## Occurrence Details

**Occurrence Number:** 115A 041
**Occurrence Name:** Ellen
**Occurrence Type:** Hard-rock
**Status:** Prospect
**Date printed:** 8/2/2025 6:04:40 PM

## General Information

**Primary Commodities:** copper, gold, nickel
**Secondary Commodities:** mercury, molybdenum, silver
**Aliases:** Kloo
**Deposit Type(s):** Volcanogenic Sulphide - type not determined
**Location(s):** 60°51'31" N - -137°57'54" W
**NTS Mapsheet(s):** 115A13
**Location Comments:** Location from drill hole plot on AR 093356 and from satellite imagery
**Hand Samples Available:** Yes
**Last Reviewed:**

### Capsule

**Exploration History**

Staked as Jude cl 1-4 (65357) in May/53 by R. Reber and optioned to Hudson Bay Mining and Smelting Company Ltd in September of that year. Hudson Bay carried out EM surveying, drilled five holes (323 m) and built a tote road in 1954.
Restaked as MC cl 1-4 (77812) in May/62 by T. Worbetts and optioned briefly by E. Kreuger in 1963. In 1965 Canadian Barranca Mines Ltd optioned the claims, staked M and MC cl 5-28 (92177 and Y9065) in July/65 to surround the original claims, improved the road, carried out geochemical soil sampling, geological mapping and drilled 3 holes (100.9 m) in 1966. The company carried out magnetometer and EM-16 surveying in 1967 and 1969 and drilled 4 holes (333.1 m) later in 1969.
Restaked as Ellen cl 1-5 (YA97362) in May/87 by R. Stack who carried out prospecting and geochemical rock sampling later in the year. In 1989 Stack carried out blast trenching and prospecting. G.S. Davidson staked Ellen cl 6-8 (YB26797) in Sep/89 and R. Stack staked Ellen cl 9-27 (YB27078) in Dec/89. The property was inspected by Noranda Exploration Company Ltd and Total Energold Corporation late in 1989, both of which carried out rock geochemical sampling. In 1990, Placer Dome Exploration Ltd visited and sampled the property in June and later in the year Stack carried out magnetometer and EM surveying , prospecting, blast trenching and Davidson staked Ellen cl 28-31 (YB35480) in Oct/90. Stack staked Ellen cl 32-37 (YB36844) in May/92.
In Aug/93, Probe Resources Ltd optioned the Ellen claims and carried out geochemical rock and soil sampling and geophysical surveying later that year. During June and Jul/95, Probe carried out road work and drilled 5 holes (457.2 m) and Stack carried out blast trenching southeast of the main showing.
G. Davidson tied on the Preston cl 1-37 (YB38265) to the northeast in Sep/93; R. Stack tied on the Brand cl 1-26 (YB46491) in Oct/93; and G. Davidson staked Jim cl 1-17 (YB57649) 4.5 km to the northeast in Jun/95.
In 2001, Stack and B. Harris of Midnight Mines Ltd carried out prospecting, hand trenching and geochemical rock sampling of areas of known mineralization and investigated the upland plateau area northwest of the main showing. A compilation report detailing all previous exploration carried out on the claim block was prepared at the end of the exploration season.
In 2002, additional prospecting, hand trenching and sampling was carried out in conjunction with a property examination completed by Expatriate Resources Ltd and during a subsequent visit by Stack and Harris.
In 2006, R. Stack and B. Harris explored by additional prospecting, geochemical rock sampling and hand trenching. Trench samples from the main horizon returned 7.23% Cu, 1.01 g/t Au and 1.01 g/t Pd over 2.5 m (Pautler, 2007). Prospecting expanded known chalcopyrite mineralization 800 m along strike southeast and 500 m along strike northwest of the main occurrence.
In 2011, A limited field program consisting of locating and re-sampling of historic trenches, geological mapping and geochemical rock sampling was conducted by J. Pautler, R. Stack and B. Harris.
In 2012, a VTEM Survey was completed by Geotech Ltd. The survey covered 304-line km.
In 2017, Group Ten Metals Inc. optioned the property and the following year conducted geological mapping, rock and soil sampling.
In 2020, Group Ten conducted additional geological mapping, rock and soil sampling.

**Capsule Geology**

The property is primarily underlain by a thick layered felsic to mafic volcanic sequence consisting of andesite flows, andesitic and mafic tuffs, and thin layers of tuffaceous argillite assigned to the Upper Triassic Nicolai Assemblage (unit uTrN), (Gordey and Makepeace, 2003). The volcanics have been variably foliated forming quartz sericite schist and narrow bands of black chlorite schist. Epidote and quartz banding is common and a few serpentine bands occur in the more mafic sections. Diorite, andesite and fine grained peridotite sills occur within the volcanics. The sills are emplaced along thrust faults at the base of the volcanic sequence. To the south, the volcanics are conformably overlain by limestone and schists containing sections of green tuffaceous volcanics assigned to the Upper Jurassic to Lower Cretaceous Dezadeash Assemblage (unit JKD1).
Mineralization at the main showing is exposed on both sides of a gully and consists of intense malachite staining and massive chalcopyrite ¿ pyrrhotite stringers hosted in a series of thick andesite flows and tuffs. Stringer zones have an associated hydrothermal alteration assemblage that commonly consists of massive dark green to black chlorite proximal to intense areas of stringer mineralization and are up to 30 centimeters thick. Pervasive weak chlorite and sericite alteration occurs up to 10 meters around the stringer zones while patches of pervasive epidote alteration with associated quartz ¿ carbonate ¿ epidote veinlets occur over the extent of the showing (50 m long). Widely divergent attitudes in two outcrops on either side of the gully (northwest striking, dipping 35¿ south-west in the north bank and northeast striking, dipping 45¿ southeast in the south bank) suggest a strong fault or fold axis underlies the creek.
The east side of the showing consists of three distinct layers of stringer mineralization. The lowest one is about three meters thick while the upper two are approximately one meter thick. The west side of the main showing consists of a single ten meter thick zone of chalcopyrite stringer mineralization.
Surface sampling in 1966 returned 3.0% Cu across a width of 9.1 m on the north side of the creek gully and 2.0% Cu across 4.6 m for the south side of the creek gully. The Hudson Bay drilling is rumored to have intersected only minor copper mineralization in graphitic shale.
Analysis of samples of the 1966 drill core returned 3.15% Cu over 5.2 m from Hole MC-1, 1.64% Cu over 10.4 m (including 6.4 m of 2.20 % Cu) in Hole MC-2 and 1.20% Cu over 5.2 m in Hole MC-3.
In 1969 Hole MC-7 intersected 1.5 m of 0.8% Cu below the 1966 holes. Holes MC-5 and 6, stepped out 61 m along strike to the northwest from the 1966 holes, cut 0.9 m of 1.1% Cu and 4.3 m of 0.6% Cu respectively. Core recovery was poor in Holes 5 and 6. Hole MC-4 tested an EM and magnetic anomaly to the east of the main showing and intersected graphite schist and two bands of serpentine, 7.9 m and 9.4 m thick, containing nickel values up to 0.11%.
Blast trenching in 1989 exposed additional massive chalcopyrite in two layers of shale interbedded with andesitic tuff and banded siliceous tuff, and a third pyritic sulphide layer in the metavolcanic rocks below over a strike length of approximately 100 m. The shale layers strike 110¿ and dip 23¿ south and contain disrupted quartz veinlets. A 2.0 m chip sample across the uppermost layer returned 8.55% Cu and 789 ppb Au. Specimens containing up to 990 ppb Au, 10.1 g/t Ag, 126 ppm Mo and 2 900 ppb Hg were also reported.
A fourth massive chalcopyrite layer was found in 1990 and disseminated sulphides were found over a thickness of 152.4 m. The VLF survey outlined three conductors southeast of the main showing.
The 1993 exploration outlined a strong copper geochemical anomaly coincident with HLEM and VLF-EM conductors. In 1995 Probe Resources drilled two holes on the west side of the main showing, 1 hole on the east side of the showing and two holes approximately 200 m northeast of the main showing. Hole 95-1 drilled on the west side of the main showing returned 5.5 m of 1.94% Cu. The other two holes drilled on the main showing returned several intersections, 3 to 7 m in length which returned 0.5 to 1.96% Cu. The two holes drilled to the northeast intersected a serpentinite sill approximately 30 m thick, containing disseminated chalcopyrite and pyrrhotite. Hole 95-4 returned 32 m grading 0.18% Ni.
Exploration in 2001 and 2002 along strike and up dip of the mineralized horizon, revealed addition chalcopyrite stringer mineralization with associated quartz ¿ chalcopyrite veins up to 300 meters to the northwest and 200 meters to the southeast. Although these zones are less than a meter thick and less intensely mineralized than the main showing, they demonstrate some continuity to the mineralization. Several geologists who have visited the property have proposed that the style of mineralization observed is consistent with that of a copper rich sulphide stringer zone to a potential Besshi style massive sulphide occurrence. No analytical results from either the 2001 or 2002 sampling programs were submitted for assessment purposes.

## Work History

| Date | Work Type | Comment |
|---|---|---|
| 7/1/2020 | Geochemistry | |
| 7/1/2020 | Geochemistry | |
| 7/1/2020 | Geochemistry | |
| 7/1/2020 | Geology | |
| 7/1/2018 | Geochemistry | |
| 7/1/2018 | Geochemistry | |
| 7/1/2018 | Geology | |
| 7/1/2018 | Other | |
| 7/1/2012 | Airborne Geophysics | |
| 7/1/2012 | Airborne Geophysics | |
| 7/1/2011 | Geochemistry | |
| 7/1/2011 | Geology | |
| 7/1/2011 | Other | |
| 7/1/2006 | Geochemistry | |
| 7/1/2006 | Geology | |
| 7/1/2004 | Geochemistry | |
| 7/1/2004 | Trenching | |
| 7/1/1995 | Geochemistry | |
| 7/1/1993 | Geochemistry | |
| 7/1/1991 | Other | |
| 7/1/1990 | Other | |
| 7/1/1990 | Geology | |
| 7/1/1989 | Geochemistry | |
| 7/1/1988 | Geochemistry | |
| 7/1/1969 | Ground Geophysics | |
| 12/31/2002 | Trenching | |
| 12/31/2002 | Other | |
| 12/31/2001 | Trenching | |
| 12/31/2001 | Other | |
| 12/31/1995 | Drilling | Five holes, 457.3 m. Two holes on west side of main showing; one hole on east side; and two on the main showing. |
| 12/31/1993 | Ground Geophysics | HLEM and VLF surveys. |
| 12/31/1990 | Geochemistry | |
| 12/31/1990 | Ground Geophysics | Also magnetic survey. |
| 12/31/1990 | Trenching | |
| 12/31/1989 | Trenching | |
| 12/31/1989 | Other | |
| 12/31/1987 | Geochemistry | |
| 12/31/1987 | Other | |
| 12/31/1969 | Drilling | Four holes, 333 m. |
| 12/31/1969 | Ground Geophysics | Also magnetic survey. |
| 12/31/1967 | Ground Geophysics | Also magnetic survey. |
| 12/31/1966 | Drilling | Three holes, 100.9 m. |
| 12/31/1966 | Geology | |

| | | |
|---|---|---|
| 12/31/1966 | Geochemistry | |
| 12/31/1966 | Development, Surface | |
| 12/31/1954 | Drilling | Five holes, 323 m. |
| 12/31/1954 | Ground Geophysics | |
| 12/31/1954 | Development, Surface | |
| 12/13/2002 | Geochemistry | |
| 12/13/2001 | Pre-existing Data | |
| 12/13/2001 | Geochemistry | |
| 12/13/1993 | Geochemistry | |
| 12/13/1993 | Trenching | |

## Assessment Reports that overlap occurrence

| Report Number | Year | Title | Worktypes | Holes Drilled | Meters Drilled |
|---|---|---|---|---|---|
| 097244 | 2018 | Prospecting, Geological and Geochemical Survey Report on the Ellen Property | Rock - Geochemistry, Soil - Geochemistry, Detailed Bedrock Mapping - Geology, Prospecting - Other | | |
| 096174 | 2012 | Airborne Geophysical Report on the Ellen Project | Electromagnetic - Airborne Geophysics, Magnetic - Airborne Geophysics | | |
| 094776 | 2006 | Geological and Geochemical Evaluation Report on the Ellen Project | Rock - Geochemistry, Regional Bedrock Mapping - Geology | | |
| 094414 | 2002 | 2002 Assessment Report on the Ellen Property | Rock - Geochemistry, Hand - Trenching | | |
| 093174 | 1993 | Assessment Report on the Ellen 1-20, 25-37 Claims | Rock - Geochemistry, Soil - Geochemistry, EM - Ground Geophysics | | |
| 092921 | 1990 | Summary Report on the Ellen Claims, NTS 115A-13 | Rock - Geochemistry, Detailed Bedrock Mapping - Geology, EM - Ground Geophysics, Line Cutting - Other, Handblast - Trenching | | |
| 060731 | 1969 | Report on a Magnetometer Survey, Haines Junction Area | Magnetics - Ground Geophysics | | |

## Related References

| Number | Title | Page(s) | Reference Type | Document Type |
|---|---|---|---|---|
| 2014-18 | Preliminary bedrock geology of the Mt. Decoeli area (parts of NTS 115A/12, 13 and 115B/9, 16) | | Yukon Geological Survey | Open File (Geological - Bedrock) |
| 93-140 | Assessment Report on the Ellen 1-20, 25-37 Claims | | Yukon Government: Energy, Mines and Resources | YMEP Report |
| 90-038 | Summary Report on the Ellen Claims | | Yukon Government: Energy, Mines and Resources | YMEP Report |

## Drill core at YGS core library

| Number | Property | Year Drilled | Core Size | Photos | Data |
|---|---|---|---|---|---|
| DDH-95-1 | Ellen | 1995 | NQ | 8 | 3 |
| DDH-95-2 | Ellen | 1995 | NQ | 10 | 3 |
| DDH-95-3 | Ellen | 1995 | NQ | 14 | 3 |
| DDH-95-4 | Ellen | 1995 | NQ | 12 | 3 |
| DDH-95-5 | Ellen | 1995 | NQ | 12 | 3 |