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Barrington River
Placer Gold Prospect

Qualifying Report
for
Integrated Resources Ltd.

3 May, 1987

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SUMMARY

Integrated Resources Ltd. of Edmonton has optioned a placer gold prospect on the Barrington River in northwestern British Columbia. The company intends to carry out a program of bulk sampling on the property in 1987 and to continue processing material if the results are economical. In April, 1987 the company reported it was engaged in developing an access road to the property.

The only significant mining activity on the property occurred in the 1930s. Mining activity since then had been limited to small scale sluicing of gravel bars until Integrated Resources carried out limited testing with a small backhoe in 1986.

Native gold from a mineralized hardrock occurrence off the property has enriched parts of a thick section of alluvium in a valley which has been widened by glaciation. The company regards it's prime target for bulk sampling to be an estimated 70,000 cubic yards (after mining) of possible reserves, equal to 53,500 cubic metres. Secondary targets are two areas contiguous to the first which contain an estimated 160,000 cubic yards (after mining) of possible reserves, equal to 122,000 cubic metres. The property also contains a large quantity of alluvium with unknown potential. Limited sampling has indicated that some of it constitutes a worthwhile target for additional exploration. In particular, material directly underlying the possible reserves which are identified above might be suitable for dredging.

A magnetic survey is recommended to precede bulk sampling. Magnetic surveys, seismic refraction, and drilling, are recommended to precede mining development on the property except for possible continued production from bulk sample pits if this is proven to be economical.

If a sluice box is employed to process bulk samples it is recommended that the efficiency of this method should be determined by testing the tailings with a centrifugal concentrator.

INTRODUCTION

Terms of Reference

The writer received instructions from Allan L. Jenkins, Vice-President of Integrated Resources Ltd., to provide a qualifying report appropriate for submission to the Alberta Securities Commission. Integrated Resources Ltd. is seeking approval for a prospectus to be offered to the public describing the company's placer gold prospect on the Barrington River in northwestern British Columbia and the company's proposed bulk sampling program there.

Company's Intent

The prospect comprises 1 granted Placer Mining Lease, 4 granted Placer Leases, and 4 Placer Lease applications, all of which are contiguous. Integrated Resources Ltd. intends to process several bulk samples from the Placer Mining Lease during the 1987 mining season utilizing a Super Sluice IV. This machine is manufactured by Jey Industries of Langley, British Columbia. Mr. Jenkins has stated his company's intent to the writer of continuing to operate the Super Sluice IV on the property providing the results are economical.

THE PROPERTY

Description

The Barrington River Placer Property comprises PML (Placer Mining Lease) 840 and PLs (Placer Leases) 6945, 8259, 8260 and 9893, plus 4 additional PL applications made in June and October, 1986.

The granted Placer Leases and applications, and the granted Placer Mining Lease, are situated entirely within the Barrington River Designated Placer Area. They encompass most of the ground which contains presently recognized probable or possible placer potential occurring within the Designated Placer Area.

Location

The property is situated along the Barrington River, just above it's entry into the Chutine River valley on NTS Map 104G12 (west half). The settlement of Telegraph Creek is situated approximately 45 km to the northeast.

Accessibility

Past access has been limited to direct helicopter flights, or to river boat or barge to the confluence of the Chutine and Stikine rivers and then by foot, all terrain vehicle or skidoo along a trail. In the 1930s heavy equipment was moved along this trail to the property.

In April, 1987 the company was engaged in extending a road 19 km through bush to connect with an existing road from Telegraph Creek near the former settlement of Glenora.

Climate

The mining season in the valley runs from May to October or November. Even December work would be possible with a good haulage road and an enclosed plant.

The property is situated between two distinctive climatic zones - the Coast Range and the Stikine Plateau. The Coast Range is a wet belt with heavy annual precipitation but relatively mild temperatures along the major valley bottoms. Annual precipitation may range from 200 to 400 cm and temperatures are rarely colder than -20°C.

The Stikine Plateau is a dry belt with light annual precipitation and a wide annual temperature range. At Telegraph Creek, annual precipitation is around 25 cm, and accumulations of winter snow rarely exceed 45 cm. Temperatures there range from -45°C to 32°C.

Precipitation and temperatures at the property occur between the above extremes and may vary considerably from year to year. Winds along the Stikine valley have a marked tendency to blow upstream in summer and downstream in winter, being independent of winds that blow across the

mountains above the valleys. Winds are sometimes strong enough to prevent local air and river traffic from operating. Winter fogs occur frequently along the boundary between the two air masses.

Local Resources

Water: The Barrington River, which traverses the property, flows throughout the year. It is not known to be a salmon spawning stream, possibly due to it's usual heavy load of suspended sediment.

Wood: Mature trees which could provide timbers suitable for bridges, etc. are common on the property.

Workers: The property is in a part of the country where local settlements can usually provide workers with experience in mining, operating earth moving equipment, mechanical jobs and cooking. Telegraph Creek and Dease Lake could probably provide all the personel required for a bulk sampling program and possible production on the property.

Supplies: Most supply requirements such as fuel, food and parts are available in Dease Lake or Watson Lake. Dease Lake is about 160 km from from the property. Watson Lake, which is on the Alaska Highway and has an almost daily airline service connecting to Edmonton and Vancouver, is an additional 290 km past Dease Lake.

Services: Several, specialized mechanical services (electrical, camp, etc.) are available from Watson Lake. A mechanic operates a commercial machine shop at the former settlement of Glenora which is about 30 km from the property.

Transport: Trucks and light helicopters are based in Dease Lake and are sometimes available from Telegraph Creek. Heavy helicopters are based in Whitehorse. River boats are available from Telegraph Creek, while barges and tugs are available from certain coastal settlements such as Campbell River, B.C. or Wrangell, Alaska.

HISTORY

The property doubtless has a long history of sluicing the gravel bars for gold. Wayne Eberg, the owner, told the writer he has heard of excursions for gold by Russian explorers into that part of the country during the long period of Russian influence along the west coast.

Attempts at larger scale mining were not made until the 1930s when Captain S.D, Barrington, who operated a river transportation company in Wrangell, used a Keystone drill and then constructed a bucket dredge and subsequently employed a dragline. The dredge was not successful and was wrecked in a flood, while the dragline was reportedly removed after one season to a more accessible area.

The Department of Mines and Petroleum Resources in Victoria has provided the information that the declared total production of gold from the Barrington River between 1906 and 1941 is 1,335 ounces. Of this total, 1,117 ounces are reported as having been produced during the 1930s.

After 1941, when production of one ounce was declared, activity appears to have been limited once again to working the gravel bars until Integrated Resources Ltd. carried out a testing program in 1986.

References to mining gold along ths Barrington River are made in the following Annual Reports Of The Minister Of Mines Of The Province Of British Columbia: 1904 page 96; 1905 page 78; 1907 page 54; 1908 page 53; 1929 page 116; 1931 page 52; 1932 page 61; 1933 page 62; and 1935 page 337. The geology of the Barrington River gold deposits is described in Geological Survey Of Canada Memoir #246, pages 79 and 80.

GEOLOGY

Topography

Profile: The valley has been glaciated and displays a typical, steep walled, U-shaped section. In the northern half of PML 840 the valley is narrower, where a later glacier has extended the valley northward. It is surmised that the bedrock base is higher there than to the south.

The main valley measures some 460 metres in width while the northern part measures only some 220 metres. The wallrock is limestone of Permian age in both cases while the cirque of the northern valley is formed by a silicified contact zone of Triassic volcanics. The limestone is prominently bedded and jointed, and contains probable relic reefs which appear as zones with open structures so that the valley was probably sculpted quickly under climatic conditions which were not severe enough to enable the glacier to erode the harder silicified volcanic rock at the head of the valley.

River Course: The Barrington River flows through a narrow gap in the resistant volcanic member which has deflected it to the west, thereby protecting a thick deposit of alluvium from erosion. The river follows the west wall of the valley, and has then been deflected back to the east wall by an even thicker section of alluvium at the head of the wider valley. The river flows along the base of a prominent limestone bluff for 180 metres and has then been deflected to approximately the centre of the valley by hummocky terrain which is due to slumping of a high lateral moraine left by the last major ice activity in the valley. The river then follows a gently meandering course toward the Chutine valley. The hummocky terrain encompasses two beaver ponds which the company intends to use as settling ponds for it's bulk sampling program and possible future production.

Gravel Bars: The river is fast flowing and carries a heavy sediment load. Extensive gravel bars, many of them partly exposed except at times of highest water, occur along the river course, especially downstream from bends. The depth of the main channel may vary from 4 to 6 metres.

As the river was deflected, first along the west wall and then back to the east, a broad point bar was defined. Part of the river has been diverted through a lowered area across the bar so that the broad point is now an island which measures some 330 metres by 60 metres. It is the company's intent to return all of the river to it's original course to permit bulk sampling of the stripped area. The fall of the river has been measured as approximately 5 metres along the length of the island, or 1.5 metres per 100 metres.

Benches: At least 5 or 6 extensive benches which are between 1 metre

and 9 metres high exist on both sides of the river. They converge and diverge in places while elsewhere they remain essentially parallel. At the head of the wider valley, approaching the west wall, the surface of the alluvium becomes increasingly steep until it attains an elevation of more than 50 metres above the level of the river.

Slides: Large talus slides line the valley, especially along the west wall where a sharp demarcation exists between the talus and the level surface of the exposed alluvium on the highest bench. Except in the vicinity of the beaver ponds, where a major slide has taken place, only a few minor tongues of hummocky slide material extend over the alluvium of the highest bench. These occur on the west side at the head of the wide valley, and on the east aide at the head of the narrower valley. These slides appear to have entered between promontories on the skyline which probably reflect erosion along major jointing in the limestone.

Alluvium: The benches are remnants of valley wide alluvium that has been eroded by the river and they do not have a bedrock base. Exposed sections, especially close to the present river level, reveal a complex pattern of channel scouring and bar deposition. The channels are filled with boulders while the bars typically comprise sandy gravel. The present river bottom is a loose and jumbled boulder pavement, but boulders are not prominent in the benches and no boulders, it is reported in GSC Memoir 246, were encountered in a program of Keystone drilling which was carried out in the 1930s.

More channel material and consistently higher gold values below the present river level indicate that these sediments have had a more active history than the benches. Lower sediments might have been deposited in a braided system with bench sedimente having been subject to less reworking.

The depth of alluvium from river level is not known. A drill hole is reported te have been put down 100 feet (30 metres) in the narrower and probably shallower upper valley from around the river level without encountering bedrock. It is stated in GSC Memoir 246 that this hole "... is said to have cut 94 feet of good pay."

Minerals

The only mineral of economic interest appears to be the native gold which is 82 fine. It occurs with magnetite in the alluvium. Some of the gold is very flat, which is typical of a braided stream environment, but some is irregular whieh suggests nearby release. The gold tends to be resistant to amalgamation, but this is readily overcome by adding nitric acid. Occasionally, gold obtained close to the river has been found to be coated with bright mercury, evidently the result of past mining activities.

Source of Gold

Five km upstream from the property, steeply dipping Triassic volcanics have been intruded by a granodiorite stock which is also of Mesozoic age. The contact zone is believed to have contributed the gold, and probably the magnetite, that occurs on the property. The country to the north, within the Barrington drainage basin, has been glaciated at a higher elevation, and a steep walled canyon has been eroded by glacial meltwater from the high country along 4 to 5 km of the contact zone. Several tributaries join the river within this section, and the river has lowered it's course hundreds of metres through the contact zone as the placer deposits were forming downstream. It can be anticipated that this type of source will yield a preponderance of fine grained gold.

Geological Model

Native gold has been eroded from a mineralized intrusive contact zone and transported along a canyon to be deposited with alluvium in a glaciated valley. The alluvium has been enriched in gold as channels and bars have acted as natural sluices, and then further enriched as the river has eroded earlier deposits. Alluvium below the present river level has been reworked to a greater degree than the higher benches and is of higher grade.

Drilling will be required to determine whether the higher grade material extends laterally beneath the benches. The boulders might have been introduced into the valley by a late glacial advance following deposition and reworking of the lower alluvium. If this is the case it

suggests the possible use of a cutter-suction dredge below the present river level.

Reserves

The total volume of alluvium on the leases amounts to tens of millions of cubic metres. Clearly, much exploration work will be required before total ore reserves can be ascertained.

It is unfortunate that data from drilling carried out in the late 1920s and early 1930s is not available. The 1931 Report Of The Minister Of Mines states: "It is estimated that approximately 700,000 cubic yards of ground containing from 35 cents to $1.65 in gold per yard (about $500,000) is indicated ..." Gold was worth $20.67 per ounce in 1931.

The writer has concluded that the 700,000 cubic yards (535,000 cubic metres) referred to above is ground that was tested by drilling and then stripped of overburden in preparation for dredging. But since no data is available it is not possible to classify the reserves as other than possible reserves. If the 700,000 cubic yards occupy all of the stripped area, the depth of the block would have to be about 18 metres to yield this volume after mining. Of the total, approximately 90% would only be available to dredging, while the remaining 10%, or 70,000 loose yd^3 (53,500 cubic metres) could be mined by dry land methods using a backhoe and trucks. The fact that the overburden has already been removed will result in less expensive sampling and possible production from this area.

An economic analysis or feasibility study of mining possible reserves is inappropriate for inclusion within this report, but it is the company's intent to commence bulk sampling within the stripped area referred to above, and to continue to process material from this area if it should prove economical to do so.

Adjoining the stripped area to the east and west are additional, possible dry mineable reserves having an estimated total volume of 160,000 cubic yards (122,000 cubic metres) after mining, from which 2 to 3 metres of overburden would have to be removed. There is a geological basis for surmising that 100,000 yd^3 (76,000 cubic metres)

of this would be comparable in grade to the possible reserves in the stripped area, while the remainder would be of lower grade. It is the company's intent to extend it's investigation to these areas after it's bulk sampling and possible mining of the stripped area.

A nearby part of the property from which possibly economic grade indications were obtained in a 1986 testing program (see below) is the point directly south of the island on the west side of the river. It is the company's intent to investigate this area also.

RECENT TESTING

A testing program on parts of PML 840 and PL 9893 was carried out from September 21 to October 17, 1986 to determine whether additional work, especially the expense of building a road to the property, could be justified. A total of 38 samples from 0.1 to 0.3 yd^3 each for a total measured volume of 6.3 yd^3 were obtained with a small backhoe and processed with a Denver Gold Saver, which has a trommel and a vibrating sluice box.

The writer, who participated throughout this program, concluded that additional work was justified and that the best results came from alluvium below the present level of the river. The stripped area was recommended as the logical place to commence bulk sampling, and areas contiguous to the east and west, and the point directly south of the island on the west side of the river, were identified as promising secondary targets. The volume and distribution of samples from the 1986 program was not adequate to support a calculation of proven or probable reserves.

The following excerpts are taken from the Report Of The Minister Of Mines, 1933: "Several approximate rocker tests on material from this pit were made by the Resident Engineer and they showed a gold content from 21.2 cents to $2.76 per cubic yard, with an average of 60.2 cents per cubic yard for the pit (gold 820 fine and $20.67 per fine ounce)."

At another pit: "... panning ... showed a gold content of from 22 cents to $2.12 per cubic yard of gravel (gold 820 fine and $20.67 per fine ounce)."

"... from the last day's run of ninety-nine cars (about 180 yards) 11 oz. of gold was recovered."

It is the conclusion of the writer that the values quoted above from the 1933 report are not in conflict with the results of the 1986 program. However, the results from the 1986 program can not be used to confirm the 1933 reported values because of limitations in the size and depths of the samples.

CONCLUSIONS

The prospect satisfies all requirements to justify a bulk sampling program as well as certain geophysical and drilling programs.

RECOMMENDATIONS

A bulk sampling program is recommended to coneentrate initially on the stripped area and later on contiguous ground to the east and west, and to the south across the river. Several pits should be dug and at least a thousand cubic yards should be processed from each one, followed by a complete cleanup of the concentrating equipment. If a sluice box is used the tailings should be carefully evaluated, and a centrifugal concentrator is recommended for this purpose.

Geophysical surveys (gradiometer-total field magnetic; seismic refraction) and drilling will be necessary to evaluate the property completely. It is recommended that a magnetic survey precede the bulk sampling so that bulk sample pits can be located with reference to the magnetic information. Drilling should not commence until all of the geophysical results are available.

Before any decision is made, after the bulk sampling phase, to continue to produce with the same equipment, a fundamental consideration is that the effectiveness of that equipment should be ascertained and the economics of proceeding should be determined.

COST ESTIMATES

The company has contracted to lease certain equipment on a monthly basis. Lease costs and projected operating costs, as provided by the company, are as follows:

		Lease	Operating	Per Month
Backhoe	(Caterpillar "225")	$8,000	$10,800	
Bulldozer	(Caterpillar "D-8")	$9,000	$13,500	
Front End Loader	(Caterpillar "980")	$8,000	$12,000	
		$25,000	$36,300	$61,300
Power Plant and Washing Plant (Lease plus Operating)				$19,320
Trucking (see below)				$15,000
Camp (8 men plus 1 cook)				$13,500
Labour				$ 7,200
				$116,320
Contingency (10%)				11,632
Cost of bulk sampling for 1 month				$127,952
Mobilization and Demobilization (per season)				$ 25,000
Cost of Program lasting 1 month				$152,952

The company has contracted trucking at $1.25 per cubic yard ($1.63 per cubic metre) and estimates a throughput of 500 cubic yards (382 cubic metres) per day at full production, with trucking costs of 500 x 30 x $1.25 = $18,750 per month.

Allowing for cleanups and changing pit locations during bulk sampling, with a throughput reduced to 400 cubic yards (305 cubic metres) per day, trucking costs would be 400 x 30 x $1.25 = $15,000 per month.

The company's estimate of 500 cubic yards per day throughput, if attainable, would result in trucking costs of $18,750 per month and a total cost of production of $132,077 per month. The cost of mobilization and demobilization has been estimated at $25,000 per season.

Therefore, a bulk sampling program lasting 1 month, in which 12,000 cubic yards is processed would cost $152,952 and each additional month of production of 15,000 cubic yards would cost $132,077. No proven reserves have been established on this property and any production will be dependent upon economical results from the bulk sampling.

REFERENCES CITED

Report Of The Minister Of Mines, 1931

Report Of The Minister Of Mines, 1933

Geological Survey Of Canada Memoir 246 (1948)

OTHER REFERENCES USED

Report Of The Minister Of Mines, 1904

Report Of The Minister Of Mines, 1905

Report Of The Minister Of Mines, 1908

Report Of The Minister Of Mines, 1929

Report Of The Minister Of Mines, 1932

Report Of The Minister Of Mines, 1935

Geological Survey Of Canada Paper 71-44 (1971)

Reports by the writer to the company dated 20 June 1986

30 October 1986

11 December 1986

CERTIFICATE

1. I am a professional geologist and a member of the Association of Professional Engineers, Geologists & Geophysicists of Alberta (APEGGA).

2. I am a graduate of the Provincial Institute of Mining, Haileybury, Ontario (Diploma in Mining Technology granted 1962) and Michigan Technological University, Houghton, Michigan (B.Sc. Geology, honours, granted 1965; completed M.Sc. Geology course 1967).

3. I have served as an executive director of a placer mining company listed on a public stock exchange, and I am familiar with the evaluation of placer prospects and with placer mining activities.

4. I have made several visits to the Barrington River property which is the subject of this report and from September 21 to October 17, 1986 I was directly involved there with a sampling and mapping program on PML 840 and PL 9893.

5. I have not received, nor do I expect to receive any interest, direct or indirect, in the property of the issuer or any affiliate and I do not beneficially own, directly or indirectly, any securities of the issuer or any affiliate.

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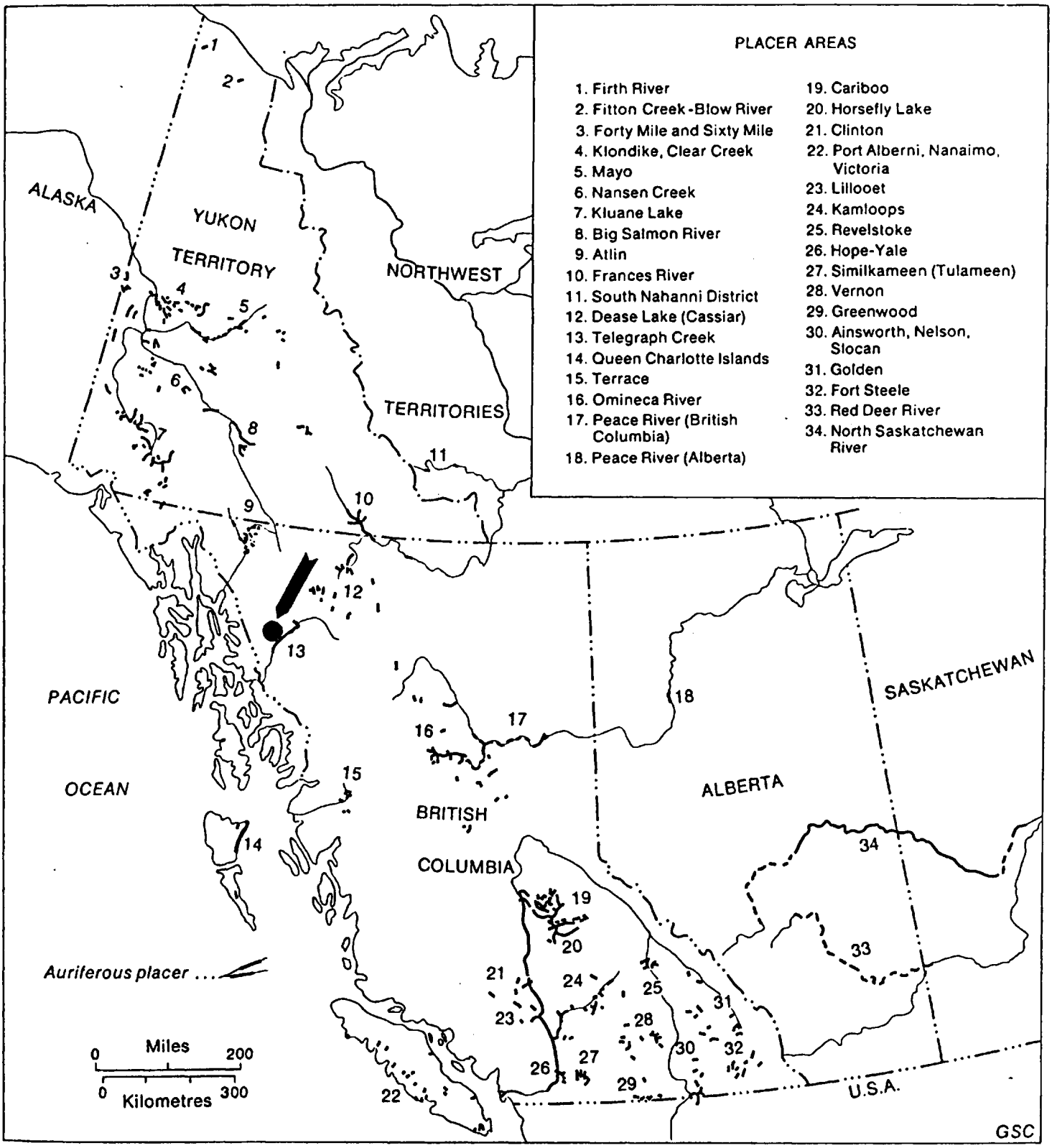
PLACER AREAS
1. Firth River
2. Fitton Creek-Blow River
3. Forty Mile and Sixty Mile
4. Klondike, Clear Creek
5. Mayo
6. Nansen Creek
7. Kluane Lake
8. Big Salmon River
9. Atlin
10. Frances River
11. South Nahanni District
12. Dease Lake (Cassiar)
13. Telegraph Creek
14. Queen Charlotte Islands
15. Terrace
16. Omineca River
17. Peace River (British Columbia)
18. Peace River (Alberta)
19. Cariboo
20. Horsefly Lake
21. Clinton
22. Port Alberni, Nanaimo, Victoria
23. Lillooet
24. Kamloops
25. Revelstoke
26. Hope-Yale
27. Similkameen (Tulameen)
28. Vernon
29. Greenwood
30. Ainsworth, Nelson, Slocan
31. Golden
32. Fort Steele
33. Red Deer River
34. North Saskatchewan River
ALASKA
YUKON TERRITORY
NORTHWEST TERRITORIES
PACIFIC OCEAN
BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
U.S.A.
Auriferous placer
0 Miles 200
0 Kilometres 300
GSC