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item 5

March 31, 1970

Comments on Geology
New Yankee Drifts
Betty O'Neal Mine
Lander County, Nevada

On March 28, 1970, the new drifts being driven on the Yankee structure from the Number Five tunnel were examined and mapped.

The drift to the left, bearing northeast, has been driven 133 feet (3/28/70) from its starting point. The Yankee vein was followed for the first 65 feet of the new work, but at that point the vein turns slightly to the right and passes into the right rib of the drift. The remaining drift footage is in chert which forms the north wall of the Yankee structure. Several northwest trending faults cut the drift beyond the point that the vein passes into the rib. These faults show movement to the southwest and could cut and offset the Yankee.

If the Yankee vein is not offset, its projected intersection with the Kinkaid vein should occur no more than 50 feet beyond the right rib of the new drift.

The drift to the right, bearing southwest, has been extended approximately 160 feet beyond the end of the old drift. The Yankee structure was followed for the first 90 feet of this new work. At that point, the Yankee intersects part of the Kinkaid vein. The Yankee vein turns slightly and passes into the right rib of the drift. The narrow Kinkaid can be seen passing out of the drift to the left. The point of intersection of the Yankee and Kinkaid can be seen clearly, with the Yankee cutting the older Kinkaid. If there is no offset, the Kinkaid should be found below the right floor of the drift and could extend down to the northwest parallel to but below the Estella vein.

Beyond this vein intersection, the new drift has followed neither structure, but continues to the southwest in the wedge of ground between the two veins. As one of the purposes of this drift was to provide a connection, in good ground, between the Number Four and Number Five tunnels, it may be best to continue on the present bearing. A connection with the Number Four tunnel should be made in approximately 250 feet. If the drift were turned to follow the Yankee structure, caved ground in the mined area of the Yankee - Estella intersection would be encountered.

If the drift were turned to the left to follow the Kinkaid vein, close to 500 feet of drifting would have to be done to make the connection with Number Four. This choice would, however provide information on the segment of the Kinkaid between the two tunnels.

Recommendations:

Northeast Drift:

The northeast drift should be turned to the right to cut the Yankee structure, and then should continue along this structure to the northeast. Care should be taken to watch for the Yankee - Kinkaid intersection (see map). The last vein sample taken in this drift ran fairly high in silver, and possibly indicates enrichment in the area of the projected intersection.

Southwest Drift:

This drift should be turned to follow the Kinkaid vein. There are stopes on the Kinkaid above the Number Four tunnel, south of the point that the vein crosses the tunnel. The 500 feet of vein structure between the new Yankee drift and Number Four could contain unmined ore.

Long-holing and sampling should be done in the Yankee - Kinkaid intersection area (see map). Holes should be drilled to the northwest (right) to cut the Yankee and test for the presence of the Kinkaid beyond the intersection to the northwest. If the drill cuttings indicate a good thickness of vein to be present, a short cross-cut should be driven to open the area for inspection. If this work shows that the Kinkaid does continue down to the northwest parallel to the Estella, angle diamond drilling could be done from the Estella stope area on Number Five to test the area below the level. Holes would be collared in the Estella footwall and drilled to the southwest.

Respectfully submitted,

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Mining Geologist