

MONTANA WESTERN EXTENDED MINE, ZEEHAN

Since October, 1938 when the previous report on Montana Western Extended Mine was made, further developmental work has been carried out as follows:-

(1) Intermediate Level:

This level was driven southerly from the rise connecting 100 feet level and Main Adit drive, at a point 60 feet below the latter. It follows hanging-wall of Clarke Lode for a distance of 63 feet.

Four horizontal bore-holes, five feet in length, were put out at intervals to test the lode and gave assay results as tabulated below.

Bore No.	Sample No.	Sample Width	Position of Bore from Rise	Lead %
1	1A	0 - 2'6"	5'	8.5
1	2A	2'6" - 5'	-	5.5
2	1B	0 - 2'6"	21'	15.9
2	2B	2'6" - 5'	-	4.4
3	1C	0 - 2'6"	28'6"	17.5
3	2C	2'6" - 5'	-	5.8
4	1D	0 - 2'6"	38'6"	5.2
4	2D	2'6" - 5'	-	3.0

Three further bores, Nos. 5, 6 and 7, spaced between 38'6" from rise and face of level, showed an average of only 0.4% lead.

In the rise, connecting 100 feet level with Main Adit drive, bore-holes were drilled at 25 feet and 50 feet respectively below Main Adit level. Assay results of these holes are as follows:-

Bore No.	Sample No.	Sample Width	Lead %
1	1A	0 - 2'6"	53.3
1	2A	2'6" - 5'	15.2
2	1B	0 - 2'6"	15.3
2	2B	2'6" - 5'	6.3

These two series of bores indicate the presence of a shoot of low grade milling ore, with enrichments in places, between the Intermediate Level and Main Adit Drive, over a length of about 45 feet. The ore-shoot does not, however, appear to be continuous down to 100 feet level.

(2) Main Shaft, 100 feet Level:

(a) East cross-cut from shaft was continued to a distance of 168 feet. At 160 feet a lode channel, showing traces of galena along a northerly strike, was cut and followed in that direction for 10 feet.

(b) Drive on branch lode from South Drive, at 102 feet from No. 1 West Cross-cut, followed a shoot of milling ore and bunches of clean galena over a length of 89 feet, where it was found to again junction with Clarke Lode.

(c) No. 2 West Cross-Cut:

Drive north-easterly at 41 feet has been extended to 112 feet in milling ore, assaying 15% lead where tested. This ore-shoot shows a width of two feet in back, and up to four feet in sole of drive.

The lode did not connect with the Clarke branch lode as was previously expected. However, it may later prove to junction with Clarke Lode closer to No. 1 West cross-cut where bunches of ore were indicated on the plan as passing out of footwall to the west.

ii No. 2 West Cross-cut was extended to a distance of 114 feet on the same general bearing. Channels showing small amounts of galena were intersected at 84 feet and in the face.

iii The north-westerly deviation at 80 feet from South Drive was continued to 35 feet with no further developments.

iv A vertical rise is now being cut to connect with No. 2 Prospecting Shaft from surface.

(d) A south-westerly drive was put out to 21 feet from end of No. 3 West Cross-cut with the object of following a small occurrence of galena showing in the face. The metal was found to be discontinuous in that direction, but at a distance of approximately 10 feet a lode channel carrying a little galena was cut and driven on for 10 feet in a north-westerly direction.

(e) South Drive has now reached a distance of 510 feet from No. 1 West cross-cut. A shoot of ore commencing at 476 feet continued for 20 feet in Clarke Lode. South of ore-shoot the channel is filled with soft graphitic slates along which there is evidence of faulting in the form of vertical slickensides. Similar conditions appertain to the channel towards the end of Intermediate level.

Conclusions:

Four shoots consisting generally of milling ore are now exposed at the 100 feet level.

(1) In south drive commencing at 65 feet from No. 1 West Cross-cut and extending south-westerly for 160 feet in Clarke Lode.

- (2) In the drive along Clarke branch lode over a distance of 89 feet.
- (3) Along lode in drive from No. 2 West Cross-cut, extending for 118 feet.
- (4) Over a length of 20 feet towards present end of South Drive.

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