GM 30612

GEOLOGY AND MINING POTENTIAL, GOLD PROPERTY

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GEOLOGY AND MINING POTENTIAL

NORDORE MINING CO. LTD.

Gold Property
Val d'Or, Quebec
Canada

Ministère des Richesses Naturelles, Québec SERVICE DE LA DOCUMENTATION TECHNIQUE

Date: 3 AVR 1975

No GM: 30612

W. N. Ingham, Ph. D. Consulting Geologist.

Val d'Or, Quebec, September 1, 1974



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The President and Directors, Nordore Mining Co. Ltd., 153 Perrault Blvd., Val d'Or, Quebec.

Gentlemen:

SUMMARY

This report describes the geology and the mining potential of your 21 mining claims totalling 1278.7 acres. These are located at the eastern side of Dubuisson township in ranges VII and VIII. The area is traversed by numerous roads and streets of part of the town of Val d'Or, (Valley of Gold), Quebec. The properties of two long-time gold producing mines, Sigma Mines and Lamaque Mining Company, lie adjacent to the east of the Nordore property. These two companies have mined nearly 40 million tons of gold ore, worth, at present prices, \$940-million.

The Nordore property has a geological environment very similar to Lamaque and Sigma, as well as other present and past gold producers in the area. It is stratigically located on important gold generating structures, and should readily respond favourably to systematic exploration.

It is recommended that Nordore carry out 20,000 feet of diamond drilling in two stages. The two stages of exploration will cost approximately \$300,000.00.

PROPERTY

The 21 mining claims, held by Nordore Mining Co. Ltd. under an option agreement, total 1278.7 acres. They cover lots 53 to 62, range VII; and lots 53A to 58A range VIII, Dubuisson township, Quebec. The 21 claims are registered with the Quebec Department of Natural Resources under the numbers as follows:

Licence	Claim	Acres	Anniversary
342370	1	49	Feb. 3
.	' 2	49	Feb. 3
II	3	47	Feb. 3
•	4	46.8	Feb. 3
342371	1	.46.8	Feb. 3
	2	46.8	Feb. 3
	3	46.8	Feb. 3
un series de la companya de la comp	4	46.2	Feb. 3
342372	1	32.5	Feb. 3
u .	1 2	68	Feb. 1
n .	3	100	Feb. 1
342373	1	100	Feb. 1
, n	2	100	Feb. 1
342374	1	100	Feb. 1
o o	2	100	Feb. 1
342375	1	50	Feb. 2
n	2	50	Feb. 2
n	3	50	Feb. 2
O	4	50	Feb. 2
342376		50	Feb. 2
u .	<u>2</u>	50	Feb. 2
7 Licences	21 claims	1278.7 ad	cres

The property is 8,600 feet long (east-west) and it averages 7,000 feet wide (north-south). All parts of it are readily accessable by roads and streets of the western part of the town of Val d'Or.

HISTORY

Gold was discovered on the adjacent property of Lamaque Mining Company in 1923, when the price per ounce was \$20.00. At Lamaque, gold production started in 1935 in a mill operated at 250 tons per day, and it was subsequently increased to 2100 tons per day. During the past 40 years of operation total production has been 22,000,000 tons of ore. This has yielded 4,001,700 ounces of gold, which at the present day price of gold at approximately \$150.00 per ounce, would have a value of over six hundred million dollars.

Gold was discovered on the adjacent Sigma Mines in 1934. Production began in 1937, and to date 15,000,000 tons have been hoisted, which has yielded 2,700,000 ounces of gold. At present day prices this would have a value of over three hundred and forty million dollars.

Rocdor Mines, Valdemaque Mines and Iso Mines drilled a few holes at scattered locations on the Nordore property during 1940 to 1963. Since then no exploration has been carried out.

The claims were staked by the writer on February 1, 2 and 3, 1974, subsequent to an agreement and commitment to option them to Nordore Mining Co. Ltd. To date Nordore has not started a proposed exploration program.

GEOLOGY

The range VIII part of the property is underlain mainly by Early Precambrian intermediate and siliceous volcanic rocks. These are rhyolite, trachyte and dacite lavas, considerably sheared and altered. Bands of tuff and agglomerate are intercalated with the lava flows. Volcanic andesite occupies the northern section of the group of claims.

on the property. Of these, the oldest is peridotite, followed by diorite, granodiorite, and feldspar porphyry. The peridotite normally occurs as elongated sills, which are structurally concordant with the volcanic rocks. A few rock outcrops indicate the presence of a body of diorite in the north-central part of the property. The eastern half of a granodiorite plug occupies the west-central area. This plug is about 5000 feet long and 3000 feet wide. It is elongated in a northwesterly direction, transverse to the structure of the intruded volcanic formations.

Dykes of feldspar porphyry and quarts feldspar porphyry, from 10 feet to 100 feet in width, intrude all of the older formations.

Structurally, the volcanic rocks strike nearly east-west and dip more or less vertically. Northeast and southwest strike directions are diagnostic of contorted conditions at the eastern end of the granodiorite stock.

Extrapolation of structural information from outcrops, drill holes and mine workings on adjacent mining properties, and from drill holes on these mining claims, indicates that several wide, strong shear structures and fault zones traverse the property in an east-west direction.

The shear structure inferred to cross the northerly part of the Nordore property is the western extension of a zone of dislocation designated the highway shear. This zone is best known on the adjacent ground of Sigma Mines, where it is associated with the localization of gold orebodies in quartz veins and in porphyry dykes.

A parallel shear zone occurs 2000 feet to the south of the above structure. It traverses the main Lamaque gold ore zones, which are in quartz veins, dykes and a mineralized plug of granodiorite. The assumed western extension of this shear appears to lie at the southeast margin of the Nordore granodiorite, which area should be especially favourable for gold deposition.

A third strong shear structure is projected across the south part of the Nordore property. Gold occurs in or near it to the east on the Lamaque property and farther to the east on Bounty Exploration (Aumaque). To the west of Nordore, on the Goldex property, currently being developed underground, the gold-bearing fractures in a granodiorite body may be related to this shear zone, or a branch of it.

In the southwest part of the Joubi Mining Corporation property, adjoining Nordore on the west, diamond drilling carried out under the direction of the writer in 1973-74, discovered a gold oreshoot in a shear structure at the contact of a granodiorite body.

North of the Nordore ground, gold deposits have been explored at the Harricana shaft, the Jacola shaft and the Stabell shaft, and 5,000,000 tons were mined at the Sullivan Consolidated shafts.

CONCLUSION AND RECOMMENDATIONS

- This property of Nordore Mining Co. Ltd. is definitely very well located in the heart of the Val d'Or, Quebec, gold mining area.
- 2. Important gold deposits occur to the east, north and west in geological environments very similar to that prevaling on the Nordore claims.
- 3. A few sporadic drill holes have been put down on the property in the past, but the projected, potentially gold ore-bearing structures are still essentially unexplored.
- 4. It is recommended that 20,000 feet of exploration diamond drilling be card dout in two stages:
 - Stage I: A firm 10,000 feet of drilling to explore selected geological and geophysical targets. This will cost, including financing, field work, engineering and administration \$150,000.00.
 - Stage II: A second 10,000 feet of drilling, predicated on favourable and encouraging results as well as adequate coverage by the first program. This will cost an additional \$150,000.00.

Submitted by

W. N. Ingham, Ph. D., Consulting Geologist.

Val d'Or, Quebec, September 1, 1974.

W. N. INGHAM, Ph.D. Consulting Geologist

CERTIFICATE

- 1. I am Walter Norman Ingham, with office at 207 Dennison Boulevard, Val d'Or, Quebec.
- I graduated with the Degree of B. A. in Geology from McMaster University in 1938, I have the degree M. A. in geology from the University of Toronto, 1941; and I received the Degree of Ph. D. in Economic Geology from the University of Toronto, 1944.
- 3. I am a member of the Canadian Institute of Mining and Metallurgy since 1947; and a Charter Fellow of the Geological Association of Canada.
- This report is based on personal geological knowledge of the Val d'Or gold area gained as a result of 30 years of almost continuous professional work, including surface mapping, exploration drilling, underground development and geophysical surveys. During the first ten of these years the writer was employed by the Quebec Government Department of Mines as Resident Geologist, for the Val d'Or Malartic area. Practising as an independent consultant the writer has discovered three gold mines in the area, two of them in 1973-74.

Because these mining claims are located within the limits of the town of Val d'Or, for many years they were withdrawn from staking and exploration. In November, 1973 the writer obtained special permission from the Quebec Department of Natural Resources to acquire the claims by staking in the usual manner. The writer is thus the vendor of the property to Nordore Mining Co. Ltd. and retains a non-assessable interest in the property. The writer is also a Director of Nordore Mining Co. Ltd. and a shareholder.

W. N. Ingham, Ph. D., Consulting Geologist.

Val d'Or, Quebec, September 1, 1974