

MAP NO.:
116 C 01, 02
115 N /16

SUMMARY REPORT X
PROSPECTUS
CONFIDENTIAL X
OPEN FILE

DOCUMENT NO: 093033
MINING DISTRICT: Dawson
TYPE OF WORK: Auger Drilling

REPORT FILED UNDER: Sixty Mile Placers Ltd.

DATE PERFORMED: July 17, to August 24, 1991

DATE FILED: January 24, 1992

LOCATION: LAT.: 64°02'N
LONG.: 140°39'W

AREA: Sixty Mile River Area
VALUE \$: 35,110.33

CLAIM NAME & NO.:
EP 1 - 32, YB31367 - YB31398
EP 65 - 96, YB31431 - YB31462
EP 97 - 148 YB31828 - YB31879
ET 1 - 56, YB31764 - YB31819

WORK DONE BY: Greg W. Hakonson

WORK DONE FOR: Sixty Mile Placers Ltd.

DATE TO GOOD STANDING:

REMARKS: # 116 C - 115 N - Sixty Mile River Area
The company carried out auger drilling on their placer ground in an attempt to correlate placer gold production to source rock. Bedrock was sampled at bottom of each placer drill hole. The results were inconclusive because not enough areas were sampled. Company plans to continue with their drilling in order to identify potential areas of lode gold occurrence.

**SIXTY MILE PLACERS LTD.
HARD ROCK EXPLORATION REPORT**

STATEMENT OF QUALIFICATIONS

GREG W. HAKONSON

Born: 1954, Dawson City, Yukon

Education:

Grades 1 - 12, Dawson City, Yukon
Geology 101, by correspondence from University of Alaska

Mining Experience:

Assisted in hard rock exploration during the summers of 1966 - 1969, on the Spotted Fawn Creek (Tombstone) and Mosquito Creek (Sixty Mile).

Purchased an active placer operation on Dominion Creek in 1974. Moved the Operation to the Sixty Mile in 1975. Assisted Cogasa Mining Corp. during the years 1975-76-77 (concurrent with my placer activities), to:

- > assess placer leases;
- > stake them into claims;
- > lay out their drill program;
- > prepare maps and reports for their mining plans; and,
- > to do a preliminary study of the Forty Mile River to recommend its mining potential. (This program covered a two month period with four people, including myself, digging shafts, pits, and spot panning.)

In 1978, I purchased another existing placer operation on Eldorado Creek and moved my activities to this location. I established the company, Eldorado Placers and operated on Eldorado Creek for nine years until the resource was depleted, at which point (1987), I moved back to the Sixty Mile area.

My eighteen years of continuous placer mining experience coupled with Geology 101, five years of information gleaned from our placer mining results on the Sixty Mile, and three years of drilling the Sixty Mile Placers, all of which I have logged and mapped, have assisted me in arriving at the conclusions described in this report.



Greg W. Hakonson
Owner/Operator
ELDORADO PLACERS LTD.

093033

**SIXTY MILE PLACERS LTD.
HARD ROCK EXPLORATION REPORT**

SCHEDULE OF EXPENSES FOR HARDROCK REPORT - 1991

WAGES FOR JULY 17 TO AUGUST 24 (1 MONTH + 7/27)

Dale Israel

Gross wages - July 17-31 (5500/mo x 13/27)	\$ 2,648.15
Gross wages - August 1-24 (6125/mo x 21/27)	4,763.89
CPP (max 632.5/39509.29[tot.wages] x g.w.)	118.66
UI (82.51/mo x 34/27 x 1.4)	145.46
Vacation pay (4% x gross wages)	296.48
Bonus (440.32 x 1 + 7/26)	558.87
WCB (2.5% of gross + vac + bonus)	<u>206.68</u>

\$ 8,738.19

Greg Brunner

Gross wages - July 17-31 (4500/mo x 13/27)	\$ 2,166.67
Gross wages - August 1-24 (4075/mo x 21/27)	3,791.67
CPP (total of 500.25/23250.1 x gross wages)	128.16
UI (82.51/mo x 34/27 x 1.4)	145.46
Vacation pay (4% x gross wages)	238.33
Bonus (440.32 x 1 + 7/26)	558.87
WCB (2.5% of gross + vac + bonus)	<u>168.89</u>

7,198.04

Drill bit maintenance - 4 days

Gross wages - (5500/27 x 4 days)	\$ 834.81
CPP (approx 2.15%)	17.52
UI (82.51/mo x 4/27 x 1.4)	17.11
Vacation pay (4% x gross wages)	32.59
Bonus (440.32 x 4/26)	67.74
WCB (2.5% of gross + vac + bonus)	<u>22.88</u>

972.66

TOTAL WAGES & BENEFITS

\$16,908.89

OTHER CHARGES

Nodwell rental

34 days x 8 hrs/day x \$50/hr	\$13,600.00
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GH preparation of report

80 hrs x \$45/hr	3,600.00
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Typing of report

526.44

Fuel

gasoline - 200 gal x 4.544 1/gal x \$.445/1.	404.45
diesel - 45 gal x 4.544 1/gal x \$.345/1.	<u>70.55</u>

TOTAL OTHER CHARGES

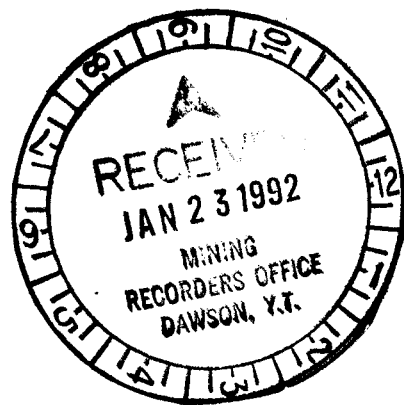
18,201.44

TOTAL CHARGES

\$35,110.33



Hard Rock Exploration Report
SIXTY MILE PLACERS LTD.
Sixty Mile River Property
Yukon Territory
Canada



093033

AUGER DRILL REPORT

PROPERTY: Dawson Mining District

NTS MAP SHEETS: 115-N-16 116-C-1 116-C-2

CLAIMS WORKED:

			<u>Block#</u>
YB31381,82,83,84	91HR EP-15,16,17,18	64°02'N 140°39'W	1 - blue
YB31445,46,54,56	91HR EP-79,80,88,90	64°02'N 140°21'W	2 - orange
YB31828,29,44,45, 74,75,76,77	91HR EP-97,98,113,114 143,144,145,146	63°58'N 140°12'W	3 - green
YB31790,91,92,93, 804,805	91HR ET-27,28,29,30, 41,42	63°55'N 140°17'W	4 - yellow

OWNERS OF PROPERTY: Sixty Mile Placers Ltd.
P.O. Box 130
Dawson City, Yukon Y0B 1G0

TYPE OF WORK: Auger Drilling

DATES WORK WAS DONE: July 17, 1991 - August 24, 1991

AUTHOR OF REPORT: Greg W. Hakonson
(Eldorado Placers Ltd.)

This report covers the assessment work applied to the following quartz claims:

<u>CLAIM</u>	<u>GRANT</u>	<u>ANNIVERSARY</u>	<u>BLOCK #</u>
EP 1-32	YB 31367-98	August 1	1 - blue
EP 65-96	YB 31431-62	August 1	2 - orange
EP 97-148	YB 31828-79	August 22	3 - green
ET 1-56	YB 31764-819	August 22	4 - yellow

located in the Sixty Mile area of Yukon - owner Sixty Mile Placers Ltd.

Approximate centre block #1	64°02'N	140°39'W
Approximate centre block #2	64°02'N	140°21'W
Approximate centre block #3	63°58'N	140°12'W
Approximate centre block #4	63°55'	140°17'W

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1 INTRODUCTION

In 1989, Sixty Mile Placers and Eldorado Placers Ltd. discussed the potential of lode gold being found in the Sixty Mile area. Both parties were in agreement that a strong potential existed, and that some concentrated effort should be made to explore the possibilities and to possibly develop a hard rock exploration program. The job was left to Eldorado Placers Ltd. the active placer operation on Sixty Mile Placers' property.

Eldorado Placers Ltd. had invested a considerable sum of money in a drill and a nodwell and had trained one of its personnel in drilling placers. Utilizing the equipment on hand and the experience of the driller to carry out some form of hard rock exploration program was therefore a logical step.

In 1990, Sixty Mile Placers staked hard rock over a fairly large portion of its placer deposit and engaged Eldorado Placers to develop and carry out a preliminary hard rock exploration program. This report covers the drilling carried out by Eldorado Placers Ltd. on placers and hard rock, it provides the reasoning behind the conclusions that were arrived at regarding lode gold occurrences in the area, and details Sixty Mile Placers 1991 hard rock exploration program as well as outlining the company's future aspirations regarding hard rock.

This report was completed by Greg Hakonson of Eldorado Placers Ltd., at the request of Sixty Mile Placers.

2 LOCATION

The area covered by this report is located in West Central Yukon Territory, Canada, at longitude 140° and latitude 64°. Quartz map numbers 115N-16, 116C-1, and 116C-2.

The Sixty Mile River heads in Alaska, and enters Canada at latitude 63°53' and flows east and then south to its confluence with the Yukon River about 50 miles upstream from Dawson City.

The hard rock claims covered by this report are the E.P. claims 1-32, 65-168, and claims E.T. 1-56. Claims E.P. 1-32 are located on the Sixty Mile Valley floor commencing approximately 1.5 miles above Five Mile Creek down stream to just above Twelve Mile Creek. Claims E.P. 65-168, also located on the valley floor of the Sixty Mile, commence approximately 2 miles above the California Creek and continue down stream to the mouth of Enchantment Creek. Claims E.T. 1-56 are located on the valley floor of Enchantment Creek and commence from the mouth of this creek and continue approximately 7 miles up stream.

3 BOTANY

The vegetation of the area is typical of the Boreal Forest Region near its northern limit. The Sixty Mile Valley is sparsely forested. Several burns are evident. The timberline is at about 3,500 feet. Only a few principal species attain the dimensions of trees but there are abundant shrubs. The trees are: the spruces, white (*Picea glauca*) and black (*Picea mariana*), aspen poplar (*Populus tremuloides*), balsam poplar (*Populus balsamifera*), and the birches, the white birch (*Betula papyrifera*) and Alaska birch (*Betula neoalaskana*).

Spruce is the most widely distributed tree. It grows at all elevations from the river to timberline. The best stands occur in the valley flats and on protected slopes. Generally the size is less than 12 inches at 3 feet above ground but the occasional individual may reach 18 inches.

The poplars are found on the valley floor and the hillsides. Best growth is attained on the alluvial flats of the main valley. Maximum size is generally less than 12 inches. Birch is relatively rare, and occupies the same habitat.

The shrubs include several species of willow, alder and birch. The shrubs are abundant throughout the valley. Willow and birch are dominant but alder is also common, particularly near the river. Undergrowth is often dense in the valley.

4 GEOLOGY

Most of the area between the international boundary and the Yukon River along the course of the Sixty Mile River is underlain by metamorphic rocks of the Yukon group. The rocks in this group are of uncertain age and of variable composition. The term Yukon group is a generalized term used by geologists to refer to four units of metamorphic rocks which are recognized by their relationships to be older than surrounding rocks, and are probably Pre-Cambrian or lower Palaeozoic in age. These rocks generally exhibit a schistoid or gneissoid texture. The structure and mineralogy are variable, making correlation with original unmetamorphosed rock types difficult.

Rocks assigned to Unit A by the Geologic Survey of Canada consist of low-grade metamorphosed sedimentary rocks. They are generally called the "Nasina series" as originally designated by McConnell in 1905. The rocks are principally quartzite, quartz-mica schist, and limestone. They underlie much of the Dawson map-area. Near the international boundary in the Sixty Mile region, the metamorphic grade is somewhat higher and often contains mappable bands of marble and quartzite (L.H. Green, mem. 364, 1972).

Unit B is the Klondike series (McConnell 1905) which applies to sericite and chlorite schist together with associated gneiss which forms much of the bedrock of the Klondike goldfield. Rocks of this series are thought to be derived from igneous rocks, chiefly volcanic in origin. This is in contrast to the Nasina series which

are thought to be generally derived from sedimentary rocks. In the Sixty Mile region Cockfield (1921) has mapped rocks assignable to both the Klondike and Nasina series (see map).

Contacts between Units A and B are well exposed in the valley of Moose Creek just north of Sixty Mile. The relationships are ambiguous showing distinct characteristics.

The Geological Survey of Canada has made two age dates of the Klondike schist using chemical means (Lowdon 1961, Leach 1963). The ages given were 138 and 175 million years.

Unit C contains much greenstone and related rock types as well as rocks lithologically similar to those included in both Units A and B. The boundaries of this unit are decided solely on the prevalence of greenstone and should not be considered definite. Cockfield (1921) mapped small areas of what are probably Unit C rocks in the Sixty Mile area.

The main rock types included in Unit C are a dense greenstone and a dark green gneiss which appears to have developed from the greenstone, particularly near granitic rocks (Unit 21) along the Yukon River. Many of the greenstones probably originated through the alteration of sills with an original composition close to gabbro or diorite, and volcanic rocks both as flows and tuffaceous sediments.

Evidence concerning the age of rocks assigned to Unit C is indirect. It appears to be interbedded with Units A and B and is presumably of similar age.

Unit D consists of gneissic rocks near granite or granodiorite in composition. Both Mertie (1937) and Cockfield (1921) considered the gneissic rocks to be intrusive into the metamorphic sedimentary rocks. Green (1972) indicates that they appear to be produced from sedimentary rocks. Age determinations between 202 and 178 million years have been made for rocks of this unit. This age places the unit within the same metamorphic time frames as Units A, B and C.

The rocks of Unit D are commonly called Pelly gneiss. These rocks are more resistant than other metamorphic rocks of the area. This property accounts for the pronounced bedrock ridges which occur in the valley of the Sixty Mile River near and below California Creek.

A much younger rock unit forms the bedrock of most of the Sixty Mile goldfield. This rock unit, termed Unit 24 by L.H. Green (1972) and variously called the andesite, volcano rock, or the blocky bedrock by miners in the district, is generally thought to be Tertiary Age. It is much younger than the surrounding metamorphic rock units and reflects a different geologic event.

The rock consists of volcanic rocks and associated sediments. The dominant rock is andesite. Individual flows can seldom be differentiated but volcanic texture is sometimes preserved. Conglomerate units and finer sediments are a minor part of

the unit. Good exposures of Unit 24 are to be seen along the roadcuts near Sixty Mile.

Any discussion of rocks in the Dawson region seems to revolve around the presence or absence of gold. Reports from both miners and geologists must be considered since one essentially represents the practical and one the theoretical situation. Gold values are well proven in the vicinity of Miller and Glacier Creeks and the adjacent parts of the Sixty Mile because of the mining activities. Geologists (Cockfield 1921, Green 1972) point out that the geologic environment is identical on other creeks of the region both in the bedrock and the alluvial gravels.

Variables such as the amount and type of volcanic rock or metamorphic rocks present influence initial gold content. Placer development and preservation are variables influencing the concentration of gold where it is present. Reconcentration where placers have been formed is sometimes associated with stream activity but also degradation of the placer is known to occur.

Unit A, the Nasina Series, forms the bedrock of much of the Klondike goldfield. Of course, this is also true of the Klondike Schist Series, Unit B. The Pelly gneiss, Unit D, is not as well proven as a gold bearing unit but it has potential, due to its composition. The volcanic rocks of Unit 24 and the contact zones have shown significant gold values in overlying placers.

The heavy mineral concentrates, of which gold is a part, give some indication of the source of the assemblage. In the case of Sixty Mile the concentrate contains oxide,

silicate and sulphide minerals and small concentrations of others such as tungsten minerals. The concentrates contain: magnetite, hematite, ilmenite, zircon, garnet, galena, cinnabar, arsenopyrite, pyrite, scheelite. Cinnabar is commonly associated with Tertiary volcanics in other areas, garnet is a metamorphic mineral; therefore no one rock unit can be considered an exclusive host for the gold. Cinnabar was noted at Miller Creek near the mouth by Cockfield. He comments that the grains ranged from less than a millimetre to more than a centimetre and show only slight wear.

GEOMORPHOLOGY

The topography is dominated by the two main features in the region, the uplands and valleys. The valley of the Sixty Mile River lies within the physiographic province known as the Yukon Plateau. This plateau extends from the mountains of the coastal system on the west to the Rocky Mountain system on the east.

This plateau represents a region extensively planated during a long period of crustal stability. The period of stability was terminated by a regional uplift. As a result, the streams became rejuvenated and renewed, cutting into the upland surface producing the broad valleys. Uplift probably took place over a considerable length of time at a slow rate, thereby allowing the maintenance of gentle topography.

The long branching ridges characteristic of the region generally are between 4000' and 4500'. Higher elevations occur, generally as mountain domes, crags and peaks

standing as remnants above the plateau. The drainage is by irregular dendritic streams. The divide between Sixty Mile River and Forty Mile River is a long ridge which Highway #3 now occupies. The divide on the south is another such ridge. The typical grade of the Sixty Mile over its entire length is 20 to 25 feet per mile. The side creeks are considerably steeper, averaging 50 to 65 feet per mile. The profile of the valley is very broad and gentle. This sort of characteristic is in contrast to much of the Yukon where glacial topography is present with its smoothed rounded, scoured U-shaped valleys. The Sixty Mile has been spared from glaciation in all but the highest regions.

The Sixty Mile River occupies a broad valley which is terraced by a conspicuous bench. This bench is most noticeable along the north bank. The river itself is entrenched in many places into a relatively narrow section. This is probably due to regional post glacial uplift. The older wide valley is generally less than half a mile wide, but sometimes reaches a mile in width.

Superficial deposits of the Sixty Mile district consist of gravels, sand, soil, muck, volcanic ash and ground ice. The thicknesses are variable, generally arranged in a wedge shape with the thick accumulation on the slopes and benches while the deposits of the valley are thinner. In the Sixty Mile valley the depth of sediments averages about 14 feet, the soils and muck somewhat less. A volcanic ash, seen many places in the Yukon, is present near the top of the soil layer.

The bedrock surface itself is variable depending on rock type and other factors. Generally the schistose bedrock is fractured and deeply weathered. The volcanic

rocks are surface weathered and fractured. The gneisses are generally fresh and even at the surface.

The gold bearing gravels occur in the present valley bottoms and on the benches or terraces along the streams. Important amounts of gold have been recovered from both deposits.

All gravels are local in origin. The clasts and boulders are consequently composed mainly of the metamorphic rocks of the Yukon group and the andesite, Unit 24. The schist pebbles have a distinctive shape, being usually flat, round edged disks, 1 to 2 inches thick and from 2 to 6 inches long. They are associated with numerous subangular and angular blocks of quartzite, rounded and subangular pebbles and cobbles of quartz and pebbles and boulders derived from the volcanic rocks. They generally have layers of sand and fine gravel interbedded and are covered by black muck.

The bench gravels are in most cases similar to those of the creek. They show very little sorting or stratification, but are commonly imbricated or shingled upstream. The bench gravels are usually thin, but in many places they are overlain by thicknesses of talus and much. They differ from gravels of the Klondike and other mining districts not only in character but in being a younger age.

The slope grades of the benches are slightly less than those of the streams. This fact, combined with the observation that they form part of a wider valley and are

more worn than the stream gravels, suggests that the bench gravels represent a relatively longer period of concentration than the creek gravels. Since gold was available for concentration at the time of their formation one may assume that it will be distributed more uniformly and in finer texture than in creek gravels. The creek gravels represent a reconcentrate of the bench deposits since their initial power to concentrate is limited by time and space.

5 MINING HISTORY

The discovery of the Sixty Mile goldfields precedes the Klondike discovery by four years. The discovery of the Forty Mile goldfields, predominantly in Alaska, led to prospecting over the divide to the Sixty Mile drainage. Mr. C. Miller is usually credited with the discovery, on the creek bearing his name. Early production was interrupted by the staking rush which followed the Klondike discoveries. Nevertheless, production continued at a moderate rate from the region. The principal creeks mined were Miller, Glacier, Big Gold, Little Gold and Bedrock Creeks.

Prospectors soon extended the discoveries down the Sixty Mile River to California, Boucher and Matson Creeks, where minor amounts of gold were recovered. No records were kept in the early days and it is likely that much of the gold was exported through Alaska unrecorded. Since 1906, the royalty has been the basis for production estimates, and therefore accuracy may be questioned. The estimated production to 1917 was approximately 2.5 million dollars, gold values being approximately 20 dollars per ounce.

Because of the success of the hand mining activities, the North American Trading and Transportation Company built a dredge near the mouth of Miller Creek and worked there for the 1915 and 1916 seasons. Presumably due to the pressures of the first World War, the operation was suspended. During the war mining continued at a reduced rate in the district.

The Holbrook Dredging Company refitted the dredge built by North American Trading and Transportation Company and operated in the valley of the Sixty Mile River below Miller Creek from 1929 to 1941. During this period hydraulic methods were used for removal of overburden. Evidence for this is to be seen on the ground and from discussions with long-time residents. Other mining operations continued during this depression period on the established creeks of the district.

After the war period of the 1940's the production again increased with the construction of a dredge by Yukon Explorations. The dredge operated in the lower reaches of Glacier and Big Gold Creeks from 1947 to 1959. During this period bulldozer mining was introduced by the Yukon Placer Mining Company which operated along Big Gold and Glacier Creeks and the Sixty Mile River. These two companies were allied in their operation. The bulldozers prepared ground for the dredge as well as operating a sluicing plant. The operation is within the memory of many local residents. Some of the buildings and the steel hulled dredge remain on Glacier Creek. All these operations used hydraulic mining methods for removal of overburden wherever possible.

Small operations have continued along these creeks to the present day. Miller and Glacier Creeks have been the most consistent producers along with the bench areas adjacent to the Sixty Mile River between the two creeks, with additional production coming from the lower grade, high volume gravels of the Sixty Mile River.

Total production for the goldfield from discovery to 1965 is about 213,000 ounces of fine gold. 123,000 ounces were produced up to 1917 (Cockfield 1921), and 72,984 ounces

for Yukon Explorations Ltd. from 1948 to 1961 (L.H. Green 1972). A reasonable estimate for the years from 1965 to 1977 would be 10,000 ounces. Gold production from 1978 to 1990 was about 344,738 ounces of crude gold. This brings the total production estimate from the Sixty Mile area to approximately 570,000 ounces of crude gold.

The Klondike gold rush curtailed exploration and development in the Sixty Mile; and the rush to the sands of Nome emptied the Klondike, so the Sixty Mile area was all but forgotten. Little exploration was carried out after the first few years (1892 - 1896).

6 SIXTY MILE PLACERS LTD.

THE COMPANY

In 1974, Sixty Mile Placers Ltd. staked sixty-seven miles of placer claims on the Sixty Mile River and five of its tributary creeks. In 1975 the company had two operating mines start up on its property. These mines operated until 1984 when economics caused them to close down or move. In 1987 Eldorado Placers was given a lay agreement on a small portion of their holdings, and has continued to mine on their ground until the present.

In the summer of 1990, Sixty Mile Placers Ltd. staked hard rock claims over the vast majority of its placer holdings. The reasons were, firstly, since the geology is similar to that of the Klondike region and there is obviously gold in the area, there is a strong potential for a lode deposit. Secondly, since the current placer operation of Eldorado Placers Ltd. is exposing approximately 350,000 yards¹ of bedrock yearly and therefore providing an excellent opportunity to prospect fresh showings, it was decided to incorporate a hard rock exploration program into their ongoing activities.

At present, Sixty Mile Placers Ltd. holds 793 placer claims and 172 hard rock claims in the Sixty Mile area.

7 HARD ROCK EXPLORATION

7A DEVELOPING AN EXPLORATION PLAN

7A1 GEOLOGICAL OBSERVATIONS AND CONCLUSIONS

In 1914, Yukon Gold did preliminary drilling in the Sixty Mile (see attached report) between the mouth of Miller Creek and the mouth of Five Mile Creek. In the summers of 1989-90-91 Eldorado Placers Ltd. drilled approximately 250 holes (8 inch diameter) between the mouth of Big Gold Creek and approximately 3/4 mile below the mouth of Five Mile Creek.

Based on the combined results of these holes and the true values recorded by Eldorado Placers Ltd.'s placer operation (see attached map) and other geological occurrences, we have been able to formulate a possible explanation for the placer findings as well as a theory on the lode deposits.

Based on true values obtained through placering at various points along the Sixty Mile valley, we have been able to determine a background value in the gravels of .002 oz./cubic yard. This background level seems to be present throughout the entire length of the Sixty Mile River. This would indicate (along with other factors) that the country rock of the area carries a small but relatively homogenous amount of Gold.

The obvious and dramatic increase in values associated with Miller Creek, Glacier Creek, Big Gold Creek, and the Sixty Mile River, below their confluences with it, would indicate that these tributaries have cut a fairly high grade anomaly, but I don't believe this accounts for the remaining percentage found in the main valley, for, if these tributaries were the only other source of gold, the Sixty Mile River pay zone should have a fairly uniform primary paystreak that would gradually weaken as it became more distal from the source (i.e. the tributaries). This is generally the case, and these tributary pay "streaks" have this general pattern, but also noted in these pay streaks are areas of extremely high values, compared to surrounding values, and areas that are abundant in "wire" gold. Both of these anomalies must have very local sources as the high value anomalies do not trail off down slope, but are restricted to small areas and the wire gold has a similar dispersal pattern and although a large portion of that gold is in strands of approximately 1/32 inch, it is very much intact, confirming that little travel has taken place.

In studying the above mentioned drilling results and the true values, two things are apparent. Firstly, the drill values do not reflect the true values, and often are not even close. Secondly, the drilling does show a background pay, a pay zone, and, "hot spots" that I believe are point sources for gold.

Reviewing the 1914 drill and drift results, the same irregularities in the pay streak that we have found are also apparent, although at the time they attributed it to salting of samples. The original miners (prospectors) found values that far exceeded the drill results, and that could not be verified even with close proximity

drilling. From placer experience, this is a symptom of drill results on extremely low grade deposits such as the Sixty Mile and we have reached the conclusion that as the values in a deposit drop, the accuracy of the drilling decreases. Therefore, our high end values would be relatively close and our low end values would be way out. This conclusion seems correct, as triangulation of the areas mined has given us fairly accurate predictions on the higher grade ground (+.02oz./yard³) and an error as high as 240% on the lower grade ground (-.02oz./yard³).

Because we have not had the opportunity to mine a statistically sufficient amount of drilled ground, we are unable to refine our percentages of error versus true values, but we are confident enough to say that the inverse relationship between the two does exist.

With the combined results of our placer drilling and the 1914 drilling, we believe we have located a point source on or near claims YB31371-2,3,4 (Map attached). This is an interesting area as it is the boundary between two different rock groups, and would be a logical setting for such an occurrence. Placer drill results in this area indicate substantially increased values that are not as apparent above or below this area.

Eldorado Placers Ltd. current placer operation will be exposing this area within the next two years, and at this point, extensive testing will be done to substantiate whether or not a point source does exist there.

7A2 EXPLORATION STRATEGY

Based on the conclusions we reached from the placer mining and exploration activities, Sixty Mile Placers Ltd. made a decision to develop a hard rock exploration program to try to locate these anomalies in the pay streak, and then to prospect them in greater detail.

Because Eldorado Placers Ltd. was geared up to test the placer deposits and it would be cost effective to utilize their expertise and equipment, the concept of drilling through the placers, and into the underlying bedrock was developed. The idea was to process the entire sample for alluvial gold and thus cleanse the tails. Once this was done, a clean bedrock sample could be taken by simply picking the washed bedrock out of the tails, giving us both a placer and a hard rock sample.

7B STAGE 1 - HARD ROCK EXPLORATION

Stage 1 of Sixty Mile Placers Ltd. hard rock exploration program is to conduct preliminary drilling on its hard rock claims, and assess any drilling done on its placer claims in the hopes of identifying anomalies in the placer pay zones. Additionally, it is to obtain bedrock samples from the bedrock underlying the placers (using combined placer and hard rock drilling techniques), and from other outcroppings, to try and piece together the full picture of the background pay, pay zones and the "hot spot" anomalies. (Section 8 details Sixty Mile Placers Ltd. 1991 Stage 1 hard rock exploration program.)

7C STAGE 2 HARD ROCK EXPLORATION

Stage 2 of Sixty Mile Placers Ltd. hard rock exploration plan is to do complimentary exploration to stage 1. This would involve more standard exploration techniques such as geo chem, magnetometer and drilling, using standard diamond drilling methods. This would be carried out once the anomalies have been pinpointed by stage 1.

8 1991 HARD ROCK

EXPLORATION PROGRAM

In the late summer and fall of 1991, Sixty Mile Placers Ltd. engaged Eldorado Placers Ltd. in stage 1 of its hard rock exploration program. A substantial amount of drilling was completed but because of high water and mechanical problems, the full extent of drilling planned was not completed.

Holes were drilled in clusters of four, with a Nodwell mounted B31 mobile auger drill. Drilling depths were dependent on the type of bedrock and its ability to be drilled with the above equipment. Average depth of holes was 19 feet and average depth of bedrock penetration was 4.5 feet.

The samples were first processed with a Prospector II made by Goldfield Engineering & Machine Works, of Provo, Utah. This is a vibrating screen device driven by an eccentric water wheel and has a longtom with an average width of 8 inches and a length of 48 inches. The matting in the longtom is called "rough top" and is a form of conveyor belting. This treatment removed the alluvial gold from the sample. Next clean bedrock was picked from the tails and bagged for assay.

The accompanying Chart A, details the depth of holes, rate of drilling and the type of auger bit used. (All the bits were designed and built by Eldorado Placers Ltd.

specifically for drilling frozen muck and gravels associated with local placers.) Attached photos of the four bits used show details of their construction.

Chart B records the results from the holes, detailing alluvial Au results and the Au assay results from bedrock. Chart C records Au results of grab samples taken at convenient out crops. Attached maps detail locations of drill holes. Chart D details Northern Analytical Labs, Ltd.'s print out.

CHART A

DATE	CLAIM	HOLE	BREAKDOWN IN FEET			TOTAL	DRILL	AUGER
			NUMBER	NUMBER	NUMBER			
YY/MM/DD	NUMBER	NUMBER	MUCK	GRAVEL	SEDROCK	DEPTH	TIME	(BT)
91/07/17	YB31381	EP 15	8.5	9.0	1.0	18.5	3 HRS	#1
91/07/17	YB31382	EP 16	8.0	9.0	6.0	23.0	4 HRS	#1
91/07/18	YB31384	EP 18	8.0	9.0	3.0	20.0	3 HRS	#1
91/07/20	YB31383	EP 17	11.0	8.0	6.0	25.0	4.5 HRS	#2
91/07/29	YB31446	EP 80	0.0	12.0	7.0	19.0	3 HRS	#2
91/08/13	YB31445	EP 79	0.0	10.0	10.0	20.0	3 HRS	#2
91/08/15	YB31845	EP 114	4.0	11.0	3.0	18.0	3 HRS	#R
91/08/15	YB31844	EP 113	5.0	8.0	6.0	19.0	3 HRS	#R
91/08/16	YB31829	EP 98	4.0	14.0	1.0	19.0	3 HRS	#1
91/08/16	YB31828	EP 97	14.0	3.0	6.0	23.0	4 HRS	#R
91/08/17	YB31454	EP 88	4.0	8.0	3.0	15.0	3 HRS	#PENGO
91/08/17	YB31456	EP 90	3.0	8.0	6.0	17.0	2 HRS	#PENGO
91/08/19	YB31875	EP 144	9.0	5.0	3.0	17.0	2 HRS	#PENGO
91/08/19	YB31874	EP 143	8.0	4.0	2.0	14.0	2 HRS	#PENGO
91/08/19	YB31876	EP 145	9.0	1.0	5.0	15.0	2 HRS	#PENGO
91/08/19	YB31877	EP 146	8.0	4.0	1.0	13.0	1.5 HRS	#R
91/08/20	YB31792	EP 29	7.0	2.0	6.0	15.0	2 HRS	#R
91/08/20	YB31793	EP 30	8.0	3.0	6.0	17.0	2 HRS	#2
91/08/21	YB31791	EP 28	6.0	0.5	5.5	12.0	2.5 HRS	#2
91/08/21	YB31790	EP 27	8.0	2.0	4.0	14.0	2.25HRS	#2
91/08/22	YB31804	EP 41	25.0	1.0	2.0	28.0	3 HRS	#R
91/08/22	YB31805	EP 42	25.0	2.0	6.0	33.0	2 HRS	#R

412.5 ft
(136.4 m)

CHART B

HOLE NUMBER	Au PPB	ALLUVIAL
		Au VALUES OZ/SQ YD
91 HR EP-15	ND	0.000
91 HR EP-16	ND	0.006
91 HR EP-17	ND	0.007
91 HR EP-18	ND	0.010
91 HR EP-79	ND	TRACE
91 HR EP-80	ND	TRACE
91 HR EP-88	<5	0.000
91 HR EP-90	19	0.000
91 HR EP-97	ND	TRACE
91 HR EP-98	ND	0.002
91 HR EP-113	8	TRACE
91 HR EP-114	ND	0.001
91 HR EP-143	<5	0.000
91 HR EP-144	<5	TRACE
91 HR EP-145	ND	TRACE
91 HR EP-146	17	0.000
91 HR ET-27	11	TRACE
91 HR ET-28	11	0.000
91 HR ET-29	ND	0.000
91 HR ET-30	ND	0.001
91 HR ET-41	15	0.000
91 HR ET-42	ND	0.000

ND - none detected

CHART C

GRAB SAMPLES

SAMPLE #	LOCATION	AU
13391 EP-17B	EP 17	ND
13391 EP-17C	EP 17	ND
13391 EP-19	EP 19	6

ND - none detected

CHART D

Northern Analytical Labs Ltd. FILE #91-4513

SIXTY MILE PLACERS LTD.
HARD ROCK EXPLORATION REPORT

Sample #	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm
13391 ED-15	3	6	2	47	0.1	4	11	380	2.84	2	5	1	25	0.2	2	2	61	1.08	0.053	3	55	1.53	283	0.26	3	1.66	0.09	0.61	1
13391 EP-16	2	5	2	49	0.2	3	12	372	2.88	2	5	1	23	0.2	2	2	62	0.93	0.037	3	50	1.58	285	0.27	2	1.69	0.08	0.36	1
13391 EP-17	3	23	5	55	0.2	7	13	484	3.07	2	5	2	22	0.2	2	2	66	1.18	0.080	8	53	1.44	255	0.27	5	1.74	0.12	0.32	1
13391 EP-17B	14	2	2	6	0.1	3	2	147	0.62	2	5	1	7	0.2	2	2	7	0.23	0.002	2	175	0.21	58	0.03	3	0.29	0.02	0.04	1
13391 EP-17C	1	17	3	36	0.2	5	9	376	2.26	3	5	2	21	0.2	2	2	41	1.36	0.041	5	55	1.15	154	0.19	3	1.08	0.06	0.32	1
13391 EP-18	7	16	4	42	0.2	6	9	418	2.54	3	5	1	22	0.2	2	2	49	0.98	0.036	5	91	1.01	280	0.24	4	1.37	0.09	0.40	1
13391 EP-19	12	3	2	1	0.1	2	1	33	0.23	3	5	1	1	0.2	2	2	2	0.05	0.001	2	142	0.04	9	0.01	6	0.08	0.01	0.01	1
13391 EP-79	7	5	5	46	0.2	15	11	487	2.98	2	5	6	10	0.2	2	3	53	0.22	0.019	18	140	1.43	254	0.20	2	1.90	0.04	1.68	1
13391 EP-80	4	16	2	49	0.2	18	12	414	2.80	88	5	5	19	0.2	2	2	54	0.27	0.019	11	115	1.47	175	0.23	3	1.79	0.04	1.40	1
13391 EP-88	5	11	2	40	0.2	18	12	482	2.73	3	5	7	39	0.2	2	2	46	1.12	0.024	17	131	1.26	131	0.12	5	1.52	0.06	0.76	1
13391 EP-90	2	9	6	54	0.1	12	10	836	3.22	5	5	5	40	0.2	2	2	39	2.90	0.033	14	65	1.42	85	0.02	4	1.40	0.03	0.33	1
13391 EP-97	8	10	7	31	0.1	9	6	361	1.84	4	5	4	27	0.2	2	2	31	0.68	0.021	11	108	0.59	179	0.09	4	0.99	0.04	0.40	1
13391 EP-98	7	6	2	50	0.2	12	11	728	3.52	2	5	7	33	0.2	2	2	48	1.16	0.029	19	109	0.87	218	0.13	4	1.50	0.07	0.85	1
13391 EP-113	8	23	8	48	0.2	10	4	177	1.35	6	5	10	36	0.2	2	2	28	0.34	0.041	25	99	0.31	250	0.06	6	0.74	0.06	0.16	1
13391 EP-114	10	10	5	39	0.2	11	7	328	2.15	4	5	5	85	0.2	2	2	35	1.05	0.029	9	140	0.77	163	0.10	3	1.91	0.13	0.66	1
13391 EP-143	7	53	7	40	0.3	13	8	433	1.97	4	5	5	77	0.2	2	2	31	1.78	0.019	11	102	0.81	162	0.08	3	1.16	0.04	0.64	1
13391 EP-144	16	129	9	69	0.3	17	10	605	2.90	2	5	8	96	0.3	2	3	47	2.50	0.018	16	113	1.42	162	0.16	2	1.83	0.03	1.43	1
13391 EP-145	7	374	17	69	1.1	15	10	401	2.55	8	5	7	48	0.6	2	3	40	1.22	0.013	16	109	1.14	304	0.10	2	1.45	0.04	0.95	1
13391 EP-146	10	82	18	79	0.3	16	9	561	2.46	13	5	5	90	0.2	2	2	39	2.36	0.028	10	106	0.87	431	0.06	6	1.29	0.04	0.45	1
13391 ET-27	4	93	103	53	1.8	10	20	518	4.53	13	5	1	84	0.2	4	2	95	1.34	0.107	6	60	1.47	366	0.22	4	2.09	0.13	0.40	1
13391 ET-28	6	18	7	38	0.2	8	6	294	2.35	7	5	1	42	0.3	2	2	46	0.59	0.041	6	77	0.67	248	0.10	5	1.21	0.08	0.23	1
13391 ET-29	4	19	11	52	0.3	16	11	565	4.09	6	5	1	72	0.2	2	2	95	1.28	0.103	8	76	1.58	665	0.23	5	2.04	0.15	0.66	1
RE 13391 EP-146	10	81	17	83	0.3	17	10	592	2.65	13	5	5	95	0.3	2	2	41	2.49	0.031	11	110	0.92	467	0.07	4	1.36	0.04	0.55	1
13391 ET-30	7	18	29	55	0.2	7	7	319	2.20	6	5	2	39	0.5	2	2	45	0.57	0.033	7	91	0.66	302	0.11	3	1.12	0.08	0.30	1
13391 ET-41	5	21	5	43	0.1	8	11	292	3.29	16	5	1	45	0.2	2	2	52	0.67	0.066	7	72	0.75	306	0.12	8	1.44	0.08	0.30	1
13391 ET-42	5	379	16	757	0.2	25	11	500	5.85	8	5	2	22	1.4	2	3	74	0.43	0.096	7	75	0.97	522	0.10	4	1.97	0.03	0.36	5
STANDARD C	18	56	40	132	6.8	70	33	1042	4.03	39	18	36	53	18.4	15	18	57	0.48	0.090	37	58	0.87	176	0.09	34	1.89	0.06	0.15	12

Samples beginning 'RE' are duplicate samples

certified to be a true copy of the original which has not been changed or altered in any way

SIXTY MILE PLACERS LTD.
AUGERS



BIT #1



BIT #2

SIXTY MILE PLACERS LTD.
AUGERS



BIT #R

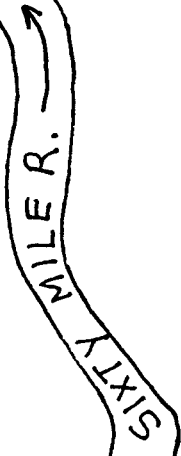


PENGO

YB31383



YB31384



EP 17



EP 18



EP 15

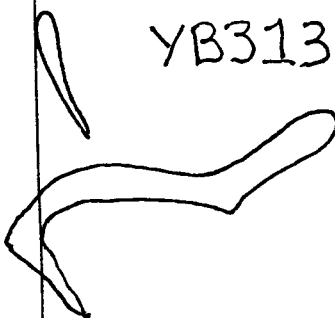


EP 16



YB31381

YB31382



YB31447

YB31448

CALIFORNIA Cr. →

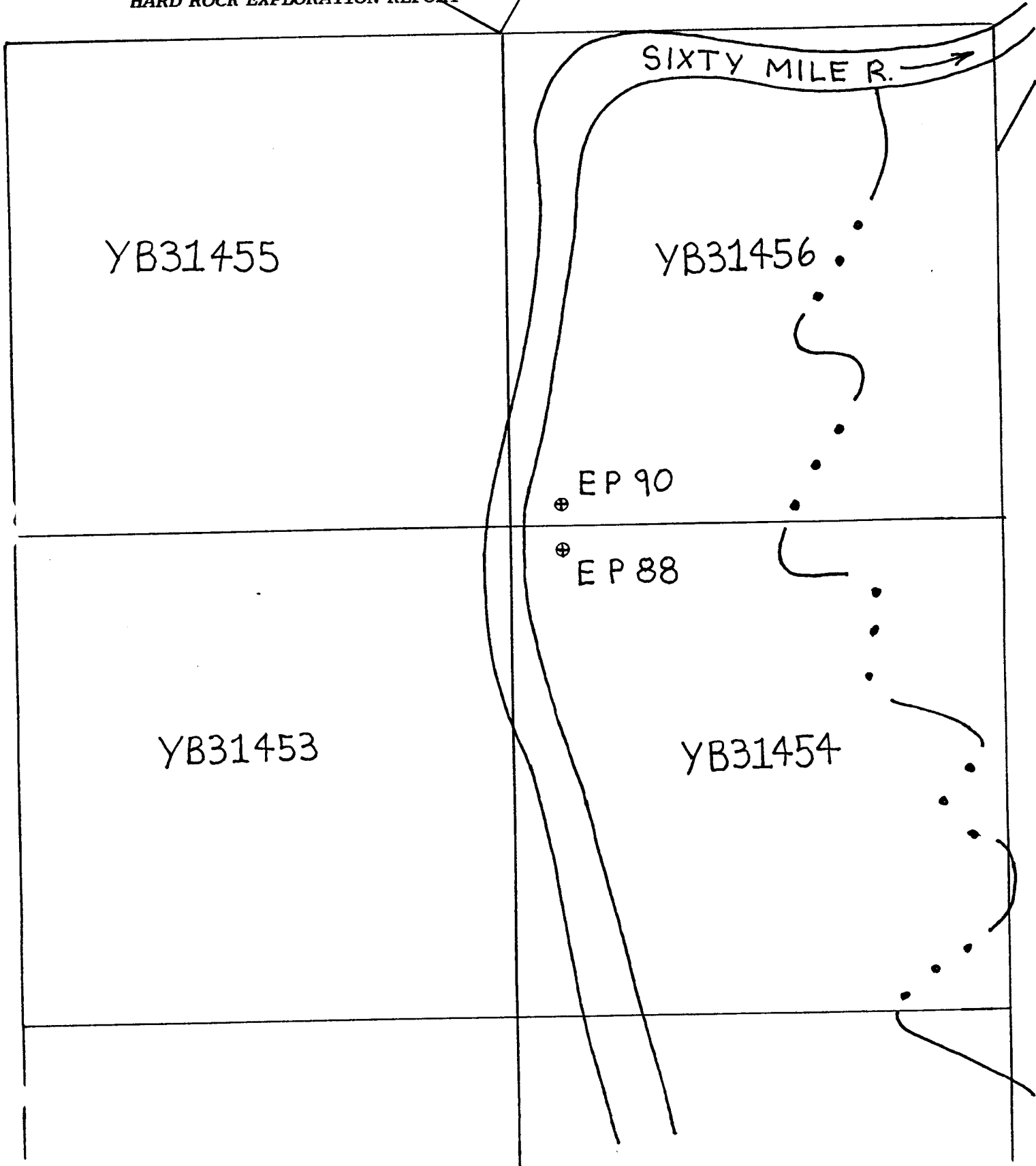
EP 79 ⊕

⊕ EP 80

YB31445

YB31446

SIXTY MILE R. →



YB31455

SIXTY MILE R. →

YB31456

⊕ EP 90

⊕ EP 88

YB31453

YB31454

SIXTY MILE PLACERS LTD.
HARD ROCK EXPLORATION REPORT

YB31828

SIXTY MILE R.
↑

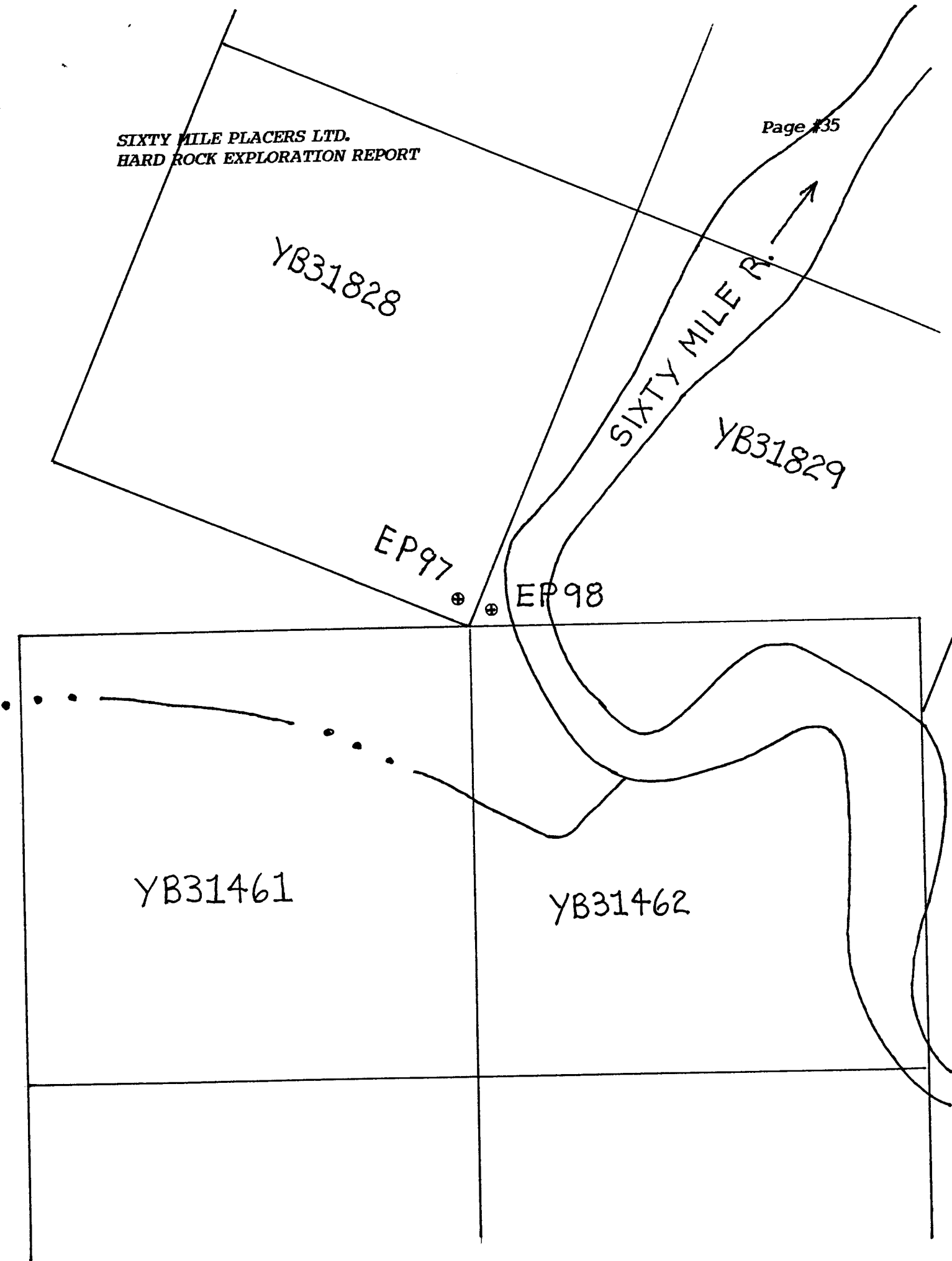
YB31829

EP97

EP98

YB31461

YB31462



SIXTY MILE PLACERS LTD.
HARD ROCK EXPLORATION REPORT

FISH Cr.

YB31844

YB31845

EP 113

EP114

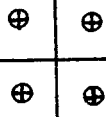
EP 111

EP112

YB31842

YB31843

SIXTY MILE R. →



SIXTY MILE PLACERS LTD.
HARD ROCK EXPLORATION REPORT

Page #37
ENCHANTMENT Cr.

YB31876

EP 145

EP 146

YB31877

EP 143

EP 144

SIXTY MILE R.

YB31875

YB31874

YB31792

YB31793

ET29

ET30

ET27

ET28

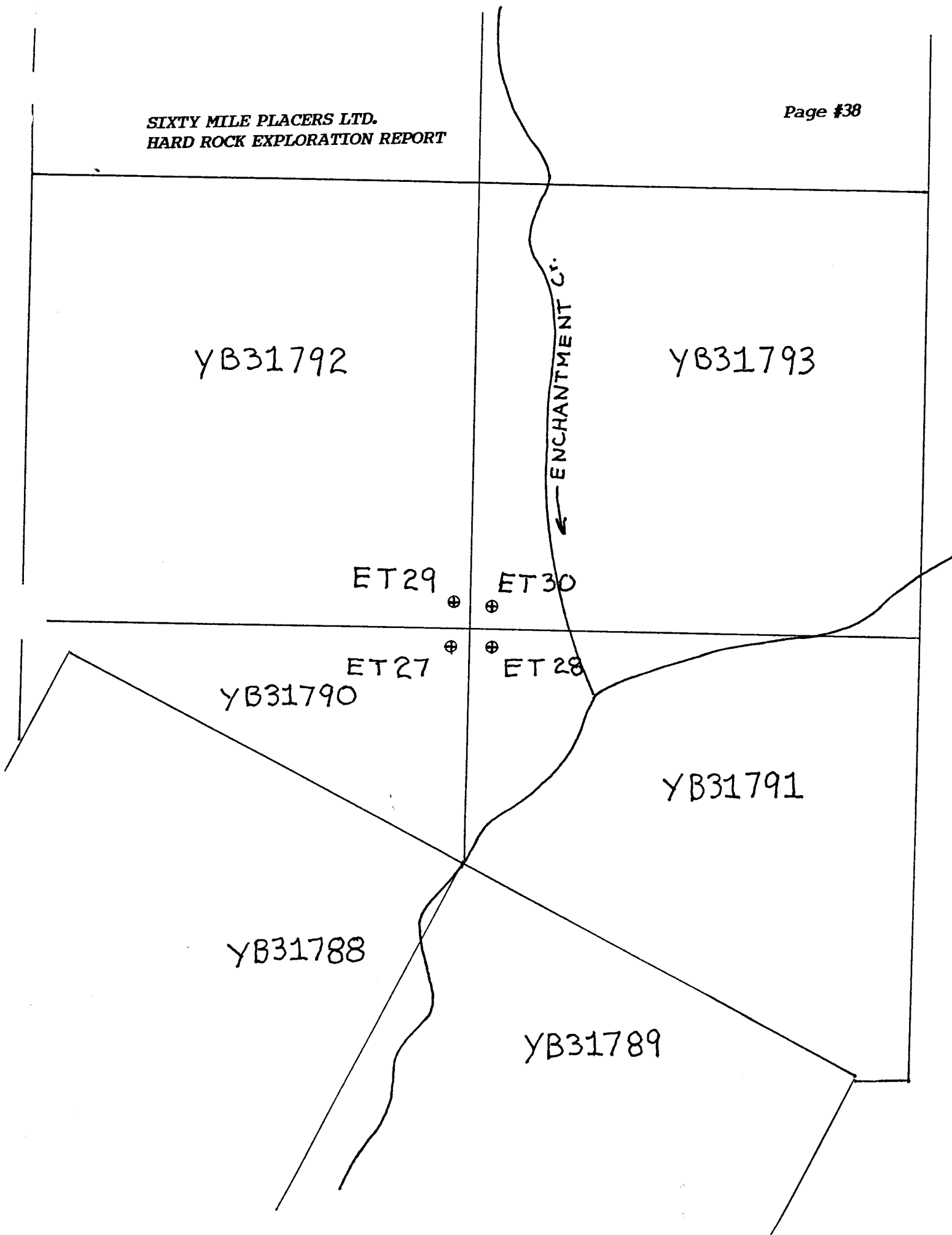
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YB31789

ENCHANTMENT Cr.



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YB31805

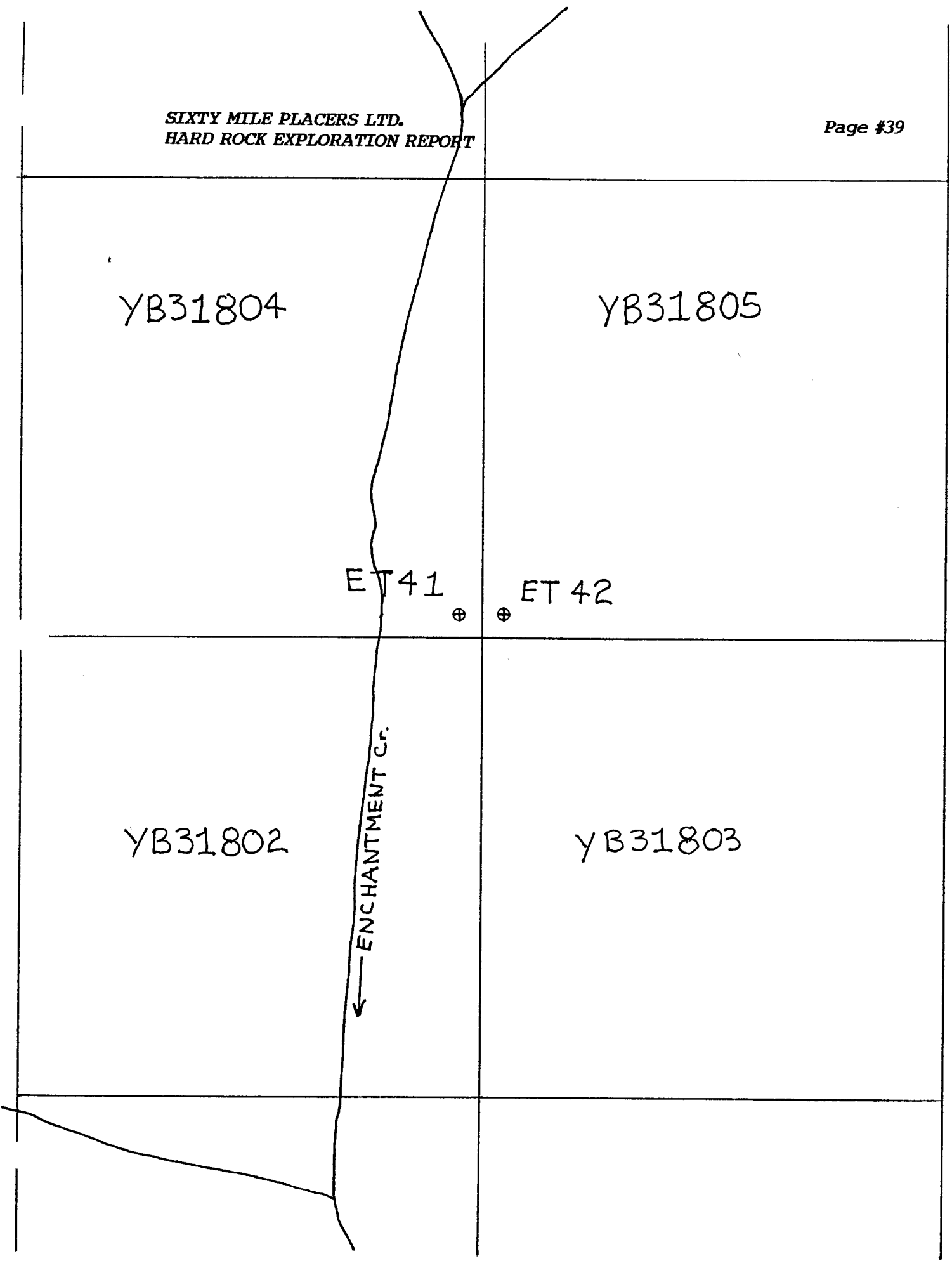
ET 41

ET 42

YB31802

YB31803

← ENCHANTMENT Cr.



9 SUMMARY

Nothing conclusive can be gleaned from the 1991 exploration program, mainly because it was not intensive enough. Over the twenty three holes and three chip samples, there was an average of 4 PPB gold in the country rock which would be more than a sufficient amount to have produced the .002 oz./cubic yard average background pay we have found in the placers.

Holes EP144-145 and ET-42 all had higher than average copper and ET-42 also had a higher than average zinc assay, which are of minor interest.

Although this method of drilling does not compare to diamond drilling, it does compare to chip sampling, and it allows samples to be taken from beneath the placers. It is our recommendation based on the results of this program, and the cost effectiveness that more testing be carried out in this manner so that concurrent sampling of both placers and hard rock can be carried out.

10 REFERENCES

Bostock, H.S.

- 1935: *The Mining Industry of the Yukon, 1934;*
Geol. Surv. Can. Mem. 178
- 1936: *The Mining Industry of the Yukon, 1935;*
Geol. Surv. Can. Mem. 193
- 1937: *The Mining Industry of the Yukon, 1936;*
Geol. Surv. Can. Mem. 209
- 1938: *The Mining Industry of the Yukon, 1937;*
Geol. Surv. Can. Mem. 218
- 1957: *Yukon Territory, Selected Field Reports to the Geological Survey of
Canada, 1898 to 1933;*
Geol. Surv. Can. Mem. 284

Cockfield, W.E.

- 1921: *Sixtymile and Ladue Rivers Area Yukon;*
Geol. Surv. Can. Mem. 123
- 1930: *The Mining Industry of Yukon, 1929;*
Geo. Surv. Can. Summ. Rept. 1929, Pt. A, pp 1-15;
reprinted in Bostock, 1957, pp 596-609.

McConnell, R.G.

- 1905: *Sixtymile District;*
Geol. Surv. Can. Ann.Rept.(New Series) Vol. XIV, 1901, Pt. A, pp 33-37;
reprinted in Bostock 1957, pp 43-46

Green, L.H.

- 1972: *Geology of Nash Creek, Larsen Creek and Dawson Map areas, Yukon
Territory;*
Geol. Surv. Can. Mem 364

Hosie, R.C.

- Native Trees of Canada, 7th edition;*
Canadian Forestry Service, Department of the Environment

Johnson, Eric H.

- 1976 *Report Concerning Environmental Considerations of Cogasa Mining Corp.
Sixty Mile River Valley Operation*

11 MAPS & ATTACHMENTS

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REPORT OF PRELIMINARY EXAMINATION

ON THE

NORTH FORK

OF THE

SIXTY MILE RIVER

- MARCH, 1914 -

INDEX

- I Introduction:-
 - (A) Purpose of the Investigation.
 - (B) Results of the Investigation.
 - (C) Recommendations.
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- II Location, Description & History of Property.
- III Power
- IIII Thawing.
- V Wood for Fuel for Thawing.
- VI Transportation and Roads.
- VII The Examination:-
 - (A) Diary.
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 - (C) Estimates of Production and Costs.
- VII Tabulation of Sampling and Claim Reports.
- IX Individual Claim and Shaft Reports.

REPORT OF PRELIMINARY EXAMINATION

ON THE NORTH FORK OF THE SIXTY MILE RIVER.

I

March 17th, 1914.

to

April 5th, 1914.

Mr. C. A. Thomas,
Resident Manager, Yukon Gold Company,
Dawson, Y. T.

Sir:-

Herewith we tender you a report on the preliminary examination made by us during March, 1914, on the North Fork of the Sixty Mile River, Yukon Territory.

(A) THE PURPOSE OF THIS INVESTIGATION was to determine as far as possible, from the prospecting already done by individual prospectors, whether or not the block of ground under consideration was worthy of a further examination on the part of the Yukon Gold Co., provided we could obtain satisfactory options on the 125 claims, more or less, in the continuous block.

(B) THE RESULTS of our necessarily hurried examination indicated the probable existence of a pay channel over 300 feet wide and about 8-3/4 miles long, for which a very rough and incomplete average gave a value

throughout of 75 cents per cubic yard. The ground is 15 feet deep, with an average overburden of moss, muck and soil of 5 feet. The pay channel, as outlined so far, clings to the left limit in frozen ground, which thaws readily with steam. Considering the entire area of this wide valley, probably 25% is already naturally thawed, and almost any part of the valley should be dredged without difficulty.

(C) OUR RECOMMENDATIONS are that options be secured at once upon a continuous block of ground lying between Miller Creek and Twelve Mile Creek, and that this area be prospected as soon as possible with Keystone Drills and shafts.

(D) AN EXAMINATION MAP accompanies this report. The map was made from the Government Base Line Map, the location of the claims being only approximate, as to date no survey has been made. The locations of shafts and drifts were not all surveyed, but are near enough to their proper positions for present purposes. Cross Sections of the valley are shown wherever we found the pay occurring above the general bedrock level of the creek.

II

LOCATION, DESCRIPTION AND HISTORY.

The block of ground under consideration is about 62 miles from the mouth of the Sixty Mile River, which enters the Yukon about 40 miles above, or South of, Dawson. The ground is located on the North, or third

Fork, of the Sixty Mile, about 40 miles from its source, and 15 miles from the Alaskan Boundary.

Our block of ground is 8-3/4 miles long, and for the upper 7-1/4 miles maintains a width of 2000 feet or over, the remainder averaging about 1000 feet. One side of the valley is bounded by rocky bluffs, while the opposite side slopes gradually until it changes to a succession of gravel benches. These gravel benches occur nearly all the distance on the left limit, and are largely made up of a white channel deposit which shows traces of gold and in some places coarse colors, although practically no prospecting has been done above the valley levels.

It is supposed, however, that many miles of the divide between the left limit of the Sixty Mile and the Forty Mile River once lay in the bed of an immense White Channel stream, as the width of the White Channel deposit has been found to be 15 miles wide in some places adjoining our block of ground. Gold has been found in all the large streams traversing this divide on both sides, emptying into the Sixty Mile and Forty Mile Rivers; in paying quantities on small tributaries of the Forty Mile side, and also on Bed Rock, Miller and Glacier Creeks on this side; while Five Mile, Twelve Mile and California Creeks all show some gold. Bed Rock Creek enters the Sixty Mile 3 miles above Miller Creek (where our block of ground commences), while Miller and Glacier Creeks, both tributary to our

block of ground, have been marked by individual miners since several years before the Klondike region was discovered.

Our theory of the occurrence of gold in the block of ground under consideration is -

(1st) a general distribution of gold coming down stream in Sixty Mile River, possibly widely scattered throughout the gravels of the valley;

(2nd) important enrichments from the wearing down of the White Channel divide described above mainly delivered by such tributaries as Bed Rock, Miller, Glacier, and Five Mile, which enrichments probably are concentrated in more definite channels in the valley, and

(3rd) local enrichments from the sloughing down of the more or less clearly defined low benches immediately adjacent to the left limit of the valley.

The prospecting done prior to our examination was mostly confined to the left limit, as shown on the map. The entire valley has not been cross-cut for its full width except in 3 places, on Claims 5, 17-18, and 24. Even in one of these three cases, several hundred feet of width is not prospected, due to thawed ground. Moreau found some coarse gold on the right limit of Claim 5, but thawed ground prevented him from outlining any pay. There is a possibility of an independent pay streak being located by the drills on the right limit.

In nearly all cases the pay occurs on, or near, the general bedrock level of the creek. In any case where creek water level would be too low for dredging, water could be carried with very short ditches from either Big Gold or Five Mile Creeks for flotation.

III

POWER

If a subsequent examination develops this block of ground for dredging, it will be expedient to have electric power, furnished either by

(A) high tension line from Dawson carrying our present supply of Twelve Mile power, or

(B) independent plant to develop electric power locally.

(A) A high tension line from Dawson to this part of the Sixty Mile would be approximately 42 miles long, and would tap many areas where poles could be cut very close to the line. On the other hand, such a line would not be near any present roads or means of traffic.

(B) In case a large area of dredging ground is developed, and a number of dredges put into commission here, it might prove advisable to develop power nearer at hand. We have been advised of a location where considerable power could be developed within 12 or 15 miles of the lower end of our block of ground. This is at the mouth of Fish Creek, which enters the Sixty mile 5 miles below California Creek, which is about 7 miles below Twelve Mile, our present downstream limit. Below Fish Creek

the Sixty Mile River runs through three or four miles of rapids, and carries over 5000 miners' inches in the driest of weather, as its flow has been increased by the Water of Twelve Mile, California, Boucher, Fish and other tributaries.

Although no levels have been taken here, it is claimed that considerable power, could be developed here with only three or four miles of flume or ditch.

IV

THAWING

Practically all the pay discovered up to the present has been found in frozen ground, but even though the pay channel may not leave the Left Limit, it is bound to be crossed by considerable naturally thawed ground at the upper and lower ends of the block. Of the entire valley, probably 25% is naturally thawed, while the frozen ground thaws readily with steam. We took measurements on the thaw made by two six-foot steam points in a drift on Claim 4-A below Five Mile. In 3 hours these two short points thawed a volume of coarse gravel 10 ft. long by 7 ft. wide by 4 ft. high. The prospector claimed that it thawed more readily than any ground he had ever worked.

The average muck overburden is about 5 feet thick. This average has been brought up by considering shafts at the mouth of Five Mile Creek, where a delta of much has been pushed out of this gulch on to the Sixty

Mile flat. In nearly all places the depth of muck and soil is only 3 or 4 feet, and in almost no case, except at the mouth of Five Mile, would the surface have to be sweated while thawing, except in the spring.

It is likely that if the shallow ground were stripped of trees and moss several years in advance of the dredge, it would thaw naturally, especially if the river could be diverted in various places to ground-slucice off the top soil.

If a large part of the block of ground proves to contain pay, it may be worth while to conduct a thorough campaign of ground sluicing, by constructing a ditch along the upper slopes of the flats on the Left Limit, and after cutting up the moss on the flats, run the muck off down the natural sloop to the river on the Right Limit.

In any case, the cost of wood for thawing will be lower than we have ever had it in our operations.

V

WOOD FOR FUEL FOR THAWING.

Wood for thawing should be delivered on the claims for \$8.00 per cord in 4-foot lengths. Our average cost per cord on Bonanza and Hunker Creeks for 1913 was \$12.04. Eli Castonguay, now prospecting at the mouth of 5-Mile, who has spent many years cutting wood in this district, gives the following information on the wood problem:-

"You can get 40,000 cords of wood, cut in 4-foot lengths, easily landed, all down hill pull on to the claims for \$6.00 to \$6.50 per cord, \$4.00 for cutting and \$2.00 for hauling. That is the price we are paying now in small lots. (see map for following). I have cruised all these hills and creeks, and find the following wood: 8000 cords green wood on Left Limit hill below 5-Mile, for one mile downstream, and 2½ miles up hill. This wood will average 8 inches straight through. 2000 cords big green wood on 5-Mile, going 7 miles to Summit on Main creek, and 10 miles on each of two branches. 25,000 cords or more on 12-Mile, as this creek is 15 miles long, and heavily wooded to the summit.

"Nothing on California except at mouth. 6000 or 7000 cords green wood on Left Limit hills of 60-Mile just upstream from 5-Mile Creek in area 2 miles long and 2 miles wide. 800 cords of dry wood on bench back of Boulais".

Herb. McDonald has furnished the Milvain Dredge on Miller Creek with wood for 2 years, is getting \$10.00 per cord in 4-ft. lengths landed on the almost inaccessible side hills along Miller Creek, after hauling the wood 2 miles down hill and one mile up hill. McDonald says that the hillsides below 5-Mile on the 60-Mile will furnish us 4000 cords to every mile, while there are thousands of cords besides on 5-Mile and 12-Mile, which creeks are heavily timbered right up to the ridges. In addition, each of the 60-Mile claims themselves should furnish a few hundred cords.

VI

TRANSPORTATION AND ROADS.

One of the main disadvantages of this country is its inaccessibility, especially in summer. The centre of our block of ground is 70 miles from Dawson by the river road taken by freighters in winter. Two or three thousand dollars spent in making cut-offs at bends in the rivers could easily reduce this to less than 60 miles. It would be difficult to transport dredge parts without many more improvements, especially in crossing the divide out of Swede Creek.

The summer road over the ridges to Glacier Creek (from which a cheap spur should be made to our block of ground) is about 60 miles long, and almost impassable for heavy loads throughout the summer. For 6 weeks during the period between April 20th and June 1st there is absolutely no means of traffic by either winter or summer road, using either wagons or sleighs.

The only solution to the problem of cheap transportation would be an entirely new road, leaving the ridges of the summer road and following the general location of the present winter road, but built on the sunny side hills above the glaciers and flood waters. By this means transportation could be kept open throughout the year, and heavy grades reduced.

The cost of such a road would be in the neighbourhood of \$100000.00. Many appeals have been made to the Government for such a road.

Following are distances from Dawson to various points along the winter trail, with their elevations above sea-level. We took the elevation observations with an aneroid.

	Distance between Points	Distance from Dawson	Elevation
Dawson	0	0	1050
North of Swede Creek	6	6	1050
12 Miles up Swede Creek	12	18	1500
22-Mile Road House, Swede Creek	4	22	1720
Swede Creek Divide	13	35	3350
Van Cleve Roadhouse-Head of Fish Creek	1	36	2920
Divide between California & Fish Creeks	1	37	3030
McDonald's-Calif.Creek 4 Miles up from 60-M.	13	50	1880
Claim 19 (Boulais) going Via 60-Mile River	20	70	-
" 5 (Woreau) " " " "	3	73	2040
Discovery on Glacier-Lesperance Roadhouse	4	77	2420

VII

THE EXAMINATION.

(a) Diary. On February 26th, 1914, you notified me to proceed to the scene of the recent gold discovery on the 60-Mile River, and make a preliminary examination. We spent a few days making a map and interviewing men familiar with the country. On March 22 we left Dawson, accompanied by Joe. Perron as confidential guide to help us gain admission

to the works of the prospectors. We arrived at Glacier Creek March 4th, and spent March 5th getting copies of all records of 60-Mile Claims from the Recorder's Office; March 6th and 7th making a tour of all prospecting, and making dates for our own sampling.

On March 8th, McFarland, Perron and Ferry sampled the shafts on Claim 11. Here it became evident that the prospectors on this claim would not admit Perron on their ground, so we were obliged to divide forces, Perron and McFarland taking the area above this claim, and Ferry that below. In the next 5 days 312 pans were taken below this claim at 34 different points including drifts, and 54 pans at and above this claim at 8 different points, making a total 6 days prospecting of 366 pans at 45 different points. In addition to those shafts and drifts sampled, information was recorded on shafts which we could not get into.

During these 6 days, various surveys of claims and shafts were made, with information for profiles where required.

On the morning of March 14th we left for Dawson meeting you the same day en route.

(b) Methods and Results. The method of sampling employed was as follows: A wood fire or steam point was put inside the shaft or drift at the point to be sampled, to thaw the ground. In nearly every case wood fires were used, the smoke of which prevented anyone from entering the shafts until we were ready to take our samples. The fire was then put

out, we went underground and cleaned away waste and into bedrock any dirt that had sloughed down, as well as the outer surface of the exposed face. This was a protection to us against salting. A canvas was then laid down on bedrock, and a uniform sample picked down from the top to bottom of pay on to the canvas. This sample was generally taken to the amount of one windlass bucket, or 8 pans. The sample was then rocked or panned, the gold dried, cleaned and weighed, and results tabulated on attached sheets, with measurements for depth, muck, gravel, etc.

We used the table of alluvial measures used as a standard in Fairbanks and Nome, and which we have checked at Dominion. This checked with the usages of some of the prospectors on the 60-Mile.

The principal equations we used were:-

6 pans = 1 Cu. Ft. in place.

8 pans = 1 Windlass bucket - loose

We checked the volume by taking sections 6" x 6" x 48" down the face for 6 pans.

Practically all our computations were made on this basis, for instance: 5-ft. thickness of pay, 8 pans to the sample gave 16¢ or 2¢ per pan. 5 ft. x 6 pans to each Cu.Ft. x 2¢ per pan = 60¢ for that volume 5 ft. high by 1 foot square = 60¢ per Sq. Ft. of bedrock. If ground was 15 ft. deep, then 60 x 9 divided by 5 equals 108¢ per Cu.Yd.

The attached sheets show the recorded data for each shaft, and a rough average for each cross cut, allowing value and width of pay channel.

(c) Following is a rough estimate of the gross Production and costs:

REVISED ESTIMATE MADE AFTER DATA WAS WORKED OUT (APRIL 4th).

Moving and rebuilding dredge	100,000.00
42 Miles High Tension Power Line at \$2000	84,000.00
Purchase Price 46200 lineal feet at \$8.00	369,600.00*
Working Cost 8,855,000 Cu. Yds. at 35¢	<u>3099,250.00</u>
Total Costs	3652,850.00
Gross Value 8,855,000 Cu.Yds at 75¢	<u>6641,250.00</u>
Net Profit	2988,400.00

* The total purchase price includes the cost of the extra ground optioned on Big Gold Creek, adjacent to the 60-Mile block, but no credit has been allowed it in "lineal feet purchased".

ORIGINAL ESTIMATE MADE BEFORE DATA WAS WORKED OUT-(March 17).

Moving and rebuilding Dredge	100,000.00
42 Miles High Tension Power Line at \$2000	84,000.00
Purchase Price 42000 running feet at \$9.00	378,000.00
Working Cost 8400000 Cu.Yds. at 35¢	<u>2940,000.00</u>
Total Cost	3502,000.00
Gross Value 8400000 Cu.Yds. at 60¢	<u>5040,000.00</u>
Net Profit	<u>1538,000.00</u>

Respectfully submitted,

D. H. FERRY,

WARREN McFARLAND.

Dawson, Y. T., Canada,

May 27th, 1914.

Mr. C. A. Thomas,

Resident Manager, Yukon Gold Co.,

Dawson, Y.T., Canada.

Dear Sir:-

I hand you herewith my report on the 1914 Drill Examination on the North Fork of the Sixtymile River, together with map of ground covered and reports on drill holes and shafts.

Respectfully yours,

(original signed by G. Costar)

REPORT
ON
SIXTYMILE DRILL EXAMINATION.
APRIL and MAY, 1914.

REPORT ON SIXTYMILE DRILL EXAMINATION

This examination was undertaken with the object in view of proving up and developing further the paystreak on the North Fork of the Sixtymile River, as outlined in the preliminary report on the shafts sunk by individual prospectors on this ground.

The plan of drilling called for a line of holes every half mile across the supposed location of the paystreak, the holes to be spaced 100' apart on the lines. This was thought sufficient to give enough information in regard to the block of ground to decide whether or not the options held by the Yukon Gold Company on the ground between the mouth of Miller Creek and the mouth of Twelvemile Creek should be taken up.

Drilling started April 6th, 1914, and continued without interruption until May 10th, 1914, when the work was shut down, the drills stored, and the crews brought back to Dawson. In the time elapsed 93 drill holes and 3 shafts were put down, with a total footage of 1697. 3' for the drill holes and 52.3' for the shafts. Shaft sinking, which is necessarily more expensive than drilling, was abandoned early in the examination due to the poor showing made by the drills in the samples they were returning.

Two drills were used in the examination, with day and night shifts on each. One drill was loaned to the Yukon Gold Company by the N. A. T. & T. Co., and the other by the Walkers Fork Gold Dredging Company which is

operating on Miller Creek under the supervision of Mr. R. H. Milvain. These two drills were both at Milvain's camp on Miller Creek, about 6 miles from our starting point in this examination and were easily hauled down with teams.

Eight lines of holes were put across the supposed location of the Sixtymile paystreak in the course of this examination, beside a few scattering holes put in to prove up doubtful spots. Only one line out of the eight showed good dredging value, and one line gave an average value just above dredging cost. The rest of the lines returned values so uniformly poor that no attempt will be made in this report to evaluate the ground drilled.

The first line of holes drilled by the H. A. T. machine - called Drill No. 2 during this work - is on Claim 19 below Big Gold, and the hillside adjoining it on the left limit. These claims are owned by M. K. Boulais. This line is parallel to and about 250' downstream from a line of shafts which were sunk by Boulais in prospecting his ground, and which showed very high values from the samples taken in them during the preliminary examination. Pay was found in only one hole on this drill hole line, and that was in Shaft #3. The value returned here was 50¢ per cu.yd. A drill hole 25' on one side of this shaft gave a value of 28¢ per cu. yd., and one 50' on the other side of the shaft gave a value of 1.3¢ per cu. yd., so it is evident that the value found in the shaft has very little extent.

As the drill progressed across the supposed location of the paystreak with such poor results it became more and more evident that either the shaft samples in the preliminary examination had been tampered with or that the ground was extremely spotted. In order to settle this question the drill was moved over to Boulais shafts. One hole was sunk about 20' directly downstream from Shaft #93 of the preliminary examination report, the original sample from which indicated a value of over \$2.00 per cu. yd. The drill result gave a value of 5.1¢ per cu. yd. Not entirely convinced I opened up this Shaft #93 and had two wood fires put in, - one in each drift from this shaft. Three large pans of material were taken from each thaw, - two pans in each case were of gravel from the top of bedrock up 3', and the third pan from each thaw was of bedrock alone. The results of this test were consistent at least, - the samples from both thaws were about the same and indicated a value of about 5¢ per cu. yd. for the ground, which checks the drilling result very closely. Two more drill holes were put down near Boulais' shafts, and both returned low values. As it seemed highly improbable that this ground could be as spotted as my sampling would indicate, if the ground here was as good as the preliminary examination showed, the only conclusion left to me was that the shaft samples were thoroughly and systematically salted.

After completing the prospecting at Boulais, the drill was moved upstream about a half mile and a line of holes 900' long put across the

"paystreak" near the upper end of Claim 15 Below Big Gold. The best hole on this line, which is called the "I" line, returned a value of 10.4¢ per cu.yd.

The Milvain Drill, called Drill No. 1, put its first line of holes, known as the "G" line, across the valley on Claim 5 Below Big Gold and paralleling the line of shafts sunk by Sam Moreau during the last three winters, 160' downstream from these shafts. Nineteen holes were put down on this line which is 1650' long. Dredgeable pay was not found in any of the holes on this line, even though the 100' spacing was cut to 50' in order to reduce the chances of error due to spotted ground in crossing Moreau's supposed paystreak on the left limit of the valley.

Moreau knows that the drilling results on his ground didn't come up to expectations. I gave him this information in order to get his ideas in regard to the poor showing, but he was unable to account for the difference, beyond the possibility that he may only have a spot. He thought the 50' spacing of the drill holes was close enough to find pay, had there been a run of it crossing the drill hole, line. He said that he had not done all the prospecting that he had wanted to do before his ground should be taken up by any company, but that when Perron brought the preliminary examiners over he had let his ground go under option rather than hold up the deal on the rest of the valley. Moreau also advanced the opinion that perhaps he had been salted by Boulais, who took samples from

Moreau's drifts during the course of Moreau's winter work in taking out a small dump. Moreau said that Boulais had taken the samples, but that he himself had done the panning.

After finishing these first three lines of holes both drills were started upstream to prospect the ground between Big. Gold and Miller Creeks as far as possible before high water and bad moving would shut down the examination for the summer. This move upstream was made on account of the poor showing on the first three lines of holes as the ground on the upper end of the property was supposed to carry better values than the ground below Big Gold, and it was thought best to prove up this upper end before carrying on an examination on the lower end where values were known to be poorer. If enough ground could be located between Big Gold and Miller to justify the installation of a dredge, further examination of the lower end of the property might then be worth while.

The first line of holes to show indications of pay is the "F" line, about a half mile above the line on Moreau's ground, and in the mouth of Big Gold. This line showed dredgeable value in three holes, but the good holes were 300' apart, with poor ones between, which showed the ground to be badly spotted. The average value per cu.yd. for the 700' between Drill Holes 54 and 51-C is 35.3¢, after reducing the value of Drill Hole 51-A to 75¢ per cu.yd. to avoid giving too much weight to the high value found at this hole.

Dredgeable value was expected here at the mouth of Big Gold, as the drill hole line was put across ground that had three chances for enrichment. It was far enough out in the Sixtymile flat to catch the Sixtymile run of gold and also far enough into the mouth of Big Gold to be enriched by the pay carried down by that creek. In addition to these two possible sources the benches on the left limit of Big Gold, being worked by W. R. Miller, probably contributed to the deposit found on this line. Owing to the very spotted nature of the ground however, it is doubtful if the good spots would be able to bring up the value of the poor ones much above dredging cost.

Only three holes were put down on the first line above Big Gold. This is the "E" line on Claim 4 Below 0 on the Sixtymile. All three of these holes showed very poor value, and two of them should have found pay if a continuous paystreak exists as outlined in the preliminary examination. It was necessary to discontinue drilling on this line before it was finished in order to get above some bad places in the Sixtymile River before the running water and bad ice should interfere seriously with moving the drill.

Both drills and the camp were moved up to the upper end of the property without any serious difficulty and the examination of the mile and a half of ground immediately below the mouth of Miller Creek began

with Drill No. 1 working on Line "C" on Claim (*ILLEGIBLE*) Above 0 on the Sixtymile, and Drill No. 2 on Line "B" on Claim (*ILLEGIBLE*) Above 0.

Line "C" proved to be very much of a disappointment. Eleven holes were sunk on this line, giving a cross out 850' long and pay was located in only one hole. This hole (No. 27) gave a value of 98.4¢ per cu.yd., but holes put down 50' on each side of the good hole gave values of 6.3¢ and 5.5¢ respectively. No. 27 is apparently just a spot.

Line "B" is the only line of this examination that showed good value, and it is my opinion that this line will represent the value to be expected from the strip of ground under the benches now being worked by J.P. Miller and the N. A. T. & T. Co. The average value for this line for 400' is 70.2¢ per cu.yd. There is probably about 1500' of this pay under Miller's benches which will possibly average 300' wide and 5 yds. deep. At 70¢ per cu.yd. this will give a gross value of \$175,000.00 for Miller's ground in pay.

It was impossible to get any lines across the N. A. T. & T. Co's. ground, so there is no definite information to go by but is my opinion that about the same gross value can be expected there as on Miller's ground. These two blocks of ground are separated however by about 1200' of ground which probably contains nothing beyond a few spots, as evidenced by Drill Hole line "C".

There is a point of rock running out from the left limit hill opposite Claim 13 Above 0 on the Sixtymile, and it was thought that possible the pay washed down from Miller's benches might have been thrown out into the valley by this point. Three holes, - Nos. 16-A, 16-B, and 16-C, - were put down just above this point on a line that should have intersected at right angle any line of pay that might have been thrown out by the rock point. These three holes all showed poor value, giving still further evidence of the non-continuity of the paystreak.

The last long line of holes to be put down in this examination is the "A" line, on Claim 18 Above 0 on the Sixtymile. Very poor values were recovered here. The drill hole line is only about 20' upstream from a line of shafts which were reported to the preliminary examiners as carrying value equivalent to 75¢ per cu. yd. The comparison afforded by the drilling results gives some idea of the dependability of local information.

The bench ground now being worked by Miller and the N. A. T. & T. Co. just below Miller Creek is very probably a continuation of the high channel from which Miller Creek got its enrichment. This old channel swings away from Miller Creek about a mile from the mouth of Miller, and cuts across a wide bench on the right limit of this creek, reappearing on the Sixtymile side where J. P. Miller is working.

Where these benches have been partly cut away by the action of the Sixtymile and the pay not badly scattered there is probably dredgeable pay. Where the high channel swung out across the present Sixtymile valley and was cut entirely away, I believe that the gold is too widely scattered over this wide valley to produce a dredgeable concentration, except in occasional spots.

Mr. R. H. Milvain, Manager of the Walkers Fork Gold Dredging Company, now operating near the mouth of Miller Creek, consulted with me on various locations during this examination. He approved of the methods pursued in testing this ground and considered that the property had been given as thorough an examination as the drilling results justified. His opinions in regard to the Sixtymile valley are about the same as my own, - that there are limited areas of dredgeable pay under the benches near the upper end of the property, but that there is no body of pay forming a continuous dredgeable paystreak.

Thanks are due Mr. Milvain for his assistance and advice during the course of this examination, and to Mr. Milvain and the N. A. T. & T. Co. for the use of their Keystone Drills and equipment.

Attached hereto are the individual drill hole and shaft reports, together with map of the ground covered in this examination, showing locations of holes.

CONCLUSION

It is my opinion that the portion of the Sixtymile valley prospected during this examination will not make a dredging proposition. There are undoubtedly some very good spots, limited in extent, but no indications of a continuous paystreak were found.

Owing to the very spotted nature of the ground, only a very close and expensive drill examination could give the information necessary to show whether or not even the best part of the ground could be dredged at a profit. From the very poor showing found in this examination, I do not believe that further work on the Sixtymile is justified.

(Original signed by G. Costar)

YUKON GOLD COMPANY

SUMMARY OF SIXTYMILE DRILL HOLES

<u>LOCATION</u>	<u>HOLE NO.</u>	<u>VALUE PER CU. YD.</u>	<u>TOTAL DEPTH</u>	<u>MUCK</u>	<u>FROST</u>
Cl. 19 Bel. Big Gold and L.L. Hillside.	100	1.6c	14.0'	*	T
	99	Trace	13.0'		T
	98	5.6c	14.5'		F
	Shaft 1	8.7c	12.5'		F
	97-A	6.6c	16.8'		F
	97	24.9c	21.0'		F
	Shaft 2	4.2c	19.5'		F
	96	1.3c	23.0'		F
	Shaft 3	50.7c	20.3'		F
	95-A	28.0c	20.5'		F
	95	14.1c	23.8'		F
	94-A	10.0c	24.0'		F
	94	10.9c	23.3'		F
	93	6.5c	28.0'		F
	92	9.1c	24.8'		F
	91	31.6c	26.3'		F
	91-B	22.4c	24'		F
	91-A	Trace	27.5'		F
	91-C	5.1c	21.5'		F
	91-D	15.6c	20.0'		F
91-E	36.7c	22.3'		F	
"I" Cl. 15 Bel. Big Gold	81	10.4c	18.5'		F
	82	0.8c	17.0'		F
	83	Blank	13.8'		F
	84	6.2c	14.0'		F
	85	0.6c	15.5'		F
	86	5.8c	17.5'		F
	87	1.4c	17.5'		F
	88	8.2c	17.5'		F
	89	Trace	17.3'		F
	90	Trace	15.3'		F

* Muck figures are illegible and have therefore been omitted

**SIXTY MILE PLACERS LTD.
HARD ROCK EXPLORATION REPORT**

**Page #71
Attachment 1**

LOCATION	HOLE NO.	VALUE PER CU. YD.	TOTAL DEPTH	MUCK	FROST
Cl. 5 Bel. Big Gold	62	6.4¢	34.5'	11'	F
	62-B	5.8¢	28.8'	20½'	F
	62-A	10.5¢	28.8'	15'	F
	62-C	16.0¢	24.0'	11'	F
	63	4.4¢	23.0'	8'	F
	63-A	4.7¢	21.5'	5'	F
	64	9.1¢	21.5'	5'	F
	64-A	Trace	19.5'	7'	F
	65	5.2¢	19.5'	7'	F
	65-A	18.0¢	19.2'	8'	F
	66	1.5¢	16.5'	9'	F
	66-A	1.0¢	18.5'	8'	F
	67	1.3¢	14.5'	3'	F
	67-A	Trace	15.5'	4'	F
	68	6.0¢	16.0'	1'	F
	68-A	4.3¢	15.5'	5½'	F
	69	2.4¢	16.0'	2'	F
	69-A	6.8¢	17.0'	5'	F
	70	2.6¢	16.5'	8'	F
	"F" Claims 1-A,2-A & 1				
Below Big Gold	51-C	56.2¢	16.0'	4'	F
	51-B	6.2¢	15.5'	2'	F
	51-A	147.3¢	16.5'	3'	F
	51	25.3¢	15.5'	2'	F
	52	21.9¢	17.5'	3'	F
	53	12.3¢	16.0'	3'	F
	54	50.6¢	16.5'	4'	T-5'to10'
	55	12.1¢	15.0'	1½'	F
	56	4.2¢	19.5'	10'	F
	"E" Cl.4Below "0" on Sixy Mile				
	46	1.4¢	17.5'	0'	T-4'to10'
	48	10.2¢	18.3'	5'	F
	50	Trace	15.0'	6'	F

**SIXTY MILE PLACERS LTD.
HARD ROCK EXPLORATION REPORT**

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Attachment J

LOCATION	HOLE NO.	VALUE PER CU. YD.	TOTAL DEPTH	MUCK	FROST
Cl.11 & 12 Ab."Ø" on Sixtymile	21	Trace	18.5'	12½'	F
	22	Trace	19.0'	8'	F
	23	28.4c	23.0'	7'	F
	24	13.1c	17.5'	5'	F
	25	14.4c	16.0'	1½'	F
	26	13.5c	17.0'	3'	F
	28-A	6.3c	16.0'	3½'	F
	27	98.4c	20.0'	1½'	T-10'to17'
	27-A	5.5c	17.5'	2'	F
	28	10.7c	18.0'	1'	F
	29	0.	16.0'	3'	T
	Special L.L.Cls13&14 Ab."Ø" on Sixtymile	16-A	14.0c	16.5'	5½'
16-B		19.3c	14.7'	1'	F
16-C		16.8c	13.7'	7'	F
"B"Cl. 15 Ab."Ø" on Sixtymile & L.L. Hillside	11	153.0c	12.8'	1'	F
	12	8.6c	11.3'	2'	F
	13	105.9c	15.2'	1½'	F
	13-A	119.4c	14.9'	1½'	F
	14	29.7c	15.5'	2'	F
	14-A	58.6c	17.3'	3'	F
	15	16.4c	17.5'	3'	F
	16	0.	16.5'	5'	F
Special Cl.16 Ab."Ø" on Sixtymile	10-E	10.2c	16.0'	7'	F
	10-F	7.3c	16.5'	1'	T
Special Cl.17 Ab. "Ø" on Sixtymile	10-C	Trace	14.5'	5'	F
	10-D	50.3c	14.5'	6'	F
"A" Cl.18 Above "Ø" on Sixtymile	1	6.8c	17.5'	3'	F
	2	2.8c	13.5'	4½'	F
	3	6.2c	17.0'	10'	F

**SIXTY MILE PLACERS LTD.
HARD ROCK EXPLORATION REPORT**

**Page #73
Attachment 1**

<u>LOCATION</u>	<u>HOLE NO.</u>	<u>VALUE PER CU. YD.</u>	<u>TOTAL DEPTH</u>	<u>MUCK</u>	<u>FROST</u>
Cl. 18 Above "Ø" on Sixtymile	4	4.2¢	16.0'	9'	F
	5	5.1¢	20.5'	6'	F
	6	Trace	20.0'	4'	F
	7	18.6¢	16.5'	4'	F
	8	Ø	12.5'	4'	F

**SIXTY MILE PLACERS LTD.
HARD ROCK EXPLORATION REPORT**

Page #74
Attachment 1

	<u>Map #95.</u> <u>Shaft 4.</u>	<u>Map #94.</u> <u>Shaft 3A</u>	<u>Map #94</u> <u>Drift 3B.</u>	<u>Map#93</u> <u>Shaft 2A.</u>	<u>Map #93.</u> <u>Drift 2B.</u>	<u>Map #93.</u> <u>Drift 2C.</u>
Depth (Ft.)	28.5	21	-	21	-	-
Muck "	7	5	-	5	-	-
Gravel "	13	14	-	14	-	-
Bed Rock "	0.5	2	-	2	-	-
Character of Bed- Rock)	Soft Schist	Soft Schist	Soft Schist	Soft Schist	Soft Schist	Soft Schist
Thickness) Gravel-Ft.) of) Bedrock") pay.)	5 0.5	4.5 1.	2 2	2.5 1.5	3 2	2.5 2.5
No. of Pans taken	8	8	8	8	8	8
Value per Pan (Cents)	1.43	3.5	5.3	7.5	7.8	9.7
Value per Sq.Ft. "	47.2	115.5	127.8	188.8	234.8	291.8
Value per Cu.Yd. "	62.5	<u>148.5</u>	<u>163.5</u>	<u>231.4</u>	<u>308.9</u>	<u>374.1</u>
Value per Cu.Yd. Allowed		156.8			382.1	

	<u>Map#92</u> <u>Shaft #1.</u>	<u>Map #92.</u> <u>Drift #1.</u>	<u>Map #92</u> <u>Drift #1</u>	<u>Map #22</u> <u>Shaft #2</u>	<u>Map #98.</u> <u>Shaft #6.</u>
Depth (Ft.)	18	-	-	13	8.5
Muck "	3	-	-	9	1
Gravel "	13	-	-	3	6.5
Bed Rock "	2	-	-	1	1
Character of Bed- Rock)	Soft Schist	Soft Schist	Soft Schist	Soft Schist	Soft Schist
Thickness) Gravel-Ft.) of) Bedrock") pay.)	2 2	1.5 2.5	2 1	3 1	5 1
No. of Pans taken	8	8	8	7	8
Value per Pan (Cents)	1.13	2.55	2.21	2.2	8.14
Value per Sq.Ft. "	27.1	61.2	39.8	52.1	5.84
Value per Cu.Yd. "	<u>48.6</u>	<u>91.8</u>	<u>59.7</u>	188.2	16.2
Value per Cu.Yd. Allowed		64.8		188.2	19.3*

**SIXTY MILE PLACERS LTD.
HARD ROCK EXPLORATION REPORT**

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Attachment 1**

AVERAGE VALUE- 119 Cents per Cu. Yd. for 450 feet wide. (Note - This value of 119 Cents is obtained by taking an average of each drift before making the general average to avoid giving too much weight to the samples which were spaced close in the drift. Allowing all samples on equal weight gives average of 145 Cents.)

AVERAGE DEPTH- 17 Ft., Avg. Muck 5 Ft.

REMARKS- Since this sampling was done, Boulais reports approximately the same pay in Map Nos. 89, 88 and 85. This adds 450 feet to the width of pay channel, giving a total width of 900 ft. Much of the latter should lie in thawed ground, as evidenced by the points T.T.T. (directly down stream from Map Nos. 89 to 88) where Boulais could not sink on account of thawed ground.

* This value of 19.3 Cents is the average of two independent samples taken in this shaft. Both are probably too low in value, due to the face having frozen back, which permits of only a poor sample being taken.

IN THE MATTER of the Yukon Placer Mining Act.

And in the Matter of the Representation Work on placer mining claims on the North Fork of the Sixtymile River, on Big Gold Creek and on Fivemile Creek in the Sixtymile Mining Division of the Yukon Territory, and on which Yukon Gold Company has Options.

And in the matter of the Application for a renewal grant of Creek Claim No. 13 Below Fivemile Creek on the North Fork of the said Sixtymile River.

I CHESTER ASHLEY THOMAS of Dawson in the Yukon Territory, Resident Manager of Yukon Gold Company, make oath and say:

1. That Yukon Gold Company sank 18 holes on creek placer mining claim No. 19 Below Big Gold Creek, in the Sixtymile Mining Division of the Yukon Territory, and on Hillside claim No. 9 adjoining the said creek claim. The total depth of the said 18 holes is 388.5 feet, the minimum depth is 13 feet, the maximum depth is 28 feet and the average depth is 21.5 feet. That hereunto annexed and marked exhibit "A" to this my affidavit is a blueprint showing the said claims and the relative positions of the said holes on the said claims.

2. That Yukon Gold Company sank 10 holes on creek claim No. 15 below Discovery on the said Big Gold Creek. The total depth of the said 10 holes is 164.3 feet, the minimum depth is 13.8 feet, the maximum depth is 18.5 feet and the average depth is 16.43 feet. That hereunto annexed and marked Exhibit "B" to this my affidavit is a blue print showing the said claim and the relative positions of the said holes on the said claim.

3. That Yukon Gold Company sank 19 holes on creek placer mining claim No. 5 below Discovery on the said Big Gold Creek. The total depth of the said 19 holes is 386.3 feet, the minimum depth is 14.5 feet, the maximum depth is 34.5 feet and the average depth is 20.33 feet. That hereunto annexed and marked Exhibit "C" to this my affidavit is a blue print showing the said claim and the relative positions of the said holes on the said claim.

4. That Yukon Gold Company sank 9 holes on creek claims Nos. 1-A, 2-A and 1 Below Discovery on the said Big Gold Creek. That the total depth of the said 9 holes is 148 feet, the minimum depth is 15 feet, the maximum depth is 19.5 feet and the average depth is 16.44 feet. That hereunto annexed and marked Exhibit "D" to this my affidavit is a blue print showing the said claims and the relative positions of the said holes on the said claims.

5. That Yukon Gold Company sank 3 holes on creek placer mining claim No. 4 Below 0 on the North Fork of the Sixtymile River in the Sixtymile Mining Division of the Yukon Territory. The total depth of the said 3 holes is 50.8 feet, the minimum depth is 15 feet, the maximum depth is 18.3 feet, and the average depth is 16.93 feet. That hereunto annexed and marked Exhibit "E" to this my affidavit is a blue print showing the said claim and the relative positions of the said holes on the said claim.

6. That Yukon Gold Company sank 11 holes on creek claims Nos. 11 and 12 Below 0 on the North Fork of the said Sixtymile River. The total depth of the said 11 holes is 198.5 feet, the minimum depth is 16 feet, the maximum depth is 23 feet and the average depth is 18.04 feet. That hereunto annexed and marked Exhibit "F" to this my affidavit is a blue print showing the said claims and the relative positions of the said holes on the said claims.

7. That Yukon Gold Company sank 3 holes on creek claims Nos. 13 and 14 above 0 on the North Fork of the said Sixtymile River, and on the hillside claims on the left limit of the said creek claims. The total depth of the said 3 holes is 44.9 feet, the minimum depth is 13.7 feet, the maximum depth is 16.5 feet and the average depth is 14.96 feet.

8. That Yukon Gold Company sank 8 holes on creek claim No. 15 above \emptyset on the North Fork of the said Sixtymile River and on the hillside claim on the left limit of the said creek claim. The total depth of the said 8 holes is 121 feet, the minimum depth is 11.3 feet, the maximum depth is 17.5 feet and the average depth is 15.1 feet.

9. That Yukon Gold Company sank 2 holes on creek claim No. 16 above \emptyset on the North Fork of the said Sixtymile River. The total depth of the said 2 holes is 32.5 feet, the minimum depth is 16 feet, the maximum depth is 16.5 feet and the average depth is 16.25 feet.

10. That Yukon Gold Company sank 2 holes on creek claim No. 17 above \emptyset on the North Fork of the said Sixtymile River. The total depth of the said 2 holes is 29 feet, the minimum depth is 14.5 feet, the maximum depth is 14.5 feet and the average depth is 14.5 feet.

11. That hereunto annexed and marked Exhibit "G" to this my affidavit is a blue print showing the respective positions of the said holes on the said creek claims Nos. 13, 14, 15, 16 and 17 above \emptyset on the North Fork of the said Sixtymile River, and of the respective hillside claims on the left limit of the said claims.

12. That Yukon Gold Company sank 8 holes on creek claim No. 18 above 0 on the North Fork of the said Sixtymile River. The total depth of the said 8 holes is 133.5 feet, the minimum depth is 12.5 feet, the maximum depth is 20.5 feet and the average depth is 16.68 feet. That hereunto annexed and marked Exhibit "H" to this my affidavit is a blue print showing the said claim and the relative positions of the said holes on the said claim.

13. That hereunto annexed and marked Exhibit "I" to this my affidavit is a blue print giving a resume of all of the said holes sunk on the said claims and showing the respective depths of each hole, and the total depths of the several holes sunk on each claim respectively.

14. That Yukon Gold Company has Options for the purchase of the said claims upon which the said work was done from the owners of the said claims.

15. That yukon Gold Company sank the said holes by means of a Keystone Drill. The said holes were sunk for the purpose of prospecting the said claims with a view to mining them by the dredging process, and the drilling operations in sinking the said holes were carried on in a

systematic and scientific manner with a view to determining the paystreak of the said claims and the extent and direction of the same.

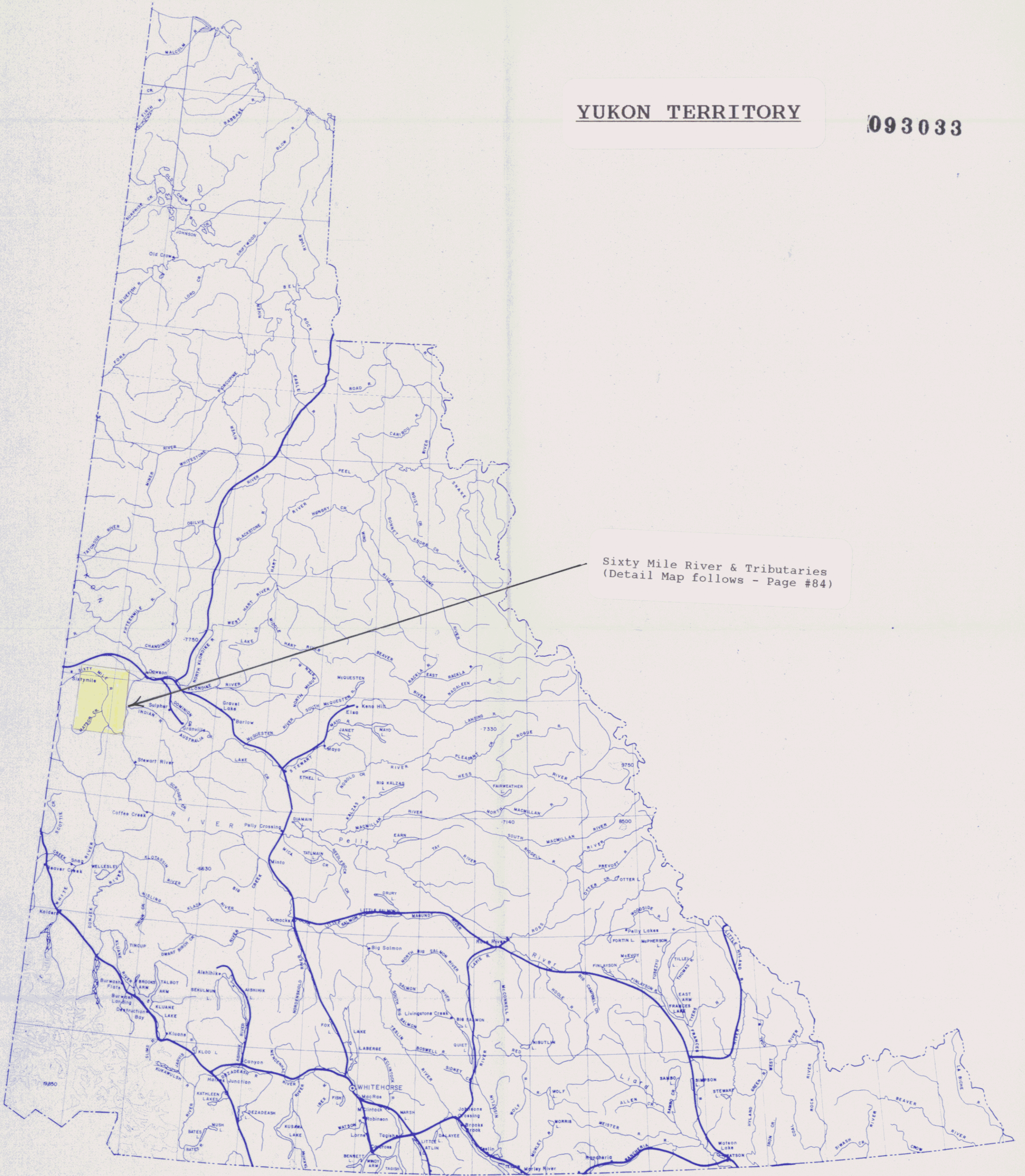
16. That in doing the said drilling Yukon Gold Company expended the sum of over Ten Thousand (\$10,000.00) Dollars.

17. That the said drilling amounting to over Ten Thousand (\$10,000.00) Dollars is inclusive of the work referred to in,

- (a) My affidavit of May 2, 1914, for a renewal of Hillside claim No. 2 Below Hill Discovery on the left limit of the North Fork of the said Sixtymile River, swearing in \$200.00 of work.
- (b) My affidavit of May 5, 1914, for renewals of creek claims Nos. 15, 16 and 21 Below Fivemile Creek on the North Fork of the said Sixtymile River, swearing in \$600.00 worth of work.
- (c) My affidavit of May 5, 1914, for a renewal grant of creek claim No. 20 on Fivemile Creek on the North Fork of the said Sixtymile River, swearing in \$200.00 worth of work.

YUKON TERRITORY

093033



Sixty Mile River & Tributaries
(Detail Map follows - Page #84)

Glacier
Creek

Little
Gold Cr.

Five Mile Cr.

California
Creek

Fish
Creek

**SIXTY MILE PLACERS LTD.
HARD ROCK EXPLORATION REPORT**

Boucher Creek

Enchantment
Creek

Fifty Mile
Creek



SCALE
1 Inch = 4 Miles

Matson
Creek

SIXTY
MILE
RIVER

YUKON
RIVER

SIXTY MILE RIVER AND TRIBUTARIES

093033

Ten Mile
Creek

40		
38	83	84
GOLD	BIG GOLD	
YB23740	YB23517	YB23518
36	81	82
GOLD		
YB23738	YB23515	YB23516
34	79	80
YB23736	YB23513	YB23514
32	77	78
BIG GOLD		
YB23734	YB23511	YB23512
30	75	76
YB23732	YB23509	YB23510
28	73	74
BIG GOLD		
YB23730	YB23507	YB23508
26	71	72
GOLD		
YB23728	YB23505	YB23506
24		
YB23726		
22		
YB23724		
20		
YB23722		
18		
YB23720		
16		
GOLD		
YB23718		
3500		

116C-2b

116C-2a

Five Mile Creek

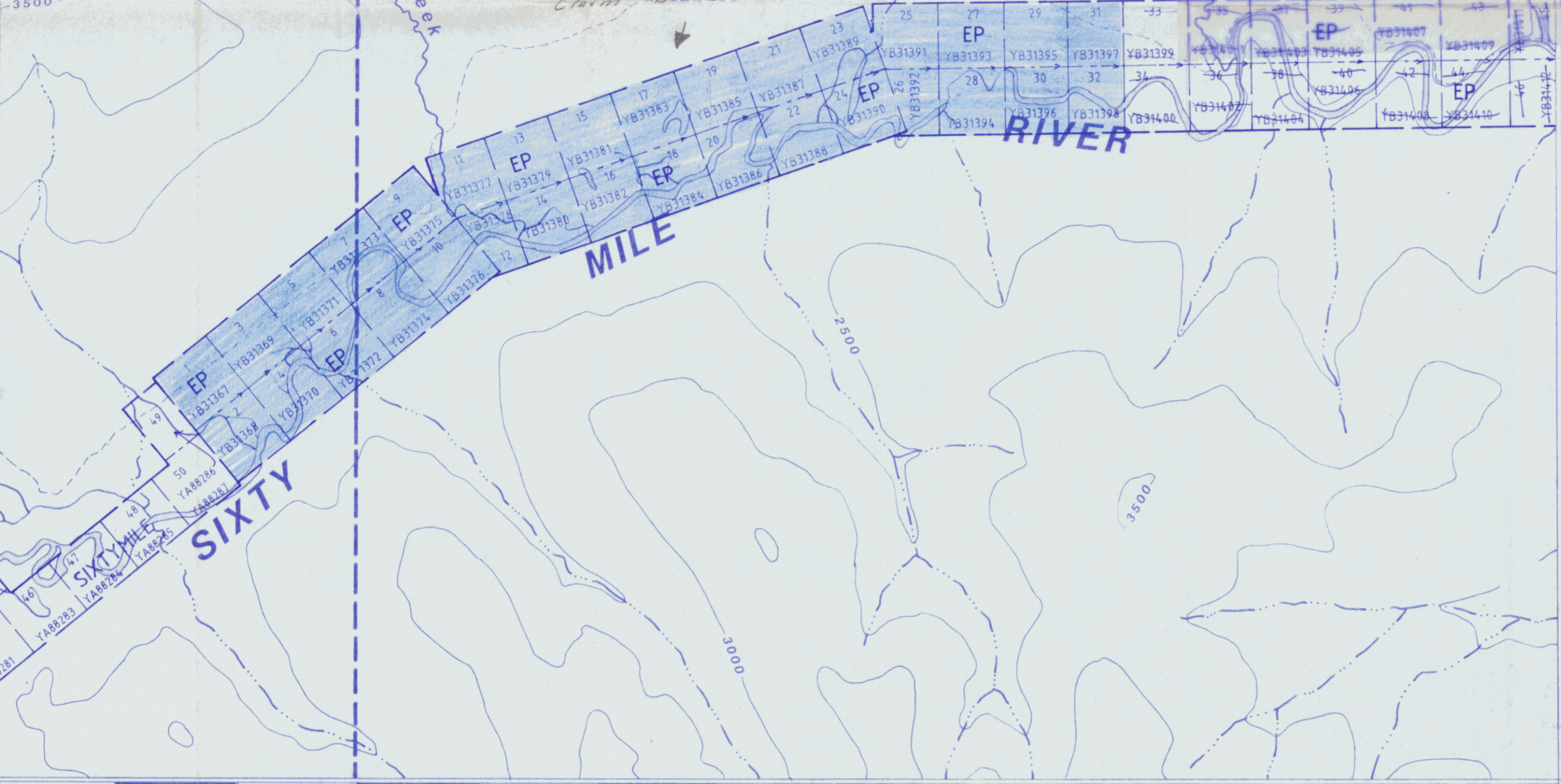
Twelve Mile Creek

Claim Block #1

MILE

RIVER

SIXTY



40'

35'

140° 30'

64° 00'

Quartz Claim Map 116-C-2

880800

05'

S-14

California

2500

3000

3500

3000

2000

2500

3500

3000

OWEN 1
YA10439
O'DELL 1
YA10440

Sixty

CLAIMS BLOCK #2

Mile

S-75
Creek

River

CLAIMS BLOCK #3

Fish

Boucher

MAP# 1154/16, 116/12
DOC# 093033

431

64°00'

140°30'

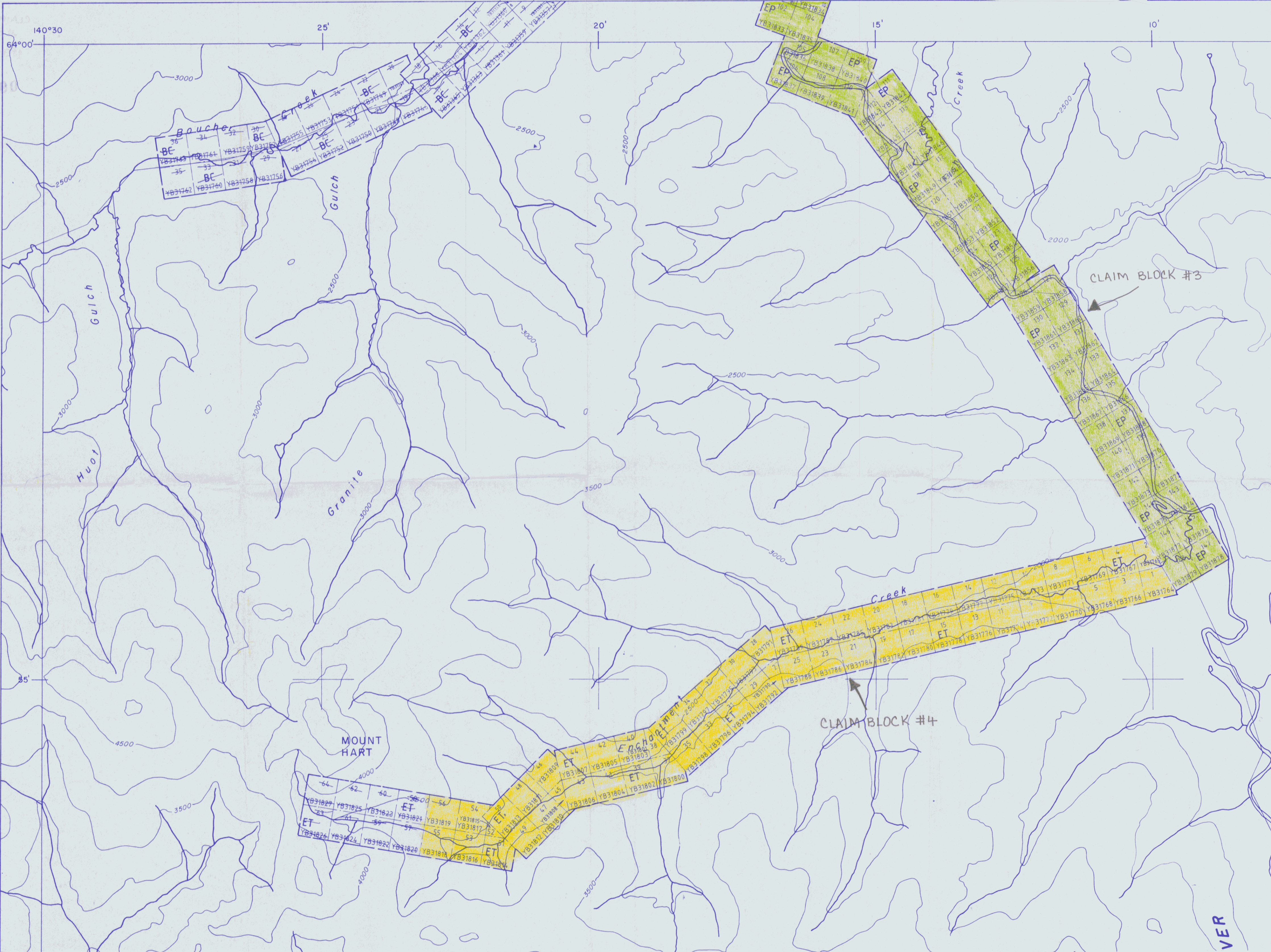
25'

20'

15'

QUARTZ CLAIM MAP

116C-1



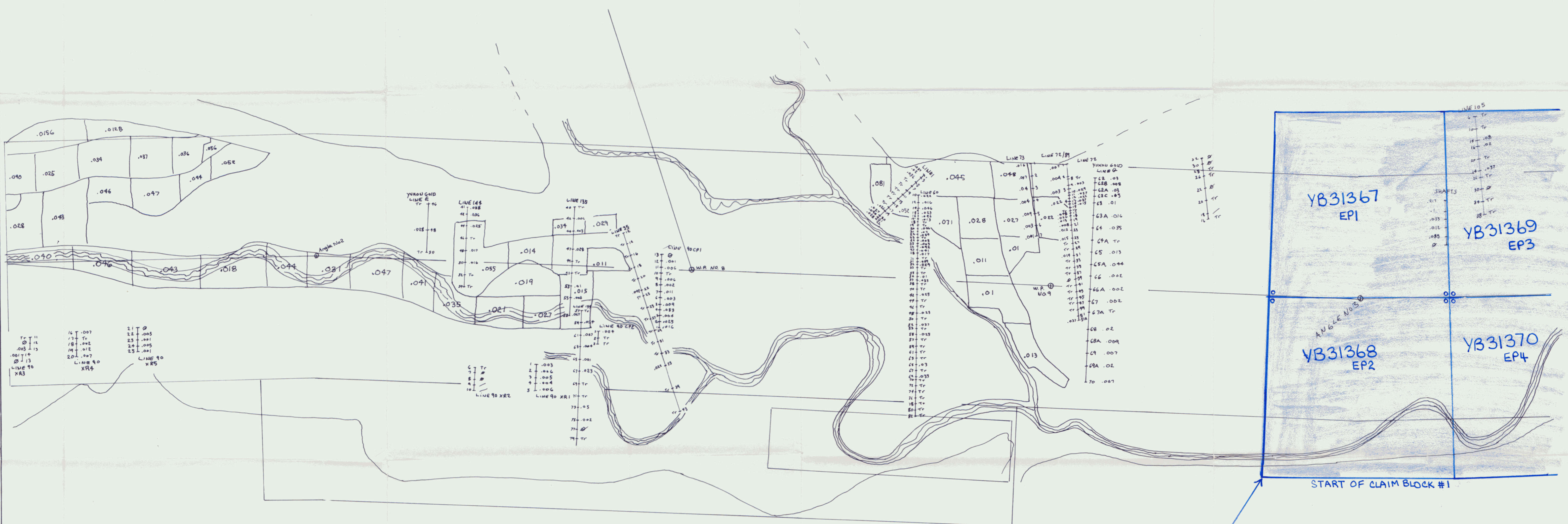
Doc# 093033

MAP# 115 N/116, 116/112

(430)

QUARTZ CLAIM MAP 115N-16

VER



Tr 11
16 T .007
17 T .011
18 T .012
19 T .013
20 T .014
21 T .015
22 T .016
23 T .017
24 T .018
25 T .019
26 T .020
27 T .021
28 T .022
29 T .023
30 T .024
31 T .025
32 T .026
33 T .027
34 T .028
35 T .029
36 T .030
37 T .031
38 T .032
39 T .033
40 T .034
41 T .035
42 T .036
43 T .037
44 T .038
45 T .039
46 T .040
47 T .041
48 T .042
49 T .043
50 T .044
51 T .045
52 T .046
53 T .047
54 T .048
55 T .049
56 T .050
57 T .051
58 T .052
59 T .053
60 T .054
61 T .055
62 T .056
63 T .057
64 T .058
65 T .059
66 T .060
67 T .061
68 T .062
69 T .063
70 T .064
71 T .065
72 T .066
73 T .067
74 T .068
75 T .069
76 T .070
77 T .071
78 T .072
79 T .073
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82 T .076
83 T .077
84 T .078
85 T .079
86 T .080
87 T .081
88 T .082
89 T .083
90 T .084
91 T .085
92 T .086
93 T .087
94 T .088
95 T .089
96 T .090
97 T .091
98 T .092
99 T .093
100 T .094
101 T .095
102 T .096
103 T .097
104 T .098
105 T .099
106 T .100

ELDORADO PLACERS LTD
VALUES MAP 1

VALUES oz / Bedrock yd

1989
1990

1/4" = 100'

093033

435
 MAP# 115 1/16, 1/16 1/12
 DOC# 093033

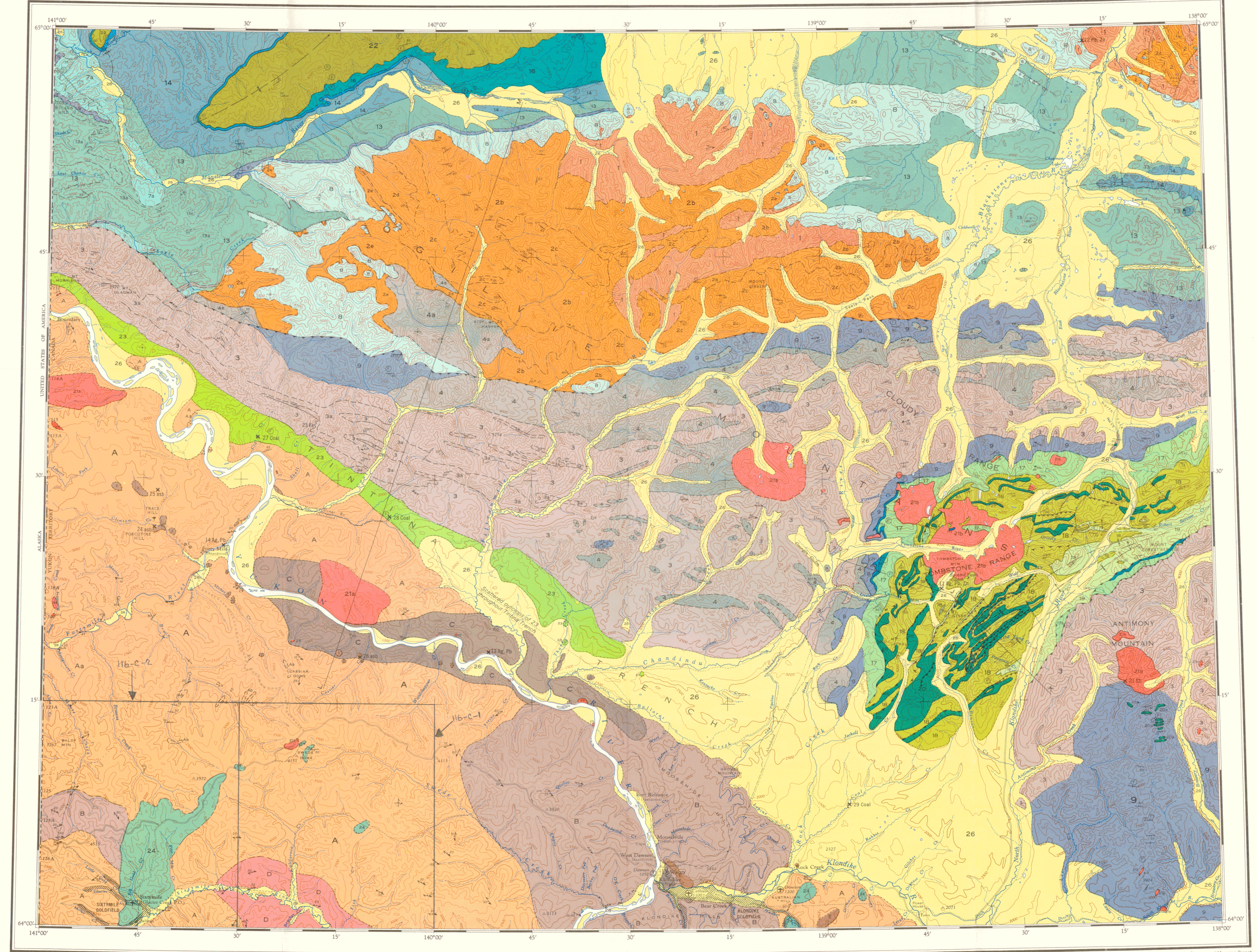
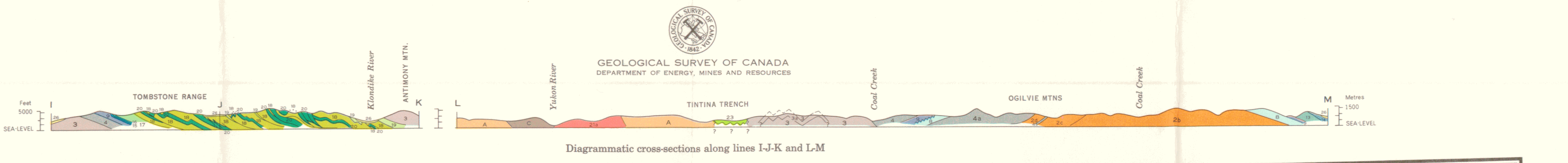
LEGEND

Note: this legend is common to maps 1282A, 1283A and 1284A

- QUATERNARY**
- 26 Unconsolidated glacial and alluvial deposits
- TERTIARY**
- 25 Quartz porphyry
 - 24 Dark grey and brown andesite and basalt, commonly porphyritic; minor shale, sandstone, and conglomerate
 - 23 Poorly consolidated, brown, buff, and grey, arkosic and micaceous sandstone, light and dark shale, poorly sorted conglomerate; minor lignite
- CRETACEOUS AND TERTIARY (?)**
- UPPER CRETACEOUS AND LATER (?)
- 22 MONSTER FORMATION: 22a, brown-weathering, thin-bedded, brown chert-grain sandstone, siltstone, shale, and fine chert-pebble conglomerate
 - 20a Orange- to brown-weathering diorite and gabbro; altered equivalents; may be older than 20
- CRETACEOUS**
- 21 21a, fine- to coarse-grained, uneven textured, biotite granodiorite and biotite quartz monzonite; 21b, mainly hornblende and hornblende/biotite syenite, commonly porphyritic (potassium feldspar phenocrysts); uneven textured, mostly medium-grained, locally fine or coarse-grained; minor diorite
 - 20 Orange- to brown-weathering diorite and gabbro; altered equivalents; 20a, may be older
 - 19 Mottled green and maroon shale and brown-weathering, thin-bedded, brown siltstone, commonly limy
 - 18 KENO HILL QUARTZITE: grey and blue-grey, massive quartzite; minor slate and phyllite, commonly graphitic, argillaceous quartzite; 18a, thin-bedded and phyllitic quartzite, graphitic and chloritic slate and phyllite; minor limestone and massive quartzite; 18b, as 18 but may be older
 - 17 LOWER SCHIST division: dark grey argillite, slate, and phyllite, commonly graphitic, thin-bedded dark grey quartzite, platy to phyllitic quartzite, minor phyllite and limy quartzite; 17a, probable equivalent?
 - 16 Black-weathering, platy, black limy shale and limestone, thin bands of grey- to buff-weathering limestone
- TRIASSIC**
- 16 Black-weathering, platy, black limy shale and limestone, thin bands of grey- to buff-weathering limestone
- PERMIAN**
- 15 TAHKANDIT FORMATION: white, light grey, and dark grey chert, cherty limestone, and limestone
 - 15a Limestone with some chert
- CARBONIFEROUS TO PERMIAN**
- 14 Buff-weathering, dark grey, thin- to medium-bedded limestone; minor black shale, chert, and chert-pebble conglomerate; 14a, dark shale, argillaceous limestone, and thin-bedded brown sandstone; minor chert-pebble conglomerate; 14b, black- and silvery-weathering shale and slate; minor platy, buff-weathering grey limestone, impure sandstone
- DEVONIAN TO CARBONIFEROUS**
- MIDDLE DEVONIAN TO CARBONIFEROUS
- 13 Black shale, argillite, and slate, black platy limestone, chert; minor chert-pebble conglomerate and quartzite; 13a, Nation River Formation: brown-weathering fine chert-pebble conglomerate and chert-grain sandstone may, in part, be younger Monster Formation (22)
- DEVONIAN**
- LOWER DEVONIAN
- 11 Limestone, dark grey, brown and black, massive to thin-bedded, very fine grained, buff-grey-weathering
 - 10 Limestone and dolomite, light grey and dark brownish grey, fine to medium grained, mostly alternating dark and light beds 2 to 5 feet thick
- SILURIAN (?) TO MIDDLE DEVONIAN
- 12 Dark grey-weathering, black, thin-bedded, platy limestone, commonly argillaceous and locally siliceous, and interbedded black chert
- ORDOVICIAN AND SILURIAN**
- ROAD RIVER FORMATION: mainly interbedded black chert and black argillite, also grey-green, olive-green, and grey chert and grey-green argillite; minor quartzite, and chert-pebble conglomerate
- 9
 - 8 Grey- and buff-weathering dolomite and limestone, mostly medium to thick bedded; minor platy black argillaceous limestone and dolomite (may include some 9, 10, and 11); 8a, grey- to dark grey-weathering, dark volcanic rocks many partly serpentinized, brown-weathering grey-green limy tuff and argillite, and thin-bedded brown limestone
- CAMBRIAN**
- MIDDLE (?) AND UPPER CAMBRIAN
- 6 Buff, brown, and grey-weathering, thin- to medium-bedded limestone, and grey-weathering thin- to thick-bedded dolomite; minor brown and green shale and orange-weathering dolomite
- LOWER CAMBRIAN TO ORDOVICIAN (?)
- 7 Grey-weathering, brown to buff limestone and limestone conglomerate; 7a, grey-weathering, medium- to thick-bedded limestone and dolomite (may include some Precambrian)
- CAMBRIAN (?)**
- 5 Mainly brick-red, thick-bedded to massive sandstone and red to buff massive conglomerate; minor red shale; local andesitic or basaltic flows and sills
- PRECAMBRIAN AND/OR LATER**
- 4 Dark brown- and green- to light grey-weathering dark green volcanic rocks, commonly with calcite filled vesicles, breccia, tuff, and agglomerate; minor interbedded shale, chert, siltstone, and limestone; 4a, dark brown to dark green-weathering dark green volcanic rocks, commonly with calcite-filled vesicles, breccia, tuff, and agglomerate, interbedded with 2d and may be older; 4b, dark green, fine-grained andesite
- PRECAMBRIAN AND/OR CAMBRIAN**
- 3 Mainly buff-, brown-, and rusty-weathering, gritty quartzite, sandstone and quartz-pebble conglomerate; black, maroon and green shales, and slates; schistose quartzite, quartz chlorite schist, quartz-mica schist and phyllite; minor limestone and black chert; 3a, thin- to medium-bedded, dark grey limestone
- PROTEROZOIC**
- 2 Orange-weathering, platy, grey-green dolomite, dark slate, minor phyllite and quartzite; 2a, pink-, orange- and grey-weathering dolomite, grey and maroon shale, white, green and mauve quartzite, minor conglomerate, mottled green and maroon shale and black limestone; 2b, buff and orange dolomite, dark shale; minor quartzite limestone and conglomerate; 2c, massive cherty and quartzose, grey dolomite; thin-bedded, buff-weathering, grey dolomite; minor black shale and white quartzite; 2d, buff-weathering dolomite-boulder conglomerate; 2e, dark shale and argillite, buff-weathering, grey siltstone; minor buff- to orange-weathering dolomite
 - 1 Mainly dark grey, grey-green, and black, thin-bedded argillite, slate and phyllite; minor grey quartzite, orange-weathering dolomite, and conglomerate; 1a, grey-weathering, thinly laminated, siliceous limestone

- METAMORPHIC ROCKS SOUTHWEST OF TINTINA TRENCH**
 (occurs only on Map 1284A, Dawson)
- E Reddish brown-weathering, dark green serpentinized ultrabasic rocks
 - D Fine- to medium-grained, granitic textured, quartz-biotite gneiss; minor quartzite, quartz-mica and biotite-chlorite schist, and quartz-feldspar pegmatite
 - C Dark weathering greenstone and banded amphibolite gneiss; minor chloritic quartz-mica schist, graphitic quartz-mica schist, quartzite, and limestone
 - B KLONDIKE "SCHIST": mainly buff weathering, light pale green quartz-muscovite-chlorite schist, and schistose, chloritic quartzite, with all intermediate rock types also present; minor silvery muscovite schist; fine-grained quartz-biotite gneiss, thinly laminated quartz-graphite-sericite schist and quartzite
 - A NASINA "SERIES": grey and grey-green, micaceous quartzite; dark grey, light grey and silvery quartz-mica schist; minor fine-grained quartz-biotite gneiss; graphitic schist and quartz-muscovite-chlorite schist; Aa, higher rank metamorphic rocks with biotite and garnet; Ab, coarsely crystalline, whitish limestone

- Bedding boundary (defined, approximate, assumed)
- Bedding, tops known (horizontal, inclined, vertical)
- Bedding, tops unknown (dip known)
- Bedding, estimated attitudes, may in part be of foliation; horizontal, inclined, vertical (dip: g, gentle; m, medium; s, steep)
- Foliation (horizontal, inclined, vertical)
- Fault (defined, approximate, assumed)
- Thrust fault (teeth in direction of dip; defined, approximate, assumed)
- Anticline (defined, approximate; arrow indicates plunge)
- Syncline (defined, approximate; arrow indicates plunge)
- Anticline, syncline (overturned)
- Fossil locality
- Mineral occurrence
- Goldfield



MINERALS

Antimony	Sb	Lead	Pb
Asbestos	asb	Silver	Ag
Coal	C	Tin	Sn
Copper	Cu	Tungsten	W
Gold placer	Au	Zinc	Zn
Iron	Fe		

Geology by L.H. Green and J.A. Roddick, 1961

To accompany GSC Memoir 364 by L.H. Green

Geological cartography by the Geological Survey of Canada

MAP 1284A
 GEOLOGY
DAWSON
 YUKON TERRITORY
 Scale 1:250,000

Miles 4 0 4 8 12
 Kilometres 6 0 6 12 18

Magnetic declination 1970 varies from 31°33' easterly at centre of west edge to 33°17' easterly at centre of east edge. Mean annual change decreasing 3.7"

Elevations in feet above mean sea-level

Base-map at the same scale published by the Surveys and Mapping Branch in 1954, 1957 and 1958. Roads were revised by the Geological Survey of Canada for this edition.

Any revisions or additional information known to the user would be welcomed by the Geological Survey of Canada.

Copies of the topographical edition of this map may be obtained from the Map Distribution Office, Department of Energy, Mines and Resources, Ottawa.

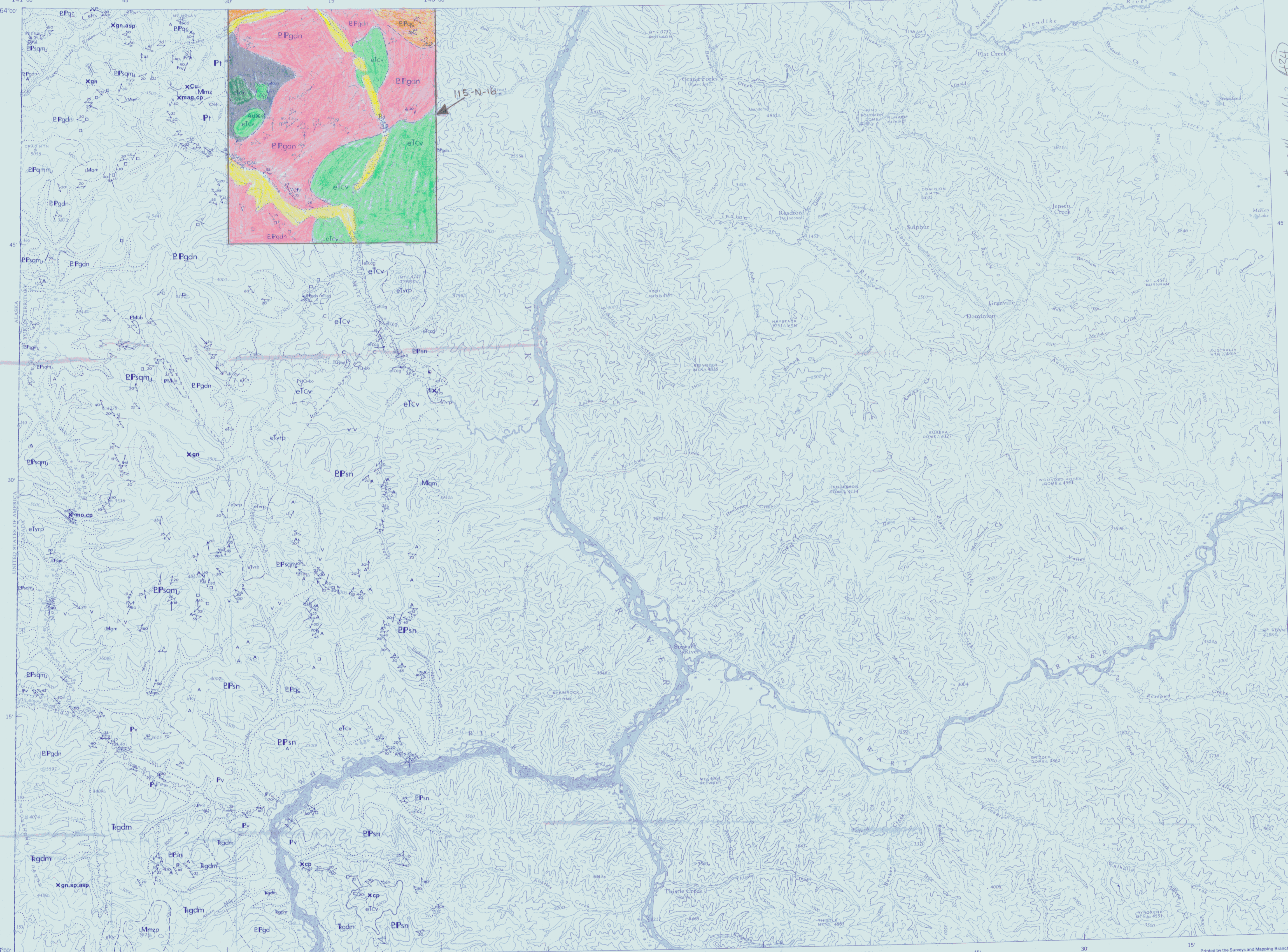
The following names have not been approved by the Canadian Permanent Committee on Geographical Names: Trace Hill, McCann Hill, Porcupine Hill, Woodchopper Creek, Monster River, East Blackstone River, Spotted Fawn Gulch.

116 G-116 F (E/2)	116 H	106 E
116 B-116 C (E/2)	116 A	106 D
1284A	1283A	1282A
115 O-115 N (E/2)	115 P	105 M
711A	1143A	890A

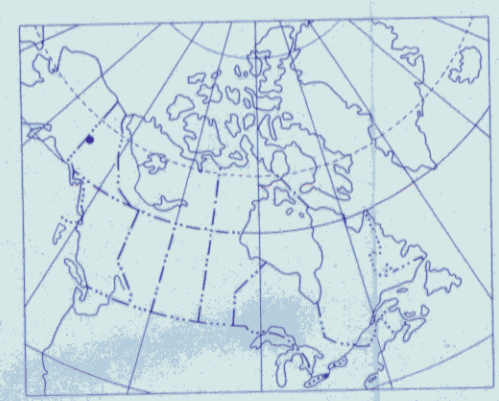


GEOLOGICAL SURVEY OF CANADA
DEPARTMENT OF ENERGY, MINES AND RESOURCES

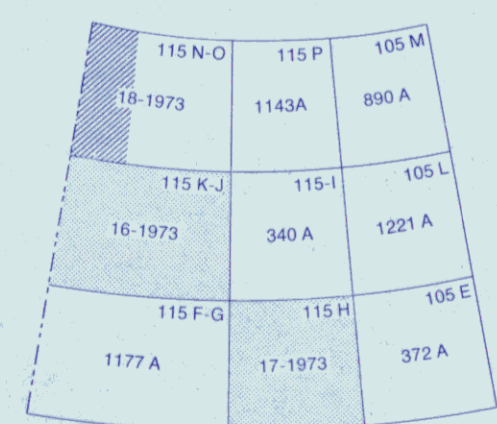
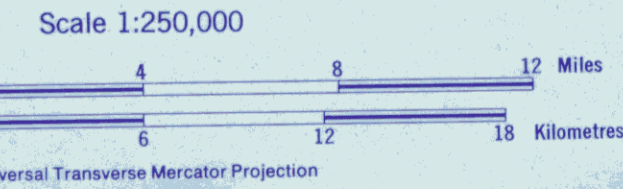
PRELIMINARY SERIES COLOURED TO CORRESPOND TO GREEN (SEE LEGEND)



- LEGEND**
- UNCONSOLIDATED QUARTZITE & ALLUVIAL DEPOSITS**
- PLEISTOCENE (?)
TQ-bo COLUMNAR BASALT: fresh orange-weathering columnar jointed olivine basalt
- EOCENE OR YOUNGER
eTcv CARMACKS GROUP: brown-weathering, brown, green and red andesite, basalt and flow breccia
eIdi DIORITE: dark brown, fine-grained diorite and gabbro
eIvvp QUARTZ FELDSPAR PORPHYRY: light coloured acid quartz feldspar porphyry and rhyolite; minor acid tuff breccia, crystal lithic tuff and ignimbrite
eIccg SANDSTONE AND CONGLOMERATE: white, coarse-grained, immature terrestrial sandstone with lesser interbedded pebble conglomerate and shale; minor lignite and rare ignimbrite
- CRETACEOUS (?)
Mqm QUARTZ MONZONITE: medium-grained equigranular biotite quartz monzonite
Mmnp PORPHYRYIC MONZONITE: medium-grained, porphyritic (K-feldspar) hornblende monzonite to syenite
Mmz HORNBLende MONZONITE: medium-grained equigranular hornblende monzonite
- TRIASSIC (?)
kgdm HORNBLende GRANDIORTITE: dark grey weathering, strongly foliated, coarse-grained equigranular biotite hornblende grandiorite
- PERMIAN (?) AND/OR TRIASSIC (?)
Pmlb DIUNITE: foliated serpentinized dunite and peridotite
- CARBONIFEROUS (?) AND/OR PERMIAN (?)
Pv SHEARED GREENSTONE: sheared and foliated chloritic greenstone and green lithic tuff; minor green cherty tuff
- PERMIAN AND/OR OLDER
Pi CHERT AND METACHERT: grey-weathering pale green and purplish brown hornfelsed argillaceous chert with lesser interbedded chloritic phyllite and marble
Pc LIMESTONE: thin-bedded limestone and marble
- FOLIATED MUSCOVITE QUARTZ MONZONITE: foliated equigranular medium-grained muscovite quartz monzonite
Efc MARBLE: coarsely crystalline white graphite marble
EPgd FOLIATED BIOTITE GRANDIORTITE: foliated to gneissic biotite grandiorite; minor interfoliated phyllite, schist and amphibolite
EPgc MASAQUAMIT QUARTZITE: black-weathering, massive, dark grey to black graphitic quartzite with lesser grey micaceous quartzite and quartz mica schist
EPsqm KLONDIKE SCHIST: black and orange-weathering well foliated pale green chlorite muscovite quartz schist; includes augen gneiss and amphibolite
EPsn SCHIST GNEISS: brown-weathering, grey muscovite biotite quartzite and quartz mica schist; includes amphibolite augen gneiss and minor marble; includes rocks of Klondike Schist and Pelly Gneiss undifferentiated
EPgdn PELLY GNEISS: strongly foliated to gneissic muscovite chlorite biotite grandiorite; minor augen gneiss; includes some undifferentiated foliated muscovite quartz monzonite
- Geological boundary (defined, approximate, assumed)
Limit of geological mapping
Bedding, tops known (inclined, vertical)
Foliation (inclined, vertical)
Lineation (horizontal, inclined)
Fault (inferred)
Occurrence of mafic dykes m
Occurrence of pegmatite dykes p
Occurrence of augen gneiss a
Occurrence of amphibolite A
Occurrence of conglomerate c
Occurrence of acid volcanic dykes v
Placer deposit px
Metallic mineral occurrence cp
Shaft or pit d
Bulldozer trenching x
- METALS AND MINERALS**
- | | |
|----------------------|--------------------|
| Arsenopyrite.....asp | Gold.....Au |
| Chalcopyrite.....cp | Magnetite.....mag |
| Copper.....Cu | Molybdenite.....mo |
| Fluorite.....fl | Sphalerite.....sp |
| Galena.....gn | |
- Geology by D.J. Tempelman-Kluit 1970, 1971, 1972
To accompany Paper 73-41 by D.J. Tempelman-Kluit
This preliminary edition may be subject to revision and correction
Geological cartography by the Geological Survey of Canada
Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada
Base-map at the same scale published by the Surveys and Mapping Branch, Department of Energy, Mines and Resources in 1963
Copies of the topographical edition of this map may be obtained from the Canada Map Office, Department of Energy, Mines and Resources, Ottawa
Magnetic declination 1973 varies from 30°30' easterly at centre of west edge to 31°58' easterly at centre of east edge. Mean annual change 3.8° westerly
Elevations in feet above mean sea-level.



MAP 18-1973
PAPER 73-41
GEOLOGY
STEWART RIVER
YUKON TERRITORY



093033

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MAP# 115 N/16, 116 C/12
DOC# 093033