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CANEX PLACER LIMITED
EXPLORATION DIVISION

6485

A REPORT ON THE GEOCHEMICAL SURVEY OF
THE ALFIE 1 TO 4 CLAIMS

43 km. NORTH OF GERMANSEN LANDING
OMINECA MINING DIVISION
B.C.

MINERAL CLAIM MAP
NTS 94 C/2W

Lat. 56°08' Long. 124°55'

FOR CANEX PLACER LIMITED
By: I. Borovic, P. Eng.,
Geologist

FIELD WORK: July 14-August 30/77
Report: October, 1977

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. _____

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A Report on the Geochemical Survey of
the Alfie Claims
Omineca Mining Division, British Columbia

INTRODUCTION

This report describes the exploration work done to date and describes the latest results of the detailed mapping and geochemical survey of the property and surrounding area. The area was mapped in the scale 1:5,000 and reduced to 1:10,000. Results of the geochemical survey were plotted on the 1:5,000 scale maps.

PROPERTY & OWNERSHIP (Figure 2)

The Alfie claims were located by Canex Placer's personnel in the October of 1976. The property consists of the following claims:

Alfie 1
Alfie 2
Alfie 3
Alfie 4

The property is owned by Canex Placer Limited of 800 Burrard Building, 1030 West Georgia Street, Vancouver, B.C.

LOCATION & ACCESS (Figure 1)

The property is at latitude $56^{\circ}08'$, longitude $124^{\circ}55'$ on mineral claim map NTS sheet 94-C-2W, in the Omineca Mining Division (see Figure 2).

The Alfie claims are located 43 km. north of Germansen Landing and are covering part of the flank of a mountain range rising to the west of the Osilinka River. Elevations range from 2,800' in the river valley to about 5,000' on the mountain. The area is densely covered with jackpine, spruce and balsam trees. Access to the property is by helicopter from Germansen Landing, a small community located some 200 miles north of Prince George.



ALFIE CLAIMS

CONGLOMERATE MOUNTAIN

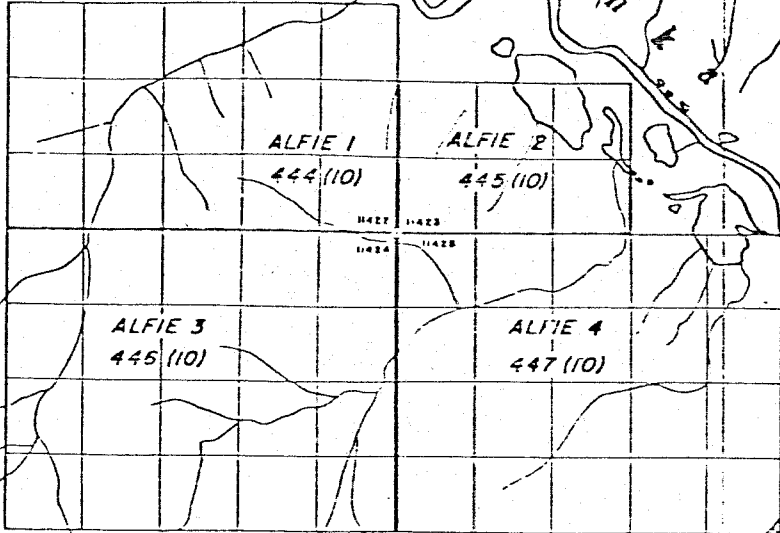
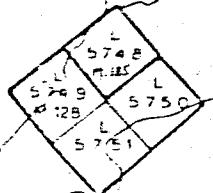
56° 00'

125° 00'

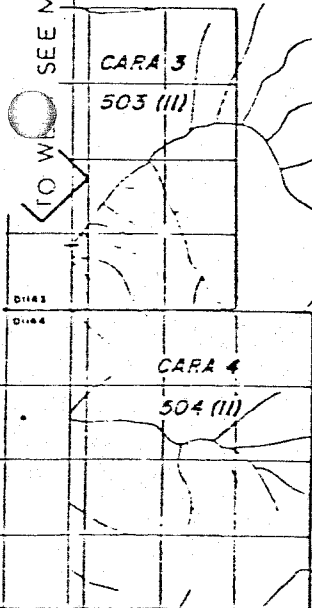
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Fig. 1.
INDEX MAP
1:250 000

56°10'



SEE MAP 94C/3E



124°52'5"

56°05'

125°00'

FIG. 2.
ALFIE CLAIMS

MINERAL CLAIM MAP

6485

94 C / 2 W

1" = 1 mile

Feb 24. 77

HISTORY OF EXPLORATION

The area of the Alfie group was first staked as the Gordon and Davies claims by Ernest and Gordon Davies, and optioned to Northwestern Explorations Limited in Vancouver, in 1951.

The first explorationists in 1951 considered the mineralization to be of the replacement type in limestones and all the work (mostly trenching) was done on the extension of the strike of those "to be replacement "vein type" bodies." The samples assayed contained less than 0.5% Pb, 2.1 to 4.9% Zn and 3.4 to 10.8% barium. Gold was not found and only 0.1 to 0.2 oz/t. silver.

During 1966 and 1967 a reconnaissance geochemical survey was undertaken in the area of the Davies group of claims by Canex Placer Limited. The survey indicated a widespread area of lead and zinc mineralization. The area was subsequently covered by 39 Donna claims.

- A. Detailed soil sampling was carried out and samples assayed for lead, zinc and silver. Two anomalous areas were indicated.
- B. The E.M. Survey was performed on the same grid as that used for soil geochemistry.

Four anomalies with positive resultant dip angles occur, probably reflecting the top of a conductive body close to surface. They are not coincident with geochemical anomalies.

- C. Following geochemical and geophysical surveys, some 2,500' of trenching was cut through the old Davies workings in order to determine the extent and controls of Pb and Zn mineralization.
- D. The area's mineral potential was re-examined and claims were geologically mapped in June, 1976.

- E. During the month of October 1976, four Alfie mineral claims with a total of 61 contiguous units were staked over the area of Donna claims and consequently Canex's holdings were increased from six old Donna claims on 61 new units covering the area of potential zinc and lead occurrences in Karst breccias, similar to the Mississippi Valley type mineralization.
- F. Exploration programme conducted in 1977 in the Alfie area comprised
- geological mapping (continued efforts from 1976)
 - geochemical soil survey covering most of the favourable areas of Alfie 3 & 4 claims not previously (in 1966/67) surveyed.

The sampling was performed on the grid with base line extended NW-SE for 4.4 km. Total of 77.5 km./lines were blazed and flagged.

- the soil samples were taken every 25 m. on the lines spaced at 100 m. intervals.

GEOLOGY

Regional

The area of the northern end of Manson Creek is underlain by limestones, dolomites, argillites and shales of Pennsylvanian(?) Permain Cache Creek group (Armstrong, J.E. (1945) and Roots, E.F. (1946, 1947, 1948)).

The most recent investigations by J.W.H. Monger (1972, 1973, 1974) show that the group is of Ordovician (?) and Silurian (?) to Middle Devonian and not of younger Permain age. The group is about 3,000 feet thick and very deformed. The lowest 1,000 feet of foliated, fine grained crystalline limestone, platy argillaceous limestone and phyllite, lithologically resembles some Ordovician and Silurian carbonates in the eastern Cordillera. The remainder is algalaminated dolomite overlain by dolomitic limestone that in places contains round, etched quartz grains and Lower Middle or Upper Devonian fossils. Algalaminated textures and algal balls at some horizons in the carbonate indicate shallow water deposition, probably within the intertidal zone - possible reef environment. Lower Middle or possible

late Lower Devonian fossils occur just below the slate, in a dolomite horizon that locally contains galena and sphalerite.

Structure

The strata in this area appears to form a homoclinal succession interrupted by faulting and local folding, that dips westwards from the high-grade metamorphic axis of the Wolverine Complex.

Detail (See Figure 3, an updated geology map)

Four stratigraphic units were recognized and mapped in the larger area on and around the Alfie claims.

1. The carbonate unit
 2. Slate & chert unit
 3. Massive calcarenite, calcirudite unit and
 4. Black rusty shale unit
- Minor volcanic and intrusive rocks were mapped in the southwest corner of the map sheet

1. The carbonate unit is underlying most of the property. It is comprised of massive light grey fossiliferous, possibly reef-subreef calcarenites, calcirudites, dolomitic calcilutites, dark grey biocalcirudites with corals, grey fine grained dolomites and dolomitic calcirudites.

The upper parts contain breccias filling the paleokarst relief and carrying Zn and Pb mineralization.

This unit is believed to be the upper part of 3,000 feet thick group of Ordovician (?) Silurian (?) to Middle Devonian rocks as mapped by J.W.H. Monger (1972, 1973, 1974).

The lower portion of the group was not observed on the property.

2. The slate & chert unit is exposed on the south western side of the property. It consists of fissile, grey to dark grey silicious slates and black shales with intercalated thin-bedded (1/2 to 1 cm.) cherts. The unit is superimposed on the older carbonate unit. Direct contact in between these units is covered. It is believed that the slate chert unit is transgressive on the karstified carbonate units.

3. Massive calcirudite, calcarenite unit is partly outcropping in the southwest corner of the property and appears to be laying above the slate and chert unit. The unit outcrops on the higher elevation than slate and chert unit but because the contacts are covered it is difficult to elaborate on the relationship.

4. Black rusty shale unit is outcropping in the southwest corner of the map sheet. It is flat laying and does not appear much disturbed tectonically. The contact with massive calcarenite unit is northeast-southwest striking fault.

Minor volcanic and intrusive rocks are outcropping in the southwest corner of the mapped sheet. Contacts with black shale units are covered therefore contact features were not observed.

Structure

The general monoclinial succession with westward dips of carbonate rocks appears partly changed in the area of the Alfie claims. In the central part of the property, the strata form an anticlinal structure with steep dipping limbs, probably due to some local faulting.

Mineralization

The carbonate rocks with sphalerite, galena, pyrite, barite and hematite minerals are located throughout the area of the Donna claims.

The best showings are found in old trenches and creek canyons and rock cliffs in the middle of the Alfie #1 overlooking the Osilinka River Valley.

Course galena and honey-coloured sphalerite with barite rosettes were observed in dolomitic limestone breccias in old trenches and on the cliffs overlooking the Osilinka River to the north.

Very fine galena and sphalerite occur in porous coral limestones filling space inside the corals.

Taking the area as a whole, sulphide mineralization appears to be widespread, patchy and concentrated in one or more favourable horizons. The extent of the mineralization would be dependant on the extent of the karstification process.

GEOCHEMICAL SURVEY

Sampling Method

Samples were taken in the "B" horizon ranging from 5" to 20" in depth over the sampled area. Very little glacial cover was encountered and the soil could be considered mostly of the residual type.

Assay Method

Samples were, first, dried in a hot air drier, then sifted in -80 mesh nylon sieves. Portions of the -80 mesh fractions were weighed and after processing analysed for zinc and lead content using techtron A.A. spectrophotometer.

All samples were processed and analyzed in the analytical facilities of the Placer Research Lab., 323 Alexander Street, Vancouver, B.C.

RESULTS

- The whole range of values from as low as 25 ppm to 1.56% Zn and from 9 ppm to 5000 ppm Pb were encountered.
- Values above 1000 ppm Zn and 250 ppm Pb are considered anomalous for the carbonate rocks of the Alfie area.
- Two anomalous areas; one on the northwest of the property (Alfie #1 and #3) and second on the southeast (Alfie #4) are established by this and previous surveys and results are combined and shown on the geochem survey maps.
- There are three anomalous zones within the northwest area. The zones range from 800 to 1000 m. in length and from 50 to 250 m. in width, occupying an accumulated area of about 340,000 m².
- Four larger anomalous zones are outlined in the southeast anomalous area, averaging 500 m. in length and from 25 to 140 m. in width, occupying an area of about 120,000 m².
- Zinc and lead anomalies are co-incident.
- Lead appears to have larger extent in the southeast than in the northwest anomalous area.
- Downhill dispersion is very small if any.
- A relatively thin residual cover and stable wooded slopes have probably had an effect on the dispersion.

EVALUATION OF RESULTS

1967-1968 trenching (see I. Borovic 1975) of the N.W. end of the Gordon showings showed that geochemical anomalies could be result of relatively small (10 x 10 x 25 m - up to 5000 tons) and high grade (5-25% Zn) or relatively large (100 x 100 x 25 m. more than 100,000 tons) but lower grade (1 x 5% Zn) mineralized bodies.

The anomalous zones are covering an accumulated area of about 460,000 m² and appear to be in place or very slightly removed from its source. This fact correlated with trenching results indicates that larger tonnages and higher grade mineralization are dependant on the depth of karstification, which is in turn very much dependant on the zones of weakness in the rocks of the carbonate belt.

D. Brown

ANNEXE I
STATEMENT OF EXPENSES

The following is a breakdown of expenses incurred in carrying out the work on the "Alfie" 1 to 4 claims in July, August, September, October, 1977.

1. Field Work (July 14 - August 30, 1977)

Personnel

I. Borovic, Geologist, Project Supervisor (July 14-19; July 29-Aug.2; Aug. 16-Aug. 30)	26 days @ \$150/day	\$3,900
P. Pacor, Assistant (July 14-Aug. 30)	48 days @ \$75/day	3,600
S. Angus, Jun. Assistant (July 14-Aug. 30)	48 days @ \$50/day	2,400
L. Jacobs, Jun-Assistant (July 14-Aug.30)	48 days @ \$50/day	2,400
L. Dickson, Jun. Assistant (Aug. 16-Aug.30)	15 days @ \$50/day	750
G. Alexander, Assistant (Aug. 18-Aug.30)	13 days @ \$60/day	780
R. Morris, Assistant (Aug. 18-Aug.30)	13 days @ \$60/day	780
	<u>Personnel Total</u>	<u>\$14,610</u>

Camp Operations

7 man camp, building cost, food and fuel \$7,620

Transportation

Trucks & Freight 4,409

Helicopter (Northern Mtn. Helicopters & Okanagan)

27 hours @ \$360/hour (fuel and salaries included) 9,720

Transportation Total \$14,129

Please Note that Line Cutting Expenses are Included in Personnel Salaries and Wages.

2. Office Work

Personnel

I. Borovic (Sept. 6-19, Oct. 3-7)	15 days @ \$150/day	\$2,250
A. Kemp (Chief Draftsman) (Sept. 10-Oct.7)	15 days @ \$100/day	<u>1,500</u>
	<u>Personnel Total:</u>	<u>\$3,750</u>

Sample Assaying (Placer Research Lab)		
2,816 samples @ 5.40 (Zn & Pb)		<u>\$15,206</u>

Topographic mapping (by McElhanney Surv. & Engin. Ltd)		<u>3,390</u>
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Office Work Total \$22,346

3. Recapitulation

Field Work - Personnel		\$14,610
- Camp Operations		7,620
- Transportation		14,129

Office Work		<u>22,346</u>
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TOTAL EXPENDITURES \$58,705

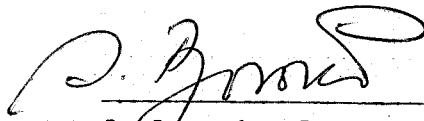
CERTIFICATE

I, I. Borovic, with business address in Vancouver, British Columbia, Do
Hereby Certify:

1. That I have personally studied, examined, mapped and supervised the
exploration work in the area of Alfie Claims located at 56⁰08' Latitude and
124⁰55' Longitude in the Omineca Mining Division, Province of British Columbia.

2. That the expenditures claimed for the performance of the work are
correct.

Respectfully submitted



I. Borovic, P. Eng.

REFERENCE

Ainsworth B. (August 20th, 1968) report of work completed in 1968 on the Donna claim group Omineca MD Canex Placer Limited, File V-97

November 1968 - Final Report on the Donna Claims, Canex Placer Limited File #V-97

Armstrong, J.E.

1949: Fort St. James map-area, Cassiar and Coast Districts, British Columbia; Geol. Surv. Can., Mem. 252

Borovic I.

1976: A Report on the Geology of the Donna Claims, Omineca Mining Division, British Columbia, Canex Placer Limited File V-97

Lord, C.S.

1948: McConnell Creek map-area, Cassiar District, British Columbia, Geol. Surv. Can., Mem. 251.

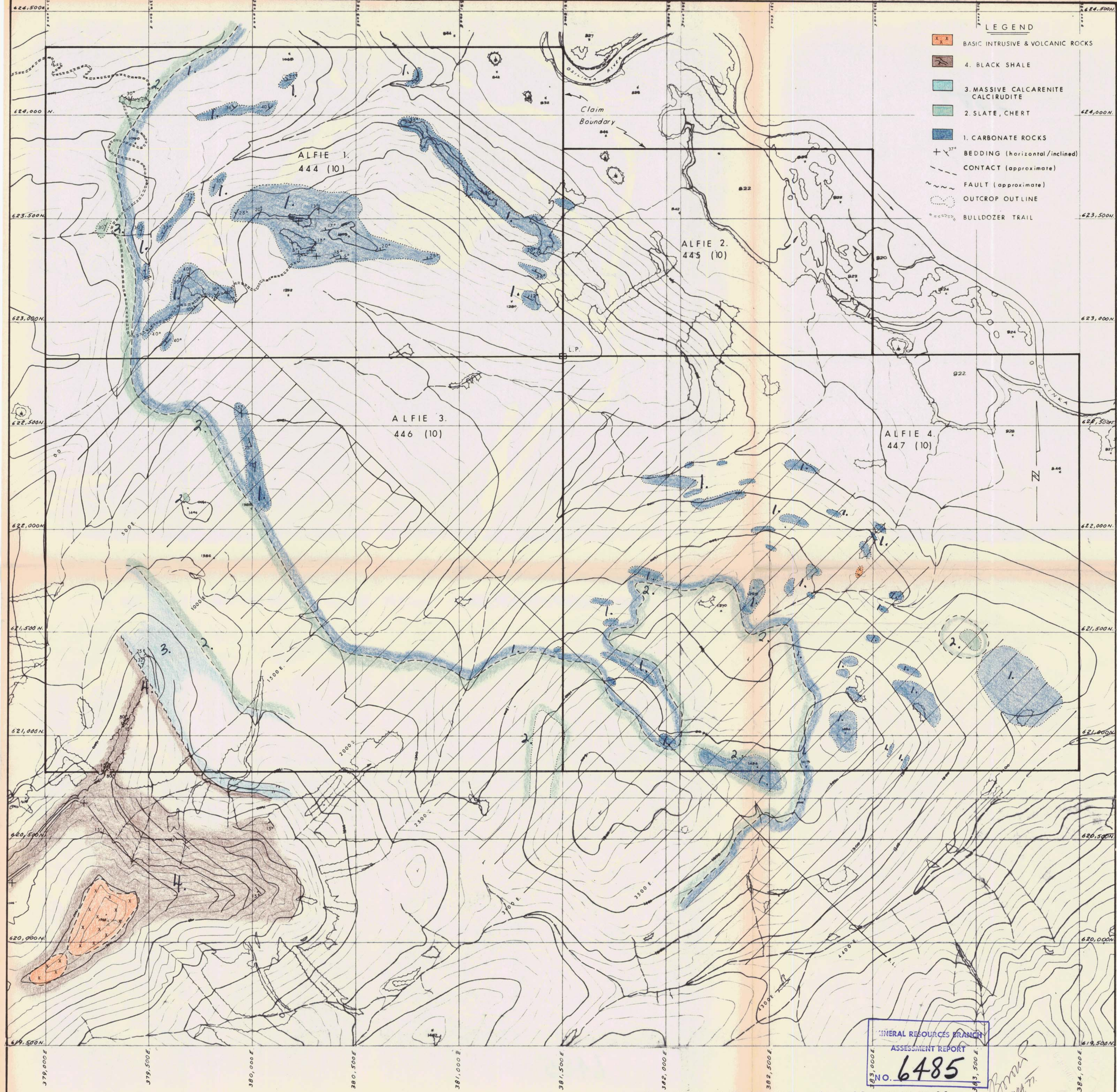
Monger, J.W.H.

1973: Upper Paleozoic Rocks of the Western Canadian Cordillera; in Report of Activities, April to October 1972, Geol., Surv. Canada, Paper 73-1, Part A, p. 27-28.

Roots, E.F.

1954: Geology and mineral deposits of Aiken Lake map-area, British Columbia; Geol. Surv. Can., Mem. 251.

Minister of Mines Report (1952)



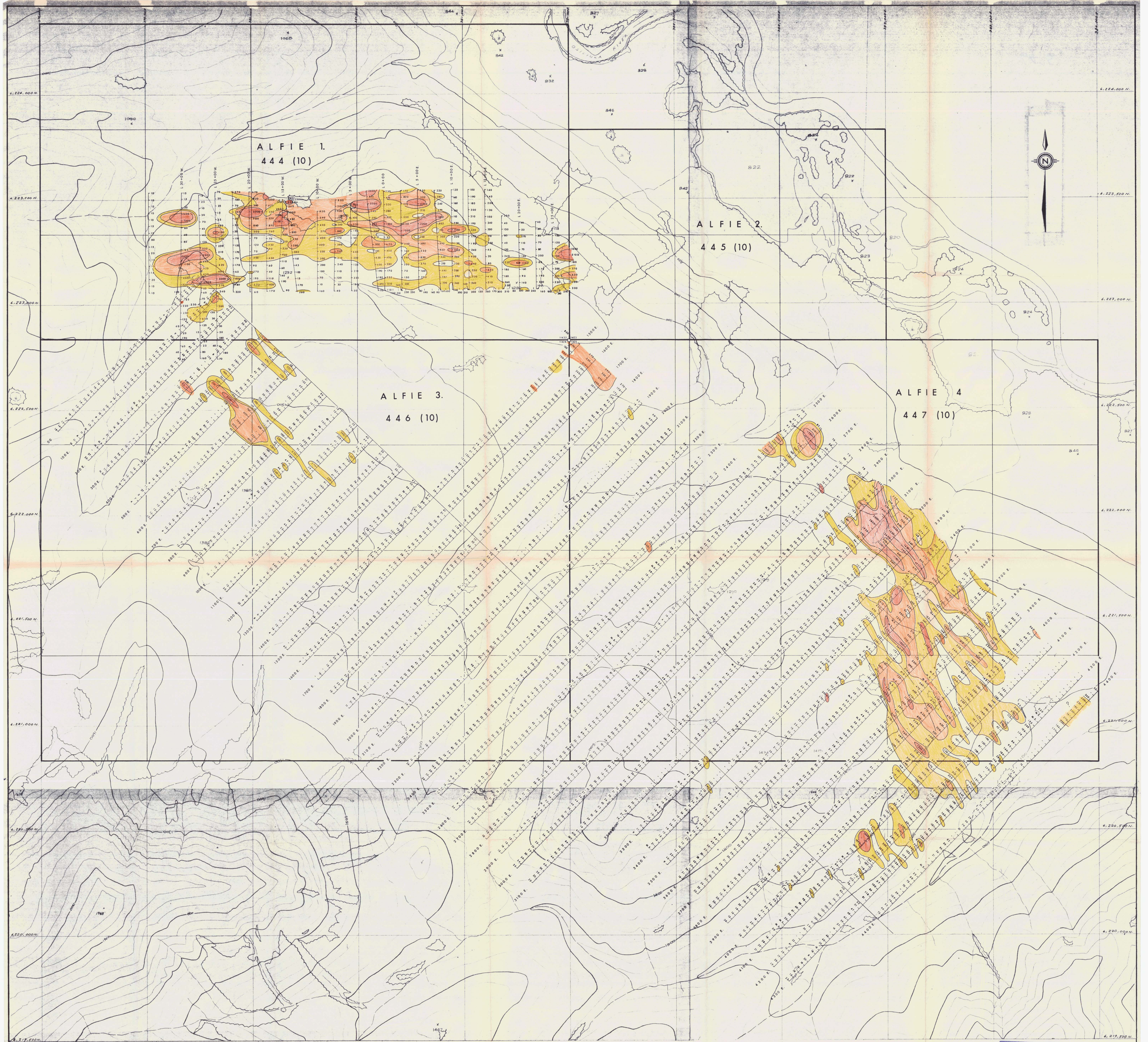
- LEGEND**
- BASIC INTRUSIVE & VOLCANIC ROCKS
 - 4. BLACK SHALE
 - 3. MASSIVE CALCARENITE CALCIRUDITE
 - 2. SLATE, CHERT
 - 1. CARBONATE ROCKS
 - BEDDING (horizontal/inclined)
 - CONTACT (approximate)
 - FAULT (approximate)
 - OUTCROP OUTLINE
 - BULLDOZER TRAIL

MINERAL RESOURCES BRANCH
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 No. **6485**

Topographical Base Map Compiled by: McElhanney Surveying & Engineering Ltd., Van., B.C.

DRAWN: I.B., A.K.	SCALE: 1:10000	CANEX PLACER LIMITED	GEOLOGY
TRACED: A.K.	DATE: OCT, 1977	ALFIE V-97	
APPROVED:	REVISED:	OSILINKA RIVER, B.C.	

FILE No.: V-97

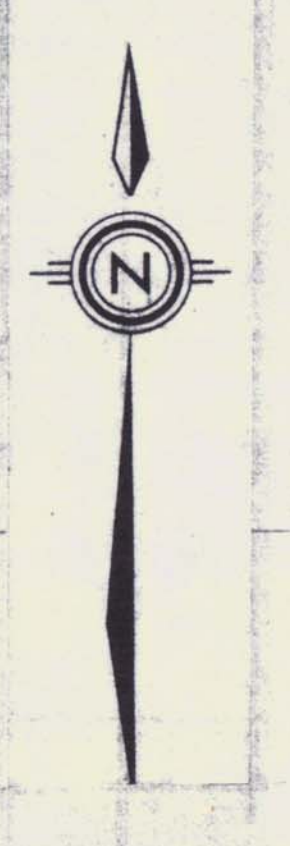


ALFIE 1.
444 (10)

ALFIE 2.
445 (10)

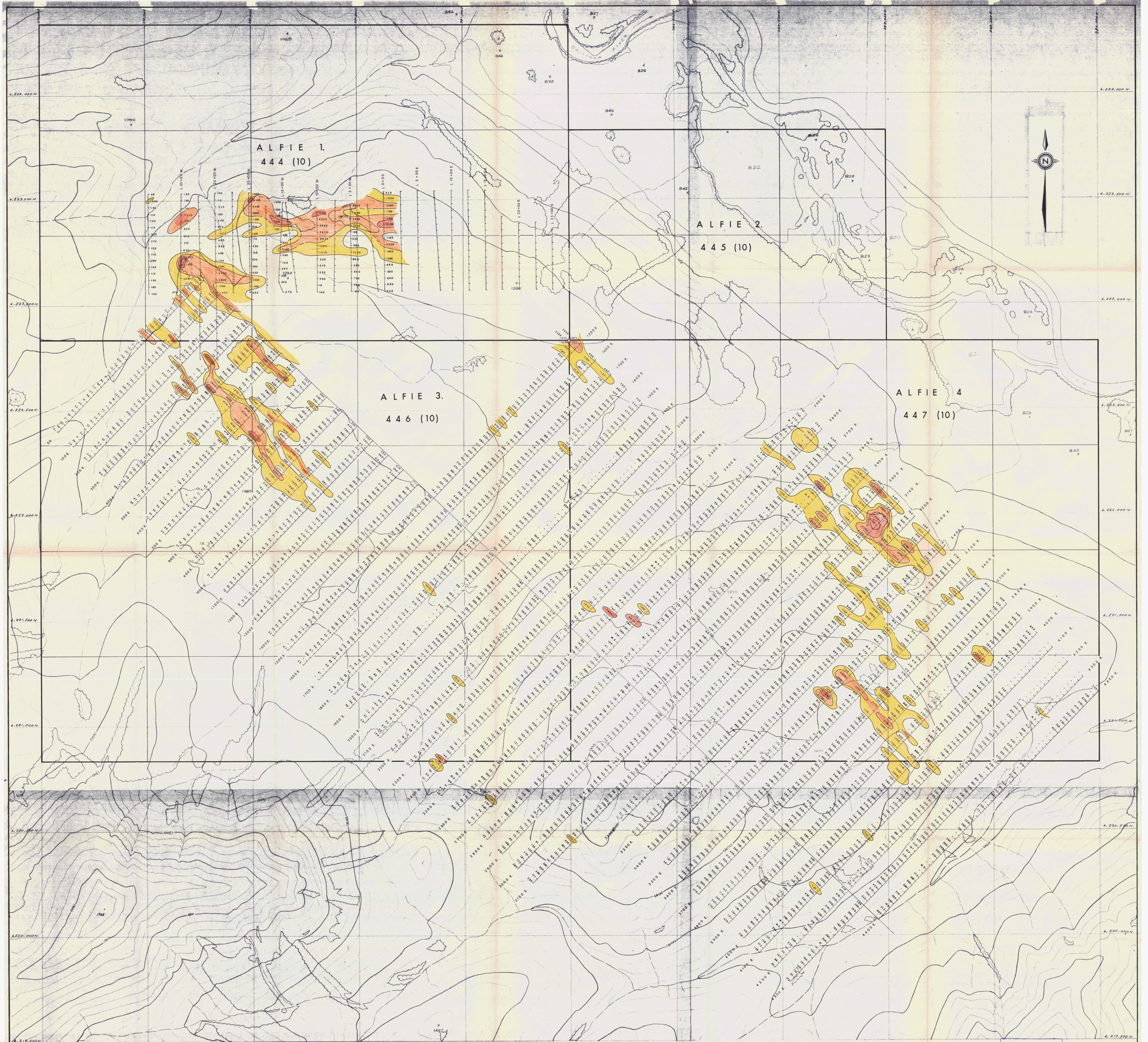
ALFIE 3.
446 (10)

ALFIE 4
447 (10)



- PPM Pb
- 1000 +
- 500 - 1000
- 250 - 500
- < 250

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ALFIE 1.
444 (10)

ALFIE 2.
445 (10)

ALFIE 3.
446 (10)

ALFIE 4
447 (10)

- PPM Zn
- > 5000
- 2000 - 5000
- 1000 - 2000
- < 1000

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