



Occurrence Details

Occurrence Number: 106D 077

Occurrence Name: Jazz

Occurrence Type: Hard-rock

Status: Prospect

Date printed: 12/16/2025 3:20:44 PM

General Information

Secondary Commodities: copper, gold, silver, uranium

Deposit Type(s): Iron Oxide Breccias & Veins (Wernecke Breccias)

Location(s): 64°38'26" N - -134°2'48" W

NTS Mapsheet(s): 106D09

Location Comments: .5 Kilometres

Hand Samples Available: Yes

Last Reviewed:

Capsule

Work History

Staked as the Jaz cl 1-8 (YA7060) in Sep/76 by the Prism Syndicate (Prism Resources Ltd, Canex Placer, Granby Mining & Chieftain Development Corp Ltd) which carried out geological mapping and radiometric surveys in 1977.

Restaked in July and Aug/92 as Jazz 1-38 cl (YB28586) by a joint venture consisting of Pamicon Developments Ltd, Equity Engineering Ltd and Westmin Resources Ltd. The companies carried out preliminary sampling, prospecting and mapping later in the month. In June/93 an additional program of limited geological mapping, prospecting and lithogeochemical sampling was carried out on the claims. In Sept/93 Newmont Exploration conducted an airborne geophysical survey over the area using proprietary company equipment.

In Jan/94 Pamicon and Equity transferred 100% interest in the claims to Westmin Resources, which then formed the Fairchild Joint Venture with Newmont. In the summer of 1994, the Fairchild Joint Venture contracted Pamicon and Equity to carry out an exploration program consisting of detailed geological mapping, prospecting and stream sediment sampling. Following the completion of the initial exploration program in Jul/94, the Fairchild Joint Venture added Jazz cl 39-46 (YB43136) to the south end of the claim block. Additional geological mapping, trenching and contour soil sampling was carried out on the claim block in August and Sept/94. In Jul/95 the joint venture added Jazz cl 47-62 (YB64446) to the southwest side of the claim block and carried out an airborne geophysical survey. The joint venture also continued exploring the claim block with geological mapping, soil and rock sampling and prospecting activities. In 1997 the joint venture drilled eight holes (1 017.43 m).

In Mar/98 Westmin was purchased by Boliden Ltd which changed its name to Boliden Westmin Ltd. At the end of 2001 Jazz cl 47-62 (YB64446) were allowed to lapse. In Jul/2004 Breakwater Resources Ltd purchased all outstanding shares of Boliden Westmin (Canada) Ltd from parent company Boliden Ltd. Breakwater transferred control of all surviving claims located in the Wernecke Mountains, Yukon to its wholly owned subsidiary NVI Mining Ltd (including the Jazz claims).

In Jan/2006 Fronteer Development Group Inc (80%) and Rimfire Minerals Corporation (20%) signed an agreement with Newmont Exploration Canada Ltd and NVI Mining Ltd to purchase all claims and exploration data relating to 700 mineral claims owned by the Fairchild Joint Venture in the Wernecke Mountains, Yukon. Fronteer Development was appointed operator of the project. In the summer of 2006 Fronteer Development carried out an airborne gravity survey over their entire claim holdings and carried out limited prospecting and rock and soil sampling programs on the Jazz claims.

Capsule Geology

The region is underlain by a metamorphosed and altered sequence of Lower Proterozoic Wernecke Supergroup clastic and carbonate rocks (Fairchild Lake Group, Quartet Group and Gillespie Lake Group, from oldest to youngest) that are intruded by Early to Middle Proterozoic mafic sills and dykes, and cut by Middle Proterozoic Wernecke Breccia. To the east, Wernecke Supergroup rocks are unconformably overlain by Middle Proterozoic Pinguicula Group rocks. According to Thorkelson (2000), Wernecke Breccia development is best modeled as a set of hydrothermal and/or phreatic breccias; brecciation being caused by explosive expansion of volatile-rich fluids. Hunt (2005) attributed Wernecke Breccia formation to periodic over-pressuring of dominantly basinal fluids, which lead to repeated brecciation of host strata and mineral precipitation.

The occurrence area is located at the headwaters of a northern branch of the upper headwaters of Gillespie Creek, approximately 12 km southwest of Gillespie Lake, in north-central Yukon. The area was regionally mapped by L. Green (1972) of the Geological Survey of Canada in 1961 as part of a helicopter-supported party known as Operation Ogilvie. Although the area has not yet been remapped by the Yukon Geological Survey, C. Roots of the Geological Survey of Canada under contract with the Exploration and Geological Services Division (now part of the Yukon Geological Survey) remapped topographic map sheets 106D/8 and 106D/7 (East half) to the south in 1990. D. Thorkelson (2000) also under contract with Exploration and Geological Services Division remapped topographic map sheet 106D/16 to the north as part of a larger bulletin. In addition Thorkelson worked closely with geologists employed by Westmin Resources which held a large number of claims in the region. The work of these geologists was incorporated into a geological compilation of the Yukon released by Gordey and Makepeace of the Geological Survey of Canada in 2003.

Based on geological mapping carried out by Thorkelson and Westmin Resources, the Jazz claims are underlain by a large northwesterly trending Wernecke Breccia complex and diorite intrusions that cut Lower Proterozoic Gillespie Lake and Quartet Groups. Prism Resources reported disseminated brannerite in the breccia which is at least 3.5 km long and greater than 700 m wide. Both homolithic and heterolithic phases are present and unlike others in the area contain muscovite in the matrix.

In 1992 Equity and others tested the potential of the large breccia body for copper-gold mineralization. Equity concluded that the copper mineralization is associated with the hematite breccia and the gabbro dykes. In 1993 Westmin mapped several new copper occurrences and some gabbro dykes were remapped as diorite intrusions. The diorites cross-cut the breccias and are spatially associated with mineralization. Rock samples collected from narrow zones of chalcopyrite and pyrite mineralization accompanied by intense chlorite and magnetite alteration both in and outside of the diorites returned maximum values of 2.97% copper, 310 ppb gold and 512 ppm silver.

In 1994 work focused on the newly staked southern claims (Jazz cl 39-46) where a narrow, northwest-trending dyke cuts heterolithic Wernecke Breccia in two locations. The 1997 drilling targeted magnetic anomalies outlined during the 1993 airborne survey. The drilling was concentrated around two previously discovered showings and many of the drill holes intersected short intervals of either coarse blebby chalcopyrite-pyrite or carbonate veinlets hosting chalcopyrite.

Fronteer Development re-visited and resampled the mineralized areas identified earlier by Westmin Resources. Their results confirm Westmin's previous results.

References

BLUSSON, S.L., 19 Jan/77. Proterozoic Stratigraphy of Northern Yukon. Talk presented to the Mineral Exploration Group, Vancouver.

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PAMICON DEVELOPMENTS LTD, Feb/95. Assessment Report #093265 by K. Hofmann and M. Stammers.

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THORKELSON, D.J. AND WALLACE, C.A., 2000. Geology and mineral occurrences of the Slat Creek, Fairchild Lake and "Dolores Creek" areas, Wernecke Mountains, Yukon (106D/16, 106C/13, 106C/14). Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada, Bulletin 10, 73 p.

WESTMIN RESOURCES LTD, Dec/92. Assessment Report #093120 by D.A. Caulfield.

WESTMIN RESOURCES LTD, Jan/94. Assessment Report #093171 by M.E. Baknes.

YUKON EXPLORATION & GEOLOGY 1995, p. 12, 16; 1997, p. 22, 35.

| Work History | | |
|--------------|---------------------|--|
| Date | Work Type | Comment |
| 12/31/2006 | Geochemistry | Limited program. |
| 12/31/2006 | Geochemistry | Limited program. |
| 12/31/2006 | Airborne Geophysics | |
| 12/31/1997 | Drilling | Eight holes, 1,017.43 m. Assessment Report #093775. |
| 12/31/1995 | Geochemistry | |
| 12/31/1995 | Geology | |
| 12/31/1995 | Airborne Geophysics | Also magnetic survey. Survey flown on tighter line spacing (200 m) than 1993 survey. |
| 12/31/1995 | Geochemistry | |
| 12/31/1995 | Other | |
| 12/31/1994 | Geology | |
| 12/31/1994 | Geochemistry | |
| 12/31/1994 | Geochemistry | |
| 12/31/1994 | Other | |
| 12/31/1994 | Trenching | |
| 12/31/1992 | Geochemistry | |
| 12/31/1992 | Geology | |
| 12/31/1992 | Other | |
| 12/31/1977 | Ground Geophysics | |
| 12/31/1977 | Geochemistry | |
| 12/31/1977 | Geology | |
| 12/13/1993 | Geochemistry | Lithogeochemical sampling. |
| 12/13/1993 | Geology | |
| 12/13/1993 | Airborne Geophysics | Also magnetic survey. |
| 12/13/1993 | Other | |

| | | |
|------------|---------------------|--|
| 12/13/1976 | Airborne Geophysics | |
|------------|---------------------|--|

Assessment Reports that overlap occurrence

| Report Number | Year | Title | Worktypes | Holes Drilled | Meters Drilled |
|------------------------|------|---|---|---------------|----------------|
| 095646 | 2007 | 2007 Geological, Geochemical and Geophysical Report on the Wernekes Project | Diamond - Drilling, Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Detailed Bedrock Mapping - Geology, Regional Bedrock Mapping - Geology, Magnetics - Ground Geophysics, Scintillometer - Ground Geophysics, Prospecting - Other, Backhoe - Trenching, Hand - Trenching, Handblast - Trenching | 28 | 6537.96 |
| 094956 | 2006 | 2006 Geological, Geochemical and Geophysical Report on the Wernekes Project | Reverse Circulation - Airborne Geophysics, Rock - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Scintillometer - Ground Geophysics, Prospecting - Other | | |
| 093379 | 1995 | Geological and Geochemical Assessment Report on the Jazz 1-62 Claims | Gamma-Ray Spectrometry - Airborne Geophysics, Magnetic - Airborne Geophysics, Rock - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Prospecting - Other | | |
| 093265 | 1994 | Geological and Geochemical Assessment Report on the Jazz 1-46 Claims | Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Prospecting - Other | | |
| 093171 | 1993 | 1993 Geochemical Report on the Jazz 1-38 Claims | Rock - Geochemistry, Bedrock Mapping - Geology, Prospecting - Other | | |
| 093120 | 1992 | Geochemical Report on the Jazz 1-38 Claims | Rock - Geochemistry, Bedrock Mapping - Geology, Prospecting - Other | | |
| 090298 | 1977 | Assessment Report on the Jaz 1-8 Claims | Gamma-ray Spectrometry - Ground Geophysics, Prospecting - Other | | |