

ASSESSMENT REPORT  
SOIL GEOCHEMICAL FOLLOW-UP

on  
Rusty 4-7, 9-14, 16-18 Mineral Claims  
at  
Poplar Creek, B.C.

50°26'N      117°10'W

Mining Division: Slocan  
N.T.S. 82K/6E

P.J. Wojdak and A.E. Marr  
February, 1982

part 2  
of 34

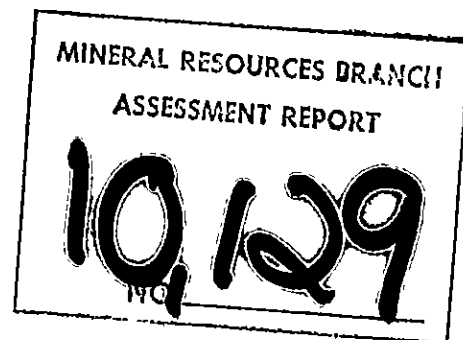


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## INTRODUCTION

The Rusty/Bullock claim group is located on the west side of Lardeau River, 70-100 km north of Kaslo.

Access is by Highway #33 (gravel surface) from Meadow Creek and Kaslo. Moderate to steep northeast facing slopes are deeply incised by major valleys of Poplar Creek, Rapid Creek and Tenderfoot Creek. Outcrop is moderately abundant on steep slopes, but is sparse on moderate slopes.

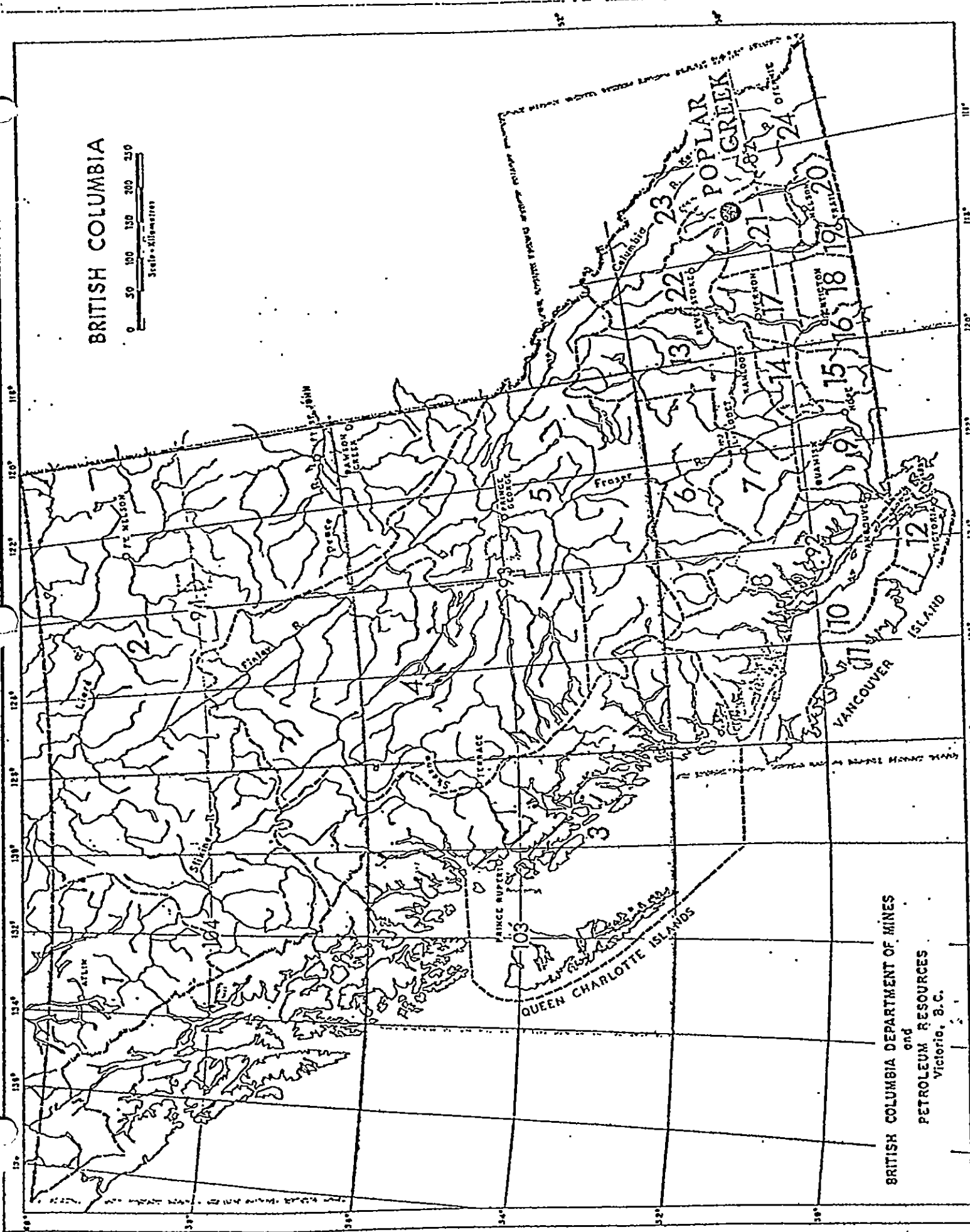
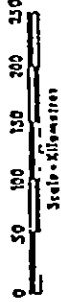
A gold prospecting rush passed through the Lardeau Valley at the turn of the century, stopping briefly at Poplar Creek between 1898 and 1903. Exploration, consisting of open cuts and driving numerous short adits continued intermittently until about 1930. Essentially no further work had been done until 1980 when claims were optioned by Westmin Resources and Armco.

Westmin Resources carried out a 6-element soil geochemical survey in 1980 on the lower slopes of Lardeau Valley extending from Cascade Creek nearly to Trout Lake. A geological/geochemical follow-up was carried out between July 18-25, 1981. A total of 217 additional soils and 12 rock samples were collected and are reported herein.

## REGIONAL GEOLOGY

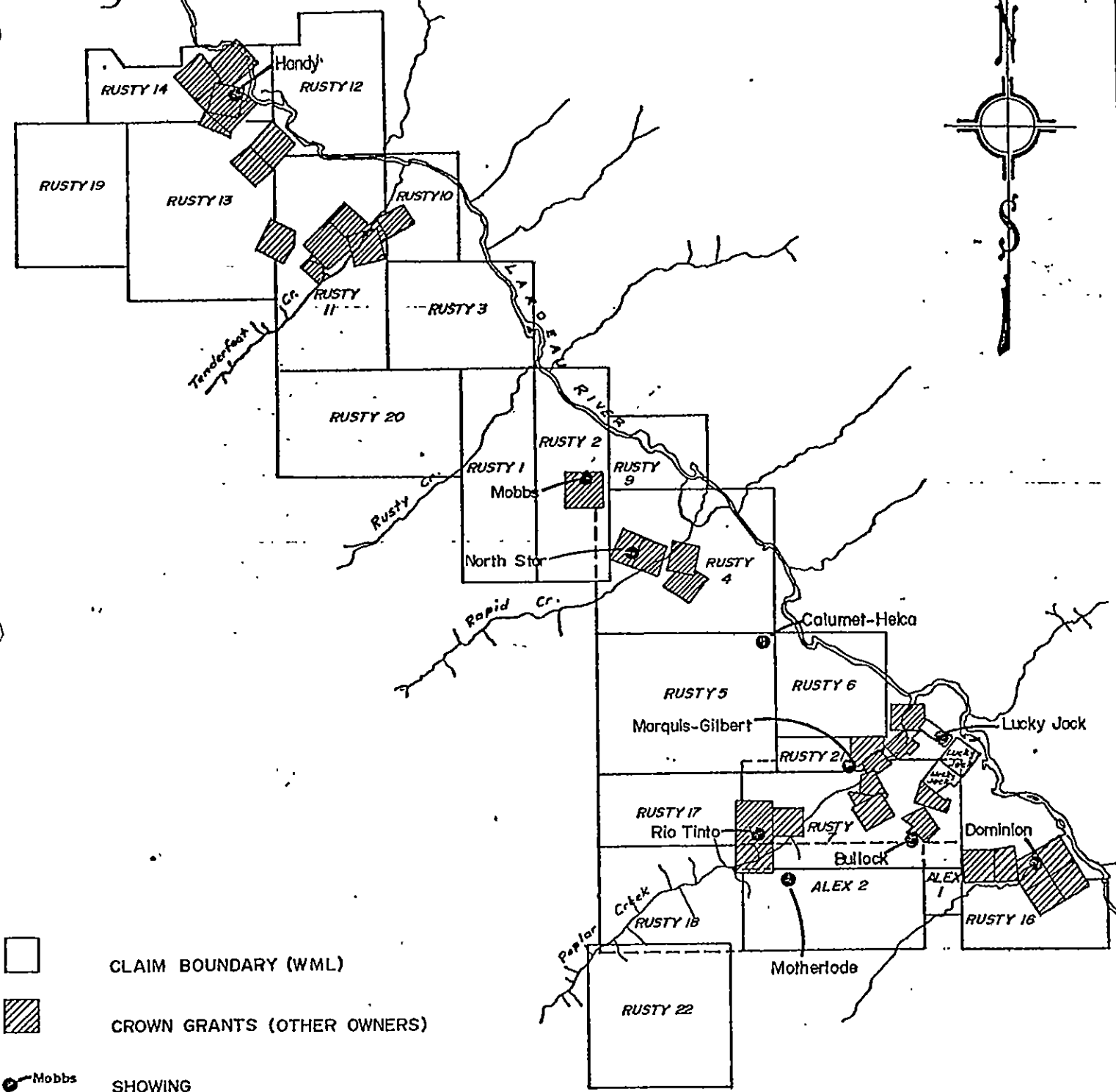
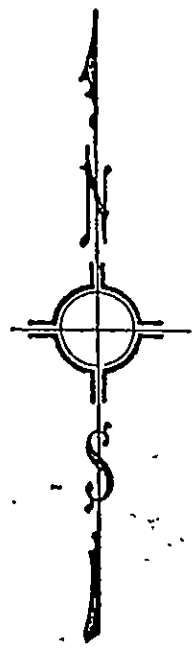
The Poplar Creek area is underlain by lower Paleozoic (Cambrian to Devonian) volcanic and sedimentary strata of the Lardeau Group that extends at least 250 km along the Kooteney Arc from the U.S. border to north of Revelstoke. The regional geology has been described by Read (1973, 1976). The strata have undergone an early isoclinal phase of folding and a younger open to tight phase and greenschist grade (boitite zone) metamorphism. The lowermost Index Formation comprises limy green phyllite (of volcanic origin), phyllitic and arenaceous limestone, grey and light green phyllite (volcanic derived sedimentary strata) and quartz grit. The Jowett Formation is a greenstone unit and is overlain by grey and green phyllite, grit and limestone of the Broadview Formation (Read, 1976). The Bullock claim group are interpreted to cover the stratigraphic interval at the top of the Jowett, although the Jowett/Broadview contact has not been defined by this study.

BRITISH COLUMBIA



BRITISH COLUMBIA DEPARTMENT OF MINES  
and  
PETROLEUM RESOURCES  
Victoria, B.C.

REVELSTOKE M.D.  
SLOCAN M.D.






-  CLAIM BOUNDARY (WML)
-  CROWN GRANTS (OTHER OWNERS)
-  Mobbs SHOWING
- RUSTY 17** CLAIM NAME

FIGURE 2.

<b>WESTERN MINES LIMITED</b>			
POPLAR CREEK PROJECT LOCATION MAP CLAIMS and SHOWINGS			
SCALE 1:40,000 0 2000 4000 Metres			
Date: Jan. '81	Drawn by: L. Connor	Revised:	NXS.MA.82/KGE

ANOMALY FOLLOW-UP

Proper statistical treatment of the 1980 data was not carried out; the results were contoured at arbitrary levels and the term 'anomaly' is used loosely herein.

Anomaly 1

(160+50 - 161+50 NW, 8+00 - 9+50SW)

- anomalous in Au (1,100 ppb), Pb, Zn and Cu over four samples (P241-3, P246).
- stratigraphy dips SW 50°.
- geology comprises chlorite-feldspar-carbonate-sericite schist in contact with an overlying siliceous graphitic phyllite.
- most of the anomaly is found below a 1-2 m wide quartz vein, which was sampled and gave 0.1 ppm Ag and 10 ppb Au (DR-50).
- considering the variability of vein assays, the vein remains the most likely source of the anomaly.
- no additional soil sampling was carried out.

Anomaly 2

(159+00 - 161+00 NW, 14+00 - 15+00 SW)

- anomalous in Cu (1,300 ppm), Pb, Zn and a minor Au anomaly over seven samples (P257-259, P229-131, P227).
- a sulphide-rich basaltic flow-top breccia was found and explains the soil anomaly.
- above and below this unit are thick flows of massive, poorly foliated, coarse grained meta-gabbro.
- sulphides observed in the flow contact include pyrite, arsenopyrite, pyrrhotite and chalcopyrite.
- a rock sample returned 1.0 ppm Ag, 30 ppb Au (DR-49).
- follow-up soil sampling gave very weak to background values.

Anomaly 3

(148+00 - 150+00 NW, 3+00 - 4+50 SW\*)

- anomalous in Cu, Pb, Zn, Au (740 ppb) and As over 15 closely spaced soil samples (P1247-1250, P1256-1259, Y643-647, G242, 243).

- anomaly is underlain by moderately carbonated (to locally highly carbonated) chlorite schist.

- downslope from the anomaly, at about G244, an old open cut was found on a quartz vein in carbonated and silicified chlorite schist (trace fuchsite).

- a narrow (2-3 m) zone of rusty weathering carbonate-quartz-fuchsite rock with pyrite is roughly on trend with the gold anomaly at G242 and the arsenic anomaly at P1248-9, but could not be traced laterally.

- five rock samples gave 10 or <10 ppb Au and 0.1 ppm Ag (PR50-54)..

- additional soil sampling confirmed the anomaly and a peak As value of 240 ppm was recorded.

- geological setting is comparable to Poplar Creek (interbedded sediments and mafic volcanics, evidence of quartz veining and carbonate-fuchsite alteration).

\*- the lines are not as plotted on the geochem map. The 149+50 line is NW of 150+00 on the lower slope of the hill. It may cross the 150+00 line further uphill so the lines become correct.

#### Anomaly 4

(148+00 - 151+00 NW, 6+00 - 6+50 SW)

- anomalous in Cu, Pb, Zn, As and Ag (1.0 ppm) over 15 samples (P1240-43, P1265-68, Y655-58, G238, Y611-12).

- probably a formational (black argillite) Zn-Ag-As anomaly.

- a wide zone of excellent outcrop on a gentle slope.

- further soil sampling confirmed the original anomaly.

#### Anomaly 5

(132+50 - 134+00 NW, 14+00 - 16+00 SW)

- anomalous in Au, Cu, Pb and Zn over five samples (N646, P786, P785, P763-4).

- the predominant rock type in the area is a thick quartz-pyrite-graphitic phyllite containing sporadic sericite associated with quartz veining.

- other rock types include a rusty quartz-sericite schist, a carbonated variant of this rock and a sulphidic greenstone.

- two rusty quartz veins were sampled and gave <10 ppb Au (GSA-2).

- the anomaly coincides with a broad seep and small stream.

- follow-up sampling has not produced a focused target.

- a formational (black argillite) source and hydromorphic transport are suggested.

#### Anomaly 6

(134+50 - 136+00 NW, 17+00 - 18+50 SW)

- anomalous in Cu, Pb, Zn, Au and Ag over seven samples (N630-33, N640-42).

- underlain by pyritic graphitic argillite that results in a thick carbonaceous soil and pyritic sericite-chlorite-quartz schist.

- lack of a geochemical focus suggests a formational source.

#### Anomaly 7

(122+00 - 125+00 NW, 12+50 - 15+00 SW)

- anomalous in Cu, Pb, Zn, Au, Ag and As over ten samples (G464, G477-82, G483-4, 6).

- predominant rock types in the vicinity of the anomaly are carbonated, pyritiferous quartz-sericite schist (which was sampled as TKB-9 and gave <10 ppb gold), a carbonated graphitic phyllite, and, underlying the phyllite, a massive carbonated chlorite-feldspar schist (metadiorite).

- minor quartz stringers occur in the graphitic phyllite.

- peak soil values are 20 ppm Au, 10.8 ppm Ag, 150 ppm As, 415 ppm Pb and 1,000 ppm As and are well focused.

- a high silver galena vein is the most likely explanation of the anomaly, although stratabound mineralization is also possible.



Anomaly 8

(108+00 - 112+00 NW, 10+00 - 12+00 SW)

- a weak anomaly that corresponds to a ridge of chlorite schist.
- quartz stringers fill joints in the chlorite schist.
- additional soil sampling gave mediocre results and a formational anomaly is suggested.

Anomaly 9

(109+00 - 113+00 NW, 13+00 - 15+00 SW)

- anomalous in Cu, Pb, Zn, Au, Ag and As over thirteen samples (J079-81, P099-096, P100, 105).
- this anomaly is found in a flat area containing numerous seeps and thick overburden.
- a gold soil anomaly occurs just below an old trench across a mafic volcanic/siltite contact.
- peak values of new soil sampling are 175 ppm Cu, 510 ppm Zn, 290 ppb Au and 210 ppm As.
- the anomaly seems too strong to be hydromorphic and due to sparse outcrop remains unexplained.

Anomaly 10

(79+00 - 80+00 NW, 16+50 - 17+00 SW)

- anomalous in Cu, Pb, Zn and Au over five samples (P807, J764, 3, 2, J768).
- anomalous soil values appear restricted to a carbonated, siliceous, sericite-chlorite schist.
- 1981 sampling on the recently acquired Broken Hill and Coronation claims has extended the anomaly 200 m further northwest.
- no mapping has been done in that area.
- this is an extensive, moderately strong Pb, As spotty Au and partially coincident Cu anomaly that remains unexplained.

Anomaly 11

(74+00 - 79+00 NW, 10+00 - 15+00 SW)

- anomalous in Pb, Zn, Au, Ag and As over four main samples.
- the anomaly is associated with a zone of altered, carbonated chlorite schist containing minor pyrite and possible arsenopyrite (sample TKB-10 gave 10 ppm Au).
- resampling gave two moderately anomalous samples, one with 102 ppm Pb, the other with 330 ppm Zn.
- the anomaly is weak but remains unexplained.

Anomaly 12

(74+00 - 76+00 NW, 18+50 - 19+00 SW)

- anomalous in Cu, Pb, Zn and As over four samples.
- extensive quartz veining was observed, associated with highly siliceous, carbonated chlorite schists.
- old trenches were located with one displaying considerable pyrite, this was sampled (DDB-8-81), but returned 10 ppb Au.
- additional sampling gave modest results although initial work gave good Pb and As values.
- the anomaly is unexplained.

Anomaly 13

(55+00, - 57+00 NW, 19+50 SW)

- anomalous in Pb and Au over three samples (P544, J465, J468)
- local geology comprises carbonated mafic volcanics (chlorite schist) overlain by dark phyllites and light leached, siliceous chlorite schist (possibly felsic volcanics).
- there is a fold axis 150 m south and a probable fault about 75 m north of the anomaly. Near the fault axis are some old workings on a quartz vein which reportedly yielded modest gold values. Unfortunately the vein was not sampled.
- the vein is on strike with the anomaly.
- resampling confirmed a strong Cu, Au, As anomaly.
- resampling (V062-094)
- (see Figure 13)

Anomaly 14

(38+00 - 39+00 N W, 7+50 - 8+00 SW)

- anomalous in Au, As with nearby Pb and Zn over three samples.

- the anomaly is underlain by carbonated graphitic phyllite and extensive glacial till.

- additional soil sampling discredited the original anomaly.

- a sample of rusty phyllite gave <10 ppb Au and no reason for the original anomaly was found.

Anomaly 15

(30+00 NW, 20+00 SW)

- anomalous in Ag, As, Cu, Zn

- geology comprises siliceous, carbonated, chlorite-feldspar schist (metadiorite), overlain by thinly bedded graphitic phyllite interlaminated with mudstone and siltstone, succeeded by chloritic, sericitic phyllite.

- no mineralization or quartz veins were observed.

- resampling shows a broad modest Cu-Zn high suggesting a formational mafic volcanic anomaly.

Anomaly 16

(28+00 NW, 15+50 SW)

- anomalous in Au (10,000 ppb) assayed 0.436 oz Au/ton.

- resampling gave a best value of 130 ppb Au.

- the sample site is flat and a solitary poor outcrop nearby is a pale green, carbonated, well-foliated chlorite schist with rusty inclusions. A pit at the sample site located a cherty variant of the above rock containing small blebs of sulphide, probably pyrite.

- lack of associated anomalies, especially As, suggests either a very minor gold source or a fluke sample.

CONCLUSIONS

An extensive soil geochemical survey was carried out in 1980 on a grid extending from Cascade Creek (south of Poplar Creek) northwesterly to within 2 km of Mobbs Creek near Trout Lake. Sixteen of the more significant anomalies were followed up in 1981. Of the 16 anomalies:

- a) 5 are concluded to be formational, i.e. related to high background rock units such as copper with mafic volcanics or zinc-silver with black shales.
- b) 1 cannot be reproduced and is discredited.
- c) 1 is attributed to minor Cu-sulphide mineralization in mafic rocks and is considered to have little potential.
- d) 4 are in a favourable geologic environment (carbonated mafic volcanics, quartz veining, etc.) and have a geochemical signature suggesting gold mineralization. Trenching is recommended for three of these -- anomalies 3, 10 and 13. Anomaly 9 is in an area of thick overburden and trenching may not be realistic.
- e) 2 are weak anomalies in areas of only generally favourable geology and have a very low priority for trenching.
- f) 2 are very localized gold anomalies with very weak support from other elements suggesting that if significant grade mineralization is present, it is not extensive and is therefore a dubious trenching target (Anomalies 1 and 16).
- g) 1 is strong lead-silver-arsenic anomaly (#7, 415 ppm Pb, 10.8 ppm Ag, 1,000 ppm As) and almost certainly indicates sulphide mineralization. It may be a quartz-galena vein, rather than a gold-bearing structure. It is readily accessible and trenching is strongly recommended.

  
P.J. Wojdak

APPENDIX 1

STATEMENT OF EXPENDITURES

ON

RUSTY 4-22

Work Period July 18-25, 1981

Salaries

Trent Bollinger (prospecting & soil sampling)	
6 days @ \$63	\$ 378.00
Don Dudek (prospecting & soil sampling)	
3 days @ \$68	204.00
Alex Marr (prospecting & soil sampling)	
6 days @ \$71	426.00
Pat Meade (soil sampling)	
4 days @ \$45.00	180.00
Paul Wojdak (prospecting)	
1 day @ \$160.00	160.00

Analyses

Soils: 203 samples for Cu, Pb, Zn, Au, Ag, As @ \$11.10	2,253.30
14 samples for Pb, As, Au @ \$9.09	127.26
Rocks: 12 au, Ag geochem @ \$6.25	75.00

Field Equipment 100.00

Transportation

Sample shipping	50.00
Four-wheel drive truck, gas	240.00

Camp Costs

20 man days @ \$16	320.00
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Interpretation & Report Preparation 600.00

\$5,113.56  
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APPENDIX 2

STATEMENT OF QUALIFICATIONS

I, PAUL J. WOJDAK of the Municipality of Delta, Province of British Columbia, hereby certify:

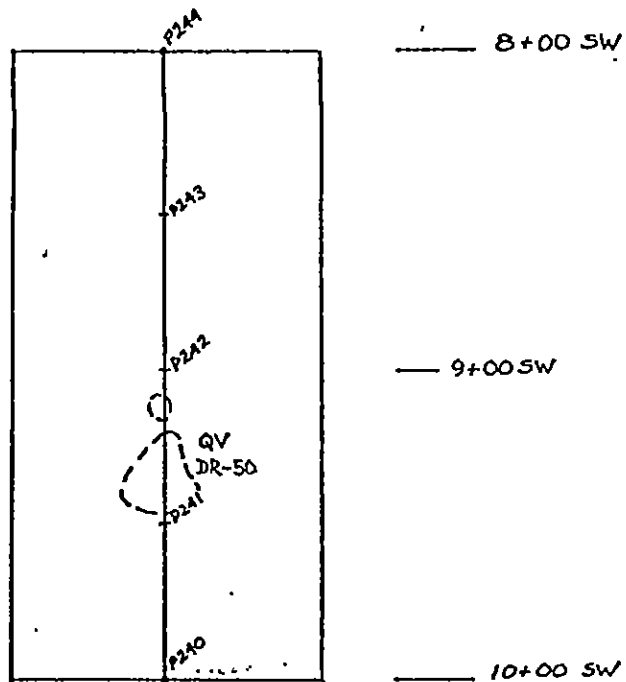
1. That I am a geologist residing at 11405 - 85th Avenue, Delta, British Columbia with a business address at Suite 904, 1055 Dunsmuir Street, P.O. Box 49066, Four Bentall Centre, Vancouver, British Columbia V7X 1C4.
2. That I graduated with a B.Sc. (Honours) in Geology and Chemistry from McMaster University, Hamilton, Ontario in 1971 and with a M.Sc. in Geology from the University of British Columbia in 1974.
3. That I am a member of the Geological Association of Canada.
4. That I have practised geology with Cominco Limited and Westmin Resources Limited from 1974 to 1982.

Dated this 2nd day of February, 1982 at Vancouver, British Columbia.

Signed   
P.J. Wojdak, M.Sc.

# Anomaly #1

DR-50	
Ag (ppm)	Au (ppb)
0.1	10



1:2500

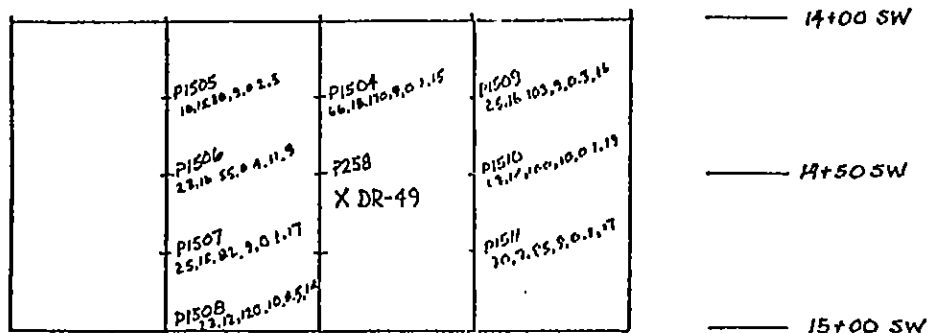


figure 1

# Anomaly #2

DR-49	
Ag (ppm)	Au (ppb)
1.0	30

Cu	Pb	Zn	Au	Ag	As
>100	>60	>300	>200	>2.0	>60
>70-100	>30-60	>200-300	>100-200	>1-2	40-60
40-70	20-30	150-200	20-100	0.4-1	20-40



1:2500

figure 2

# Anomalies 3 & 4

	Ag(ppm)	Au(ppb)
PR 50	-	<10
51	-	<10
52	-	<10
53	0.1	10
54	0.1	<10

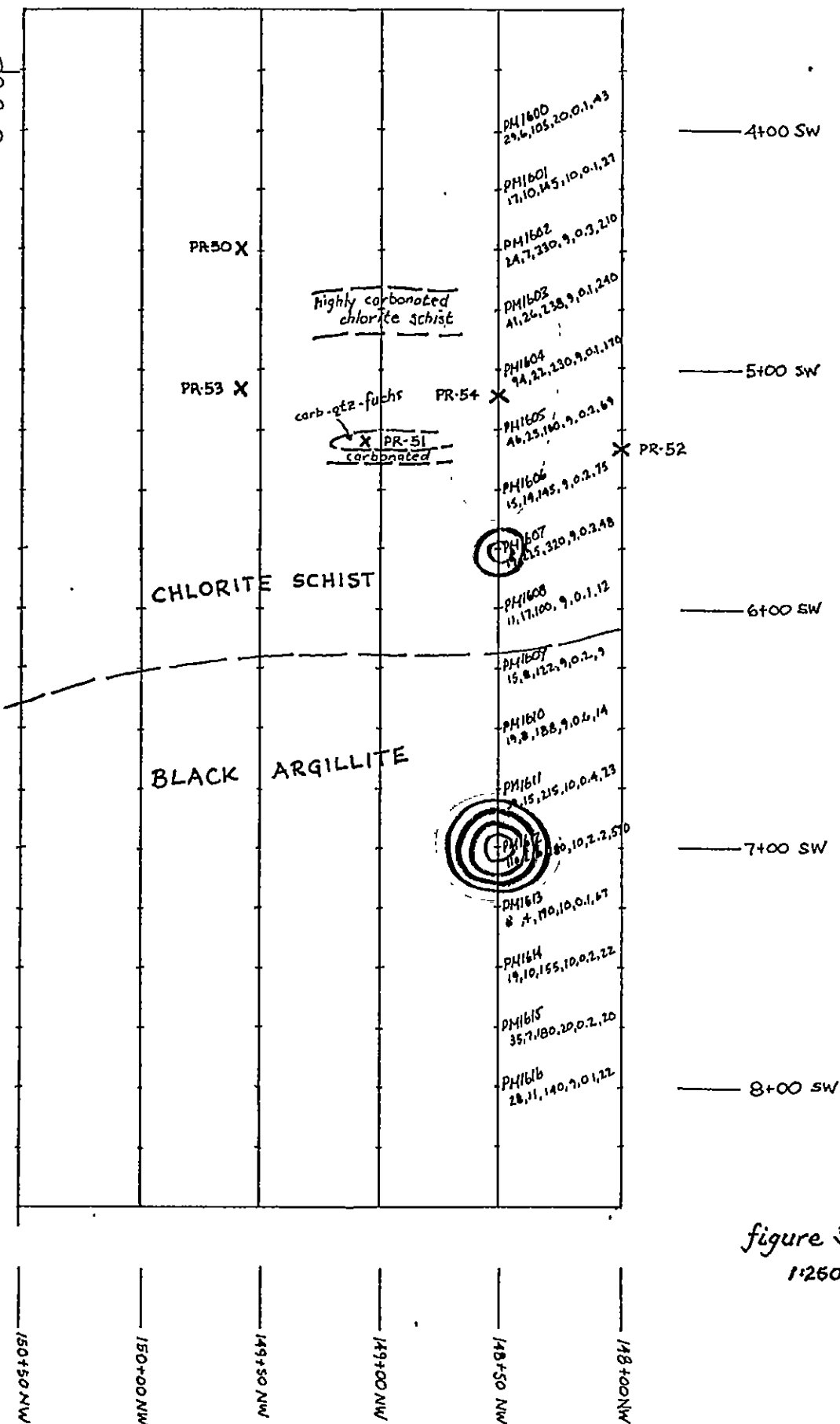


figure 3  
1:2500



Anomaly #5

X GSA-2

GSA-2, < 10 ppb Au

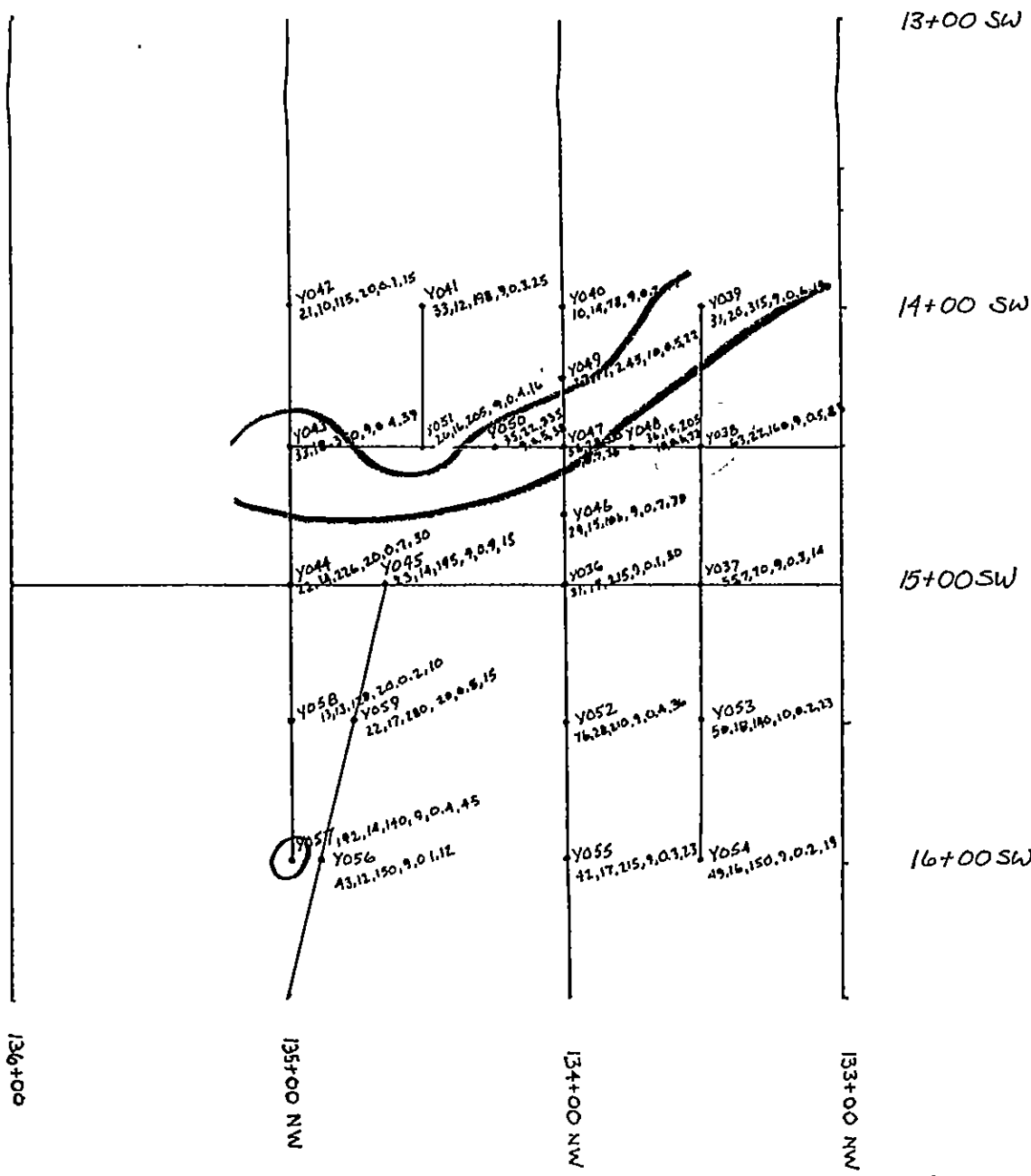


figure 4

Anomaly #6

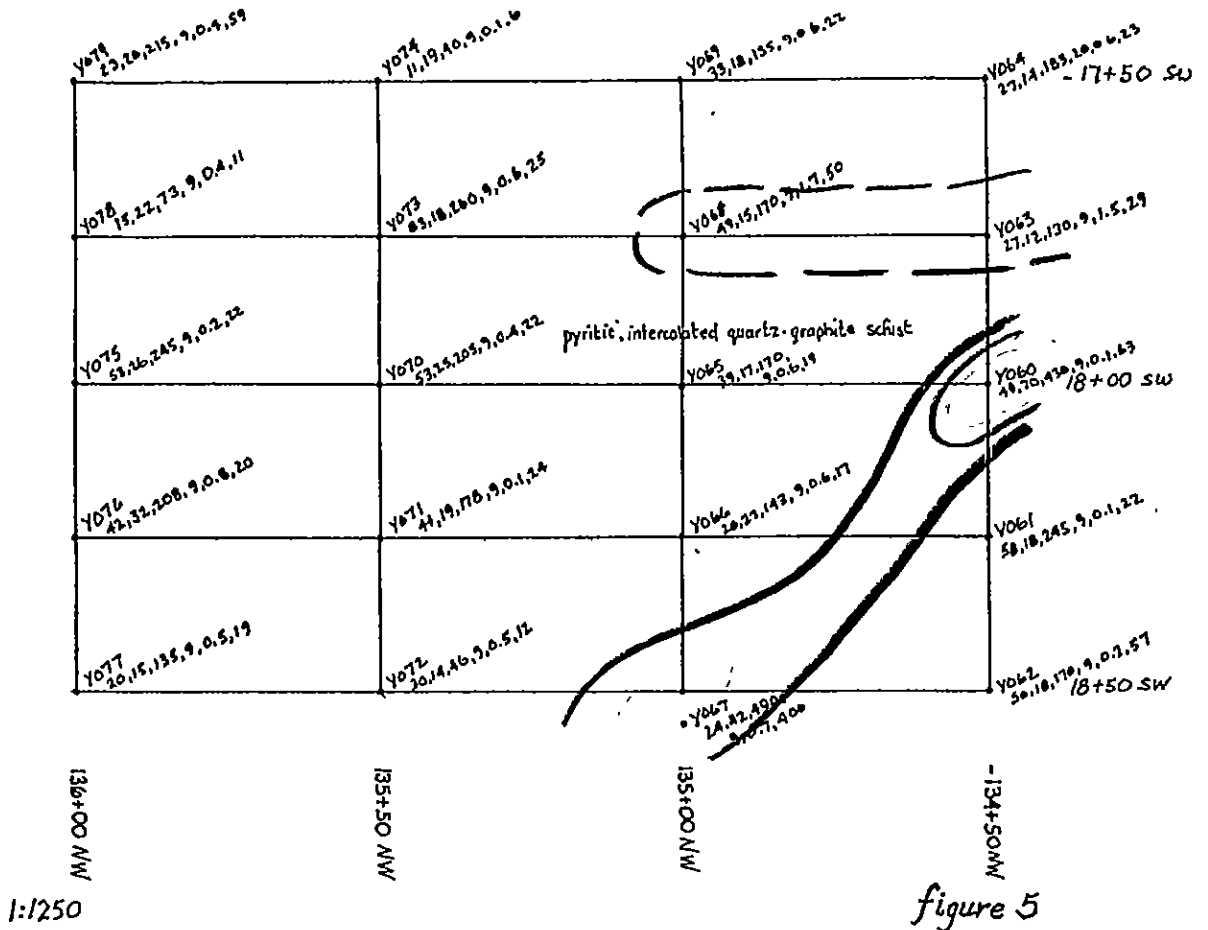


figure 5

Anomaly #7

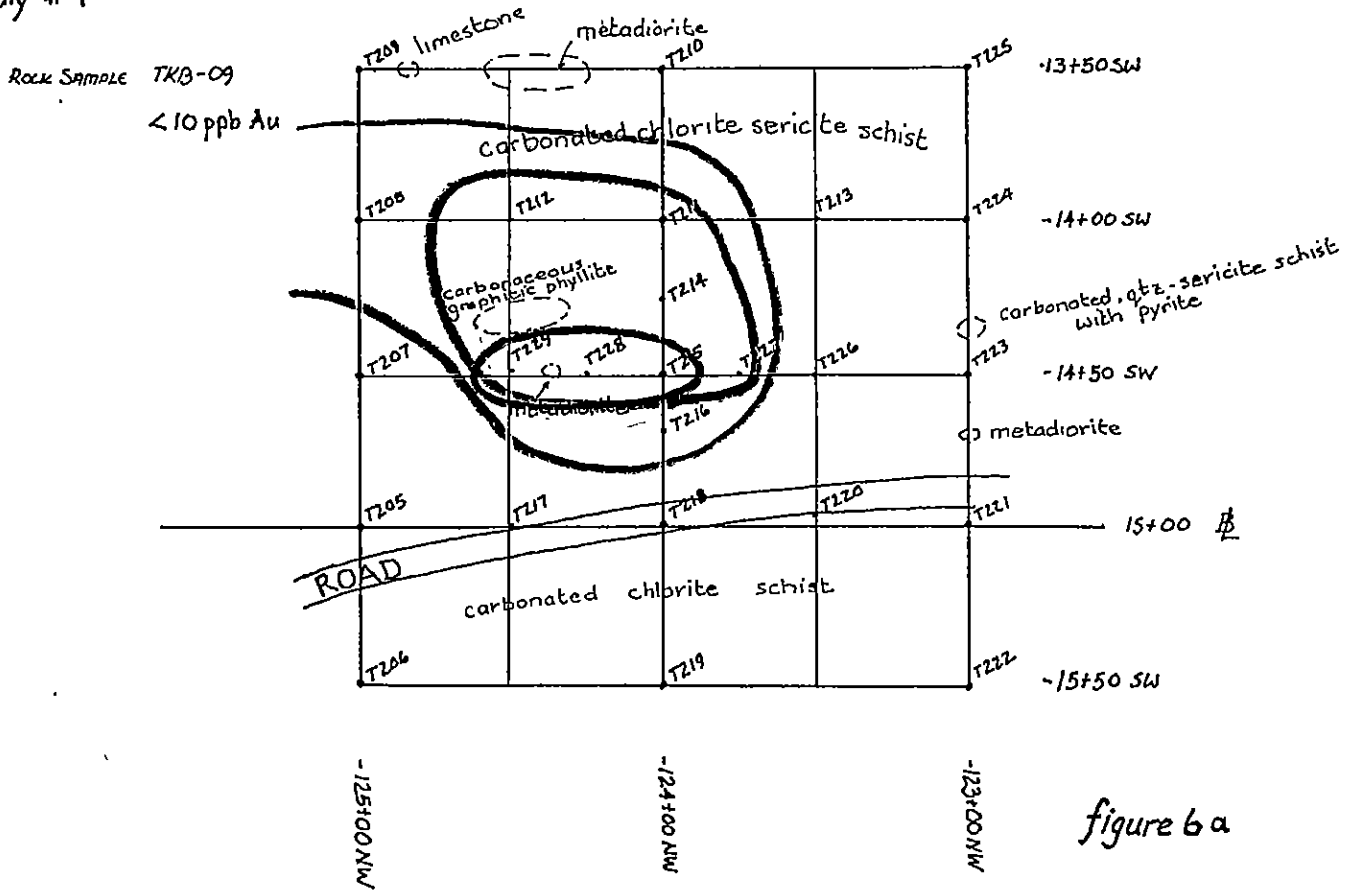


figure 6a

Rock Sample TKB-09

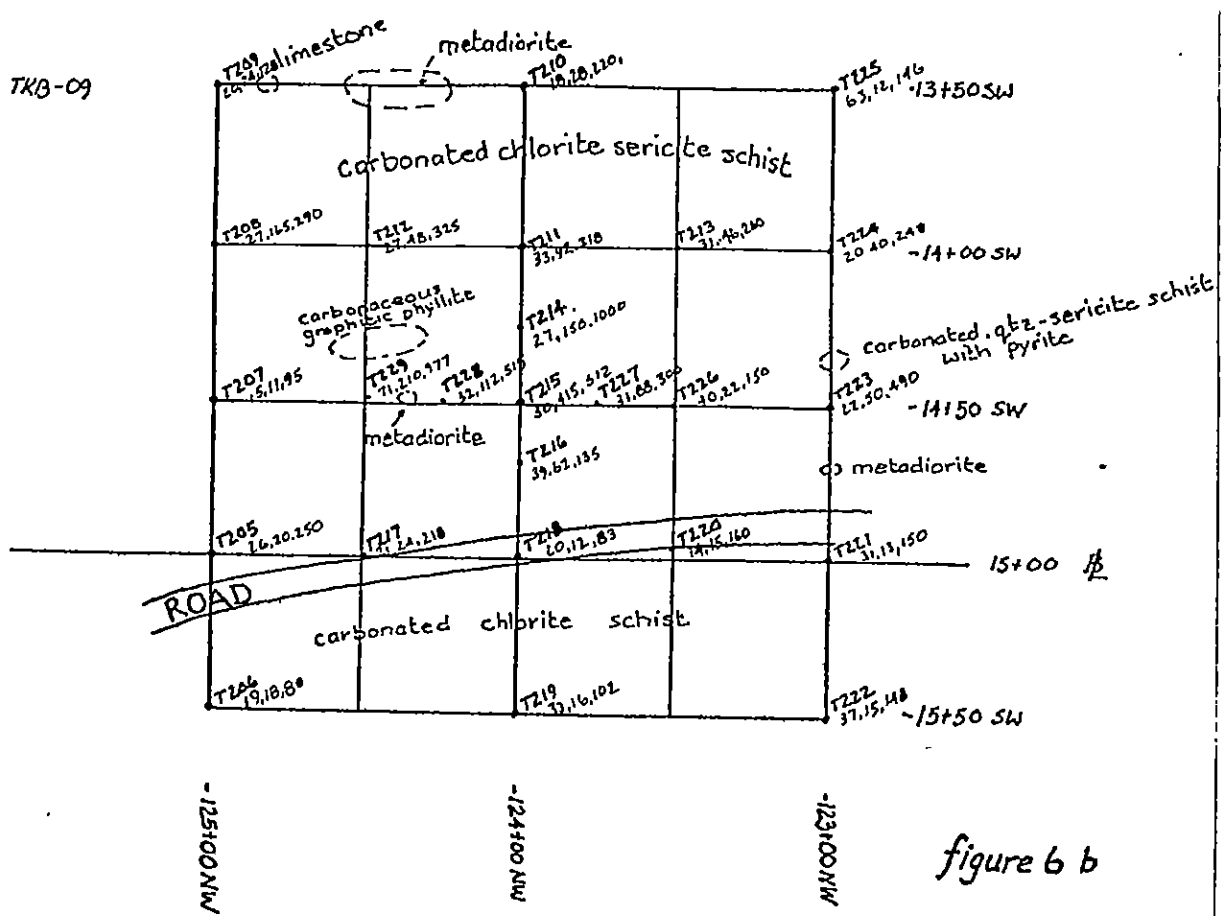


figure 6 b

Rock Sample TKB-09

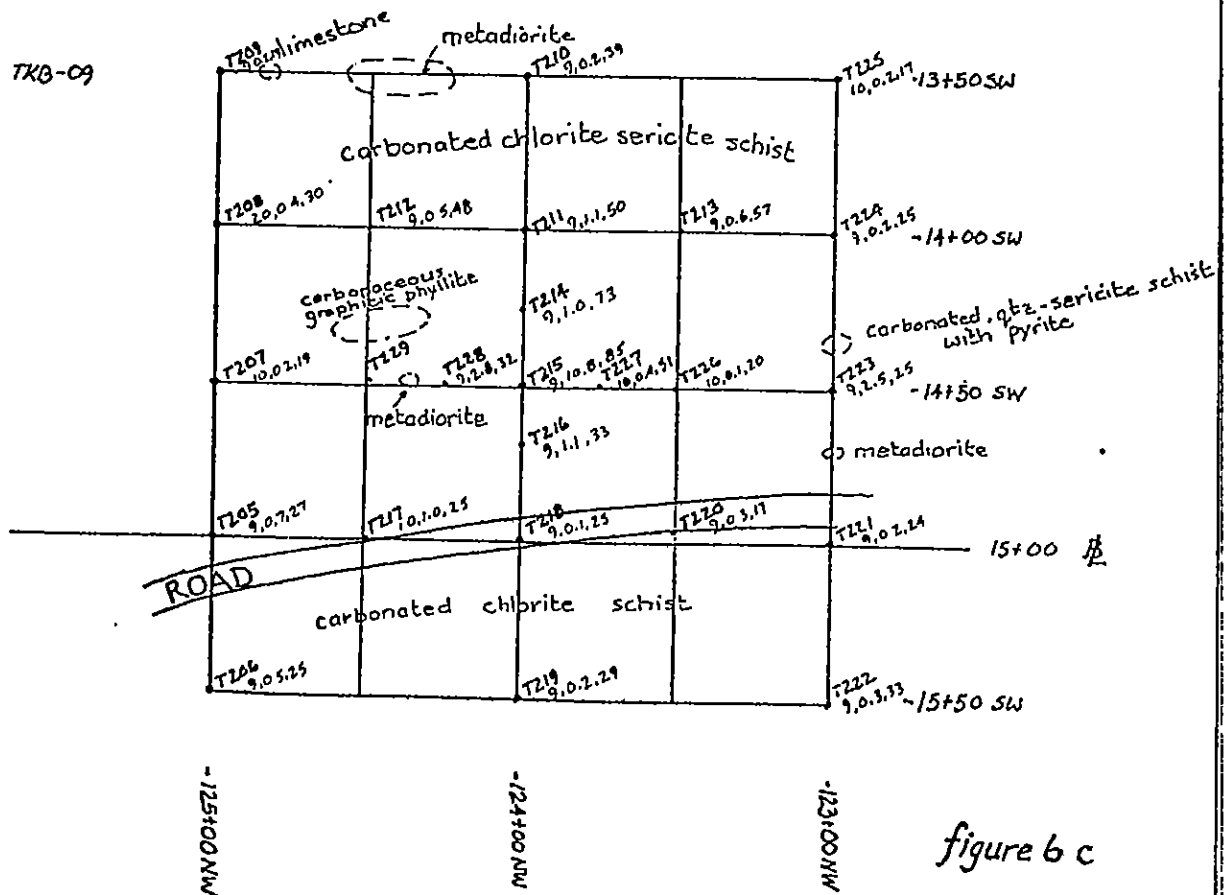
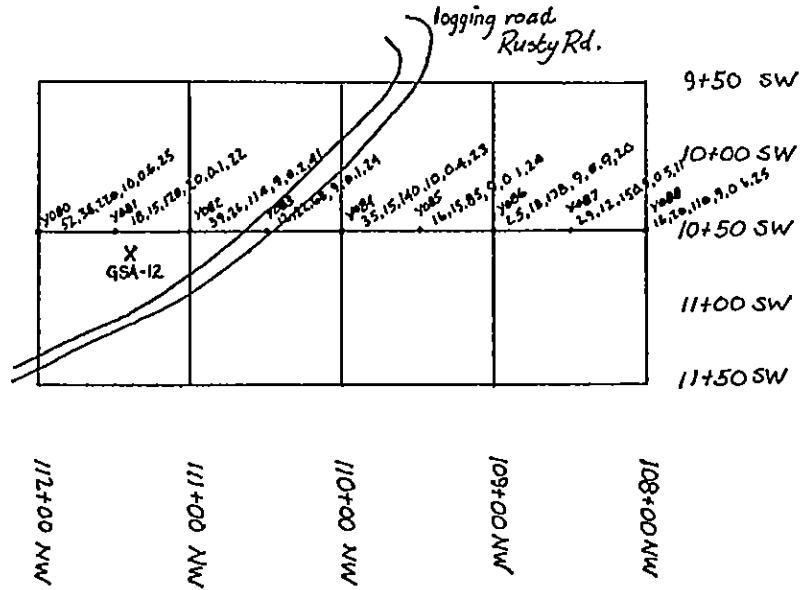


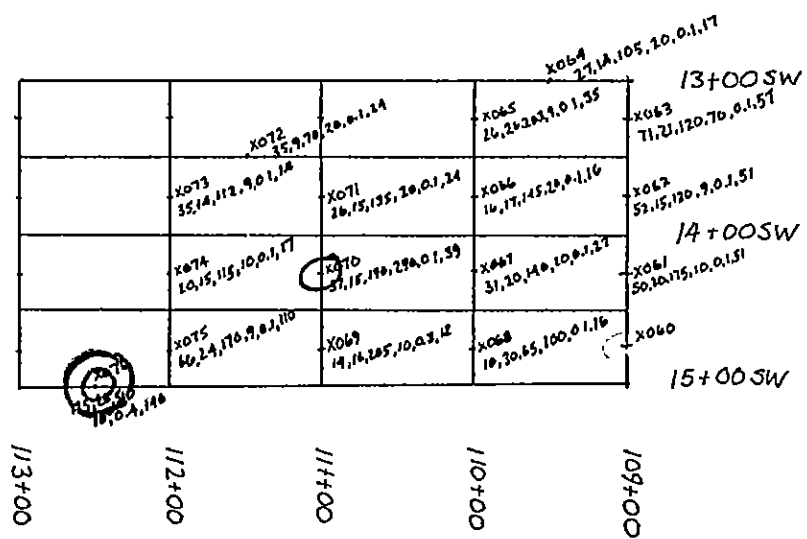
figure 6 c

# Anomaly #8



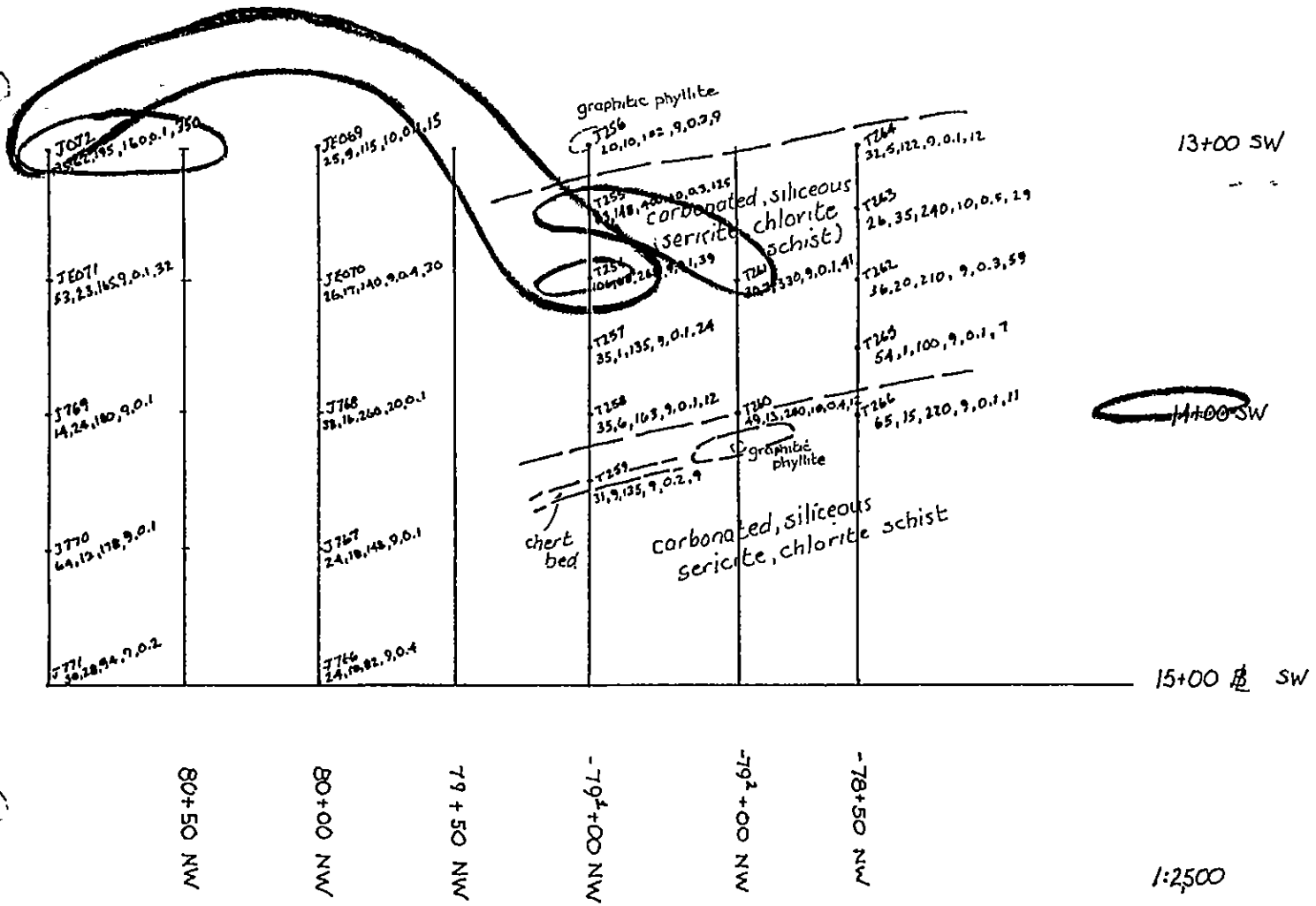
1:5,000  
figure 7

# Anomaly #9



1:5,000  
figure 8

Anomaly #10



1:2500  
figure 9

Anomaly # 11

TKB-10, <10 ppb Au.

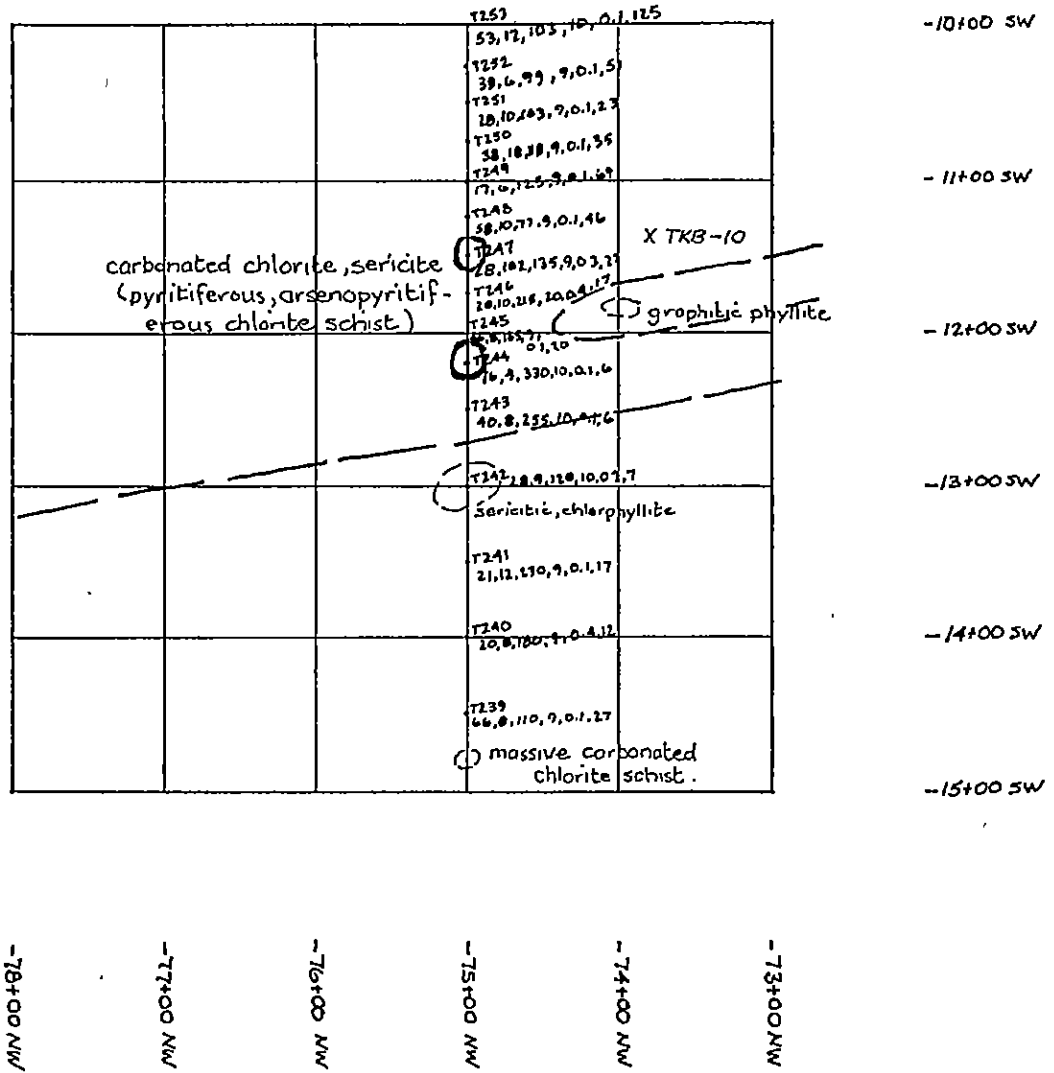
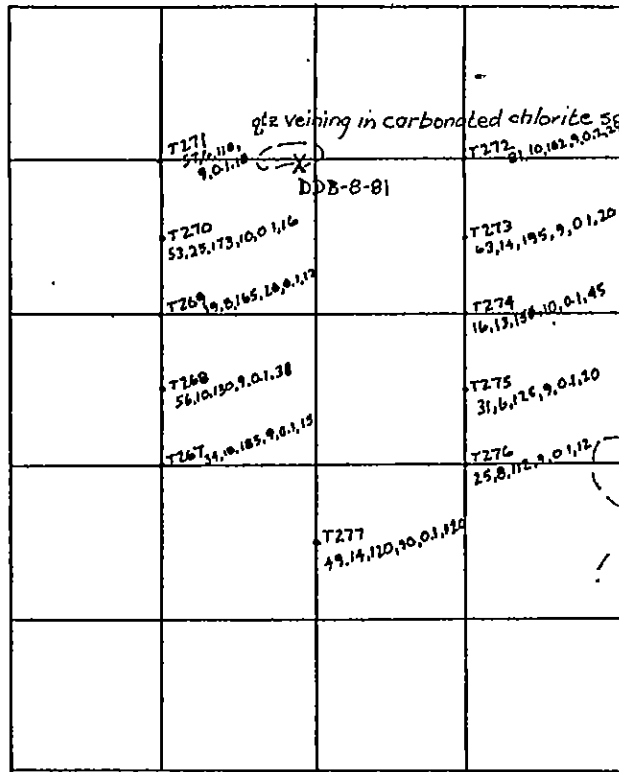


figure 10  
1:5000

Anomaly # 12

DDB-8-81, <10 ppb Au



- 18+00 SW

- 19+00 SW

- 20+00 SW

- 76+00 NW

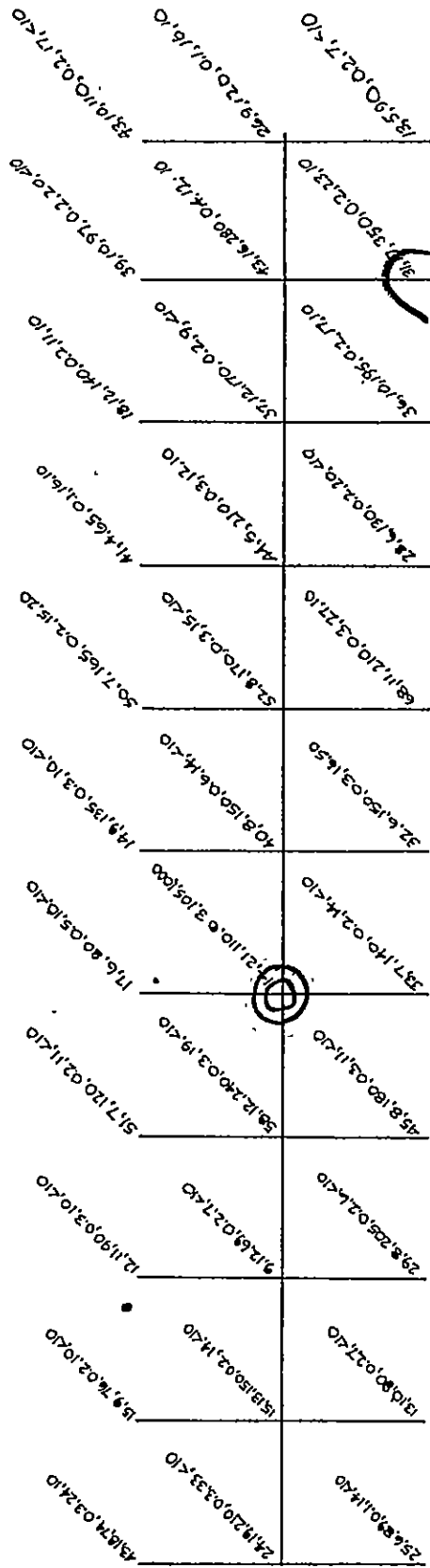
- 75+00 NW

- 74+00 NW

1:2,500

figure 11

Anomaly # 13



Cu, Pb, Zn, Ag, As, Au

55+00 NW

56+00 NW

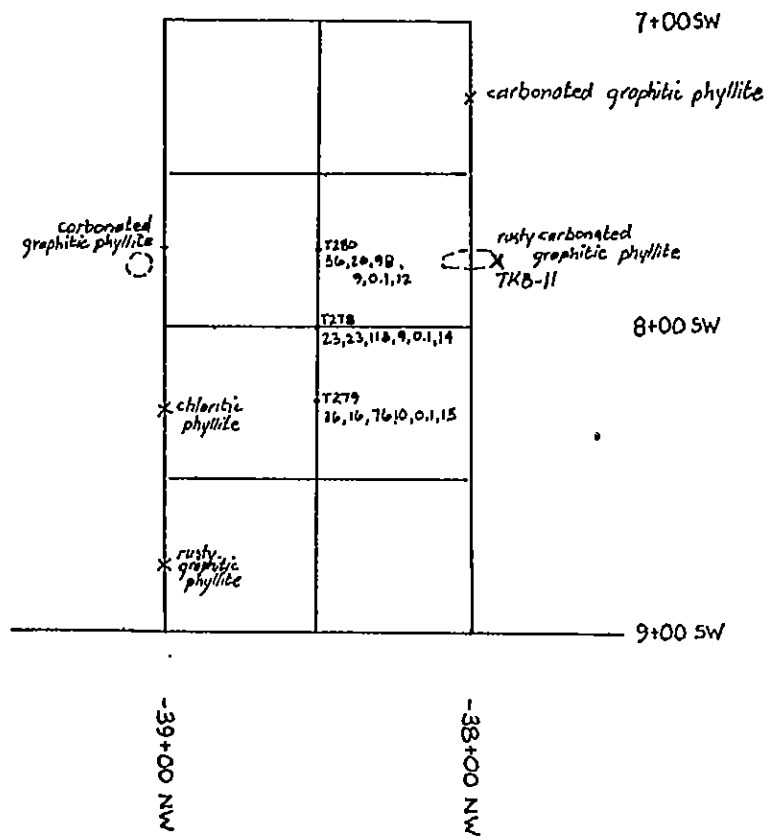
57+00 NW

MS05+61

figure 12



Anomaly # 14



TKB-11 - <10 ppb Au

figure 13

Anomaly # 15

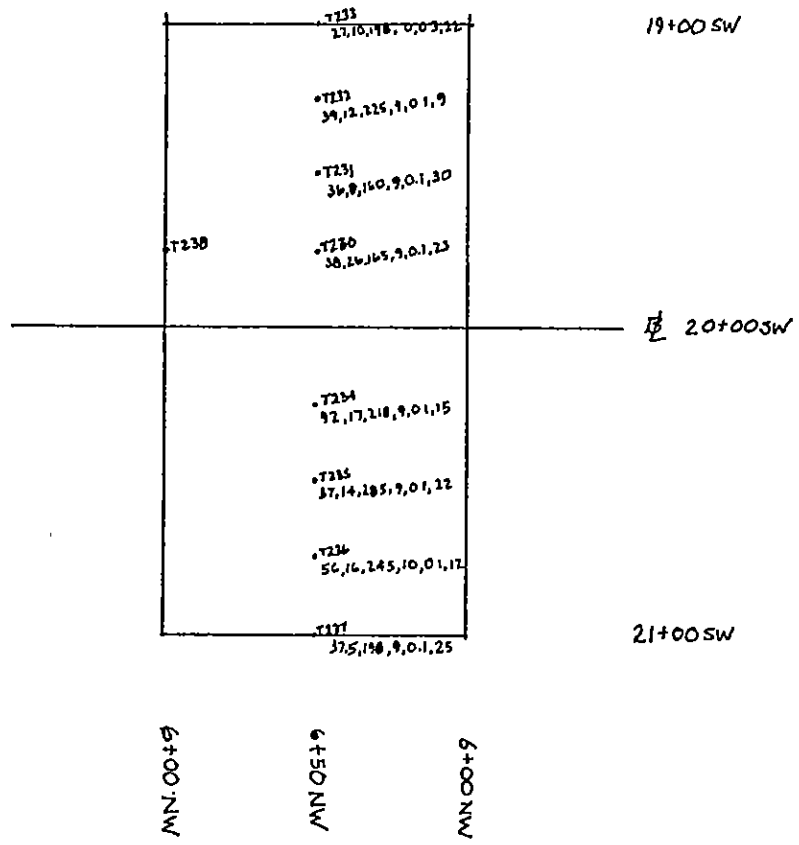


figure 14

Anomaly #16

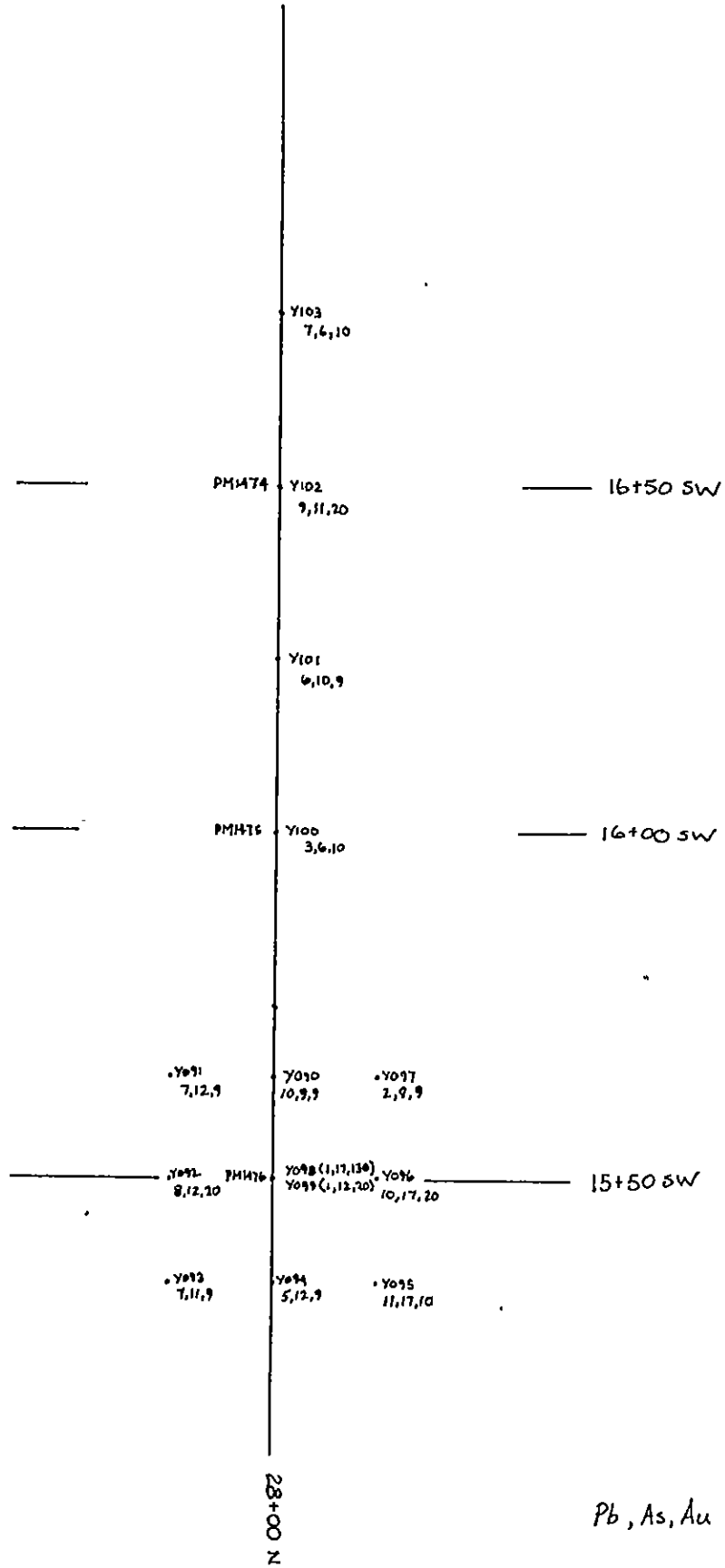
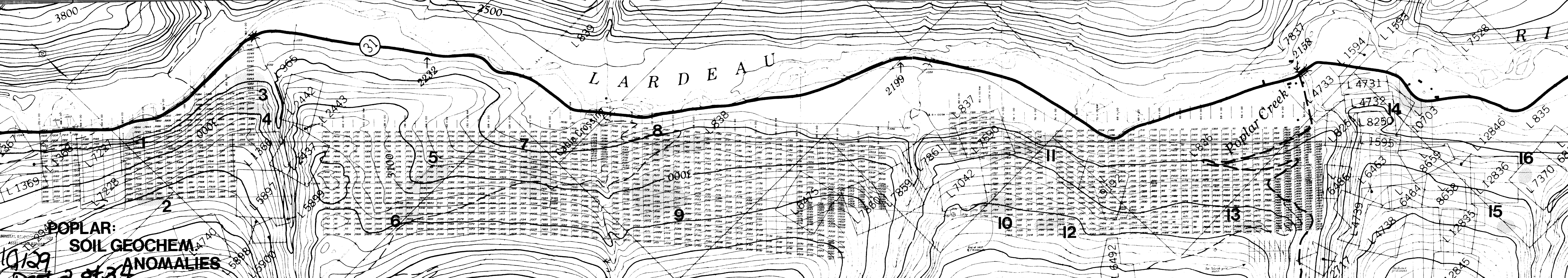


figure 15

# L A R D E A U



## POPLAR: SOIL GEOCHEM ANOMALIES

MINERAL RECORDS DIVISION  
ASSESSMENT REPORT  
19/29

Part 2 of 34

End of 140°  
E T-10000

See T-10000 grid  
sheet

See Blank  
grid sheet