

0021



State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
James W. Carter
Division Director

1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801
801-538-5340
801-359-3940 (Fax)
801-538-7223 (TDD)

June 9, 1997

TO: File

THRU: Daron Haddock, Permit Supervisor *DH*

FROM: Jess Kelley, Reclamation Specialist *JK*

RE: 1996 Annual Report, Cyprus Plateau Mining Corporation, Star Point Mine, ACT/007/006, Folder #2, Carbon County, Utah

SUMMARY:

The permittee submitted the 1996 Annual Report for Division approval on April 22, 1997.

TECHNICAL ANALYSIS:

This writer examined 4 sections of the Annual Report to determine whether or not they contained adequate information: 1) subsidence monitoring data, 2) certified sediment pond inspections, 3) certified refuse pile inspection, and 4) updated mine maps.

● Subsidence Monitoring Data

Prior to 1994, mining was concentrated in the area east of a large graben which straddles the boundary between R7E and R8E in T15S. Then, in 1994, a crossing was constructed in rock through the graben and panels were laid out and mining was begun west of the graben in R7E.

Subsidence is measured by conventional survey methods at numerous points. Subsidence data from all monitored points are tabulated in the Annual Report. Also included in the Annual report is a summary of the rather complex subsidence monitoring program carried out at this mine since 1994. This summary provides the following information:

- The points above Panels 1-7, 13 and 14 (east of graben crossing, T15S, R7E, Sections 12 & 13) have reached effective maximum subsidence and were not

monitored in 1996. Likewise, the points in the southern half of this area were not monitored in 1996.

■ Points U1, U2, U3 and U4, which lie above panels 15 and 16 (T15S, R8E, Section 18), have reached effective maximum subsidence and were not monitored in 1996.

■ Points U-5 through U-17 and GS-1, which lie above panels 8, 9 and 17 (T15S, R8E, Section 18) have reached effective maximum subsidence and were not monitored in 1996.

■ Points U-18 through U-32, which extend in a line northward from panel 15 (T15S, R8E, Section 18) into Section 7, have reached effective maximum subsidence and were not monitored in 1996.

■ Points G-1 through G-15, which lie west of the graben crossing above panels 18 through 22 (T15S, R7E, Sections 14 and 23), and Points G-16 through G-19, which lie west of the graben crossing and extend in a line eastward from panel 2 (T15S, R7E, Section 14), have reached effective maximum subsidence and were not monitored in 1996.

■ Points G-20 through G-94, which lie west of the graben crossing above panels 24, 25, 27 and 30 (T15S, R7E, Sections 23 and 26) and panels 31, 32, 33, 34, 35 and 38 (T15S, R7E, Sections 10, 11, 14 and 15) were monitored.

■ Points G-95 through G-104, which lie west of the graben crossing above panels 40, 41 and 42 (T15S, R7E, Sections 2, 3, 10 and 11) were installed and surveyed ahead of mining.

The Annual Report also includes graphical summaries of subsidence *and* horizontal movement at Points U-1 through U-4 and GS-1, all of which are near the cliff face at the east end of the mine area, and subsidence cross sections along lines of monitoring points at several locations throughout the mine area. Cross sections A-A, B-B, C-C, D-D (east of the graben crossing; there are 2 cross sections designated 'D-D') and F-F are east of the graben crossing and are all in areas where mining has been discontinued. Cross sections D-D (west of the graben crossing; there are 2 cross sections designated 'D-D'), E-E, G-G and H-H are west of the graben crossing and are all located over the east panels, where mining has recently been discontinued. The typical angle of draw calculated from these cross sections ranges from 23° to 26° in the area west of the graben crossing.

● Certified Sediment Pond Inspections

There are 9 sediment ponds at this site. All were inspected on December 30, 1996 by T. Arthur Palm, a licensed professional engineer registered in the state of Utah. Certified inspection reports are on file with the Division. These inspections revealed no evidence of instability, structural weakness, or other hazardous conditions.

● Certified Refuse Pile Inspection

There is one large refuse pile at this site. The refuse pile was inspected on December 30, 1996 by T. Arthur Palm, a licensed professional engineer registered in the state of Utah. A certified inspection report is on file with Division. This inspection revealed no evidence of instability, structural weakness, or other hazardous conditions.

● Updated Mine Maps

The Annual Report includes updated maps of the underground workings. Maps W-4 and W-5 show, respectively, the 3rd south mains and the 3rd north mains, all of which lie west of the graben crossing. These maps specify those areas mined before 1996, those mined during 1996, and those which will be mined in 1997.

The Annual Report also includes updated maps of the subsidence monitoring plan. Map 521.121f has been updated to show all points monitored for subsidence before 1996. Map 521.121g1 has been updated to show the points monitored for subsidence in 1996 as well as those placed ahead of mining in 1996.

RECOMMENDATION:

It is recommended that the subsidence monitoring data, the certified sediment pond inspection reports, the certified refuse pile inspection report and the updated mine maps be accepted by the Division as satisfying the respective regulatory requirements for the Annual Report.