





[ARIS11A]

#### **ARIS Summary Report**

Regional Geologist, Smithers **Date Approved:** 1998,10,27 Off Confidential: 1999.09.11

**ASSESSMENT REPORT: 25656** 

Mining Division(s):

Liard

**Property Name:** 

Table Mountain Gold

Location:

**NAD 27** 

Latitude: 59 13 19 Latitude: 59 13 18 Longitude: 129 39 00

129 39 06

UTM:

6564739 462896

**NAD 83** NTS:

104P04E

Longitude:

UTM:

6564917

462802

Camp: 052

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Claim(s):

Sun

Operator(s):

Cusac Gold Mines Ltd.

Author(s):

Glover, Michael J.

Report Year:

1998

No. of Pages:

31 Pages

Commodities

Searched For:

Gold, Silver

General

**GEOL, GEOC, PHYS** 

Work Categories:

**Work Done:** 

Geochemical

SAMP Sampling/assaying (60 sample(s);)

Elements Analyzed For : Gold

Geological

GEOL Geological

(1.0 ha;)

**Physical** 

TREN Trench

(1 trench(es);) (6250.0 m)

Keywords:

Auriferous quartz veins, Gold, Paleozoic, Quartz veins, Sylvester Allochthon

Statement Nos.:

3124100, 3124103, 3124105, 3124121, 3124124

MINFILE Nos.:

104P 029

**Related Reports:** 

05628, 05887, 06125, 06641, 07501, 07601, 07816, 09116, 11074, 14491, 21548, 21549, 21550

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GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

25.656

# Cusac Gold Mines Ltd.

# **Table Mountain Gold Property**

**Trenching Report** 

Sun Claim - Bear Vein - 1998 Field Season

	VERAL TITLES BRANCH C'd.
L.I.#	SEP 2 1 1998
File.	VANCOUVER, B.C.

Prepared For: Cusac Gold Mines Ltd.

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Prepared By: Michael J. Glover, B.Sc., September 6, 1998

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## Introduction

This report documents an overburden trenching and vein sampling program conducted between July 25<sup>th</sup> and August 16th of 1998 by Cusac Gold Mines Ltd. on the Sun Claim on the Table Mountain Gold Property. The objectives of this work were;

• To expose the Bear Vein, intersected and partially defined by diamond drilling in 1997, and evaluate the distribution and continuity of Au grade within the structure.

# **General Property Information**

## **Property Location and Access**

The Table Mountain Gold Property is located in northern British Columbia, 150 kilometers south of Watson Lake, YT (See Figure 1). Highway 37 transects the property and provides all-weather access to Watson Lake to the north and Dease Lake to the south.

At present, the property consists of a generally contiguous block of 204 full and fractional mineral claims and Crown Grants totaling 974 units. These claims cover an area of approximately 240 square kilometers (See Figure 2). The claims all lie within the Liard Mining Division. This figure highlights the area of work covered in this report, the Sun claim.

# **Property Topography and Vegetation**

The claims forming the Table Mountain Gold Property cover the broad McDame Creek Valley and the Table Mountain to the south. The terrain is typical of northern British Columbia. Although the area is mountainous with relief exceeding 1000m, the local terrain is generally moderate. Overburden varies from thin till on the steeper slopes to deeper deposits in the McDame Creek Valley. Shallow lakes, swampy areas, and mixed poplar/spruce growths cover the valley floors. Pine forests cover the slopes, gradually thinning at higher elevations into alpine meadows.

Figure 1 : Property Location Map

The red highlighted square indicates the property location and approximates the area illustrated in Figure 2.

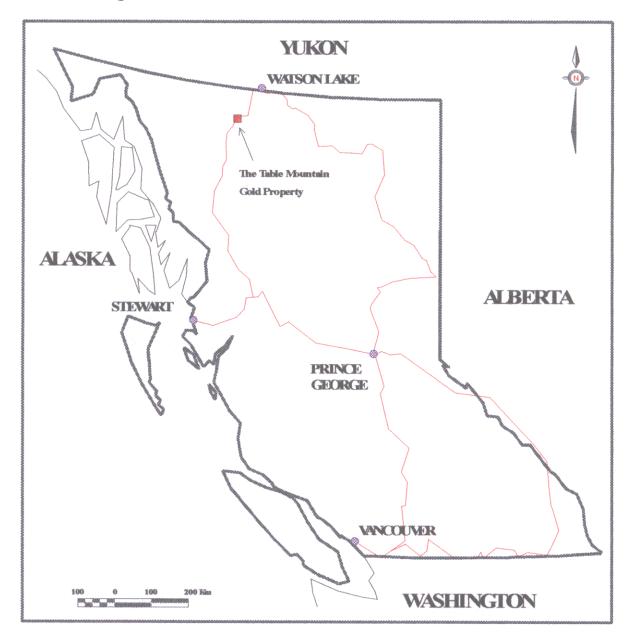


Figure 2: The Property

The boundaries of the claims forming the Table Mountain Gold Property are illustrated below. The Sun claim is indicated by the red shaded polygon.

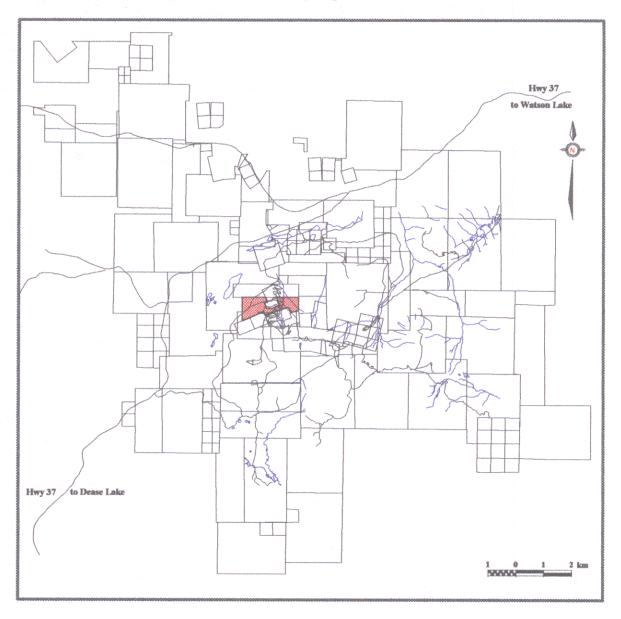
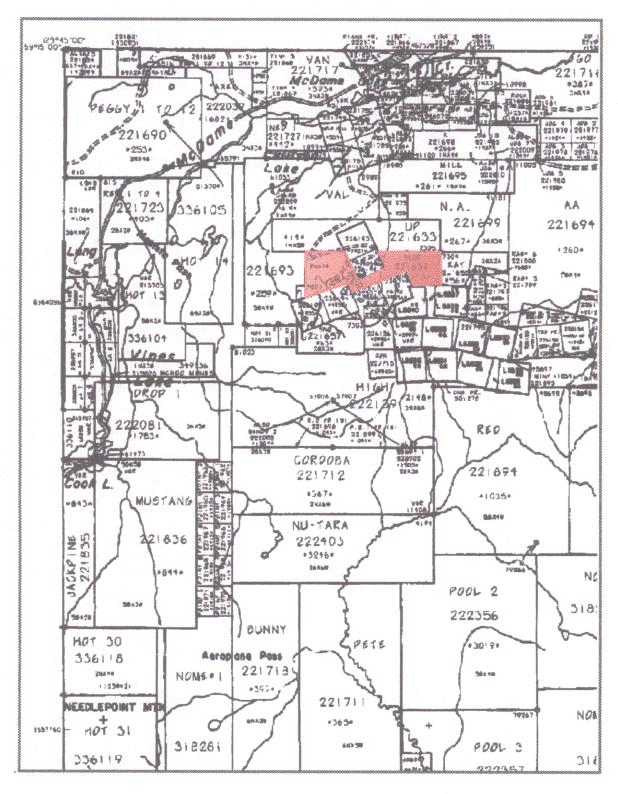


Figure 3: Claim Map
The north west corner of 104P 4/E at 1:50,000 highlighting the Sun Claim



## **Property History**

Placer gold was first discovered in the McDame area in 1874. The town of Centerville was established during the ensuing rush, and a reported 65,000 ounces of gold were produced over the next twenty years from placer workings on McDame, Snow, Troutline, and Quartzrock Creeks. In 1877, a nugget weighing over 40 ounces was found. Limited production continues on a sporadic basis even to the present time. The total placer gold production from the area to date has been estimated at 108,000 ounces.

The first mineral claims were staked in 1934. A small exploration rush developed over the next few years as most of the near-surface, gold-bearing veins were discovered.

The Vollaug vein was discovered in 1935 by John Vollaug and his partner Hans Ericksen. Vollaug and Ericksen also staked the Agnes and Jennie claims covering the original exposure of the Jennie vein in what is now known as the Main Mine area. Cominco completed a prospecting, trenching, and drilling program on the Vollaug vein structure in 1937.

Around this time, an unknown group brought a small mill to the Jennie vein location and drove a short crosscut to the vein. No significant values were encountered and work terminated. These early workers stopped only a few rounds short of a high-grade shoot on the Jennie vein.

Between 1942 and 1946, a prospector named Pete Hamlin exposed auriferous quartz veins in trenches on what is now the Pete claim. Pete Hamlin introduced the Brett brothers to the Table Mountain and Pooley Pass areas in the late 50s. The Bretts staked several claim blocks in the area during this period.

In the early 1950s, Silver Standard Mines Limited explored the Vollaug vein.

In 1973, Table Mountain Mines drove a decline and an adit on an ore shoot on the west end of the Vollaug vein based on results from the 1937 Cominco drilling and the Silver Standard work from the 1950s. They eventually followed up this work in 1977 with an adit extension and two raises which proved up an encouraging ore shoot within the Vollaug structure. They did not mine this ore shoot.

In 1974, David and Kristian Ross of the Agnes and Jennie Mining Company Limited, trenched and sampled the original highgrade outcrop of the Jennie vein exposed on Erickson Creek. Subsequent drilling during 1975-76 defined a high-grade ore shoot within the structure. On January 1, 1977, the Rosses collared a portal at the 1350 meter elevation (35 level) to test the vein by drifting along strike. By March 1978, Nu-Energy Development Corp. had become a 50% partner in the project. Underground development had defined a high-grade ore shoot with a reserve of 8800 tons grading 1,55 oz/T Au. The Jennie vein eventually produced more than 62,000 oz Au from 113,000 tons of ore.

As noted, Cusac's interests in the area originated with the prospecting efforts of brothers Guilford and Fred Brett in the mid 1950s. These and other efforts, initially seasonal, eventually became full-time with the formation of Glen Copper Mines Ltd. in 1965. Glen Copper evolved, through Cusac Industries, to become Cusac Gold Mines Ltd. in 1995.

Cusac's key claims in the area were staked by Guilford Brett in 1977.

In 1979, Cusac Industries Ltd. conducted a program of mapping, geochemistry, geophysics, and drilling on the Pete claim. A road was built into the area and three holes were drilled in 1980 with no significant intersections.

In 1980, Plaza Mining Corporation acquired the claims along the strike extension of the Vollaug vein to the east of the Table Mountain Mine property. They erected a 150 ton per day mill and commenced production from two small open pits.

Esso, through a 5 year option agreement, explored portions of the area in the early 1980s.

Exploratory work in the Main Mine area during 1981-82 defined a second significant gold-bearing structure, the Maura vein. Both the Jennie and Maura veins were developed down dip by a second adit at the 1280 meter elevation (the 28 level). A third adit was driven at an elevation of 1210 meters (the 21 level) to develop the Maura structure at greater depth. The Devine, Bear, Goldie, and Dease veins were discovered during this development. In 1982, surface drilling resulted in the discovery of a third significant gold-bearing structure, the Alison vein, located in the footwall of the Maura and Jennie zones.

In December of 1982, the Agnes and Jennie Mining Co. and Nu-Energy were amalgamated to form the Erickson Creek Gold Mining Co. (Erickson).

In 1982, Cusac Industries discovered the high-grade Dino vein and explored the Hot vein. Development of a crosscut, 300 feet of drift on the Hot vein and a raise to surface were completed. Low grades discouraged further work.

In September 1983, Plaza Mining Corporation went into receivership. Erickson acquired the Plaza assets which included the mineral rights to the remaining known strike length along the Vollaug vein.

In late 1983, Erickson started a new adit at the 1420 meter elevation, approximately 3 km east of the Main Mine workings to develop some of the reserves on the Vollaug structure. Known as the Troutline, this adit had reached the vein by year end. In 1983, Erickson also initiated work on a new adit below the Main Mine workings known as the 14 level.

In 1984, the original mill capacity was expanded to 300 tons per day. This mill was subsequently destroyed in a fire in January 1986. A new mill was built and the mine was brought back into production in October 1986.

In 1984, Cusac optioned its claims to Erickson. Over the years, further mineral rights were obtained on adjacent ground by staking, purchase, and under option agreements.

In 1985, Erickson discovered the Eileen vein, just south of the Dino vein, on the Cordoba claim. Drilling resulted in the definition of an economic ore body which was developed via the Cusac Decline.

In 1985, Total Compagnie Francaise des Petroles, a French government-affiliated energy company, acquired operating control of Erickson Gold.

Ore production from the Eileen commenced during the summer of 1986. Underground

mapping and drilling resulted in the discovery of the Michelle vein.

Prospecting conducted in 1987 uncovered the Katherine vein on the NuTara claim. The Katherine vein was the target of a subsequent percussion and diamond drilling program.

In late 1987, an underground diamond drill program, testing east of the Eileen workings, discovered the vein system known as the Michelle High Grade zone (MHG). Attempts to further define the MHG from surface were ineffective. Definition drilling from underground was limited to available drill station locations as further development was halted by heavy water flows. A preliminary estimate of the potential of this zone indicated 24,337 tons at a grade of 1.019 oz/T Au. These results encouraged Total Energold to embark on an ambitious exploration and development program. A 2.5 km adit (the 10 Level) was collared in the fall of 1988 to investigate the MHG. At this point, reserves were depleted and production from the Cusac Portal and the Main Mine had ceased. Some production continued from the Vollaug through the end of the year. In late 1989, after completing 1.7 km of the 10 Level adit, work was terminated due to unexpectedly high costs and heavy ground water flows.

In 1989, Erickson conducted an integrated program of trenching, mapping, geophysics, and diamond drilling in the Cusac area. The Bain vein was discovered and a small mineral inventory was defined via further trenching and drilling.

Surface exploration in 1990 resulted in discovery of the Christine vein and a mineralized zone on the Theresa vein in the Hunter area.

Additional geophysics, geochemistry and diamond drilling conducted in 1990 and 1991 resulted in the definition of two significant reserve blocks on the Bain vein. The West Bain contained drill-indicated probable reserves of 34,741 tons at 0.687 oz/T Au. The East Bain contained drill-indicated probable reserves of 22,120 tons at 0.565 oz/T Au.

In April 1991, Total Energold elected to divest themselves of their North American mineral assets to focus on their oil and gas interests. All of the assets pertaining to the Erickson Gold operation near Cassiar were assigned to Energold Minerals Inc. and were subsequently purchased outright by Cusac Industries Ltd., free and clear of any royalties to Energold.

In 1993 Cusac reopened the mine and 300 ton per day milling operation at Table Mountain with the main production target being the West Bain structure. Definition drilling conducted on the West Bain zone confirmed reserve estimates.

A limited surface exploration program in 1993 resulted in the discovery of the Bonanza zone west of the West Bain.

In the fall of 1993, Cusac initiated development of the West Bain zone. During this period the old Cusac Portal workings were reopened and examined. Remarkably, no water was encountered in the workings. The development of the 10 level had lowered the water table and drained the water that had prevented the former owners from developing the MHG.

Milling of ore from the West Bain commenced in April of 1994. Underground mining was completed in July, and crown pillar extraction, in August, of 1995.

In January of 1995, Cusac entered into a joint venture agreement with Cyprus Canada Inc.

(Cyprus), known as the Taurus Project. This project, involving a 40 square km group of claims in the northern portion of the property, regarded a mineralised zone straddling the boundaries of claims held by International Taurus Resources Inc. (Taurus) and Cusac.

In August of 1996, after spending approximately \$3 million, Cyprus elected to withdraw from the Taurus project. Subsequent to Cyprus' withdrawal, Cusac entered into an option agreement with Taurus regarding the same group of claims.

As a result of exploration completed by Cyprus and Taurus on the Taurus/Cusac project, Taurus geologists have estimated drill-indicated and geologically drill-inferred resources of approximately 1 million ounces of gold. The bulk of mineralization on Cusac's portion of the project is in the geologically drill inferred category. This low-grade, near surface, potentially bulk mineable resource, is associated with shear zones and disseminated sulphide mineralization.

During the development of the Cusac decline to the MHG, the Big vein was defined and mined. Definition drilling of the MHG commenced in May 1995.

Mining of the MHG commenced in June 1995 from the top of, what proved to be, a complex faulted series of high grade ore blocks. Sporadic production from this zone continued through 1997.

1995 surface diamond drilling of the Katherine vein to the west of the Bain, resulted in the definition of a small open-pit amenable reserve. This block was mined. The Bain Gap, between the East and West Bain blocks, was tested with inconclusive results.

In the summer of 1995, I.P. surveying, designed to test for zones similar to that being investigated at Taurus was undertaken. Follow up drilling to this I.P. work did not yield any significant disseminated mineralization. The final hole on the Van claim, 95VAN-5, designed to test coincident weak geochem and interpreted fault structures, intersected a quartz stringer yielding 1.679 oz/T Au over 0.2m.

Underground drilling at Cusac discovered the Lily vein, the eastern extension of the MHG.

In early 1996, the 10 level development, dormant since late 1989, was extended by 250m.

Mining of the Lily from the 1160 commenced in March 1996. The Lily was eventually mined between the 1130 and 1170 levels over a strike length of 150m.

Underground drill testing of the ground north of the Lily resulted in the discovery of the Melissa structure. Access was driven but fault disruption of the structure rendered the vein sub-economic.

A compilation of Vollaug data undertaken in the summer of 1996 led to the re-evaluation of existing reserves and drilling of selected targets. Rehabilitation of the 57 level portal and decline was undertaken and mining began in October of 1996. Mining from the 57 was completed in February of 1997 and work commenced on rehabilitation of the 49 level drift. Production from the 49 began in April. Dilution, due to poor hanging wall conditions, and erratic grade distribution combined to result in lower than anticipated recovered grades. Lowered grade and low gold prices combined to make the zone sub-economic. The mining

was stopped in July of 1997.

The Cusac decline was extended east in May-July of 1997 to permit drill testing of the Lily further to the east. No significant results were yielded by this drilling.

During the same period, an exploration drill program was undertaken to test the area east of the Erickson Creek Fault Zone (ECFZ) near the Main Mine. Initial attempts to follow up isolated intersections from previous drilling met with mixed results. Drilling the Bear vein extension, east of the Main Mine, resulted in the partial definition of a near surface ore shoot.

Open-pit mining of an ore panel on the Vollaug in the Table Mountain Mine area, initially discovered by Cominco in 1937, and subsequently upgraded by drilling in 1996, was completed between July and September of 1997. Portions of the Melissa and narrow vein sections of the Lily on the 1600 level were mined during September through November 1997.

## **Property Geology**

Figure 4 illustrates the general geology of the central portion of the property.

The property is underlain by rocks of the Sylvester Allochthon. Thrust faults divide the allochthon into three major sub-horizontal lithotectonic sheets. The Basal Sylvester Thrust forms the contact between the lowermost thrust sheet of the allochthon and the underlying autochthonous sediments of the Cassiar Platform terrane. The Table Mountain Thrust marks the top of the lowermost thrust sheet. The Huntergroup Thrust marks the top of the middle thrust sheet. The allochthon was emplaced sometime between the Late Triassic and Mid-Cretaceous (Gordey).

The lowermost thrust sheet is composed predominantly of sub-greenschist facies meta-andesites, cherts and cherty volcanics. Discontinuous tectonic slivers of listwanite, generally interpreted to be metasomatized serpentinites, occupy the Table Mountain Thrust. The middle thrust sheet, less than 500 meters thick, is composed of graphitic argillite with minor interbedded siltstones and sandstones. The uppermost thrust sheet consists of pyroxene porphyritic meta-volcanic rocks with minor intercalated metasediments. These rocks range in age from Late Devonian to Late Triassic (Gordey). Cretaceous and Tertiary lamprophyre and diabase dikes intrude locally (Boronowski).

Gold mineralization occurs in quartz vein systems within the lowermost thrust sheet proximal to the Table Mountain thrust.

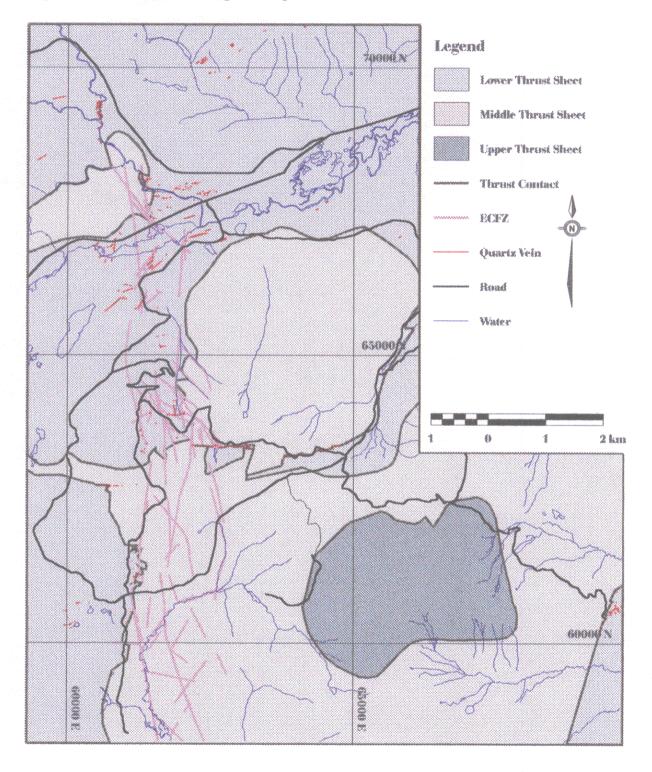
Dating of sericite, associated with auriferous quartz veining, indicates an Early Cretaceous age. This postdates emplacement of the Sylvester Allochthon and pre-dates the Middle to Late Cretaceous emplacement of the Cassiar Batholith. This fact and the absence of exposures of contemporaneous intrusives have lead Ball, a former property geologist, to suggest that the property "could be situated over hidden intrusives localized by early transcurrent faults and associated transtensional zones".

Auriferous polyphase quartz veining is spatially and genetically related to the Table Mountain Thrust. The thrust formed an impermeable structural discontinuity localizing hydrothermal fluid flow. Boronowski has suggested that the listwanites occupying the thrust signify "proximity to a deep crustal break, a possible source of gold, and an environment where acidic gold-bearing hydrothermal solutions would be neutralized and enhance precipitation of gold."

Gold mineralization, within quartz veins, is concentrated at or immediately below the thrust.

Productive veining is concentrated along a north-south trending zone of faulting known as the Erickson Creek Fault Zone (ECFZ). Clusters of alteration zones, veins, and faults, that occur intermittently along the ECFZ are interpreted to represent separate hydrothermal centers. Mineralized veins and alteration zones also occur distal to the ECFZ, however, none of these structures have yielded economic mineralization to date.

Figure 4 : Generalized Geological Map



Two distinct geometries of auriferous veining are recognized (Panteleyev & Diakow);

Type 1 veins (e.g., The Jennie and Eileen), are moderate to steeply dipping and occupy shear structures in the lower thrust sheet immediately below the thrust and generally terminate against the thrust. Generally striking 060-080 and dipping north, segments of these veins, typically 1m to 6m thick, average 200m in length. Vein systems can reach 1.8 km. Ore shoots generally occur within the top 30m of the vein. Gold grades, generally higher and more consistent in the upper portions, decrease and become more erratically distributed down dip.

Type 2 veins (e.g., The Vollaug), are relatively shallow dipping veins that occur within the thrust plane. These veins are have a characteristic ribboned appearance due to the presence of graphitic stylolites. The Vollaug, striking east-west, has a known length of 2.7 km. Thicknesses reach up to 4m but are generally less than 2m. Shallowly plunging elongate ore shoots are localized by flexures in the thrust plane.

The steeply dipping Type 1 veins are more abundant, contain higher grade gold mineralization, and are easier to mine than the Type 2 veins.

Mineralized veins are polyphase and commonly tectonically banded. Fine-grained mineralized quartz frequently cuts pre-existing early barren, coarse-grained, quartz veining. Gold occurs freely or is found intimately associated with clots of medium-grained euhedral pyrite. Increased sulphide concentrations generally indicate higher gold grade however some of the more spectacular free gold specimens from the property contain minimal sulphides. The common sulphide assemblage is pyrite, tetrahedrite, and sphalerite. Chalcopyrite and galena are less common. Arsenopyrite is rare.

Vein structures are offset by cross-faulting and dikes frequently cut through the ore bodies. Late stage alteration, commonly clay, associated with these cross faults and dikes, and variations in mineral assemblages within veining on either side of a fault, indicate that these structures were present during the final stages of hydrothermal activity.

Multiple distinctive overlapping alteration haloes occur within the volcanics adjacent to auriferous quartz veins. The most extensive is a widespread propylitic halo defined by veinlet stockworks of calcite, chlorite, and quartz with accessory pyrite and chalcopyrite. A carbonate alteration envelope, generally extending less than 15m from veining, increases in intensity towards the vein. This alteration is characterized by bleaching. An iron enrichment halo within the more intensely carbonate altered volcanics is evidenced by the presence of up to 10% coarse euhedral pyrite. Crackle brecciation, a distinctive fine multi-phase brittle breccia with a silica/carbon fracture filling accompanies the higher degrees of carbonate alteration.

With the exception of areas where the erosional surface is below the Table Mountain Thrust, (e.g., Katherine), listwanites are spatially associated with, but not restricted to, every known economic auriferous quartz vein system on the property. Three mineral assemblages characterize progressively increasing degrees of metasomatism within the Listwanites; Serpentine-Carbonate, Talc-Carbonate, and Quartz-Mariposite-Carbonate.

Ore has been produced from four vein systems on the property. Offset segments of a single structure have frequently been individually named. In the Main Mine area, the Jennie, Maura and Alison veins represent a single fault disrupted structure. Similarly, at Cusac, the Eileen.

Big, MHG, and Lily may be interpreted to be the same vein. This is also the case for the Katherine-Bonanza-Bain System. The various mine openings on the Vollaug are all working the same vein.

#### **The Current Work**

#### The Sun Claim

The Sun claim, located on the north slopes of Table Mountain east of the Main Mine workings, covers an area of 200 HA. Record details are tabulated below.

Sun	Ju	ly 11, 2001	221632	13	8 200

## **Summary of Work**

During the period July 25<sup>th</sup> to August 16<sup>th</sup> of 1998, a program of overburden trenching and vein sampling was carried out on the Sun Claim. This program was designed to expose and evaluate an extension of the Bear Vein.

Originally discovered by Erickson during the course of driving the 21 Level drift, this Type 1 vein was partially mined out from the 21 and 14 Levels. Exploration drilling in 1997, designed to test for veining east of the Erickson Creek Fault Zone and east of the Main Mine Area yielded several interesting intersections on a Bear Vein extension. Additional follow up holes began to define a near surface mineralized shoot. The decision was taken in late 1997 to halt drilling on the structure and to undertake a trenching and sampling program to determine the continuity of the structure and of Au grade within the structure.

This work is ongoing. Initial sampling yielded Au grades sufficient to warrant the extraction of a bulk sample. Extraction of the bulk sample is currently underway (Aug. 30<sup>th</sup>, 1998) and the extension of the existing overburden trench is dependent upon equipment availability as resources are being assigned to the bulk sampling on a priority basis.

#### Results of work

Figure 5 illustrates the location of the Bear Vein relative to the Main Mine workings.

Initial trenching has exposed 50m of the vein structure. The erosion surface at this point is an estimated 5m below the Table Mountain Thrust Contact. This is evidenced by DDH interpretation, occurrences of fuchsite noted within the wall rock volcanics proximal to the vein, and a sub-crop of graphitic argillite occurring immediately south of and above the central portion of the trench.

The vein strikes 072 to 077 degrees and is vertical to steeply south dipping. The structure terminates in a sub-vertical n-s fault on the west end of the trench. Initial attempts to follow the vein further to the west revealed a series of sub-parallel offsetting structures. While offsets are small, in the 2m range, this fact combined with the absence of grade in drill intersections to the west limit the potential for surface accessible economically viable veining to the west.

The structure bifurcates and the quartz veining pinches near the east end of trench. A narrow (5cm) shear persists. This fact and the occurrence of diamond drill intersections approximately

45m west of the current western end of the overburden trench yielding core length intersections of 0.393 oz/T Au/0.60m and 0.776 oz/T Au/0.30m suggest the possible existence of a second vein section that may be amenable to surface trenching. The overburden trench will be extended to the east as equipment availability allows.

The exposed quartz veining is typical of a Type 1 vein as described in the general geology section. The vein is polyphase. A late medium grey silica breccia matrix locally supports milky white angular fragments of the original vein. Sulphide mineralogy is also typical consisiting of +/-1% combined pyrite, chalcopyrite, sphalerite, and tetrahedrite. Fine (<0.5mm) free gold is common. Tension gashes and stringering in the footwall and hanging wall volcanics suggest dextral motion on the shear hosting the vein.

Chip sampling of the vein was completed at two meter intervals. Where possible, separate hanging wall and footwall section samples were taken. Zones of strong stringering were also sampled. Results from the stringer zones are not included in the composite vein grades. Experience has shown that these zones lack the vertical continuity of the primary structure and should not be included in economic calculations. The samples were analyzed for Au and Ag by Fire Assay at the Cusac Mine Assay Lab employing standard fire assay techniques. Original assay results are presented in Table 1. It has been standard practice at the mine site to cut assays greater than 2 oz/T Au to 2 oz/T Au. While this practice has also been utilized in this instance, the consistently high values yielded by many of the samples suggest that this may not be a statistically valid procedure.

Table 2 summarizes the composite sample results over the length of the vein and the composite vein grades/widths for the 36m long vein segment currently being bulk sampled. Figure 6 is a diagram of the vein structure with composite cut Au assay values.

A 36m strike length portion of the vein yields a cut composite grade of 1.155 oz/T Au over an average vein width of 0.57m. Drill hole intersections suggest that this grade may carry 15m down-dip locally. Work has commenced on extracting this 36m long section of vein to a depth of +/- 7m. Employing a dilution factor of 100% (1.2m/4') break and a tonnage factor of 2.95 Tons/m3, the sample may yield 490 oz Au (36m x 7m x 1.2m x 2.95T/m3 x 0.548 oz/T Au) from 900 tons of muck.

Figure 5: Bear vein Location

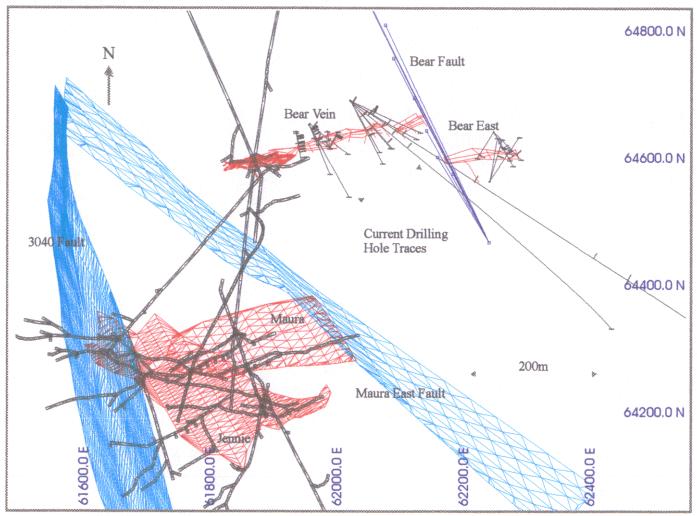


Figure 5 : Bear Vein Location
This plan illustrates the spatial relationship of the Bear vein to the Main Mine Workings

Table 1 : Original Assay Results

Sample		Raw As	Raw Assays Composited		Cut A	SSSVS	Composited			
Location			Values		1		Values			
Loc'n	Sample	Portion	Oz/T	Width	Oz/T	Width	Oz/T	Width	Oz/T	Width
			Au	(m)	Au	(m)	Au	(m)	Au	(m)
								<b>.</b>		
10	44801	All	0.078	0.10	0.078	0.10	0.078	0.10	0.078	0.10
	T							<del>j</del>		
12	44802	All	0.343	0.20	0.343	0.20	0.343	0.20	0.343	0.20
	1						<u> </u>			
14	44803	All	0.660	0.30	0.660	0.30	0.660	0.30	0.660	0.30
	14004	A 44				<del></del>	ļ		-	
16	44804	All	0.437	0.30	0,437	0.30	0.437	0.30	0.437	0.30
10	44005	T7137	0.001		0.45.5			<del></del>		
18			0.024	0.40	0.106	0.65	0.024		0.106	0.65
18	44806	HW	0,237	0.25			0.237	0.25		
20	44907	THE P	0.06		10.004					
20 20			0.067	0.25		0.55	0.067		1.121	0.55
20	44808	nw	34.950	0.30			2.000	0.30		
22	44809	D117	0.065	0.40	0.000	0.50	0.065	- 40		
22			0.063	0.40 0.30	0.289	0.70	0.065		0.289	0.70
22	77010	LIW ,	0.366	0.30			0.588	0.30	•	
24	44211	FWSTRS	0.087	0.20	Nice Co-	nposited	0.087			
24	44812		0.054	0.35	0.741		0.087	0.30	0 741	0.65
24	44813		1.542	0.30	0.741	0.03	1.542		0.741	0.65
	11015	LAV	1.342	0.30			1.542	0.30		
26	44814	FW	0.850	0.45	0.512	U 6V	0.850	0.48	0.512	7 PA
26			0.078	0.45		V.6 <b>V</b>	0.078	0.45	0.314	0.80
			0.075	0.55			V.V/8	0.33		
28	44816]	FW	0.708	0.40	0.524	0 60	0.708	0.40	0.524	0.60
28	448171		0.155	0.20	0.027	0.00	0.155	0.40	V.J24	0.00
28		IWSTRS	0.476		Not Com	posited	0.133	0.40		ļ
1			-,		···· ···	-Prosecott	· · · · · · · · · · · · · · · · · · ·	0.40		
30	448191	W	2.561	0.20	2.507	0.35	2.000	0.20	2.000	0.35
30	448201		2.435	0.15			2.000	0.15	000	رد.0
32	44821 I		5.076	0.40	3.461		2.000		1.923	0.80
32	44822 I	·IW	1.846	0.40			1.846	0.40		0.00

L		1		1				1		
34	44823 FV	N .	0.902	0,30	1.884	0.70	0.902	0.30	1.529	0.70
34	44824 H	W	2.620	0.40			2.000	0.40		1 .V W
36	44825 Al	1	4.389	0.50	4,389	0.50	2.000	0.50	2.000	0.50
38			0.927	0.20	0.326	0.70	0.927	0.20	0.326	0.70
38	44827 H	W	0.085	0.50			0.085	0.50		
40	44828 FV		0.468	0.20	0.947	0.70	0.468	0.20	0.947	0.70
40	44829 H	W	1.138	0.50			1.138	0.50		
42	44830 FV		2.910	0.40	1.637	0.80	2.000	0.40	1.182	0.80
42	44831 HV	W	0.363	0.40		i	0.363	0.40		
44	44832 FV		1.408	0.20	1.190	0.60	1.408	0.20	1.190	0.60
44	44833 HV	<i>y</i>	1.081	0.40			1.081	0.40		
46	44834 All		5.974	0.40	5.974	0.40	2.000	0.40	2.000	0.40
48	44835 All		10.528	0.30	10.528	0.30	2.000	0.30	2.000	0.30
50	44836 All		8.543	0.30	8.543	0.30	2.000	0.30	2.000	0.30
52	44837 All		0.709	0.50	0.709	0.50	0.709	0.50	0.709	0.50
54	44838 All		4.073	0,30	4.073	0.30	2.000	0.30	2.000	0.30
56	44839 S V	/ein	0.100	0.20	0.170	0.80	0.100	0.20	0.170	0.80
56	Wa		0.000	0.50			0.000	0.50	7. 11. 5. 41.	
30	44840 N	v can	1.201	0.10			1.201	0.10		]

Table 2: Composite Assay Results

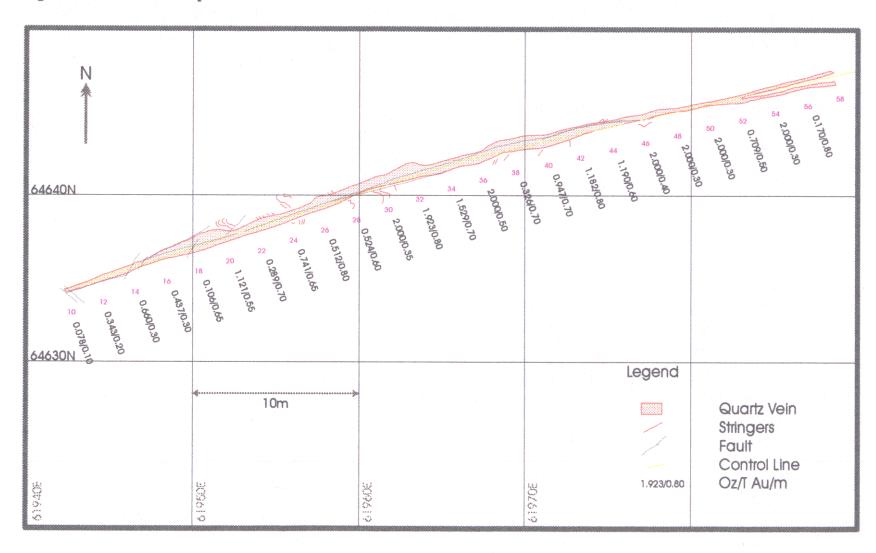
Sample Location	Raw Assays		Cut Assays		Raw Assay Grade*m	Cut Assay Grade*m	
Location	Oz/T Au	Width (m)	Oz/T Au	Width (m)	Products	Products	
10	0.078		0.078				
12	0.343	0.20	0.343	0.20		İ	
14	0.660	0.30	0.660	0.30			
16	0.437	0.30	0.437	0.30			
18	0.106	0.65	0.106	0.65			
20	19.094	0.55	1.121	0.55	10.502	0.617	
22	0.289	0.70	0.289	0.70	0.202	0.202	
24	0.741	0.65	0.741	0.65	0.482	0.482	
26	0.512	0.80	0.512	0.80	0.410	0.410	
28	0.524	0.60	0.524	0.60	0.314	0.314	
30	2.507	0.35	2.000	0,35	0.877	0.700	
32	3.461	0.80	1.923	0.80	2.769	1.538	
34	1.884	0.70	1.529	0.70	1.319	1.071	
36	4.389	0,50	2.000	0.50	2.195	1.000	
38	0.326	0.70	0.326	0.70	0.228	0.228	
40	0.947	0.70	0.947	0.70	0.663	0.663	
42	1.637	0.80	1.182	0.80	1.309	0.945	
44	1.190	0.60	1.190	0.60	0.714	0.714	
46	5.974	0.40	2.000	0.40	2.390	0.800	
48	10.528	0.30	2.000	0.30	3.158	0.600	
50	8.543	0.30	2.000	0.30	2.563	0.600	
52	0.709	0.50	0.709	0.50	0.355	0.355	
54	4.073	0.30	2.000	0.30	1.222	0.600	
56	0.170	0.80	0.170	0.80			

Table 3: Calculation of Average Grade and Width

# Calculation of Average Composite Grade and Width for Bold Cells in Table 2 (20m to 54m)

Sum of Grade Wid Products	th		31.670	11.838
Sum of Sample Wi	dths 10.25			
Average Width		0	.57	
Average Grade			3.090	1.155
Uncut	3.090 Oz/T Au	0.57 m.	over (54-20	) +2 = 36m
Cut	1.155 <u>Oz/T</u> Au	<u>0.57 m.</u>	over (54-20	+2 = 36m

Figure 6: Bear Vein Sample Plan



# **Conclusions and Recommendations**

Current work has outlined a 36m strike length portion of the Bear Vein that warrants further sampling. A bulk sampling program is being undertaken. Indications of a possible additional vein segment to the East should be followed up with additional overburden trenching and vein mapping and sampling.

Respectfully submitted,

Michael J. Glover, B.Sc.

# **Appendices**

# Appendix A: Writer's Certificate

I, Michael J. Glover, B.Sc., of 130 Melvin Cr., Bowser, BC,

do hereby certify that:

I am a geology graduate of Lakehead University, Thunder Bay, Ontario, 1986.

I have practiced as a geologist, with minor interruptions, since 1984 for various companies in Canada and overseas.

This report is based on knowledge gained during the period June 1995-September 1998 while I was employed as a mine geologist at the Table Mountain Property by Cusac Gold Mines Ltd..

I may, at any given time, hold an option to acquire securities in Cusac Gold Mines Ltd.

Cassiar, BC, September 6, 1998.

M. Glover, B.Sc.

# Appendix B: Cost Statement

# Cusac Gold Mines Ltd. 1998 Bear Vein Trenching Program Overburden Trenching and Vein Sampling Initial Period July 25, 1998 to August 16, 1998

Position	Wages	Room	Days	Sub-Total
Manager	250	40	22.0	6380
Geologist	275	40	22.0	6930
Mechanic	225		20.0	4500
Operator	225		22.0	4950

Equipment	Rate	Units	Sub-Total
D-7	110	117.0	12870
235	150	121.0	18150
Trucks	45	69.0	3105
Pumps	50	35.0	1750

Miscellaneous	Rate	Units	Sub-Total
Analyses	25	60.0	1500
Report			900
Office			300
Misc			2000

Total

\$63,335

# Appendix C: References

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