Occurrence Details

Occurrence Number: 105K 033
Occurrence Name: Darin
Occurrence Type: Hard-rock
Status: Deposit
Date printed: 8/5/2025 4:04:05 PM

General Information

Primary Commodities: lead, zinc
Secondary Commodities: copper, silver
Aliases: Adrian Zone
Deposit Type(s): Vein Polymetallic Ag-Pb-Zn+/-Au
Location(s): 62°53'51.11" N - -132°10'36.43" W
NTS Mapsheet(s): 105K16
Location Comments: Location taken fron Overland Resources location map.
Hand Samples Available: No
Last Reviewed:

Capsule

Work History

The Hess Syndicate (Atlas Explorations Ltd, Quebec Cartier Mining Company and Phillips Brothers (Canada) Ltd), carried out reconnaissance scale geological mapping and rock, silt and soil sampling during the summer of 1967. Based on early geochemical results the syndicate, staked Lad cl 3-12, 19-38 and 45-62 (Y14076), approximately 4.0 km to the north and northwest.

In the summer of 1968 the syndicate carried out geological mapping, rock and soil sampling, hand trenching and a ground magnetic and electromagnetic survey. In August and Sep/68 the syndicate expanded the claim block southward by staking Lad cl 65-102 (Y31259). The enlarged claim block included the Darin occurrence (this occurrence) and other mineralized occurrences located to the northwest along the same mineralized trend. In 1969, the syndicate carried out road construction, bulldozer trenching, geological mapping, geochemical sampling and geophysical (airborne and ground) surveys. Most of this information was never filed for assessment credit.

The Atlas interest in the syndicate was transferred in 1974 to Cima Resources Ltd.

In Jun/96 R. Berdahl staked Andrew cl 3-10 (YB65798) 1 km to the northwest to cover the Andrew (Minfile Occurrence 105K 089) and Darcy (Minfile Occurrence 105K 003) occurrences. Berdahl also staked Andrew cl 1-2 (YB65796) 4 km to the northwest to cover the Hugo Creek area (part of Lad Occurrence). In 1996, Berdahl prospected and collected grab samples from various mineralized showing previously discovered by the syndicate and now located on the Andrew claims.

In Jul/99, Berdahl carried out hand and blast trenching and geochemical sampling on the Andrew showing (Minfile Occurrence 105K 089 - previously called the "J" showing by the syndicate) located approximately 2 km to the northwest. No work was carried out on this occurrence.

Noranda Incorporated optioned the Andrew claims in Aug/2000 and immediately staked AMB cl 1-68, 70 and 72-104 (YC02355) forming a contiguous claim block that included the Andrew claims and other historic showing located farther to the north and west. During the winter of 2000/01, Noranda carried out airborne magnetic and EM geophysical surveys over the area, including the Andrew/AMB claim block and Berdahl's previously staked Scott claims located to the southwest.

In Jul/2001 the company staked AMB cl 105-112 (YC02776) on the southwestern corner of the claim group. From July to Oct/2001 the company carried out geological mapping, prospecting, ground magnetic and gravity geophysical surveys, rock and soil geochemical sampling and drilled 15 diamond drill holes (2,717.7 m). None of the holes tested this occurrence.

Between Sep/2001 and Feb/2002, Noranda staked AMB cl 115-162 (YC09953, includes fractional claims) on the northeast side of the claim block to protect internal fractions within the group and to extend the claim block to the southeast. The actual occurrence was staked within AMB cl 123- 146 (YC09961) in Oct/2001. During August and Sep/2002 the company soil sampled along a trend line starting northwest of the Andrew occurrence and running southeast through the Darcy showing and the future Darin occurrence (this occurrence). Noranda also collared 8 diamond drill holes (1,838.3 m) on the property. None of the holes tested this occurrence. Noranda subsequently terminated its option agreement on the property and returned the claims to Berdahl.

On February 1, 2007 Overland Resources Ltd announced it had secured a twelve month exclusive option to acquire a 90% interest in the Andrew property from Berdahl for US$50,000.00. Overland Resources immediately renamed the property the Andrew Base Metal project and undertook due diligence including reviewing all previous exploration data and calculating a JORC (Australian –Joint Ore Reserve Committee) compliant resource calculation for the Andrew showing. On March 15, 2007 the company announced an inaugural JORC-compliant resource estimate for the (newly defined – (formerly zone)), Andrew (zinc) deposit. The resource calculation was based on the results of 23 diamond drill holes (4,556 m) previously drilled on the deposit by Noranda Inc during 2001 and 2002.

In Jul/2007 Overland Resources staked Bridge cl 1-8 (YC56739), cl 11-16 (YC56747) and cl 19-32 (YC5677753) to the southwest linking the main property to the pre-existing Scott claims. The company also staked Ozzie cl 1-16 (YC56665) and cl 17-32 (YC56703) south and southwest of the Andrew deposit.

During the 2007 exploration season Overland Resources carried out property wide geological mapping, prospecting and rock and soil sampling programs. The company also tested the Andrew deposit with a 10 hole (2,979 m) diamond drill program. Only data from drillhole AN07-24 was filed for assessment credit.

On July 15, 2007 following the completion of 5 diamond drill holes, Overland Resources announced that it had elected to exercise its option early to acquire a 90% interest in the Andrew Base Metal project from Berdahl in return for cash and 5 million shares. In Nov/2007 Overland Resources released initial metallurgic test work conducted on representative samples submitted from the Andrew Zinc deposit. In February/2008 the company was issued a Winter Road Permit allowing it to mobilize heavy equipment and other supplies to the project area.

In Apr/2008 Overland Resources announced an updated JORC compliant resource for the Andrew (zinc) deposit. The resource estimate was based on the 24 drillholes completed by Noranda Inc and the 10 drill holes completed by the company in 2007.

Overland Resources commenced their 2008 exploration program in mid-April. The company completed 133 diamond drillholes on the property. Five diamond drillholes (810 m) tested the Adrian zone located approximately 600 m to the northwest of this occurrence. Thirteen diamond drillholes (1,699 m) tested the Darin zone. The remaining holes tested targets located elsewhere on the property.

In May/2009 Overland Resources released an updated JORC compliant mineral resource estimate for the Andrew (zinc) deposit and an initial JORC compliant resource for the newly defined Darcy (zinc) deposit (Minfile Occurrence 105K 004). The new resource estimate incorporated drill data collected from the 2008 drill program.

Overland Resources did not carry out any field work in 2009, instead the company worked towards releasing an preliminary independent economic evaluation of the entire Yukon Base Metal project and conducting metallurgical experiments on the project's ore. The economic evaluation report and preliminary metallurgical results was released in Jun/2009.

In 2010 Overburden Resources collared 8 diamond drill holes (1,181.3 m) on the Darin zone. The company also drilled hydrogeological holes on the Andrew (Zinc) deposit and carried out infill drilling on the Darcy (zinc) deposit located 1.4 km to the northwest. Other exploration work included 22 test pits dug over the Andrew Zinc deposit to establish soil mechanics and permafrost conditions for an ongoing feasibility study and a soil sample survey carried out northeast of the Andrew (zinc) deposit which later evolved into the Andrew Northeast zone.

In Feb/2011 Overland Resources released an initial JORC compliant resource estimate for the newly defined Darin (zinc) deposit (this occurrence) and updated resource estimates for the Darcy and Andrew (zinc) deposits. As part of this exercise the company released an updated JORC compliant resource estimate for the entire Yukon Base Metal project.

During the 2011 exploration season Overland Resources drilled 74 diamond drill holes (10,437 m) on the property. None of the holes were collared on or near this occurrence. Twenty nine holes tested for extensions of mineralization at the Andrew and Darcy (zinc) deposits. Eleven holes tested the Andrew Northeast zone (prospect). The remaining thirty-one holes collected geotechnical and hydrogeological data. The company continued working on the technical, economic and environmental components of mine permitting.

In Jul/2011 Overland Resources staked Shack cl 1-2 (YD61696) and TA cl 3-332 (YE63953) approximately 7 km to the south to cover the previously used winter road access. The company drilled 2 boreholes (29.66 m) to collect the geotechnical properties of the area. The information was collected in conjuction with other geotechnical data for the companies environmental assessment.

In Mar/2012 Overland Resources released updated JORC compliant resource calculations for the Andrew and Darcy (zinc) deposits and the entire Yukon Base Metal project. Since there was no new diamond drilling carried out on the Darin (zinc) occurrence its resource estimate remained the same. In Jun/2012 the company released an updated study into the economics of developing a mining operation at the Yukon Base Metal project. Despite robust grades the economic study indicated a sustained long term improvement in both zinc and lead prices would be required to provide a suitable return to the company. Thus the company elected to suspend all further exploration and mine permitting work for the entire Yukon Base Metal project.

All mining claims necessary for the project are in good standing until at least 2026.

Capsule Geology

The property area is located approximately 15 km east of Mt Selous, in east-central Yukon. The closest settlements Faro and Ross River, Yukon are located 100 km to the southwest and 115 km south of the property, respectively. A winter trail connects the property to the North Canol Road at Dragon Lake located approximately 60 km to the south. Normal access to the property is by helicopter or short take-off and landing fixed wing aircraft via a 400 m unsealed airstrip located approximately 4 km northwest of the Andrew occurrence.

The property is located in the western portion of the Selwyn Basin; a continental margin rift-fill and cover sedimentary sequence lying off the coast of ancestral North America. The oldest stratigraphic units on the property are the Yusezyu and Narchilla formations of the Neoproterozoic to Lower Cambrian Hyland Group. They are overlain by Ordovician to Silurian Road River Group rocks which are in turn overlain by Devonian to Mississippian Earn Group rocks. The Hyland Group comprises an upper thrust sheet that overlies the Road River and Earn Group rocks. The entire sequence has been intruded by Cretaceous granite, quartz monzonite and granodiorite intrusions assigned to the Selwyn Plutonic Suite.

Initial exploration work carried out by Atlas Explorations in 1968 identified 14 separate vein showings on the property. The Darin showing was initially discovered in 1969 and explored with a single trench (M). Actual assays from this work are missing but the company decided that despite high grade results obtained from some other areas of the property none of the mineralization appeared significant enough to warrant additional work. *It appears much of the data for this period is missing.

It appears that Berdahl prospected the area in 1996 as his location map displays separate lead and copper showings in the vicinity of trench M, however he did not include any descriptions or assay results with his assessment report. As the area was located outside the boundary of his claim block any work carried out in the area would not have qualified for assessment credit, thus likely explaining the absence of any data.

Noranda prospected the area in 2001 although it was located outside the AMB claim block. Noranda reported scattered outcrops and boulders of silicified and brecciated quartzite hosting quartz-calcite veins containing sphalerite and galena. Assays from 4 grab samples averaged 0.0% copper, 8.4% lead, 2.5% zinc and 21.8 g/t silver. Soil sampling carried out in 2002 outlined a zinc anomaly (E) north of showing M. The southeastern end of the anomaly was truncated by the termination of sampling.

Soil sampling completed by Overland Resources in 2007 and 2008 and merged with historical data collected by Atlas Explorations, Berdahl and Noranda outlined a 2,500 m long, zinc in soil anomaly that extends to the southeast of the Andrew (zinc) deposit through the Darcy and Darin showings.

Overland Resources collared 5 diamond drillholes on the Adrian zone located approximately 600 m northwest of the occurrence to test anomalous soils and the continuity of minor surface mineralization. All five holes returned trace mineralization with the best results from hole AD08-04 which returned 1.3% zinc over 19.5 m. Mineralization occurs as disseminated or vein-hosted fine to coarse grained sphalerite predominantly hosted in strongly silicified, coarse grained sandstone. The Adrian zone appears to be the northeast extension of mineralization found at the Darin showing. Drilling only tested about one half of the strike length of the zone. Further drilling was recommended.

Prospecting carried out in and around the Darin showing uncovered massive galena in quartz-calcite vein stockworks cutting medium to coarse grained quartz sandstone. Rock samples returned up to 17,000 ppm zinc, 25,300 ppm lead, 5.52 g/t silver and 49.1 ppm copper. The diamond drill program was designed to test the zinc soil anomaly and the continuity of surface mineralization. Nine of the thirteen drillholes intersected mineralization ranging from trace to 11.2% zinc over 11.5 m in drillhole DN08-008. Analysis of results led the company to believe that most of the holes intersected the northern edge of the mineralized zone and that drilling farther south could result in the discovery of additional mineral resources.

In May/2009 Overland Resources released an updated JORC compliant resource for the Andrew (zinc) deposit and an inaugural resource for the newly defined Darcy (Zinc) deposit. The following month the company released the results of an independent economic evaluation of developing a mining operation at the Andrew and Darcy (zinc) deposits.

In Nov/2009 Overland Resources released the results of Heavy Liquid Separation (HLS) test work conducted by an independent Canadian laboratory. HLS is used in the laboratory to simulate the process of Dense Media Separation. Tests completed on various crush sizes showed that over 90% of the sample was rejected as waste while over 80% of the zinc metal was recovered. In all cases this resulted in an upgrade of the zinc grade of at least eight times that of the initial sample head grade of 2.4% zinc. The Dense Media Separation beneficiated material could be readily processed further through the plant currently proposed for the Andrew Base Metal project. In Dec/2009 the company announced that they would fund a definitive feasibility study into the development of the project.

The 2010 diamond drill program was focused on defining and evaluating the Darcy (zinc) deposit and the Darin mineralized zone. The eight holes were drilled along three drill fences located approximately 100 m apart, to fully cover the length of anomalous soil geochemistry and surface mineralization encountered the previous year. All of the holes intersected mineralization indicating a potentially large mineralized system. The best results were returned from drillhole DN10-019 which returned 20.5 m assaying 3.6% zinc from 19.5 m to 40 m depth. The drill program greatly improved the company's understanding of the geological controls on mineralization at the Darin zone.

Examination of diamond drill core and the results of geological mapping show that the geology of the Darin zone consists of Neoproterozoic to Paleozoic sediments, dominantly massive to poorly bedded quartz-rich sandstones interbedded with vari-textured maroon/green and black mudstones, limestone and breccias. There is evidence of folding, brittle faulting and semi-ductile shearing. Mineralization consists of blebby to massive sphalerite and galena associated with brecciation and quartz and carbonate veining and infill.

In Feb/2011 Overland Resources released a JORC compliant resource estimate for the newly defined Darin (zinc) deposit and updated resource estimates for the Darcy and Andrew (Zinc) deposits. Incorporating a 2% zinc cut-off, the Darin (zinc) deposit was calculated to host an Inferred resource of 360 000 tonnes grading 4.0% zinc and 0.2% lead. As part of this exercise the company released an updated JORC compliant resource estimate for the entire Yukon Base Metal project. Incorporating a 2% zinc cut-off, the Yukon Base Metal project was calculated to host a total resource (Measured, Indicated and Inferred) of 11,045,000 tonnes grading 5.8% zinc and 12.0% lead.

During the 2011 exploration season Overland Resources drilled 74 diamond drill holes (10,437 m) on the property. None of the drilling was carried out on the Darin (zinc) deposit. The company continued working on the technical, economic and environmental components of mine permitting.

In Mar/2012 Overland Resources released updated JORC compliant resource calculations for the Andrew and Darcy (zinc) deposits and the entire Yukon Base Metal project. Resources at the Darin (zinc) deposit did not change. In Jun/2012 the company released an updated study into the economics of developing a mining operation at the Yukon Base Metal project. Despite robust grades the economic study indicated a sustained long term improvement in both zinc and lead prices would be required to provide a suitable return to the company. Thus the company decided to suspend all further exploration and mine permitting work on the project and "mothball" the project until economic conditions improved.

At the time of suspension, the Yukon Base Metal project hosted a total resource (Measured, Indicated and Inferred) of 13,672,000 tonnes grading 5.3% zinc and 0.8% lead (utilizing a 2% zinc cutoff).

Work History

Date	Work Type	Comment
12/13/2012	Studies	Updated economic assessment for the entire Yukon Base Metal project released. Project mothballed.
12/13/2011	Studies	Preliminary JORC (Australian) compliant mineral resource for newly defined Darin Zinc deposit released.
12/13/2010	Drilling	8 holes (1,181.3 m)
12/13/2010	Geology	Area surrounding occurrence was mapped in detail, drill core re-examined.
12/13/2008	Geochemistry	Sampled mineralized outcrop in vicinity of occurrence.
12/13/2008	Drilling	13 holes (1, 699 m)
12/13/2008	Geochemistry	
12/13/2008	Geology	Carried out mapping over Adrian and Darin showings.
12/13/2002	Geochemistry	Soil sampling line crossed this area.
12/13/2001	Geochemistry	Noranda prospected and sampled old trench (showing M).
12/13/1996	Other	no results reported
12/13/1969	Geochemistry	Grab samples collected from trench, no assays reported.
12/13/1969	Trenching	Showing M was trenched in 1969.
12/13/1969	Geology	Trench examined as part of larger program.

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
096194	2011	2011 Assessment Report Geological and Geochemical Surveying on the Selous Claims	Diamond - Drilling, Rock - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology	68	1414.04
095705	2010	Geological, Geochemical and Drilling Assessment Report for Quartz Mining Claims Grouping HM02805	Diamond - Drilling, Drill Core - Geochemistry, Rock - Geochemistry, Soil - Geochemistry, Detailed Bedrock Mapping - Geology, Metallurgical Tests - Lab Work/Physical Studies, Prospecting - Other, Environmental Assessment/Impact - Studies, Geotechnical - Studies		3712.10
095681	2010	Geological and Geochemical Assessment Report for Myschka Licenses	Rock - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Prospecting - Other, Process/Interpret - Pre-existing Data		
		Geological, Geochemical and Diamond Drilling Assessment Report on	Diamond - Drilling, Drill Core - Geochemistry, Rock - Geochemistry,		

095648	2008	Geological, Geochemical and Diamond Drilling Assessment Report on the Yukon Base Metal Project	Silt - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Prospecting - Other, Backhoe - Trenching	135	23424.70
093881	1996	Andrew Claim Group Prospecting and Geochemical Report	Bedrock Mapping - Geology, Prospecting - Other		
018941	1968	Hess Project Report 1968 Laforce Lake - Mount Selous Area	Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Regional Bedrock Mapping - Geology, Prospecting - Other		
019809	1968	Hess Area Project Proposed Property Follow-Up 1968 Field Season	Research/Summarize - Pre-existing Data		
018947	1967	Hess River Project Report	Rock - Geochemistry, Soil - Geochemistry, Detailed Bedrock Mapping - Geology		
019032	1967	Hess River Project Report	Data Compilation - Pre-existing Data		

Related References

Number	Title	Page(s)	Reference Type	Document Type
YEG1987	Yukon Exploration 1987	181.	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Annual Report
YEG1999_OV	Yukon Mining & Exploration Overview 1999	25.	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Annual Report
YEG2001_OV	Yukon Mining & Exploration Overview 2001	12, 25.	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Annual Report
YEG2002_OV	Yukon Mining, Development & Exploration Overview 2002	20, 24, 26.	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Annual Report
YEG2007_OV	Yukon Exploration and Geology Overview 2007	22, 37, 40.	Yukon Geological Survey	Annual Report
YEG2008_OV	Yukon Exploration and Geology Overview 2008	18, 32, 36.	Yukon Geological Survey	Annual Report
YEG2009_OV	Yukon Exploration and Geology Overview 2009	53.	Yukon Geological Survey	Annual Report
YEG2010_OV	Yukon Exploration and Geology Overview 2010	53, 63, 64.	Yukon Geological Survey	Annual Report
YEG2011_OV	Yukon Exploration and Geology Overview 2011	41-42, 70, 72.	Yukon Geological Survey	Annual Report
2003-9(D)	Yukon Digital Geology (version 2)		Yukon Geological Survey	Open File (Geological - Bedrock)
ARMC016355	Stream sediment geochemical survey - Total lead - Earn project - Tay River area - Map No. 16		Property File Collection	Geochemical Map
ARMC015726	Diamond drill core, lithologic and structural log - 80-NA-01 - North Anvil Range - MX-184		Property File Collection	Drill Logs
ARMC018787	Field map - Anvil Range area -105K/2 & 7		Property File Collection	Geoscience Map (General)

Resource/Reserve

Year	Zone	Type	Commodity	Grade	Tonnage	Amount	Reported Amount	43-101 Compliant	Cut-off
2012	Total Yukon Base Metal Project (Open Pit)	Not Defined	zinc	5.3 %	13,672,000	724616	Yes	Yes	2 % zinc
Final JORC (Australian) compliant resource estimate for the entire Yukon Base Metal project (Andrew, Darcy and Darin Zinc deposits) at shut down of project.									
2012	Total Yukon Base Metal Project (Open Pit)	Not Defined	lead	.8 %	13,672,000	109376	Yes	Yes	2 % zinc
Final JORC (Australian) compliant resource estimate for the entire Yukon Base Metal project (Andrew, Darcy and Darin Zinc deposits) at shut down of project.									
2011	Darin Zinc Deposit (Open Pit)	Inferred	zinc	4 %	360,000	14400	Yes	Yes	2 % zinc
Initial and only JORC (Australian) compliant mineral resource for Darin deposit. Project mothballed in June 2012. Overland Resources press release February 21, 2011.									
2011	Darin Zinc Deposit (Open Pit)	Inferred	lead	.2 %	360,000	1440	Yes	Yes	2 % zinc
Initial and only JORC (Australian) compliant mineral resource for Darin deposit. Project mothballed in June 2012. Overland Resources press release February 21, 2011.									