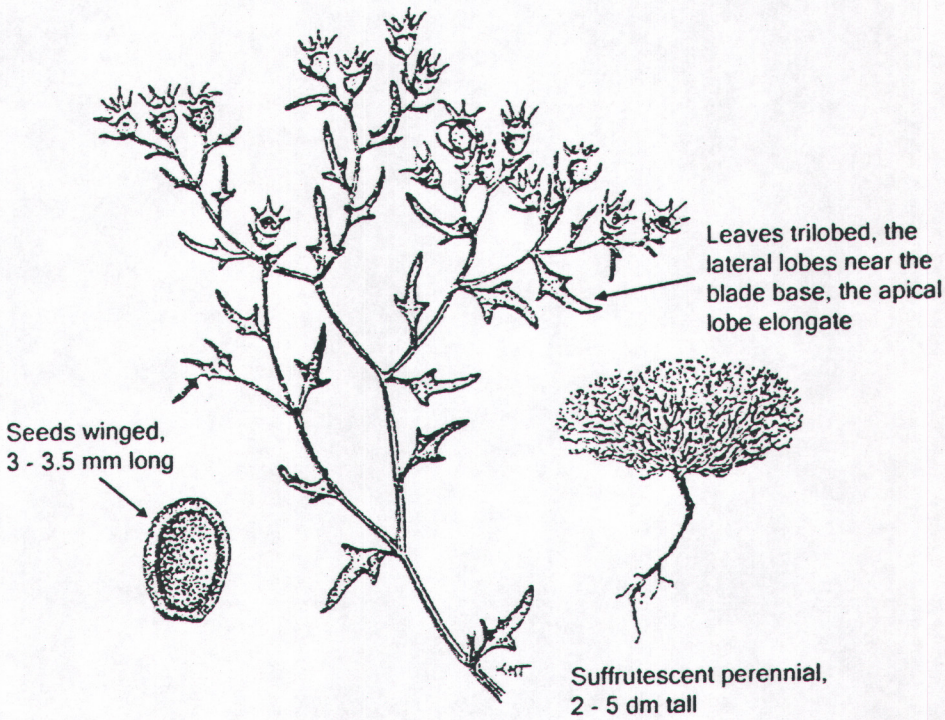

MENTZELIA MULTICAULIS VAR. *LIBRINA*

Scientific name: ***Mentzelia multicaulis*** **(Osterh.) Darlington var.** ***librina*** **Thorne & & F.G. Sm.**
(common name) Horse Canyon stickleaf

Family: Loasaceae
(common name) Stickleaf family

Synonyms:
None

Global Distribution:
Carbon and Emery Counties, Utah; a Colorado Plateau endemic

Land Ownership:
BLM - Price Field Office, State Lands, and private

Habitat:
Sagebrush, rabbitbrush, and pinyon-juniper communities at about 6,200 feet elevation, on the Mancos Shale and Price River Formations, July - September.

Comments:
This variety differs from var. ***multicaulis*** by the leaves that are trilobed, with the lateral lobes near the stem base and the apical lobe elongate.

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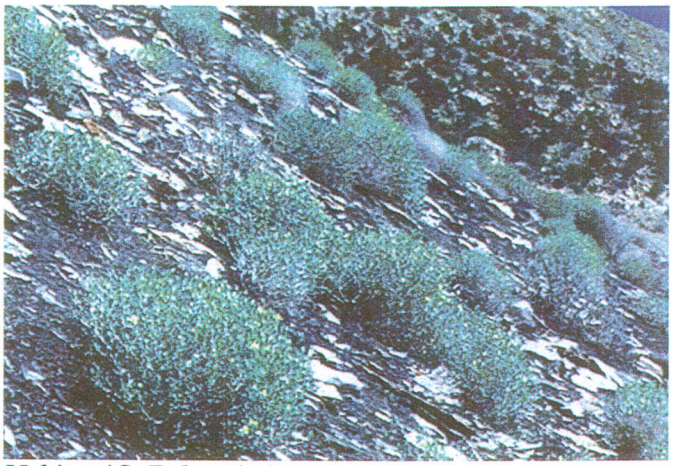
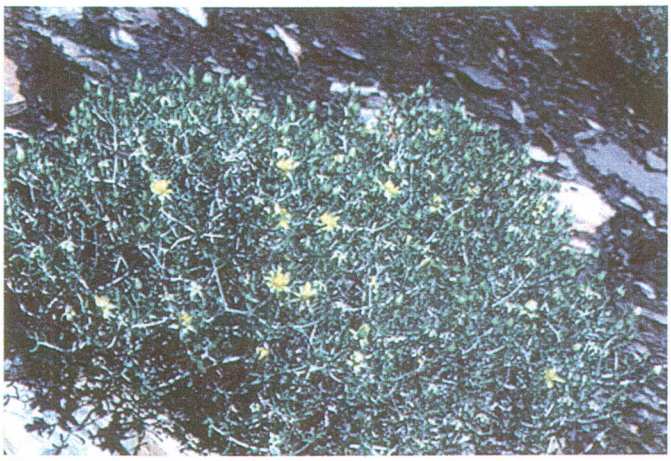
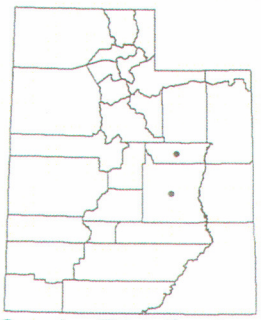
Mentzelia multicaulis var. *librina*



Habitat (C. Delmatier)



Closeup (C. Delmatier)



Species Distribution

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Appendix 8

Lila Canyon Photographs

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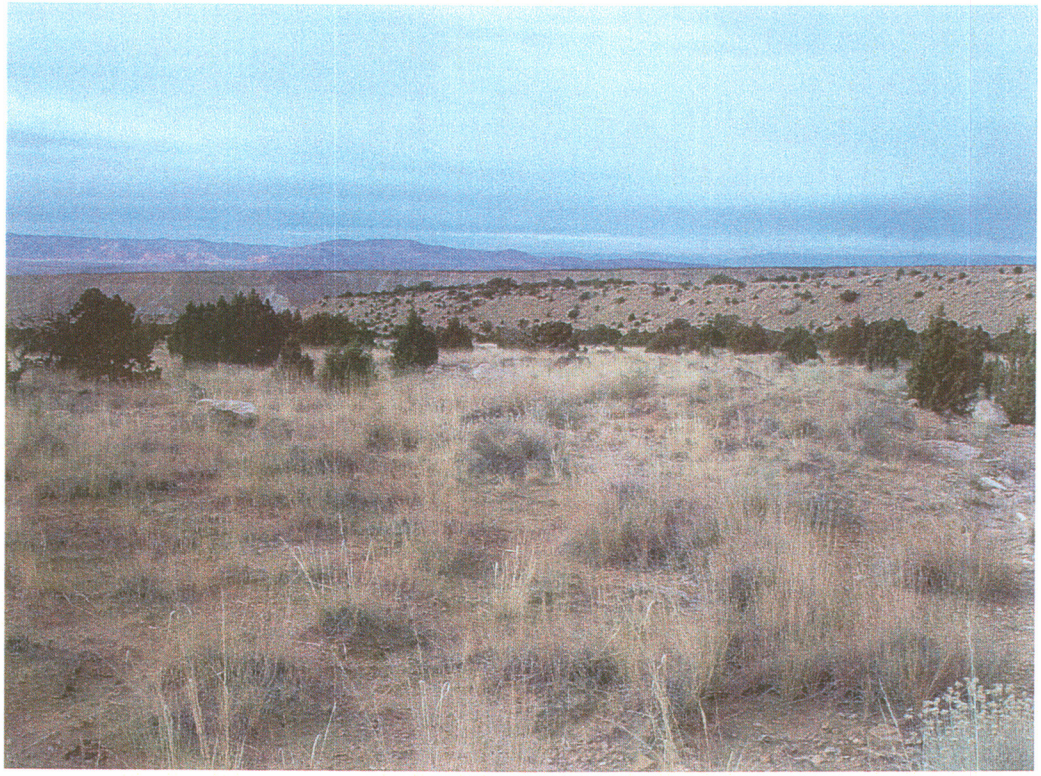
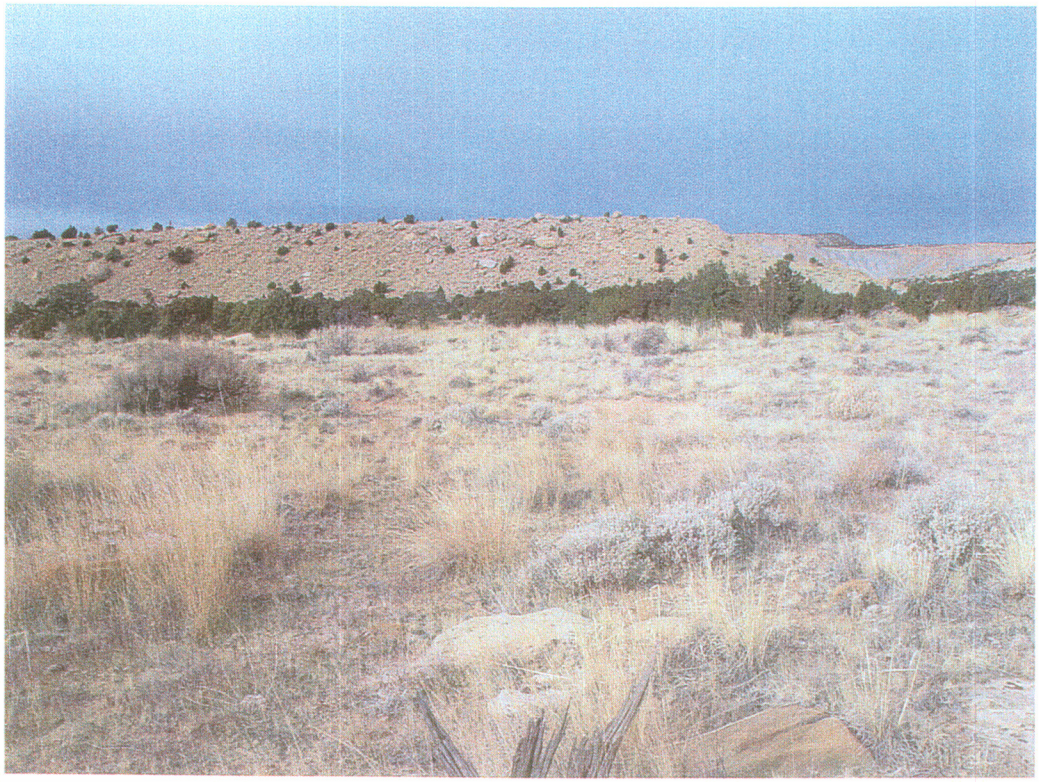


Reference Area



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Disturbance Site

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Appendix 9

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