

GEOLOGY, GEOCHEMISTRY, GEOPHYSICS

WHITEMAN 1, 2, III CLAIMS

VERNON MINING DIVISION

Map 82L-4E

(latitude 50° 13' N, longitude 119° 38' W)

Owner: Kennco Explorations (Canada) Ltd.

Operator: Essex Minerals Company

Consultant: J. R. Woodcock Consultants Ltd.

Report by J. R. Woodcock, July 1979

PART 282
7397

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WHITEMAN CREEK

INTRODUCTION

Anomalous molybdenum or uranium values in stream geochemistry have led several companies to the Whiteman Creek area over the past fifteen years. In 1964 Southwest Potash Corporation staked claims in the vicinity of the present Whit claims. In 1966 Noranda Mines Ltd. staked claims 13 km west of the mouth of Whiteman Creek, and in 1967 followed this up with soil sampling. In 1973 Kennco Explorations (Western) Ltd. acquired an anomalous area 14 km west of the mouth of Whiteman Creek, made a brief field examination, and allowed the claims to lapse. From 1974 to 1977, Canadian Occidental Petroleum Ltd. staked ground as a result of a regional geochemical survey. The work done by Occidental and recorded for assessment work is described in reports 5692, 6052 and 6572 by C. C. Macdonald. In 1978 Cominco Ltd. acquired ground south and west of the Occidental holdings. Old claim posts indicate that Cominco Ltd. had also previously staked claims in 1970.

In 1977 the staff of Kennco Explorations (Western) Ltd. reappraised the previous work, re-examined the area, and staked the claims covering the west end of the Whiteman Creek Stock. In 1977 Mr. Steve Gower mapped the anomalous area and conducted a soil geochemical survey. This work revealed some anomalous values in molybdenum and fluorine and resulted in recommendations for further work.

In 1979 J. R. Woodcock did additional mapping and rock geochemistry on the claims and recommended an induced polarization survey. Phoenix Geophysics Ltd. was contracted to do the survey.

The existing flagged grid (10 km) from the Kennco geochemical survey was used for the induced polarization survey. The grid measurements are slope distances; because the geophysicists preferred slope distances rather than corrected horizontal distances no changes were made. The lines were slashed and extended to the east. The grid lines and the baseline were tied to topographical features by chain and compass surveys along the logging road in the western part of the grid area and up Kennco Creek. The base map thus produced was extended by utilizing expanded overlays of 20-chain aerial photographs (B.C. 4196--102 and 045).

For the rock geochemistry, 60 samples of about two kg were taken from available outcrops and submitted to Bondar-Clegg & Co. Ltd. for geochemical analyses for Pb, Zn, Mo, Mn, F. Half of the samples were also analyzed for W.

LOCATION AND ACCESS

Whiteman Creek, 20 km in length, drains eastward into Okanagan Lake. A logging road along the north side of the Creek gives access to the claims.

The center of the Whiteman claims is at latitude 50° 13' N, longitude 119° 38' W. It is 10 km west of Okanagan Lake and 30 km southwest of Vernon, on map sheet 82 L-4E. The claims are in the Vernon Mining Division.

CLAIM DATA

TABLE I
Claim Data

<u>Name</u>	<u>Record Number</u>	<u>Record Date</u>	<u>Assessment Credits (pre 1979)</u>	<u>Recorded Owner</u>
Whiteman 1	329 (5)	May 30/77	4	Kennco Explorations (Canada) Ltd.
Whiteman 2	339 (6)	June 14/77	3	John R. Woodcock
Whiteman III	629	June 13/79	0	Can. Occidental Petroleum Ltd.
Whit 1 to Whit 18	18010 (P) to 18027 (P)	Nov. 5/74	5	" "
Whit 19	35 (11)	Nov. 3/75	5	" "
Whit 20, 21	176 (11), 177 (11)	Nov. 8/76	3	" "
Whit 22, 23	337 (6), 338 (6)	June 10/77	3	" "
Lock 1 to 4	593 (1) to 596 (1)	June 25/79	0	Cominco Ltd.
D & C 1 to 4	505 (8) to 508 (8)	Aug. 8/78	0	Charles Brett of Kelowna

The Whiteman 1 (6 units) and Whiteman 2 (18 units) claims were staked on May 28, 1977 and June 7, 1977 respectively by Gordon Davies and Gordon Kain for Kennco Explorations (Canada) Ltd. The two claims were grouped into the Whiteman #1 Group on May 23, 1978 and a geochemical report by R. L. Stevenson was submitted in 1978 for assessment work.

An extra nine units (Whiteman III claim) was staked by Paul Stanneck, agent for John R. Woodcock, west of Whiteman 2 on June 12, 1979 and recorded on June 13, 1979. This claim was added to the Whiteman Group on July 20, 1979.

GEOLOGY

Whiteman Creek crosses and exposes acid intrusive rocks as a narrow east-west window within flat-lying Tertiary volcanics of the Kamloops Group. Much of the intrusive is mapped as part of an upper

Mesozoic pluton, equivalent in age to the Coast Range plutons. A. G. Jones (1959) has named this rock granodiorite and this terminology is used as a field name in this present report. The rock is leucocratic, contains hornblende, abundant quartz, white feldspar, and minor biotite. It displays minor lineation of mafic minerals.

West of the Whiteman Creek Stock and adjacent to or in contact with it, is an area of a fairly equi-granular granodiorite (field identification) composed of feldspar, quartz, and biotite. Locally (e.g. sample W77) it has abundant pyrite and is highly sericitized leaving the quartz crystals as eyes within a sericitized ground mass. In some places (e.g. sample W80) the sericitized rock is bleached (probably by supergene leaching) to a friable white rock. These alteration types appear to be restricted in extent. Most exposures have very low pyrite content plus some epidote and some chloritization. It is probably part of the Mesozoic batholith.

The Whiteman Creek Stock, which intrudes the granodiorite, is generally regarded as Tertiary and has been called syenite. A date of 50 M.Y. has been reported. At its west end it includes four rock types. The prevalent rock is a pink porphyry which is composed mainly of large (about 1 cm long) orthoclase phenocrysts and, for this report, is field named "orthoclase porphyry". The matrix is pink to white, fine-grained phaneritic rock consisting of feldspar and quartz and resembling aplite. Generally, the orthoclase phenocrysts are abundant enough to form more than 50% of the rock. In addition to the orthoclase, the porphyry contains other small phenocrysts. These include minor quartz and biotite flakes (generally in concentrations).

Two unusual features characterize most of the orthoclase porphyry. White pockets of completely sericitized feldspar (?) are conspicuous in most of the relatively fresh rock. In places these occur in the center of the orthoclase crystals. They were noted and described by Mr. Steve Gower in his company report. The sharp contact with a relatively fresh rim and a complete absence in most of the orthoclase phenocrysts may indicate a different composition in the central parts of some of the phenocrysts. The second unusual feature is the abundance of irregular vugs into which small quartz crystals project. Other euhedral crystals associated with these vugs include a light, yellowish green mineral which may be axinite. Purple fluoride crystals also occur within or adjacent to some of the vugs. Concentrations of biotite crystals are generally associated with the vuggy patches and goethite linings in some of the vugs indicate that disseminated pyrite also occurred with the disseminated biotite.

The second rock type, forming only a small portion of the Whiteman Creek Stock, is herein called monzonite porphyry. It resembles the matrix of the orthoclase porphyry. It is the latite porphyry of Macdonald's report.

Another phase of the stock is the "mixed rock type" which has been called breccia. This rock type includes the orthoclase porphyry and the monzonite porphyry. Observations in weathered exposures and cliffs show that, in places, some of the pieces of aplite have abundant pyrite whereas other adjacent pieces have only negligible pyrite. However, in some places the pieces of orthoclase porphyry appear to be merely concentrations of orthoclase phenocrysts within the monzonite. Although the transition between the rock types within this so-called breccia is sharp, knife-edge contacts were not seen. Also, no voids are present. The writer suggests that possibly the mixing took place late in the magmatic stage rather than by forceful intrusion of two different rock types, each in the solid state.

The third rock type of the Stock is "latite porphyry", a rock with dark grey aphanitic matrix and large white feldspar phenocrysts. It crops out along the east side of Kennco Creek. A second exposure of a similar rock type, but highly altered to sericite, occurs beside or within the Whiteman Creek Stock near the bridge (sample W134).

Some outcrops of rhyolite with quartz phenocrysts (unit 8) are found south of Kennco Creek. This has also been included in the Whiteman Creek Stock. However it could be an extrusive rock.

The western part of the Whiteman Creek Stock intrudes Mesozoic granodiorite on its north side and volcanic rocks on its west side and it is probably overlain by Kamloops volcanic rock on its south side. Abundant epidote, both disseminated and along fractures, in the adjacent intruded rocks may be contact metasomatism related to the Whiteman Creek Stock. Such epidote occurs within the intruded granodiorite and the intruded volcanic rocks.

About 1.6 km west of the Whiteman Creek Stock, the dark grey volcanics containing abundant epidote and minor pyrite change quite abruptly into barren unaltered dark grey volcanics. These relatively unaltered volcanics are probably part of the Kamloops Group.

The Pleistocene deposits in the area include outwash deposits, mostly sand, which occur around the junction of Kennco Creek and Whiteman Creek. In addition, deep deposits of boulder till occur in the upper slopes south of Whiteman Creek and are exposed in the road cuts of the logging roads.

ALTERATION AND MINERALIZATION

Secondary sericite and abundant pyrite (mainly indicated by limonite type) occur together as intense hydrothermal alteration in an area about one half mile in diameter. This includes much of the breccia or mixed rock exposures along the east side of Kennco Creek and some of the highly fractured volcanic rock exposed in the logging road west of Kennco Creek, an exposure of granodiorite west of Kennco Creek, and exposures of intrusive rocks along Kennco Creek. The alteration product

sericite is based on field identification; however this appears to have been verified in some of the petrographic studies done by Mr. Steve Gower. In places, sericite forms veins up to two cm thick and these cut the highly sericitized rock and also form local stockwork. These could be mistaken for quartz in a cursory examination.

A quartz stockwork occurs in some of the latite porphyry east of Kennco Creek. The quartz veinlets resemble what the writer generally calls "epithermal type quartz veinlets". The veinlets can be discontinuous--they terminate abruptly, horsetail out, are locally en echelon, and in places have a wispy appearance. The quartz is dark grey.

Manganese oxide occurs within the Whiteman Creek Stock, generally outside of the zone of intense pyrite alteration. This appears as dark coating on fracture surfaces within the Whiteman Creek Stock. Some of it has been weathered and transported to cement stream gravels. Exposures of cemented stream gravels can be seen for a length of 40 meters along the logging road near the bridge and also at the junction of Kennco Creek, 0.7 km upstream from Whiteman Creek.

Hematite coats the surface of loose rock within the Whiteman Creek Stock, east of Kennco Creek. This is generally confined to talus and is not abundant within the outcrop source of the talus. This is probably a surface alteration of jarosite-rich limonite.

GEOCHEMISTRY

As noted above, the Whiteman claims cover the western part of the Whiteman Creek Stock and the intruded regional host rocks. Mapping described in this report was confined to this general area and concentrated on the alteration zones which lie along the western margin of the Whiteman Creek Stock. Although there does appear to be a geochemically anomalous area around the lower reaches of Kennco Creek, anomalous values are also found along the upper reaches of Kennco Creek. Whether these are two separate anomalous areas or whether there is one general linear anomalous zone extending along Kennco Creek and lying in the vicinity of the western margin of the Whiteman Creek Stock is not known. There are insufficient outcrops in the upper reaches of Kennco Creek to allow a definitive statement.

In addition to the rock samples taken near the anomalous zone of lower Kennco Creek, several rock chip samples were taken eastward into the Whiteman Creek Stock and westward into the volcanic horizons.

In addition to the rock geochemistry done by J. R. Woodcock Consultants Ltd., assessment work reports by Kennco Explorations (Western) Ltd. and by Canadian Occidental Petroleum Ltd. give some rock geochemistry results. The samples taken eastward along the Whiteman Creek Road and the reported samples of Kennco and of Occidental have been plotted

on one small scale map (1:10,000) and included in the report for the purpose of more accurately establishing background values. This smaller scale map does not duplicate the values of the more detailed sampling around lower Kennco Creek as these are presented on larger scale maps (1:5,000).

The metal which presents the most uniform anomaly is manganese. This displays a pronounced low near the lower parts of Kennco Creek. This low is at least 500 meters wide and 700 meters long and is co-extensive with the eastern half of the interpreted pyrite high. Additional low manganese values also occur in the western part of Whiteman Creek Stock near the upper reaches of Kennco Creek.

Manganese values in the volcanic rock to the west of the anomalous zone and in the Whiteman Creek Stock to the east of the anomalous zone are generally in the order of 400 to 500 ppm. However, immediately east of the anomalous zone, manganese stain can be seen in the intrusive rocks of the Stock and it is in this area that manganese values are generally 800 to 900 ppm. Insufficient outcrops are available for sampling to be able to determine whether or not this represents part of a manganese halo.

The zinc geochemistry corresponds quite closely to the manganese geochemistry, with the zinc low (values generally less than 20 ppm) occurring in the lower reaches of Kennco Creek. Similar low zinc values are scattered throughout the rock geochemical samples reported by Occidental in the Whiteman Creek Stock; however these do not seem to form a persistent low area. Noticeable are the lack of any anomalous high values in zinc and the general low background values throughout the region.

Lead values are erratic and no reliable trend can be interpreted with the present data.

Molybdenum values appear to result from a rock type rather than specific mineralized zones. The values within rocks of the Whiteman Creek Stock vary from 3 to 30 ppm with an average from the present study of 10 ppm. The values in the older rock units (the volcanics and the Mesozoic granodiorite) range from 2 to 8 ppm and average 3.4 ppm.

Tungsten analyses were only obtained for samples within the vicinity of the altered area. These values generally range from 5 to 25 ppm for rocks of the Whiteman Creek Stock (including those within the altered zone and those within the area of fresh rocks). The few values obtained for rocks outside of the Whiteman Creek Stock range from 3 to 8 ppm. There is some correlation of tungsten and molybdenum values. However there is no correlation with the Kennco Creek alteration zone. The tungsten samples were re-run in a second laboratory; the results gave background values (2 to 8 ppm) with only one slightly high value (sample W92--12 ppm).

Reported fluoride values range from 187 to 2550 ppm. Although there is no persistent trend, most of the high values (> 1000 ppm) occur within the interpreted pyritic zone. Samples taken eastward along the access road (within the Whiteman Creek Stock) are within relatively unaltered rock and are uniformly lower than average.

GEOPHYSICAL WORK

The lines from a prior geochemical survey were slashed to make them passable for induced polarization. A control survey was made along the logging access road and along Kennco Creek to tie in the grid lines more accurately. A magnetometer survey was made by J. R. Woodcock Consultants Ltd. and an induced polarization survey by Phoenix Geophysics Ltd. The induced polarization survey will be the subject of a separate report.

The results of the flux gate magnetometer survey are presented in Figure 4. Two features should be noted. These include a low magnetic response which extends along Kennco Creek a short distance and expands on its northern end in an easterly and a westerly direction. The westerly expansion of the low is more pronounced; this could possibly be caused by some alteration along an east-west shear zone.

In addition to this somewhat irregular low, there is a high in the western part of the grid area. It is partially delimited by the work on lines 20 N and 24 N. The magnetic high in this area corresponds partly with an increase in the metal factor and a decrease in resistivity. Magnetite bearing volcanic rock might account for both types of anomalies.

J. R. Woodcock

REFERENCES

Jones, A. G.; 1959; Vernon map-area, British Columbia: Geological Survey of Canada Memoir 296.

Gower, S. C.; 1977; Whiteman prospect-progress report: Company report for Kennco Explorations (Western) Ltd.

Stevenson, R. W.; 1978; Silt, soil, and rock geochemical investigations - Whiteman # 1 Group: Company report for Kennco Explorations (Western) Ltd.; Assessment Work Report # 6738.

Brynelsen, B.; 1967; Geochemical report - Pat claims, Whiteman Creek: Company report for Noranda Exploration Co. Ltd.; Assessment Report # 1039.

Macdonald, Colin C.; 1976; Geochemistry of the Whit 19 claim: Company report for Canadian Occidental Petroleum Ltd.; Assessment Report # 6052.

Macdonald, Colin C.; 1977; Geology and geochemistry of Whit (1-23) claims: Company report for Canadian Occidental Petroleum Ltd.; Assessment Report # 6572.

Macdonald, Colin C.; 1975; Geology and geochemistry of the Whit claim group: Company report for Canadian Occidental Petroleum Ltd.; Assessment Report # 5692.



SEMI-QUANTITATIVE ANALYSIS FOR

Cu, Pb, Zn, Mo, Ag, Ni, Co, Cd, Mn

1. Samples dried in infra red ovens.
- 2a. ROCKS: all material passes through a primary and secondary crushed to approximately -8 mesh. Using a 3/8" splitter, all material is scientifically split down to about 250-300 gms. Analytical split is pulverized in a vibratory grinding mill to >50% -150 mesh.
- 2b. SOILS/SEDS: are screened (-80 mesh unless otherwise directed) and rolled simply.
- 2c. DRIED LAKE BOTTOM SEDIMENTS AND BOC SAMPLES: are disaggregated and sieved to -80 mesh or as directed.
3. Weighed on 0.5 gm.
4. Digested 3 hours in LeFort Aqua Regia.
5. Bulked to 20% acid concentration, homogenized, and allowed a uniform settling time.
6. Analyzed by atomic absorption in constant comparison with both synthetic and matrix standards.
7. Results permanently recorded on chart paper.

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APPENDIX II

COSTS

Wage Costs

(a) Establish and Survey Grid:

P. Stanneck:	19 days @ \$105	\$ 1,995.00
May 18 to 31		
June 1, 8, 9, 10, 13		
Statutory Holiday	1 day @ \$105	105.00
D Miller:	18 days @ \$67.50	1,215.00
May 18 to 31		
June 1, 7, 9, 10		
Statutory Holiday	1 day @ \$67.50	67.50
D. Gorc:	1 day @ \$105	105.00
June 13		
Statutory Holiday	1 day @ \$105	105.00

(b) Assist with IP Survey:

D. Miller:	5 days @ \$67.50	337.50
June 3 to 7		
P. Stanneck:	5 days @ \$105	525.00
June 3-6, 8		

(c) Magnetometer Survey:

D. Miller:	2 days @ \$67.50	135.00
June 14, 15		
D. Gorc:	4 days @ \$105	420.00
June 12, 14, 15, 20		

(d) Geology and Geochemistry:

J. R. Woodcock	12½ days @ \$325	4,062.50
May 16 to 20, 24		
June 7, 8, 11		
May 31, June 1, 4, 5,		
25, 26, 28 (½ days)		
Chong (draftsman):	38½ hrs. @ \$9.00	346.50
June 4-July 19		
D. Gorc:	15 days @ \$105	1,575.00
May 16-22, 29, 30, 31		
June 4, 5, 6, 8, 16		
D. Miller:	1 day @ \$67.50	67.50
June 16		

Total Wage Costs

\$11,061.50

Food and Accommodation

Motel Costs	\$ 1,061.63	
86 man days (includes 12 man days for IP crew) = \$12.35/day		
Food Costs	764.77	
(\$8.89/day)		\$ 1,826.40

Maps & Reproductions

364.43

Geochemical Analyses

996.31

119.40

1,115.71

Miscellaneous Supplies

176.65

Vehicle*20% allowable*

Redhawk Rental (Jimmy)

33 days @ \$17.85

4389 km @ 8¢

gas

589.05

351.12

318.64

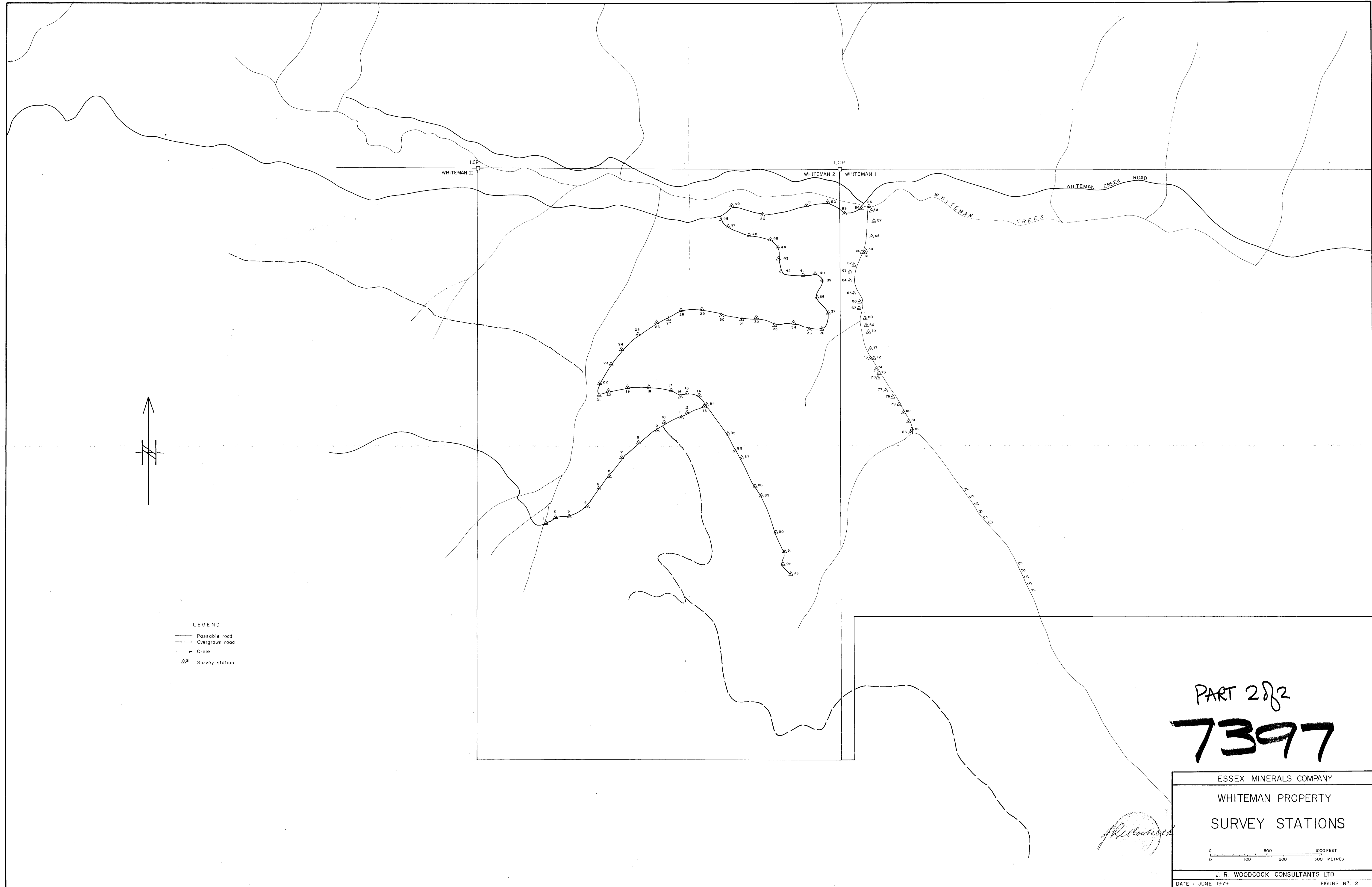
251.76~~1,258.81~~*14796.45*~~\$15,803.50~~

Total

~~20% Allowable =~~~~\$3,160.70~~J. R. Woodcock

J. R. WOODCOCK

July 31, 1979



LEGEND
 — Passable road
 - - - Overgrown road
 → Creek
 Δ²¹ Survey station

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ESSEX MINERALS COMPANY	
WHITEMAN PROPERTY	
SURVEY STATIONS	
J. R. WOODCOCK CONSULTANTS LTD.	
DATE: JUNE 1979	FIGURE NO. 2

J. R. Woodcock



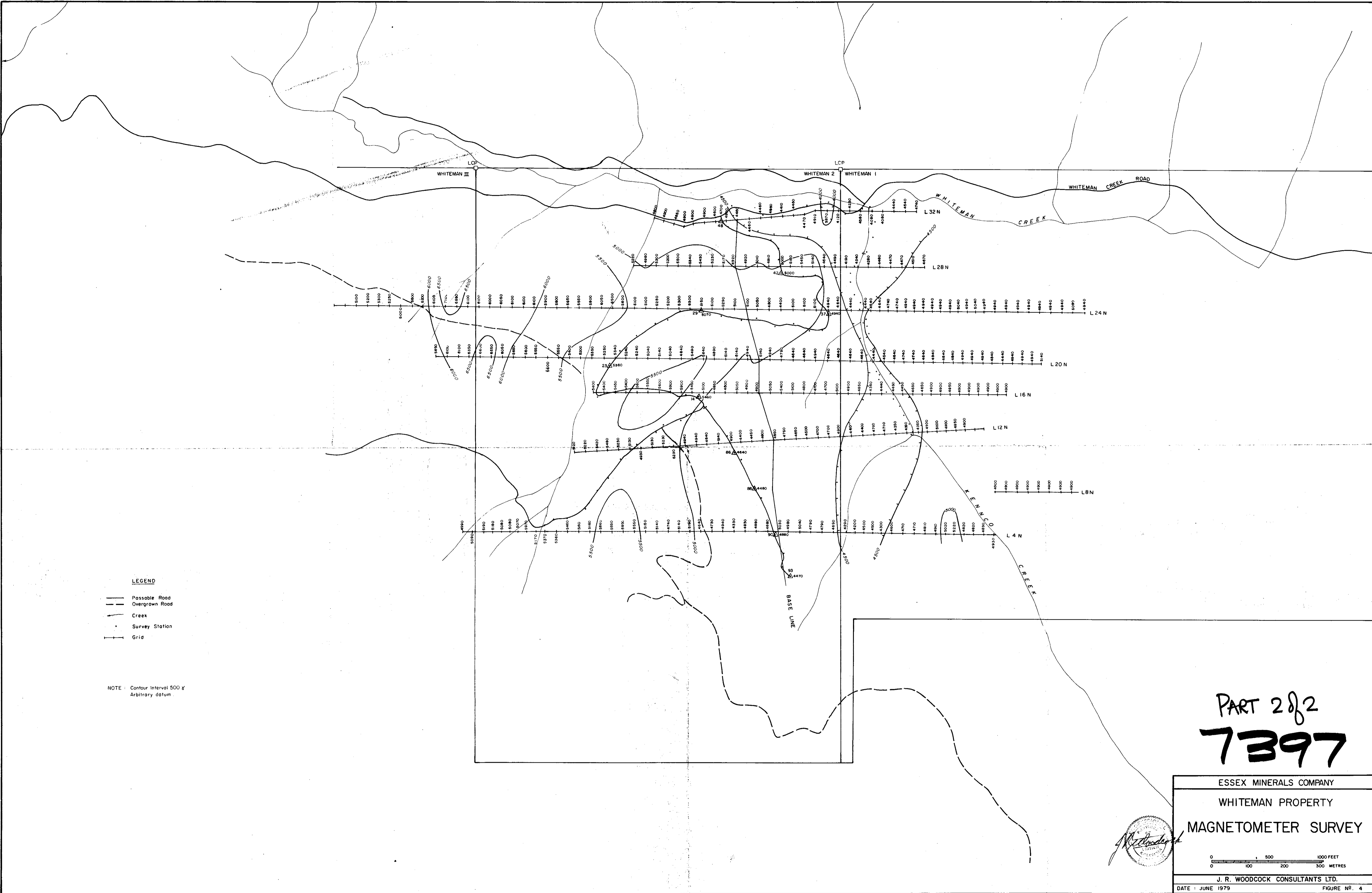
LEGEND

- QUATERNARY**
- Fe-Mn cemented stream gravel
 - Glacial outwash
 - Boulder Hill
- KAMLOOPS (?) VOLCANICS**
- Andesites some felsites
- WHITEMAN STOCK**
- Rhyolite porphyry
 - Lattite porphyry
 - Mixed rock (breccia)
 - Monzonite porphyry
 - Transition rock
 - Orthoclase porphyry (syenite)
- MESOZOIC INTRUSIONS**
- Granodiorite
- NICOLA (?) VOLCANICS**
- Andesites with epidote
- Approximate contact
- - - Boundary of high pyrite zone
- - - Limits of glacial outwash
- Outcrop
- Passable road
- - - Overgrown road
- Creek
- Survey station

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ESSEX MINERALS COMPANY	
WHITEMAN PROPERTY	
GEOLOGY	
J. R. WOODCOCK CONSULTANTS LTD.	
DATE : JUNE 1979	FIGURE NO. 3





LEGEND

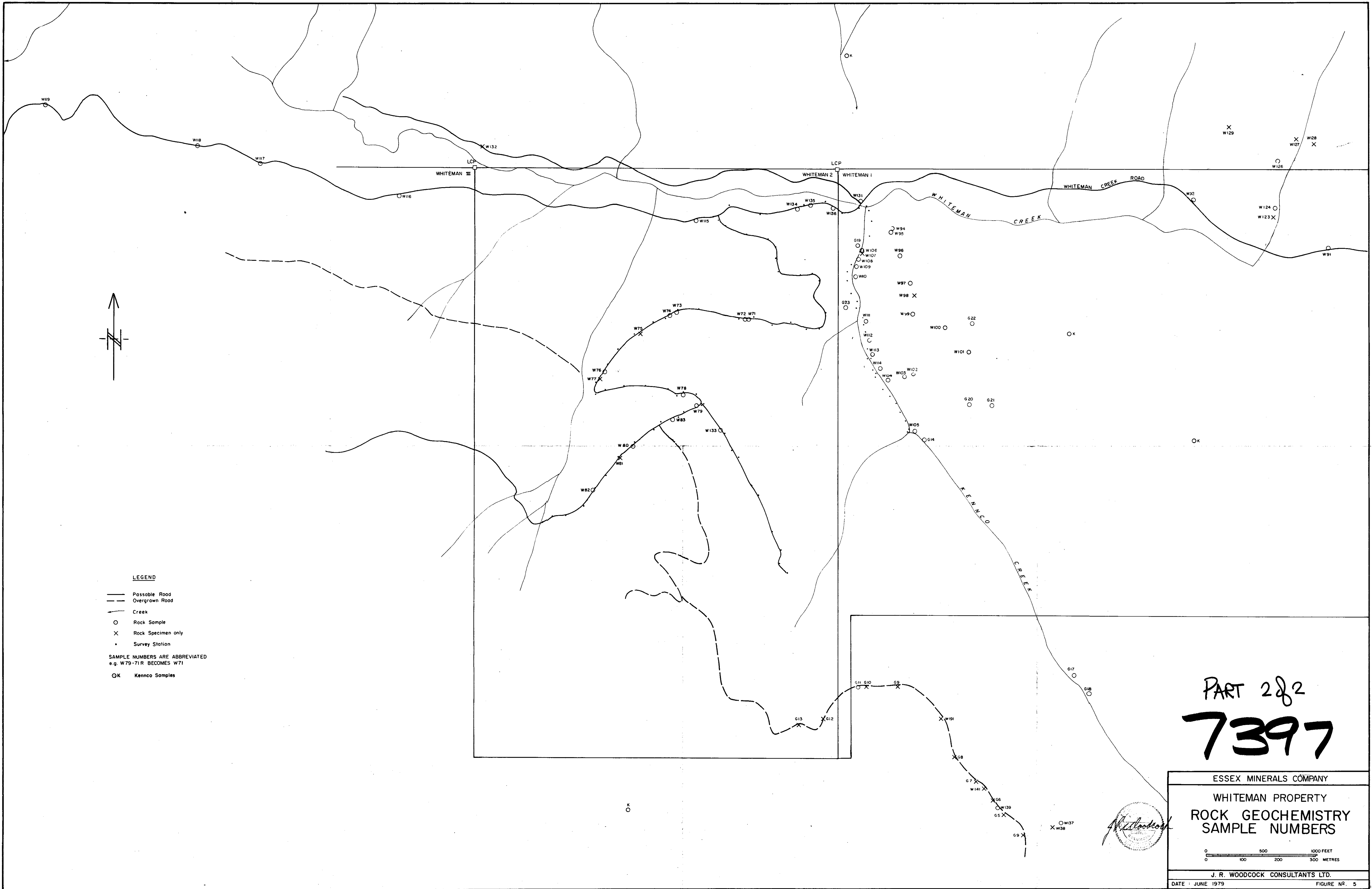
- Possible Road
- - - Overgrown Road
- ~ Creek
- Survey Station
- Grid

NOTE : Contour Interval 500' ±
Arbitrary datum

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ESSEX MINERALS COMPANY	
WHITEMAN PROPERTY	
MAGNETOMETER SURVEY	
J. R. WOODCOCK CONSULTANTS LTD.	
DATE : JUNE 1979	FIGURE NO. 4





LEGEND

- Possible Road
- - - Overgrown Road
- ~ Creek
- Rock Sample
- × Rock Specimen only
- Survey Station

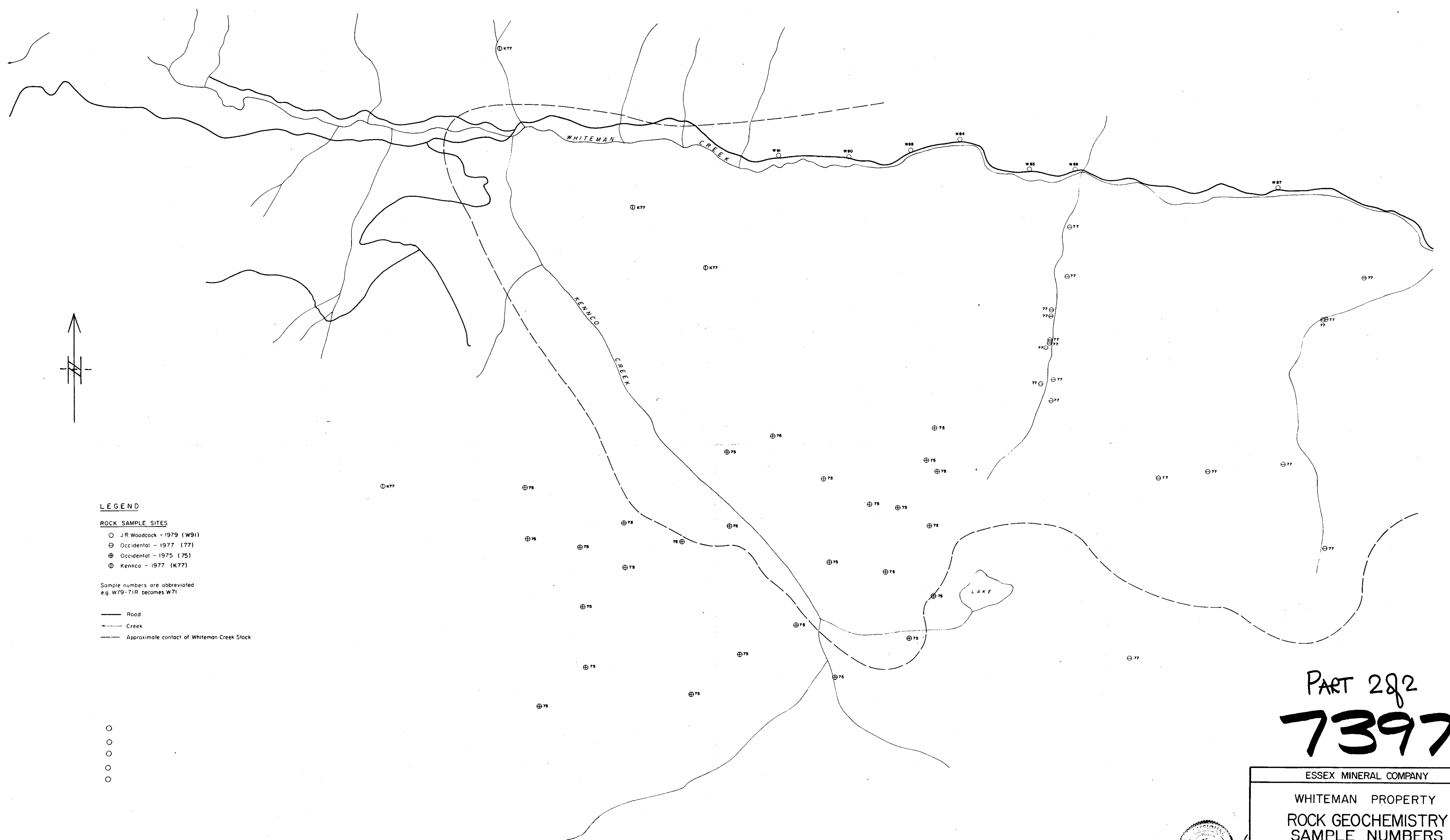
SAMPLE NUMBERS ARE ABBREVIATED
 e.g. W79-71R BECOMES W71

OK Kennco Samples

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ESSEX MINERALS COMPANY	
WHITEMAN PROPERTY	
ROCK GEOCHEMISTRY	
SAMPLE NUMBERS	
J. R. WOODCOCK CONSULTANTS LTD.	
DATE: JUNE 1979	FIGURE NO. 5





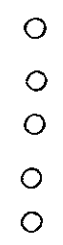
LEGEND

ROCK SAMPLE SITES

- J.R. Woodcock - 1979 (W91)
- ⊖ Occidental - 1977 (77)
- ⊕ Occidental - 1975 (75)
- ⊙ Kennco - 1977 (K77)

Sample numbers are abbreviated
e.g. W79-71R becomes W71

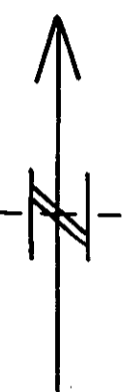
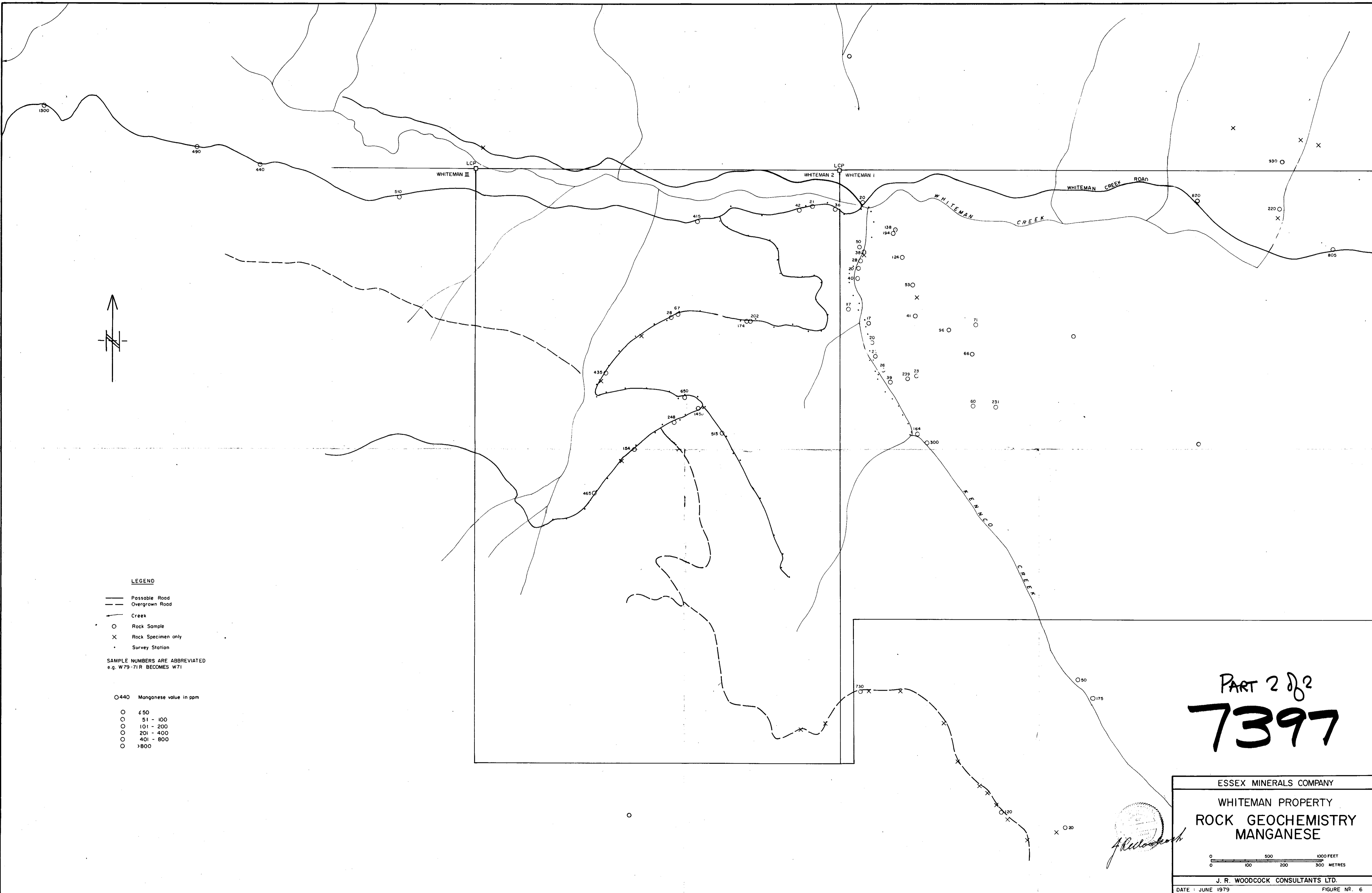
- Road
- Creek
- - - Approximate contact of Whiteman Creek Stock



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ESSEX MINERAL COMPANY	
WHITEMAN PROPERTY	
ROCK GEOCHEMISTRY	
SAMPLE NUMBERS	
J.R. WOODCOCK CONSULTANTS LTD.	
DATE: JUNE 1979	FIGURE NO. 5a



LEGEND

- Possible Road
- - - Overgrown Road
- Creeks
- Rock Sample
- X Rock Specimen only
- Survey Station

SAMPLE NUMBERS ARE ABBREVIATED
e.g. W79-71R BECOMES W71

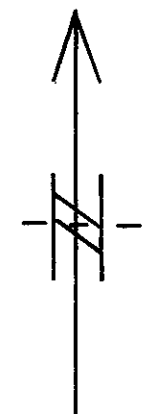
○440 Manganese value in ppm

- ≤ 50
- 51 - 100
- 101 - 200
- 201 - 400
- 401 - 800
- >800

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ESSEX MINERALS COMPANY	
WHITEMAN PROPERTY ROCK GEOCHEMISTRY MANGANESE	
J. R. WOODCOCK CONSULTANTS LTD.	
DATE: JUNE 1979	FIGURE NO. 6

J. R. Woodcock



LEGEND

ROCK SAMPLE SITES

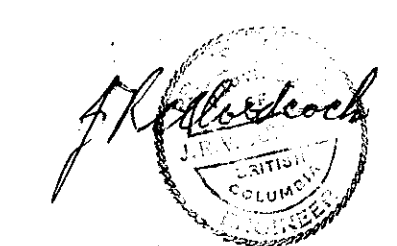
- J.R. Woodcock - 1979
- ⊕ Occidental - 1977
- ⊕ Occidental - 1975
- ⊕ Kennco - 1977

Sample numbers are abbreviated
e.g. W79-71R becomes W71

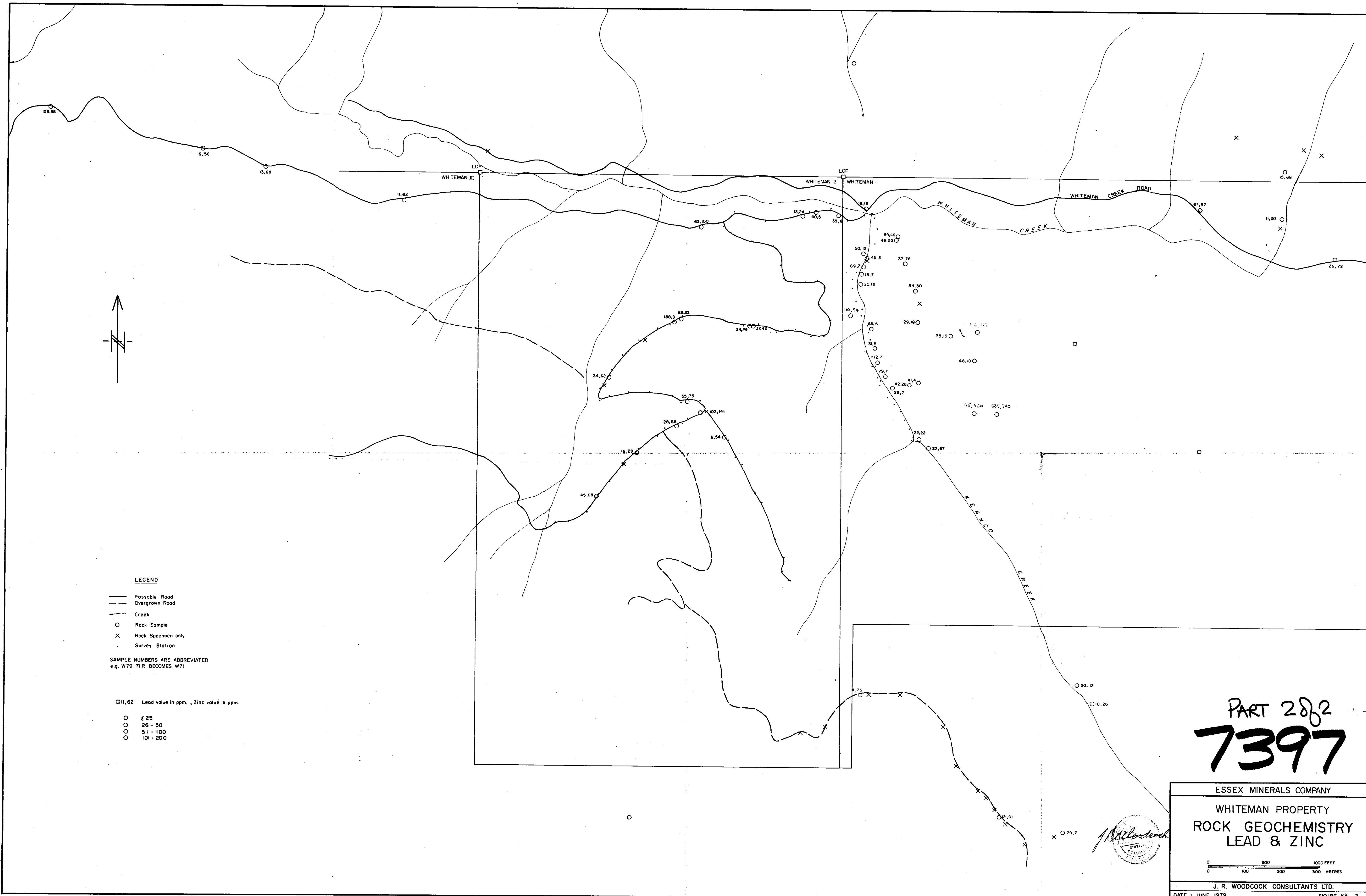
- Road
- Creek
- - - Approximate contact of Whiteman Creek Stock

- < 50 ppm
- 51 - 100
- 101 - 200
- 201 - 400
- 401 - 800
- > 800

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ESSEX MINERAL COMPANY	
WHITEMAN PROPERTY	
ROCK GEOCHEMISTRY	
MANGANESE	
J. R. WOODCOCK CONSULTANTS LTD.	
DATE: JUNE 1979	FIGURE NO. 00



LEGEND

- Possible Road
- - - Overgrown Road
- Creek
- Rock Sample
- × Rock Specimen only
- Survey Station

SAMPLE NUMBERS ARE ABBREVIATED
e.g. W79-71R BECOMES W71

○11,62 Lead value in ppm, Zinc value in ppm.

- < 25
- 26 - 50
- 51 - 100
- 101 - 200

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ESSEX MINERALS COMPANY

WHITEMAN PROPERTY

ROCK GEOCHEMISTRY

LEAD & ZINC

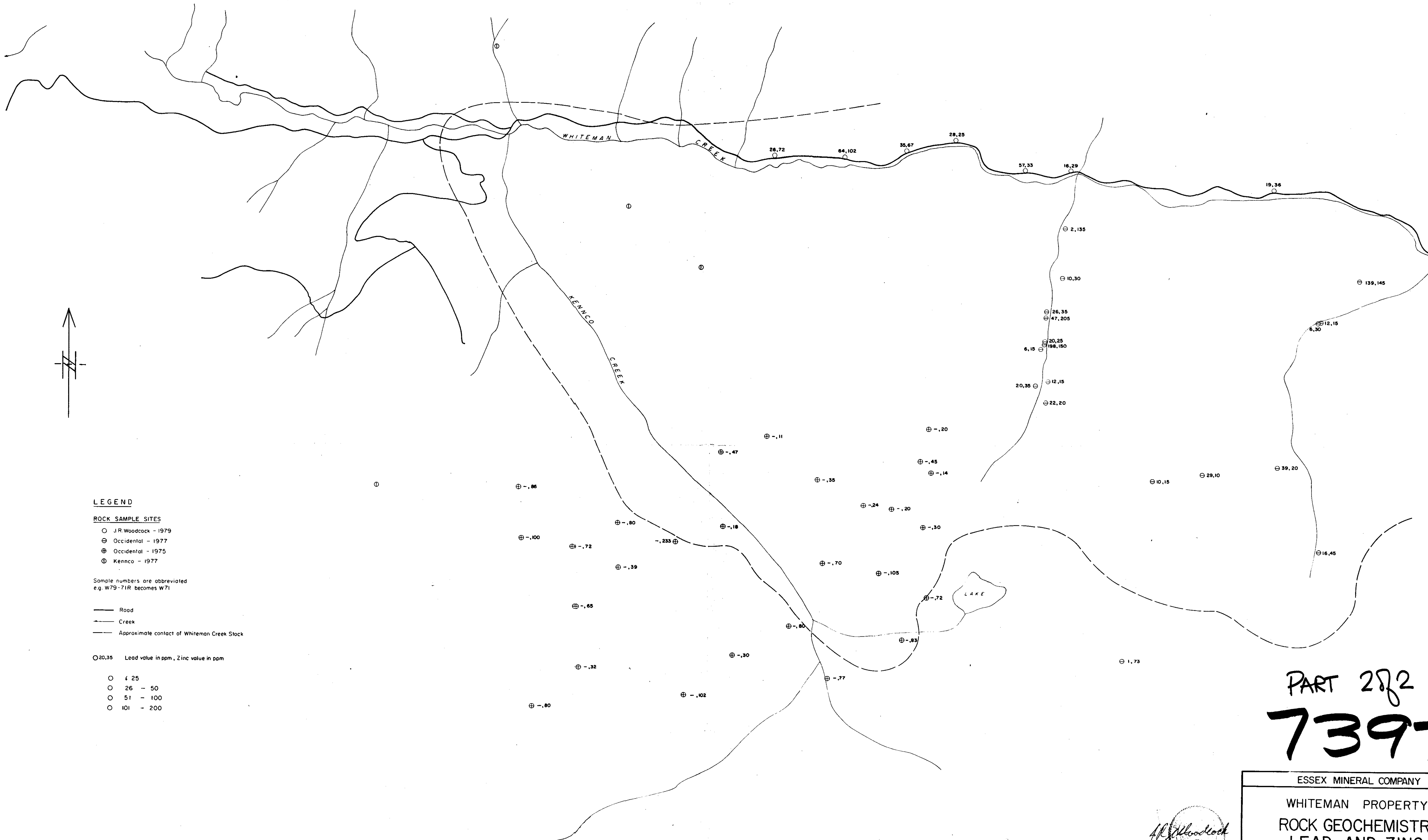
0 100 200 300 METRES

0 500 1000 FEET

J. R. WOODCOCK CONSULTANTS LTD.

DATE: JUNE 1979

FIGURE No. 7



LEGEND

ROCK SAMPLE SITES

- J.R. Woodcock - 1979
- ⊕ Occidental - 1977
- ⊕ Occidental - 1975
- ⊕ Kenno - 1977

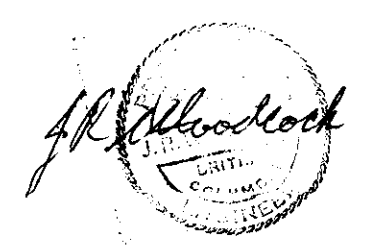
Sample numbers are abbreviated
e.g. W79-71R becomes W71

- Road
- Creek
- - - Approximate contact of Whiteman Creek Stock

○ 20,35 Lead value in ppm, Zinc value in ppm

- 4 25
- 26 - 50
- 51 - 100
- 101 - 200

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ESSEX MINERAL COMPANY	
WHITEMAN PROPERTY ROCK GEOCHEMISTRY LEAD AND ZINC	
J.R. WOODCOCK CONSULTANTS LTD.	
DATE: JUNE 1979	FIGURE NO. 7a



- LEGEND**
- Possible Road
 - - - Overgrown Road
 - ~ Creek
 - Rock Sample
 - × Rock Specimen only
 - Survey Station

SAMPLE NUMBERS ARE ABBREVIATED
e.g. W79-71R BECOMES W71

- 15,12 Molybdenum value in ppm., Tungsten value in ppm.
- <3
 - 4 - 6
 - 7 - 12
 - 13 - 25
 - 26 - 50
 - >50

LCP

WHITEMAN III

LCP

WHITEMAN 2 WHITEMAN 1

WHITEMAN CREEK ROAD

WHITEMAN CREEK

KENNECO CREEK

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ESSEX MINERALS COMPANY

WHITEMAN PROPERTY

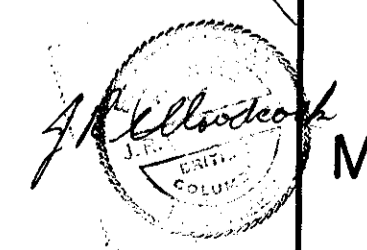
ROCK GEOCHEMISTRY

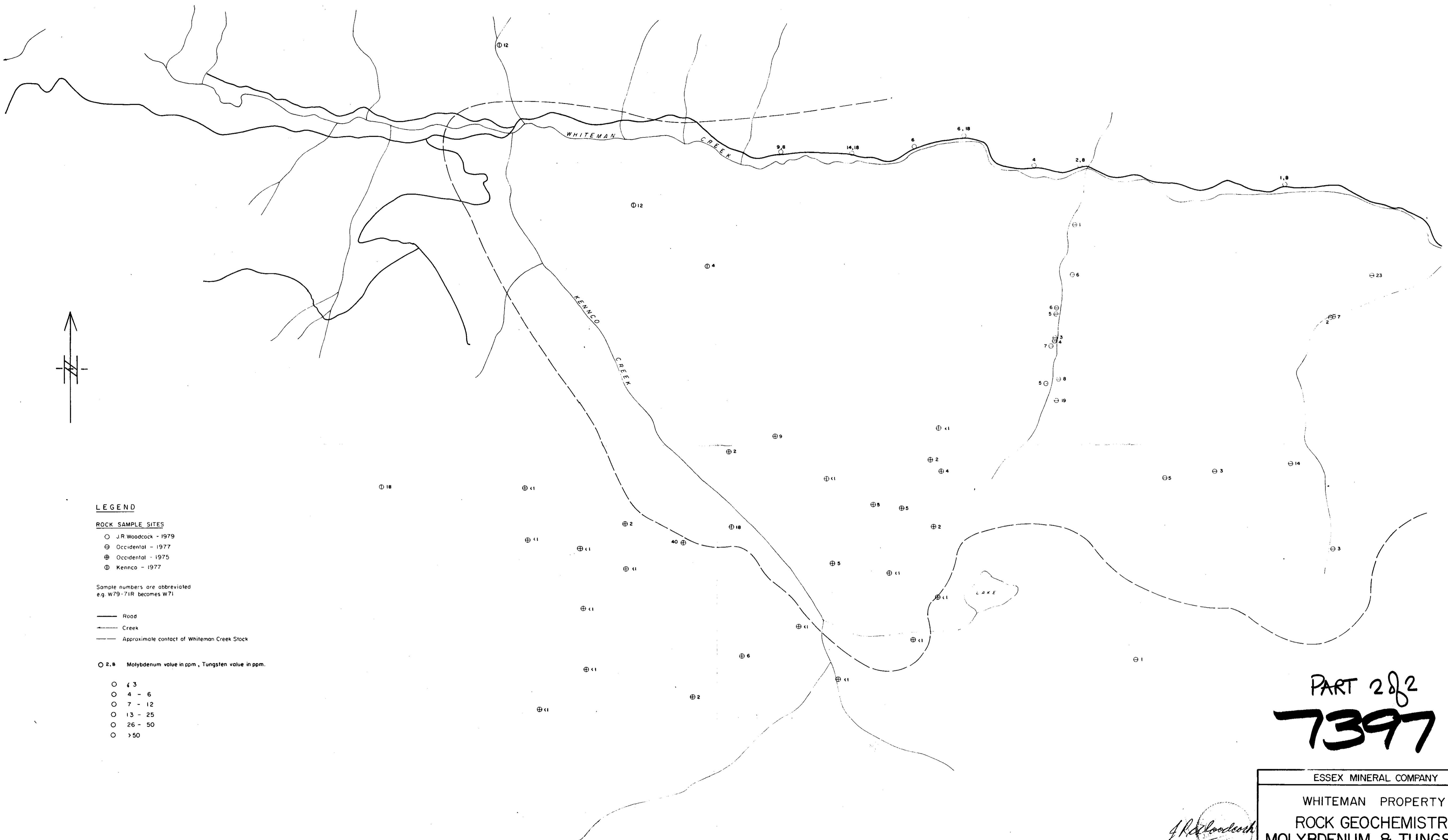
MOLYBDENUM & TUNGSTEN

J. R. WOODCOCK CONSULTANTS LTD.

DATE: JUNE 1979

FIGURE NO. 8





LEGEND

ROCK SAMPLE SITES

- J.R. Woodcock - 1979
- ⊖ Occidental - 1977
- ⊕ Occidental - 1975
- ⊗ Kennico - 1977

Sample numbers are abbreviated
e.g. W79-71R becomes W71

- Road
- Creek
- - - Approximate contact of Whiteman Creek Stock

○ 2, 8 Molybdenum value in ppm, Tungsten value in ppm.

- 4-3
- 4 - 6
- 7 - 12
- 13 - 25
- 26 - 50
- >50

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J.R. Woodcock

ESSEX MINERAL COMPANY	
WHITEMAN PROPERTY	
ROCK GEOCHEMISTRY	
MOLYBDENUM & TUNGSTEN	
0 1000 2000 FEET	0 200 400 600 METRES
J.R. WOODCOCK CONSULTANTS LTD.	
DATE: JUNE 1979	FIGURE NO. 8a



LEGEND

- - - - - Possible Road
 - - - - - Overgrown Road
 - - - - - Creek
 ○ Rock Sample
 X Rock Specimen only
 . Survey Station

SAMPLE NUMBERS ARE ABBREVIATED
 e.g. W79-71R BECOMES W71

FLUORIDE, ppm

○ < 500
 ○ 501 - 1000
 ○ 1001 - 1500
 ○ 1501 - 2000
 ○ 2001 - 2500
 ○ > 2500

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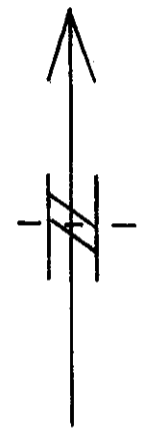
WHITEMAN PROPERTY
 ROCK GEOCHEMISTRY
 FLUORIDE

0 500 1000 FEET
 0 100 200 300 METRES

J. R. WOODCOCK CONSULTANTS LTD.

DATE: JUNE 1979 FIGURE NO. 9

J.R. Woodcock



LEGEND

ROCK SAMPLE SITES

- J.R. Woodcock - 1979
- ⊖ Occidental - 1977
- ⊕ Occidental - 1975
- ⊙ Kennco - 1977

Sample numbers are abbreviated
e.g. W79-71R becomes W71

- Road
- - - Creek
- - - Approximate contact of Whiteman Creek Stock

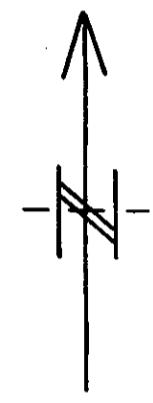
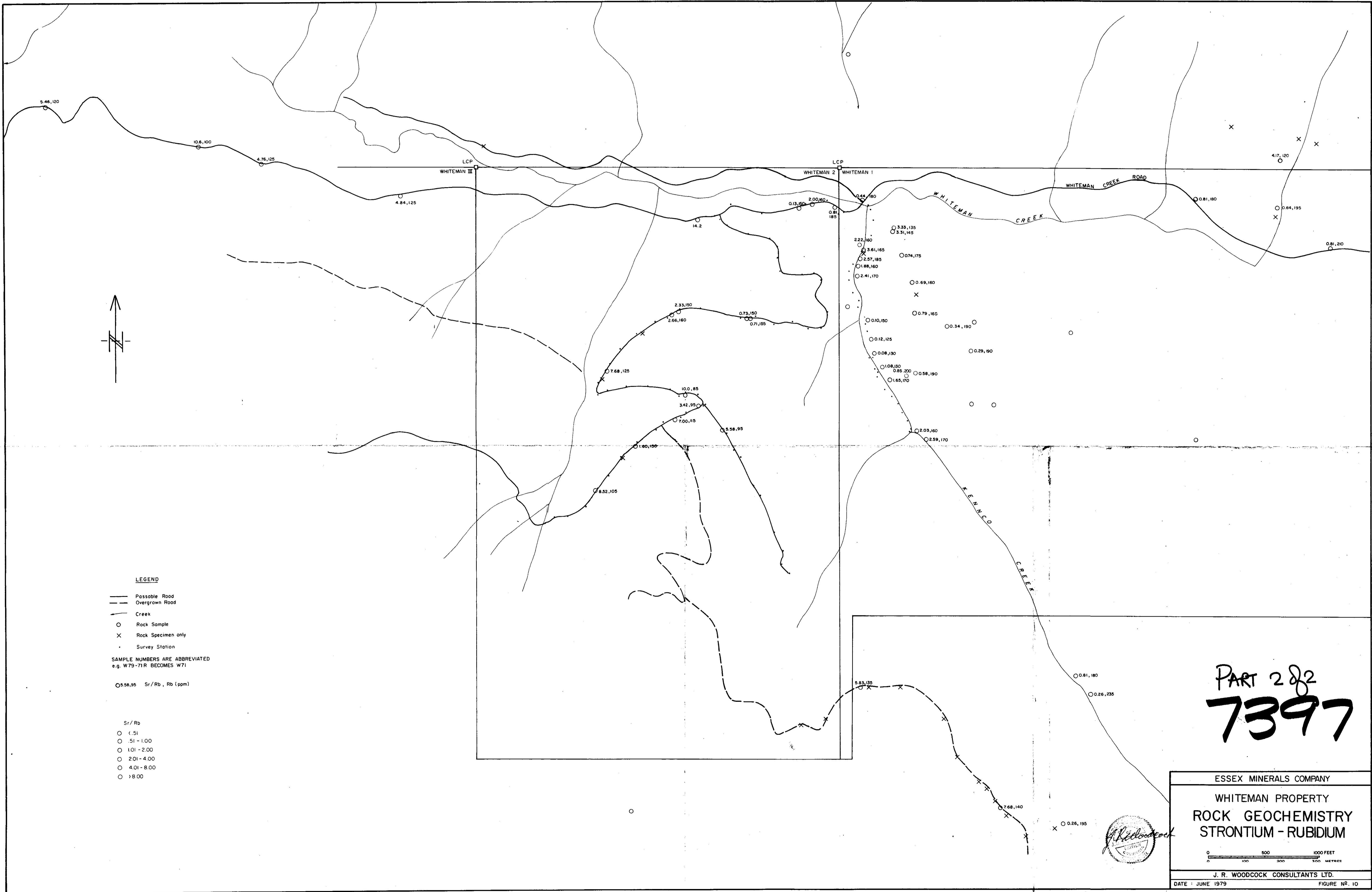
FLUORIDE, ppm

- < 500
- 501 - 1000
- 1001 - 1500
- 1501 - 2000
- 2001 - 2500
- > 2500

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J.R. Woodcock

ESSEX MINERAL COMPANY	
WHITEMAN PROPERTY	
ROCK GEOCHEMISTRY	
FLUORIDE	
J.R. WOODCOCK CONSULTANTS LTD.	
DATE: JUNE 1979	FIGURE NO. 9



LEGEND

- Possible Road
- - - Overgrown Road
- Creek
- Rock Sample
- × Rock Specimen only
- Survey Station

SAMPLE NUMBERS ARE ABBREVIATED
e.g. W79-71R BECOMES W71

○ 5.58,95 Sr/Rb, Rb (ppm)

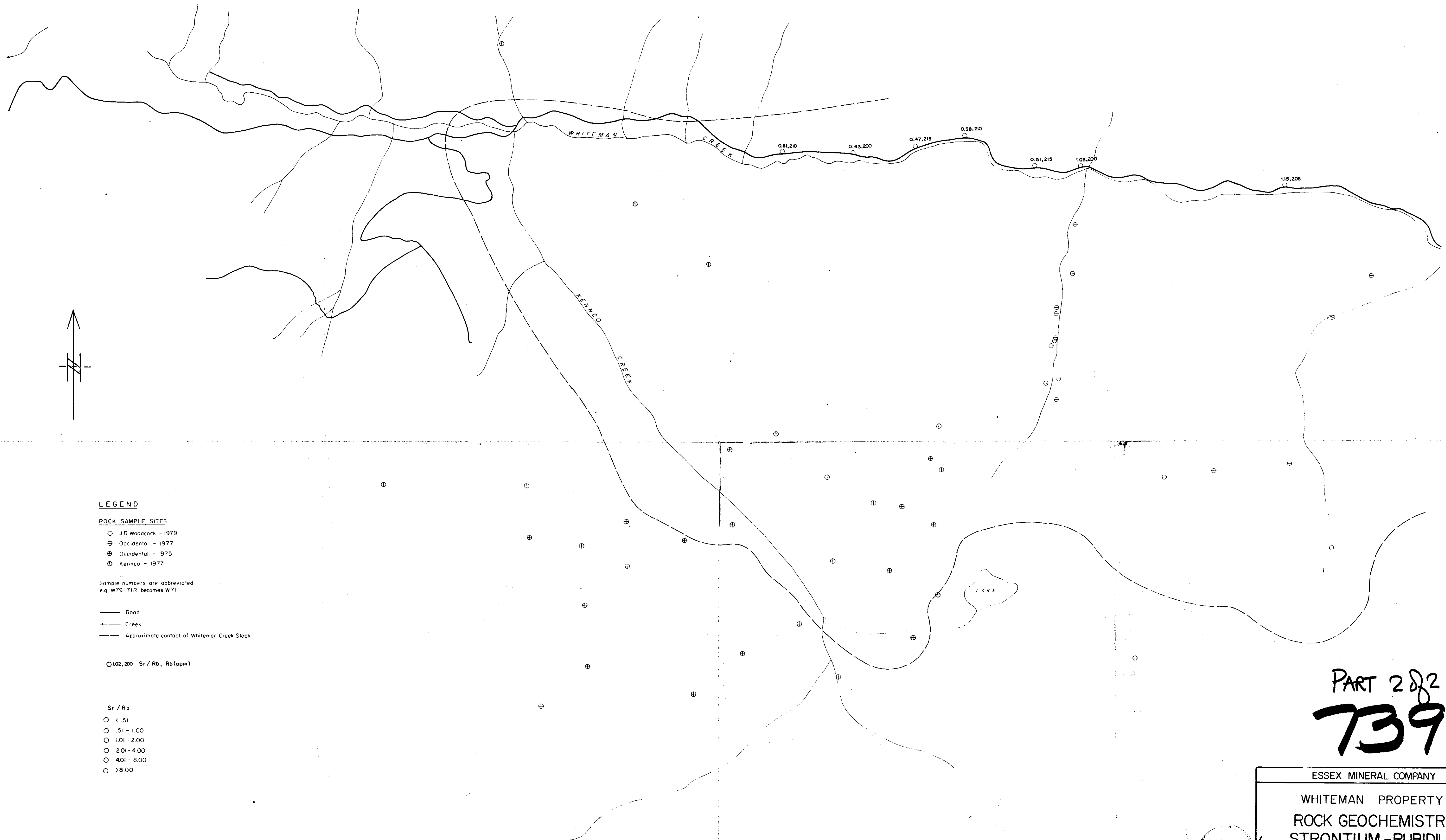
Sr/Rb

- < .51
- .51 - 1.00
- 1.01 - 2.00
- 2.01 - 4.00
- 4.01 - 8.00
- > 8.00

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ESSEX MINERALS COMPANY	
WHITEMAN PROPERTY	
ROCK GEOCHEMISTRY	
STRONTIUM - RUBIDIUM	
J. R. WOODCOCK CONSULTANTS LTD.	
DATE: JUNE 1979	FIGURE NO. 10





LEGEND

ROCK SAMPLE SITES

- J.R. Woodcock - 1979
- ⊕ Occidental - 1977
- ⊕ Occidental - 1975
- ⊕ Kennico - 1977

Sample numbers are abbreviated
e.g. W79-71R becomes W71

- Road
- Creek
- - - Approximate contact of Whiteman Creek Stock

○ 0.02, 200 Sr / Rb, Rb (ppm)

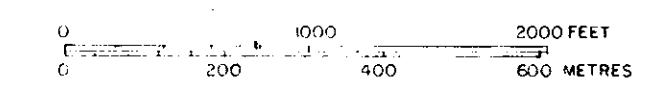
Sr / Rb

- < .51
- .51 - 1.00
- 1.01 - 2.00
- 2.01 - 4.00
- 4.01 - 8.00
- > 8.00

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ESSEX MINERAL COMPANY

WHITEMAN PROPERTY
ROCK GEOCHEMISTRY
STRONTIUM - RUBIDIUM



J.R. WOODCOCK CONSULTANTS LTD.