

3.2.11(a) James Canyon Area

The Upper O'Connor B seam has a large inflow of ground water into the active mining operations. To reduce the amount of inflow, two de-watering wells were drilled in James Canyon (see map 3.4-1 James Canyon).

Access to the water well site is via an exiting road in James Canyon. The road had been water barred and reseeded in the 1970's. Approximately, 4,400 feet of the James Canyon was reopened to reach the drill pad location. As construction started the topsoil from the road was pushed aside and used a berm. A 18-inch culvert was installed in a side drainage to James Canyon. The water bars were left in place and silt fences were installed at the outflow of each bar for sediment control.

A track hoe was used to remove the topsoil from the drill pad and stored at the head of James Canyon. The topsoil was encircled by silt fence for sediment control and marked with a sign. The subsoils were used as fill to create the drill pad. The drill pad is approximately 100 feet wide and 200 feet long or about 0.46 acres. A ditch was constructed above the drill pad to divert water from the undisturbed area. The runoff calculations and ditch design are included in Volume 5, Section 22 James Canyon. An 18-inch culvert was placed in the road just east of the drill pad to allow drainage from the undisturbed area to enter James Canyon Creek. The culvert design calculation are included in Volume 5, Section 22 James Canyon. A sediment pond was dug on the west end of the drill pad to treat runoff from the disturbed area. The sediment pond is designed for total containment and the design calculations are in Volume 5, Section 22 James Canyon. Silt fence was placed at the toe of the out-slope for sediment control.

Two water wells were drilled **in the fall of 2001**. The first hole, JC-1, was bored to a 19-inch diameter and cased with 14-inch diameter steel pipe **and wire-wrap screen**. **The hole was drilled at an approximate angle of 22 degrees from vertical, dips to the east, and penetrates the water producing fault below the 10 Left panel area**. The total length of the drill hole is 1,030 feet. The second hole, JC-2, was drilled vertically, has a 29-inch diameter borehole, and was cased with 20-inch diameter steel pipe **and wire-wrap screen**. The hole was drilled into the sandstone below the coal seam and bottoms out at 1,010 feet. Electric well pumps were installed in each well and were initially operated using a diesel generator. The diesel

generator was replaced by underground power cables in November 2001 that run from a PacifiCorp power line located near the head of James Canyon to the well site. An 8-inch wide three foot deep trench was dug on the outer edge of the James Canyon road for routing power cables to the drill pad. Three power cables and one communication cable were placed in the trench. The cables are rated for 12,400 volts. A transformer is used to reduce the voltage to 4,160 volts and switch gear are used to turn the pumps on and off.

A 16-inch diameter HDPE pipe was buried from the drill pad to Electric Lake. The pipeline was routed along the old James Canyon road to the lake. Once the pipeline was buried, the road surface was deep gouged, the water bars were reestablished, silt fences installed at the outflow of the water bars for sediment control, and the disturbed area was reseeded.

A third well, JC-3, will be drilled at the James Canyon well pad site in March-April 2003. This well will be drilled and completed within the 10 Left area of Skyline mine. This area of the mine was sealed in October 2002 after mining of the 9 Left panel was complete. The purpose of the well is to remove water from the mine and discharge it to Electric Lake. PacifiCorp will obtain a UPDES permit and operate the well to discharge mine water to the lake. Water from the JC-3 well will be pumped to the lake through the existing buried 16-inch HDPE pipe. A transformer and switching gear separate from the JC-1 and JC-2 equipment will be used to operate this well. No additional disturbance outside the existing James Canyon well pad disturbed area is anticipated as a result of drilling and completing JC-3. Skyline Mine will reclaim the entire James Canyon well site at final mine reclamation unless other arrangements are made and agreed upon by the Division, the Manti-LaSal National Forest, and PacifiCorp. Plate 3.4-1 illustrates the location of the JC-3 well and related power equipment.

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