

10.

NAME: DELORO MINE

LOCATION: Marmora Township, concessions 6, 8, 9,  
lot 10; 9; W $\frac{1}{2}$ , 10 & NE $\frac{1}{4}$ , 8

ACCESS: The Deloro Mine site can be reached by  
travelling east of the Village of Deloro for 1/8 of a  
mile on a gravel road.

DEVELOPMENT HISTORY: 1871-1896: 3 shafts sunk, Gatling  
#1 was sunk to 154 feet with 494 feet of drifting;  
The Tuttle #2 shaft was sunk to 70 feet with 172 feet  
of drifting; The Timber shaft was sunk to 70 feet.  
(1896-1903): Gatling shaft continued to 347 feet, and  
2 new levels were established. Tuttle shaft deepened  
to 127 feet. Timber shaft deepened to 100 feet. Total  
drifting was 1,600 feet and cross cutting 780 feet.  
Eight other shafts were sunk to a depth of 517 feet and  
219 feet of drifting was done. A 20 stamp mill and  
works for an arsenic recovery plant was constructed.

GEOLOGY: Mafic rocks cut by felsic dykes, enclose quartz  
veins which are 100 to 1,000 feet long, 1 to 5 feet  
wide, dip 20° to 55° west and contain up to 10%  
arsenopyrite. The most extensively worked were the  
Gatling and the Tuttle veins. Gold is mostly associ-  
ated with the arsenopyrite.

RESERVES (TONNAGE & GRADE): 10,360 ounces of gold was  
produced from 39,143 tons of ore between 1897 and 1902.  
The average grade was 0.26 oz. per ton. Reserves un-  
known; waste piles cannot be identified because of  
subsequent smelter operation; tailings are buried under  
a swamp (volume and grade unknown).

COMMENT ON PROSPECTS: At the moment, the Ministry of  
Environment have operating control of the property, and  
no exploration has taken place because of this.  
Erickson Construction Company Limited is effectively  
dormant and the extent of environmental remedial  
activities to clean up arsenic pollution may effectively  
preclude gold exploration.

In addition, this property has a ferric hydroxide  
tailings pond containing 100,000 dry tons containing  
trace Au, 0.8-3.7 oz/ton Ag, and large amounts of  
Co, Ni, and Cu. This material certainly appears to  
have good potential for retreatment. (Reid Crowther  
and Partners Limited, A Remedial Clean Up Program  
for the Deloro Site, A Consultant's Report for the  
Ontario Ministry of Environment, November 1980).  
The present owner is Erickson Construction Company  
Limited of Ottawa, Ontario.

10. (continued)

REFERENCES:

- GSC, 1927, Economic Geology Series #4, pp. 101-103.
- OBM, 1892, Vol. 2, p. 238.
- OBM, 1898, Vol. 7, pp. 90-92.
- OBM, 1899, Vol. 8, Pt. 1, pp. 39, 40.
- OBM, 1900, Vol. 9, pp. 90, 91.
- OBM, 1901, Vol. 10, pp. 52, 115.
- OBM, 1904, Vol. 13, Pt. 1, p. 18.
- ODM, 1936, Vol. 45, Pt. 1, p. 13.
- OGS, 1979, Mineral Deposits Circular #18, Pt. 2, p. 35, 36.

(Lasir Mines Inc. operated a test batch leach plant on these tailings in 1981). Whether or not the bulk of the tailings are recoverable and can be profitably treated is unknown.

B) The Deloro Mine milled 39,143 tons of gold ore in the 1871-1903 period. The tailings are located in what is now a swampy depression just west of the old Deloro plant site. No data is available on the gold content of these tailings.

In addition to the above tailings from the early gold mines, the Deloro plant site also contains wastes from the treatment of African, Moroccan, and Canadian cobalt ore concentrates between 1940 and 1961. This processing yielded approximately 100,000 dry tons of ferric hydroxide mud tailings now contained in a 20-acre pond. Four analyses of these tailings by Deloro Stellite, Limited, November, 1970 (in Resident Geologist's Files, Tweed, Ontario) show the following range:

Ag	0.8 - 3.7 oz/ton
As	4.1 - 5.9%
Co	0.2 - 4.1%
Ni	0.05 - 0.4%
Cu	0.35 - 1.35%
Fe	8.5 - 12.9%
Pb	104 ppm
Zn	153 ppm
Au	trace

Retreatment of these tailings in a local custom mill might well prove quite profitable, and at the same time help to ameliorate environmental damage caused by these tailings.