CANEX PLACER LIMITED
EXPLORATION DIVISION

5359
94K/4W

REPORT ON THE GEOLOGY AND GEOCHEMISTRY OF THE DRIFTPILE PROPERTY DRIFTPILE CREEK, BRITISH COLUMBIA

COMPRISING WORK DONE
BETWEEN AUGUST 12 AND SEPTEMBER 3, 1974
ON THE "D", "P", "G" AND "GOOF"
MINERAL CLAIMS, LIARD MINING DIVISION, B.C.

N.T.S. 94-K-4(W)

H.M. Wise, B. Sc.(Eng.), M.S.
Canex Placer Limited

December, 1974.

700 BURRARD BUILDING • 1030 WEST GEORGIA STREET • VANCOUVER, B.C., CANADA V6E 3A8 • (604) 682-7082

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700 BURRARD BUILDING • 1030 WEST GEORGIA STREET • VANCOUVER, B.C., CANADA V6E 3A8 • (604) 682-7082

SUMMARY

A total of 158 mineral claims were located in 1974 by personnel of Canex Placer Limited in the Driftpile Creek area of northeastern British Columbia. An exploration program consisting of geologic mapping, soil and rock geochemistry, and limited trenching was carried out during August, 1974.

Mineralization consists of sphalerite and galena which is found within beds of massive framboidal pyrite and in close association to bedded barite. The bedded pyrite and bedded barite formations are enclosed by non-calcareous black shales that are considered to be part of the Kechika Group of Ordovician age. The structure and ore textures are consistent with a sedimentary origin of the pyrite-sphalerite-galena deposit.

Mineralization of potential ore grade has been found only as boulders so far, however the environment is favourable for the development of a large tonnage lead-zinc deposit.

RECOMMENDATIONS

(1) Further soil sampling is required along the east, west and north sides of the present grid in order to define the total favourable stratigraphic horizon.

(2) Further geologic mapping, with emphasis on the regional setting of the Driftpile property, is required.

(3) A vertical loop EM survey, designed to trace the bedded-pyrite units, is strongly recommended.

INTRODUCTION

HISTORY

The Driftpile Creek lead-zinc prospect was discovered as a result of a reconnaissance stream geochemical survey performed in 1970 by Geophoto Consultants Limited. Follow-up by Geophoto confirmed the presence of the geochemical anomaly but after no mineralization was uncovered, the results were regarded as due to metalliferous black shales. The geochemical data was presented to Canex Placer Limited in 1973; prospecting by B. Hodgson and the writer uncovered boulders of pyrite-banded black shale that contained sphalerite and galena on Driftpile Creek near the mouth of Creek 122.

The area of interest was staked by Canex Placer Limited during the summer of 1974, and geological mapping and soil and rock geochemical surveys were carried out on the property.

LOCATION AND ACCESS

The Driftpile property consists of a total of 153 full-sized and fractional mineral claims, being:

Claim Name	Record Number	Anniversary Date
D1-54	71808-71861	Aug. 12/75
P1-54	71754-71807	Aug. 12/75
G1-40	71993-72032	Sept. 6/75
GOOF-1-4FR	71862-71865	Aug. 12/75
GOOF-5-FR	71992	Sept. 6/75

These claims are located straddling Driftpile Creek, fourteen

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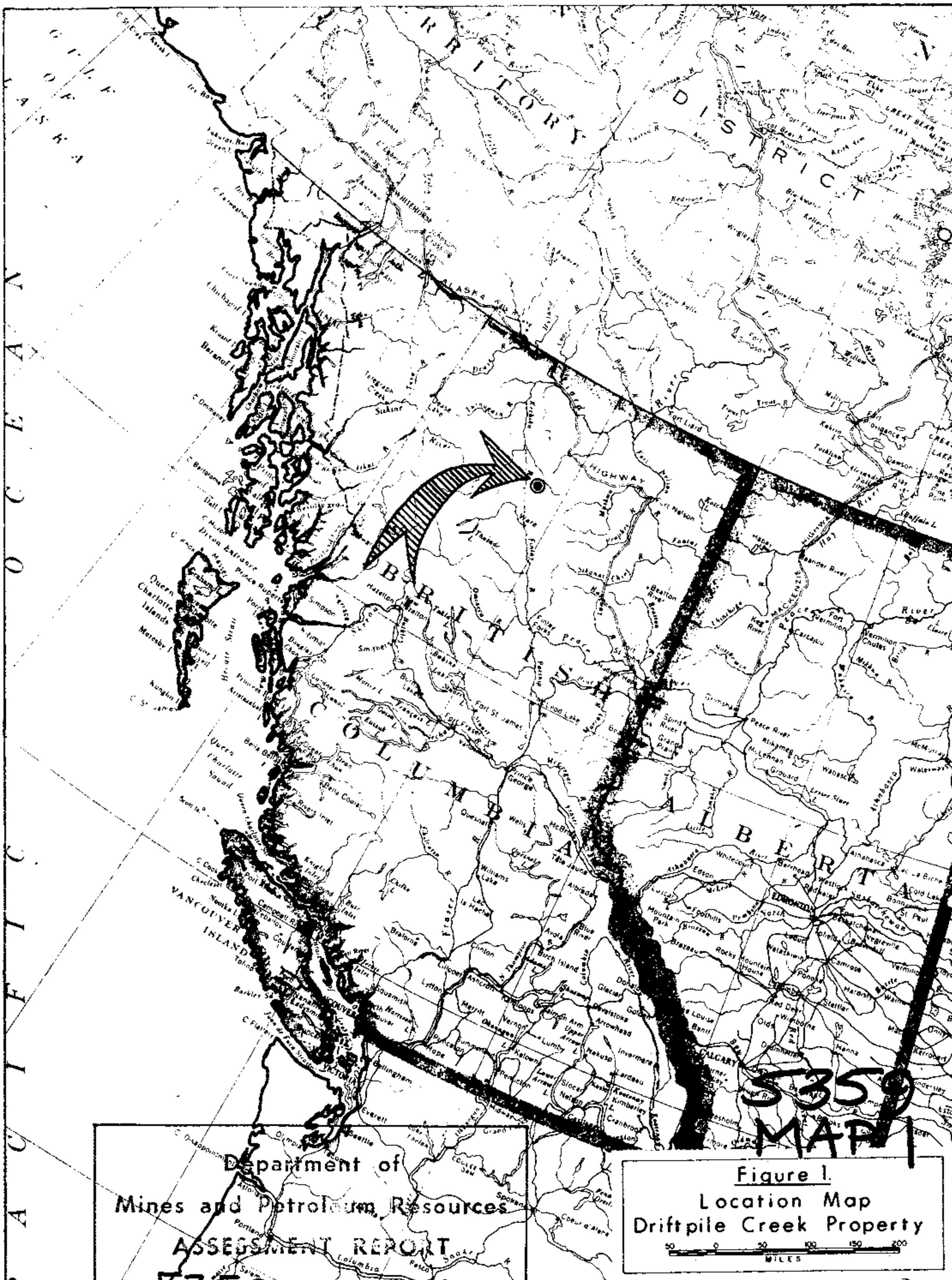
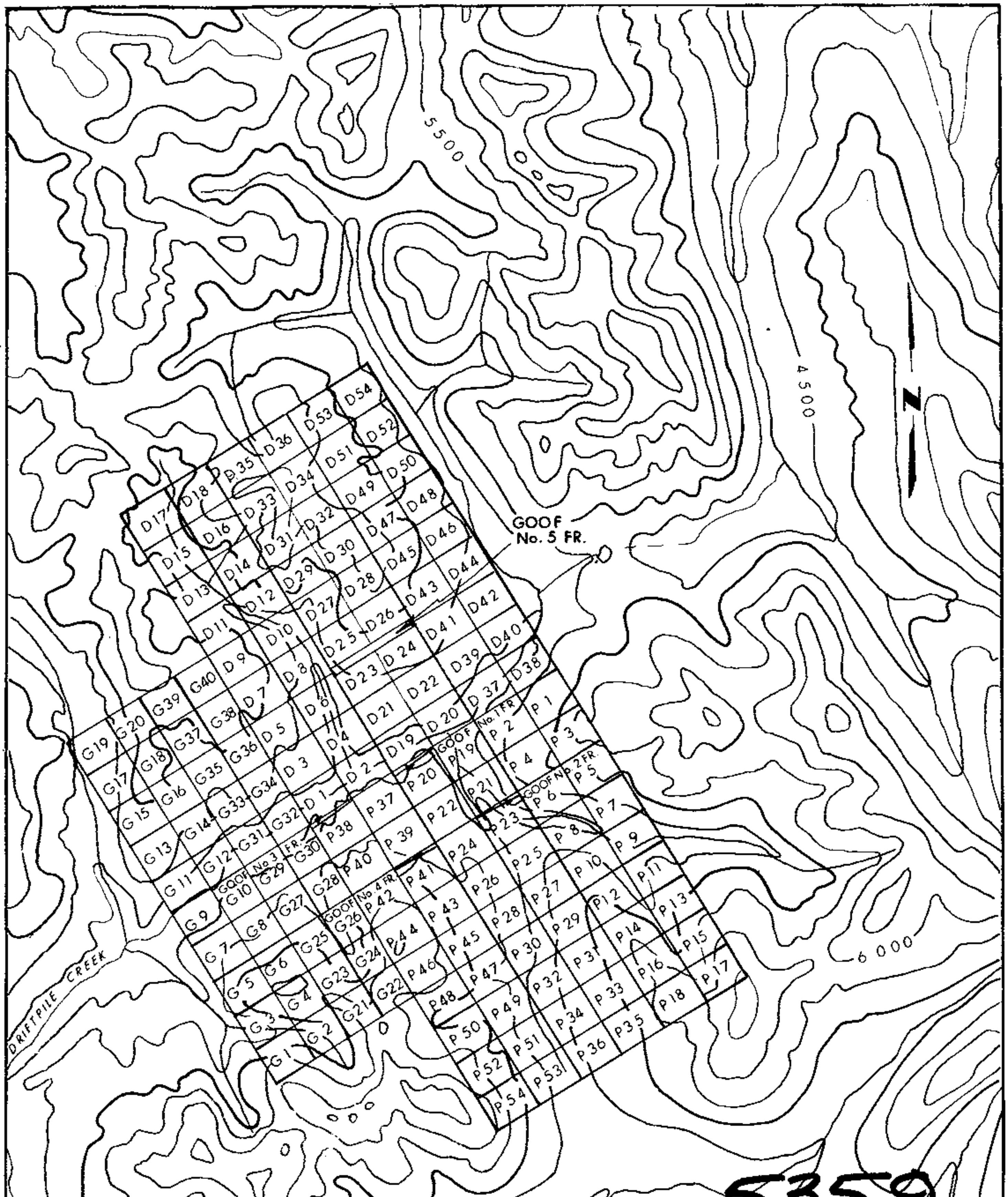


Figure 1.
Location Map
Driftpile Creek Property



5359
MAP 2

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 5359 MAP #2

Figure 2.
CANEX PLACER LIMITED
DRIFTPILE CR. PROPERTY
"D", "P", "G" and "GOOF" Mineral Claims
Scale: 1" = 1 mile

miles upstream from the confluence with the Kechika River (Figures 1 & 2). The elevation of the claim group ranges from 3900 feet to above 6000 feet. The centre of the Driftpile claim group is at 58° 04' north latitude and 125° 55' west longitude.

Access to the property is by float plane to either Mayfield Lake in the Gataga River valley (9 air miles from the centre of the property) or Middle Gataga Lake at the headwaters of South Gataga River (12 air miles from the centre of the property), and by helicopter from the lake up to the claim group. A horse trail exists between Middle Gataga Lake and the Driftpile Creek.

The closest road is Mile 442 of the Alaska Highway, but mountainous terrain would make road access to the claim group extremely difficult. Both Mackenzie, B.C. and Watson Lake, Y.T. were used as supply points for the 1974 exploration programme.

OWNERSHIP

The Driftpile Creek prospect is owned by a partnership of Canex Placer Limited, General Crude Oil Company Northern Limited, Pembina Pipe Line Limited and Sun Oil Company (Delaware). Canex Placer Limited is the operator.

TOPOGRAPHY

The topography of the Driftpile Creek property is generally that of rounded mountains with sharply incised creek valleys. Further to the east, limestone peaks rise abruptly to in excess of 8000 feet; to the west,

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peaks of clastic rocks rise in excess of 7000 feet.

North-facing slopes are covered with stunted spruce and juniper to 4500 feet elevation; south-facing slopes are generally bare of trees. Above the tree-line, buck-brush is the dominant vegetative cover up to 5500 feet elevation.

Despite the narrow valleys, Driftpile Creek and its major tributaries are meandering streams. The valley bottoms are usually swampy.

WORK PERFORMED

During the 1974 field season, work on the property consisted of marking a rectangular grid totalling 24.0 line-miles, geologic mapping at a 1:4800 scale on the area covered by the grid, soil sampling for a total of 1300 samples, rock sampling of all outcrops observed in the course of mapping, and hand trenching with some blasting. All soil and rock samples were analyzed for lead, zinc and barium at the Research Centre of Placer Development Limited in Vancouver.

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GEOLOGY

REGIONAL GEOLOGY

The Driftpile prospect lies within the northern Rocky Mountain fold system, fourteen miles east of the Rocky Mountain Trench. According to Gabrielse (1962) the Trench is a locus of faulting that separates the Rocky Mountain Structural Province from the Cassiar Mountains.

The prospect lies within black shale terrain that has been assigned to the Kechika Group (Taylor & Stott, 1971). The Kechika Group is of Ordovician age (Taylor & Stott, 1971; Gabrielse, 1962) based upon graptolites found in strata of similar lithology as that within the Driftpile Creek area. No graptolites have been found in the Driftpile area.

Towards the north and northwest the Ordovician strata change from shale to argillaceous limestone; towards the east the Ordovician strata undergo a facies change to clean platform-type shallow-water limestones.

Greenstone dikes and sills have been observed to cut Ordovician carbonates in the Turnagain River area northwest of Driftpile Creek (Gabrielse, 1962) and southeast of Driftpile Creek thick units of volcanic sediments occur within the lower part of the shale succession (Taylor & Stott, 1971).

Since fossil evidence is lacking within the Driftpile Creek shales, it is not certain that they are of Ordovician age. Taylor (1971, p. 16), has stated that Silurian graptolitic shales "might extend into the (Driftpile Creek) area, however, for convenience of mapping purposes all the graptolitic

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shales have been mapped in that facies unit of the Kechika Group". The Driftpile Creek area was within a black shale facies from Middle Cambrian until at least Upper Devonian.

PROPERTY GEOLOGY

The portion of the claim group covered by the grid was mapped at a scale of 1:4800. All outcrops observed are plotted on the geological map.

There is less than 1% outcrop in the mapped area. Of necessity, the interpreted geological structure has been heavily based upon the geochemical results, and especially upon the distribution of barium in the soil.

The property is underlain by a black shale sequence within which is a bedded barite unit and a thin bedded pyrite unit. The entire sequence is considered to be part of the Kechika Group of Ordovician age. Due to time limitations and lack of helicopter support, it was impossible to map the entire stratigraphic succession of the Kechika Group in the Driftpile Creek area.

The oldest rock unit within the mapped area is a grey-weathering, non-calcareous black shale which is exposed along the east side of the mapped area, east of the interpreted fault that extends from 6000N, 1600E to 6N, 7E on the DP grid. Within this unit are strata of shiny black-weathering hard, non-calcareous shale, however, in both grey-weathering and black-weathering shales, no bedding or any evidence of internal structure

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was observed, and so the relationship of the two shale facies is unknown.

Higher in the succession, there is an increase in barite content of the shales. Along Driftpile Creek there are two barite horizons, each approximately 15 feet thick, which outcrop between the most easterly claim line and the eastern edge of the grid. Between the barite horizons, the black shale is mainly of the shiny black-weathering facies.

Overlying the shale and barite sequence is the series of massive pyrite beds. This unit is very well exposed at the Driftpile Creek Showing (see Figure 3) located on the main creek 1500 feet east of the grid base line. The pyrite sequence is 30 feet thick at this location. The lowest rock unit exposed at this location is shiny black-weathering shale. Black shale containing disseminated framboidal pyrite comprises the lowermost unit of the pyrite sequence. Above this unit are narrow beds of massive pyrite separated by very fine interbeds of black shale. While in hand specimen the pyrite appears massive, under the microscope the pyrite beds are shown to consist of overlapping centres of framboidal pyrite with interstitial detrital material and barite. The massive pyrite sequence grades upwards into thin alternating pyrite, barite and shale beds. Higher in the sequence the number of pyrite beds decreases, and barite predominates. The stratigraphic column as exposed along Upper Driftpile Creek is illustrated in Figure 4.

Unweathered pyrite sequence outcrops only along Upper Driftpile Creek and towards the north along a minor creek up to 1200 N, 1900 E. Because of the very high pyrite content, the rock decomposes very readily

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when exposed to the atmosphere to leave a residue of black clay and various orange-coloured iron oxides. This effect is shown very well at Trench #6, located at 200S, 300E (Figure 8). In the Stratigraphic Section composed from this trench (Figure 9) the black clay corresponds to shale beds and rust corresponds to beds of massive pyrite. At the site of Trench #6, only rocks of the pyrite sequence are exposed, giving a thickness in excess of 45 feet at this location. The effect of weathering on the expected grade of the pyrite sequence is shown by comparing the assays of the lower part of Trench 3 (Figure 6) which contains weathered pyrite beds exposed to the atmosphere and the assays from the outcrops at 1000N, 1900E and 800N, 1800E which were obtained through sampling the fresh rock exposed only in the bed of the creek below water level.

The sequence of barite rocks is best exposed in the canyon of Creek 153 to the north of the mapped area. Because of the very rugged nature of this canyon only one reconnaissance traverse was made down this creek. The barite sequence is also at surface but poorly exposed on the east central part of the mapped area as indicated by the soil geochemistry results. The barite occurs as white beds up to one half inch thick separated by grey beds containing a higher content of detrital material. Occasionally, there are thin interbeds of black shale containing discontinuous stringers of overlapping pyrite framboids. Microscopically the barite occurs as small interlocked tabular grains. Generally the elongation of the grains is parallel to the bedding planes.

Based upon field evidence, there is a lateral facies change between the barite sequence and the black shales which occupy the entire southern portion of the mapped area. Float and outcrop evidence on the

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northeastern edge of the grid indicates a local facies change within this area also. In both of these areas there are many features described in the literature of the Alabama bedded barite deposits (Zimmerman and Amstutz, 1964). Thin beds of barite are discordant and contain discreet barite grains in a black shale matrix. Spherical nodules of radiating barite approximately one-eighth inch in diameter are found within thicker black shale beds. Examination of galena-bearing float specimens from 4000N, 1900E indicated barite nodules one-half inch in diameter had settled into a layered ooze, with water layers of sediment piled on top of and around the nodule.

Grey-weathering black shales identical to those found on the eastern part of the mapped area also outcrop on the western half of the grid, but these are interpreted to overlie the barite sequence. In the southern half of the grid no distinction has been noticed between the upper and lower shale series. Graphitic black shales outcrop near the mouth of Creek 142 (south of camp) and near the mouth of Creek 120 (west of camp). These graphitic shales are also characterized by a white and blue-weathering surface. Similar rocks, but with lower graphite content, also outcrop along the canyon of Creek 152 north of the mapped area.

One limestone outcrop, located at 1200N, 2000W was observed, but the structural relationship of this rock to the rest of the shale sequence is unknown.

West of the grid, the mountain underlain by the northern "G" claim block is composed of grey-weathering black argillite. The lack of

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cleavage within this rock unit is the only megascopic difference between this rock unit and the grey-weathering black shales.

The Driftpile Creek area has undergone an interesting glacial history. A large glacier which occupied the Driftpile Valley remained steady for a considerable period of time and allowed the formation of a prominent broad terrace at approximately the 4200 foot elevation on both sides of the valley. A second large glacier occupied the valley of Creek 140 and left a kettle in the glacial drift at the former dam-site.

Two types of sedimentary rock have formed since the cessation of glaciation. Travertine outcrops in the valley bottom of Creek 120 and several other creeks further west; at all locations the outcrops is restricted to a small area near the mouth of the creek. The travertine contains fossil fresh-water snails, and leaf, twig, branch and log casts. The rock is made up of small rounded fragments of black shale and glacially-derived sand grains set in a carbonate matrix. The rock contains up to 0.3% Zn in smithsonite. The other recent sedimentary rock is a limonite spring deposit which outcrops at various places throughout the mapped area. The rock consists of fragments, cobbles and boulders of black shale set in a porous matrix that is mainly composed of various rusty-coloured iron oxides. At 2600S, 600E the spring deposit contains boulders of galena-bearing pyrite beds. The limonite spring deposits have been formed by the precipitation of iron oxides at the points at which cold water springs have issued from the ground.

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STRUCTURE

The Driftpile prospect lies within the western part of the Rocky Mountain Fold Belt. On a regional scale the sedimentary rocks have been folded and faulted along axes which trend northwesterly. Mapping by Gabrielse (1962) has shown that "tight, northeasterly overturned folds and associated thrust faults are prominent in the range between Kechika and Gataga Rivers".

Despite the complex folding, the outcrop pattern on the Driftpile claims is that of a sedimentary sequence striking northwesterly parallel to the regional structural trend and dipping from 25° to 30° to the west. This pattern is modified by the local folding and faulting.

The local folding pattern is most evident in the canyon of Creek 153, but the steepness of this valley has prevented intensive study. The barite units exposed in the canyon have been locally overturned very complexly.

A closed syncline has been interpreted as underlying the Driftpile Valley at the mouth of Creek 122. The pyrite beds exposed at the mouth of Creek 122 are thus the same beds as exposed at the Upper Driftpile Creek site.

Folding also occurs on a smaller scale as observed in Trench #6 (Figure 8). The wavelength of the isoclinal folding as exposed in this trench is in the order of fifty feet.

On the microscopic scale, individual beds within the barite and

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TRENCH No. 1

600N., 300E.

- Trench not sampled - dip slope exposed.
- average bedding attitude 250°/30°W. at top; 305°/55°W. at bottom
- gently folded - fold crests @ plunge 285°/15°S.

Trench No. 1. dimensions 45ft. × 8ft. × 1ft. = 360 ft.^{3} = 13.3 yd.^{3}

TRENCH No. 2

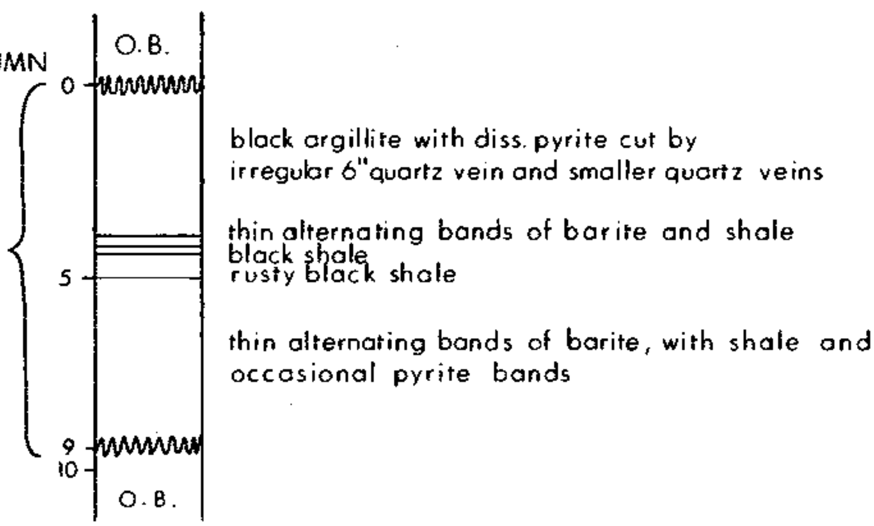
1300N., 450E.

STRATIGRAPHIC COLUMN

1" = 5 feet

Sample 50126

Zn: 0.09 %
Pb: 0.05 %
Ba: 10.0 %



Trench No. 2. dimensions 9 feet × 5 feet × 3 feet = 132 ft.^{3} = 5 yd.^{3}

TRENCH No. 4

2600S., 650E.

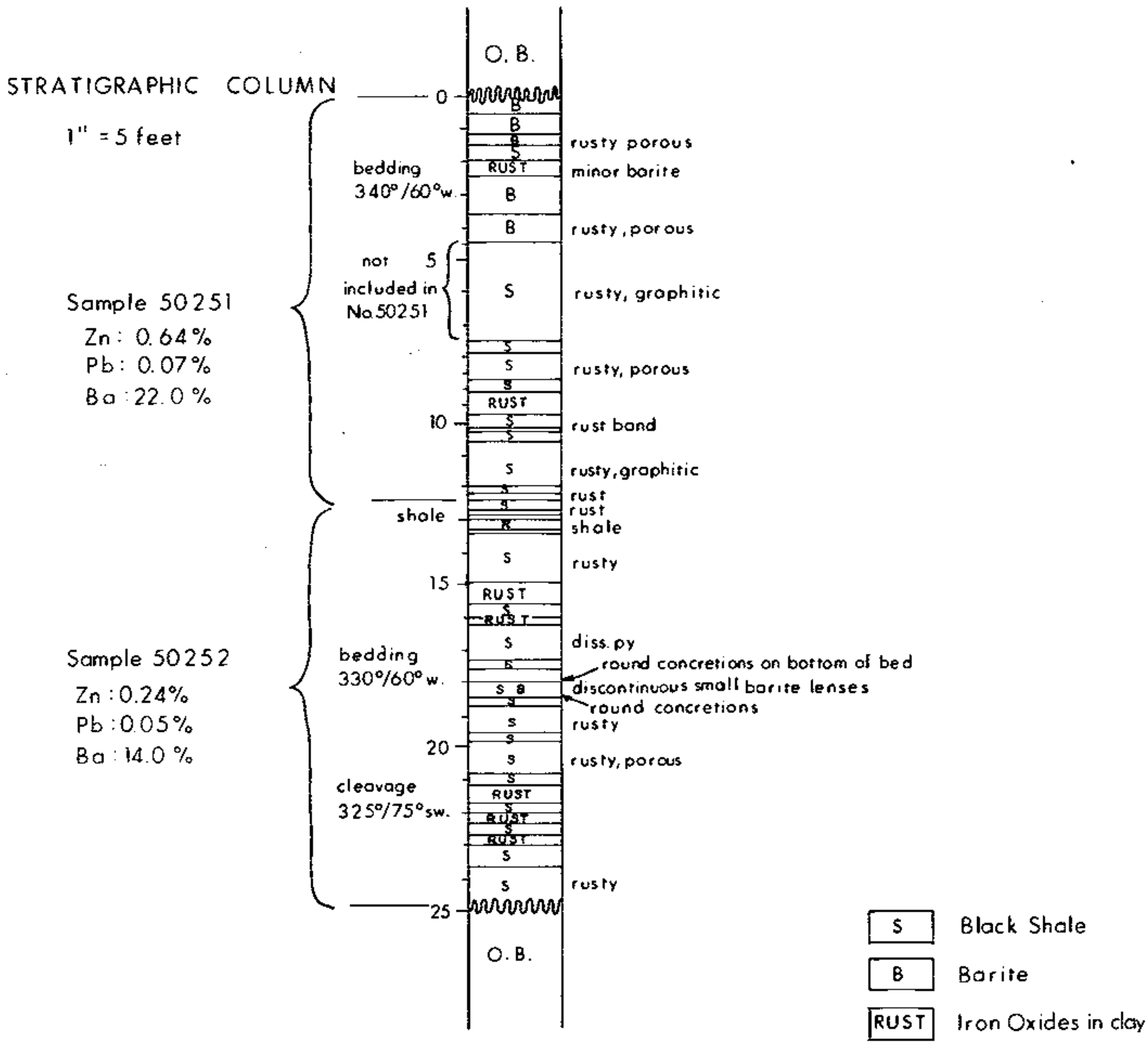
- Trench not sampled
- "Modern Conglomerate" exposed - sub-angular boulders of pyrite - banded rock in matrix of iron oxides and clay

Trench No. 4 dimensions 10 feet × 3ft. × 3ft. = 90 ft.^{3} = 3.3 yd.^{3}

FIGURE 5

TRENCH No. 3.

1150 N. , 1850 E.



Trench No. 3 dimensions 1 ft. × 15 ft. × 25 ft. = 375 ft^3 = 13.9 yd^3

FIGURE 6

STRATIGRAPHIC SECTION

TRENCH No. 6

1" = 5 Feet

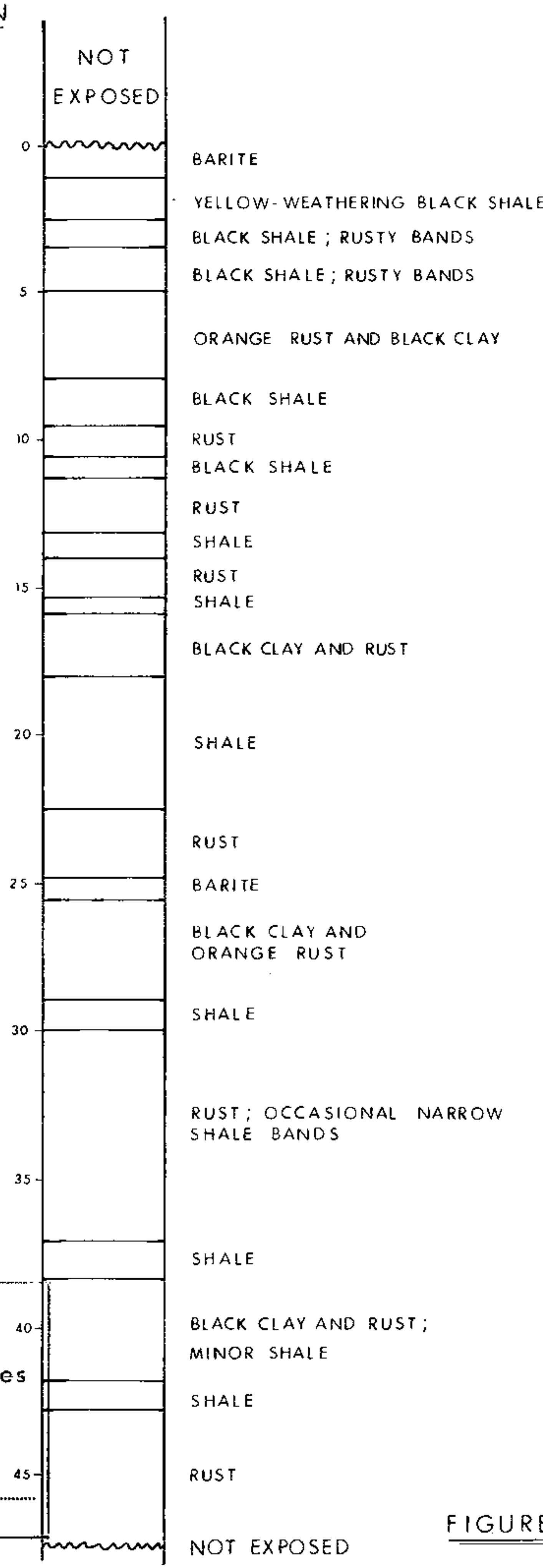
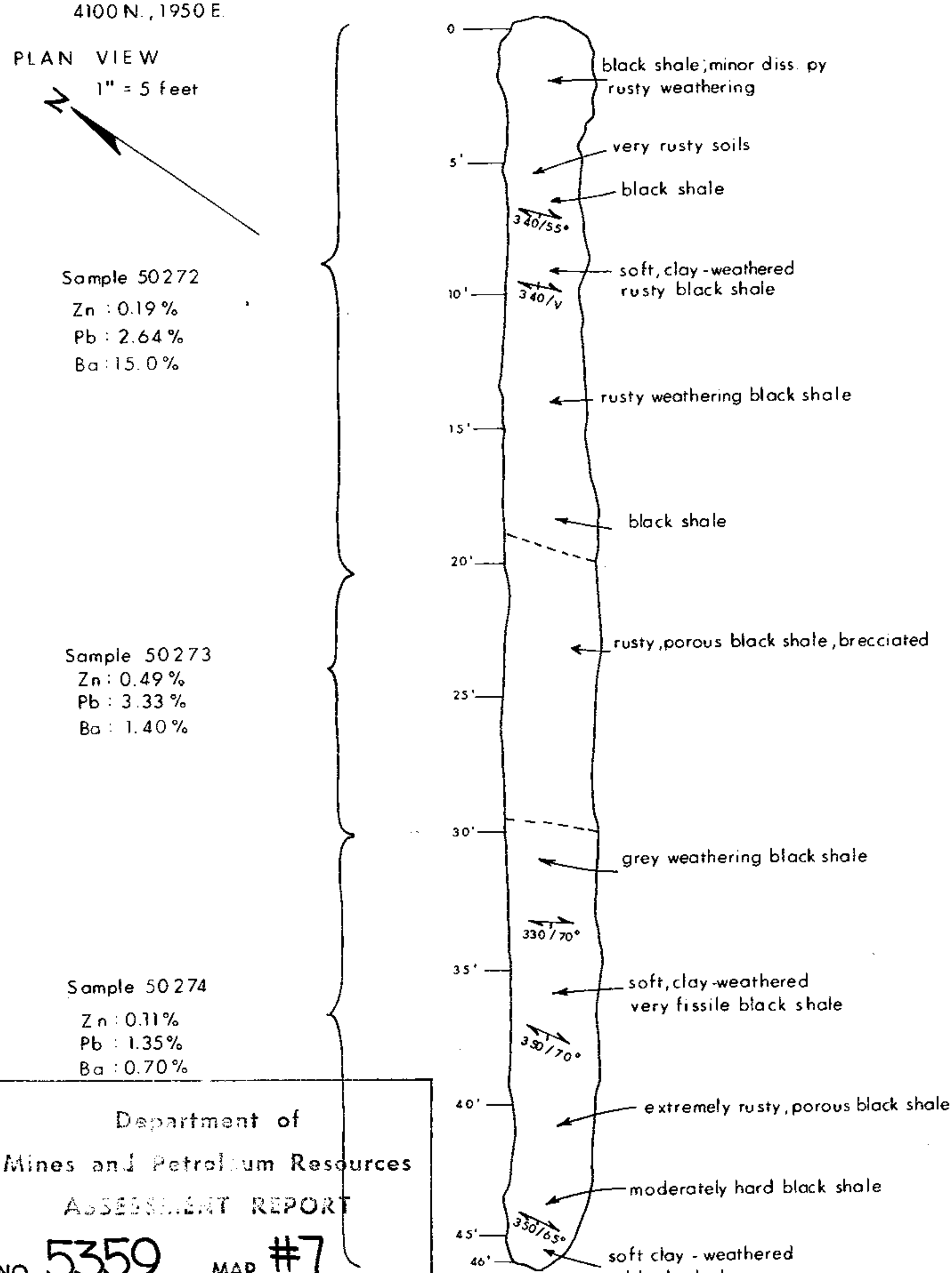


FIGURE 9

TRENCH No. 5

4100 N., 1950 E.



Trench No. 5 dimension 46 ft. × 3 ft. × 2.5 ft. = 345 ft.^{3} = 13.2 yd.^{3}

FIGURE 7

APPENDIX I

STATEMENT OF QUALIFICATIONS

I, Henry Michael Wise, residing at 3088 Yukon Street, Vancouver, British Columbia, state that:

(1) I have graduated from Queen's University with a B.Sc.(Eng) degree in Geological Sciences in 1968 and from the University of California at Berkeley with an M.S. degree in Engineering Geoscience in 1970.

(2) I have been employed by Canex Placer Limited, Vancouver, British Columbia, as an Exploration Geologist since 1970.

(3) I am a member of the Canadian Institute of Mining and Metallurgy.

(4) I personally supervised the exploration program at the Driftpile Creek property during August, 1974.

H. M. Wise

Henry Michael Wise, B.Sc.(Eng), M.S., MCIM

APPENDIX II

SUMMARY OF EXPENDITURES

PERSONNEL

H.M. Wise	Aug. 3 - Sept 1, 1974 : 30 days @ $77.00	= $2310.00		
N. Kirk	Aug. 2 - Aug.13, 1974 : 12 days @ $33.00	= 396.00		
A. Penner	Aug. 2 - Sept.2, 1974 : 32 days @ $40.00	= 1280.00		
T. Eadie	Aug. 3 - Sept.2, 1974 : 31 days @ $36.00	= 1116.00		
G. Cavey	Aug. 3 - Aug.26, 1974 : 24 days @ $33.00	= 792.00		
M. Lutz	Aug. 3 - Sept.1, 1974 : 30 days @ $46.00	= 1380.00		
T. Provost	Aug. 3 - Sept.2, 1974 : 31 days @ $1500/month	= 1500.00		
		$7394.00	$7,394.00	

MOBILIZATION/DEMOBILIZATION

Personnel: 2 days @$314.00 =	= $628.00	
Commercial Lodging 10 man-days @$9.00	= 90.00	
Meals - 14 man-days @ $15.00	= 210.00	
	$928.00	928.00

CAMP OPERATION

Camp supplies 190 Man-days @$15.00	= $2850.00	
Building Supplies and fuel	= 1876.47	
	$4726.47	$4726.47

TRANSPORTATION

Aircraft:		
Watson Lake Flying Service	= $3,322.00	
Northern Thunderbird Airlines	= 3,862.00	
Helicopter:		
Frontier Helicopters	= 2,573.00	
Canex Placer Limited	= 6,240.00	
Fuel	= 457.13	
Air Fares:	= 457.00	
Transportation of Supplies	= 1,157.20	
	$18.068.33	18.068.33

ASSAYING

1300 soil samples for Pb, Zn, Ba @ $3.75	= $4,875.00	
276 rock samples for Pb, Zn, Ba @ $4.50	= $1,242.00	
	$6,117.00	6,117.00

APPENDIX II continued ....

PREPARATION OF REPORT

Personnel			
H.M. Wise	20 days @ $77	= $1,540.00	
Draftsman	20 days @ $60	= 1,200.00	
Typist	5 days @ $35	= 175.00	
		$2,915.00	2,915.00
Thin and Polished Sample Preparation			124.50
Map and Report Reproduction			90.12
		TOTAL	$40,363.42

I certify that the above figures are a true account of actual expenditures incurred during and as a result of exploration of the Driftpile Creek property.

January 21, 1975.

H. Michael Wise
Canex Placer Limited

Declared before me at the City of Vancouver, in the Province of British Columbia, this 29 day of January 1975, A.D.

A Commissioner for taking Affidavits within British Col
A Notary Public in and for the Province of British Col
Sub-mining Recorder

REFERENCES

1. Gabrielse, H., 1972:
   Descriptive Notes on Kechika Map-Area, British Columbia; Geol. Surv. Can. Map 42-1962.

2. Jackson, D.E., Steen, G. and Sykes, D., 1964:
   Stratigraphy and Graptolite Zonation of the Kechika and Sandpile Groups in Northeastern British Columbia; Bull. Can. Pet. Geol., V 13, No. 1, pp 139-154.

3. Mills, J.W. et al, 1971:
   Bedded Barite Deposits of Steven's County, Washington; Econ. Geol. V 66, pp 1157-1163.

4. Taylor, G.C. and Stott, D.F., 1971:
   Tuchodi Lakes, British Columbia; Geol. Sur. Can. open file report.

5. Zimmerman, R.A. and Amstutz, G.C., 1964:
   Small Scale Sedimentary Features in the Arkansas Barite District; in Developments in Sedimentology, V 2, Elsevier Publishing Company, pp 157-163.

pyrite units are folded due to soft sediment slumping and adjustments during dewatering and diagenesis of the beds.

A strong cleavage which has been caused by regional forces has developed within the black shale sequence. The cleavage also can be traced in the barite and pyrite beds but has not resulted in any significant transposition of bedding. Remobilization of sulphides along cleavage planes has been noted, but is not important. Sulphide remobilization into a fault zone was noted at the Upper Driftpile Creek showing.

The fault that lies to the east of the grid is considered to be of regional importance. Barite or pyrite beds are not found to the east of this fault. The easterly trending fault along line 3600N has been interpreted from the abrupt change of slope along this line and the presence of springs along the line. The offset of the fault is not considered to be major. Another fault has been interpreted as lying along the valley of Creeks 122 and 140. This fault is a normal fault with the east side dropped downwards relative to the west side.

Small faults observed at the Upper Driftpile Creek showing had attitudes: 300°, vertical; 320°, 65° southwest; 305°, vertical.

MINERALIZATION

The minerals of economic important that occur on the Driftpile Creek prospect are sphalerite and galena. Barite is of potential interest, but the remote location of Driftpile Creek would result in very high transportation costs of a low-value commodity.

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Sphalerite and galena are associated with the bedded pyrite sequence. The sulphide grains occur as anhedral interlocked grains interstitial to the pyrite framboids. No sphalerite or galena is found within the black shale interbeds. The grain size of the sulphides is estimated from microscope work as less than 20 microns, with many of the grains being one order of magnitude smaller. The pyrite framboids range in size from 100 microns to 25 microns in diameter.

Beds which contain commercially significant quantities of galena or sphalerite have only been found as float. At 4000N, 1900E, float boulders contain thin beds of galena interbedded with barite beds. Framboidal pyrite makes up less than 10% of the rock. Float boulders from 100S, BL and from 1200S, 200E south to 1700S contain rare visible sphalerite and galena beds interbedded with pyrite and black shale beds.

Boulders containing bedded pyrite with visible galena were found within a limonite spring deposit at 2600S, 600E. Trench #4 was attempted at the site, but the breccia proved impossible to drill, and several bits were lost before the project was abandoned.

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GEOCHEMICAL SURVEY

SOIL SAMPLING METHOD

Pits for soil samples were dug with a mattock to a depth that ranged between 6" and 14" in depth. Where possible, the samples were taken from the "B" horizon which was variously grey, brown, orange or red in colour. The colour apparently reflected the type of underlying bedrock. When the "B" horizon was not developed, the sample was taken from the "C" horizon. Samples with a high organic content were avoided.

ROCK SAMPLING METHOD

Rock samples were taken from most outcrops within the mapped area. The rock fragments were selected at random from several points on the outcrop in order to assure a representative assay. The rocks were coarsely crushed at the camp before shipment to the assay laboratory.

ASSAY METHOD

All soil and rock samples were assayed at the Research Laboratory of Placer Development Limited in Vancouver, B.C. The samples were dried in a hot air drier at about 120°F. The rock samples were then crushed to pass a -200 mesh screen; the soil samples were screened with the -80 mesh fraction saved. Ten grams of each sample were retained for analysis

For lead and zinc analysis, 1 gram of the fine material was digested in a nitric acid solution and an aliquot of the digested sample was then analyzed with a Perkin Elmer Model 403 Atomic Absorption Spectrophotometer. The wavelenghts used were:

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Zinc .... 2139 Å

Lead .... 2170 Å

For barium assay, 0.5 gram of the fine material was digested in a solution of 20% oxalic acid, 40% hydrofluoric acid, and 40% ~~hydriotic~~ hydroiodic acid. The sample was heated to dryness, then diluted hydrochloric acid and potassium chloride solution were added. An aliquot of the digested sample solution was then analyzed with a Perkin Elmer Model 403 Atomic Absorption Spectrophotometer using dilute hydrochloric acid as zero solution. The wavelength used was:

Barium .... 2768 Å

DISCUSSION OF RESULTS

Contoured soil analysis maps for zinc, lead and barium are included in the back pocket of this report. Rock analysis results are recorded on the geology map adjacent to the outcrop from which the sample was obtained. The soil results are strongly dependent upon the underlying bedrock.

For zinc in soil, the general background values in the black shale were between 100 and 300 ppm. Background values within the barite sequence were between 200 and 400 ppm.

For lead in soil, the general background values in the black shale were less than 100 ppm. Background values within the barite sequence were between 200 and 400 ppm.

The bedded pyrite formation is anomalous in both lead and zinc, although comparison of the two maps indicates that the maximum values are

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not coincident. Based upon the soil results, the eastern limb of the syncline is zinc rich and lead poor, while the western limb is revealed as lead rich and zinc poor.

The high pyrite content of the bedded pyrite sequence has created an acid groundwater condition in which zinc is very mobile and lead is somewhat mobile. This accounts for the relatively low order anomaly observed within the soil overlying pyritic shales. Sampling of the oxidized bedded-pyrite outcrops has confirmed this behaviour of zinc and lead ions.

A small lead anomaly and larger zinc anomaly coincide with the area at 4000N, 1900E in which bedded galena float samples were found. Further prospecting and trenching are required in this area in order to ascertain the bedrock source of the soil anomalies and the float.

Strong coincident lead and zinc anomalies are located along the west side of the grid, from 800S, 1700W to 2000N, 1700W. The results indicate the presence of two anomalous bands, which might represent either two stratigraphic horizons or the outcrop trace of a single sedimentary formation. The soil in this area is underlain by black shale which is slightly graphitic. No mineralization has been observed in this area.

Barium in the soil is very strongly associated with the sub-outcrop of the barite sequence in the east-central part of the grid. Values of barium in soils overlying black shale are generally less than 0.25%, except to the southeast. This represents the shale formation that is the stratigraphic equivalent of the barite sequence.

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The weak barium anomaly on the western edge of the grid is roughly coincident with a lead and zinc anomaly. This anomaly cannot be easily explained, except for the strong anomaly on lines 6000N and 5600N that is due to the bedded barite that underlies this portion of the grid. It is possible that the weak anomaly further south is the stratigraphic equivalent of the barite formation.

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CONCLUSIONS

Lead and zinc are found in the Driftpile Creek area in close association with bedded-pyrite and bedded barite formations. The entire sequence is enclosed within non-calcareous black shales that probably belong to the Kechika Group of Ordovician age. All of the rocks in the area are considered to be of sedimentary origin; there is no evidence of hydrothermal activity within the area of the claims.

The grade of the lead and zinc found as outcrop is too low to be of economic interest, however, boulders of similar character have been found within the claim group that are of potential ore grade. Further work is therefore required in order to define the most favourable areas for economic mineralization.

Respectfully submitted,

H. Michael Wise

H. Michael Wise, B.Sc. (Eng.), M.S.

HMW:amh
January 17, 1975.

- TRENCH NOT SAMPLED
- LONG AXIS OF TRENCH 020°
- DIMENSIONS OF TRENCH 135 ft. × 4 ft. × 4 ft. = 2160 ft.^{3} = 80.0 yd.^{3}

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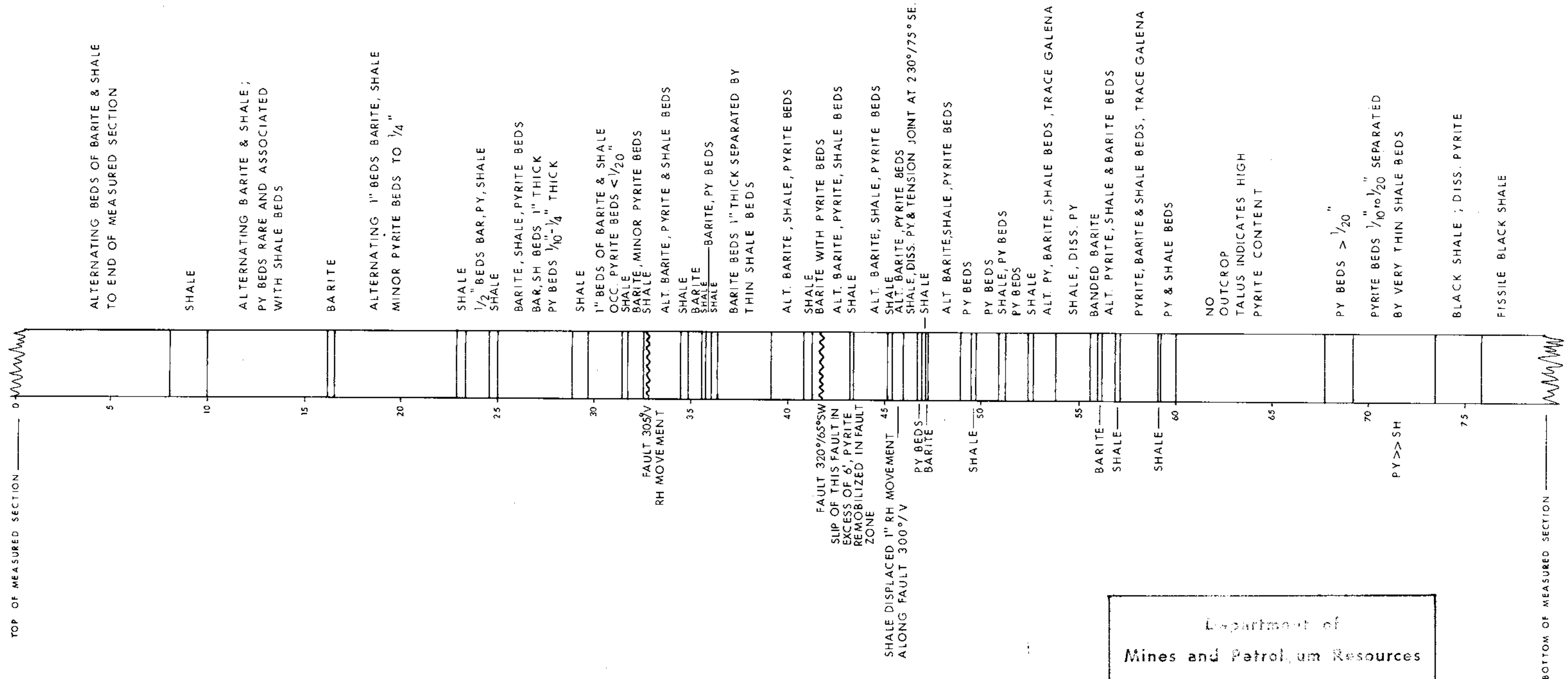
FIGURE 8

TRENCH No. 6

300S. , 200 E.

5359
MAP 8

SECTION VIEW LOOKING SOUTHERLY



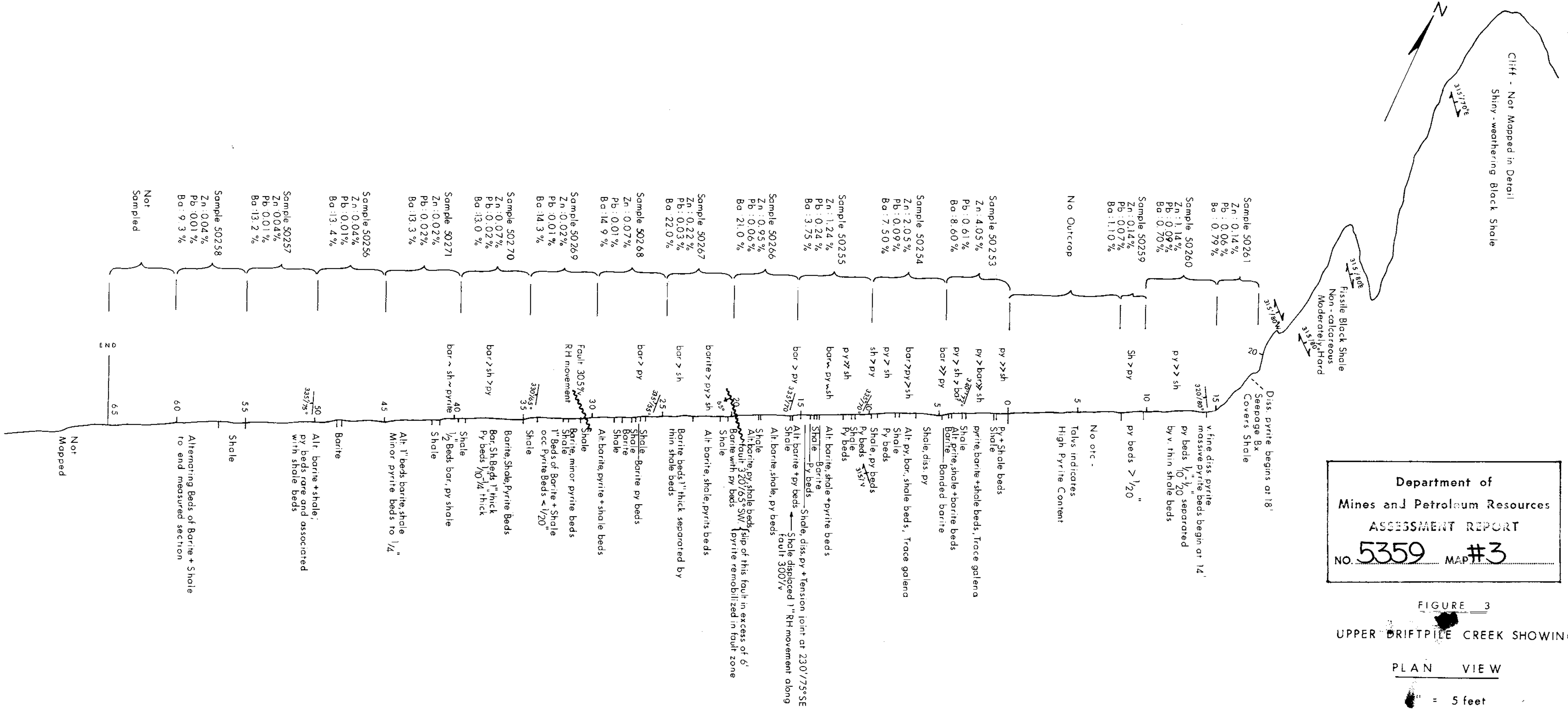
5359
MAP4

FIGURE 4

STRATIGRAPHIC SECTION

UPPER DRIFTPILE CREEK SHOWING

1" = 5 feet



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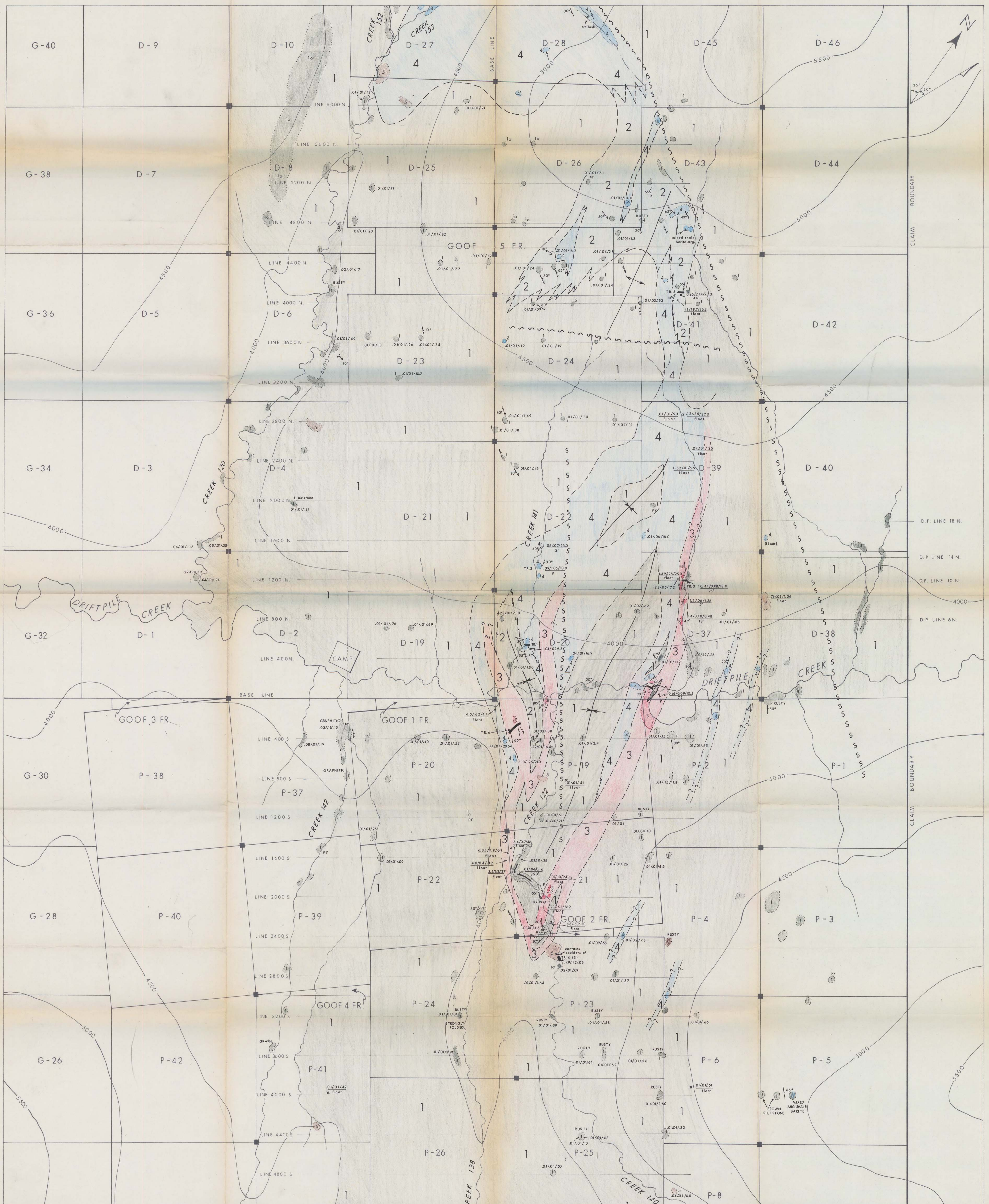
MAP 3

FIGURE 3
UPPER DRIFTPILE CREEK SHOWING
PLAN VIEW
1" = 5 feet



LITHOLOGY

RECENT

5	SEEPAGE BRECCIA

PALEOZOIC

4	BARITE; CONTAINS SOME INTERBEDDED BLACK SHALE
3	PYRITE BEDS; CONTAINS INTERBEDDED BARITE AND BLACK SHALE
2	MIXED BARITE AND BLACK SHALE
1a	ARGILLITE
1	BLACK SHALE

SYMBOLS

ROCK OUTCROP

ATTITUDE OF BEDDING

CLEAVAGE

FAULT

CONTACT

SYNCLINE

ANTICLINE

ORDER OF ASSAY VALUES:
% ZINC / % LEAD / % BARIUM
WIDTH

0 200 400 600 800 1000 FEET

1" = 400'

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MAP 10

CANEX PLACER LIMITED

DRIFTPILE CREEK AREA, B.C.

N.T.S. 94-K-4

GEOLOGY

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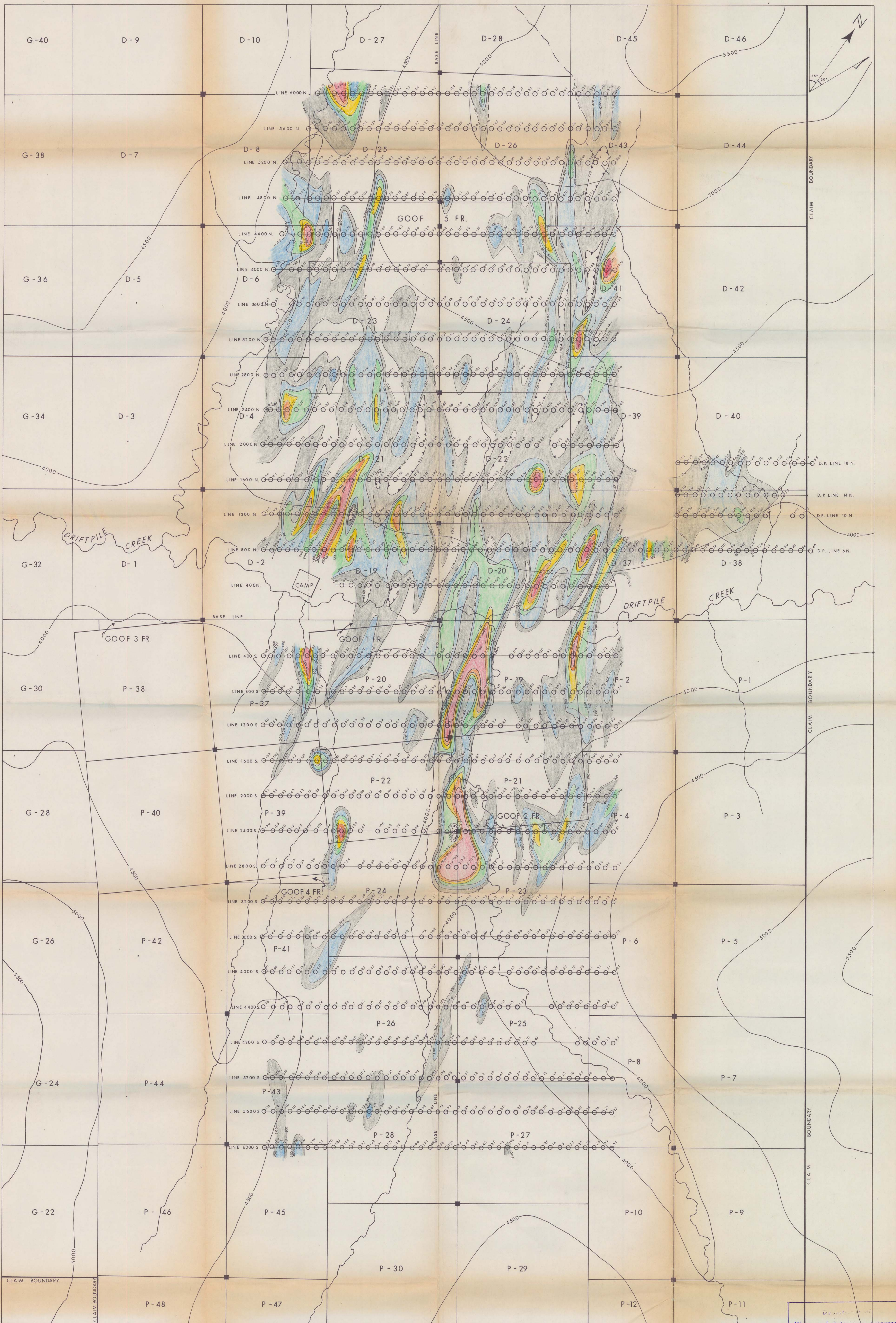
H. M. Wise

MAPPED BY: H.M. WISE — AUGUST, 1974 — A.K.



LEGEND

Pb Scale

- > 2000 ppm
- 1600 - 2000
- 1200 - 1600
- 800 - 1200
- 400 - 800
- 200 - 400

0 200 400 600 800 1000 FEET

1 : 4800

CANEX PLACER LIMITED

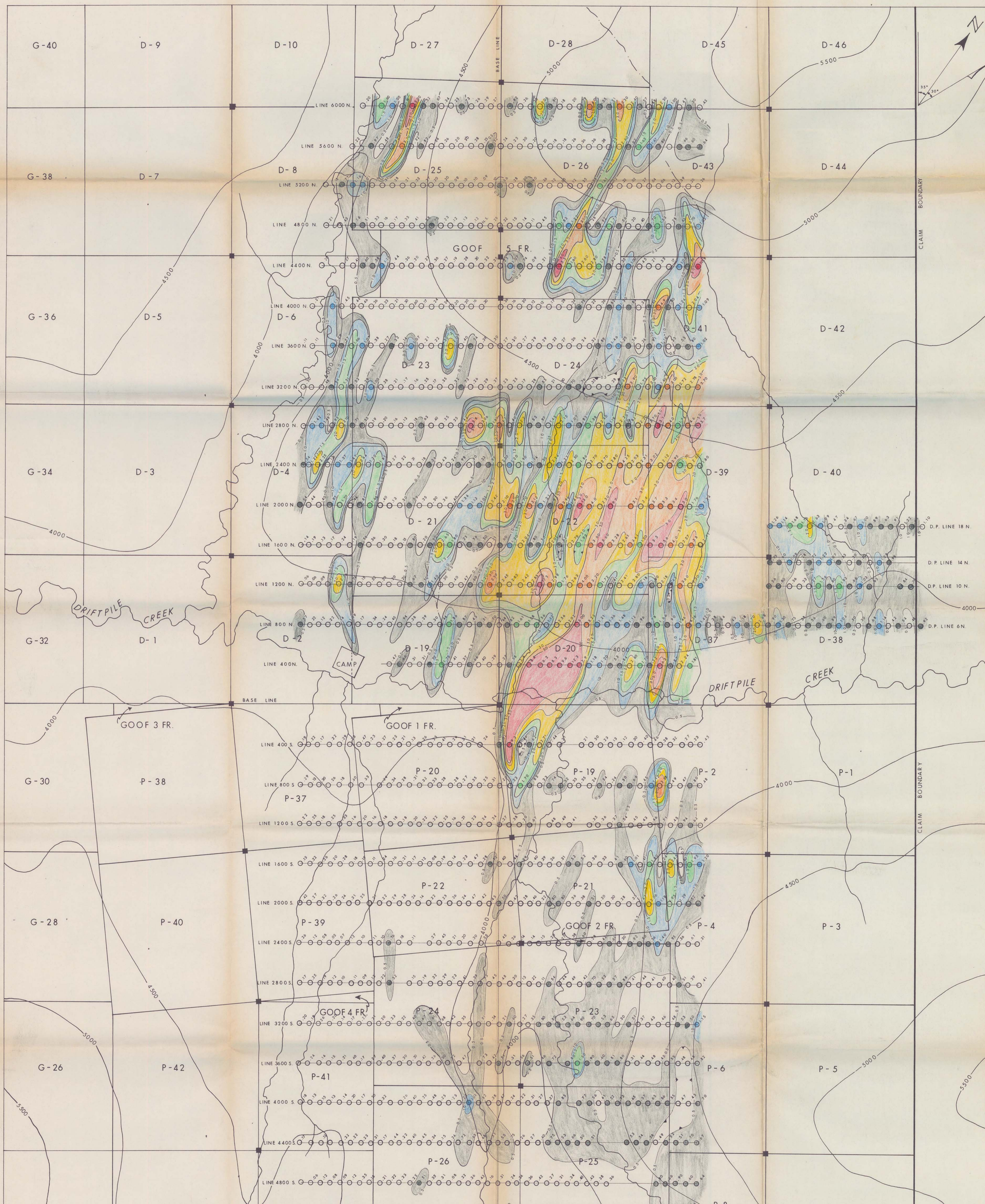
DRIFTPILE CREEK AREA, B.C.

N.T.S. 94 - K - 4.

SOIL GEOCHEMISTRY

LEAD

5359
MAP 12



LEGEND

Bar Scale

> 5.0 %

3.0 - 5.0 %

2.0 - 3.0 %

1.5 - 2.0 %

1.0 - 1.5 %

0.5 - 1.0 %

0 200 400 600 800 1000 FEET

1 : 4800

5359
MAP 13

CANEX PLACER LIMITED

DRIFTPILE CREEK AREA, B.C.

N.T.S. 94 - K - 4.

Resources
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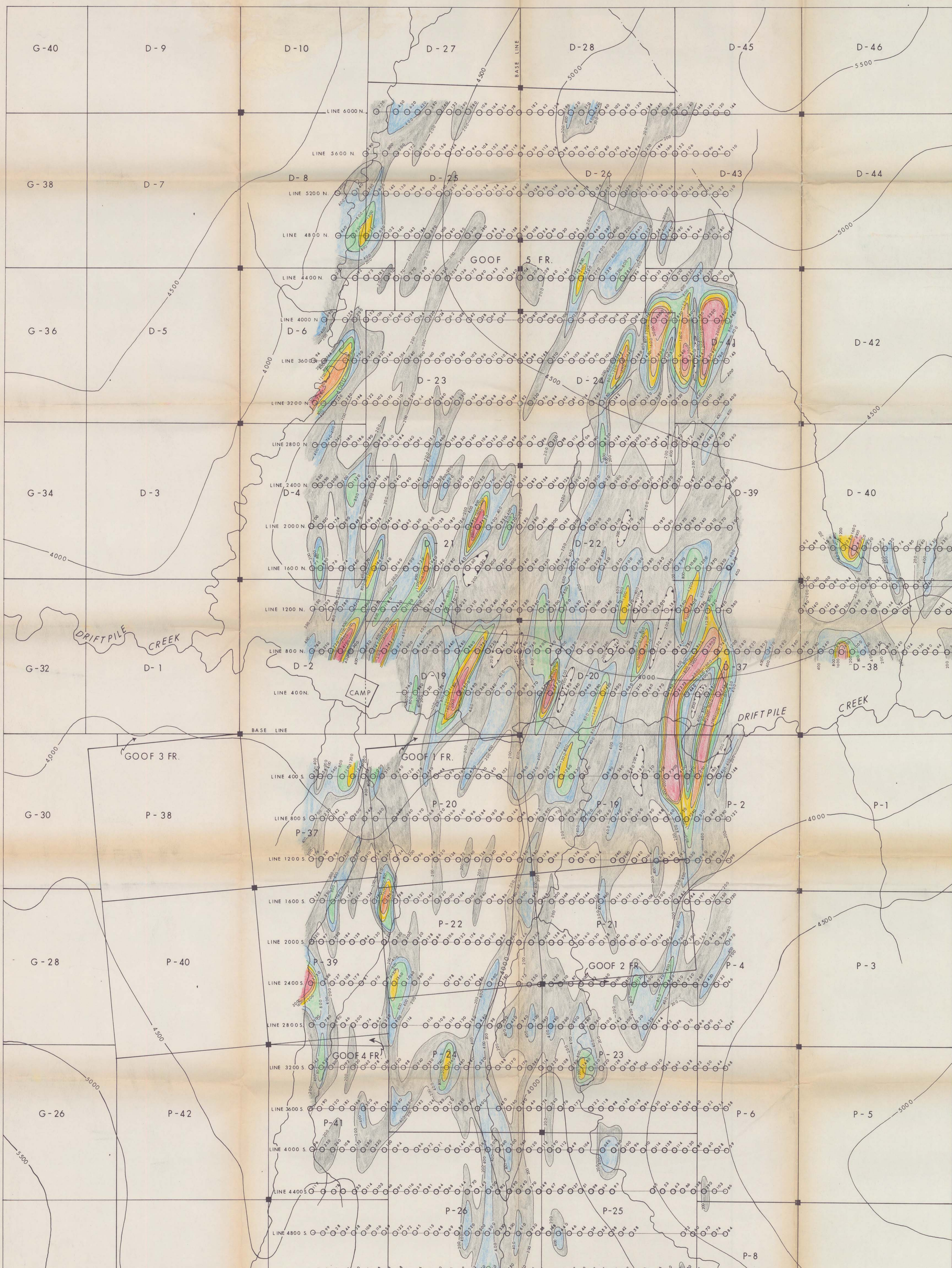
SOIL GEOCHEMISTRY

BARIUM



LEGEND

Zn Scale

- > 2000 ppm
- 1600 - 2000
- 1200 - 1600
- 800 - 1200
- 400 - 800
- 200 - 400

0 200 400 600 800 1000 FEET

1 : 4800

5359

MAP 11

CANEX PLACER LIMITED

DRIFTPILE CREEK AREA, B.C.

N.T.S. 94 - K - 4.

SOIL GEOCHEMISTRY

ZINC

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G. M. Wise