091657 ASSESSMENT REPORT
01 Sep 85
JENNIFER 1 - 10 CLAIM GROUP
WHITEHORSE MINING DISTRICT

Randall S. Rogers M.Sc. P.Geo

WHITEHORSE M.D.

MAP No. 115 B 16

ASSESSMENT REPORT
N. M. E. A. P.
CONFIDENTIAL
OPEN FILE

TYPE OF WORK: GEOLOGICAL

REPORT FILED UNDER	S.J. Hill — DOCUMENT NO. 091657
DATE PERFORMED	July 18, 22, 1984 — DATE FILED: October 23, 1985
LOCATION - LAT.	60°54'N — AREA:
LOCATION - LONG.	138°22'W
CLAIM NO.	JENNIFER 1-10 YA82629-YA82638
VALUE $	
WORK DONE BY	R.S. Rogers (Rogers Exploration Services Ltd.).
WORK DONE FOR	S.J. Hill

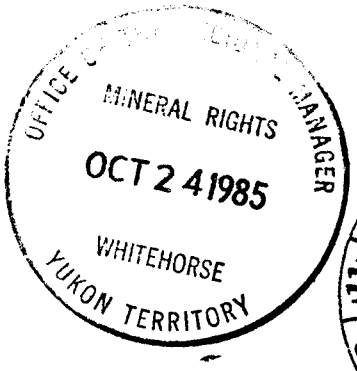
REMARKS

091657

The claims overlie Paleozoic limestones and carbonaceous pelites which are dissected by steep northwesterly-trending faults. Faulting has localized felsic sub-volcanics of Tertiary(?) age. Stockwork quartz veining is evident in carbonate altered felsic volcanics. Sulphide minerals include chalcocite, chalcopyrite, tetrahedrite, pyrite, galena and sphalerite.

Eight grab samples were taken from vein material on the claims. Selected grab samples assayed as high as 1481.1 g/t Ag, 35.14 g/t Au and 22.5% Cu.

YEX 85 p. 204



JENNIFER 1 - 10 CLAIMS

N.T.S. 115B/16

Latitude 60 54'N Longitude 138 22'W

WHITEHORSE MINING DISTRICT

YUKON TERRITORY

ASSESSMENT REPORT

Randall S. Rogers M.Sc., P.Geol,
Rogers Exploration Services Ltd.
Whitehorse, Yukon Territory

01 Sept 85

091657

This report has been examined by
the Geological Evaluation Unit
under Section 53 (4) Yukon Quartz
Mining Act and is allowed as
representation work in the amount
of $ 7200.00 .

D.E. Emond

for Regional Manager, Exploration and
Geological Services for Commissioner
of Yukon Territory.

SUMMARY AND RECOMMENDATIONS

The Jennifer 1 - 10 claims are located in the headwaters of Silver Creek at latitude 60 54'N by longitude 138 22'W in the southwestern Yukon Territory. The property is owned by S.J. Hill of Newboro, Ontario.

Mineralization discovered to date on the property is confined to a spectacular zone of quartz stockworking developed in highly altered acidic subvolcanics of probable Tertiary age capped by 250 feet of castellate weathering limestone and dolomiote of probable Triassic age. The quartz stockworking which includes veins varying in thickness from 6" to 24" carry significant amounts of chalcocite, chalcopyrite, tetrahedrite, pyrite, galena and sphalerite in varied proportion in a zone of pervasive argillic alteration. Discrete vein intersections display vuggy cavities with well developed acicular quartz crystals, and most of the sulphide material exposed to date is well oxidized and displays varying amounts of malachite, azurite, limonite and jarosite in fracture surfaces and pyrite boxwork. Selected samples from the stockworking zone have returned assays up to 43.20 OPT Ag, 0.25 OPT Au and 22.5% Cu.

This property is at a preliminary stage of exploration and consequently no estimate of economic reserves is possible at this writing.

The author conducted geological investigations and general prospecting on the Jennifer property between 20 July 84 and 31 July 84 as documented herein.

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INTRODUCTION

This report summarizes the geological setting, mineralization and exploration history of the Jennifer 1 - 10 mineral claims and tenders recommendations for further investigation of the property. The present study was comissioned by S.J.Hill of Newboro, Ontario. Background material for the study included all field notes and descriptions from the author's investigation of the property, a search of the Yukon Territory archives and assessment report files of the Department of Indian Affairs and Northern Development and a comprehensive literature search. The author has personally examined the property on the 18th and 22nd dyas of July, 1984.

The author is well versed in the geological setting, exploration history and potential for development of the area surrounding the Jennifer claim group having conducted major exploration programs for various interests in this region over the past four years.

PROPERTY

Location and Access

The Jennifer 1 - 10 mineral claims are located at 6500' a.s.l. in the headwaters of Silver Creek at latitude 60° 54'N by longitude 138° 22'W in the southwestern portion of the Yukon Territory (Figure 1). The claims are situated 8 miles south of milepost 1050 on the Alaska Highway, 110 miles west of Whitehorse in an area bound to the north by the Shakwak Trench and to the south by Kluane National Park.

Access is currently by helicopter charter from the settlement of Haines Junction 30 miles to the southwest. Road access to the property could be facilitated with development of a four wheel drive road along the broad valley of Silver Creek from the Alaska Highway to the base of the main showing area. This road would extend approximately 12 miles along the Silver Creek drainage and could be constructed at nominal cost.

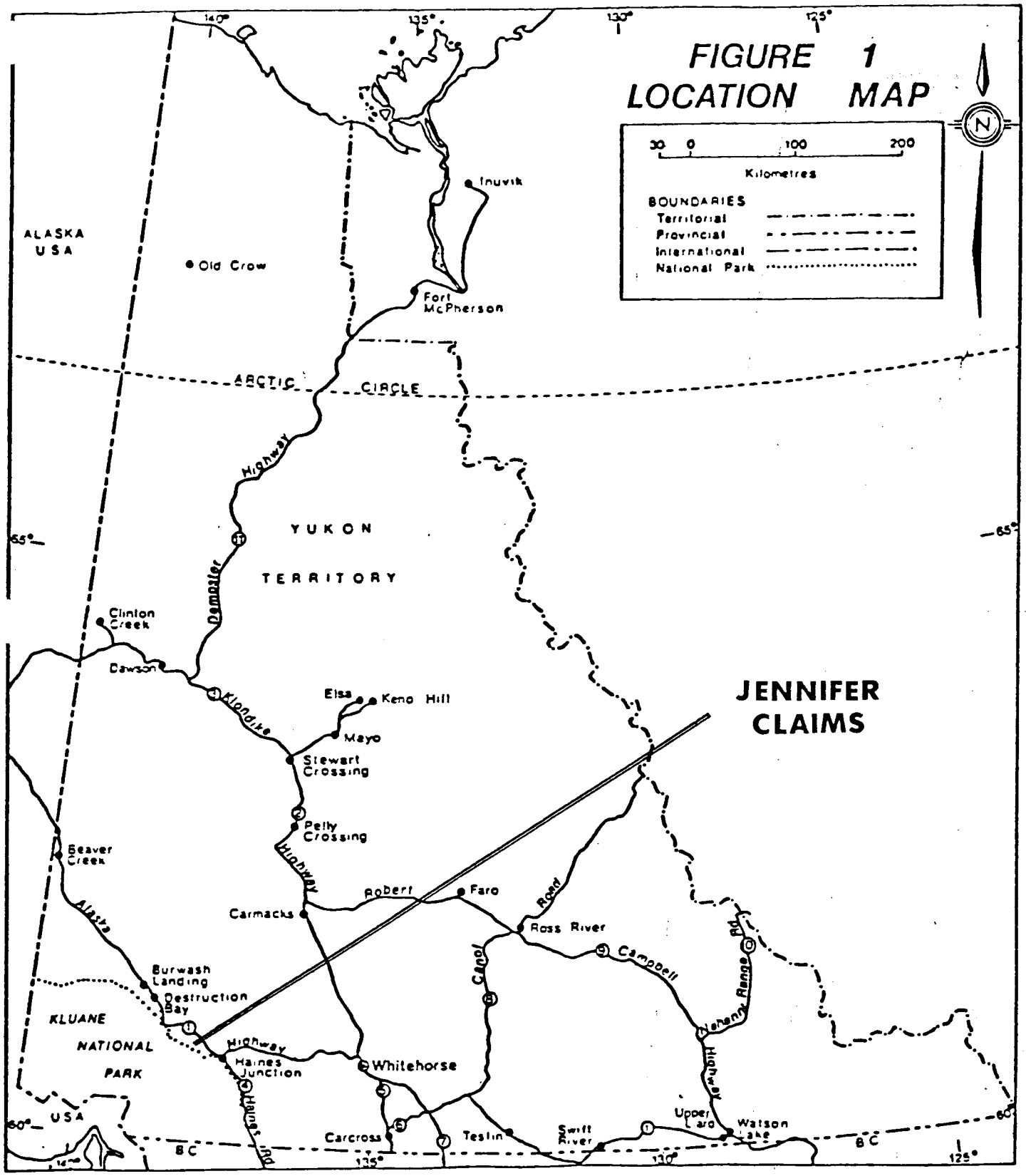


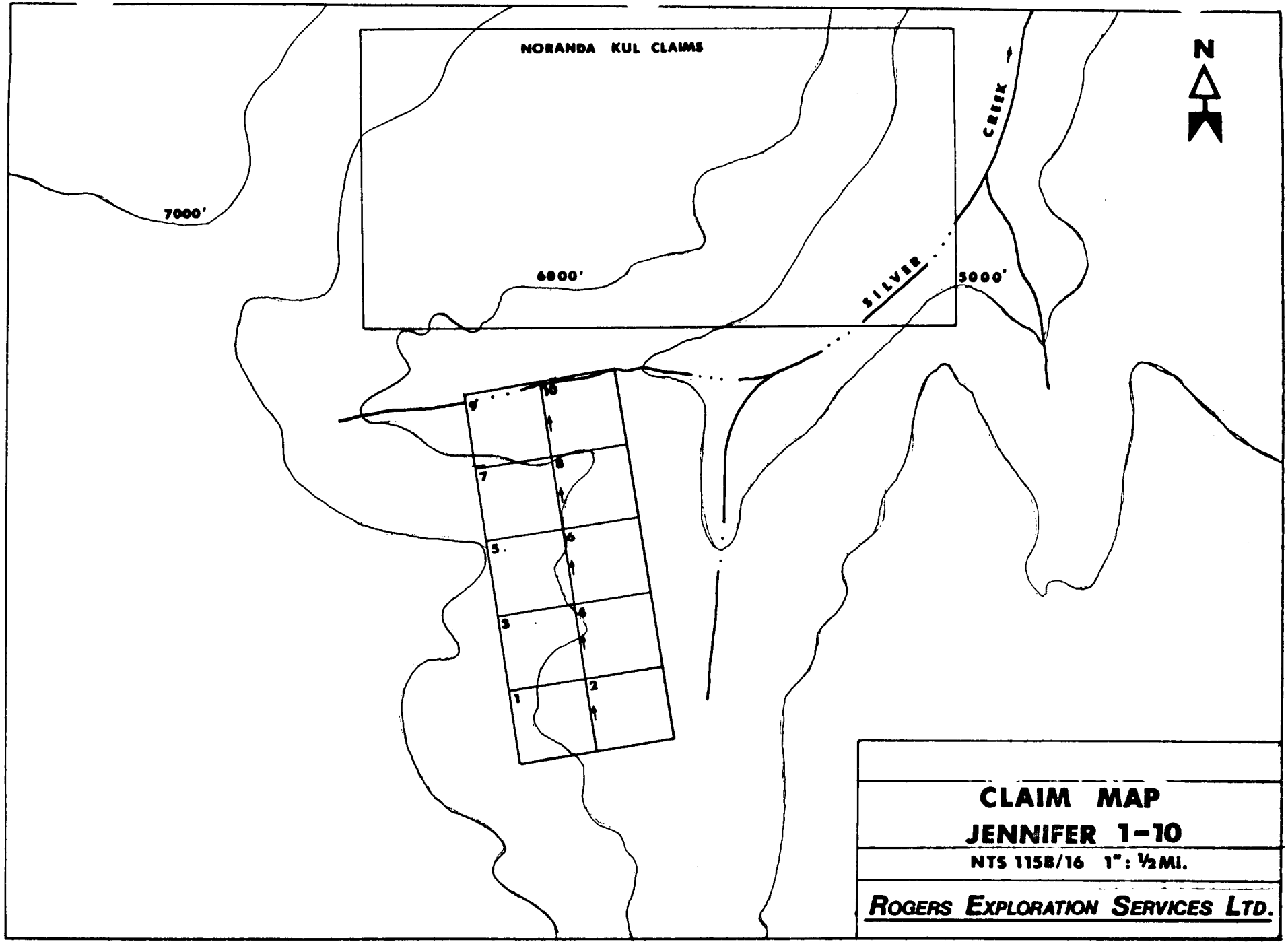
FIGURE 1
LOCATION MAP
30 0 100 200
Kilometres
BOUNDARIES
Territorial
Provincial
International
National Park
N
JENNIFER CLAIMS
ALASKA USA
Old Crow
Inuvik
Fort McPherson
ARCTIC CIRCLE
Dempster Highway
YUKON TERRITORY
Clinton Creek
Dawson
Klondike
Elsa
Keno Hill
Mayo
Stewart Crossing
Pelly Crossing
Beaver Creek
Alaska Highway
Robert Campbell Highway
Faro
Carmacks
Ross River
Canol Road
Campbell Highway
Burwash Landing
Destruction Bay
KLUANE NATIONAL PARK
Haines Junction
Haines Rd
Whitehorse
Carcross
Teslin
Swift River
Upper Liard
Watson Lake
USA
BC
65°
60°
140°
135°
130°
125°

Claims

The property comprises 10 mineral claims located under the Yukon Quartz Mining Act (Figure 2). The claims are contiguous and all posts were located by the author during field investigations and found to be staked in accordance with the requirements of the Yukon Quartz Mining Act. The legal description and disposition of the Jennifer 1 - 10 claims is presented in Table I. No other claims border on the Jennifer claim group at this time; Noranda Exploration Company, Ltd. (NPL) conducted a field program on the nearby Kul 1 - 32 claims (YA79000 et al, expiry 06 Dec 84) one mile north of the Jennifer group in the 1984 field season.

Table I. Claim Data

Claim Name	Record No.	Expiry Date	Owner
Jennifer 1	YA82629	20 Jul 86	S.J. Hill
Jennifer 2	YA82630	20 Jul 86	S.J. Hill
Jennifer 3	YA82631	20 Jul 86	S.J. Hill
Jennifer 4	YA82632	20 Jul 86	S.J. Hill
Jennifer 5	YA82633	20 Jul 86	S.J. Hill
Jennifer 6	YA82634	20 Jul 86	S.J. Hill
Jennifer 7	YA82635	20 Jul 86	S.J. Hill
Jennifer 8	YA82636	20 Jul 86	S.J. Hill
Jennifer 9	YA82637	20 Jul 86	S.J. Hill
Jennifer 10	YA82638	20 Jul 86	S.J. Hill


NORANDA KUL CLAIMS
CREEK
N
7000'
6000'
5000'
SILVER
10
9
8
7
6
5
4
3
2
1
CLAIM MAP
JENNIFER 1-10
NTS 115B/16 1" : ½MI.
ROGERS EXPLORATION SERVICES LTD.

Physiography and Climate

The Jennifer property is situated in the Western System of the Canadian Cordillera as described by Bostock (1948). The St. Elias Mountains of southwestern Yukon locally include the Kluane Ranges and Duke Depression. The property lies on the northern boundary of the Kluane Ranges, in a narrow front ridge of the St. Elias Mountains rising steeply above the Shakwak Valley. The slopes of the Kluane Ranges are steep and uniform with long straight talus screes; in the area of the property, the Kluane Ranges comprise a series of high ridges parallel to the main front connected by smoothly undulating saddles. The Kluane Ranges area is dissected by major transverse V-shaped valleys containing the Slims and Duke Rivers and rises to elevations of 8500 feet near the Jennifer group.

The claim group is located on the eastern flank of a major mountain dividing the west and south forks of Silver Creek on the side of a large terminal moraine which currently occupies the valley of the south fork.

During Pliestocene time great masses of ice accumulated in the Icefield Ranges of the St. Elias Mountains and moved northeasterly into the Shakwak Valley and Duke Depression. The average ice level was at approximately 6000 feet

elevation throughout the St. Elias Mountains. Three progressively less extensive ice sheets have been identified with the upper limit of successive sheets 1000 to 1500 feet below that of the preceding sheet, so that previous erosion surfaces were largely obliterated. With the retreat of the last sheet at the close of the Glacial Epoch, meltwaters formed several large basin lakes in the area. Recent glacial activity has been restricted to alpine glaciation in the high peaks of the St. Elias Mountains south of the property.

There is no timber cover on the property, and a notable paucity of any kind of vegetation. Game is restricted to seasonal herds of mountain sheep and goat and the property lies wholly within the confines of the Kluane Game Sanctuary.

Adequate water for development purposes is available in the south fork of Silver Creek and tributaries draining the property.

The property is shielded from the Pacific Ocean by the bulwark of the St.Elias Mountains and has therefore a dry continental climate despite the proximity of tidewater. Summers are short and hot with temperatures up to 35°C, while winters are severe with short daylight hours and temperatures ranging to -60°C. The effective exploration season extends from late May to early October.

HISTORY

In 1892 Jack Dalton and E.J. Glave made an overland trip with four packhorses from the Chilkat River to Klaune Lake over a footpath that the coastal Chilkat Indians had used for over two centuries as a trading route to the tribes of central Yukon. Dalton established trading posts at Pleasant Camp (now the Canada Customs post on the Haines Highway) and Dalton Post on the Tatshenshini River. Over the next few years, Dalton cleared and improved trail as far north as the Nordenskold River near Carmacks, and the route became known as the Dalton Trail. Klondike prospectors used the trail extensively in the 1898 - 1900 period en route to the gold fields of the Dawson area, but prospecting in the Kluane area peripheral to the Jennifer claim group was not established until 1903 when Silver City was settled at the eastern end of Kluane Lake and became the center of mining activity in the region. Silver City boasted a post office, N.W.M.P. detachment and Mining Recorder; a wagon road led east through Champagne to Whitehorse. Placer gold prospecting flourished in the Silver Creek area up to the 1940's with several major strikes made on Silver Creek and neighbouring streams. The onset of World War II brought on the building of the Alaska Highway through the region in 1942, and the improved access precipitated a hardrock exploration boom in the post war period.

No history of previous development on the Jennifer property is known.

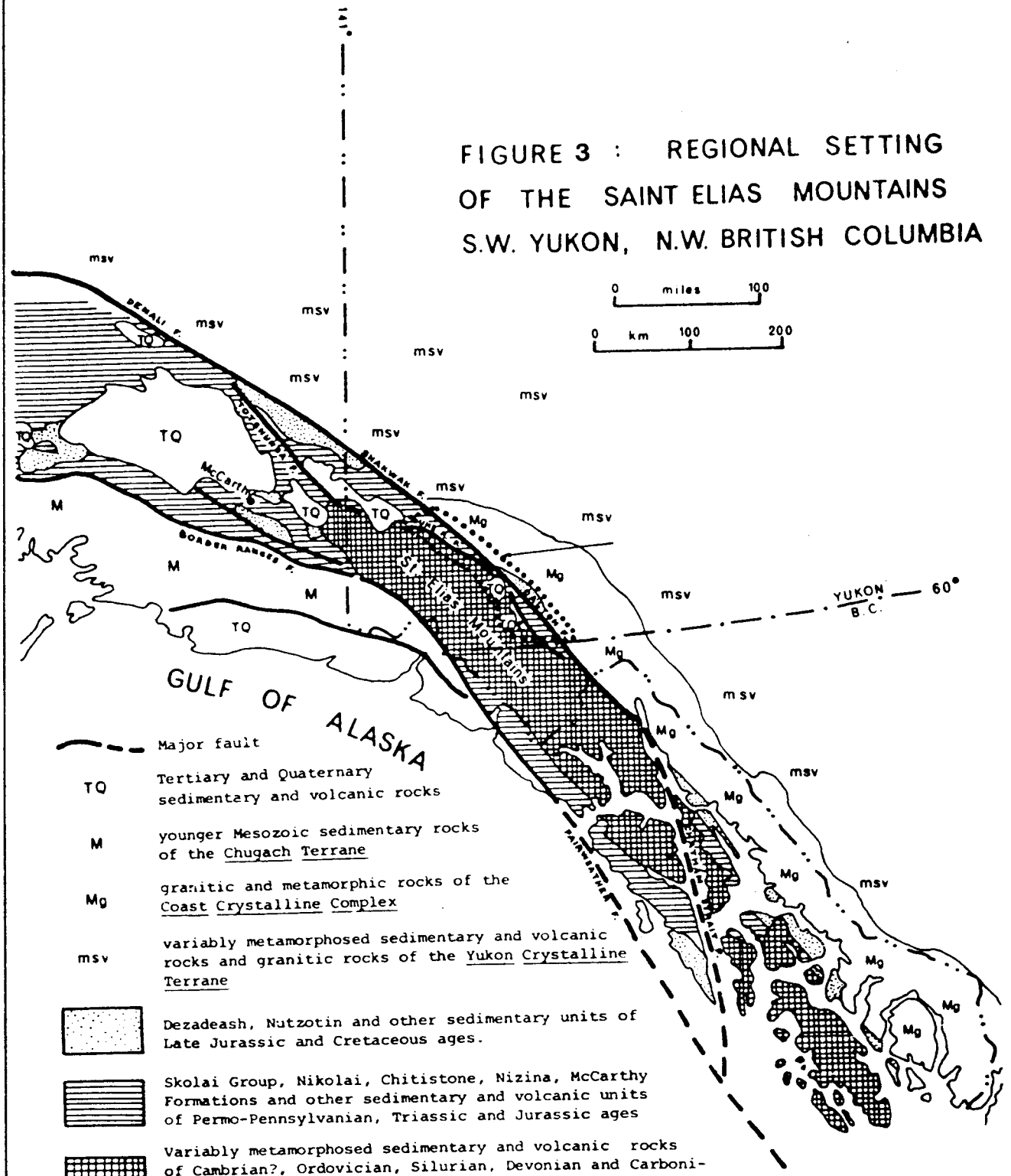
REGIONAL GEOLOGY

The St. Elias Mountains of southwestern Yukon are dominated by a subparallel system of major regional faults, most of which display dextral strike-slip displacements ranging up to 200 kilometers in extent. These faults separate the region into discrete geological blocks; within each block the geology is uniform and more or less continuous, between adjacent blocks correlation of lithology is difficult or impossible.

Regional geology of the St. Elias area is seen in Figure 3. East of the St. Elias Mountains is the Yukon Crystalline Terrane (msv) which is a collage of Proterozoic to late Paleozoic crystalline basement punctured by Mesozoic granites and Cenozoic subvolcanic-volcanic rocks. South and east of the St. Elias Mountaines, a narrow, northwesterly trending tongue of the Coast Crystalline Complex (Mg) is dominated by rocks of granitic composition and Mesozoic age.

The St. Elias Mountains are bordered on the east by the Shakwak-Denali-Dalton Fault System. West of the fault, three distinct terranes make up the St. Elias: the easternmost Taku-Skolai Terrane (Wrangellia) of mainly Permo-Pennsylvanian strata, the central Alexander Terrane of Cambrian to Carboniferous age and the southwestern Chugach Terrane of Cretaceous to Jurassic age.

FIGURE 3 : REGIONAL SETTING OF THE SAINT ELIAS MOUNTAINS S.W. YUKON, N.W. BRITISH COLUMBIA



The Chugach Terrane consists primarily of Cretaceous greywacke, siltstone, argillite and volcanics of the Yakutat or Valdez Groups, and includes a melange complex with blocks of up to seven kilometers width. Cenozoic sedimentary rocks cap this sequence which displays varying grades of locally restricted amphibolitic metamorphism. In the area of the Jennifer property, the Alexander Terrane is confined to an area southwest of the claim group.

The Alexander Terrane underlies the Icefield Ranges of the St. Elias Mountains and includes Cambro-Ordovician volcanics, Silurian to Pennsylvanian carbonates, pelite and volcanics metamorphosed to greenschist facies and cut by Permian and younger granitics. The southern portions of the Jennifer claim group may include rocks of the Alexander Terrane; contacts and fault traces are currently obscured in talus and precipitous cliffs.

The Taku-Skolai Terrane (Wrangellia) fronts on the northern side of Kluane National Park and extends over portions of the Dezadeash, Kluane and St. Elias mapsheets. It includes Pennsylvanian to Permian volcanics, Permian sedimentary rocks, mid-Triassic to lower Cretaceous pelites and sandstones fault bound to the northwest by the Shakwak-Denali-Dalton Fault and by the Duke River Fault to the southwest.

Only the Tertiary cover is common to all three fault blocks. These include the continental clastic rocks of the Amphitheatre

Formation of Paleocene to Miocene age and the Wrangell continental volcanics.

Intrusive rocks include sills, dikes and stocks of pre-Permian to Miocene sparsely distribute in all three fault blocks. These include a Permian gabbro, Permo-Triassic gabbro and ultramafite, early Cretaceous gabbro and clinopyroxenite, Mesozoic granitic plutons, Oligocene quartz latite and Tertiary Wrangellian diorites.

The Taku-Skolai Terrane contains most of the known lode mineral occurrences in the Kluane area, and appears to comprise the entire northern portion of the Jennifer group, including the showing area. This part of the Taku-Skolai has been designated Wrangellia Two (W2) by Campbell of the G.S.C.

Wrangellia W2 includes that area bounded by the Duke River Fault and Shakwak-Denali-Dalton Fault System, and may have a basement of pre-lower Permian hornblende-pyroxene gabbro, gabbro pegmatite and diabase and/or oceanic crust. It is locally intruded by Cretaceous, Lower and Upper Tertiary acid subvolcanics, sills and dikes of Permo-Triassic gabbro and ultramafics, Cretaceous-Tertiary gabbro, diabase and quartz diorite and Tertiary gabbro and basalt. Cover includes Jura-Cretaceous flysch and local basic volcanics of the Gravina-Nutzotin belt, lower Tertiary continental clastics and Neogene Wrangellian lava.

LOCAL GEOLOGY

The geology of the property area is fairly complex and not well understood at this writing. On a regional scale, the Jennifer property is located in the W2 Wrangellian Terrane bounded to the north by the Shakwak-Denali-Dalton fault system and to the south by the Duke River Fault.

The claims appear to comprise a fault complicated assemblage of Triassic Chitistone and McCarthy limestone and pelitic carbonates and shales of indeterminate age, disrupted and variously juxtaposed by several high angle northwesterly trending faults with inferred dextral strike slip. Subordinate faulting is expected but not mapped to date.

The faulting has localized several high level subvolcanic acid intrusions of probable Tertiary age; where these have encountered favorable stratigraphy, epithermal type precious metal systems have developed. Several such other sytems are known peripheral to the present claim group and should be explored in the near future.

The subvolcanics are highly altered, with local bleaching and carbonitization and have developed spectacular mineralized quartz stockworking.

MINERALIZATION

Gold, silver and copper mineralization are developed in a zone of intense quartz stockworking in the Tertiary (?) acid subvolcanics capped by Triassic limestone and dolomite. The showing is exposed on the west bank of Silver Creek at an elevation of 6,500 feet a.s.l. in a glaciated knob 1200 feet in length. The stockwork is exposed on the south, east and north by topography, and is open to the west under a castellate cover of limestone some 250 feet thick (Figures 4,5 and 6). The stockwork area is approximately 120 feet thick, 200 feet wide and 1200 feet long as currently exposed.

Mineralization, including chalcocite, chalcopyrite, tetrahedrite, pyrite, galena and sphalerite in a white quartz mesh stockworking appears to be of a classic epithermal type. Vein junctions are vuggy with large, well developed quartz crystals and open space filling.

It is probable that Tertiary subvolcanics were emplaced along a zone of structural weakness or fault preparation and that the overlying carbonates formed a self-sealing cap to the epithermal system.

Eight grab samples from the stockworking zone are tabulated in assays seen in Table II. A sample from an earlier investigation by the author returned assays of 0.25 OPT Au and 25.0 OPT Ag.

Figure 4. Showing from South

Figure 6. Showing from East.

Chemex Labs Ltd.

Analytical Chemists • Geochemists • Registered Assayers

212 Brooksbank Ave.
North Vancouver, B.C.
Canada V7J 2C1

Telephone:(604) 984-0221
Telex: 043-52597

CERTIFICATE OF ASSAY

TO : ROGERS EXPLORATION SERVICES LTD.,

P.O. BOX 4488
WHITEHORSE, YUKON
Y1A 2R8

CERT. # : A8414029-001-A
INVOICE # : I8414029
DATE : 2-AUG-84
P.O. # : NONE

Sample description	Prep code	Cu %	Ni %	Co %	Ag oz/T RUSH FA	Au oz/T RUSH FA	
13153 D	236	3.67	<0.01	0.002	5.12	0.010	--
13154 D	236	22.50	<0.01	0.002	43.20	0.018	--
13155 D	236	4.74	<0.01	0.002	11.24	0.010	--
13156 D	236	0.31	<0.01	<0.001	0.54	<0.003	--
13157 D	236	9.14	<0.01	0.003	13.90	0.010	--
13158 D	236	4.30	<0.01	0.002	5.76	0.006	--
13159 D	236	0.15	<0.01	0.001	0.54	0.020	--
13160 D	236	0.02	<0.01	0.002	0.10	0.012	--

TABLE III : ASSAY SUMMARY

Sample No.	Description
13153 D	Quartz with malachite, azurite, chalcocite and pyrite; slightly oxidized and brecciated.
13154 D	Quartz and quartz carbonate breccia with malachite, chalcocite and chalcopyrite.
13155 D	Quartz with azurite, chalcocite and extensive limonitic alteration; mildly calcareous.
13156 D	Quartz with limonite and jarosite in pyrite boxwork; minor chalcocite and azurite.
13157 D	Quartz with jarosite and limonite; very pyritic with minor chalcocite and azurite.
13158 D	Quartz with jarosite and limonite; very pyritic with minor malachite staining.
13159 D	Quartz and quartz-carbonate breccia with minor rusty pyrite and limonitic boxwork.
13160 D	Quartz-carbonate breccia with minor jarosite and limonite.

All samples collected from Jennifer 1 - 10 stockwork system on field examination of 22nd July 1984.

R.S. Rogers M.Sc., Registered Assayer, Province of British Columbia

CONCLUSIONS

The Jennifer 1 - 10 mineral claims are an epithermal type Cu-Au-Ag prospect with an excellent probability of developing substantial reserves of mineralization. An aggressive program of exploration should be conducted in the 1985 field season to determine the continuation of the present mineralized zone under the limestone cap to the west. There is ample room at this end of the showing to develop significant reserves.

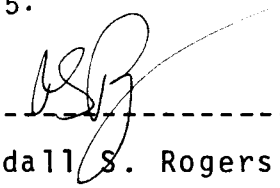
Preliminary grades from grab samples collected in the 1984 season suggest that this property has a high potential of success, and as such is a viable exploration target.

CERTIFICATE

I, Randall Stewart Rogers, of the City of Whitehorse in the Yukon Territory, DO HEREBY CERTIFY:

1. THAT I am a consulting professional geologist with offices situate at 32 Marion Crescent, Whitehorse, Yukon Territory;
2. THAT I am a Professional Geologist (P.Geol.) licenced by the Association of Professional Engineers, Geologists and Geophysicists of Alberta;
3. THAT I am a graduate of the University of British Columbia with the degree of Bachelor of Science in Geology;
4. THAT I am a graduate of Queen's University at Kingston, Ontario with the degree of Master of Science in Mineral Exploration;
5. THAT I a member of the Canadian Institute of Mining and Metallurgy;
6. THAT I am a member of the Geological Association of Canada;
7. THAT I have personally examined the property now covered by the Jennifer 1 - 10 claims on the 18th and 22nd days of September, 1984;
8. THAT I have no interest, direct or indirect, in the Jennifer 1 - 10 claim group and do not expect to receive or acquire any;
9. THAT I consent to the use of this report by S.J.Hill for the purposes of vending, optioning or otherwise disposing of full or partial interest in the property.

DATED at the City of Vancouver, British Columbia this 1st day of September, A.D. 1985.



Randall S. Rogers M.Sc., P.Geol.

STATEMENT OF COST

Jennifer Claim Group

20 July 84 to 31 July 84

1.	Wages:	Professional geologist 3 days at $ 340.00		1020.00
2.	Supplies:			150.00
3.	Transport:	Truck costs	150.00	
		Helicopter	350.00	
		Subtotal	500.00	500.00
4.	Analytical:	Chemex Labs Ltd.		275.00
			TOTAL	$ 1945.00