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SUMMARY NOTES

1979 EXPLORATORY DRILLING PROGRAM

WOODWARD PLACER LEASE No. 172

LIKELY AREA, BRITISH COLUMBIA

by

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White Rock, B. C.

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INTRODUCTION

The summary notes which follow are intended to supplement an August, 1979 report by the writer entitled: "Preliminary Report, Woodward Placer Lease No. 172, Likely Area, British Columbia". The reader is referred to that report for information concerning the location, history, geological setting and other data relating to Placer Lease No. 172 and its environs.

Since the date of preparation of the August, 1979 report, the Woodward Group has staked additional placer mining leases in the area adjoining Lease No. 172, has carried out limited plane table surveys and, in November and December, 1979, the Group drilled three exploratory holes to bedrock in an area to the immediate east and northeast of the old Woodward hydraulic pit which is shown in the accompanying plans and in figures included in the August, 1979 report.

A summary of and a preliminary interpretation covering

the 1979 drilling are presented and suggestions as to future program are provided herein.

The writer was not present on the property during the course of drilling and has taken the drilling and other data presented herein from notes, logs and similar records prepared on his instructions by Messrs. David Woodward and Bud Henning. In addition, panned concentrates from cuttings samples have been examined by the writer.

PROGRAM OBJECTIVE, DATA AND RESULTS

Introductory note

The primary objective of the Woodward Group late 1979 drilling program was to confirm through exploratory drilling off the eastern side of the now caved 1934-36 Woodward hydraulic pit reported placer gold values in two zones: one at and near bedrock and the second some 60 feet above and approximately 30 feet below the surface. To that end, three drill sites were staked on November 3rd, 1979 at and midway between stations B-1 and B-2, figure 1. At the time, it was also suspected on the basis of sketchy historical information that the staked holes were in or bordering an area of reportedly successful exploratory drilling conducted by a British firm in or about 1938.

A rig of Bud Henning Drilling Co. Ltd. of Quesnel, B. C. was employed in the drilling of three holes on Placer Lease No.

172 during the period November 22nd, 1979 through December 5th, 1979. In total, 293 feet of hole were constructed. Hole locations were revised somewhat during the course of drilling, partially because of results obtained and also because of new historical information obtained by Mr. Frank Woodward concerning the much earlier British company drilling. The drilled locations are shown in figure 1.

Surveys and drill locations

Mr. John Woodward of the Woodward Group conducted plane table surveys of parts of Placer Lease No. 172 on November 3rd, 1979 during the initial staking of the drill holes and on February 16th, 1980 after the drilling program had been completed. The data obtained during the surveys have been compiled in figure 1 appended hereto.

The November 3rd, 1980 survey was conducted with the writer acting as rodman and included the area of the old Woodward hydraulic pit. Tentative locations for exploratory churn drill holes were spotted at or near stations B, B-1 and B-2. The line of holes was located primarily to explore to the immediate east of the caved hydraulic cut the possible presence of a postulated east-southeasterly trending elevated old Keithley channel extending from Rabbit Creek through the Woodward hydraulic cut and on toward lower Snowshoe Creek (figure 4, page 18, August, 1979 report). Values in placer

gold were said to have been present at levels of 30 and 85-90 feet below the surface in the eastern face of the old cut and the holes were also designed to evaluate that statement.

During the course of the November-December, 1979 drilling program, the location of Hole No. 3 was altered. On February 16th, 1980, Mr. John Woodward assisted by Mr. Frank Woodward extended the previous survey to include that Hole and the surrounding area. At the time, it was not feasible to further extend the initial survey to include the Lower Snowshoe hydraulic pit, areas of known bedrock exposure, etc. That work should be done when the ground is free of snow.

Summary drilling data (from Henning Drilling & Dave Woodward)

Pertinent data relative to the November-December drilling on the Woodward Group Placer Lease No. 172 are as follows:

1) Contractor:

Bud Henning Drilling Co. Ltd.
Box 4095, Quesnel, B. C. V2J 3J2
(604) 994-3338

2) Personnel:

Foreman	- Bud Henning Sr.
Driller	- Bud Henning Jr.
Panner	- Jack Willey

3) Equipment:

Drill	- Bucyrus-Erie 22W (1500 ft. - 6" hole cap.)
Water truck	- 300 Imp. gal. skid mounted tank on Dodge 3/4 ton power wagon
Tractor	- 1958 Caterpillar D-7

4) Hole, etc. data:

Hole size	- 6 inch
Casing size	- 6-5/8 inch O.D.
Casing weight	- 20 lbs./ft.
Cashing shoe	- 8 inch

5) Summary activity log

Date(s)	Item
Nov. 12, 13	Preparatory shop work; loading
Nov. 14-17	Moving
Nov. 18-19	Access road work; moving
Nov. 20	Site preparation
Nov. 21	Set up on Hole No. 1; haul pipe
Nov. 22	Spud Hole No. 1 at 8:30 a.m. Nov. 22: 0-25 ft. Nov. 23: 25-67 ft. Nov. 24: 67-79 ft. Nov. 25: 79-80'3" (T.D. in bedrock)
Nov. 25	Pulled all casing; completed Hole No. 1
Nov. 26	Move on & spud Hole No. 2 Nov. 26: 0-52 ft. Nov. 27: 52-77 ft. Nov. 28: 77-111 ft. Nov. 29: 111-118 ft. (T.D. in bedrock)
Nov. 29	Pulled all casing; completed Hole No. 2
Nov. 30	Move on & spud Hole No. 3 Nov. 30: 0-30 ft. Dec. 2: 30-50 ft. Dec. 3,4: 50-95 ft. (T.D. in bedrock)
Dec. 5	Pulled casing; rigging down; completed Hole No. 3
Dec. 6	Completed rigging down; moving out.

Driller's lithologic logs

No geologist was on location during the course of the drilling program so that only the driller's lithologic logs are available. As is normally the case, those are very sketchy,

brief and of comparatively little value. For the most part, samples were taken and washed down for five-foot intervals although some variation of interval arose because of the presence of boulders, non-recovery in slimey clay, etc.

The summary lithologic descriptions for the three holes drilled and compiled from the driller's logs are as follows:

Hole No. 1

Interval - ft.	Lithology
0-10	Brown sand & gravel
10-16	Sandy clay
16-26	Yellow clay (hard)
26-55	Glacial till (clay and rock)
55-63	Cemented sand and gravel
63-64	Sand and gravel with clay
64-65	Sand - medium (unconsolidated)
65-66	Sand and gravel (unconsolidated)
66-68	Boulder
68-75	Sand, gravel, boulders & clay (yellow)
75-80	Bedrock
80.25	T.D. in bedrock

Hole No. 2

Interval - ft.	Lithology
0- 15	Brown sand & gravel
15- 35	"Slum" (clay)
35- 39	Sand, gravel with clay
39- 52	Clay - yellow, hard
52- 60	Glacial till (blue clay & rock)
60- 73	Clay - yellow, hard
73- 77	Brown clay with rock
77- 85	Yellow clay
85- 95	Cemented sand, gravel & clay
95-101	Boulders
101-110	Rotten bedrock
110-118	Grey bedrock
118	T.D. in bedrock

Hole No. 3

Interval - ft.	Lithology
0-20	"Slum" - boggy
20-30	Sand, gravel & clay
30-50	Sand & clay - yellow, hard
50-66	Sand & yellow clay
66-78	Brown clay & rocks
78-80	Yellow clay & gravel
80-82	Rotten bedrock
82-95	Bedrock
95	T.D. in bedrock

Recovered gold values

No values or colors in gold are reported in the driller's logs covering samples taken and panned down during the 1979 drilling program. However, Mr. Frank Woodward did note the presence of a very coarse and somewhat flattened flake of gold in the concentrate from the interval 75-80 feet, immediately above bedrock, in Hole No. 3.

The writer examined the panned concentrates from all intervals of the three holes under the microscope. No gold was observed in the concentrates from Holes Nos. 1 and 2 despite their proximity to reported former attractive production from two zones in the eastern face of the Woodward hydraulic cut.

The coarse flake noted by Mr. Woodward in the interval 75-80 feet in Hole No. 3 was, of course, examined but no colors were observed in samples from higher levels in that hole. The single coarse color measured approximately 2 by 3 mm. and is

about 0.5 mm. thick. It is semi-flattened but meaty, is not severely pounded through stream action, is angular to sub-round in plan and has sub-round edges. It is an almost pure particle with a finely pitted surface. Local minute patches of finely grainy and possibly fractured translucent to milky quartz are present on one surface of the particle.

A few finer colors in discreet particles of gold were observed in the panned concentrate from the bedrock interval 85-90 feet of Hole No. 3. These are meaty, semi-flattened but not flaky particles of sub-angular to sub-round outline with sub-round to rounded edges. The particle size varies with some measured in plan as follows: 0.1 x 0.3 mm., 0.1 x 0.4 mm., 0.2 x 0.5 mm. and 0.5 x 1.0 mm. No gold was observed in the concentrates of samples from other intervals of Hole No. 3.

Metallic minerals present in the panned concentrates of several intervals included magnetite and pyrite as well as metal fragments from welds, casing shoe and drill tools.

INTERPRETATION OF RESULTS

Introductory statement

The results obtained through the Woodward Group November-December, 1979 drilling program were, on the whole, less encouraging than anticipated on the basis of the placer gold recoveries

said to have been obtained from two zones within the Woodward hydraulic pit, notably along its eastern face. The 1979 Holes Nos. 1 and 2 drilled to the immediate east of the pit found no evidence of values within the section down to and including uppermost bedrock. Hole No. 3 which was drilled to the north-northeast of the main area of the hydraulic pit did obtain one coarse color in the five foot interval immediately overlying bedrock and a few colors from a second and lower interval some five feet into bedrock. That hole is believed by Mr. Frank Woodward to be in the general area of apparently successful 1938 drilling by a British firm (August report, pgs. 14, 16). In fact, Mr. Woodward states that he has found evidence of former drilling at two locations near Hole No. 3.

The three holes drilled in November and December, 1979 did not provide evidence of placer gold reserves on P.L. No. 172. The configuration of the bedrock surface as defined by the holes suggests the possible presence of an elevated old Keithley channel a short distance to the north of the position postulated in figures 4 and 6 of the writer's August, 1979 report. As noted, Hole No. 3 located some deep values near and in bedrock within the confines of the suspected channel. Thus, any future work should be directed toward the exploration of that area in which at least some deep values have been obtained and some prior and reportedly successful drilling has taken place.

Lithology and correlation

The information obtained from the driller's logs of Holes Nos. 1, 2 and 3 is shown on the drill cross-section of figure 2 appended hereto. Examination of the section provides little evidence of correlation of lithologies from hole to hole. The writer believes the lack of correlation to be a function of totally inadequate sample descriptions rather than of lack of continuity of lithic units.

Correlation of "brown sand and gravel" between the tops of Holes Nos. 1 and 2 is indicated and that is supported by the observed continuity of brown, apparently lacustrine, silty sand with lenses and beds of fine gravel along the top of the eastern face of the hydraulic pit. Otherwise, no detailed correlations seem possible.

The relative abundance of total magnetics and of pyrite in panned concentrates are also shown in a general way in figure 2. The total magnetics show no hole-to-hole relationships as might be expected because of a high proportion of foreign metal fragments and particles. The first appearance and occurrence of pyrite seems to correlate in a general way between Holes Nos. 1 and 2 but does not carry through to Hole No. 3, possibly because of variations in panning technique.

The writer is of the opinion that a more accurate and detailed record of lithology should be assembled during any future drilling program.

In general, the sedimentary section appears on the basis of the scanty information available to be made up entirely of glacial and glacial-related material resting upon bedrock of varying character. There is no suggestion of the presence of pre-glacial or inter-glacial material preserved below deposits of the last glacial period or sub-period.

The general character of the bedrock varies from hole to hole as it does at the surface. The "rotten rock" of Holes Nos. 2 and 3 is likely to be highly schistose and fractured material which fragments easily as opposed to being deeply weathered bedrock. By contrast, the implied more competent uppermost bedrock of Hole No. 1 is likely to be predominantly quartzite.

Elevated channel configuration

Holes Nos. 1, 2 and 3 in combination with a relatively few surveyed surface exposures of bedrock have provided additional information concerning the configuration of the bedrock surface below the area of the Woodward hydraulic pit on Placer Lease No. 172.

Figure No. 2 attached hereto, a vertical cross-section through the 1979 holes, shows a northerly slope of the bedrock surface from Hole No. 1 into Hole No. 2 and a slight average rise of the surface still further north into Hole No. 3. No doubt, Hole No. 2, the lowest of the three at bedrock, did not fortuitously reach the lowest bedrock point along the line of

section.

The sketch colored contours on the bedrock surface drawn from available data points shown on figure 3 indicate on poorly established grounds the possible location of an old, elevated, east-northeasterly trending between Holes Nos. 2 and 3. Clearly, additional work is required to examine this or alternate possibilities relating to the configuration of the bedrock surface and to possible channel locations.

SUGGESTED PROGRAM

With the exception of colors obtained in and near bedrock during the drilling of Hole No. 3, the 1979 program was not encouraging. Unfortunately there is no evidence of the continuity of the zone(s) containing the colors of Hole No. 3 into Hole No. 2 in which bedrock was penetrated at a greater depth.

The possibility exists of an elevated channel with easterly or other orientation and with its axis between Holes Nos. 2 and 3.

The writer considers that additional and relatively inexpensive data bearing upon the possible presence of an old elevated channel can be obtained through the surface mapping of bedrock exposures and old workings in the general area between Lower Snowshoe and Rabbit creeks and surrounding the old Woodward hydraulic cut. Accordingly a limited program

involving the obtaining, compilation and interpretation of that information is recommended as a first stage for the future.

A second stage which should be considered after the above involves the application of multiple channel refraction or other geophysical techniques as a possible tool in mapping the bedrock surface and therefore old, elevated depositional channels possibly present therein. Such mapping, if successful, would serve as a guide to further drilling.

Respectfully submitted,

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March 31, 1980.