Occurrence Details

Occurrence Number: 105G 048
Occurrence Name: Pup
Occurrence Type: Hard-rock
Status: Showing
Date printed: 12/16/2025 3:19:56 PM

General Information

Secondary Commodities: asbestos, copper, gold, lead, zinc
Aliases: Eldorado
Deposit Type(s): Volcanogenic Massive Sulphide (VMS) Besshi Cu-Zn
Location(s): 61°42'55" N - -131°42'45" W
NTS Mapsheet(s): 105G12
Location Comments: .5 Kilometres
Hand Samples Available: No
Last Reviewed:

Capsule

Work History

Staked as Pup cl (88395) in Aug/63 by Newmont Mining Corporation Ltd which completed a magnetometer survey later in the year. The company carried out bulldozer trenching and drilled two holes (193.6 m) in 1964.
Restaked as Eldorado cl 1-58 (YB11987) in May/88 by A. Carlos, and immediately optioned to Noranda Exploration Company Ltd. In Jun/88, the company staked Eldorado cl 59-78 (YB14223) on the east side of the claim block and carried out preliminary soil sampling and limited mag and VLF/EM surveys later in the summer. In Mar/89 Noranda cut a new grid and carried out a detailed EM and magnetic geophysical survey. In Jun/89 the company carried out geological mapping, soil sampling and trenching. Noranda relinquished its option in Mar/90.
Northern Dynasty Explorations Ltd staked Lug cl 1-78 (YB14165) on the southern boundary of the Eldorado claims in Jun/88. The company mapped, soil sampled and conducted magnetometer and EM surveys in 1989.
In Jun/94 Cominco Ltd staked Zoo cl 1-33 (YB49787) on the eastern side of the remaining Eldorado claims. In 1994 the company carried out a regional helicopter-borne, radiometric, and EM/magnetic geophysical survey over the entire area and in 1995 followed up the results with ground HLEM, magnetic and gravity geophysical surveys. The company carried out geological mapping, prospecting and drilled 1 diamond drill hole (96.9 m) in 1996.
In Oct/94 J. Dodge staked Midas cl 1-29 (YB56539) 2 km southwest of the occurrence. In Jun/95 Dodge transferred the claims to Dodgex Ltd and carried out mapping, prospecting and some geochemical sampling.
In Sep/95 Carlos optioned the remaining Eldorado claims to Mar-West Resources Ltd. In the fall of 1995 Mar-West purchased the results of a regional helicopter-borne, radiometric and EM/magnetic geophysical survey flown by Cominco Ltd over the Eldorado claims. In the spring of 1996 Mar-West carried out a ground EM/magnetic geophysical program to follow up 4 anomalies identified by the helicopter airborne geophysical survey the previous year. In Jun/96 the company staked Knee cl 1-12 (YB84086) north of the Eldorado claims to provide access between the claim block and the Robert Campbell Highway and in Jul/96 the company staked West cl 1-208 (YB85439) around the Eldorado, Zoo and Midas claim groups. Mar-West drilled 6 diamond drill holes (532 m) in the summer of 1996 to test the potential for exhalative massive sulphide mineralization associated with the geophysical anomalies and epigenetic gold mineralization present at the ¿Main¿ showing.

Capsule Geology

Geological mapping (Murphy et al., 2001) shows the region is dominantly underlain by a layered sequence of Devonian to Early Mississippian metavolcanic and metasedimentary rocks of the Yukon-Tanana Terrane (YTT) that have been intruded by Mississippian granitic intrusions and later Cretaceous and Jurassic intrusions. The YTT is a volcanic-plutonic pericratonic arc assemblage that was strongly deformed and metamorphosed by Late Triassic time. Volcanic-hosted massive sulphide deposits exist at different stratigraphic positions within the YTT.
The area is predominantly underlain by Devonian to Mississippian Fire Lake metavolcanic rocks overlain by Eocene mafic volcanic flows, although outcrop is sparse. Ultramafic rocks form distinct aeromagnetic anomalies, and it appears that the original Pup claims were staked to cover a small, circular magnetic anomaly of 150 gamma magnitude. Prospecting by Newmont Mining uncovered asbestos-bearing float in an area roughly coincident with the aeromagnetic anomaly. Examination of float and drill core samples revealed two types of serpentine: (1) a dark green barren variety, and (2) a light apple green type cut by numerous white veinlets containing slip fibre, mostly less than 0.6 cm in length.
On the Eldorado claims, Noranda obtained encouraging gold values from rusty weathering schist containing arsenopyrite with minor galena and chalcopyrite. Grab samples assayed up to 10 g/t Au. Ground electromagnetic surveys outlined several east-west trending conductors interpreted to be massive sulphides or graphite. Follow-up magnetic surveys outlined several high amplitude magnetic highs immediately north of the conductor axes. Soil sampling results were masked by deep glacial overburden which overlies the entire region. The best result was 560 ppb Au, which is coincident with an 800 m long EM conductor axis. Scattered arsenic values up to 1000 ppm were returned north of this conductor axis.
Mar-West's helicopter-borne electromagnetic, radiometric and magnetic survey identified five discrete anomalies. Four of these were selected for ground follow-up by HELM and total field magnetics. Mar-West drilled 6 holes (531.96 m) in 1996 to test three of the geophysical anomalies and gold bearing quartz-arsenopyrite mineralization at the 'Main' showing at Hoolio Creek. The majority of the holes intersected dark coloured, variably deformed, altered and metamorphosed black shale, argillite and phyllite. Hole 96-04 was drilled to test a coincident EM conductor/ magnetic high. It intersected 0.3 metres of massive sulphide, consisting of arsenopyrite-pyrite-sphalerite in sharp contact with hanging wall graphitic shale interbedded with minor dacitic tuff and in gradational contact with foot wall green sericitic volcaniclastic sedimentary rocks. Hole 96-06, designed to test the strike extension of hole 96-04, intersected similar lithologies and returned anomalous gold values but failed to intersect massive sulphides.
On the adjoining Lug claims, veins with gold, arsenopyrite, chalcopyrite, pyrite and galena occur in Devonian to Mississippian limestone and schist, unconformably overlain by Eocene basalt. The Hoolio Creek showing immediately north of the property consists of small silicified arsenopyrite-pyrite lenses in sericite schist. A grab sample assayed 10.3 g/t Au and a 60 cm chip sample assayed 3.1 g/t Au.
Small lenses of disseminated sulphides were also found at several horizons in the upper schist layer along the Hoole River valley. The lenses typically contain up to 5% chalcopyrite and 15% pyrite, with up to 630 ppb Au. Small lenses of disseminated galena and sphalerite in the limestone do not appear to contain significant gold or silver. In outcrop, the phyllitic schists are rusty to buff weathering depending on the amount of pyrite. Hunt (field notes, 1996) describes the pyrite as being very fine-grained and disseminated throughout the massive, fine-grained grey phyllitic schists.
Dodge (1995) reports similar rocks underlying the Midas claim block. Specifically, he describes an exposure of chlorite schist along the banks of the Hoole River. Also described is a 25 metre interval of thin bedded, buff weathering, grey limestone with calcareous schists bounding the unit. An upper chlorite quartz phyllite and interfoliated chlorite muscovite quartz schist is exposed on a hillock in the southeastern corner of the claim block. Dodge located numerous cobbles and boulders of milky white, fine grained quartz with sheeted pyrite-chalcopyrite-chlorite. This material assayed up to 1378 ppb Au and 1.68% Cu. Dodge also describes one float boulder containing stratabound, syngenetic sphalerite in a calcareous metaquartzite which assayed 12%-16% zinc.
Cominco's 1995 geophysical survey identified an EM conductor which crossed three grid lines and is open to the east and west. No mineralization was observed in outcrop. A single drill hole (96.9 m) was drilled to test a moderate EM conductor with coincident magnetic high. The hole intersected minor disseminated grains of sphalerite and galena in 1-cm-thick quartz-calcite veins within the limestone and mafic tuff units. Samples of these veins returned 1217 ppm Pb and 1718 ppm Zn.

References

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Work History

Date	Work Type	Comment
12/31/1996	Drilling	Seven holes, 628.9 m. Six holes (532 m) drilled by Mar-west on Eldorado claims, one hole (96.9 m) drilled on Zoo claims by Cominco.
12/31/1995	Ground Geophysics	Also HLEM and gravity surveys.
12/31/1994	Airborne Geophysics	Also Magnetic and radiometric surveys. Carried out by Cominco on Zoo claims.
12/31/1989	Geology	
12/31/1989	Geochemistry	
12/31/1989	Ground Geophysics	Also EM survey.
12/31/1988	Geochemistry	

12/31/1988	Ground Geophysics	Also VLF-EM survey. Limited in scope.
12/31/1964	Drilling	Two holes, 193.55 m.
12/31/1964	Trenching	
12/31/1963	Ground Geophysics	
12/13/1996	Geology	
12/13/1996	Ground Geophysics	Also magnetic survey on Eldorado claims.
12/13/1996	Other	

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
093552	1996	Report on the 1996 Diamond Drilling Program on the Eldorado Property	Diamond - Drilling	6	531.96
092802	1989	Geochemical and Trenching Report on the Eldorado 1-58 Claims	Rock - Geochemistry, Soil - Geochemistry, Detailed Bedrock Mapping - Geology, EM - Ground Geophysics, Magnetics - Ground Geophysics, Mechanical - Trenching		
092741	1989	Geochemical and Geophysical Report on the Eldorado 1-78 Claims	Soil - Geochemistry, EM - Ground Geophysics, Magnetics - Ground Geophysics, Prospecting - Other		
060148	1972	Geology and Geochemistry, Hoo Occurrence	Silt - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology		

Related References

Number	Title	Page(s)	Reference Type	Document Type
ARMC016583	Geology map - 105G/12 - Star Creek		Property File Collection	Geoscience Map (Geological - Bedrock)