will be required. Subsidence monitoring results for several mine (Star Point Mine, Wilberg Mine, and Castle Gate Mine) in this part of Utah indicate that maximum subsidence typically occurs in approximately 2 to 3 years following cessation of active mining. Since these mines operated in essentially the same geologic sequence as the Willow Creek Mine it is acticipated that the time interval for maximum subsidence to occur will be similar. If actual subsidence response does not follow this pattern, the monitoring schedule may be adjusted as appropriate.

Subsidence monitoring data will be reported to UDOGM annually in conjunction with other applicable annual reporting requirements. The subsidence monitoring report will consist of an updated mining map showing the subsidence monitoring sites, a spreadsheet summarizing all historical horizontal and vertical location data for each surveyed monitoring point, and subsidence profile graphs for surveyed subsidence monuments.

Subsidence control points were installed in 1997 to monitor subsidence effects from underground mining operations. The data through 2002 (Exhibit 16) shows no subsidence occurred over the Willow Creek Mine. Due to the misfortunes of the Willow Creek Mine, mine development activities never created enough void space whereby subsidence would occur. The data shows some anomalies which can be explained as engineering error when in-house surveyors performed the monitoring versus the data gathered by a registered land surveyor. Graphical presentation of the data has not been generated due to the lack of any substantial subsidence.

Data presented in Exhibit 10 – Hydrologic Conditions at the Willow Creek Mine at Mine Closure including Projections of Future Potentiometric Levels and recommended Monitoring Plans, analyzed the hydrologic data and demonstrated that no mining related impacts to the hydrologic balance in the permit and adjacent area occurred.

4.5.2.3 Mine Structures and Facilities

The underground mining and related activities will require limited surface support facilities. The facilities to be utilized in conjunction with operations will include both existing facilities located in the Castle Gate, Gravel Canyon, and Crandall Canyon areas and new facilities to be constructed in the Willow Creek mine surface facilities area. These facilities will provide the necessary infrastructure for effective management and handling of personnel, equipment, materials and supplies, and both coal and mine waste materials, and will include a number of structures specifically designed to control or mitigate potential mining related impacts.

Construction of required surface structures and facilities has previously been discussed in Section 4.5.2.2, General Description of Mine Plans, Mining Methods, and Related Design Requirements. The surface structures and facilities will be operated, maintained, and ultimately reclaimed in a manner that prevents or controls erosion and siltation, water pollution, and damage to public or private property; and to the extent possible using the best technology currently available, minimizes damage to fish, wildlife, and related environmental values, and minimizes additional contributions of suspended solids to streamflow or runoff outside the permit area. Any contribution of suspended solids from mine disturbance areas will not exceed applicable effluent limitation under Utah or Federal law.

Methane degasification wells are presently permitted under BLM jurisdiction for permitting and bonding requirements.

Required surface facilities are shown and identified on the Mine Surface Facilities Map, (Map 18B). The following lists the surface facilities:

File in:
☐ Confidential
☐ Shelf
X Expandable
Refer to Record No 0009 Date 04252003
In C/0070038, 2003, Incoming
For additional information

Willow Creek Surface Facilities Area

Description

1. Mine/Fire Water Tank – 350,000 Gallons
2. Run of Mine (R.O.M.) Coal Stockpile
3. Propane Tanks
4. R.O.M. Escape Tunnel
5. Elevated Conveyor Canopy
6. Mine Ventilation Fan Set
7. Mine Ventilation Shaft
8. Main Substation
9. U-G1 Belt Drive Building
10. Mine Portals (5 ea.)
11. Shop Building
12. Warehouse Building
13. Motor Control Building & Methane Pump Facility
14. Administration and Bathhouse Building
15. 4" Temporary Water Line
16. Used Oil Tanks

0009

PLATEAU MINING CORPORATION

COPY

Willow Creek Mine
847 NW Hwy 191
Helper, Utah 84526
(435) 472-0475
Fax: (435) 472-~~4780~~ 4782
An affiliate of RAG

April 25, 2003

Mr. Daron R. Haddock
Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801

Incoming
C/007/038
AM03B
OK

Re: Discontinuance of Subsidence Monitoring at the Willow Creek Mine, Plateau Mining Corporation, Willow Creek Mine, C/007/038, Carbon County, Utah

Dear Mr. Haddock:

Plateau Mining Corporation (PMC) is submitting an application to discontinue subsidence monitoring at its Willow Creek Mine. Due to the unfortunate cessation of mining, the extraction of coal never created the void space whereby subsidence could occur. Subsidence monitoring in accordance with the approved plan shows that subsidence never materially occurred and that further monitoring is unwarranted.

PMC reduced its water monitoring requirements subsequent to a permit change that was approved on January 22, 2003. In this amendment (Exhibit 10), the Permittee demonstrated that mining had no significant impact to the hydrologic resources. Part of this demonstration involved the analysis of the subsidence data gathered over the years, which showed that subsidence never materialized and no significant impacts occurred to the hydrologic resources due to subsidence caused by mining.

The attached permit change presents the subsidence data gathered through 2002 for incorporation into Exhibit 16 and some minor verbiage changes to page 4.5-34.

If the Division have any questions or needs additional information, please do not hesitate to contact me at (435) 472-4741.

Sincerely,

Johnny Pappas
Sr. Environmental Engineer

Enclosures

File: Willow Creek Mine – Subsidence Discontinuance
Chron.: JP030406.ltr

File in:
C/0070038, 2003, Incoming
Refer to:
☐ Confidential
☐ Shelf
☒ Expandable
Date: 04252003

RECEIVED
APR 28 2003
DIV. OF OIL, GAS & MINING

APPLICATION FOR COAL PERMIT PROCESSING

COPY

Permit Change ☒ New Permit ☐ Renewal ☐ Exploration ☐ Bond Release ☐ Transfer ☐

Permittee: Plateau Mining Corporation
Mine: Willow Creek Mine **Permit Number:** C/007/038
Title: Discontinuance of Subsidence Monitoring
Description, Include reason for application and timing required to implement:
Based on survey data through 2002, no subsidence occurred over the underground mine workings

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

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

Please attach four (4) review copies of the application. If the mine is on or adjacent to Forest Service land please submit five (5) copies, thank you. (These numbers include a copy for the Price Field Office)

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

Johnny Pappas
Print Name

Sr. Env. Engineer - 4/24/03
Sign Name, Position, Date

Subscribed and sworn to before me this 24 day of April, 2003

Wilma Howa
Notary Public

My commission Expires: Sept 05, 2004
Attest: State of Utah } ss:
County of Carbon

NOTARY PUBLIC
WILMA HOWA
70 South Main
Helper, Utah 84526
My Commission Expires
September 05, 2004
STATE OF UTAH

For Office Use Only:	Assigned Tracking Number:	Received by Oil, Gas & Mining
		RECEIVED APR 28 2003 DIV. OF OIL, GAS & MINING

Form DOGM- C1 (Revised March 12, 2002)

APPLICATION FOR COAL PERMIT PROCESSING
Detailed Schedule Of Changes to the Mining And Reclamation Plan

COPY

Permittee: Plateau Mining Corporation
Mine: Willow Creek Mine **Permit Number:** C/007/038
Title: Discontinuance of Subsidence Monitoring

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

			DESCRIPTION OF MAP, TEXT, OR MATERIAL TO BE CHANGED
☐ Add	☒ Replace	☐ Remove	Section 4.5, Page 4.5-34
☒ Add	☐ Replace	☐ Remove	Exhibit 16, Survey data through 2002 and Drawing 1
☐ Add	☐ Replace	☐ Remove	
☐ Add	☐ Replace	☐ Remove	
☐ Add	☐ Replace	☐ Remove	
☐ Add	☐ Replace	☐ Remove	
☐ Add	☐ Replace	☐ Remove	
☐ Add	☐ Replace	☐ Remove	
☐ Add	☐ Replace	☐ Remove	
☐ Add	☐ Replace	☐ Remove	
☐ Add	☐ Replace	☐ Remove	
☐ Add	☐ Replace	☐ Remove	
☐ Add	☐ Replace	☐ Remove	
☐ Add	☐ Replace	☐ Remove	
☐ Add	☐ Replace	☐ Remove	
☐ Add	☐ Replace	☐ Remove	
☐ Add	☐ Replace	☐ Remove	
☐ Add	☐ Replace	☐ Remove	
☐ Add	☐ Replace	☐ Remove	
☐ Add	☐ Replace	☐ Remove	
☐ Add	☐ Replace	☐ Remove	
☐ Add	☐ Replace	☐ Remove	
☐ Add	☐ Replace	☐ Remove	
☐ Add	☐ Replace	☐ Remove	
☐ Add	☐ Replace	☐ Remove	
☐ Add	☐ Replace	☐ Remove	

Any other specific or special instruction required for insertion of this proposal into the Mining and Reclamation Plan.	Received by Oil, Gas & Mining RECEIVED APR 2 8 2003 DIV. OF OIL, GAS & MINING

Table 1

Willow Creek Subsidence Monitoring Report

Point No.	See Note	Northing 1997	Northing 1998	Northing 1999	Northing 2000	Northing 2001	Northing 2002	Easting 1997	Easting 1998	Easting 1999	Easting 2000	Easting 2001	Easting 2002	Elevation 1997	Elevation 1998	Elevation 1999	Elevation 2000	Elevation 2001	Elevation 2002	Difference in Subsidence 1st Year	Differenece in Subsidence 2nd Year	Differenece in Subsidence 3rd Year	Difference in Subsidence 4th Year	Difference in Subsidence 5th Year
SS-CON-1		522,620.59	522,620.59	522,620.59				2,178,659.27	2,178,659.27	2,178,659.27				8,454.68	8,454.68	8,454.68				0.00	0.00			
MAT		535,667.74	535,667.74	535,667.74				2,181,889.15	2,181,889.15	2,181,889.15				7,454.05	7,454.05	7,454.05				0.00	0.00			
GENE		523,471.08	523,471.08	523,471.08				2,191,540.98	2,191,540.98	2,191,540.98				8,270.31	8,270.31	8,270.31				0.00	0.00			
EAST		510,457.12	510,457.12	510,457.12				2,183,503.59	2,183,503.59	2,183,503.59				6,404.55	6,404.55	6,404.55				0.00	0.00			
BC-1		510,968.15	510,968.15	510,968.15				2,176,438.10	2,176,438.10	2,176,438.10				6,164.78	6,164.78	6,164.78				0.00	0.00			
BARN		510,795.10	510,795.10	510,795.10				2,177,679.20	2,177,679.20	2,177,679.20				6,266.66	6,266.66	6,266.66				0.00	0.00			
CPSS-A1		522,745.86						2,187,566.89						8,197.40										
CPSS-A2		521,671.73						2,187,569.75						8,193.80										
CPSS-A3		520,768.74						2,187,896.03						8,066.11										
CPSS-A4		519,860.97						2,187,988.46						7,912.53										
CPSS-A5		519,011.36						2,187,610.47						7,916.46										
CPSS-A6		517,930.91						2,187,299.45						7,612.88										
CPSS-B1		522,746.92			522,746.86	522,746.92		2,183,319.13			2,183,319.73	2,183,319.56		8,436.73			8,436.26	8,436.73		-0.47	0.00			
CPSS-B2		522,159.43	522,159.33		522,159.33	522,159.43		2,183,398.56	2,183,398.54		2,183,399.08	2,183,398.56		8,405.47	8,405.40		8,405.08	8,405.45		-0.07	-0.39	-0.02		
CPSS-B3		521,609.07	521,608.90		521,608.78	521,609.07		2,183,159.40	2,183,159.36		2,183,159.87	2,183,159.40		8,333.67	8,333.55		8,333.30	8,333.64		-0.12	-0.37	-0.03		
CPSS-B4		521,163.03	521,162.96		521,163.03	521,163.03		2,182,946.10	2,182,945.99		2,182,946.10	2,182,946.10		8,311.86	8,311.76		8,311.86	8,311.85		-0.10	0.00	-0.01		
CPSS-B5		520,975.93	520,975.93	520,975.71	520,975.64	520,975.93		2,183,005.23	2,183,005.23	2,183,005.32	2,183,005.30	2,183,005.23		8,241.87		8,241.83	8,241.64	8,241.24			-0.04	-0.23	-0.63	
CPSS-B6		520,793.89	520,793.76		520,793.55	520,793.89		2,183,045.26	2,183,045.19		2,183,045.69	2,183,045.26		8,173.15	8,173.11		8,172.82	8,173.12		-0.04		-0.33	-0.03	
CPSS-B7		520,576.29	520,576.11	520,575.99	520,575.94	520,576.18		2,183,093.01	2,183,093.02	2,183,093.09	2,183,093.01	2,183,092.89		8,155.94	8,155.90	8,155.90	8,155.77	8,155.92		-0.04	-0.04	-0.17	-0.02	
CPSS-B8		520,393.19	520,393.01	520,392.88	520,393.05	520,393.25		2,183,067.84	2,183,067.87	2,183,067.90	2,183,067.90	2,183,067.78		8,138.52	8,138.51	8,138.54	8,138.17	8,138.42		-0.02	0.02	-0.35	-0.10	
CPSS-B9		520,193.59	520,193.46	520,193.30	520,193.24	520,193.49		2,183,013.81	2,183,013.83	2,183,013.85	2,183,013.79	2,183,013.76		8,141.51	8,141.46	8,141.48	8,141.33	8,141.50		-0.05	-0.03	-0.18	-0.01	
CPSS-B10		520,106.34	520,106.18		520,105.95	520,106.31		2,182,977.42	2,182,977.45		2,182,977.39	2,182,977.42		8,150.56	8,150.49		8,150.32	8,150.56		-0.07		-0.24	0.00	
CPSS-B11		520,016.74	520,016.61	520,016.51	520,016.39	520,016.72		2,182,929.89	2,182,929.88	2,182,929.95	2,182,929.87	2,182,929.88		8,149.32	8,149.24	8,149.28	8,149.06	8,149.31		-0.08	-0.04	-0.26	-0.01	
CPSS-B12		519,919.33	519,919.21		519,918.93	519,919.33		2,182,896.04	2,182,896.03		2,182,896.00	2,182,896.02		8,127.35	8,127.28		8,127.05	8,127.34		-0.07		-0.30	-0.01	
CPSS-B13		519,838.92	519,838.82		519,838.59	519,838.91		2,182,833.93	2,182,833.92		2,182,834.43	2,182,833.93		8,131.04	8,130.86		8,130.51	8,131.04		-0.18		-0.53	0.00	
CPSS-B14		519,743.12	519,743.00		519,743.19	519,743.13		2,182,808.51	2,182,808.54		2,182,808.59	2,182,808.52		8,113.12	8,113.06		8,112.93	8,113.11		-0.06		-0.19	-0.01	
CPSS-B15		519,652.71	519,652.50		519,652.22	519,472.58		2,182,779.76	2,182,779.76		2,182,779.65	2,182,779.58		8,099.64	8,099.64		8,099.35	8,099.53		0.00		-0.29	-0.11	
CPSS-B16	**	519,554.72	519,554.47					2,182,757.62	2,182,757.59					8,082.02	8,082.14					0.12				
CPSS-B16	**				519,593.39						2,182,737.18						8,083.48							
CPSS-B17	**	519,458.86	519,458.65					2,182,686.73	2,182,686.74					8,075.27	8,075.22					-0.05				
CPSS-B17	**				519,425.02						2,182,661.43						8,076.59							
CPSS-B18		519,348.31	519,348.11		519,347.76	519,348.13		2,182,661.62	2,182,661.70		2,182,661.66	2,182,661.51		8,065.87	8,065.73		8,065.32	8,065.67		-0.14	-0.55			
CPSS-B19		519,244.50	519,244.26	519,244.08	519,244.00	519,244.50		2,182,643.37	2,182,643.44	2,182,643.47	2,182,643.32	2,182,643.37		8,066.37	8,066.28	8,066.22	8,065.81	8,066.25		-0.09	-0.10	-0.56		
CPSS-B20		519,159.92		LOST				2,182,646.53		LOST				8,068.32		LOST					LOST			
CPSS-B20			519,184.81		519,184.69	519,184.80			2,182,647.64		2,182,647.65	2,182,647.51			8,069.88		8,069.55	8,069.73		-0.33				
CPSS-B21		519,068.94		LOST				2,182,681.82		LOST				8,075.41		LOST					LOST			
CPSS-B21			519,084.46		519,084.07	519,084.38			2,182,649.74		2,182,649.63	2,182,649.51			8,073.55		8,073.27	8,073.44		-0.28				
CPSS-B22	**	518,979.74	518,979.62					2,182,676.51	2,182,676.47					8,088.31	8,088.18					-0.13				
CPSS-B22	**				519,018.17	519,018.47					2,182,671.32	2,182,670.87					8,085.65	8,086.24						
CPSS-B23	**	518,872.98	518,872.76					2,182,691.75	2,182,691.87					8,094.70	8,094.31					-0.39				
CPSS-B23	**				518,807.31						2,182,676.24						8,105.25							

Table 1

Willow Creek Subsidence Monitoring Report

Point No.	See Note	Northing 1997	Northing 1998	Northing 1999	Northing 2000	Northing 2001	Northing 2002	Easting 1997	Easting 1998	Easting 1999	Easting 2000	Easting 2001	Easting 2002	Elevation 1997	Elevation 1998	Elevation 1999	Elevation 2000	Elevation 2001	Elevation 2002	Difference in Subsidence 1st Year	Differenece in Subsidence 2nd Year	Differenece in Subsidence 3rd Year	Difference in Subsidence 4th Year	Difference in Subsidence 5th Year
CPSS-B24		518,770.62	518,770.52		518,770.13	518,770.39		2,182,690.49	2,182,690.52		2,182,690.52	2,182,690.35		8,118.15	8,118.07		8,117.07	8,117.80		-0.08	-1.08			
CPSS-B25		518,643.00	518,642.92	518,642.68	518,642.35	518,642.74		2,182,708.90	2,182,708.88	2,182,708.90	2,182,708.92	2,182,708.80		8,147.81	8,147.73	8,147.98	8,147.21	8,147.74	8147.81	-0.08	0.17	-0.60	-0.07	0.00

Table 1

Willow Creek Subsidence Monitoring Report

Point No.	See Note	Northing 1997	Northing 1998	Northing 1999	Northing 2000	Northing 2001	Northing 2002	Easting 1997	Easting 1998	Easting 1999	Easting 2000	Easting 2001	Easting 2002	Elevation 1997	Elevation 1998	Elevation 1999	Elevation 2000	Elevation 2001	Elevation 2002	Difference in Subsidence 1st Year	Difference in Subsidence 2nd Year	Difference in Subsidence 3rd Year	Difference in Subsidence 4th Year	Difference in Subsidence 5th Year
CPSS-B26		518,558.36	518,558.13	518,557.69	518,557.71	518,558.08		2,182,713.22	2,182,713.22	2,182,713.43	2,182,713.49	2,182,713.05		8,161.52	8,161.24	8,161.45	8,160.56	8,161.33	8161.3	-0.28	-0.07	-0.96	-0.19	-0.22
CPSS-B27		518,487.68	518,487.49		518,487.21	518,487.50		2,182,763.51	2,182,763.54		2,182,763.95	2,182,763.39		8,165.95	8,165.85		8,165.27	8,165.68	8165.89	-0.10		-0.68	-0.27	-0.06
CPSS-B28		518,390.47	518,390.27	518,390.06	518,389.93	518,390.25		2,182,799.71	2,182,799.85	2,182,799.68	2,182,799.59	2,182,799.59		8,174.71	8,174.68	8,174.64	8,174.29	8,174.51	8174.73	-0.03	-0.07	-0.42	-0.20	0.02
CPSS-B29		518,278.45	518,278.25	518,278.03	518,277.83	518,278.08		2,182,835.74	2,182,835.88	2,182,835.84	2,182,835.66	2,182,835.65		8,183.00	8,182.94	8,182.79	8,182.63	8,182.88	8183.02	-0.06	-0.21	-0.37	-0.12	0.02
CPSS-B30		518,087.41	518,087.18	518,086.67	518,086.99	518,087.10		2,182,878.18	2,182,878.20	2,182,878.42	2,182,878.77	2,182,877.98		8,182.00	8,181.95	8,182.26	8,181.17	8,181.88	8181.96	-0.05	0.26	-0.83	-0.12	-0.04
CPSS-B31		517,962.54	517,962.37	517,961.81	517,962.08	517,962.31		2,182,752.82	2,182,752.68	2,182,753.06	2,182,753.37	2,182,752.62		8,139.22	8,139.14	8,139.41	8,138.36	8,139.03	8139.16	-0.08	0.19	-0.86	-0.19	-0.06
CPSS-B32		517,780.02	517,779.87	517,780.14	517,780.02	517,779.79		2,182,683.40	2,182,683.27	2,182,683.12	2,182,683.11	2,182,683.17		8,120.42	8,120.35	8,120.15	8,120.00	8,120.29	8120.37	-0.07	-0.27	-0.42	-0.13	-0.05
CPSS-B33	**	517,608.46	517,608.39					2,182,587.51	2,182,587.46					8,119.37	8,119.35					-0.02				
CPSS-B33	**				517,686.32	517,686.58					2,182,629.60	2,182,629.21					8,121.97	8,122.62	8122.71		0.65	0.74		
CPSS-B34	**	517,440.39	517,440.35					2,182,472.81	2,182,472.81					8,120.68	8,120.69					0.01				
CPSS-B34	**				517,548.53	517,548.74					2,182,558.87	2,182,558.35					8,125.65	8,126.36	8126.64		0.71	0.99		
CPSS-B35		517,243.54	517,243.54	517,242.87	517,243.57	517,243.33		2,182,385.82	2,182,385.82	2,182,385.93	2,182,385.45	2,182,385.62		8,130.64	8,130.64	8,130.49	8,130.18	8,130.56	8130.67	0.00	-0.15	-0.46	-0.08	0.03
CPSS-B36		517,096.27	517,096.29	517,095.51	517,095.76			2,182,271.11	2,182,271.11	2,182,271.24	2,182,271.00			8,165.39	8,165.40	8,165.20	8,164.98		8165.51	0.01	-0.19	-0.41		0.12
[illegible]-B37	*	516,895.56	516,895.54					2,182,190.05	2,182,190.06					8,170.19	8,170.18					-0.01				
[illegible]-B37	*			516,906.85	516,906.79					2,182,208.01	2,182,207.96					8,163.78	8,163.71		8164.13		-0.07			0.35
CPSS-B38	**	516,694.75	516,832.61					2,182,170.65	2,182,121.59					8,175.99	8,176.36					0.36				0
CPSS-B38	**				516,732.72						2,182,172.78						8,185.06							
CPSS-B39		516,515.56	516,515.35	516,515.70	516,515.60	516,515.38		2,182,157.41	2,182,157.24	2,182,157.19	2,182,157.27	2,182,157.34		8,160.19	8,160.03	8,160.05	8,160.06	8,160.19	8160.56	-0.16	-0.14	-0.13	0.00	0.37
CPSS-B40		516,426.35	516,426.20	516,426.45	516,426.33	516,426.35		2,182,131.32	2,182,131.22	2,182,131.16	2,182,131.16	2,182,131.32		8,142.62	8,142.50	8,142.47	8,142.44	8,142.62	8143	-0.12	-0.15	-0.18	0.00	0.38
CPSS-B41		516,330.44	516,330.40	516,330.50	516,330.43	516,330.44		2,182,107.58	2,182,107.55	2,182,107.44	2,182,107.44	2,182,107.58		8,124.84	8,124.74	8,124.67	8,124.53	8,124.83	8125.24	-0.10	-0.17	-0.31	-0.01	0.40
CPSS-B42		516,216.10	516,216.07	516,216.21	516,216.13	516,216.10		2,182,097.77	2,182,097.74	2,182,097.58	2,182,097.69	2,182,097.77		8,113.93	8,113.90	8,113.90	8,113.77	8,113.92	8114.39	-0.03	-0.03	-0.16	-0.01	0.46
CPSS-B43		516,134.90	516,134.87	516,135.07	516,134.93	516,134.90		2,182,099.32	2,182,099.26	2,182,099.18	2,182,099.18	2,182,099.32		8,116.09	8,116.04	8,115.97	8,115.88	8,116.08	8116.57	-0.05	-0.12	-0.21	-0.01	0.48
CPSS-B44		516,036.19	516,036.08	516,035.31	516,035.64	516,036.19		2,182,101.33	2,182,101.29	2,182,101.45	2,182,101.84	2,182,101.33		8,120.72	8,120.70	8,120.51	8,120.23	8,120.70	8121.16	-0.02	-0.21	-0.49	-0.02	0.44
CPSS-B45		515,928.14	515,928.07	515,927.35	515,927.71	515,928.14		2,182,127.54	2,182,127.50	2,182,127.46	2,182,128.09	2,182,127.54		8,128.41	8,128.38	8,128.24	8,128.08	8,128.40		-0.03	-0.17	-0.33	-0.01	
CPSS-B46		515,838.21	515,838.17	515,838.10	515,838.01	515,838.21		2,182,141.47	2,182,141.40	2,182,141.33	2,182,141.38	2,182,141.47		8,141.88	8,141.75	8,141.67	8,141.61	8,141.86		-0.13	-0.21	-0.27	-0.02	
CPSS-B47		515,728.20	515,728.14		515,727.79	515,728.20		2,182,184.80	2,182,184.71		2,182,185.45	2,182,184.80		8,163.66	8,163.64		8,163.15	8,163.65		-0.02		-0.51	-0.01	
CPSS-B48		515,647.43	515,647.40			515,647.43		2,182,171.32	2,182,171.28			2,182,171.32		8,144.15	8,144.08			8144.14		-0.07			-0.01	
CPSS-B49		515,533.30	515,533.22	515,533.20	515,533.18	515,533.30		2,182,160.85	2,182,160.80	2,182,160.74	2,182,160.79	2,182,160.85		8,150.65	8,150.60	8,150.38	8,150.47	8,150.63		-0.05	-0.27	-0.18	-0.02	
CPSS-B50		515,451.22	515,451.19	515,450.38	515,450.67	515,451.22		2,182,129.57	2,182,129.55	2,182,129.68	2,182,130.22	2,182,129.57		8,154.35	8,154.31	8,153.65	8,154.23	8,154.33		-0.04	-0.70	-0.12	-0.02	
CPSS-B51		515,387.79			515,387.42	515,387.79		2,182,047.28			2,182,047.91	2,182,047.28		8,159.28			8,158.81	8,159.25				-0.47	-0.03	
CPSS-B52		515,329.12			515,328.64	515,329.12		2,181,969.90			2,181,970.68	2,181,969.90		8,153.27			8,152.86	8,153.25				-0.41	-0.02	
CPSS-B53		515,229.58						2,181,931.85						8,113.66										
CPSS-B54		515,154.24						2,181,909.79						8,084.73										
CPSS-B55		515,055.67						2,181,915.75						8,049.67										
CPSS-B56		514,951.17						2,181,895.69						8,024.18										
CPSS-B57		514,863.31						2,181,846.10						8,011.35										
[illegible]B58		514,793.73						2,181,821.30						7,995.47										
[illegible]59		514,679.96						2,181,769.76						7,959.38										
CPSS-B60		514,605.34			514,604.69			2,181,721.61			2,181,721.76			7,925.85			7,925.35					-0.50		
CPSS-B61		514,514.83						2,181,694.47						7,871.72										
CPSS-B62		514,424.47			514,423.93			2,181,654.82			2,181,655.01			7,870.80			7,870.42					-0.38		

Table 1

Willow Creek Subsidence Monitoring Report

Point No.	See Note	Northing 1997	Northing 1998	Northing 1999	Northing 2000	Northing 2001	Northing 2002	Easting 1997	Easting 1998	Easting 1999	Easting 2000	Easting 2001	Easting 2002	Elevation 1997	Elevation 1998	Elevation 1999	Elevation 2000	Elevation 2001	Elevation 2002	Difference in Subsidence 1st Year	Differenece in Subsidence 2nd Year	Differenece in Subsidence 3rd Year	Difference in Subsidence 4th Year	Difference in Subsidence 5th Year
CPSS-B63		514,332.30						2,181,640.82						7,823.30										
CPSS-B64		514,143.02			514,142.66			2,181,610.85			2,181,611.09			7,809.020			7,807.98					-1.04		
CPSS-B65		513,938.02						2,181,559.09						7,757.540										
CPSS-B66		513,777.42			513,776.84			2,181,459.09			2,181,459.14			7,761.960			7,761.58					-0.38		
CPSS-B67		513,599.48			513,598.91			2,181,389.34			2,181,389.36			7,742.48			7,742.08					-0.40		
CPSS-BA1	**	517,742.25	517,742.20	517,742.20		517,742.25		2,183,424.70	2,183,424.60	2,183,424.60		2,183,424.70		7,948.16	7,948.08	7,948.08		7948.15	7948.15	-0.08	-0.08		-0.01	-0.01
CPSS-BA1	**				517,679.27						2,183,471.53						7,951.02							
CPSS-BA2		517,469.18	517,469.10	517,469.10	517,469.28	517,469.18		2,183,680.19	2,183,680.12	2,183,680.12	2,183,679.69	2,183,680.19		7,864.92	7,864.88	7,864.88	7,864.67	7,864.91	7865	-0.04	-0.04	-0.25	-0.01	0.08
CPSS-BA3		517,261.72	517,261.68	517,261.68	517,261.72	517,261.72		2,184,339.00	2,184,339.00	2,184,339.00	2,184,339.10	2,184,339.10		7,773.45	7,773.40	7,773.40	7,773.45	7,773.44	7773.74	-0.05	-0.05	0.00	-0.01	0.29
CPSS-BB1		515,376.24		515,376.24				2,182,172.64		2,182,172.64				8,127.61		8,127.61					0.00			
CPSS-BB2		514,561.22		514,561.22				2,183,158.51		2,183,158.51				7,860.68		7,860.68					0.00			
CPSS-BC1	*	516,770.52		516,770.52				2,182,159.96		2,182,159.96				8,184.03		8,184.03					0.00			
CPSS-BC1	*				516,750.03						2,182,098.39						8,169.09		8170.06					0.97
[illegible]-BC2		516,827.72	516,827.68	516,827.72	516,827.10	516,827.72		2,182,071.50	2,182,071.54	2,182,071.50	2,182,071.62	2,182,071.50		8,161.62	8,161.56	8,161.62	8,161.38	8,161.61	8161.83	-0.06	0.00	-0.24	-0.01	0.21
[illegible]BC3		516,909.07		516,908.46	516,908.51	516,909.07		2,182,034.90		2,182,035.27	2,182,035.10	2,182,034.90		8,113.13		8,113.13	8,112.54	8,113.11	8113.26		0.00	-0.59	-0.02	0.13
CPSS-BC4		516,983.12		516,982.56	516,982.53	516,983.12		2,181,975.52		2,181,975.87	2,181,975.75	2,181,975.52		8,072.21		8,071.69	8,071.35	8,072.20	8072.2		-0.52	-0.86	-0.01	-0.01
CPSS-BC5		517,081.70		517,081.22	517,080.99	517,081.70		2,181,947.55		2,181,947.91	2,181,947.41	2,181,947.55		8,031.56		8,031.42	8,031.00	8,031.55	8031.55		-0.14	-0.56	-0.01	-0.01
CPSS-BC6		517,152.39		517,152.36	517,151.81	517,152.40		2,181,883.81		2,181,883.93	2,181,883.83	2,181,883.81		7,997.15		7,997.43	7,996.04	7,997.15	7997.18		0.28	-1.11	0.00	0.03
CPSS-BC7		517,225.09		517,224.84	517,224.67	517,225.10		2,181,866.02		2,181,866.63	2,181,866.05	2,181,866.05		7,963.27		7,963.28	7,962.54	7,963.26	7963.52		0.01	-0.73	-0.01	0.25
CPSS-BC8		517,305.17		517,304.79	517,304.72	517,305.20		2,181,777.09		2,181,777.49	2,181,777.20	2,181,777.10		7,907.35		7,907.10	7,906.65	7,907.36	7906.93		-0.25	-0.70	0.01	-0.42
CPSS-BC9		517,370.98		517,370.98	517,370.46	517,371.00		2,181,731.41		2,181,731.41	2,181,731.55	2,181,731.40		7,881.650		7,881.04	7,880.53	7,881.65	7881.66		-0.61	-1.12	0.00	0.01
CPSS-BC10		517,422.49			517,420.77	517,422.50		2,181,630.03			2,181,628.20	2,181,630.00		7,820.10		7,820.10	7,819.25	7,820.09	7820.12		0.00	-0.85	-0.01	0.02
CPSS-BC11	**	517,504.11		517,504.11		517,504.10		2,181,571.76		2,181,571.76		2,181,571.80		7,785.26		7,785.26		7785.24	7785.27		0.00		-0.02	0.01
CPSS-BC11	**				517,556.07						2,181,539.62						7,769.93							
CPSS-BC12		517,577.67			517,575.99	517,577.70		2,181,507.80			2,181,506.01	2,181,507.82		7,763.65		7,763.66	7,763.21	7,763.64	7763.75		0.01	-0.44	-0.01	0.10
CPSS-BC13		517,653.52			517,653.47	517,653.53		2,181,444.02			2,181,443.66	2,181,444.03		7,745.51		7,745.54	7,744.03	7,745.50	7745.47		0.03	-1.48	-0.01	-0.04
CPSS-BC14		517,735.14			517,733.21	517,735.15		2,181,375.18			2,181,373.12	2,181,375.20		7,727.34		7,727.41	7,726.92	7,727.33	7727.32		0.07	-0.42	-0.01	-0.02
CPSS-BC15		517,799.76		517,798.92	517,798.02	517,799.77		2,181,317.63		2,181,317.63	2,181,315.84	2,181,317.64		7,698.37		7,698.14	7,697.85	7,698.36	7698.37		-0.23	-0.52	-0.01	0.00
CPSS-BC16		517,896.97		517,896.45	517,895.21	517,896.98		2,181,247.92		2,181,248.04	2,181,246.04	2,181,247.93		7,654.490		7,648.42	7,654.07	7,654.50	7654.42		-6.07	-0.42	0.01	-0.07
CPSS-BC17		517,958.68			517,956.87	517,958.68		2,181,206.38			2,181,204.50	2,181,206.39		7,617.70			7,617.42	7,617.71	7617.4			-0.28	0.01	-0.30
CPSS-BC18		518,036.90		518,036.30	518,035.38	518,036.90		2,181,125.80		2,181,126.08	2,181,124.22	2,181,125.80		7,591.810		7,591.88	7,591.27	7,591.82	7591.77		0.07	-0.54	0.01	-0.04
CPSS-BC19		518,080.98		518,080.98	518,079.53	518,080.97		2,181,056.88		2,181,056.88	2,181,055.24	2,181,056.88		7,572.010		7,572.01	7,571.56	7,572.01	7571.94		0.00	-0.45	0.00	-0.07
CPSS-BC20		518,128.78	518,125.04		518,127.41	518,128.77		2,180,978.42	2,180,977.79		2,180,976.88	2,180,978.42		7,547.74	7,547.66	7,547.81	7,547.36	7,547.75	7547.67		0.07	-0.38	0.01	-0.07
CPSS-BC21		518,143.08		518,141.74	518,141.90	518,143.08		2,180,825.18		2,180,823.70	2,180,823.61	2,180,825.20		7,491.15		7,490.78	7,490.46	7,491.15	7491.24		-0.37	-0.69	0.00	0.09
CPSS-BC22		518,208.65	518,208.57	518,207.38	518,207.45	518,208.66		2,180,769.93	2,180,769.97	2,180,768.46	2,180,768.37	2,180,769.94		7,419.08	7,418.91	7,418.56	7,418.59	7,419.09	7419.03		-0.52	-0.49	0.01	-0.05
CPSS-BC23		518,272.14	518,272.07	518,270.96	518,270.96	518,272.15		2,180,701.87	2,180,701.86	2,180,700.41	2,180,700.27	2,180,701.88		7,361.71	7,361.56	7,361.17	7,361.10	7,361.70	7361.74		-0.54	-0.61	-0.01	0.03
C[illegible]C24		518,365.85		518,364.65	518,364.71	518,365.84		2,180,637.47		2,180,636.00	2,180,635.91	2,180,637.46		7,314.95		7,314.51	7,314.56	7,314.94	7315.02		-0.44	-0.39	-0.01	0.07
C[illegible]1		512,938.57						2,177,940.73						6,285.47										
CPSS-C2		513,041.29						2,177,983.90						6,289.67										
CPSS-C3		513,125.82						2,178,036.86						6,303.85										
CPSS-C4		513,191.42						2,178,090.36						6,310.41										

Table 1

Willow Creek Subsidence Monitoring Report

	See Note	Northing 1997	Northing 1998	Northing 1999	Northing 2000	Northing 2001	Northing 2002	Easting 1997	Easting 1998	Easting 1999	Easting 2000	Easting 2001	Easting 2002	Elevation 1997	Elevation 1998	Elevation 1999	Elevation 2000	Elevation 2001	Elevation 2002	Difference in Subsidence 1st Year	Differenece in Subsidence 2nd Year	Differenece in Subsidence 3rd Year	Difference in Subsidence 4th Year	Difference in Subsidence 5th Year
Point No.																								
CPSS-C5		513,305.34						2,178,126.29						6,327.47										

Table 1

Willow Creek Subsidence Monitoring Report

Point No.	See Note	Northing 1997	Northing 1998	Northing 1999	Northing 2000	Northing 2001	Northing 2002	Easting 1997	Easting 1998	Easting 1999	Easting 2000	Easting 2001	Easting 2002	Elevation 1997	Elevation 1998	Elevation 1999	Elevation 2000	Elevation 2001	Elevation 2002	Difference in Subsidence 1st Year	Differenece in Subsidence 2nd Year	Differenece in Subsidence 3rd Year	Difference in Subsidence 4th Year	Difference in Subsidence 5th Year
CPSS-C47		518,179.88						2,179,221.39						6,742.32					6742.31					-0.01
CPSS-C48		518,307.24						2,179,297.24						6,751.54					6751.47					-0.07
CPSS-C49		518,420.34						2,179,217.38						6,780.50					6780.48					-0.02
CPSS-C50		518,483.99						2,179,359.70						6,790.03					6790.03					0.00
CPSS-C51		518,602.71						2,179,371.95						6,790.20					6790.17					-0.03
CPSS-C52		518,689.26						2,179,409.28						6,810.51					6810.49					-0.02
CPSS-C53		518,744.45						2,179,509.36						6,817.79					6817.77					-0.02
CPSS-C54		518,849.78						2,179,559.70						6,835.59					6835.57					-0.02
CPSS-C55		518,942.98						2,179,515.97						6,846.68					6846.66					-0.02
CPSS-C56		519,094.28						2,179,658.65						6,869.91					6869.88					-0.03

LOST - Marker lost during well drilling

Contorl Adjacent to or over Longwall Mining

** Point Reestablished in 2000

* Point Reestablished in 1999