



Occurrence Details

Occurrence Number: 105G 013

Occurrence Name: Hoo

Occurrence Type: Hard-rock

Status: Prospect

Date printed: 12/15/2025 10:19:42 PM

General Information

Secondary Commodities: lead, silver, zinc

Deposit Type(s): Skarn Pb-Zn

Location(s): 61°33'9" N - -131°32'57" W

NTS Mapsheet(s): 105G12

Location Comments: .5 Kilometres

Hand Samples Available: Yes

Last Reviewed:

Capsule

Work History

In 1955 K.G. Sanders and J. Ryan of Newmont Mining Corporation of Canada Ltd discovered mineralized float in the area but did not stake the occurrence. The occurrence was staked within Hoo cl 1-123 (90072) in Jan/66 by Northlake Mines Ltd (a syndicate consisting of Augustus Exploration Ltd, Copper Ridge Mines Ltd, Silver Standard Mines Ltd, Transcontinental Resources Ltd, North Pacific Mines Ltd). In the spring of 1966, Northlake flew an airborne magnetic and EM survey over the area. Follow-up Ronka and Turam geophysical surveys located an EM conductor and grid soil sampling located a soil anomaly (Area 19). Lead-zinc bearing limestone float was found in a small creek which crosses Hoo claims 44, 46 and 63, while chalcopyrite in quartz was found in a larger creek crossing claims 76 and 88. Area 18, an EM conductor located in the Hoole River valley, was drill tested in 1966 (see Minfile Occurrence #105G 133).

Restaked as Ho-Ho cl 1-245 (Y64634) in Aug-Oct/72 by South Yukon Joint Venture (Straus Exploration Inc, Marietta Resources International Ltd, Union Oil Company of Canada Ltd, and Chevron Canada Limited (Standard Oil Company of BC Limited), which explored with grid soil sampling and mapping in 1972, and bulldozer trenching, eight diamond drill holes (762 m), a tote road and airstrip construction in 1973. The Tee and Kup cl (Y73522) were fringe staked in Jun/73 by A. Harman. The Ho-Ho claims were transferred in 1973 to Chevron Canada Limited, which conducted additional bulldozer trenching.

W. Shenfield staked Sarah cl 1-2 (YA91031) to the west in Jun/86 and rocked sampled in 1988.

Restaked as Argus cl 1-28 (YB35082) by Archer, Cathro & Associates (1981) Ltd in Aug/92. Kennecott Canada Inc optioned the property and carried out a program of auger drilling and soil sampling between July and Sep/93. Archer, Cathro added Argus cl 31-106 (YB45845) in Jun/93 and Argus cl 107-108 (YB46289) in Sep/93. Archer Cathro transferred the Argus claims to YGC Resources Ltd. in Apr/94.

In Feb/95 Kennecott Canada Exploration Inc staked Cyr cl 1-10 & 19-76 (YB56979) on the southeast boundary of the Argus claims, up-ice of high grade float found on the Argus property. Kennecott collected 114 auger soil, 9 silt and 4 rock samples in 1995. In 1996 Kennecott collected 84 samples in a biogeochemical survey.

Atna Resources optioned the Argus property from YGC Resources and staked the Argus cl 107-110 (YB60244) in Aug/95. In June and July of 1996, Equity Engineering supervised a program of grid establishment, magnetometer and VLF-EM surveying, geological mapping and diamond drilling (nine holes totalling 910 m) on the Argus property for Atna Resources. Atna completed six holes totaling 610 metres in 1997.

Capsule Geology

The area is located in the Yukon-Tanana Terrane and is underlain by a layered sequence of metamorphosed and deformed sedimentary and volcanic rocks believed to represent a mid Paleozoic continental magmatic arc. The area has not yet been re-mapped by the Yukon Geology program, however diamond drilling and trenching on the property revealed thick sequences (100 m or more) of phyllite, carbonaceous and non-carbonaceous phyllite and chloritic phyllite, massive clean quartzite, phyllitic quartzite with light blue quartz clasts and chloritic quartzite, thick bedded, dark grey, finely laminated, pyritic limestone (to 30 m thick or more), and minor quartz-biotite-sericite schist.

These descriptions generally match units DMN1 and DMN2 of Gordey's (1999), Devonian to Mississippian (and older ?) Nasina Assemblage. These units also likely correlate with Murphy and Piercey's (1999) Devonian to Early Mississippian units (units Df, Dm, Dq, Dq) which they mapped in the Finlayson Lake district, located to the southeast.

Early exploration and diamond drilling focussed on the EM anomaly located on the southwest side of the Hoole River (Minfile Occurrence #105G 133). In 1972 the South Yukon Joint Venture focussed their efforts on tracing back the source of the high grade lead-zinc float first discovered in 1955. Archer (1973) described the typical mineralized float specimen as consisting of bands of disseminated sphalerite with small amounts of galena and pyrite in weakly metamorphosed, well laminated quartzite containing 15% ankerite and calcite, and 1% to 5% (sericite) as very fine grained flakes with a crude orientation. The quartz is described as being sucrosic and occurring as fine laminations interspersed with sphalerite rimmed ankerite bands. Grid soil sampling outlined five large coincident lead and zinc anomalies within an area 3 658 m long and 914 m wide. These anomalies were named from east to west; zones 'A' through 'E'. Sampling of float returned grades averaging approximately 7% Zn, 0.4% Pb and 13.7 g/t silver. Trenching and drilling showed that the mineralization was confined to clastic horizons associated with limestone lenses. The best assay from trenching was 3.5% Zn across 3.7 m and the best drill section was 3.9% Zn and 0.2% Pb across 4.0 m from Hole E1.

On the adjoining Sarah claims high grade sphalerite float occurs near a thin limestone layer containing minor sphalerite lenses.

Soil sampling and auger drilling undertaken in 1993 by Kennecott Canada on the Argus claims, detected several lead and zinc anomalies in glacial overburden. Twenty-three float samples collected down-ice of zone 'A' and described as 'hard' foliated quartzite returned an average grade of 0.53% Pb, 8.67% Zn, and 21.4 ppm Ag. Other rock samples returned highs of 6 000 ppm Ba, > 10 000 ppm Zn and 252 ppm Pb. Kennecott also sampled all previous trenches.

In 1995 three soil samples collected from two lines located south of Northlake Creek, on Kennecott's Cyr claims, returned anomalous zinc values (144-154 ppm) with elevated lead; consistent with the northwest direction of ice movement. Two lines of soil samples collected north of Northlake Creek returned a number of anomalous zinc values possibly representing an extension of mineralization found at the 'A' and 'B' zones on the adjoining Argus claims.

As part of Kennecott's 1995 field program, J. Bond (Hulstein, 1996) completed a study of the Quaternary geology on and surrounding the Cyr claims. Bond concluded that based on ice directions and the angularity of the float specimens, the source of the 'A' zone anomaly on the Argus claims would likely be found to the east on Kennecott's adjoining Cyr claims. In 1996 Kennecott carried out a helicopter treetop biogeochemical sampling program in an effort to trace float mineralization and soil anomalies to source. Results identified a Ba-Cu-Hg-Zn anomaly in the northwest corner of the Cyr claims adjacent to the 'B' zone on the adjoining Argus claims (Hulstein, 1997).

Atna Resources explored the Argus property with ground magnetic and VLF surveys prior to diamond drilling. The property hosts Pb-Zn-Ag sedimentary-sedimentary- exhalative style mineralization in carbonaceous phyllitic rocks which occur above or within a carbonaceous limestone/marble unit. The mineralization consists of sphalerite, galena and pyrite as intergrowths, semi-conformable replacement masses, stringers within quartz and marble, and as foliation conformable, massive-to-disseminated bands.

The geophysical program undertaken by Equity Engineering on the Argus claims was successful in defining local stratigraphy and several holes in the follow-up drilling program intersected significant mineralization. Drilling in 1996 concentrated on the 'A' zone, and significant intersections include: 2.75% Zn, 0.12% Pb and 7.06 g/t Ag over 7.3 meters from hole ARG96-01 and; 2.67% Zn, 0.75% Pb and 11.0 g/t Ag over 15 meters from hole ARG96-02. Step out holes, collared to the east of these two holes also intersected mineralization. Diamond drilling continued in 1997, with the best result obtained in hole ARG96-07. The hole returned 10.1 metres grading 18.7 g/t Ag, 0.86% Pb, and 3.26% Zn.

References

ARCHER CATHRO AND ASSOCIATES, May/73. Assessment Report #060148 by A.R. Archer.

ATNA RESOURCES LTD, May/96. Assessment Report #093469 by P. Kallock.

ATNA RESOURCES LTD, Apr/97. Assessment Report #093582 by M.E. Baknes.

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KENNECOTT CANADA INC, May/96. Assessment Report #093468 by R. Hulstein.

KENNECOTT CANADA EXPLORATION INC, Feb/98. Assessment Report #093669 by R. Hulstein

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MURPHY, D.C., AND PIERCEY, S.J., 1999b. Geological map of parts of Finlayson Lake (105G/7,8 and parts of 1,2, and 9) and Frances Lake (parts of 105H/5 and 12) map areas, southeastern Yukon (1:100,000 scale). Exploration and Geological Services Division, Indian and Northern Affairs Canada, Open File 1999-4.

NORTHLAKE MINES LTD, Jun/66. Assessment Report #019117 by P.H. Sevensma.

NORTHLAKE MINES LTD, 1966. Assessment Report *#060253 by P.H. Sevensma.

NORTHLAKE MINES LTD, Jan/67. Assessment Report #019114 by A.J. MacDonald.

SHENFIELD, W., Apr/88. Assessment Report *#092862 by W. Shenfield.

YUKON EXPLORATION AND GEOLOGY 1995, p. 12. 1996, p. 16, 32. 1997, p. 17, 35, 38.

Work History		
Date	Work Type	Comment
12/31/1997	Drilling	Six holes, 610 m.
12/31/1996	Drilling	Nine holes, 910 m.
12/31/1996	Geology	
12/31/1996	Geochemistry	Also silt and rock samples.
12/31/1996	Ground Geophysics	Also VLF-EM survey.
12/31/1995	Geochemistry	Also soil sampling.
12/31/1995	Drilling	
12/31/1993	Geochemistry	
12/31/1993	Drilling	Overburden drilling.
12/31/1988	Geochemistry	
12/31/1978	Trenching	
12/31/1973	Development, Surface	
12/31/1973	Drilling	Eight holes,762 m.
12/31/1973	Development, Surface	
12/31/1973	Trenching	
12/31/1972	Geology	
12/31/1972	Geochemistry	
12/31/1966	Geochemistry	
12/31/1966	Airborne Geophysics	Also EM survey.
12/31/1955	Other	Newmont discovered mineralized float.

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
093669	1996	Assessment Report on the 1996 Biogeochemistry Survey on the Cyr Property	Biogeochemistry - Geochemistry		
093582	1996	Geological, Geophysical and Diamond Drilling Report on the Argus Property	Diamond - Drilling, Rock - Geochemistry, Bedrock Mapping - Geology, EM - Ground Geophysics, Magnetics - Ground Geophysics	8	908.50
093469	1995	Geological, Rock and Soil Geochemical Survey Argus Mineral Claims	Rock - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology		
093194	1993	Assessment Report on the 1993 Geological and Geochemical Investigation of the Argus Property	Orthophoto - Airphotography, Auger - Drilling, Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Line Cutting - Other		
091161	1978	Assessment Report on Bulldozer Trenching Conducted July 31 to Aug 9, 1978 on Hoho 1-48, 57-68, 67-78, 174, 176, 178, 180, 189-190, 270F-272F Claims	Rock - Geochemistry, Mechanical - Trenching		
090950	1973	Drill Logs Hoo Joint Venture	All Weather Road - Development, Surface, Diamond - Drilling, Mechanical - Trenching	8	762.10
060148	1972	Geology and Geochemistry, Hoo Occurrence	Silt - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology		
060250	1966	Geological, Geochemical, Geophysical & Physical Work Report on the Hoo, EL, Gee Leo, P.S., P.G., C.W. and Z Claim Groups	Electromagnetic - Airborne Geophysics, Magnetic - Airborne Geophysics, Diamond - Drilling, Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, EM - Ground Geophysics, Backhoe - Trenching	4	486.46
019114	1966	Report on the Hoo, EL, Gee Leo, P.S., P.G., C.W. and Z Group of Mineral Claim Groups	Electromagnetic - Airborne Geophysics, Magnetic - Airborne Geophysics, Diamond - Drilling, Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, EM - Ground Geophysics, Backhoe - Trenching	4	486.46
019117	1966	Report on Airborne Geophysical Survey	EM - Ground Geophysics, Magnetics - Ground Geophysics		

Related References

Number	Title	Page(s)	Reference Type	Document Type
ARMC008063	Pelly project economic geology map - Figure 16a		Property File Collection	Geoscience Map (Geological - Bedrock)
ARMC008066	Regional geochemical map - Copper, lead and zinc - Pelly project		Property File Collection	Geochemical Map
ARMC016589	Geochemical map -105G/12 - Starr Creek		Property File Collection	Geochemical Map
ARMC016583	Geology map - 105G/12 - Star Creek		Property File Collection	Geoscience Map (Geological - Bedrock)