

SECOND REPORT FOR A-B MINING COMPANY  
ON MAGNETOMETER SURVEYS ON THE DELONG IRON DEPOSIT  
HUMBOLDT COUNTY, NEVADA

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*See mapfiles (2 maps)*

Reno, Nevada  
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This report covers a second magnetometer survey made for the A-B Mining Company on the DeLong iron deposit, Humboldt County, Nevada. The DeLong deposit is situated high in the Jackson Mountains at the head of Jackson Creek and is reached by a graded trucking road from the Jungo-Bottle Creek road. The mineralized zone occurs mainly in the steep south side of a high spur ridge. The iron ore is largely magnetite in somewhat irregular masses occurring along a northward striking fault or sheer zone in metavolcanic rocks. Originally the ore may have occurred in a single large irregular body, but the ore and country rocks now are cut and displaced by a series of strong normal faults.

In December 1953 magnetometer measurements were made to expand and correlate an earlier dip needle survey in order to outline the main ore zone and its possible extension southward across the creek from the main mining pit. At this time a grid was established with a zero point just south of the main road and a base line bearing approximately N.  $4^{\circ}$  E. In the December survey the main ore zone was outlined from 150S to 740N and a new offset



extension was found south of the creek. Recent drilling in this new anomaly shows high-grade ore. The magnetic results of the first survey now are incorporated in the revised and expanded magnetic map that accompanies this second report. The chief purpose of the second survey was (1) to check an area in the northeast part of the grid where stripping now is being done and (2) to extend the magnetic measurements both northward and southward in virgin ground.

The first survey outlined a main positive magnetic zone about 900 feet long and varying in width from 100 to 300 feet. Within the zone the magnetic intensity over the chief blocks of ore range above 20,000 gammas and in places they go beyond the range of the magnetometer or above 31,000 gammas. Disregarding local irregularities, the magnetic results show that the main mineralized zone is divided into three blocks that are offset progressively westward on the north, indicating the presence of faults along which there has been considerable post-mineral movement. Geologic observations and local magnetic irregularities indicate additional faulting within the blocks, particularly the large central one. In reference to the magnetometer grid, the north block lies between 700N and 350N, the central block between 350N and 25N, and the south block between 0-150S. The latter is the new discovery made in December, in an area of slope and stream detritus.

At the time of the second survey stripping had been started high on the slope in the northeast part of the grid,



where the earlier surveys indicated a secondary positive anomaly or branch of the main anomaly. The roads leading to this area are shown on the new map. Additional scattered measurements were made in this area and two short traverses, No. 2 and No. 3, were run along the roads to outline the anomaly in more detail. The revised results, shown on the new map, show much higher magnetic values than were indicated by the early dip needle survey, and a somewhat greater width of mineralization. The strike length is short, however, and the new readings indicate a relatively small block of ore centering at about 600M-165W of the grid. This is probably a slice or wedge faulted from the main zone to the west, although it might be a short branch vein. Strong negative readings on the east side just below the lower road suggest that the bottom of the block is close by or at least that the block dips sharply to the west. Stripping operations now in progress are properly located and should determine the economic value of this block, which definitely is not large unless there is a junction at depth with the main body to the west.

In order to further check the northern part of the mineralized zone Traverse 1 was run northwest of the grid proper, as shown on the new map. This traverse shows no indications of mineralization along the projection of the main magnetic anomaly. At the southwest end it shows a sharp narrow peak of moderate intensity indicating a small separate vein of no economic significance.

South of the main haulage road the grid was extended



to 700S by a series of seven traverses as shown on the new map. The 300S line, running from the base line to 600W, shows no direct southward extension of the main mineralized zone. The measurements show a new anomaly, however, occurring between 300S and 450S in the general vicinity of 500W. Maximum values of magnetic intensity occur on or near the 350S line, which shows a very strong main peak at about 450W and a smaller peak near 550W. The main peak exceeds 25,000 gammas. This may be a new mineralized zone, but the short strike length suggests that it is more likely a faulted segment of the main zone. The magnetic reversals on the 350S line make depth calculations unreliable, but the two sharp peaks suggest the presence of two veins or small blocks relatively close to the surface. These might be the upward projections of a larger mass at depth. When exploratory drilling is resumed it is recommended that one or two holes be drilled to test this anomaly. It is suggested that the first hole be located between the 350S and 400S lines at about 470W and that the hole be inclined at a fairly steep angle to the northeast.

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E. L. Stephenson  
E. L. Stephenson  
Consulting Geophysicist  
Registered Prof. Engineer No. 501