



Occurrence Details

Occurrence Number: 1150 054

Occurrence Name: Mckinnon

Occurrence Type: Hard-rock

Status: Prospect

Date printed: 6/15/2025 11:48:05 AM

General Information

Secondary Commodities: gold

Deposit Type(s): Paleoplacer

Location(s): 63°41'45" N - -139°9'25" W

NTS Mapsheet(s): 115011

Location Comments: .5 Kilometres

Hand Samples Available: Yes

Last Reviewed:

Capsule

Work History

Staked as Britannia group (4279) commencing in June, 1900 by the McKinnon brothers, who put in a 8 m adit and a 18 m shaft in 1901-1902. Other development included the 24 m Winchester shaft, a 30 m shaft and 46 m adit on the Andromeda claim and numerous shallow pits and open cuts. Approximately 200 claims were kept in good standing by various owners until interest waned following the death of the McKinnon's in the early 1920's.

Re-staked in October, 1963 as Indiana cl 1-40 (79438) by Canex Aerial Exploration Ltd; in July, 1965 as Black Bear cl 2, 3, and 8 (87028) by F. Burkhard; in September, 1966 as Black Bear cl 1-4 (87915) by Burkhard; in June, 1968 as Mac cl 1-16 (Y15385) by Cominco Ltd; and in July, 1971 as Kin cl 1-16 (Y65020) by Yukon Revenue Mines Ltd. Only mapping and geochemical sampling have been done since 1912.

In May-June, 1973, R. Hrkac tied on Mac cl 1-9 (Y65992) and cl 10-150 (Y81401), Ray cl 1-64 (Y81542) and Tom cl 1-88 (Y81606). Hrkac transferred the claims to a private company, Andac Resources Ltd., which mapped in 1974, entered a joint venture in 1975 with Kapvik Exploration Ltd and Action Resources Ltd, and added Bill cl 1-40 (Y90309) and others in April-August, 1975, conducted more mapping and sampling and drilled one hole (70 m) later in the year. Yukon Revenue mapped and sampled in 1972 and 1974 and drilled 4 holes (292.6 m) in 1975. Andac et al. flew an aeromagnetic survey in 1976, transferred the claims to McKinnon Rand Resources Ltd. in early 1977, and optioned them to Dome Mines Ltd., which enlarged the property and drilled 4 holes (934.2 m) in 1979.

Re-staked as Key cl 1-38 (YA87792) in October, 1985 by G. Harris and D. Waugh who performed geological mapping in 1986. In 1987, the property was optioned by Volcano Resources Corporation, which added Key cl 39-123 (YA88705) in January and February, 1987 and which explored with mapping, magnetic and VLF-EM surveys, bulldozer trenching and 9 diamond drill holes (469.7 m). D. Waugh tied on Key cl 124-143 (YB23213) to the west in October, 1988, and re-staked and added Key cl 40-319 (YB30115) in April, 1990 and Tri cl 45-104 (YB30425) in May, 1991. B. Harris staked the Mck 1-34 cl (YB45771) in October, 1993.

Under an option agreement with D. Waugh, Richlode Investments Corporation performed a geochemical bulk sampling and trenching program on the Key and MCK claims in 1993. The occurrence was re-staked as Mck cl 1-34 by Waugh in August, 1995. Several of the Key claims did not expire until after Waugh re-staked the prospect.

Re-staked as Long cl 1-6 (YC04112) by V. Matkovich in April, 1997.

Weststar Resources performed a limited geochemical survey of the McKinnon area in 2009, dominantly consisting of silt and soil samples.

Capsule Geology

The original owners obtained many assays in the range 3.4 g/t Au to 10.3 g/t Au from a conglomerate that they compared with the South African Rand. The GSC reported that a 1.8 tonne shipment tested at the Government stamp mill around 1901 assayed about 3.4 g/t Au. However, extensive sampling by MacLean in 1914 showed only trace amounts. Some reports have suggested that surface assays may be somewhat higher than average due to supergene enrichment.

Minor amounts of sulphides and siderite are also present in the conglomerate, which consists of well rounded pebbles of white quartz (90%) and micaceous quartzite (10%) averaging 0.4 to 2.5 cm in diameter and up to 8 cm maximum. The matrix ranges from sand to silt sized clastic debris to bluish, fine mica, which is locally silicified and well indurated. Bedding or banding is virtually absent. According to Cominco, the grade ranges from trace to 3.4 g/t Au and the gold is present in an extremely fine state in the matrix.

Andac's 1975 hole failed to reach the base of the conglomerate, but did return subcommercial gold fragments from 1.8 to 6.0 m, 9.1 to 39.6 m, and 51.8 to 70.1 m. The Yukon Revenue drilling in 1975 and Dome drilling in 1979 returned only low gold assays.

Mapping by G. Lowey for DIAND in 1983 determined that the conglomerates are Lower Cretaceous (Albian) in age and that they were deposited in fluvial and deltaic environments. Upper Cretaceous to Paleocene Carmacks Group andesite flows are interbedded with the conglomerates and the sequence is cut by coeval porphyritic andesite to (minor) dacite sills and dykes. Conglomerates are divisible into two sequences: a lower lithic unit and an upper quartzose unit. Only the upper unit contains gold. Historically, this deposit was regarded as a paleoplacer, but Lowey suggested an alternative epigenetic epithermal origin, citing the extensive silicification and clay alteration. Assays of the conglomerate show the presence of typical epithermal trace metals, such as Ag, As, Ba, Hg, Pb and Sb, although the values are uniformly low.

The 1986-1987 work returned disappointing results with only 6 of 47 chip samples returning greater than 20 ppb Au, with a maximum of 87 ppb Au.

Of the seven 500 kg bulk samples collected and processed in 1993, most returned low gold values. The highest assay obtained was 0.118 g/t Au.

Soil samples from the 2009 program by Weststar Resources returned anomalous gold values up to 70 ppb Au corresponding to increases arsenic and silver values.

Work History

| Date | Work Type | Comment |
|------------|-----------------------------|--|
| 12/31/1993 | Geochemistry | Seven 500 kg bulk samples were collected and processed |
| 12/31/1987 | Drilling | Nine holes, 469.7 m. |
| 12/31/1987 | Geology | |
| 12/31/1987 | Ground Geophysics | Also VLF survey. |
| 12/31/1987 | Trenching | |
| 12/31/1986 | Geology | |
| 12/31/1979 | Drilling | Four holes, 934.21 m. |
| 12/31/1976 | Airborne Geophysics | |
| 12/31/1975 | Drilling | One hole, 70.1 m. |
| 12/31/1975 | Geology | |
| 12/31/1975 | Geochemistry | Also rock sampling. |
| 12/31/1975 | Other | |
| 12/31/1974 | Geology | |
| 12/31/1974 | Other | |
| 12/31/1973 | Geochemistry | |
| 12/31/1972 | Geology | |
| 12/31/1972 | Geochemistry | |
| 12/31/1920 | Trenching | |
| 12/31/1920 | Development, Underground | Drove a 24.4 m shaft, a 30.5 m shaft & a 45.7 m adit were before 1920. |
| 12/31/1912 | Geology | |
| 12/31/1912 | Development, Underground | Various adits and shafts dug 1901-1912. |
| 12/31/1901 | Development, Underground | Drove a 8.23 m adit and a 18.29 m shaft during 1901-02. |
| 12/13/2009 | Geochemistry | |
| 12/13/2009 | Geochemistry | |

| Assessment Reports that overlap occurrence | | | | | |
|--|------|---|--|---------------|----------------|
| Report Number | Year | Title | Worktypes | Holes Drilled | Meters Drilled |
| 095561 | 2009 | Geochemical Report on the McKinnon Project | Silt - Geochemistry, Soil - Geochemistry | | |
| 092156 | 1986 | Preliminary Geological Report on the McKinnon Creek Property | Cursory Property Visit - Other, Data Compilation - Pre-existing Data | | |
| 120354 | 1984 | Placer Gold Potential of Central Indian River, Klondike Placer Goldfields | Resource Estimate - Studies | | |
| 091354 | 1979 | [Diamond Drill Logs 137-1 to 137-4 McKinnon Creek Area] | Diamond - Drilling | 4 | 1260.35 |
| 090105 | 1976 | Report on Airborne Magnetometer Survey on the McKinnon and Montana Creek Claims | Magnetic - Airborne Geophysics | | |
| 060902 | 1973 | Preliminary Geological Report on the Mac, Ray, and Tom Mineral Claims | Rock - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Prospecting - Other | | |
| 019102 | 1968 | Geological Report on the MAC Group of Mineral Claims | Bedrock Mapping - Geology, Data Compilation - Pre-existing Data | | |

| Related References | | | | |
|----------------------------|--|---------|--------------------------|--------------------------|
| Number | Title | Page(s) | Reference Type | Document Type |
| ARMC003583 | Summary of exploration and development work - 1980 - Indian River Coal | | Property File Collection | Report |
| ARMC008317 | Location map - Indian River coal project - Coal exploration licence #101 | | Property File Collection | Geoscience Map (General) |
| ARMC008318 | Key map - Dawson mining district - Coal exploration licence #101 | | Property File Collection | Geoscience Map (General) |
| ARMC008319 | Geological map - Coal exploration licence #101 - Figure 3 | | Property File Collection | Geoscience Map (General) |
| ARMC007841 | Topographic map - Pencil manuscript - Indian River Coal - Sheet 1 | | Property File Collection | Geoscience Map (General) |

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| Drill core at YGS core library | | | | | |
|--------------------------------|----------|--------------|-----------|--------|------|
| Number | Property | Year Drilled | Core Size | Photos | Data |
| 87-1 | McKinnon | 1987 | NQ | 6 | 3 |
| 87-2 | McKinnon | 1987 | NQ | 6 | 3 |
| 87-4 | McKinnon | 1987 | NQ | 6 | 3 |
| IR-80-1 | McKinnon | 1980 | NQ | 6 | 0 |
| DDH-137-2 | McKinnon | 1979 | NQ-BQ | 46 | 1 |
| DDH-137-3 | McKinnon | 1979 | NQ-BQ | 40 | 1 |