



Occurrence Details

Occurrence Number: 105H 078
Occurrence Name: Julia
Occurrence Type: Hard-rock
Status: Prospect
Date printed: 12/16/2025 5:59:38 AM

General Information

Secondary Commodities: copper, gold, silver, zinc
Deposit Type(s): Volcanogenic Massive Sulphide (VMS) Besshi Cu-Zn
Location(s): 61°25'1" N - 129°59'38" W
NTS Mapsheet(s): 105H05
Location Comments: 1 Kilometres
Hand Samples Available: No
Last Reviewed:

Capsule

Work History

Staked as Julia cl 1-10 (YA56379) in Aug/80 by Welcome North Mines Ltd and Esperanza Exploration Ltd. Arbor Resources Ltd, immediately optioned the property and carried out geochemical and gravity surveys and in Sep/80 staked Julia cl 11-20 (YA56518) and cl 37-70 (YA56528). In May/81 Arbor entered into a joint venture with Esso Resources Canada Inc which performed EM, mag and geochemical surveys and drilled 3 holes (329 m) before dropping the option. The claims were transferred briefly to Atlantic Rim Resources Ltd in 1983. Restaked by YGC Resources Ltd as the Money cl 1-20 (YB16726) in Mar/90. YGC performed soil and rock geochemical sampling and prospecting in Aug/90. In Aug/94 YGC added Money cl 21-46 (YB51926) to the northern end of their claim block. The claims were optioned in Feb/95 by Atna Resources Ltd which carried out soil sampling, hand trenching, geological mapping and a HLEM geophysical survey later in the year. In 1996 the company drilled seven diamond drill holes (965.6 m) to test the down-dip and strike potential of known showings in Boulder and Welcome North Creeks. In Dec/94 Cominco Ltd staked Era cl 1-117 (YB59295) 4.5 km to the west. In May/95 the company staked Era cl 118-357 (YB62437) on the eastern boundary of the Money claims. The company carried out silt sampling and an airborne EM/magnetic geophysical survey in 1995; follow up ground geophysics, soil and silt sampling, prospecting and geological mapping in 1996; and geological mapping, geophysical surveying and drilled four holes (827.8 m) in 1997. In Sept/95 Westmin Resources Ltd. staked Nail cl 1-258 (YB61768) south of the Money claims. The claim block extends west onto map sheet 105G 08.

Capsule Geology

The area is underlain by a northeast-dipping sequence of Pennsylvanian to Permian age rocks, assigned to the Campbell Range succession. The Campbell Range succession was previously thought to be part of the Slide Mountain Terrane but recent mapping by Murphy and Piercey (1999, map) suggests that the succession is part of the Yukon-Tanana Terrane and that it represents the culmination of the transition from arc-rifting or back-arc extension to oceanic or back-arc marginal basin magmatism and sedimentation. The Yukon-Tanana Terrane hosts the neighbouring Wolverine (Yukon Minfile #105G 072) and other volcanogenic massive sulphide (VMS) deposits.

Unit JP Cs, the middle unit of the Campbell Range succession and the youngest unit exposed in the area, is composed of carbonaceous argillite, quartz sandstone, chert, and chert pebble conglomerate. In the northeast the unit passes into a Pennsylvanian limestone, unit JP Cl. The upper unit, unit JP Cb2 consists of foliated and tightly folded, coarse basaltic breccia, pillowed and massive basaltic lavas, gabbro, diabase and maroon and green chert. Pennsylvanian to Permian ultramafic rocks intrude all levels of the succession.

The area has been glaciated but bedrock on upper slopes is relatively well exposed with little or no till cover. The rocks strike northwesterly and dip apparently in a homoclinal fashion to the northeast at about 60 degrees. The rocks are regionally metamorphosed to sub-greenschist facies, characterized by epidote alteration and weak foliation sub-parallel to bedding. To the northwest gentle folds indicate the sequence occupies the eastern limb of a major fold. Lineations suggest a shallow plunge to the northwest.

The occurrence hosts two types of volcanogenic massive sulphide (VMS) mineralization. One consists of small massive pyrite lenses, the other consists of larger disseminated and stockwork pyritic bodies. The pyrite lenses are narrow and likely rod shaped with limited strike length as they produce no conductive effects. The disseminated bodies are up to several hundred metres long and may be up to 30 m wide with weak to moderate conductive effects. Both styles of mineralization contain minor amounts of Cu, Zn, Ag and Au.

Poorly exposed beds of massive pyrite, 1.5 m thick, with minor chalcopyrite subcrop in Boulder and Welcome North Creeks. A grab sample from Welcome North Creek returned results of 0.167% Cu, 0.05% Zn, 0.63 opt Ag and 0.018 opt Au. Additional mineralization occurs in several gossanous areas underlain by siliceous and clay altered rock containing pyrite with minor chalcopyrite and brown sphalerite disseminated and in fractures.

Arbor Resources carried out a soil geochemical survey and analysed the samples for Cu, Pb, Zn, Au and Ag. Three areas with elevated Cu (> 100 ppm) values were identified in 1981. Anomalous Cu values (up to 6 000 ppm) were obtained over the gossan in Boulder Creek. Weaker anomalous values were obtained near Welcome North Creek and near a gossanous area south of Camp Creek. Weakly anomalous values in Zn roughly coincide with the three Cu zones. Ag, Pb and Au values are low.

Esso Minerals carried out 19 line km of HLEM and 18 line km of magnetometer surveys. The EM survey identified 5 conductors one of which in part coincident with the large gossan on Boulder Creek. The company also collected eleven silt samples from the three streams that cross the property. Boulder Creek returned the highest values of 500 ppm Cu, 2.3 ppm Ag and 10 ppb Au.

Of the three diamond drill holes drilled in 1981, hole 81-1, failed to intersect the massive sulphides in Boulder Creek but did cut a lower zone of disseminated and stockwork sulphide mineralization consisting of pyrite, with minor chalcopyrite and traces of sphalerite in a quartz-clay altered rock (tuffaceous sediment?). Hole 81-2 from the same site, but angled 45 degrees further north, intersected 0.5 m of massive pyrite at the base of a maroon siltstone or argillaceous tuff bed. Below that was a layer of pillowed basalt followed by the same zone of disseminated and stockwork mineralization intersected in hole 81-1. The hole cut the zone sooner than expected suggesting that the zone is not stratigraphically controlled. Hole 81-3 was drilled to test a 1.5 m wide subcrop of massive pyrite in Welcome North Creek. It failed to intersect any sulphides.

In 1990, YGC re-examined the mineralized showings. The company determined that the mineralization probably belongs to the Besshi-type of volcanogenic massive sulphide deposits which typically occur within fine-grained clastic sedimentary rocks deposited after the cessation of submarine basaltic volcanism. The gossanous alteration zones that occur stratigraphically below the Boulder Creeks massive sulphide showing may represent hydrothermal feeder zones for the stratiform mineralization.

Reconnaissance soil sampling outlined three areas of elevated copper response. Two of the areas occur downslope of areas of known mineralization. The source of the third area was not determined. Prospecting uncovered several angular boulders of massive pyrite-pyrrhotite up to one metre in diameter in the bed of Boulder Creek, upstream from one of the previously discovered gossans. Selected samples from the boulders assayed from 0.44% Cu and 1.4 g/t Au to 2.06% Cu and 2.1 g/t Au. An occurrence of ferricrete was found in the bed of Welcome North Creek.

Atna's 1995 program generally confirmed earlier results obtained by YGC and others. Soil sampling outlined 4 areas anomalous in copper, and the HLEM geophysical surveys identified 4 conductors, all of which were related to either mineralized showings or gossans.

Two of Atna's 1996 drill holes were drilled to test the down-dip and strike continuation of the massive pyrite mineralization located on surface in Welcome North Creek. Both holes failed to intersect massive sulphide mineralization. The sequence exposed on surface, with the exception of the massive sulphides, was represented in both drill holes. Poor recoveries and faulting may be responsible for the absence of sulphides in one hole, where a 3 m washout with no core recovery occurred at the expected depth of the massive sulphide layer.

The remaining five holes tested sulphide mineralization in the Boulder Creek area. All five holes intersected either massive sulphides or zones of quartz-sericite-pyrite +/- chlorite stockwork up to 20 m thick. Mineralization consists primarily of sulphides of copper with lesser zinc, gold and silver within a sequence of mafic flows and breccia and is associated with maroon and

oxidized fine-grained sediments. The best drill result down dip of the surface showing returned 1.2 m of 0.62% Cu, 0.15% Zn, 32 g/t Ag and 0.7 g/t Au. Drilling has defined a tabular massive sulphide layer with a down dip length of at least 130 m, a strike length greater than 53 m and an average thickness of 1.0 m. Drilling in 1997 tested resistivity lows identified during geophysical resurveying of the central portions of the claim block. Hole Mon 97-8 intersected elevated Cu-Zn +/- Ag +/- Au in three semi-massive (>60%) sulfide zones consisting of 0.7 m of massive sulfides within maroon pelites at a volcanic-sediment break, a 9.7 m pyrite pseudo-breccia zone and a 0.9 m pyritic tuff layer. None of the intersections were of either economic grades or widths. Cominco originally staked the Era claims to follow-up two anomalous silt samples reported in a 1987 government regional geochemistry survey. Samples from two adjacent streams approximately 1 km apart, returned Zn values of 2 445 and 2 510 ppm, with corresponding cadmium values of 12.6 and 10.5 ppm. Silt sampling carried out in 1995 returned several anomalous values for Cu, Zn and Ba. An airborne geophysical survey outlined several conductive zones. Soil sampling completed in 1996 outlined two linear zones moderately anomalous in Cu and Ni on the east side of the claim block. Silt sampling of streams at the north end of the claim block returned 25 samples highly anomalous in Zn and Ni. Ground geophysics outlined several conductive (HLEM) trends and magnetic responses. Soil sampling completed in the northeast corner of the claim block in 1997 returned 6 samples with values >= 100 ppm Zn and Cd values up to 131 ppm. Samples surrounding these anomalies reported higher than background Zn.

References

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ATNA RESOURCES LTD, May/97. Assessment Report #093649 by M. Baknes.

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COMINCO LTD, May/96. Assessment Report #093454 by D. A. Senft and R. W. Holroyd.

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HUNT, J.A., 1997 Massive Sulphide deposits in the Yukon-Tanana and adjacent Terranes. In: Yukon Exploration and Geology 1996, Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, p. 35-45.

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MURPHY, D.C. and PIERCEY, S.J., 1999. 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, Yukon, Indian and Northern Affairs Canada, Open File 1999-4.

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YUKON EXPLORATION AND GEOLOGY, 1981, p. 143. 1995, p. 12. 1996, p. 12, 31-32; 1997, p. 17, 36, 38.

Work History

Date	Work Type	Comment
12/31/1997	Drilling	Four holes, 827.8 m.
12/31/1997	Geology	
12/31/1996	Drilling	Seven Holes, 965.6 m.
12/31/1996	Geology	
12/31/1996	Geochemistry	Also silt sampling.
12/31/1996	Ground Geophysics	Also HLEM survey.
12/31/1996	Other	
12/31/1995	Geology	
12/31/1995	Geochemistry	
12/31/1995	Ground Geophysics	HLEM survey.
12/31/1995	Trenching	
12/31/1990	Geochemistry	

12/31/1990	Geochemistry	
12/31/1990	Other	
12/31/1981	Drilling	Three holes, 329 m.
12/31/1981	Geochemistry	
12/31/1980	Ground Geophysics	
12/31/1980	Geochemistry	
12/13/1995	Geochemistry	
12/13/1995	Airborne Geophysics	Also magnetic survey. Flown by Cominco.
12/13/1981	Ground Geophysics	Also magnetic survey.

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
095510	2011	Linecutting, Geology and Geochemistry Work Completed on the Money Property	Rock - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Line Cutting - Other		
094707	2005	Assessment Report for Work Performed on the Money Claims Between October 18 and October 26, 2005	Geotechnical - Studies		
094236	2000	Finlayson Project Description Report	Environmental Assessment/Impact - Studies, Geotechnical - Studies, Heritage/Archeological - Studies		
093960	1997	1997 Project Report on the Money Property	Diamond - Drilling, Detailed Bedrock Mapping - Geology, IP - Ground Geophysics, Resistivity - Ground Geophysics	4	827.80
093649	1996	Geological and Diamond Drilling Report on the Money Property	Diamond - Drilling, Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Detailed Bedrock Mapping - Geology, Prospecting - Other	7	965.60
093591	1996	1996 Assessment Report Describing Geological, Geochemical, and Geophysical Surveys on the Wolverine Regional Project Claims (But 1-64, Foot 233-468, 473-516, 525-550, 561-586; FYD 1-94; Hang 1-17, 41-61, 81-102, 121-147, 161-186, 201-210, 253-257, 291-299, 301, 329-341, 367-382, 417-453; Nail 1-258; and Rope 1-553), Finlayson Lake Area, Yukon Territory	Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Regional Bedrock Mapping - Geology		
093584	1996	Dighem V Survey for Westmin Resources Limited Wolverine Lake Project Yukon	Electromagnetic - Airborne Geophysics, Magnetic - Airborne Geophysics		
093424	1995	Geological, Rock and Soil Geochemical Surveys and Trenching	Rock - Geochemistry, Soil - Geochemistry, EM - Ground Geophysics, Hand - Trenching		
093425	1995	Geophysical Report, Money Creek Prospect	EM - Ground Geophysics		
090858	1981	A Combined Report on the Geology, Horizontal Loop E.M. and Magnetometer Surveys and Diamond Drilling of the Julia 1-20, 37-70 Mineral Claims	Diamond - Drilling, Silt - Geochemistry, Detailed Bedrock Mapping - Geology, EM - Ground Geophysics, Magnetics - Ground Geophysics	3	329

Related References

Number	Title	Page(s)	Reference Type	Document Type
ARMC016606	Geological map - 105H/5 - 'Money Creek'		Property File Collection	Geoscience Map (Geological - Bedrock)
ARMC013711	Sketch map of Money Creek with geochem notations		Property File Collection	Geochemical Map
ARMC013710	Geochemical and geophysical report on the Julia claims - Stage 1 - In the Frances Lake area, Yukon Territory on behalf of Arbor Resources Ltd.		Property File Collection	Report
BROCK000198	Report on the Julia claims in the Frances Lake area - 1980		Property File Collection	Report
BROCK000199	Geochemical and geophysical report on the Julia claims in the Frances Lake area - Stage I		Property File Collection	Report
BROCK000200	Notes on Julia claim group		Property File Collection	Miscellaneous Company Documents
BROCK000201	Preliminary geological report on the Julia claim group		Property File Collection	Report
BROCK000202	Analytical report - File No. 0-683 - Julia claims		Property File Collection	Assays

Drill core at YGS core library

Number	Property	Year Drilled	Core Size	Photos	Data
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DDH-81-1and2	Julia	1981	BQ	0	2
DDH-81-3	Julia	1981	BQ	0	1