Location/Identification

MINFILE Number: 104B 033
National Mineral Inventory Number: 104B8 Au1
Name(s): **EAST GOLD**
ELECTRUM, PIONEER

Status: Past Producer
Mining Method Underground
Regions: British Columbia
BCGS Map: 104B030
NTS Map: 104B08E
Latitude: 56 16 54 N
Longitude: 130 04 02 W
Elevation: 735 metres
Location Accuracy: Within 100M

Mining Division: Skeena
Electoral District: Stikine
Resource District: Coast Mountains Natural Resource District

UTM Zone: 09 (NAD 83)
Northing: 6237941
Easting: 433926

Comments: Portal located at the 735 metre elevation. Location 5 kilometres south of the toe of Frank Mackie Glacier about 200 metres west of the Bowser River (Annual Report 1946, page 69).

Mineral Occurrence

Commodities: Gold, Silver, Lead, Zinc, Copper

Minerals
Significant: Sphalerite, Galena, Electrum, Pyrargyrite, Silver, Arsenopyrite, Tetrahedrite, Chalcopyrite, Pyrite
Associated: Quartz, Calcite
Alteration: Sericite, Silica, Carbonate, Pyrite
Alteration Type: Sericitic, Silicific'n, Carbonate, Pyrite
Mineralization Age: Unknown

Deposit
Character: Vein, Stockwork, Massive, Disseminated
Classification: Epithermal, Hydrothermal, Epigenetic
Type: H05: Epithermal Au-Ag: low sulphidation, I05: Polymetallic veins Ag-Pb-Zn+/-Au, I02: Intrusion-related Au pyrrhotite veins

Host Rock

Dominant Host Rock: Sedimentary

Stratigraphic Age	Group	Formation	Igneous/Metamorphic/Other
Lower Jurassic	Hazelton	Unuk River	------
Lower Jurassic	------	------	Texas Creek Plutonic Suite

Isotopic Age	Dating Method	Material Dated
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Lithology: Fine Grained Siltstone, Greywacke, Argillite, Tuffaceous Rock

Geological Setting

Tectonic Belt: Intermontane
Terrane: Stikine
Physiographic Area: Boundary Ranges

Inventory

Ore Zone: DRILLHOLE
Category: Assay/analysis
Year: 2007
Report On: N
NI 43-101: N

Sample Type: Drill Core

Commodity	Grade
Gold	3.01 grams per tonne

Comments: From a 26-metre drill interval.
Reference: Assessment Report 30206.

Ore Zone: SHEAR
Category: Assay/analysis
Year: 1946
Report On: N
NI 43-101: N

Sample Type: Chip

Commodity	Grade
Gold	5.1400 grams per tonne

Comments: From a 1.82 metre chip sample.
Reference: Annual Report 1946, page A68.

Summary Production

		Metric		Imperial	
Mined:		31	tonnes	34	tons
Milled:		0	tonnes	0	tons
Recovery	Silver	98,627	grams	3,171	ounces
	Gold	31,694	grams	1,019	ounces
	Lead	2,354	kilograms	5,190	pounds
	Zinc	1,029	kilograms	2,269	pounds
	Copper	30	kilograms	66	pounds

Capsule Geology

The East Gold Mine has been classified as a low-sulphidation epithermal deposit hosting epithermal breccia-veins.

The deposit is located 5 kilometres south of Frank Mackie Glacier just west of the Bowser River. Limited mining and underground exploration was conducted on the property from 1931 to 1965 producing a small tonnage of high grade gold-silver ore. From 1939 to 1945, inclusive, fourteen shipments of sorted ore were made with a total weight of 14.74 tonnes. This contained approximately 20,092 grams of gold and 44,291 grams of silver (Annual Report 1946, page A72). From 1949 to 1954 inclusive, 29 tonnes were mined and contained a total of 29,828 grams of gold, 90,105 grams of silver, 2,067 kilograms of lead, 558 kilograms of zinc, and 30 kilograms of copper. In 1965, 2 tonnes were mined producing 1,866 grams of gold, 8,522 grams of silver, 278 kilograms of lead, and 471 kilograms of zinc.

The region is underlain by a north-northwest trending belt of folded volcanic rock which contains a thick sedimentary sequence in-folded along a synclinal axis. This belt has been correlated with the Lower Jurassic Unuk River Formation, Hazelton Group, with the deposit occurring within the Upper Siltstone Member. This belt is cut by Mesozoic and Tertiary intrusions. A northern extension of the Early Jurassic Summit Lake Stock occurs within 600 metres to the southwest of the occurrence (Fieldwork 1983; Open File 1987-22).

The deposit is apparently located within an isolated fault block that has been affected as a whole by hydrothermal alteration. The rocks are mainly comprised of highly fractured and sheared fine-grained siltstone with minor clastic horizons. Greywacke, argillite and tuffaceous sediments also occur. The major structure in the mine area is a tightly folded anticline made up of minor folds and locally contorted beds. It has a north-northwest trend and plunges to the south. A pervasive sericite, quartz, carbonate, pyrite alteration has overprinted the strata producing a reddish hue to area outcrops.

Three types of mineralization occur at the East Gold deposit:

1) A high-grade vein zone varying from 3 to 60 centimetres in width is bounded on the hangingwall side by a fault with average strike of 165 degrees and dip of 68 degrees west. The vein is knife edge thick on surface and can be traced for 53 metres. Underground it extends from the foot of a raise 12 metres northward where it appears to merge into a diffuse shear zone. The zone is sheared and silicified and contains stringers of quartz and calcite, much pyrite and discontinuous lenses, from 1 to 2.5 centimetres wide, of dark brown sphalerite and some galena. Minor amounts of pyrargyrite (ruby silver), electrum, arsenopyrite, tetrahedrite, chalcopyrite, and native silver also occurs, with electrum forming rich pockets locally. A 30 centimetre sample across the zone taken within the drift assayed 24.00 grams per tonne silver and a trace of gold. A 6.5 centimetre sample including a 4 centimetre stringer of sphalerite and galena assayed 476.58 grams per tonne silver and 2.06 grams per tonne gold. The entire production of the mine up to 1945 has come from this one vein zone. It is not clear whether post 1945 production also came from this source (Annual Report 1946).
2) Several strong and persistent shears cut the sediments, striking from 110 to 125 degrees and dipping from 70 to 85 degrees southwest. The rocks along the shear are silicified and carbonatized in bands ranging up to 30 centimetres in width, with the bands closely spaced over a width 0.6 to 4.6 metres. This zone is thought to extend for about 450 metres. Mineralization occurs in the altered sediments and in stringers and bands of quartz. Mineralization is similar to that of the high-grade vein zone but much less abundant with gold and silver values also being lower. Typical assays are 25.71 grams per tonne silver and a trace of gold over 1.82 metres and 5.14 grams per tonne gold and 3.43 grams per tonne silver over 1.82 metres (Fawley, A.P., 1946).
3) A stockwork of quartz veins occurs in highly fractured sediments about 300 metres southeast of the raise, approximately on strike with the high-grade vein. One vein is 30 centimetres wide and contains chalcopyrite, sphalerite, galena and small amounts of tetrahedrite, arsenopyrite and malachite. Metallic minerals form 5 per cent of the vein.

Work History
A number of claims in the Pioneer group Nos. 1 and 2 were located by William and Fred Jancowski and John Campbell in about 1927. The Silver group of 4 claims, the Silverton, Nos. 2 and 3, Silver Fraction, and Silver Fraction No. 1, was located south of and adjoining the Pioneer groups by J.R. Jancowski. The Silverton group, adjoining the Silver group on the south, was owned by Mr. Boer and associates of Hyder, Alaska.

During 1929-30 the Pioneer groups were under option to Cominco Ltd. Trenching and diamond drilling was done on the quartz veins but this work failed to show any continuity of values. Hole No. 2 drilled under a high grade siliceous outcrop, showed values of 299 grams per tonne gold, and 301 grams per tonne silver over a width of 1.5 metres. Location of this hole is not known but presumably it was drilled on what was later to become known as the "high grade" vein.

The owners resumed work on the property and began driving an adit at the 762 metre elevation (2,500 foot) elevation. Work on the property ceased in about 1934 and no further activity was reported until 1939. At this time the property was held by Mrs. J.L. Campbell, of Hyder. Lessees A. Phillips and associates began development work and from time to time shipped small quantities of high grade ore to the Provincial Government sampling plant at Prince Rupert. The ground was apparently restaked as the East group of 8 claims by A. Phillips and associates in about 1944 and intermittent work was carried on until 1954. Development work to this date in the adit, driven on the north side of a ravine some 80 metres above the valley floor, consisted of about 82 metres of lateral work, a small stope winze, and two worked out stopes.

No further activity was reported until 1959 when the East Gold claim Nos. 1 to 8, owned by A. Phillips, and the Luck claim Nos. 1 to 4, owned by S .A. Liening of Seattle, were optioned to Dempster Explorations Limited. Work by the company included 380 metres of underground, and 211 metres of surface diamond drilling; the option was later dropped. Utica Mines Ltd optioned the property in 1962 and apparently a new adit was begun and driven under the ore zone for a total length of 150 metres. A total 227 metres of EX diamond drilling was done, apparently from this adit. The option was relinquished in June 1963. The claims lapsed again and in March 1965 A. Phillips staked the East Gold claim Nos. 1 to 8 and the East Gold Extension claim Nos. 1 to 6 on the showings. Some development work was carried on until November when Mr. Phillips was killed in a blasting accident.

In 1986, Sun Valley Gold optioned the property from the owners and completed limited mapping and sampling. The work included in a 12 hole, 800-metre diamond drill program in 1987 (Assessment Report 16198). The Sun Valley program was designed to test one of the zones that contained the previously mined high-grade gold-silver mineralization. The drill program did not intercept any high-grade mineralization similar to that previously mined between 1939 and 1965, although quartz veins that could have hosted this type of mineralization were intercepted in eight of the twelve holes completed. A splay fault structure was also drill-tested. Other holes were designed to test secondary targets.

American Creek Resources Ltd acquired the original six Electrum claims named Rollin 1-6 in September 2004 and started initial exploration in that same month that included the collection of 84 rock samples.

Preliminary geologic mapping and lithogeochemical sampling on the Electrum property was completed by American Creek Resources Ltd in the summer and fall of 2005. A total of 1,446 rock samples were submitted for analyses. American Creek also participated in a helicopter-borne magnetic and electromagnetic survey conducted in 2005. The results of the survey show several broad areas of elevated magnetics that correspond to areas of strong pyrite-sericite alteration and silicification.

A ground geophysical induced polarization (IP) survey was carried out on the Electrum property during 2006. American Creek Resources Ltd executed a drill program on the Electrum property in 2006 (American Creek Resources Press Release - January 9, 2007). The results confirmed small veins grading as high as 440 grams per tonne gold and 400 grams per tonne silver over narrow widths in epithermal breccia-veins, structurally

controlled and striking 120-130 degrees and dipping from 60 degrees west to vertical (American Creek Resources Press Release - January 9, 2007).

A 2007 drill program by American Creek was designed to test targets outlined by surface mapping and sampling, and to identify targets for deeper drilling. A program of 44 drill holes totaling 12,574 meters was completed. The drilling was carried out in the area a few hundred metres north-northeast of the MINFILE plotted location of the East Gold mine to an area about 600 metres north-northeast. Drill results confirmed small veins grading as high as 440 grams per tonne gold and 400 grams per tonne silver over narrow widths in epithermal breccia-veins, structurally controlled and striking 120 to 130 degrees and dipping from 60 degrees west to vertical (Assessment Report 30206).

An extensive exploration program on the Electrum property was also carried out in 2007. Two additional claims, Slippery Willow 1-2, were added to the property in 2007. The Slippery Willow claims contain an airstrip as well as several locations for constructing a camp. Highlights of the results obtained include 3.01 grams per tonne gold and 2.05 grams per tonne silver over 26 metres; 29.9 grams per tonne gold and 10.2 grams per tonne silver over 2 meters; 0.53 grams per tonne gold and 2.49 grams per tonne silver over 31 meters (Assessment Report 30206).

Surface sampling om the Electrum (East Gold) property in 2008 (News Release, July 8,2010) and 2010 focused on extending the mineralized zones to the south of the historic East Gold mine in an area with little previous drilling over an extension of 500 by 500 meters (www.tudor-gold.com/projects/electrum/).

In 2011, a drill program by American Creek Resources Ltd was aimed at testing the stockwork style mineralization at depth and consisted of 2105 metres in 7 holes (http://www.tudor-gold.com/projects/electrum/). The program occurred southwest of the East Gold mine area. Drilling, reported for 2015, targeted Shiny Cliff and Mine Hill (http://www.tudor-gold.com/projects/electrum/).

In 2016, a drill program was carried out by Tudor Gold (operator) and American Creek Resources Ltd. to extend and expand on previous drilling programs carried out by American Creek. One small area of the Electrum property includes the site of the historic East Gold mine. A trenching program was carried out on a new blast zone. As noted in a press release issued by Tudor on September 12, 2016, the trenching program carried out on the new blast zone targeted a vein system which is infilled with a fine-grained blackish, blue-grey mineralization. The structure includes wide, sharp-edged quartz fragments in a foliated sulphide-quartz-carbonate matrix; the sulphides are pyrite and pyrrhotite with thin galena/silver seams. Twelve representative specimens were collected across the vein structure. Assays of those specimens yielded averages of 3,461.92 grams per tonne silver and 2.24 grams per tonne gold (Tudor Gold Corp, News Release January 11, 2017). Complete results of the trench sampling may be found in the noted press releases on the Tudor Gold website. Several holes revealed subsurface mineralization in the area below the newly identified blast zone. Due to fault complexity Tudor Gold was unable to state with the certainty if the mineralization revealed in these drill holes was linked, or continuous between holes. A four tonne bulk sample collected from the new blast zone assayed 2.82 grams per tonne gold, 539 grams per tonne silver, 1.96 per cent lead and 1.97 per cent zinc (Tudor Gold Corp, News Release January 11, 2017).

Bibliography

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EMPR ASS RPT *16198, *30206
EMPR BULL 63
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EMPR OF *1987-22
EMPR PF (Statement of Material Facts - Sun Valley Gold Mines Ltd., 1987; Rimfire Minerals (2001): Annual Report and Press Releases)
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PR REL American Creek Resources Jan. 9, 2007 (CCNMatthews); *July 8, 2010, Nov.2, *Dec.10, 2015; Tudor Gold Corp. Sept 12, 2016; *Jan.11, 2017
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Date Coded:	1985/07/24	**Coded By:**	BC Geological Survey (BCGS)	**Field Check:**	N
Date Revised:	2017/12/14	**Revised By:**	Garry J. Payie (GJP)	**Field Check:**	N