

418

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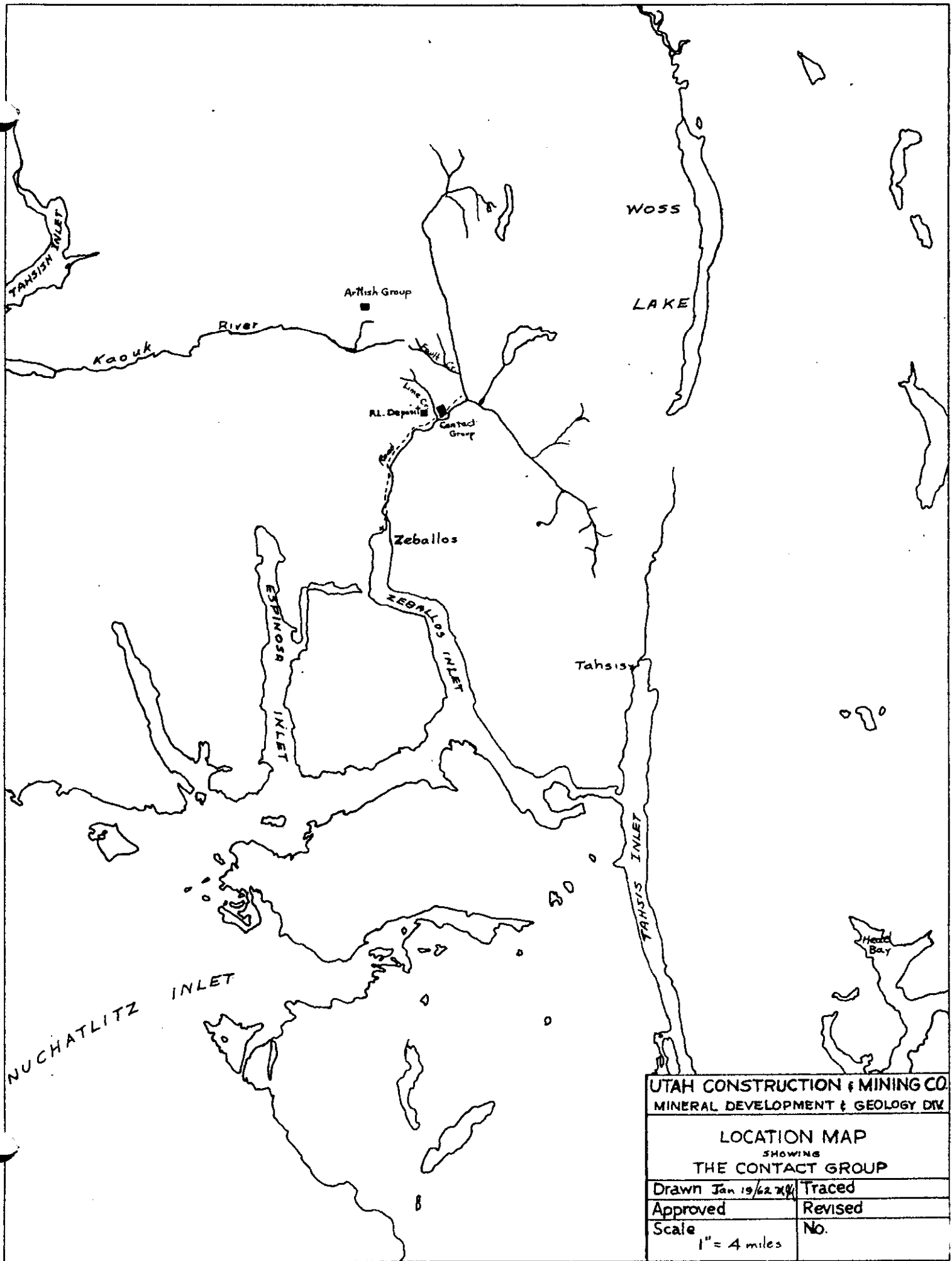
M A P S

1 Location map	-i-
2 Magnetic Intensity Map	in pocket
3 Geology Map	in pocket

**Department of
Mines and Petroleum Resources
ASSESSMENT REPORT**

NO. 418 MAP.....

92L/2W



UTAH CONSTRUCTION & MINING CO.
MINERAL DEVELOPMENT & GEOLOGY DIV.

LOCATION MAP SHOWING THE CONTACT GROUP	
Drawn Jan 19/62 J.K.	Traced
Approved	Revised
Scale 1" = 4 miles	No.

GEOLOGICAL & GEOPHYSICAL REPORT

CONTACT GROUP

4½ MILES NORTH OF ZEBALLOS

50° 126° S.W.

REPORT BY: M.J. YOUNG

CLAIM HOLDER: O.L. SKOGLAND,
ZEBALLOS, B.C.

WORK FOR: UTAH CONSTRUCTION & MINING CO.,
204-510 W. HASTINGS,
VANCOUVER 2, B.C.

PERIOD: NOVEMBER 2 TO NOVEMBER 17/61

&
DECEMBER 28 TO DECEMBER 31/61

INTRODUCTION:

The Contact group, consisting of eight claims, was staked by Mr. O.L. Skogland of Zeballos, B.C. Initially Contact numbers 1, 2, 3 and 4 were located on June 15, 1959 to cover an aeromagnetic anomaly shown on the government aeromagnetic map of the Lime Creek area which was published in 1957. On August 5, 1959 Contact numbers 5, 6, 7 and 8 were located in the Zeballos River Valley on the eastern side of Lime Creek. These claims tied onto the south end of the original group of four claims.

The Utah Construction and Mining Co. optioned the Contact group from Mr. Skogland on November 1, 1961, in order to explore the aeromagnetic anomalous area and also to explore the favourable, volcanic, limestone and intrusive contacts on the group.

A geologic and magnetic survey was undertaken on the Contact numbers 1, 2, 3 and 4 claims by a geologist and two assistants during the period November 2 to November 17, 1961. Three geologists and one assistant

worked on the property again during the period December 28 to December 31, 1961, and completed a ground magnetic survey on the remaining four claims. The crews arranged accommodation and meals in Zeballos and travelled to and from the property each day.

Traverse lines were run east-west at 300 foot intervals during the initial work and 500 foot intervals during the later work. Base lines designated on the accompanying map sheets as B.L. "A" and B.L. "B", were run where convenient and for the easiest travelling. B.L. "A" follows an existing trail over most of its length. The surveying of the traverse lines and base lines was done with a tape and compass. Traverse lines were closed on the base line but the survey of the base lines was not closed.

Sharp dip needle readings were taken ^{with a Sharpe D-2 dip needle *Ypn.*} at 100-foot intervals during the initial work and Jalander magnetometer ^{(model 1959 - Serial 5770) *Ypn.*} readings were taken at 50-foot intervals during the later work. A Jalander magnetometer was used by each of the two-man parties and both instruments were read at an established base station in the morning and again in the afternoon. The readings of one Jalander were then adjusted, before plotting, to correlate with this other instrument in relation to their respective readings at the base station.

LOCATION AND ACCESS:

The Contact group is located at approximately $50^{\circ} 03'$ N. latitude and $126^{\circ} 48'$ W. longitude and is $4\frac{1}{2}$ miles by road north of the town of Zeballos on the west coast of Vancouver Island, B.C. The claims lie, for the most part north of the Zeballos River, ranging from approximately 200 feet to 2000 feet above sea level.

Zeballos, a village of a couple of hundred people, is accessible by aircraft and boat. B.C. Airlines operate daily flights from Vancouver (weather permitting). There is a bi-weekly boat service between Zeballos and Gold River. Also a water taxi makes daily trips to Gold River to connect with a bus which travels a private logging road to Campbell River. This road is closed to all private users.

Accommodation and meals can be obtained at the Pioneer Hotel and Cafe in Zeballos.

An all weather road connects Zeballos and the property. This road is currently being improved by Zeballos Iron Mines who expect to begin hauling iron concentrates from their mill to their ocean carrier loading dock at Zeballos by March, 1962.

Radio telephone communication to outside points is available at the Zeballos Iron Mines office in Zeballos.

TOPOGRAPHY AND VEGETATION:

Contact numbers 5, 6, 7 and 8, lie essentially in the Zeballos River valley with the river running through Contact numbers 7 and 8. This ground appears to be fairly heavily drift-covered. Erratic boulders vary in size with a few up to approximately 12 feet in diameter. Contact numbers 1, 2, 3 and 4 lie on a steep slope. Steep limestone buffs lie to the west of the location line. The topography east of the location line is less rugged. Contact creek follows the location line on the upper claims.

Vegetation includes a thick underbrush, and fairly thin timber on the slopes. The lower ground has been logged over and slash and underbrush make travelling very slow.

Generally speaking the amount of outcrop especially on the Contact number 1, 2, 3 and 4 claims is above average.

CLIMATE:

The climate is wet and mild. Local inhabitants of Zeballos claim that annual precipitation is normally 200 inches with most of this falling as rain. Zeballos does get a few inches of snow but this increases up the valley and at higher elevations. There was approximately three inches of snow on the Contact property when the crews worked there late in December but this snow soon melted.

Temperatures are moderate in Zeballos. There is no record of the river having frozen and the harbour is ice free in winter.

HISTORY OF THE ZEBALLOS AREA:

The town of Zeballos was established around 1935 at the height of the gold rush in the area. Magnetite had attracted attention to the area as early as 1900 but a long period of inactivity followed until gold was discovered on the Tagore property in 1924. Another period of inactivity followed until 1934 when the first gold quartz veins were discovered. In 1936 the main high grade vein of the Privateer mine was found and by 1938 there were 35 properties in various stages of development. The Privateer mine was the only major producer in the camp. It has been inoperative since 1948; however National Explorations drilled a copper prospect on the Privateer property in 1961 and they are reported to have some interesting intersections. Apparently this drilling has been shut down for the winter.

Interest in the area was again revived in the early 1950's because of the magnetite deposits in the area. The Argonaut Mining Co. drilled the Churchill property at the head of Fault Creek in 1951 and proved 650,000 long tons of iron ore. They subsequently dropped the property because of the

low reserves and high sulphur content of the magnetite. Ventures Ltd. optioned their F.L. (Ford) deposit to International Iron Mine in 1960, and this property is now rapidly approaching production. The Artlish group has been optioned to Utah Construction and Mining and exploration work was started on this property last summer. Ventures Limited have staked around the Artlish property and are reported to have several promising showings.

GENERAL GEOLOGY:

The general geology of the area is described in the G.S.C. Memoir 272 by J.W. Hoadley and shown on the Woss Lake map sheet 1028-A which accompanies the Memoir. Basically there are four different rock types as follows:

- 1) Diorite - composing the Zeballos batholite and related to the coast intrusions of Jurassic and/or Cretaceous age.
- 2) Bonanza group of volcanics and intercalated sediments of Upper Triassic and earlier age.
- 3) Quatsino formation (limestone) Upper Triassic in age.
- 4) Karmutsen group of volcanics and intercalated sediments of Upper Triassic and Earlier age.

The above divisions were made by Dr. H.C. Gunning during his work in the area in 1931 and 1932.

DETAILED GEOLOGY:

The Karmutsen volcanics unit, distribution of which is shown on the accompanying map sheet, includes andesite, amygdaloidal andesite, agglomeritic andesite and an ^ualtrabasic phase which may be a gabbro or hornblendite.

The massive andesite is fine grained in varying shades of light to moderately dark green colour. Usually there appears to be some chlorite

and epidote alteration present. The epidote is found in very narrow stringers and small blebs.

Amygdaloidal andesite occurs in greater abundance than the massive variety. The weathered surface is often pitted in which case the amygdules have been partially weathered out. The majority of the so-called amygdules may represent fine fragments and consequently what was mapped as an amygdaloidal andesite may be a fine fragmental phase. The "amygdules" appear to be largely light coloured feldspar and have in many places been epidotized.

The agglomeritic andesite contains epidotized angular fragments up to four inches across. The amygdaloidal andesite was usually found in close proximity to the agglomeritic andesite and this probably supports the idea that it is really a fine fragmental variety. Also an agglomeritic andesite exists which contains numerous dark rounded, uniform-sized (approximately two inches by one inch) fragments. These were noted on some cliff faces which may represent shear planes and consequently may be some feature associated with the shearing. The fragments are slightly raised above the rock surface giving a bumpy appearance.

A considerable portion of what has been mapped as Karmutsen volcanics is the ultrabasic phase. The weathered surface is rough and shows clearly the medium grained characteristic of the rock. The rock is dark green, and appears to be at least 90% hornblende. This rock type occurs as whole outcrops. However it was also noted as irregular patches and bands in the andesite, but limited exposure did not allow a good determination of the contact features. However it is thought that this rock is intrusive.

The Quatsino limestone varies from a massive to crystalline variety. It is usually light in colour with some thin dark bands reflecting the bedding. However, small amounts of a darker massive variety were noted.

The intrusive rocks are mainly diorite. This varies from a leucocratic to mesotype, medium grained rock. The distribution is much as shown on the accompanying map; however the contact is very arbitrary because of the limited amount of outcrop. The diorite as mapped in the lower half of Contact No. 6 may actually be diorite dyke swarms. There is some altered andesites seen adjacent to the diorite in this region. This may be andesite incorporated in the batholith or it may be adjacent to diorite dykes.

A light green porphyritic, fine grained andesite intrusive outcrops adjacent to a narrow skarn zone on Contact No. 1 and is thought to be the cause for the skarn zone.

Aphanitic light coloured, massive aplitic dykes occurs throughout the property. These dykes appear to contain minor, sulphides, especially in contact with the limestone. They are usually rusty in colour but little sulphide (pyrite) is actually visible.

STRUCTURE:

Structures in the area generally have a north to northwest strike. The Quatsino limestone found on the property extends at least 50 miles northwesterly to Empire Development's property south of Benson Lake and can be found on Neroutsos Inlet near Jeune Landing. The underlying Karmutsen and overlying Bonanza volcanics follow the same strike. The direction of the long axes of the Zeballos batholith is inclined slightly more westerly than the regional strike of the intruded volcanics and sediments. Regional dips are moderate to the west.

The limestone-volcanic contact on the Contact property has a variable strike but generally strikes north and dips between 40 and 60 degrees to the west. The skarn-limestone contact on the trail just south of line 6 S

dips 45° to the west and strikes northerly.

Folding does not appear to be severe in the limestone or the volcanics. Minor folding of the limestone can be traced by bedding planes.

The Karmutsen volcanics have not been mapped in detail. It is felt that detailed mapping would prove that the different members described in this report would show some continuity and trends. It is likely that certain members in the group are more magnetic than others.

A series of north-south faults may dissect the limestone and show up as sharp cliff faces. However there was no brecciation or mineralization found to indicate strong faulting.

Shearing, striking $N 50^{\circ} W$ and dipping flatly (20°) to the southwest is evident in the narrow mineralized zones on the trail between lines 9 S and 12 S.

MINERALIZATION AND ALTERATION:

A narrow skarn zone, approximately six to ten feet in width in contact with porphyritic andesite on the west and limestone on the east, was mapped just south of line 6 S and on the trail (B.L. "A"). The skarn is massive garnetite. A three-foot oxidized zone containing patchy magnetite and some chalcopyrite is found on the contact with the limestone. This narrow mineralized zone appears to be very local in extent and evidently is the result of the intrusive porphyritic andesite in contact with limestone and in close proximity to the volcanics.

A narrow three-foot exposure of massive garnetite was noted near the south end of contact No. 6. No apparent mineralization is associated with this skarn.

A small amount of mineralization including magnetite and disseminated pyrite exists between lines 9S and 12 S, and on the trail (B.L. "A") on

Contact No. 1, in a sheared, oxidized andesite. The zones once again are very narrow and appear to follow the shearing which trends N 50° W. dipping 20° to the southwest.

The only massive magnetite seen outside the above mentioned zones was 970 feet east of (B.L. "A") on line 9S. A small one inch by two-inch pod of magnetite in the volcanics was noted here.

MAGNETIC SURVEY:

The small anomaly A-1, 580 feet east of (B.L. "A") on line 6 N is thought to be a topographic effect combined with a low magnetite content of the volcanics. Readings increased from the base of the outcrop toward the top of the outcrop. The rocks here exhibit a slight attraction to the pocket magnet.

Also the anomalies A-2 and A-3 on line 6 X approximately 900 to 1200 feet east of (B.L. "A") are due to the low magnetite content of the volcanics combined with topography. The negatives between the two anomalies lie in a shallow gully with the anomalies occurring over outcrops. Rock is exposed, almost immediately below the + 32° reading on a short cliff face and no magnetite is evident. The reading is possibly due to the fact that it was taken on top of a small cliff and the low magnetite content of the volcanics. However, the one high reading may have been taken over a small pod of magnetite which is not exposed. Highest readings on line 21 S, anomalies A-4 and A-5 can also be related to topography and the low anomalous readings on line 29 S, anomalies A-6 and A-7, are thought to be caused by a thinning of the overburden over the volcanics.

No anomalous readings could be obtained over or in the vicinity of any of the skarn zones on Contact No. 1 which indicates these zones are small and inconsequential.

CONCLUSIONS AND RECOMMENDATIONS:

It is concluded that the aeromagnetic anomaly on the Contact group shown on the government aeromagnetic map of the Lime Creek area must be a result of a mass effect from certain members of the volcanic in rocks which contain minor amounts of magnetite. If the topography were smoothed out over the volcanics it appears that the dip needle readings would be approximately 8 degrees above those obtained on the limestone. It is not likely that the volcanics have a uniform magnetic susceptibility. Locally the agglomeritic andesite seems to have a higher magnetic susceptibility than the other members. This may account for the fact that the aeromagnetic anomaly had limited dimensions and occurred over only a portion of the Karmutsen volcanics. Since there is a good deal of rock exposed in the aeromagnetic anomalous area and none of it mineralized to any extent, plus the fact that there are no magnetic anomalies of any consequence, it appears that there is no mineralization of economic importance present. Exposure is poor on the Contact Nos. 5, 6, 7 and 8 claims but neither the aeromagnetic survey or the recent ground survey indicated any magnetic anomalies. Hence it must be concluded that chances of finding anything of economic importance on this ground are slight. It is therefore recommended that the option with Mr. O.L. Skogland be dropped.

*This work done under the
supervision of:
G.A. Noel,
P. Eng.*



M. J. Young
M.J. Young, B.Sc.
Geologist,
Utah Construction & Mining Co.

UTAH CONSTRUCTION & MINING COMPANY
MINERAL DEVELOPMENT AND GEOLOGY DIVISION

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~~XXXXXXXXXXXXXXXXXXXX~~

ROOM 204 - 510 WEST HASTINGS STREET - VANCOUVER 2, B. C.

July 13, 1962

Mr. T.G. O'Neill,
Mining Recorder,
205 Elizabeth Street,
ALBERNI, B.C.

Dear Sir: RE: CONTACT NOS 1-8 incl M.C.'S - GEOLOGICAL
AND GEOPHYSICAL REPORT

This letter is in response to your enquiry of July 6 for additional information relative to the geological and geophysical report submitted by Mr. M.J. Young to cover the 1962 assessment requirements on the Contact Nos. 1 to 8 mineral claims in the Zeballos area, Alberni Mining Division.

The dip needle used in the geophysical survey of the claims was a Sharpe D-2 dip needle, serial number 588. This dip needle is a Lake Superior type with a 360° circle and is provided with a levelling bubble and a needle release mechanism permitting readings to be taken "on the swing" for use as a "super dip" instrument. The instrument is manufactured by Sharpe Instruments Limited, Toronto, Ontario. Our procedure is to read this instrument with the operator facing west so that the dip needle readings are a function of the earth's vertical magnetic field.

The magnetometers (2) used in the geophysical survey were Jalander Electronic magnetometers, both model 1957, serial numbers 5770 and 5780. These instruments are manufactured by H. Jalander, Helsinki, Finland and operate on the "fluxgate" principle. This instrument has a range of 0 to 250,000 gammas, both positive and negative, in five sensitivity ranges. It is a self-orienting, vertical magnetic field, magnetometer of good precision.

The geological and geophysical work on the Contact group of claims was done under my supervision.

Yours very truly,

G.A. Noel

G.A. NOEL,
District Geologist

GAN/do

\$ 800

DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA.
To Wit:

In the Matter of

SUB - MINING RECORDER
RECEIVED
MAY 29 1962
M.R. #54836 \$21.00
VANCOUVER, B.C.

I, GERALD A. NOEL

of Room 204-510 W. Hastings Vancouver 2, B.C.

in the Province of British Columbia, do solemnly declare that I am District Geologist in charge of operations of Utah Construction & Mining Co. in the Province of British Columbia and that during the periods November 2 to November 17, 1961 and December 28 to December 31, 1961, Utah Construction & Mining Co. paid salaries for work actually done and for the Contact group of eight claims in the Alberni Mining Division. These claims have record numbers 4747 to 4750 and 4826 to 4829 inclusive and were recorded June 18, 1961 and August 6, 1961 respectively.

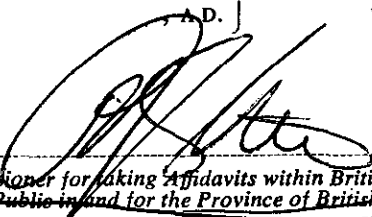
H.J. Young was paid a total of \$391.20 for 20 days work at the rate of \$500.00/month
E. Savrans was paid a total of \$189.37 for 11 days work at the rate of \$500.00/month
Knud A. Jodtfredsen was paid a total of \$179.53 for 15 days work at the rate of \$350/month
H.M. Jones was paid a total of \$74.20 for 4 days work at the rate of \$75.00/month.
G.J. Delane was paid a total of \$61.28 for 4 days work at the rate of \$75.00/month

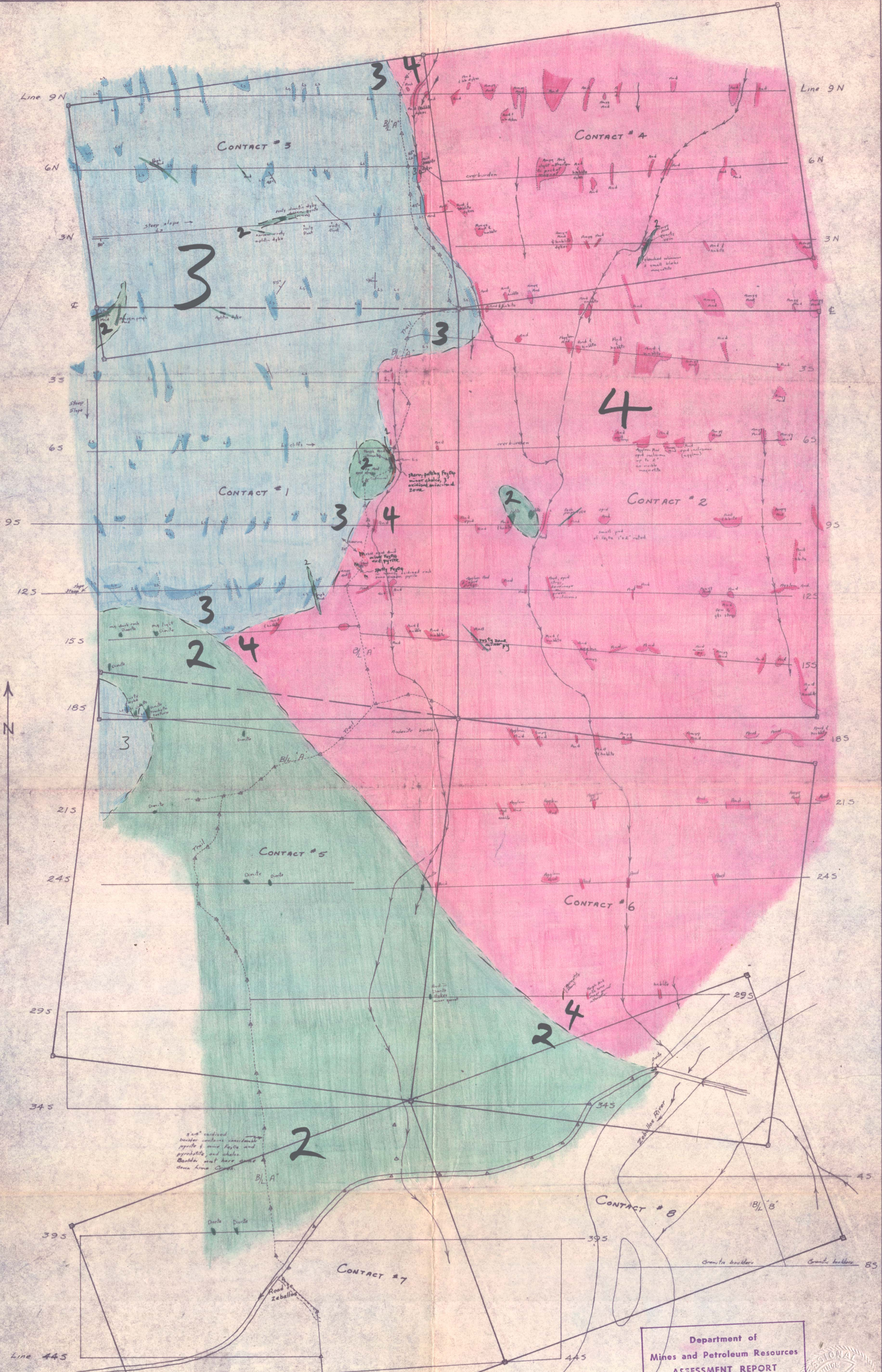
Thus a total of \$895.58 was spent for wages for work on and for the Contact group of claims.

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City
of Vancouver, in the
Province of British Columbia, this 29th
day of May, 1962 A.D.

Gerald A. Noel


A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia.



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 418 MAP 3



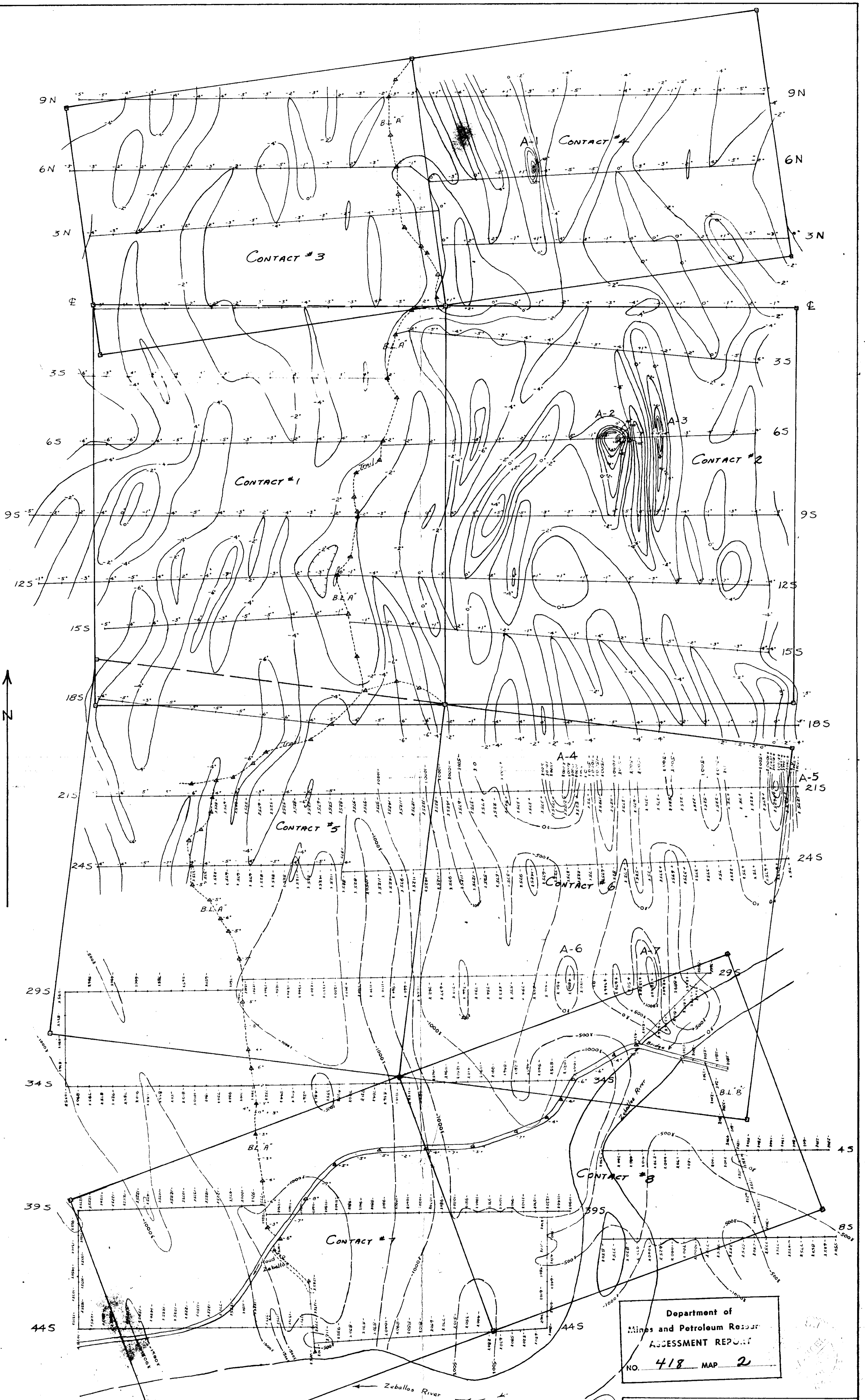
UTAH CONSTRUCTION AND MINING CO.
MINERAL DEVELOPMENT AND GEOLOGY DIV. VANCOUVER B.C.

GEOLOGY MAP
CONTACT GROUP
ZEBALLOS AREA
VANCOUVER ISLAND BRITISH COLUMBIA

DRAWN Dec 18, 1961	7/19/4	TRACED	
APPROVED		REVISED Jan 18, 1964	
SCALE: 1" = 200'		NO.	

LEGEND:

- 4 [Pink Box] Karmutsen volcanics; andesite, amygdaloidal agglomeritic & porphyritic includes ultrabasic hornblende phase which is believed to be intrusive
- 3 [Blue Box] Limestone
- 2 [Green Box] Diorite & Porphyritic Andesite intrusives
- 1 [Brown Box] Skarn
- m [Green Box] Mineralized areas, magnetite (red), chalcopyrite (green)
- 45° [Line with angle] Bedding
- [Line with arrows] Shearing
- [Square with cross] Claim posts & claim boundaries
- [Triangle] Chain & compass survey stations
- [Wavy line] Creek
- [Double line] Road
- [Line with cross-ticks] Bridge
- [Line with '45'] Traverse line



Department of
 Mines and Petroleum Resources
ASSESSMENT REPORT
 NO. 418 MAP 2

UTAH CONSTRUCTION AND MINING CO.		MINERAL DEVELOPMENT AND GEOLOGY DIV. VANCOUVER, B.C.	
MAGNETIC INTENSITY MAP CONTACT GROUP ZEBALLOS AREA VANCOUVER ISLAND BRITISH COLUMBIA			
DRAWN	Dec. 18, 1961	J.M.G.	TRACED
APPROVED			REVISED Jan. 4/62 J.M.G.
SCALE	1" = 200'		NO.

LEGEND:

- Pace & compass survey stations
- Claim posts & showing claim boundaries
- Traverse lines
- Road
- Bridge
- Trail
- Sharp dip needle reading
- Jander magnetometer reading
- Magnetic contour; 20 gamma interval; Instrument - Sharp dip needle
- Magnetic contour; 10 gamma interval; Instrument - Jander magnetometer

418

M2

Zeballos River