Occurrence Details

Occurrence Number: 106F 008
Occurrence Name: Crest
Occurrence Type: Hard-rock
Status: Deposit
Date printed: 12/16/2025 9:45:20 PM

General Information

Primary Commodities: iron, phosphorus, silica
Deposit Type(s): Iron Formation
Location(s): 65°15'8" N - -133°2'22" W
NTS Mapsheet(s): 106F06
Location Comments: .5 Kilometres
Hand Samples Available: Yes
Last Reviewed:

Capsule

Work History

Hematite float in glacial till was well known for years (Geological Survey of Canada Paper 50-14) before the source was discovered by California Standard Company Ltd in 1961. A total of 862 claims (an area of about 240 sq km) were staked in Jun/62 and transferred to a new subsidiary company, Crest Exploration Ltd, which carried out geological mapping, channel sampling, ground and airborne geophysical surveying and drilled one hole (106.7 m) in 1962. In 1963 the company continued channel sampling, carried out bulk sampling, drilled 18 holes (2 549.3 m) and constructed an airstrip.

In addition, the entire property was surveyed and taken to lease and a feasibility study was carried out by Canadian Bechtel Ltd in 1963-64, and two bulk samples totaling about 110 tonnes were shipped out for metallurgical tests. Sometime in the late 1970¿s to early 1980¿s the property was transferred to Chevron Resources Canada.

In Apr/2002 Promithian Inc, the Nacho Nyak Dun Development Corporation and the Yukon Department of Energy Mines and Resources engaged Hatch Associates Ltd to carry out a high level evaluation of Promithian's plan for developing the Crest Iron deposit into a mining-steel manufacturing operation. In Jul/2006 Chevron Resources Canada Ltd commissioned Hatch Consulting Ltd to review the economics of the Crest Iron deposit.

Capsule Geology

Iron formation composed of unaltered hematite and jasper occurs near the base of the glacial-marine Rapitan Formation of Late Proterozoic age. Thickness is up to 152 m and average iron content is 43% and ranges as high as 65%. Thin layers with primary sedimentary features suggest that chemical deposition of alternating silica and hematite rich layers was interrupted by the influx of flows of conglomerate and mud, which scoured channels in the soft iron and silica sediment. Some of the fine grained clastic beds impregnated with hematite have the appearance of tuff or volcanic ash that settled in soft hematitic ooze.

The hematite and silica are believed to have been carried in solution by fumarolic waters and precipitated in grabens on the sea floor. Phosphorous is the main impurity, occurring as finely disseminated apatite.

In May/64 mineable reserves in the Iron Creek area (zones 1 to 9), employing a less than 1:1 stripping ratio, were estimated at 3 175 147 000 tonnes, averaging 43.8% iron, 26.6% silica and 0.34% phosphorous (Assessment Report #017964 p. 5). In 1986 Yeo published a reserve figure of 5.6 billion tonnes averaging 47.2% iron for the central part of the Crest deposit (see also Assessment Report #091697 p. 18). Regional reserves are estimated at over 18.5 billion tonnes.

References

CANADA NORTH, Sep/62. Giant ore find brings new hope to the north. P. 9-10.

CHEVRON CANADA RESOURCES SNAKE RIVER IRON ORE REVIEW, by C. McBean, Hatch Consulting Ltd. Available from promithian.citymax.com website.

CREST EXPLORATION LTD, Jun/62. Assessment Report #061478 by R.M. Williams.

CREST EXPLORATION LTD, Jun/63. Assessment Report #091697 by R.J. Flower.

CREST EXPLORATION LTD, May/64. Assessment Report #017964 by R.J. Flower.

CREST EXPLORATION LTD, Nov/65. Assessment Report #019058 by J.L. Charles.

CREST EXPLORATION LTD, Nov/65. Assessment Report #019059 by D. Miller.

CREST EXPLORATION LTD, Nov/65. Assessment Report #019060 by A.R. Rule and C.B. Daellenbach.

CREST EXPLORATION LTD, Nov/65. Assessment Report #019093 by P. Boutin.

CREST EXPLORATION LTD, 1965. Assessment Report #019094 by J.E. Lawver.

DAHLSTROM, C.D.A., Apr/72. The Snake River Iron Deposit. Talk presented to Fourth Northern Resource Conference, Whitehorse.

DAHLSTROM, C.D.A., 24 Sep/64. Crest Exploration. Northern Miner, p. 83.

GEOLOGICAL SURVEY OF CANADA Paper 50-14, p. 23-24; Paper 63-38, p. 15-18; Paper 64-36, p. 16-17; Paper 65-1A, p. 143; Paper 65-19, p. 22-23.

KLEIN, C. AND BEUKES, N.J., 1993. Sedimentology and geochemistry of the glaciogenic late Proterozoic Rapitan Iron Formation in Canada, Economic Geology and the Bulletin of the

Society of Economic Geologists, May 1993, Vol. 88, No. 3, p. 542-565.

NORRIS, D.K., ET AL., 1993. The geology, mineral and hydrocarbon potential of the Northern Yukon Territory and Northwestern District of Mackenzie. Geological Survey of Canada Memoir, in press.

PROMITHIAN INC., Jun/2005. Web Site: www.promithian.citymax.com.

YEO, G.M. 1986. Iron-formation in the late Proterozoic Rapitan Group, Yukon and Northwest Territories. : In Mineral Deposits of the Northern Cordilleran, Canadian Institute of Mining and Metallurgy, Special Volume 37 by J. A. Morin.

Work History

Date	Work Type	Comment
7/17/2006	Studies	Hatch, July 2006. Review of Crest Deposit.
12/31/2002	Studies	Hatch Associates hired to carry out high level evaluation.
12/31/1964	Studies	
12/31/1963	Geochemistry	Amount of work done: 110 TONNES
12/31/1963	Drilling	Number of holes drilled: 18 Amount of work done: 2549.3 METRES
12/31/1963	Studies	
12/31/1963	Other	
12/31/1962	Drilling	Number of holes drilled: 1 Amount of work done: 106.7 METRES
12/31/1962	Geology	

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
017964	1963	Summary Report of Operations on the Yukon Iron & Mica Claims Snake River Area	Air Strip - Development, Surface, Diamond - Drilling, Soil - Geochemistry, Regional Bedrock Mapping - Geology	18	2549.30
091697	1963	A Continued Study of the Beneficiation Characteristics of Iron Ore from the Snake River Iron Ore Deposit	Magnetic - Airborne Geophysics, Rock - Geochemistry, Soil - Geochemistry, Gravity Survey - Ground Geophysics, Magnetics - Ground Geophysics		

Related References

Number	Title	Page(s)	Reference Type	Document Type
ARMC013558	The Snake River iron deposit - Notes on a talk to the Yukon Northern Resource Conference		Property File Collection	Report
ARMC013556	Notes on Snake River area		Property File Collection	Report
ARMC013562	News clipping - Major iron discovery		Property File Collection	News Release
ARMC013561	Notes on Crest iron ore		Property File Collection	Miscellaneous Company Documents
ARMC013560	Snake River area structural cross sections		Property File Collection	Geoscience Map (General)
ARMC013559	Snake River iron deposit 1963 field program summary report		Property File Collection	Report
ARMC013563	Drilling areas - Snake River project		Property File Collection	Geoscience Map (General)

Resource/Reserve

Year	Zone	Type	Commodity	Grade	Tonnage	Amount	Reported Amount	43-101 Compliant	Cut-off
2006	Iron Creek area (Open Pit & Underground)	Historical Estimate	iron	43.82 %	11,196,300,000		No	No	35% soluble Fe
Chevron Canada Resources Snake River Iron Ore Review by Hatch Consulting (July 2006), pg. 2-9. Iron Creek is most suitable area for open pit operation, with low stripping ratios for 6 Billion tonnes.									
1986	CREST - MAIN DEPOSIT (OPEN PIT)	Historical Estimate	iron	47.2 %	5,600,000,000		No	No	Unknown
Figure includes total reserves for Crest deposit which is most explored part of property.; Paper by Yeo in CIM Volume. Also Assessment Report #091697 p. 18.									
1964	CREST - CORE DEPOSIT (OPEN PIT)	Historical Estimate	iron	43.8 %	3,175,147,000		No	No	Unknown
Figure covers zones 1 to 9, core of deposit, i.e. what company would mine to get property into production. Using maximum stripping ratio of 2/3 cubic metre to 1 tonne of ore.; Assessment report #017964 by R.J. Flower, p. 5.									
1964	CREST - CORE DEPOSIT (OPEN PIT)	Historical Estimate	phosphorus	.34 %	3,175,147,000		No	No	Unknown
Figure covers zones 1 to 9, core of deposit, i.e. what company would mine to get property into production. Using maximum stripping ratio of 2/3 cubic metre to 1 tonne of ore.; Assessment report #017964 by R.J. Flower, p. 5.									
1964	CREST - CORE DEPOSIT (OPEN PIT)	Historical Estimate	silica	26.6 %	3,175,147,000		No	No	Unknown

Figure covers zones 1 to 9, core of deposit, i.e. what company would mine to get property into production. Using maximum stripping ratio of 2/3 cubic metre to 1 tonne of ore.; Assessment report #017964 by R.J. Flower, p. 5.									
1963	Crest overall resource (Open Pit & Underground)	Historical Estimate	iron	40 dwp/Tl	25,000,000,000		No	No	unknown
Canadian Betchel and Crest Exploration, 1963, assessment report 061478, quoted in Hatch 2006. Overall resource figure 20 to 30 B tonnes, grade approximated for data entry.									