ASSESSMENT REPORT, STEWART CLAIMS
NELSON MINING DIVISION
NTS 82F/6, 82F/3
Lat. 49°15'   Long. 117°15'

Owned by: E. W. and J. N. Denny

Work completed by: Shell Canada Resources Ltd.

by G. W. Turner
January 11, 1980

Table of Contents

List of Figures

Appendix II

List of Tables

1. Property

The Stewart claims were optioned December 11, 1978 from E. W. and J. N Denny of R. R. #1, Nelson, British Columbia. The agreement covers the land area listed in Table I.

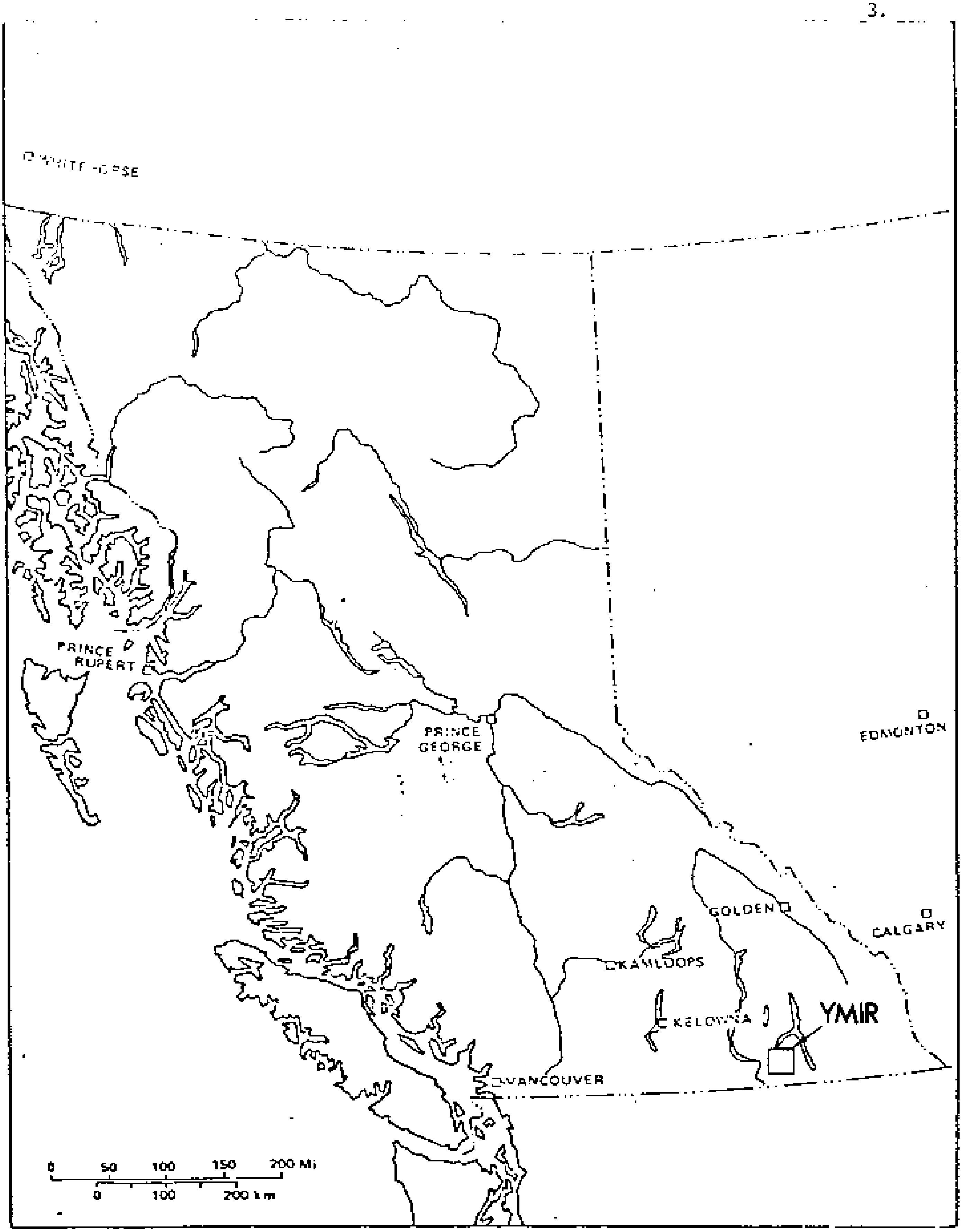
Table 1: Schedule of Lands

Name	Recording Date	Units	Acres	Hectares (25/unit)
Stewart 1	April 28, 1978	20	1,235.60	500
Stewart 2	April 28, 1978	20	1,235.60	500
Stewart 3	May 8, 1978	20	1,235.60	500
Stewart 4	July 14, 1978	6	370.68	150
Stewart 5	November 28, 1978	20	1,235.60	500
Stewart 6	November 28, 1978	16	988.48	400
Stewart 7	November 28, 1978	12	741.36	300
Stewart 8	November 28, 1978	20	1,235.60	500
Stewart 9	November 28, 1978	20	1,235.60	500
Stewart 10	November 28, 1978	20	1,235.60	500
Stewart 11	November 28, 1978	20	1,235.60	500
Stewart 12	November 28, 1978	8	494.24	200
Stewart 13	April 24, 1979	4	247.12	100
Reverted Crown Grants				
Houlton L4626	November 28, 1978	1	46.00	18.61
Princess No. 1 (L4647)	November 28, 1978	1	51.64	20.90
Maggie L5144	November 28, 1978	1	31.00	12.54
Royal L5322	April 18, 1978	1	51.65	20.90
Free Silver (L2902)	April 18, 1978	1	27.89	22.65
Ruby L2904	April 18, 1978	1	28.07	22.65
Totals		211	12,962.93	5,245.00

Work on the property commenced May 28, 1979 and terminated on October 18, 1979.

2. Location and Access

The Stewart Claims are located at latitude 49°15' and longitude 117°15' (NTS 83/F6, 83F/3), 29.5 road km south of Nelson, British Columbia (Figure 1). Access to the property is by existing logging roads from the Trail-Salmo Highway (No. 3) and by the Stewart Creek fire access road from the Nelson-Salmo Highway (No. 6), utilizing a four wheel drive vehicle.



INDEX MAP: FIGURE 1

3. Work Completed

The Stewart Claims were worked continuously from May 28, 1979 to September 13, 1979 and intermittently from September 26, 1979 to October 18, 1979. The exploration target was a molybdenum bearing porphyry system.

Regional geology, claim location, and grid locations are presented on a 1:20,000 scale map (Figure Ib).

Work on the Stewart Claims involved linecutting, a reconnaissance and grid controlled geological mapping, grid controlled geochemistry, and grid controlled geophysics.

Two grids were cut and chained to 25 m intervals, utilizing a 120 m line spacing, for a total of 97.3 km.

A reconnaissance geological mapping at a 1:5000 scale was accomplished using aerial photographs in conjunction with field traverses. Final basemaps were prepared from an orthophoto compilation, completed by McElhaney Surveying and Engineering Limited for Shell Canada Resources Limited.

Detailed geological mapping, at a 1:5000 scale, was completed over both existing grids in order to confirm or discount the presence of a favourable environment for a molybdenum bearing porphyry system. A compilation of both surveys appear as Figures 6 to 11.

Soil geochemistry was completed over both grids. The B_1 soil horizon was sampled at 100 metre intervals and 1009 samples taken. These samples were analysed for copper, zinc, silver, molybdenum and tungsten. Contour maps of the data were prepared at a 1:5000 scale and are included as Figures 12 to 21.

A magnetometer survey was completed over both grids utilizing a 12.5 metre station interval. Contoured maps appear as Figures 22 and 23. Horizontal shootback was completed over specific lines, utilizing a 25 meter station interval. This was completed as a follow up on anomalous soil geochemistry results. Stacked profiles for this survey appear in Figure 24.

4. Geology

4.1 General Geology

The geological summary and detailed description of units is based on field geological mapping on a detailed and reconnaissance scale. Data was obtained by Shell personnel during the 1979 field season and complimented by data from previous authors and government reports and maps (see references).

Contained on the Stewart property are sequences of the Elise (Rossland) volcanic series, Hall sedimentary series, and localized intrusives of the Nelson and Coryell plutonic series. The volcanic and sedimentary sequences form north-south linear belts transected by several east, northeast, north, and northwest trending faults. Formational contacts are gradational over distances of up to 600 meters (m) and all units are conformable. Age relations between the intrusive units represented on the property have been discussed by various authors however no definite relation has been established. For purposes of this report, the age relations as shown on Table II will be used.

It should be noted that previous authors (McConnell and Brock, 1904; Dolly, 1912; McAllister, 1951; Mulligan, 1952) have stated that the units on the Stewart property, from east to west, represent a conformable sequence of volcanic and sedimentary rocks which can be separated into a lower volcanic formation (Elise), a middle sedimentary formation (Hall) and an upper volcanic formation (Beaver Mountain). Others (Drysdale, 1915; Walker, 1934; Little, 1960) stated that the Elise and Beaver Mountain volcanic units are equivalent, the repitition due to a synclinal structure (Little, 1960) the axis of which bisects the Hall sedimentary units. For the purposes of this report, no differentiation between the two volcanic formations is made.

4.2 Local Geology

4.2.1 Elise (Rossland) Formation

The Elise (Rossland) volcanic group consists of predominantly basaltic to andesitic flow units, with minor tuff, lapilli tuff and agglomerate units of similar composition. The fragmental units appear to be restricted to the base of the formation.

4.2.1.1 Andesite/Basalt Flow: This unit is massive, fine to medium grained, locally quartz/plagioclase porphyritic (maximum diameter of porphyries @ 1.0 centimeter (cm)) and homogeneous. Where it is contact with the intrusive units it is metamorphosed to a hard (silicified) hornfelsic unit.

Table 2: Table of Formations

ERA	PERIOD	FORMATION	LITHOLOGY
Cenizoic	Tertiary & Post Coryell dykes & sills (Eocene? or later)		- breccia pipe - aplite - lamprophyre - diabase
	- intrusive contact -	Coryell Intrusives	- porphrytic quartz monzonite - biotite-augite monzonite
	- intrusive contact -	Post Nelson dykes	- porphrytic biotite/ plagioclase/quartz dyke (contains some assimilated material) - quartz porphrytic rhyolite
	- intrusive contact -		
Mesozoic	Cretaceous (Lower?)	Nelson Intrusives	- feldspar porphyry
	- intrusive contact -		
	Jurassic (Middle & Upper?)	Hall Formation	- argillite - sandstone - sandstone/argillite - pebble conglomerate - mica schist - garnet-diopside skarn - impure garnet skarn
	- conformable contact -		
	Jurassic (Lower)	Elise (Rossland) Volcanics	- basalt/andesite flow - tuff - lapilli tuff - agglomerate

4.2.1.2 Tuff: This unit is finely laminated (bedded, 2.0 to 5.0 millimeter (mm) thickness), fine fragmental, the fragments measuring 1.0 to 2.0 mm in diameter. The fragments are angular and compose up to 30% of the unit and are set in a fine grained andesitic matrix. This may represent a facies equivalent of the lapilli tuff unit (4.2.1.3).

4.2.1.3 Lapilli Tuff: This unit occurs as a massive to weakly foliated (bedded?) fragmental containing rounded intermediate hornfelsic fragments, 1.0 cm in diameter, which compose up to 30% of the rock. The matrix is fine grained and andesitic in composition. This may represent a facies equivalent of the agglomerate unit (4.2.1.4).

4.2.1.4 Agglomerate: This unit consists of subangular elongate fragments of unidentifiable hornfelsic compositions (up to 6.0 cm in length) composing up to 50% of the rock. The matrix consists of finely laminated (bedded, thicknesses of 0.1 to 2.0 mm) fine tuffaceous material (4.2.1.2) of an andesitic composition.

4.2.1.5 Local Sediments: In the southwest corner of the property, thick sequences of argillite and sandstone occur. These sequences are similar to units found in the Hall Formation and have been classified with the Hall units. They could, however, be part of the older Active Formation (Ordovician) which outcrops 1.0 kilometer (km) to the west of the western claim boundary.

4.2.2 Hall Formation

The Hall Formation conformably overlies the Elise (Rossland) Formation and consists of conglomerate, sandstone, banded sandstone/argillite, argillites and local schists and calcareous sediments (calcareous sediments are locally metamorphosed to skarn). Minor andesitic flow units are found near the base of the formation and are equivalent to the Elise (Rossland) volcanics. The formation is divided into two sub parallel bands by an eliptical stock of porphyritic quartz monzonite, the eastern division grading laterally into the underlying volcanic units. Mulligan (1950) suspected that rocks mapped as Hall sedimentary units south of Boulder Mill Creek (Keystone Mountain) may represent an overthrust plate of the Ymir Formation, based on the presence of well indurated, hornsfelsic argillites devoid of banding or coarse arenaceous material. From field observation it would appear that this would represent a small lense of sedimentary material at the base of the Hall Formation with more typical Hall sedimentary units exposed further west and downslope.

4.2.2.1 Argillites: The argillites exposed on the property are fine grained, moderately well indurated, and black to light grey in colour. Primary bedding features were observed but not common with bed thicknesses varying from 1.0 to 3.0 cm. It is highly jointed with muscovite commonly occuring as large flakes along joint surfaces. Pyrite is also common composing up to 2.0% of the unit thus giving it a characteristic rust stain.

4.2.2.2 Sandstone: This unit is composed of a medium to fine grained arkosic material and is massive to moderately well foliated. In some exposures it appears well bedded with an average bed thickness of 30 cm and weathers from a light grey to buff colour. Where in contact with intrusive units it appears to have been completely recrystallized and in some instances contains small uncrushed quartz eyes at 1.0 mm average diameter.

4.2.2.3 Sandstone (greywacke)/argillite: This unit consists of interbedded argillite (4.2.2.1) and an arkosic greywacke (similar to (4.2.2.2) with bed thicknesses commonly averaging 2.0 to 3.0 cm).

4.2.2.4 Pebble conglomerate: This unit is a matrix supported polymict orthoconglomerate composed of 50 to 70% elongated pebbles (N5°W). The rock is crudely bedded, with an average bed thickness of 4.0 cm, and the matrix is a friable mudstone.

4.2.2.5 Mica schist: This occurs in one locality and is a typical biotite schist.

4.2.2.6 Skarn: Local calcareous sediments have been metamorphosed to a garnet diopside or impure garnet skarn. The garnet-diopside skarn is the best developed and occurs to the immediate north of the east central porphyritic quartz monzonite stock (Figure 5). This skarn is scheelite bearing, with accessory molybdenite, sphalerite, pyrite and pyrrhotite and has been worked in the past (Arrow Tungsten workings, for its tungsten) Figure 6.

A second skarn zone occurs at the Mayflower/ Blossom locality and appears as an impure garnet skarn containing pyrite, pyrrhotite mineralization with minor accessory scheelite.

4.2.2.7 Volcanics: minor andesitic/basaltic flows (4.2.1.1) are found intercalated with the sediments at the base of the Hall Formation.

4.2.3 Nelson Intrusives

The Nelson intrusives include massive granite, granodiorite and diorite batholithic facies, and quartz diorite and diorite satilite, border, and dike facies (Mulligan, 1952). The only facies of the Nelson intrusives located on the property is a feldspar porphyritic phase. Late phase or post Nelson intrusives include a rhyolite porphyritic dike-sill and quartz-feldspar-biotite porphyritic dike facies.

4.2.3.1 Feldspar porphryite: This intrusive contains porphyritic-glomeroporphyritic plagioclase feldspars set in a fine grained dioritic groundmass. The porphyries are commonly 1.0 - 2.0 cm in diameter and, in the case of the plagioclase, is at times glomeroporphyritic. The unit also contains partly assimilated fragments of the host material, which range in diameter from 1.0 cm to 5.0 cm.

4.2.4 Coryell Intrusives

Two biotite-augite monzonite conoliths occur on the property, (Figures 2 to 5) both stocks being remarkably similar in both composition and texture. The westernmost stock displays a sharp northeasterly contact with the surrounding Hall Formation and has been suggested to represent a major fault (Mulligan, 1951). However, no apparent contortion of the sedimentary units and their apparent continuation on either side of the stock fail to indicate the presence of a major structural break.

The easternmost stock is unique in the fact that it is transected by numerous faults which contain significant lead-zinc-silver mineralization. These faults continue into the surrounding host units but terminate abruptly at the contact with a porphyritic quartz monzonite stock which actually intrudes some faults as a dike facies.

Two unique porphyritic quartz monzonite stocks occur on the property, the westerly expression (Figures 2 to 5) exposed over an area of approximately 1.0 km^2, displays a distinct rust stain and a well developed quartz stockwork. The second expression is an elliptical stock, covering approximately 6.0 km^2, occuring 2 km west of the town of Ymir (Figures 2 to 5). These stocks have been previously correlated with the Nelson intrusives, however Mulligan (1951) points out that they vary from the typical Nelson granodiorite in the proportion of potassic feldspar to plagioclase and in the ferromagnessian content.

4.2.4.1 Biotite-Augite Monzonite: This intrusive contains large lamallae of biotite (up to 1.0 cm in length and less than 0.5 mm in thickness) which in hand specimen appear to have a random orientation. This gives the rock a lacey pattern and they are believed to represent a complex series of shrinkage cracks (Mulligan, 1950). Phenocrysts of augite, measuring up to 5.0 mm in length, compose up to 20% of the unit and with the biotite, are set in a fine ground mass of plagioclase laths.

4.2.4.2 Porphyritic Quartz Monzonite (PQM): This unit consists of irregular masses of quartz and potassic feldspar and grades from a coarse potassic feldspar/porphyritic phase to a fine grained granodiorite phase. The phenocrysts are commonly six cm or more in length, the larger of which are usually incompletely developed, containing finer feldspar and quartz. The groundmass contains fine grained potassic-feldspar, sphene, augite and biotite with quartz, the quartz occuring as stringers and blebs which appear to have been introduced at a later stage. In outcrop the eastern expression appears as a moderately well jointed leucocratic stock, with intermittent patches of rust stain which concentrates at fractures and quartz stringers. The quartz stringers and fractures are commonly altered to 2.0 to 3.0 cm below surface. Pyrite is disseminated throughout the northern expression of the stock comprising up to 2% of the unit. The western expression is extensively rust stained and contains a well developed quartz stockwork and fracture system. The oxide stain is due to the breakdown of the ferromagnessians and the weathering of pyrite.

Both stocks are believed to represent a late acid stage of the Coryell.

4.2.5 Post Coryell Intrusives

Two main types of intrusive are grouped in this age bracket, a large breccia pipe located at the southwest corner of the central PQM stock and dike rocks of varying compositions.

4.2.5.1 Breccia Pipe: This unit consists of large angular fragments (xenoliths) of PQM, hornfels, and possibly biotite augite monzonite. The fragments are set in a fine grained andesitic matrix. In places the matrix was found to contain varying amounts of pyrite, pyrrhotite, magnetite and trace amounts of scheelite and molybdenite. Extensive pyrite, pyrrhotite mineralization has given this entire unit a characteristic rust stain.

4.2.5.2 Dikes: For simplicity's sake this group has been left unsubdivided into lamprophyres and diabases although their compositions vary widely.

4.3 <u>Alteration</u>

A detailed alteration mapping was not attempted during the 1979 field season, however several general features were noted.

Alteration is primarily restricted to the PQM stocks and is expressed as oxidation staining, chloritization of ferromagnesian minerals, carbonitization of fractures, greisen and felsitization.

In the surrounding host units alteration is expressed as an overall rust staining (due to weathering of both primary and introduced pyrite), epidote veining, and localized skarn.

Rust staining, in the eastern PQM stock, is expressed as patches and concentrations along fractures and quartz stringers where it has resulted from the direct weathering of sulphides to two cm below the surface. This seems to be restricted to the northwestern expression of the stock. The western expression of the PQM displays an overall rust staining with similar concentrations of fractures and quartz stringers.

In both intrusives hornblende and biotite are altered to chlorite which forms small lenses (approximately 2.0 mm in length). This alteration is also restricted to the northeastern section of the eastern PQM stock.

Carbonitization of fractures containing pyrite and molybdenite mineralization was noted in the eastern PQM stock, at 1320 S 375 W (Stewart east grid co-ordinates) along with a felsitization of the PQM host along specific zones.

Sericite and completely saussuritized oligoclase occurs at 900 S; 700 W (Stewart east grid) in the PQM stock and is associated with a three meter (m) wide quartz vein. A breccia containing abundant fine grained molybdenite occurs in contact with this vein (see Section 4.5.3).

Kaolinization of the west PQM stock occurs at grid co-ordinates 240S - 175W.

4.4 Structure

The Stewart property lies at the junction of three linear features as defined by G. Addie (1970). These features appear to be responsible for the intense faulting found in the Free Silver area. The faulting cross cuts the biotite augite monzonite and the surrounding host material and terminates abruptly at the PQM contact. This intensive shearing appears to control the lead-zinc-silver mineralization in the area (see Sections 4.2.4 and 4.5.1).

McAllister (1950) suspects the presence of a drag fold at the eastern Hall/Elise (Rossland) contact immediately south of the Eastern PQM stock. This fold is evidenced by the apparent repetition of units and thickening of the volcanic formation in the southeastern portion of the property. This fold structure may be emphasized by a pushing apart of units by the PQM stock.

The possibility of a large overthrust plate of the Ymir Formation has already been discussed in Section 4.2.2.

Little (1960) suggests the possibility of a large synclinal structure with an axis bisecting the Hall Formation. This structure is evidenced by the repetition of volcanic units on either side of the sedimentary units and the similarity between the volcanic units. This structure would also explain the disappearance of the Hall Formation 3.2 km north of Hall Creek.

Jointing is extensive in the Hall Formation and moderate in the remaining units. No obvious pattern was noted but a general north south trend was observed; likely emphasized by the general foliation/bedding trend.

4.5 Mineralization

4.5.1 Lead Zinc Silver

Pb Zn Ag mineralization was encountered at several locations on the property, occuring as fault hosted fissure veins, with associated quartz-carbonate/carbonate gangue.

Extensive workings exist on the Free Silver, Ruby, and Royal crown grants, as open cuts, and adits. A list of localities is presented in Table 3.

Table 3: Pb-Zn-Ag Occurances: Free Silver Area

Co-ordinates		Comments
2715S	750E	Mayflower workings, sph, gal (tr Mo, sh) py,po: adit
2880S	175W	Iron capping? py, po: two adits
3120S	350E	Sph, gal: adit
3130S	025W	Sph, gal: pit
3000S	000	Sph, gal: pit
3140S	150W	Sph, gal: pit
3140S	000 to	
3240S	000	Sph, gal: series of pits and small adits
3240S	175W	Sph, gal: pit
3155S	515E	Free Silver workings: sph, gal, tr cpy, silvanite: adi
3360S	125W	Sph, gal: pit

' grid references from Stewart East Grid

Most of the open cuts (pits) are located on a major north-south trending shear zone which dips steeply east. The mineralization occurs as several parallel fissure veins attaining a maximum thickness of 10 cm over distances of two meters. The shear can be traced over a distance of 100 m.

The Free Silver adit (3155S 515E, Figure 9) was drifted on a series of north south trending galena-sphalerite bearing shear zones which attain a maximum thickness of greater than 20 cm at the centre of the adit and a minimum of 10 cm at the end of the workings. Silvanite was found in calcite filled vugs in an andesitic host (occurs as a zenolith in the augite monzonite) and appears to be associated with trace amounts of chalcopyrite and galena.

The Mayflower/Blossom adit (2715S 750E, Figure 8) occurs close to the contact of the biotite-augite monzonite chonolith. It appears to have been driven in an attempt to intersect a Pb-Zn fissure vein located at surface. No mineralization was found in place, however mineralized dump material was located and reports indicate a sizeable amounts of Pb Zn Ag ore was extracted. (MMR, 1912, 1915, 1920, 1921, 1925, 1929, 1930). The adit also intersected minor scheelite bearing skarn zones and molybdenite mineralization was found associated with a quartz, carbonate vein transecting a PQM finger.

The Trask workings (1560S 125E), which consist of three adits (all of which are now caved), were driven on Pb Zn fissure veins located along a major shear zone. The most extensive mineralization observed was at the junction of two shear zones where the vein attains a thickness of 20 cm.

Sphalerite was located in the PQM stock at 1700S 450W where it occurs as fissure veins following a fracture zone.

Fault hosted fissure veins of sphalerite and galena also occur immediately north of the breccia pipe and have been exposed by several pits. Other occurances on the property include the (Boulder City) Clubine-Comstock adit on Keystone Mountain, The Trixiev workings on Arlington Mountain and on a peak directly north of and adjacent to Stewart Mountain.

4.5.2 Tungsten

Tungsten mineralization is primarily restricted to skarn zones however it does occur in some pits on the breccia pipe (see Appendix I assay results and Figure 3), in a fault zone bordering the breccia pipe, and in a quartz stockwork in the Stewart west plug.

The major occurance of scheelite is in the Arrow Tungsten workings (Figure 6, Figure 5) where it is hosted in a band of garnet-diopside skarn and has minor associated sphalerite and molybdenite. The scheelite occurs as fine disseminations throughout the skarn and in some flat lying quartz carbonate veins, indicating the possibility that some scheelite was introduced at a later date. The skarn is dominantly diopside with locally abundant garnet and is hosted in argillite and argillaceous quartzite (1% over 1.5 meters, B.C. Minister of Mines Report).

Minor scheelite was located in some localized impure garnet skarn bands intersected by the Mayflower workings (Figure 8).

Scheelite was also located in the quartz stock-work developed in the Stewart west plug, along a shear zone at the eastern breccia/hornfels contact (L1360S - 1050W), in the matrix material of the breccia pipe (Appendix II and Figure 3) and as coarse crystals in a bull quartz vein (960S; 700W).

4.5.3 Molybdenum

Molybdenum mineralization was found at the locations listed in Table 4.

Table 4: Molybdenum Mineralization Locations

Location	Mineralization	Habit	Host	Comments
Stewart East Grid				
660S 975E	Mo, Hem	quartz stringers	PQM/HFLS	quartz stockwork and disseminations
960S 700W	Mo, sh	breccia	PQM	forms matrix with py, po, quartz and
1320S 375W	Mo	quartz stringers and fracture coatings	PQM	carbonate. Has associated carbonate along fractures.
1320S 800W	Mo	quartz stringers	PQM	quartz stockwork
1320S 850W	Mo	quartz stringers	PQM	quartz stockwork
1320S 900W	Mo	quartz stringers	PQM	quartz stockwork
1320S 950W	Mo	quartz stringers	PQM	quartz stockwork
1440S 950W	Mo	quartz stringers	PQM	quartz stockwork
1430S 990W	Mo	quartz stringers	PQM	quartz stockwork
1560S 350E	Mo, Hem	fracture coatings and disseminations	PQM	has associated carbonate along fractures
1860S 1050W	Mo	quartz stringer	PQM	quartz stockwork
2410S 1200E	Mo	assoc. with a PQM dyke	PQM	coating along dyke margins
2270S 1525E	Mo, Sc	assoc. with quartz vein	HFLS	found associated with quartz vein x-cutting PQM dyke
2760S 1210E	Mo	quartz vein	HFLS	in quartz
2715S 750E	Mo	quartz breccia	PQM	found in Mayflower adit
Stewart West Grid				
130S 010W	Mo	quartz stringer	PQM	quartz stockwork
145S 000	Mo	quartz stringer	PQM	quartz stockwork
160S 005W	Mo	quartz stringer	PQM	quartz stockwork
365S 090W	Mo	quartz stringer	PQM	quartz stockwork
365S 060W	Mo	quartz stringer	PQM	quartz stockwork
370S 070E	Mo	quartz stringer	PQM	quartz stockwork
390S 045E	Mo, Sh	quartz stringer	PQM	quartz stockwork
500S 005W	Mo, Sh	fracture coatings & quartz stringers	HFLS	quartz stockwork

In the Stewart east stock mineralization is restricted to the northern exposure and occurs as coatings along the margins of quartz veinlets, forming a poorly developed quartz stockwork, and as coatings along fracture surfaces.

The most significant mineralization is located at 960S; 700W in a breccia containing fragments of PQM and hornfels. The molybdenum is fine grained and occurs with quartz, pyrite, pyrrhotite, and scheelite in the matrix of the breccia.

Molybdenum is also found as coatings along the margins of 'fingers' of PQM which intrude the surrounding host rocks, and as minor quantities in the Arrow Tungsten and Mayflower skarn zones, as well as at minor workings bordering the breccia pipe.

In the Stewart west plug molybdenum is found in a quartz stockwork and as fracture coatings with associated scheelite mineralization. It was also located in the hosting hornfels, occuring along fracture surfaces, adjacent to the plug.

An occurance measuring 52 m X 21 m X 30 m was drilled by Copperhorn Mining Ltd. in 1967 in the Quartz Creek vicinity, immediately west of the town of Ymir. No assay results are available.

4.5.4 Pyrite; Pyrrhotite

Pyrite and pyrrhotite are found as stringers at several locations on the property. In particular, they were found as an iron capping at 2820S 175W (Stewart east) and in a trench at 2760S 1300E (Stewart east). They are also found in concentration in most Pb Zn Ag fissure veins and in the breccia pipe as disseminations and fragments.

In the northern exposures of the eastern PQM pyrite is found evenly distributed (forming approximately 2% of the total unit composition) and appears to concentrate with the molybdenum mineralization.

The characteristic rust stain of the Hall Formation is caused by an even dissemination of pyrite throughout most of the units, in particular the argillite. Both pyrite and pyrrhotite are present in the Elise (Rossland) volcanics and are believed to have been introduced into the units (Mulligan, 1951).

4.6 Discussion

In general, the observations made in this report agree with those of previous authors in all but two respects, the division of the volcanic series into the Elise (Rossland) group and the Beaver Mountain group, and the intrusive age relations between the porphyritic quartz monzonite stocks and the Nelson Intrusives.

The division of the Elise (Rossland) and Beaver Mountain volcanics was originally made by McConnell and Brock (1904) and supported by Daily (1912), McAllister (1950) and Mulligan (1951). Drysdale (1915), Walker (1934) and Little (1960) however indicated that no division existed between the two groups, stating that the similarity between the units indicated that they were contemporaneous. Little (1960) further stated that a synclinal structure was responsible for this repetition of units, the axis of which bisects the Hall Formation at N20^{o}W. This structure is further evidenced by the disappearance of the Hall Formation three km north of Hall Creek and by Frebolds (1958) discovery of contemporaneous ammonites at localities in the Arlington mine (southwest of Keystone Mountain) which are identical to those located by McAllister on the highway between Barret and Hall Creeks.

The porphyritic quartz monzonite intrusives have been identified as Nelson by Drysdale (1915), Walker (1934), and McAllister (1950). Mulligan (1951) however points out that the composition is unique.

> "Powders from a number of large pink phenocrysts examined in oils are all potassic feldspar. They also give strong potassium indications spectroscopically. A large phenocryst of a typical Nelson granodiorite showed no potassium lines.....In view of its unique characteristics and spatial relationship to the monzonite bodies, it seems best to leave the origin and age of this body undecided."

(Mulligan, 1951) pp. 155 - 156).

It was also noted that the Stewart east PQM stock crosscut Pb-Zn mineralized fault zones transecting the hosting units and the eastern biotite augite monzonite, actually intruding some faults as dikes. This together with the fact that a similar stock occuring to the west carries no Pb-Zn mineralized fault zones indicates that the PQM stocks are post biotite augite monzonite (perhaps representing a late acid phase of the Coryell) and that the Pb Zn mineralization introduced into the fault zones may be directly related to the PQM.

5. Geochemistry

5.1 Methodology: Silts

The drainage pattern from the Stewart property was sampled at 43 locations by stream silt sampling. An approximately two litre sample of stream silt was analysed for Cu, Zn, Ag, Mo and F and a five gram panned concentrate analysed for Sn and W.

5.2 Methodology: Soils

B_1 soil geochemical samples were taken over both existing grids at 100 meter intervals along grid lines 120 meters apart. A total of 1009 samples were taken from the Stewart east (392) and Stewart west (117) grids. The spacing of the samples was sufficiently dense to ensure a satisfactory representation of the geochemical environment present.

All samples were dried, packaged and sent to Chemex Labs of Calgary for Cu, Ag, Zn, W and Mo analysis.

Statistical treatment of the data utilizing a computer process was completed and background, third, second, and first rank anomalous values determined. The method of determination is discussed in detail in Appendix II.

Contoured geochemical maps appear as Figures 9 to 16, at a 1:5000 scale, for molybdenum, tungsten, zinc and copper respectively for both grids.

5.3 Geochemical Results: Silts

Sample locations are plotted on Map 1b and the corresponding results are listed in Appendix I.

Anomalous values are shown in Table 7 with explanations as to their source.

The anomalous values obtained draining the southwest corner of the property should be investigated further.

5.4 Geochemical Results: Soils

5.4.1 Molybdenum

On the Stewart east grid two anomalous zones were indicated by the soil geochemical results, the most extensive of which centres over the breccia zone. A high of 61 ppm was detected at 1800S; 1600W, however no visible mineralization was located on surface. A value of 26 ppm corresponds with a high of 140 ppm W at an adit where visible MoS_2 and WO_3 was located (1080). This anomaly effectively closes a Mo anomaly detected by Quintana Limited in 1970 (B.C. Assessment File 2301).

Table 5: *Anomalous Silt Sample Results & Explanations*

Sample #	Drainage	Zn	Ag	Mo	W	Sn	F	Explanation
		Anomalous Values (ppm)						
1	Stewart east PQM/breccia content			6	15		1520	Mo W geochemanomalies over breccia and north PQM.
5	NE property limit. Stewart 13				30			Union carbide W soil geochem anomaly.
6	Lower Stewart Creek	660						Drainage from Arrow Tungsten workings.
8	Quartz creek			6				Soil geochem anomaly & vis mineralization north PQM.
9	Quartz creek			8				Soil geochem anomaly & vis mineralization north PQM.
10	Quartz creek				6			Soil geochem anomaly & vis mineralization north PQM.
12	Quartz creek				6			Soil geochem anomaly & vis mineralization north PQM.
13	Quartz creek			17	7		3640	Soil geochem anomaly & vis mineralization north PQM.
14	Quartz creek				9			Soil geochem anomaly & vis mineralization north PQM.
15	Azamera claims	540						Soil geochem anomaly section.
16	Stewart Creek				12			Showing above Stewart Creek Falls.
17	Arlington east slopw				8			No explanation.
18	Keystone west slope				13			No explanation.
19	Keystone central slope				60			No explanation.
23	Keystone east slope	670		10	25		2340	No explanation for Mo, W. Boulder Grey workings.
24	Arlington west slope					5		No explanation.
31	Stewart west PQM		1.3		12		1520	No explanation for Ag; visible mineralization in PQM
33	Stewart west PQM				10			No explanation for Ag; visible mineralization in PQM.
39	NE property limit	500						No explanation.
41	Breccia Stewart east				6			Soil geochem.
42	Free Silver west slope			6	9		1840	PQM.
43	Free Silver southwest slope				8		1760	Workings and soil geochem.

1 For Sample Location See Figure 3

The second anomalous zone centres over the northwest PQM/host contact where a high of 99 ppm Mo was detected at the shaft location (contamination from the dump is suspected). The anomalous values form a U shape open to the east, and within the anomalous zone spotty high values occur at:

Location		ppm Mo
600S	900W	30
720S	600W	32
840S	200W	36
840S	900W	48
960S	700W	99
1200S	700W	55
1200S	400W	42

All of these highs occur to the north and topographically lower than the mineralization located in a poorly developed quartz stock work (see Section 4.2.4.2) samples taken near the visible mineralization showed no anomalous values. A possible explanation for these results is the lack of developed soil and extensive outcrop in the immediate vicinity of the mineralization. Possibly the drainage from these showings resulted in the entrapping of anomalous Mo between ridges topographically lower. It is interesting to note that the above high values do lie in topographic depressions between ridges.

These two anomalous zones cover areas of approximately 900 m X 700 m and 500 m X 700 m respectively.

Small isolated anomalous values appear to ring the PQM stock with significant vales occuring at 840S; 700E (54 ppm) and 2880S; 1600E (64 ppm). The former value is explained by its position directly below a (MoS_2) mineralized expression of the PQM stock, however there is no explanation for the latter value.

On the Stewart west grid an approximately 600 m X 400 m anomalous zone open to the north centres over the PQM plug attaining a high value of 71 ppm at 0+00S 100E. The anomaly corresponds with visible mineralization found within the plug.

5.4.2 Tungsten

Only one significant tungsten anomaly was detected on the Stewart east grid, and it corresponds almost exactly with the Mo anomaly centered over the breccia pipe. Both the tungsten and molybdenum anomalies outline the limits of the breccia pipe. Isolated highs at 2640S; 700E (1750 ppm) and 460S; 700W (52 ppm) can be explained by contamination from the Mayflower and shaft dumps respectively. A high value of 52 ppm occurs at 2880S; 1600E corresponding with a molybdenum high of 64 ppm. There is no explanation for either value.

On the Stewart west grid some slightly anomalous values occur downslope from the PQM plug.

5.4.3 Zinc

Anomalous zinc values appear to be retained in the regions peripheral to the PQM intrusives on both the Stewart east and west grids. Expected high values were obtained over and adjacent to known Pb Zn Ag occurances and workings, however the geochemical halo over the ridge located at the southern extension of the Stewart east grid appears too extensive to be explained by the known mineralization and should be investigated further. Isolated high values (greater than 600 ppm) were detected over two areas, at 960S; 300E curving to 240S; 700E and from 2640S; 1400E to 3000S; 1500E. The latter anomaly encompasses the molybdenum/tungsten high value at 2880S; 1600E. There is no explanation for either geochemical anomaly.

5.4.4 Copper

Although the copper values were contoured, no real anomalous areas were detected from the survey. The only observation made from the data is that the PQM intrusives have characteristically low values.

5.4.5 Silver

Data for the silver analysis was low (less than 0.2 ppm) and so no contour map was prepared. Some slightly anomalous values were obtained in areas peripheral to the PQM intrusives correlating well with the Zn anomalous zones.

6. Geophysics

In July and August of 1979 a total field magnetometer survey, utilizing a Scintrex MP-2 magnetometer, was conducted over the two grids in order to further delineate geological contacts and to detect a possible pyrite, pyrrhotite bearing skarn zone similar to the Arrow Tungsten formation (see Section 4.2.2.6). As a followup on known and possible Pb-Zn-Ag (pyrite, pyrrhotite) occurances, and on combined geochemical results, a shootback EM survey on specific lines (utilizing a crone EM unit) was instituted to determine extensions ofmineralization to depth or the presence of as of yet undetected mineralization.

6.1 Magnetometer

A total of 4032 readings were taken at 12.5 meter separation. An excellent correlation was made between the geology and magnetic expression (see Figures 17 & 18). The volcanic and sedimentary units gave an irratic response ranging over 7200 and the sedimentary units giving generally higher responses. This is likely due to the higher pyrrhotite content of the sedimentary units.

The porphyritic quartz monzonite is expressed as a broad magnetic low, likely due to the low mafic content and absence of pyrrhotite mineralization. The biotite-augite monzonite gives more irratic responses, and this is likely due to the higher proportion of mafic minerals and the presence of some accessory magnetite in the groundmass. The generally higher background response and isolated highs ovserved over the breccia pipe can be explained by the overall distribution of pyrrhotite and magnetite mineralization in the matrix and concentration of these minerals at some localities (See Table 6 for response/unit comparison).

6.2 Crone EM (Horizontal Loop)

Horizontal shootback was performed over selected lines as a followup on previous surveys. Coil separation was 100 meters, and inphase readings were taken at 25 meter intervals, using a horizontal transmitter mode. The frequencies used were 5010 Hz and 1830 Hz and readings were plotted in the form of stacked profiles (Figure 19).

Results obtained were discouraging indicating that the mineralization observed is isolated or too minor to be of any significant economic interest. However it should be noted that if the pyrite and pyrrhotite content is low then response over these occurances could be minor or non-existant. Also the geochemical responses indicate the possibility of Pb-Zn occurances away from those exposed at surface by pits. Therefore even though the results of the survey are negative, the area still warrants further investigation.

Table 6: Summary of Magnetic Response

Unit	Magnetometer Readings ( ) Response	Range	Comments
Volcanics and Sediments	18,800 - 9600	9600	Characteristic irratic response to these units. The sedimentary units appear to give slightly higher readings which is likely due to their generally higher pyrite/pyrrhotite content.
Porphrytic Quartz Monzonite	13,400 - 12,600	800	This unit is expressed as a broad magnetic low.
Biotite Augite Monzonite	14,600 - 13,000	1,200	The more erratic behavior of this stock may be explained by the higher proportion of mafic minerals and the presence of some accessory magnetite in the groundmass.
Breccia Pipe	15,800 - 10,200	5,600	The generally higher background values and isolated highs can be explained by the overall distribution of po, and mag in the groundmass and concentration of these minerals at some localities.

7. Conclusions

Conclusions reached on the basis of work completed on the Stewart claims can be summarized as follows:

1) The Stewart claims cover a conformable sequence of volcanic and sedimentary rocks which are bisected by a major synclinal structure. These are in turn, intruded by four phases which are from oldest to youngest, a feldspar porphyry (Nelson), a rhyolite porphyry, a biotite augite monzonite and a porphyritic quartz monzonite.

2) Intrusive relationships indicate that the PQM unit is post Coryell in age rather than Nelson as previously suspected.

3) That the PQM may be responsible for the Pb-Zn mineralization encountered on the property.

4) The Pb-Zn-Ag mineralization occurs as narrow fissure veins controlled by major structural breaks and are, at this time, of no economic significance.

5) The molybdenum mineralization is primarily restricted to the two expressions of PQM and that it occurs as either disseminations, coatings along margins of quartz veinlets, and/or as coatings along fracture surfaces.

6) The tungsten mineralization occurs primarily in skarn zones proximal to the eastern PQM stock.

7) Alteration includes extensive alteration and weak griesenisation kaolinization, chloritization of ferromagnesian minerals, and carbonitization. Rust staining was found in most units while the remaining alteration characteristics were observed only in the PQM stocks.

8) That a molybdenite, scheelite bearing quartz stockwork is present in the western PQM stock.

9) Silt sampling indicates the vicinities of Keystone and Arlington Mountains worth further investigation.

10) The magnetometer survey display an excellent correlation with the geological interpretation.

11) The Crone EM shootback survey results did not indicate an extension of known mineralization to depth or indicate any new zones of interest.

12) From the above observations it is recommended that the property be retained for further evaluation by a detailed alteration mapping and fracture density study.

APPENDIX I

Qualifications of Author

Qualifications of Author

I, Gordon W. Turner, state that I am a geologist employed by Shell Canada Resources Limited of Calgary, Alberta, in the capacity of a Minerals Exploration Geologist. That I did obtain an Honours BSc. degree in geology from Lakehead University in 1978, and have practiced my profession since graduation. That I supervised and was directly involved with the field work on which this report is based.

G. W. Turner
Geologist
Minerals Exploration
Shell Canada Resources Limited

APPENDIX II

Geochemical Procedures and Results

Geochemical Procedures and Results

Silt Sampling

43 two litre samples of stream silt were taken at various locations on the property (Figure 1b) and were sieved to -80 mesh. These samples were then halved and one portion analysed for Mo, F, Zn, Ag, (Cu). The second portion was then panned to a 5 gram concentrate and analysed for Zn and W. Results for the survey appear in Section I.

Soil Sampling

1009 B_1 soil samples were taken over fixed grid systems at a sample density of 100 m by 120 m. These samples were packaged, dried, and sent to Chemex Labs of Calgary for Mo, W, Cu, Zn, Ag analysis by atomic absorption methods. Results of the survey appear in Section II.

Cumulative frequency plots of the survey data appear as Figures 21 to 28. Contour intervals were determined by using the following formulae:

Background
Third order anomaly $\bar{x} + S$
Second order anomaly $\bar{x} + 2S$
First order anomaly $>\bar{x} + 3S$

Results from each grid were treated as separate populations and a straight line relation was estimated from the cumulative frequency plots.

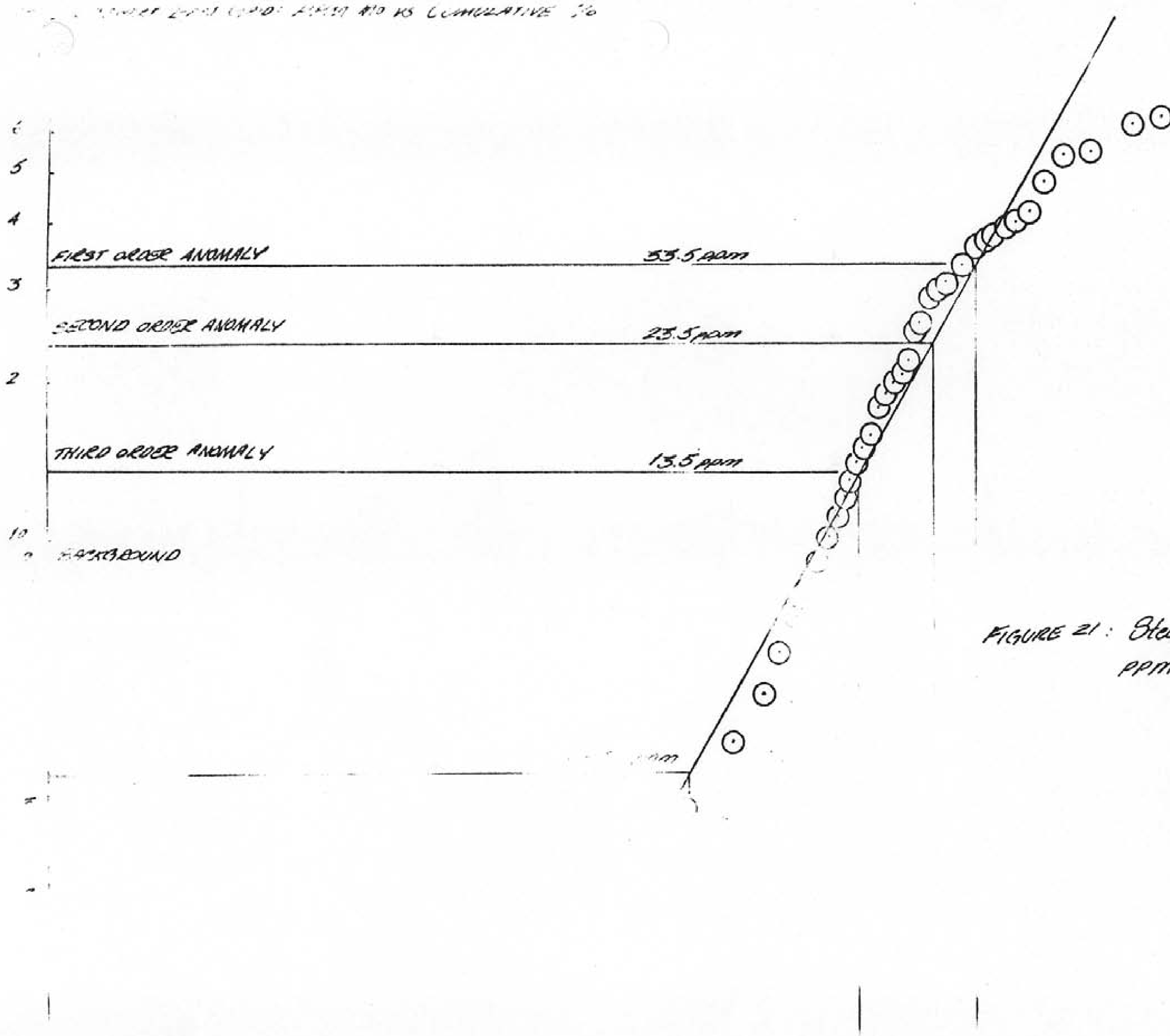


FIGURE 21: Stewart East Grid
ppm Mo vs Cumulative
%

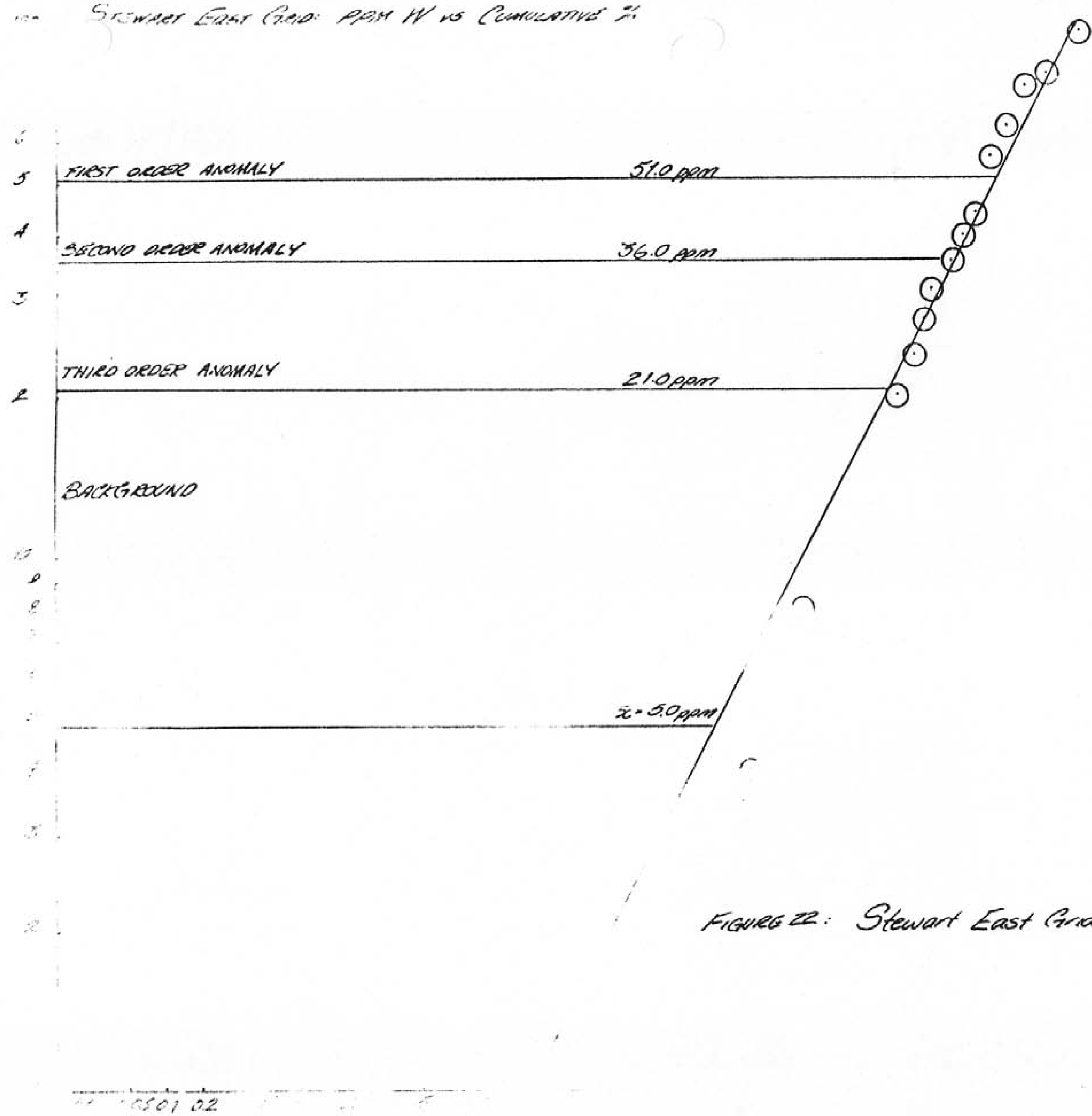


FIGURE 22: Stewart East Grid: PPM W vs Cumulative %

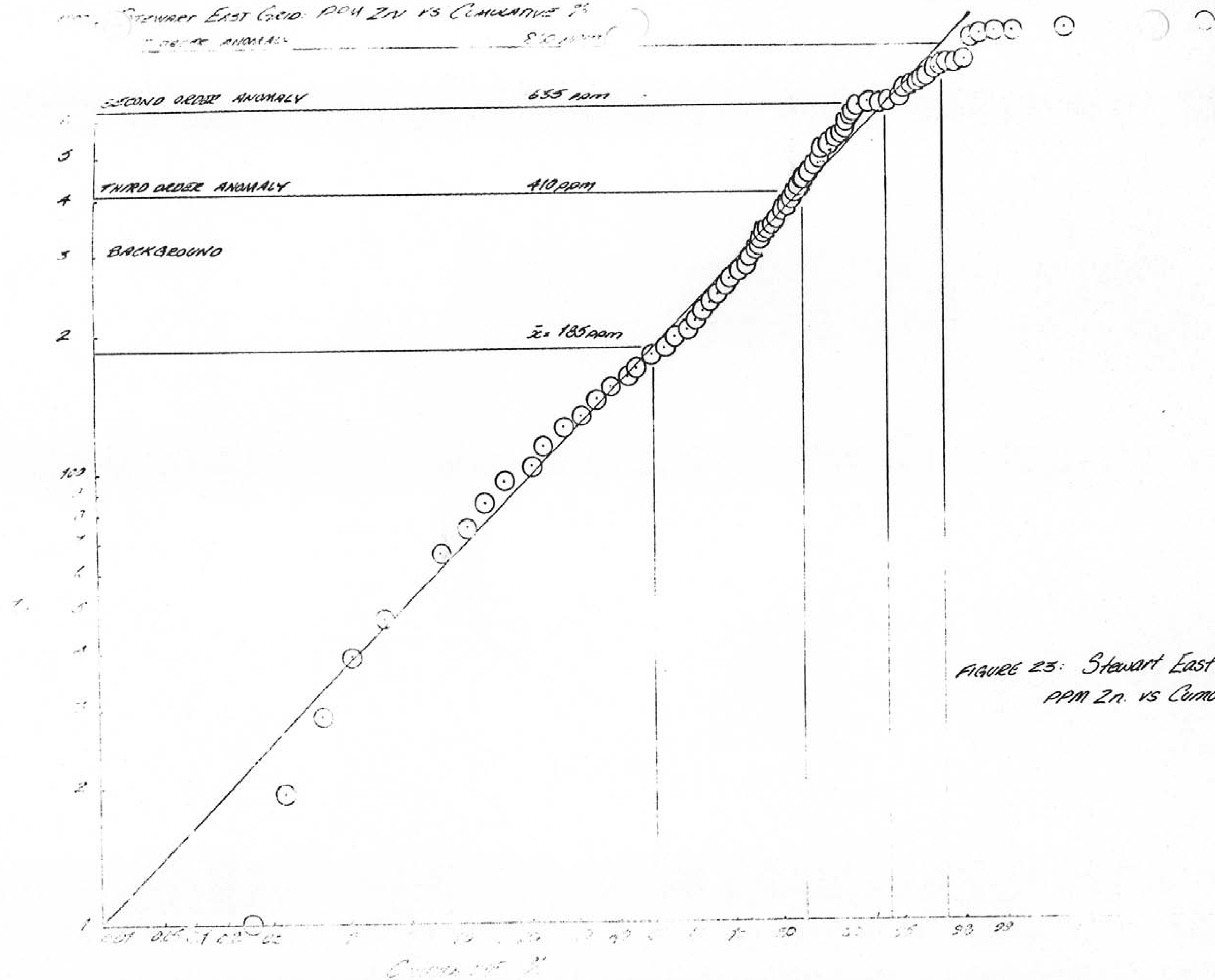


FIGURE 23: Stewart East Grid
PPM Zn. vs Cumulative %

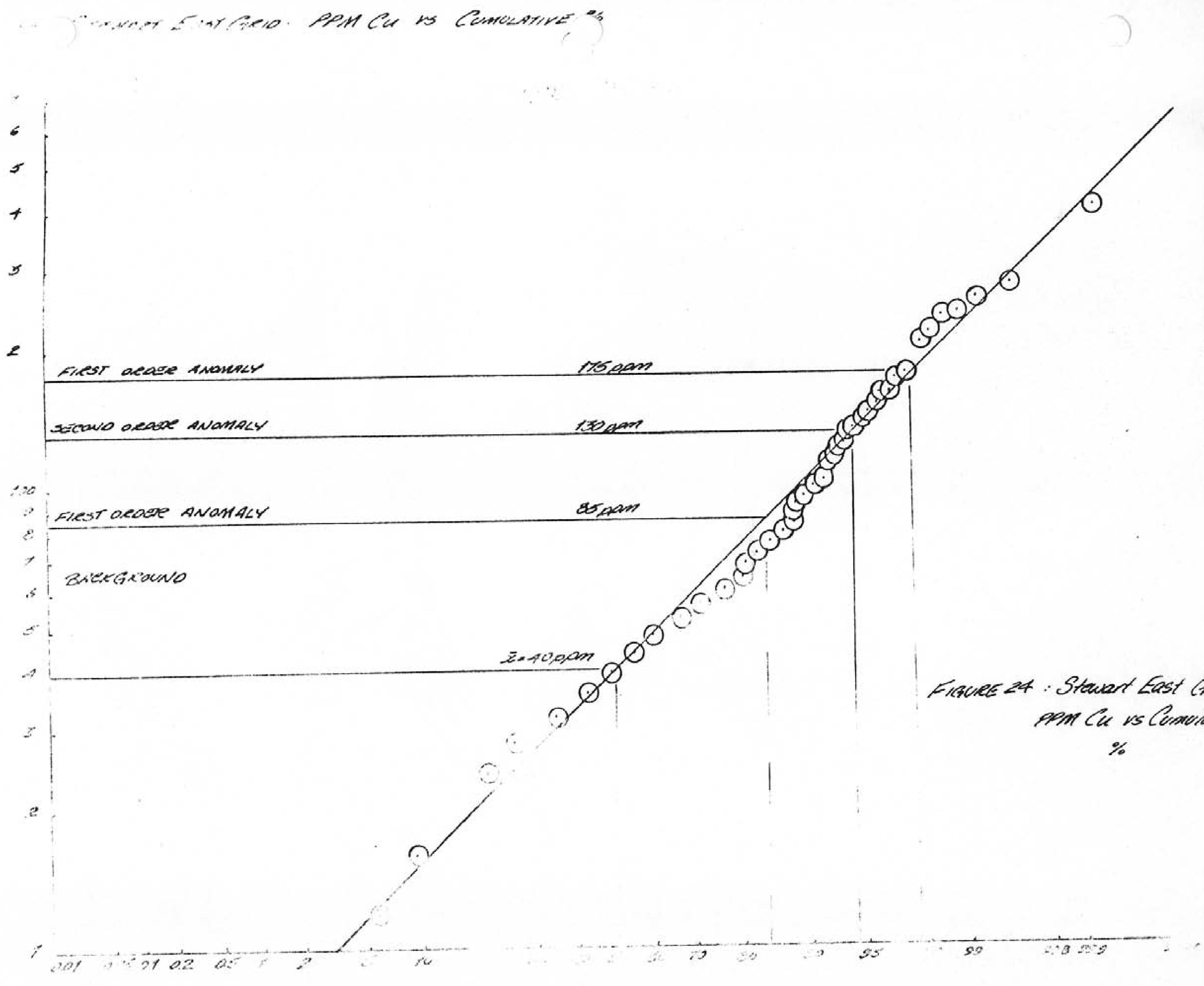


FIGURE 24 : Stewart East Grid
PPM Cu vs Cumulative
%

… West Grid: PPM Mo vs Cumulative %

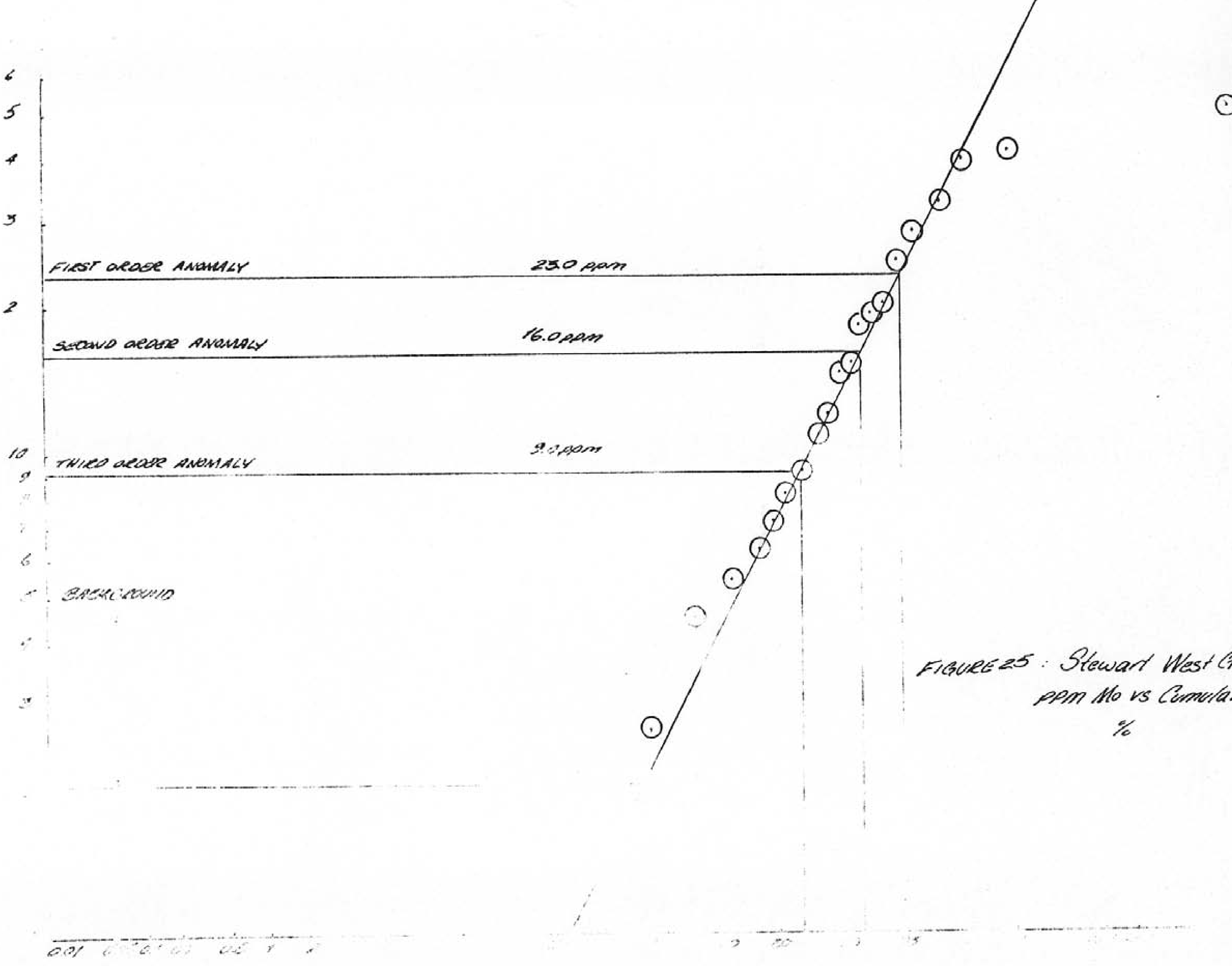


FIGURE 25: Stewart West Grid. ppm Mo vs Cumulative %

STEWART WEST GRID · PPM W VS CUMULATIVE %

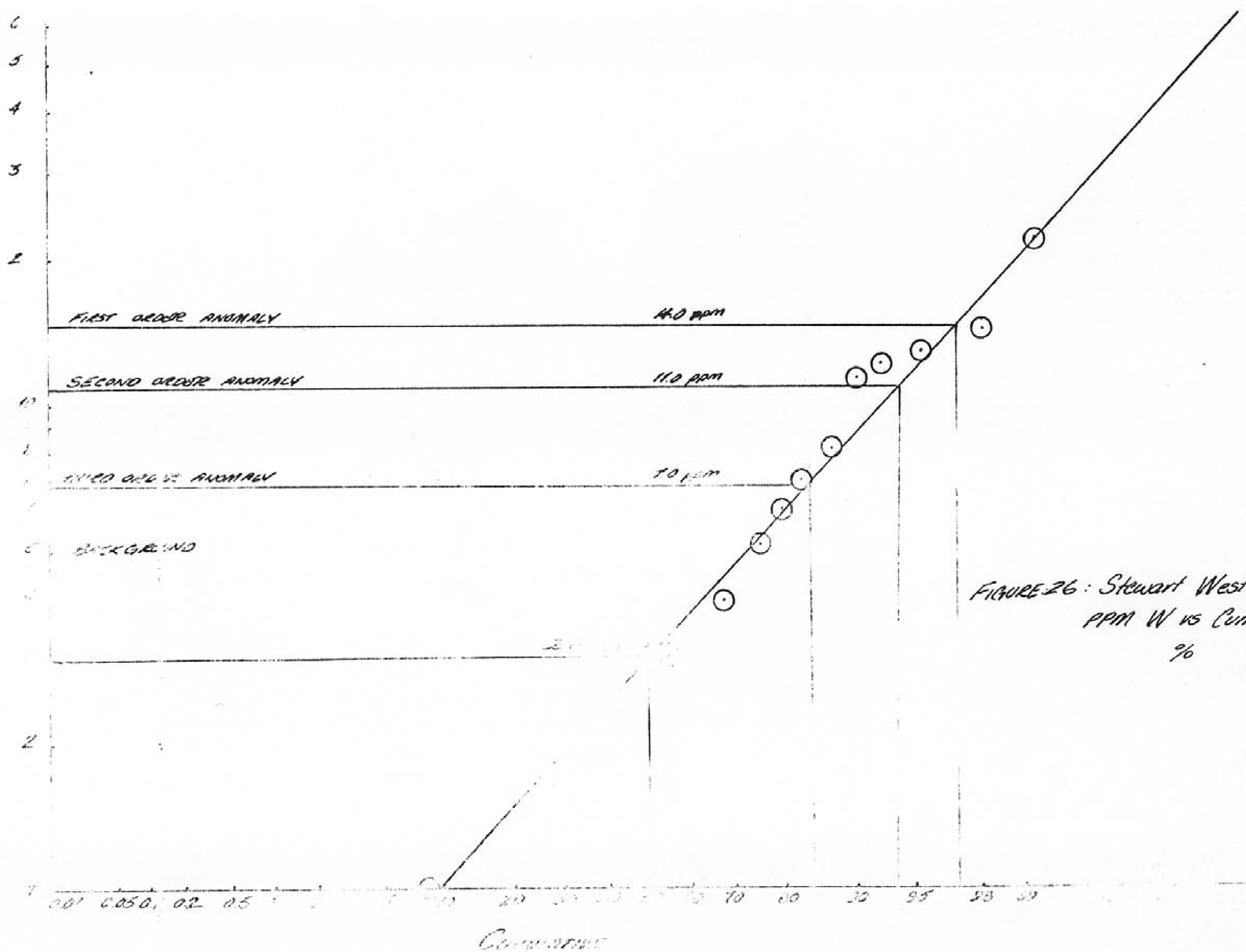


FIGURE 26 : Stewart West Grid PPM W vs Cumulative %

STEWART WEST GRID: PPM ZN VS CUMULATIVE %

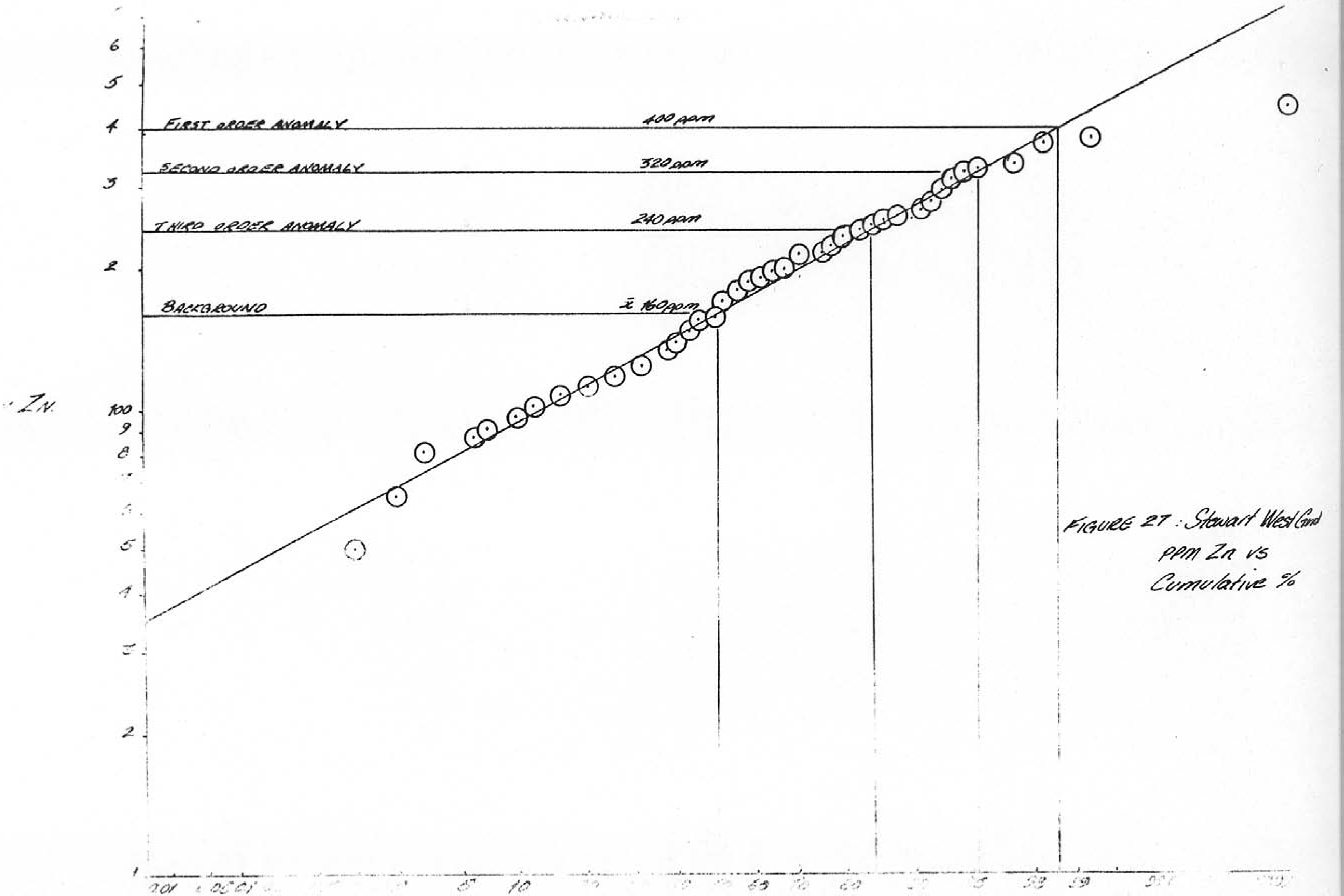


FIGURE 27: Stewart West Grid
ppm Zn vs
Cumulative %

STEWART WEST GRID PPM Cu VS CUMULATIVE %

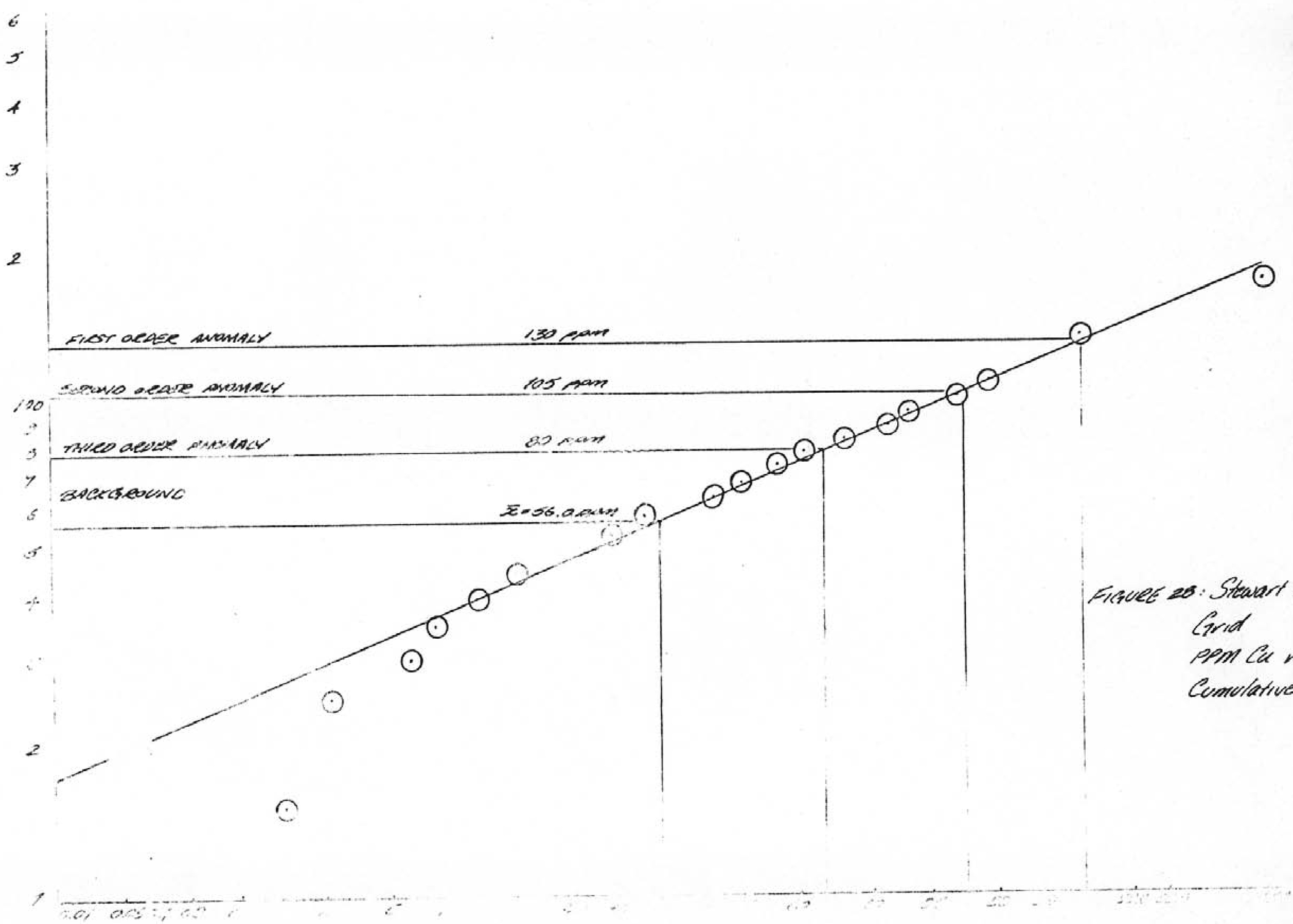


FIGURE 28: Stewart West Grid PPM Cu vs Cumulative %

Section I: Silt Geochemical Results

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SHELL CANADA RESOURCES LTD.
GENERAL DELIVERY
NELSON B.C.

DATE JULY 19 1979
PROJECT NO. 816-1-682

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	ZN PPM	AG PPM	MO PPM	F PPM
2	48	245	<0.2	1.5	1160
3	47	225	<0.2	1.5	920
4	35	275	<0.2	1.5	1200
5	53	255	<0.2	1.5	960
6	58	660	<0.2	1.5	880
10	60	260	<0.2	10	960
13	88	470	<0.2	17	2640
15	110	540	<0.2	4.0	1480
16	46	220	<0.2	4.0	1080
17	53	345	<0.2	4.5	960
18	50	195	<0.2	4.5	760
19	58	255	<0.2	3.5	1120
20	58	245	<0.2	3.5	720
21	53	255	<0.2	4.0	1040
22	53	355	<0.2	4.0	1840
23	85	670	<0.2	10	1160
26	80	480	<0.2	4.5	1440
27	80	275	1.3	4.0	1200
37	50	235	<0.2	2.0	1000
38	60	415	<0.2	2.0	1040
39	88	500	<0.2	2.0	1320
40	80	480	<0.2	4.5	1280
41	39	190	<0.2	4.0	1360
42	53	205	<0.2	6.0	1840
43	33	175	<0.2	2.5	1760

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NELSON B.C.

DATE JULY 19 197

PROJECT NO. 816-1-682

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	WO3 %	SN %
2	0.02	<0.01
3	0.01	<0.01
4	0.01	<0.01
5	0.01	<0.01
6	0.01	<0.01
10	0.02	<0.01
13	<0.01	<0.01
15	<0.01	<0.01
16	0.01	<0.01
17	0.01	<0.01
18	0.01	0.01
19	0.01	<0.01
20	<0.01	<0.01
21	<0.01	<0.01
22	0.01	<0.01
23	0.01	<0.01
26	0.01	<0.01
27	<0.01	0.01
37	<0.01	<0.01
38	0.01	<0.01
39	0.01	<0.01
40	<0.01	<0.01
41	0.01	<0.01
42	0.02	<0.01
43	0.02	<0.01

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DATE SEPTEMBER 27, 1979

PROJECT NO. 816-1-682

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	W PPM	SN PPM
C 2	3	1
3	2	1
4	1	1
5	30	1
6	1	1
10	6	1
13	6	1
15	1	1
16	12	1
17	8	1
18	13	1
19	60	1
20	1	1
21	4	1
22	7	1
23	25	1
26	3	1
27	2	1
37	1	1
38	1	1
39	1	1
40	1	1
41	6	1
42	9	1
43	8	2

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PROJECT NO. 816-1-718

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	ZN PPM	AG PPM	MO PPM	SN PPM
1	145	<0.2	6	2
8	180	<0.2	6	1
9	120	<0.2	8	1
11	120	<0.2	4	1
12	285	<0.2	3	1
14	85	<0.2	3	1
24	180	<0.2	3	5
25	195	<0.2	3	1
28	125	<0.2	3	2
29	110	<0.2	3	1
30	125	<0.2	2	1
31	140	<0.2	3	2
32	45	<0.2	2	2
33	80	<0.2	3	1
34	50	<0.2	2	1
35	35	<0.2	3	1
36	55	<0.2	3	1

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[illegible] RESOURCES LTD.

DATE [illegible]

PROJECT NO. [illegible]

[illegible]

[illegible]	[illegible] (ppm)	[illegible] (ppm)
[illegible]	15	[illegible]
[illegible]	1	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	7	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	1	[illegible]
[illegible]	1	[illegible]
[illegible]	1	[illegible]
[illegible]	1	[illegible]
[illegible]	1	[illegible]
[illegible]	12	[illegible]
[illegible]	1	[illegible]
[illegible]	10	[illegible]
[illegible]	1	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	1	[illegible]

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Section II: Soil Geochemical Results

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DATE JULY 19 19
PROJECT NO. 816-1-682

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	ZN PPM	AG PPM	MO PPM
0+00S 3991K 5+00W	58	600	<0.2	4.0
4+00W	40	405	1.0	4.0
3+00W	65	600	0.7	4.0
~~2+00W~~	~~80~~	~~460~~	~~0.5~~	~~4.0~~
1+00W	50	400	0.9	4.0
0+00E	53	135	<0.2	2.0
1+00E	64	620	0.4	2.0
2+00E	60	920	<0.2	6.0
~~3+00E~~	~~60~~	~~420~~	~~0.6~~	~~8.0~~
4+00E	55	165	0.2	3.5
5+00E	34	215	0.3	3.5
6+00E	50	160	0.3	3.5
7+00E	27	195	0.2	2.0
~~8+00E~~	~~33~~	~~125~~	~~0.2~~	~~2.0~~
9+00E	42	200	<0.2	2.0
10+00E	45	115	<0.2	1.5
1+20S-5+00W	65	345	0.4	2.0
4W	53	175	0.5	6.0
~~3W~~	~~49~~	~~255~~	~~<0.2~~	~~2.0~~
2W	33	235	0.3	3.0
1W	36	170	<0.2	3.0
0	50	105	<0.2	1.5
1+20S 1+00E	49	400	0.3	6.5
~~2E~~	~~50~~	~~610~~	~~<0.2~~	~~10~~
3E	65	335	0.3	7.0
4E	203	950	0.2	8.5
5E	44	175	<0.2	3.0
6E	45	180	<0.2	1.5
~~7E~~	~~46~~	~~160~~	~~0.6~~	~~19~~
8E	31	115	<0.2	3.0
9E	33	115	<0.2	2.5
1+20S 9+50E	46	375	<0.2	3.0
2+40S 5+00W	25	400	<0.2	3.0
~~4W~~	~~35~~	~~190~~	~~<0.2~~	~~2.5~~
3W	27	170	<0.2	2.5
2W	35	140	<0.2	2.5
1W	58	235	0.2	5.5
0	65	175	<0.2	5.5
~~2+40S 1+00E~~	~~75~~	~~400~~	~~<0.2~~	~~13~~
2+40S 2E	47	710	<0.2	7.0

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SHELL CANADA RESOURCES LTD.
GENERAL DELIVERY
NELSON B C

DATE JULY 19 19

PROJECT NO. 816-1-682

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	ZN PPM	AG PPM	MO PPM
2+40S 3+00E	34	315	<0.2	3.5
4+00E	51	155	0.2	3.5
5+00E	60	950	0.2	7.0
6+00E	53	215	0.6	8.0
7+00E	20	110	<0.2	2.0
8+00E	28	140	<0.2	2.0
9+00E	54	130	<0.2	3.0
10+00E	25	150	<0.2	3.0
3+60S 5+00W	35	135	<0.2	3.0
4+00W	30	135	<0.2	1.0
3+00W	33	130	<0.2	1.0
2+00W	35	120	<0.2	4.0
1+00W	42	115	<0.2	5.5
0	58	215	0.2	5.5
1+00E	27	335	0.3	5.5
2+00E	20	400	<0.2	2.5
3+00E	48	580	<0.2	4.0
4+00E	115	790	<0.2	11
5+00E	85	660	0.3	7.5
6+00E	53	195	0.4	7.5
7+00E	33	230	<0.2	5.0
8+00E	33	175	<0.2	5.0
9+00E	58	120	0.4	2.5
10+00E	21	105	<0.2	2.5
4+80S 5+00W	22	130	1.4	1.5
4+00W	17	50	0.5	1.5
3+00W	33	105	<0.2	1.5
2+00W	25	105	<0.2	1.5
1+00W	51	105	<0.2	5.5
0	53	150	<0.2	3.5
1+00E	58	260	0.2	3.5
2+00E	54	415	<0.2	5.5
3+00E	41	790	0.3	3.5
4+00E	37	175	0.3	2.5
5+00E	58	110	<0.2	2.5
6+00E	75	110	<0.2	6.5
7+00E	60	145	<0.2	4.0
8+00E	39	80	0.2	2.5
9+00E	32	90	0.2	2.5
10+00E	60	105	<0.2	2.5

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PROJECT NO. 816-1-682

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	ZN PPM	AG PPM	MO PPM
6+00S 5+00W	33	195	0.3	6.0
4+00W	31	100	0.7	1.5
3+00W	29	90	<0.2	1.5
~~2+00W~~	~~28~~	~~140~~	~~<0.2~~	~~6.0~~
1+00W	34	85	<0.2	2.5
0	44	215	<0.2	3.0
1+00E	57	135	<0.2	4.0
2+00E	44	670	<0.2	3.0
~~3+00E~~	~~55~~	~~195~~	~~<0.2~~	~~3.0~~
4+00E	42	195	<0.2	2.0
5+00E	54	105	<0.2	2.0
6+00E	29	140	<0.2	3.0
7+00E	65	125	0.4	3.0
~~8+00E~~	~~25~~	~~90~~	~~0.7~~	~~2.5~~
9+00E	43	60	<0.2	2.0
10+00E	75	85	<0.2	2.0

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PROJECT NO. 816-1-682

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	W PPM
0+00S 0+00E	20
1+00E	2
2+00E	5
3+00E	6
4+00E	13
5+00E	1
6+00E	3
7+00E	1
8+00E	1
9+00E	2
10+00E	1
1+00W	3
2+00W	3
3+00W	4
4+00W	13
5+00W	13
1+20S 00+00E	10
1+00E	2
2+00E	11
3+00E	4
4+00E	3
5+00E	2
6+00E	1
7+00E	2
8+00E	1
9+00E	2
9+50E	1
1+00W	8
2+00W	1
3+00W	2
4+00W	3
5+00W	3
2+40S 00+00E	2
1+00E	2
2+00E	3
3+00E	8
4+00E	2
5+00E	4
6+00E	3
7+00E	2

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GEOCHEMICAL ANALYSES

SAMPLE NUMBER	W PPM
2+40S 8+00E	2
9+00E	2
10+00E	1
2+40S 1+00W	6
2+00W	2
3+00W	2
4+00W	1
5+00W	1
3+60S 0+00E	4
1+00E	2
2+00E	2
3+00E	9
4+00E	14
5+00E	4
6+00E	3
7+00E	2
8+00E	1
9+00E	1
10+00E	4
1+00W	13
2+00W	2
3+00W	1
4+00W	1
5+00W	1
4+80S 0+00E	2
1+00E	3
2+00E	12
3+00E	4
4+00E	3
5+00E	2
6+00E	2
7+00E	2
8+00E	1
9+00E	5
10+00E	4
1+00W	1
2+00W	1
3+00W	1
4+00W	3
5+00W	2

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DATE
JULY 19 197

PROJECT NO.
816-1-682

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	W PPM
6+00S ,0+00E	8
,1+00E	4
,2+00 E	4
,3+00E	8
,4+00E	8
,5+00E	4
,6+00E	3
,7+00E	4
8+00E	6
9+00E	5
10+00E	4
1+00W	2
2+00W	4
3+00W	2
4+00W	1
5+00W	2

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SHELL CANADA RESOURCES LTD.

DATE JULY 26 1979

YMIR 3991K PROJECT

PROJECT NO. 816-1-718

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	AN PPM	AG PPM	MO PPM
720S 500W	39	180	<0.2	21
400W	37	150	<0.2	21
300W	29	100	<0.2	11
200W	44	250	<0.2	25
100W	43	140	<0.2	4.0
0+00E	52	210	<0.2	6.0
100E	70	145	<0.2	11
200E	65	680	0.8	11
300E	60	750	0.5	11
400E	40	205	<0.2	7
500E	48	180	0.3	4
600E	19	155	<0.2	4
700E	60	270	0.5	16
800E	33	200	<0.2	3
900E	27	170	<0.2	3
1000E	46	135	0.5	5
840S 500W	23	75	1.0	5
400W	29	125	<0.2	13
300W	29	75	<0.2	11
200W.	50	260	<0.2	36
100W	30	160	<0.2	6
0+00E	29	145	<0.2	3
L840S 100E	41	205	0.5	9
200E	54	410	0.5	6
300E	70	670	0.5	5
400E	40	195	0.4	8
500E	30	150	<0.2	5
600E	46	180	<0.2	3
700E	80	110	<0.2	54
800E	50	235	<0.2	8
900E	43	100	<0.2	5
1000E	35	115	<0.2	5
1100E	60	200	<0.2	18
1200E	38	145	<0.2	1.0
1300E	49	180	<0.2	3
1400E	36	105	<0.2	2
1500E	42	125	<0.2	3
1600E	52	120	<0.2	3
1700E	170	300	<0.2	3
1800E	46	80	<0.2	2

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YMIR 3991K PROJECT

PROJECT NO. 816-1-718

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	ZN PPM	AG PPM	MO PPM
/L840S 1900E	70	160	<0.2	1.0
L960S 500W	65	210	<0.2	5
400W	19	75	<0.2	5
300W	38	130	<0.2	7
200W	14	65	<0.2	2
100W	28	145	<0.2	9
0	37	120	<0.2	8
100E	35	190	<0.2	7
200E	80	425	0.4	7
300E	60	325	<0.2	5
400E	75	300	<0.2	5
500E	54	215	<0.2	5
600E	28	225	<0.2	3
700E	55	190	<0.2	1.0
800E	44	155	<0.2	1.0
900E	80	245	<0.2	11
1000E	34	245	<0.2	3
1100E	34	260	<0.2	1.0
1200E	27	225	<0.2	1.0
1300E	46	190	<0.2	2.0
1400E	39	95	<0.2	1.5
1500E	30	85	<0.2	1.5
1600E	28	120	<0.2	2.0
1700E	30	90	<0.2	1.0
1800E	28	90	<0.2	1.0
1900E	95	285	<0.2	1.0
L1080S 500W	25	95	<0.2	29
400W	45	150	<0.2	6
300W	46	60	<0.2	18
200W	34	150	<0.2	8
100W	45	205	<0.2	8
L1080S 0+00	47	240	<0.2	5
100E	42	260	<0.2	4
200E	50	390	<0.2	4
300E	61	325	<0.2	4
400E	43	230	<0.2	3
500E	57	245	<0.2	10
600E	57	175	<0.2	3
700E	39	215	<0.2	2
800E	32	150	<0.2	1.5

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YMIR 3991K PROJECT

PROJECT NO. 816-1-718

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	AN PPM	AG PPM	MO PPM
L1080S 900E	43	85	<0.2	1.5
1000E	47	135	0.3	1.5
1100E	50	475	<0.2	3
1200E	60	145	<0.2	3
1300E	30	175	<0.2	1.0
1400E	37	115	<0.2	2.0
1500E	60	100	0.2	4
1600E	21	140	<0.2	2
1700E	30	110	<0.2	3
1800E	22	100	<0.2	2
1900E	400	215	<0.2	5
1200S 500W	29	135	<0.2	4
400W	52	210	<0.2	42
300W	32	130	<0.2	4
200W	37	130	<0.2	6
100W	30	210	<0.2	3
0+00E	46	205	<0.2	3
100E	21	80	<0.2	14
200E	55	150	<0.2	4
300E	50	180	<0.2	4
400E	55	170	<0.2	15
500E	55	400	<0.2	9
600E	60	475	<0.2	10
700E	50	475	1.0	6
800E	56	390	<0.2	3
900E	45	340	<0.2	5
1000E	32	215	<0.2	5
1100E	47	370	<0.2	7
1200E	39	160	<0.2	7
1300E	48	165	<0.2	11
1400E	25	115	<0.2	3
1500E	28	85	<0.2	5
1600E	31	115	<0.2	4
1700E	50	130	<0.2	2
1800E	24	60	<0.2	3
1900E	31	65	0.4	5
1440S 1900E	57	140	<0.2	2
1800E	60	150	0.2	4
1700E	65	110	0.2	4
1600E	32	155	<0.2	1

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YMIR 3991K PROJECT PROJECT NO. 816-1-718

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	AN PPM	AG PPM	MO PPM
L1320S 1500W	NO SAMPLE	NO SAMPLE	NO SAMPLE	NO SAMPLE
1400W	NO SAMPLE	NO SAMPLE	NO SAMPLE	NO SAMPLE
1300W	30	155	<0.2	1
1200W	42	105	<0.2	2
1100W	41	100	<0.2	1
1000W	55	175	<0.2	2
900W	41	75	<0.2	1
800W	51	60	<0.2	1
700W	33	80	<0.2	2
600W	38	95	<0.2	4
500W	29	130	<0.2	2
400W	30	120	<0.2	1
300W	54	155	<0.2	1
200W	95	125	<0.2	2
100W	90	150	<0.2	6
0+00	52	155	<0.2	2
L1320S 100E	27	210	<0.2	2
200E	27	190	<0.2	2
300E	34	165	<0.2	2
400E	40	190	<0.2	4
500E	39	225	<0.2	4
600E	38	390	<0.2	5
700E	30	225	<0.2	7
800E	35	245	<0.2	4
900E	31	225	<0.2	2
1000E	30	175	<0.2	5
1100E	48	110	<0.2	13
1200E	50	135	<0.2	5
1300E	42	100	<0.2	4
1400E	26	300	<0.2	3
1500E	30	140	<0.2	4
1600E	19	190	<0.2	2
1700E	70	110	<0.2	4
1800E	43	125	<0.2	1
1900E	55	150	<0.2	3
1440S 1400E	16	215	<0.2	2
1300E	75	265	<0.2	21
1200E	36	245	<0.2	3
~~1100E~~	~~50~~	~~245~~	~~<0.2~~	~~5~~
1000E	55	175	<0.2	5

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GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	AN PPM	AG PPM	MO PPM
1440S 1500E	47	120	<0.2	4
1440S 900E	50	175	<0.2	4
800E	45	245	<0.2	4
700E	60	160	<0.2	2
600E	55	280	<0.2	1
500E	60	285	<0.2	10
400E	65	275	<0.2	10
300E	44	910	<0.2	5
200E	41	230	<0.2	3
100E	42	280	<0.2	4
0+00E	23	205	<0.2	3
100W	34	205	<0.2	3
200W	33	160	<0.2	4
300W	22	160	<0.2	5
400W	15	135	<0.2	4
500W	9	60	<0.2	1
600W	12	60	<0.2	1
700W	14	55	<0.2	1
800W	13	45	<0.2	4
900W	13	35	<0.2	4
1000W	43	20	<0.2	4
1100W	16	50	<0.2	3
1200W	37	80	<0.2	7
1300W ← 1400S	19	70	<0.2	2
~~L180S~~ 1300W	24	50	<0.2	8
1200W	130	170	<0.2	22
1100W	20	110	<0.2	6
1000W	11	45	<0.2	3
900W	14	75	<0.2	2
800W	16	40	<0.2	1
700W	10	40	<0.2	2
600W	12	60	<0.2	1
500W	11	65	<0.2	1
400W	7	50	<0.2	1
300W	15	60	<0.2	2
200W	9	50	<0.2	2
100W	9	40	<0.2	4
0+00	32	75	<0.2	4
~~100E~~	~~30~~	~~115~~	~~<0.2~~	~~8~~
200E	20	345	<0.2	7

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GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	ZN PPM	AG PPM	MO PPM
L1800S 300E	18	345	<0.2	2
400E	13	195	<0.2	1
500E	30	780	<0.2	5
600E	10	285	<0.2	2
700E	13	90	<0.2	1
800E	24	80	<0.2	1
900E	13	95	<0.2	1
1000E	15	105	<0.2	1
1100E	18	90	<0.2	1
1200E	21	85	<0.2	1
1300E	34	80	<0.2	1
1400E	37	60	<0.2	4
1500E	19	170	<0.2	1
1600E	17	80	<0.2	2
1700E	60	145	<0.2	16
1800E	11	85	<0.2	4
1900E	9	60	<0.2	3
L2160S 1300W	80	90	<0.2	14
1200W	40	85	<0.2	14
1100W	30	80	<0.2	6
1000W	25	110	<0.2	11
900W	38	195	<0.2	14
800W	30	190	<0.2	6
700W	8	55	<0.2	1
600W	9	90	<0.2	1
500W	11	125	<0.2	1
400W	26	120	<0.2	4
300W	15	100	<0.2	4
200W	14	80	<0.2	1
100W	16	65	<0.2	3
0+00	12	70	<0.2	2
3991K L2280S 1300W	30	125	<0.2	7
L2280S 1200W	34	90	<0.2	14
1100W	22	80	<0.2	4
1000W	17	85	<0.2	4
900W	12	65	<0.2	3
800W	17	85	<0.2	11
700W	14	145	<0.2	7
600W	12	175	<0.2	3
500W	20	130	<0.2	2

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SHELL CANADA RESOURCES LTD. DATE JULY 26 1979

YMIR 3991K PROJECT PROJECT NO. 816-1-718

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	ZN PPM	AG PPM	MO PPM
L2280S 400W	22	175	<0.2	1
300W	11	80	<0.2	3
200W	16	85	<0.2	3
100W	20	60	<0.2	2
0+00	21	90	<0.2	3

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SHELL CANADA LTD. DATE AUG 2 1979

YMIR 3991K PROJECT NO. 816-1-754

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	ZN PPM	AG PPM	MO PPM
3991K 2160S-100E	10	88	<0.2	2.5
200E	7	80	<0.2	2
300E	7	51	<0.2	1.0
400E	2	11	<0.2	<1.0
500E	11	76	<0.2	3
600E	7	49	<0.2	2
700E	8	63	<0.2	2
800E	5	32	<0.2	1
900E	4	28	<0.2	1
1000E	5	39	<0.2	1
1100E	3	31	<0.2	<1.0
1200E	7	63	<0.2	1.5
1300E	11	106	<0.2	1.5
1400E	9	72	<0.2	1.5
1500E	10	72	<0.2	1.0
1600E	8	60	<0.2	1.0
1700E	7	54	<0.2	<1.0
1800E	4	72	<0.2	<1.0
1900E	10	85	<0.2	2.0
3991K 2280S-100E	14	84	<0.2	2.5
200E	3	15	<0.2	<1.0
300E	8	88	<0.2	2.0
400E	19	135	<0.2	1.5
500E	37	215	<0.2	2.5
600E	28	270	<0.2	2.5
700E	46	145	<0.2	2.5
800E	39	300	<0.2	2.5
900E	37	210	<0.2	2.5
1000E	43	125	<0.2	2.5
1100E	54	245	<0.2	4.0
1200E	29	160	<0.2	1.5
1300E	14	80	<0.2	<1.0
1400E	13	65	<0.2	<1.0
1500E	20	135	<0.2	2.0
1600E	75	450	<0.2	5.0
1700E	235	505	<0.2	18
1800E	65	165	<0.2	7
1900E	24	175	<0.2	<1.0
3991K 2400S-1300W	65	175	<0.2	3.5
1200W	37	125	<0.2	4.0

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SHELL CANADA LTD. DATE AUG 2 1979

YMIR 3991K PROJECT NO. 816-1-754

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	ZN PPM	AG PPM	MO PPM
3991K 2400S-1100W	36	165	<0.2	12
1000W	32	475	<0.2	22
900W	29	210	<0.2	1.0
800W	33	225	<0.2	4.5
700W	50	230	<0.2	48
600W	43	305	<0.2	9
500W	50	215	<0.2	4.0
400W	45	125	0.2	4.5
300W	20	245	0.3	2.0
200W	39	160	<0.2	1.5
100W	35	130	0.2	1.0
3991K 2400S-0100	20	170	<0.2	2.0
100E	33	615	0.3	3.0
200E	37	290	<0.2	2.5
300E	29	215	<0.2	1.0
400E	23	155	<0.2	3.0
500E	33	524	<0.2	2.0
600E	50	225	<0.2	1.5
700E	29	495	<0.2	1.5
800E	40	629	0.2	2.0
900E	50	680	0.2	2.0
1000E	24	170	<0.2	1.0
1100E	20	135	<0.2	1.0
1200E	29	185	<0.2	2.5
1300E	30	160	<0.2	2.5
1400E	28	160	<0.2	1.5
1500E	29	185	<0.2	3.0
1600E	37	100	<0.2	2.0
1700E	55	230	<0.2	5.0
1800E	47	255	<0.2	2.0
1900E	42	215	<0.2	3.0
3991K 2520S-1300W	130	255	0.3	1.5
1200W	140	290	0.2	4.0
1100W	34	350	<0.2	10
1000W	23	160	<0.2	4.0
900W	27	165	<0.2	5.0
800W	33	175	<0.2	3.0
700W	34	185	<0.2	15
600W	47	170	<0.2	13
500W	45	225	0.2	9

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YMIR 3991K PROJECT NO. 816-1-754

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	ZN PPM	AG PPM	MO PPM
3991K 2520S-400W	34	255	0.2	3.0
300W	28	155	0.2	2.0
200W	20	430	0.2	2.0
100W	24	145	0.2	1.5
2520S 0+00	19	100	<0.2	2.5
2520S 100E	27	185	0.2	2.5
200E	50	260	<0.2	8
300E	115	190	0.3	21
400E	28	685	0.3	5.0
500E	49	690	0.3	4.5
600E	46	430	0.2	3.0
700E	44	305	<0.2	2.0
800E	52	260	<0.2	4.5
900E	29	650	<0.2	3.0
1000E	55	560	<0.2	4.0
1100E	40	360	0.2	4.0
1200E	31	255	0.2	2.0
1300E	38	160	0.2	2.0
1400E	23	190	<0.2	2.0
1500E	32	200	<0.2	2.0
1600E	25	155	<0.2	1.0
1700E	65	135	<0.2	10
1800E	27	260	<0.2	2.0
1900E	44	140	<0.2	6.0
3991K 2640S-1300W	65	225	0.2	4.0
1200W	38	380	0.3	4.0
1100W	25	255	<0.2	5.0
1000W	27	260	<0.2	4.0
900W	27	155	<0.2	4.0
800W	28	315	<0.2	2.5
700W	40	260	0.2	6.0
600W	34	330	0.2	4.0
500W	65	210	0.2	14
400W	40	200	0.3	3.0
300W	27	160	<0.2	3.0
200W	45	200	0.2	4.0
100W	37	195	0.2	3.5
2640S 0+00	38	110	<0.2	4.0
100E	50	200	0.2	8
200E	110	160	0.2	16

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PROJECT NO 816-1-754

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	ZN PPM	AG PPM	MO PPM
3991K 2640S-300E	45	155	<0.2	6.0
400E	47	295	<0.2	6.0
500E	75	503	0.3	9
600E	100	450	0.3	10
700E	35	524	<0.2	2.0
800E	115	195	<0.2	6.0
900E	30	280	<0.2	2.0
1000E	34	455	<0.2	2.0
1100E	45	630	0.3	5.0
3991K 2760S 1300W	37	210	<0.2	3.0
1200W	22	230	<0.2	2.0
1100W	22	295	<0.2	2.0
1000W	41	195	0.2	4.5
900W	40	175	<0.2	4.0
800W	40	195	0.2	2.5
700W	23	310	<0.2	2.0
600W	30	210	<0.2	4.0
500W	22	155	<0.2	2.5
400W	45	630	0.2	4.0
300W	50	370	0.2	6.0
200W	46	270	0.2	7.0
100W	15	80	<0.2	3.0
3991K 2760S-0+00	50	260	<0.2	5.0
100E	25	70	<0.2	3.0
200E	65	160	<0.2	21
300E	65	210	<0.2	12
400E	23	185	<0.2	2.0
500E	35	390	<0.2	2.0
600E	65	596	<0.2	2.0
700E	170	215	<0.2	5.0
800E	52	165	<0.2	1.5
900E	40	245	<0.2	1.5
1000E	105	650	<0.2	1.5
1100E	115	630	<0.2	2.5
39912 1560S 1900E	70	100	<0.2	1.5
1800E	55	135	<0.2	1.5
1700E	37	140	<0.2	1.0
1600E	75	140	<0.2	1.0
1500E	34	370	<0.2	3.0
1400E	50	630	<0.2	6.0

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SHELL CANADA LTD.

YMIR 3991K

DATE AUG 2 1979

PROJECT NO. 816-1-754

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	ZN PPM	AG PPM	MO PPM
3991K 1560S-1300E	32	485	<0.2	3.0
1200E	49	300	<0.2	4
1100EA	49	155	<0.2	3.0
1100EB	40	135	<0.2	3.0
1000E	70	100	<0.2	4
910E	2	30	<0.2	<1.0
800E	15	155	<0.2	1.5
700E	36	125	<0.2	2.0
600E	43	125	<0.2	2.0
500E	29	120	<0.2	2.5
400E	37	450	<0.2	5.0
300E	54	195	<0.2	2.0
200E	39	552	0.2	1.0
100E	45	380	0.2	5.0
3991K 1560S-0+00	50	380	<0.2	3.0
100W	55	240	0.2	5.0
200W	45	155	<0.2	3.0
300W	54	255	<0.2	5.0
400W	46	225	<0.2	5.0
500W	31	135	<0.2	5.0
600W	17	40	0.2	3.5
700W	22	70	<0.2	3.0
800W	22	40	<0.2	3.0
900W	33	120	<0.2	3.0
1000W	40	80	<0.2	4.0
1100W	55	120	0.2	5.0
1200W	80	175	<0.2	5.0
1300W	46	125	<0.2	3.5
3991K 1680S-1300W	32	70	<0.2	3.0
1200W	55	90	<0.2	10
1100W	33	135	<0.2	3.0
1000W	19	35	<0.2	3.0
900W	26	110	<0.2	2.0
800W	19	50	<0.2	1.5
700W	10	50	<0.2	1.0
600W	5	30	<0.2	<1.0
500W	18	100	<0.2	3.0
400W	18	70	<0.2	2.0
300W	15	80	<0.2	1.0
200W	46	170	<0.2	4.0

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DATE AUG 2 1979

YMIR 3991K

PROJECT NO 816-1-754

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	ZN PPM	AG PPM	MO PPM
3991K 1680S-100W	34	100	0.2	2.0
0+00	44	100	<0.2	20
1680S 100E	23	120	<0.2	6.0
200E	33	400	0.3	4.0
300E	32	596	0.2	3.0
400E	41	190	<0.2	2.0
500E	65	140	<0.2	2.0
600E	34	130	<0.2	2.0
700E	31	160	<0.2	1.5
800E	28	155	<0.2	2.0
900E	37	105	<0.2	3.0
1000E	37	125	<0.2	3.0
1100E	55	155	<0.2	4.0
1200E	50	85	<0.2	3.0
1300E	50	135	<0.2	2.0
1400E	41	125	<0.2	2.0
1500E	40	130	<0.2	2.0
1600E	55	110	<0.2	4.0
1700E	28	120	<0.2	4.0
1800E	43	130	<0.2	2.0
1900E	55	90	<0.2	3.0
3991K 1920S-1300W	170	95	<0.2	19
1200W	140	135	<0.2	29
1100W	55	140	<0.2	7
1000W	27	95	<0.2	26
900W	28	55	<0.2	3
800W	21	75	<0.2	3
700W	15	110	<0.2	2
600W	20	105	<0.2	1
500W	17	105	<0.2	3
400W	17	135	<0.2	2
300W	28	100	<0.2	2
200W	33	80	0.2	2
100W	38	70	<0.2	3
3991K 1920S-0+00	50	215	<0.2	2
100E	41	400	0.2	5
200E	55	255	<0.2	7
300E	32	330	<0.2	5
400E	45	190	<0.2	5
500E	42	100	<0.2	5

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SHELL CANADA LTD.

YMIR 3991K

DATE AUG 2 1979

PROJECT NO. 816-1-754

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	ZN PPM	AG PPM	MO PPM
3991K 1920S-600E	33	175	0.2	2.0
700E	33	320	<0.2	2.0
800E	30	125	<0.2	4.0
900E	29	125	<0.2	1.0
1000E	49	105	<0.2	4.0
1100E	75	110	<0.2	3.0
1200E	34	90	<0.2	2.0
1300E	40	120	<0.2	3.0
1400E	49	95	<0.2	3.0
1500E	40	90	<0.2	3.0
1600E	65	90	<0.2	3.0
1700E	16	70	<0.2	3.0
1800E	49	255	<0.2	18
1900E	22	225	<0.2	2.0
3991K L2040S-1300W	160	95	<0.2	32
1200W	80	130	<0.2	19
1100W	75	205	<0.2	30
1000W	55	110	<0.2	6.0
900W	125	465	<0.2	2.5
800W	24	85	<0.2	2.0
700W	22	105	<0.2	1.0
600W	28	80	<0.2	1.0
500W	19	130	<0.2	1.0
400W	33	170	<0.2	1.0
300W	24	85	<0.2	1.0
200W	19	70	<0.2	1.0
100W	31	50	<0.2	1.0
3991K L2040S 0+00	36	280	<0.2	4.0
100E	49	140	<0.2	4.0
200E	24	105	<0.2	2.0
300E	19	160	<0.2	1.0
400E	29	596	<0.2	3.0
500E	20	170	<0.2	2.0
600E	27	195	<0.2	2.0
700E	31	100	<0.2	2.0
800E	45	100	<0.2	2.0
900E	37	145	<0.2	2.0
1000E	26	140	<0.2	2.0
1100E	14	110	<0.2	1.0
1200E	13	95	<0.2	<1.0

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SHELL CANADA LTD. DATE AUG 2 1979

YMIR 3991K PROJECT NO. 816-1-754

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	ZN PPM	AG PPM	MO PPM
3991K L2040S-1300E	40	90	<0.2	2.0
1400E	49	85	<0.2	2.0
1500E	33	170	<0.2	3.0
1600E	65	594	<0.2	4.0
~~1700E~~	~~70~~	~~70~~	~~<0.2~~	~~4.0~~
1800E	36	145	<0.2	5.0
1900E	15	190	<0.2	2.0

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SHELL CANADA RESOURCES LTD.

DATE
AUG 17 1979
PROJECT NO.
816-1-835

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	ZN PPM	AG PPM	MO PPM	W PPM
L2640S 1200E	17	95	<0.2	3	2
1300E	18	160	<0.2	3	1
1400E	70	880	<0.2	7	3
1500E	28	320	<0.2	4	10
1600E	42	150	<0.2	3	12
1700E	45	125	<0.2	7	10
1800E	37	145	<0.2	3	2
1900E	33	140	<0.2	3	1
L2760S 1200E	27	185	<0.2	1	2
1300E	23	110	<0.2	1	1
1400E	33	440	<0.2	2	1
1500E	30	540	<0.2	3	3
1600E	37	160	<0.2	3	5
1700E	33	140	<0.2	7	13
1800E	75	185	<0.2	8	3
1900E	105	215	<0.2	7	4
L2880S 1300W	59	230	<0.2	7	22
1200W	58	280	<0.2	6	25
1100W	36	200	<0.2	2	12
1000W	49	345	<0.2	4	5
900W	53	470	<0.2	5	12
800W	58	200	<0.2	5	10
700W	45	275	<0.2	7	11
600W	23	195	<0.2	4	13
500W	39	285	<0.2	4	4
400W	70	440	0.4	4	5
300W	45	235	0.4	4	5
200W	145	590	1.0	20	13
100W	40	95	<0.2	8	3
0+00	70	275	<0.2	3	2
100E	95	580	<0.2	4	3
200E	110	940	0.8	16	3
300E	105	930	<0.2	4	2
400E	70	300	<0.2	6	5
500E	75	345	<0.2	4	3
600E	60	165	<0.2	3	5
700E	40	295	<0.2	3	1
800E	85	275	<0.2	3	2
900E	35	260	<0.2	3	4
1000E	30	135	.0.2	3	2

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SHELL CANADA RESOURCES LTD.

DATE AUG 17 1979
PROJECT NO. 816-1-835

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	ZN PPM	AG PPM	MO PPM	W PPM
1100E	30	195	<0.2	3	13
1200E	25	260	<0.2	3	3
1300E	30	140	<0.2	2	3
1400E	40	185	<0.2	2	2
1500E	40	700	<0.2	2	20
1600E	250	470	<0.2	64	65
1700E	70	155	<0.2	4	10
1800E	50	150	<0.2	2	4
1900E	100	180	<0.2	18	4
L3000S 1300W	65	150	<0.2	1	12
1200W	65	235	<0.2	6	28
1100W	35	165	<0.2	2	20
1000W	65	185	<0.2	3	30
900W	100	270	0.8	4	6
800W	55	190	<0.2	4	5
700W	25	185	<0.2	2	5
600W	90	210	<0.2	10	3
500W	65	360	<0.2	5	4
400W	65	400	<0.2	5	2
300W	100	405	0.6	9	20
200W	100	540	<0.2	5	3
100W	70	660	2.6	7	1
0+00	150	420	<0.2	3	4
100E	135	350	<0.2	4	5
200E	75	625	<0.2	3	3
300E	55	165	<0.2	3	4
400E	65	160	<0.2	4	12
500E	45	420	<0.2	3	3
600E	105	365	<0.2	4	2
700E	65	220	<0.2	2	2
800E	50	170	<0.2	2	6
900E	35	180	<0.2	2	3
1000E	30	190	<0.2	1	2
1100E	30	140	<0.2	2	2
1200E	35	300	<0.2	2	3
1300E	40	185	<0.2	1	4
1400E	55	240	<0.2	1	2
1500E	40	700	<0.2	2	4
1600E	125	560	<0.2	3	4
1700E	40	270	<0.2	2	4

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DATE AUG 17 1979

PROJECT NO. 816-1-835

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	ZN PPM	AG PPM	MO PPM	W PPM
1800E	80	195	<0.2	5	55
1900E	45	195	<0.2	3	4
L3120S 600W	35	420	<0.2	3	2
500W	55	255	<0.2	4	1
400W	100	145	0.8	4	2
300W	50	255	<0.2	3	3
200W	70	900	<0.2	2	1
100W	65	780	<0.2	4	1
0+00	75	420	<0.2	3	3
100E	75	750	<0.2	2	13
200E	70	930	<0.2	2	1
300E	30	210	<0.2	1	1
400E	55	190	<0.2	1	3
500E	120	520	<0.2	2	2
600E	100	295	<0.2	2	7
700E	155	570	<0.2	3	5
800E	95	270	<0.2	11	8
900E	55	160	<0.2	3	3
1000E	50	480	<0.2	2	3
1100E	45	105	<0.2	3	4
1200E	30	165	<0.2	1	1
1300E	25	110	<0.2	2	2
1400E	145	210	<0.2	2	10
1500E	30	250	<0.2	2	1
1600E	35	195	<0.2	2	1
1700E	40	80	<0.2	2	4
1800E	215	170	<0.2	15	35
1900E	65	150	<0.2	3	4
L3240S 600W	75	200	<0.2	2	3
500W	50	170	<0.2	3	4
400W	50	235	<0.2	2	5
300W	130	630	0.4	4	5
200W	115	520	0.4	7	5
100W	105	710	0.4	4	6
0+00	170	820	0.8	2	12
100E	65	250	<0.2	2	6
200E	40	275	<0.2	2	1
300E	45	255	<0.2	1	1
400E	120	440	<0.2	1	2
500E	60	190	<0.2	2	1

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GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	ZN PPM	AG PPM	MO PPM	W PPM
600E	80	640	0.4	2	3
700E	100	260	<0.2	2	4
800E	100	295	<0.2	2	3
900E	60	185	<0.2	2	7
1000E	50	325	<0.2	2	5
1100E	100	65	<0.2	6	4
1200E	30	230	<0.2	1	1
1300E	55	230	<0.2	2	12
1400E	40	165	<0.2	3	2
1500E	60	200	<0.2	3	7
1600E	50	145	<0.2	2	6
1700E	60	215	<0.2	3	11
1800E	75	150	<0.2	2	8
1900E	100	180	<0.2	2	7
L3360S 600W	100	220	<0.2	2	NSS
500W	80	255	<0.2	2	NSS
400W	60	220	<0.2	3	NSS
300W	140	930	0.8	2	3
200W	270	910	0.6	2	15
100W	230	950	1.0	3	15
0+00	75	480	<0.2	2	NSS
100E	65	620	<0.2	5	4
200E	50	235	<0.2	2	3
300E	60	700	<0.2	1	11
400E	45	250	<0.2	2	3
500E	55	255	<0.2	2	2
600E	65	400	<0.2	1	3
700E	35	270	<0.2	2	1
800E	35	270	<0.2	2	20
900E	35	320	<0.2	2	3
1000E	60	230	<0.2	2	2
1100E	35	190	<0.2	2	8
1200E	30	100	<0.2	1	3
1300E	15	115	<0.2	1	1
1400E	35	140	<0.2	1	4
1500E	35	115	<0.2	1	2
1600E	45	155	<0.2	2	4
1700E	40	140	<0.2	1	3
1800E	135	335	<0.2	2	14
1900E	50	160	<0.2	3	3

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GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	ZN PPM	AG PPM	MO PPM	W PPM
L3480S 600W	35	240	<0.2	3	3
500W	85	170	<0.2	2	4
400W	95	255	<0.2	3	15
300W	65	325	<0.2	3	4
200W	50	760	<0.2	4	2
100W	85	540	<0.2	2	3
0+00	50	300	<0.2	2	4
100E	50	220	<0.2	3	2
200E	60	155	<0.2	3	3
300E	70	350	<0.2	4	1
400E	55	145	<0.2	1	3
500E	50	120	<0.2	2	3
600E	30	185	<0.2	2	3
700E	60	170	<0.2	2	11
800E	55	180	<0.2	2	1
900E	50	270	<0.2	2	1
1000E	25	165	<0.2	2	1
1100E	40	135	<0.2	1	2
1200E	25	90	<0.2	1	1
1300E	40	580	<0.2	1	13
1400E	100	150	<0.2	2	2
1500E	30	140	<0.2	2	1
1600E	60	90	<0.2	3	5
1700E	65	120	<0.2	5	4
1800E	75	120	<0.2	3	1
1900E	65	215	<0.2	3	13
L3600S 600W	75	190	<0.2	3	4
500W	45	255	<0.2	3	10
400W	45	320	<0.2	2	5
300W	60	160	<0.2	2	3
200W	45	350	<0.2	2	3
100W	50	375	<0.2	3	1
0+00	50	440	<0.2	3	1
100E	55	290	<0.2	2	2
200E	60	250	<0.2	2	1
300E	65	170	<0.2	2	1
400E	55	180	<0.2	2	3
500E	40	170	<0.2	2	1
600E	40	280	<0.2	2	1
700E	50	220	<0.2	2	3

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GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	ZN PPM	AG PPM	MO PPM	W PPM
800E	85	345	<0.2	3	2
900E	40	240	<0.2	3	1
1000E	50	200	<0.2	2	4
1100E	60	215	<0.2	3	3
1200E	55	160	<0.2	2	1
1300E	45	160	<0.2	2	1
1400E	75	120	<0.2	2	5
1500E	40	165	<0.2	1	4
1600E	50	145	<0.2	3	3
1700E	60	125	<0.2	2	2
1800E	85	190	<0.2	2	3
1900E	50	180	<0.2	2	5
L0+00S 400E	65	195	<0.2	3	3
300E	50	120	<0.2	2	1
200E	40	120	<0.2	3	3
100E	105	300	<0.2	11	7
0+00	30	125	<0.2	5	4
1+00W	50	250	<0.2	19	5
2+00W	40	120	<0.2	3	4
3+00W	25	85	<0.2	1	3
4+00W	40	85	<0.2	2	2
5+00W	85	210	1.0	2	3
6+00W	35	150	0.4	2	2
L1+20S 4+00E	50	145	<0.2	2	2
3+00E	65	180	<0.2	2	3
2+00E	50	140	<0.2	5	3
1+00E	50	120	<0.2	11	8
0+00	90	180	<0.2	28	5
1+00W	15	50	<0.2	2	8
2+00W	50	210	<0.2	11	7
3+00W	50	140	0.2	5	3
4+00W	60	170	<0.2	3	1
5+00W	45	135	<0.2	3	2
6+00W	40	135	0.4	2	2
L2+40S 4+00E	50	195	<0.2	2	1
3+00E	60	180	<0.2	3	2
2+00E	85	160	<0.2	12	3
1+00E	130	115	<0.2	32	6
0+00	30	65	<0.2	9	3
1+00W	30	115	<0.2	3	2

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DATE AUG 17 1979

PROJECT NO 816-1-835

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	ZN PPM	AG PPM	MO PPM	W PPM
2+00W	95	215	<0.2	14	3
3+00W	65	135	<0.2	4	5
4+00W	60	120	<0.2	3	2
5+00W	85	125	<0.2	2	4
6+00W	65	155	<0.2	2	3
L3+60S 4+00E	45	180	<0.2	2	3
2+00E	60	110	<0.2	9	3
1+00E	30	40	0.4	6	2
0+00	45	105	<0.2	20	4
100W	75	105	<0.2	39	8
200W	105	450	<0.2	40	13
300W	110	200	<0.2	15	3
400W	175	135	<0.2	24	7
500W	45	95	0.6	2	2
600W	45	125	0.2	2	2
L480S 6+00W	65	100	1.0	3	4
5+00W	55	120	<0.2	4	3
4+00W	85	115	<0.2	4	5
3+00W	50	95	<0.2	6	6
2+00W	85	310	<0.2	50	8
1+00W	60	105	<0.2	6	4
0+00	50	135	<0.2	6	2
1+00E	105	125	<0.2	9	3
2+00E	50	135	<0.2	4	3
3+00E	55	215	<0.2	6	2
4+00E	65	270	<0.2	5	2
L6+00S 6+00W	95	100	<0.2	1	6
5+00	50	85	<0.2	1	22
4+00	65	115	<0.2	4	4
3+00	65	170	<0.2	6	11
2+00	70	100	<0.2	18	14
1+00	65	110	<0.2	8	4
0+00	70	160	<0.2	7	6
1+00E	45	80	<0.2	8	3
2+00E	35	95	0.2	2	2
3+00E	50	125	0.2	2	1
4+00E	75	160	0.2	2	2
L7+50S 6+00W	80	160	<0.2	2	3
5+00W	55	150	<0.2	2	2
4+00W	90	140	<0.2	4	14

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SHELL CANADA RESOURCES LTD.

DATE AUG 17 1979

PROJECT NO. 816-1-835

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	ZN PPM	AG PPM	MO PPM	W PPM
3+00W	60	160	<0.21	5	3
2+00W	80	335	<0.21	6	14
1+00W	55	150	<0.21	6	3
0+00W	65	155	<0.21	5	4
1+00E	80	190	<0.21	5	3
2+00E	65	200	<0.21	3	1
3+00E	65	255	<0.21	3	1
4+00E	50	520	<0.21	3	1
L8+40S 600W	85	235	<0.21	1	2
500W	50	210	<0.21	2	3
400W	75	235	<0.21	4	5
300W	75	160	<0.21	4	8
200W	80	210	<0.21	3	6
100W	70	190	<0.21	6	2
0+00	90	200	<0.21	3	3
100E	90	440	<0.21	4	4
2+00E	75	215	<0.21	3	1
3+00E	85	440	<0.21	5	1
4+00E	60	380	<0.21	7	2
L9+60S 6+00W	55	250	<0.21	2	3
5+00W	65	215	<0.21	2	2
4+00W	70	270	<0.21	3	4
3+00W	70	220	<0.21	5	11
2+00W	90	190	<0.21	4	13
100W	50	185	<0.21	2	5
0+00	75	260	<0.21	5	2
100E	60	365	<0.21	4	2
200E	65	335	<0.21	4	2
300E	75	570	<0.21	4	4
400E	60	320	<0.21	2	2
L10+80S 6+00W	65	195	0.2	1	2
5+00W	45	230	<0.21	1	12
4+00W	30	135	<0.21	1	2
3+00W	65	185	<0.21	1	4
0+00	55	260	<0.21	2	4
100E	65	220	0.2	4	5
200E	65	255	<0.21	2	4
300E	60	235	<0.21	1	3
400E	80	220	<0.21	1	2
L12+00S 600W	30	90	<0.21	<1	1

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DATE AUG 17 1979

PROJECT NO 816-1-835

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	ZN PPM	AG PPM	MO PPM	W PPM
500W	70	185	<0.2	1	8
400W	75	110	<0.2	2	12
300W	65	180	<0.2	1	5
200W	65	135	<0.2	1	2
100W	65	200	<0.2	1	2
1+00E	40	215	<0.2	2	3
2+00E	70	230	<0.2	2	13
3+00E	55	325	<0.2	1	2
4+00E	80	275	<0.2	1	3

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DATE SEP 17/79
PROJECT NO. 816-1-1047

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	ZN PPM	AG PPM	MO PPM	W PPM
3991KL6+00S6W	24	183	0.8	3	2
7W	46	281	0.7	3	4
8W	35	278	0.5	8	14
9W	49	700	0.4	30	15
10W	174	330	0.3	6	12
L7+20S6W	33	352	0.6	32	14
7W	40	186	0.3	2	1
8W	35	155	0.3	3	20
9W	79	210	0.6	7	8
10W	53	296	0.5	7	8
L8+40S6W	23	235	0.6	8	1
7W	19	99	0.4	10	1
8W	26	204	1.0	37	4
9W	74	510	<0.2	48	14
10W	17	84	0.2	5	1
L9+60S6W	23	132	0.4	6	2
7W	17	61	0.8	850	125
8W	22	135	0.3	12	5
9W	22	197	<0.2	13	15
10W	51	173	<0.2	7	5
L10+80S6W	12	75	<0.2	5	1
7W	10	85	0.5	6	1
8W	20	81	0.5	6	4
9W	16	91	0.5	8	10
10W	26	106	0.6	10	4
L12+00S6W	16	105	0.7	38	3
7W	25	82	1.1	55	8
8W	15	93	<0.2	3	8
9W	21	92	0.3	14	14
10W	64	100	0.2	6	1
18+00S14W	59	100	<0.2	30	14
15W	52	276	0.2	40	35
16W	102	151	<0.2	61	95
17W	83	268	0.2	31	75
18W	86	198	<0.2	32	35
19+20S14W	95	255	<0.2	30	2
15W	70	383	<0.2	20	8
16W	88	216	<0.2	21	15
17W	84	203	<0.2	25	45
18W	114	189	0.3	29	12

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DATE SEP 17/79

PROJECT NO. 816-1-1047

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	CU PPM	ZN PPM	AG PPM	MO PPM	W PPM
3991N20+40S14W	122	244	0.3	33	35
15W	46	213	0.5	10	1
16W	70	377	0.4	21	25
17W	94	320	0.4	42	400
18W	41	309	0.2	7	25
21+60S14W	136	177	0.3	39	25
15W	47	429	<0.2	10	12
16W	39	210	0.3	5	27
17W	60	132	0.2	4	14
18W	83	370	0.3	8	20
22+80S14W	65	204	<0.2	40	20
15W	95	158	0.4	13	15
16W	58	221	0.7	4	14
17W	44	300	0.2	4	25
18W	85	260	0.9	10	40

CTA MEMBER CANADIAN TESTING ASSOCIATION

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Section III: Assay Results

CHEMEX

CALGARY 2021 - 41 AVE. N.E. CALGARY, CANADA T2E 6P2
TELEPHONE (403) 276-9627 TELEX 038-25541
EDMONTON 6112 DAVIES ROAD, EDMONTON, CANADA T6E 4M9
TELEPHONE (403) 465-9877 TELEX 037-41596

CERTIFICATE OF ANALYSIS

• MINERAL • GAS • WATER • OIL • SOILS • VEGETATION • ENVIRONMENTAL ANALYSIS

SHELL CANADA RESOURCES LTD.

RE: YMIR 3991K

DATE NOV. 22/79

PROJECT NO. 816-1-1317

GEOCHEMICAL ANALYSES

SAMPLE NUMBER	MOS2 %	W PPM	WO3 %
40	<0.01	1	
41	<0.01	200	
42	<0.01	25	
43	<0.01	1	
44	0.01	125	
45	<0.01	1	
46	<0.01	200	
47	<0.01	2	
49	<0.01	-	0.08
50	<0.01	4	
51	<0.01	14	
52	<0.01	15	
53	<0.01	14	
54	<0.01	1	
55	<0.01	1	
56	<0.01	14	
57	<0.01	1	
58	0.01	175	
59	<0.01	200	
60	<0.01	100	
61	0.01	12	
62	<0.01	25	
63	0.01	80	
64	<0.01	20	
65	<0.01	35	
66	<0.01	35	
67	<0.01	1	
68	<0.01	12	
69	<0.01	12	
70	<0.01	1	
71	<0.01	17	

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APPENDIX III

COST DISTRIBUTION

Distribution of Costs: Ymir Project, 3991K, Stewart Claims

The costs to the claims have been subdivided into specific costs, those costs pertaining to specific claims, and general costs, those costs pertaining to the entire claim group.

Specific Costs
- Labour
  - detailed geological mapping
  - soil sampling
  - magnetometer survey
  - EM (crone) survey
- Soil analytical costs
- Geophysical surveys
- Linecutting

General Costs
- Labour
  - reconnaissance mapping
  - silt sampling
  - trench sampling
  - travel
  - prospecting
  - office (rain)
  - de/mobilization
- Field equipment
- Office materials
- Fuel and lubricants
- Tools
- Drafting supplies
- Camp materials
- Orthophoto preparation
- General contractors
- Silt analytical costs
- Rock analytical costs
- Contract transportation
- Communications
- Travel allowance

In the case of specific costs, allotments have been made on the basis of % gridded areas/claim according to Table 1. General costs have been allotted according to % total area/claim on the basis of Table 2. Final figures appear in Tables 6, 7, 8, and 9 inclusive.

Table 1

Claim	Total line cut (m)	% total line
Stewart 1	6,000	6.47
Stewart 2	36,200	37.97
Stewart 3	29,200	31.50
Stewart 4	9,000	9.71
Stewart 7	600	0.73
Stewart 8	5,600	6.04
Stewart 9	6,100	7.58
Total	92,700	100.00

Table 2

Claim	Units	Acres	Hectares (25/unit)	% area
Stewart 1	20	1,235.60	500	9.53
Stewart 2	20	1,235.60	500	9.53
Stewart 3	20	1,235.60	500	9.53
Stewart 4	6	370.68	150	2.86
Stewart 5	20	1,235.60	500	9.53
Stewart 6	16	988.48	400	7.62
Stewart 7	12	741.36	300	5.72
Stewart 8	20	1,235.60	500	9.53
Stewart 9	20	1,235.60	500	9.53
Stewart 10	20	1,235.60	500	9.53
Stewart 11	20	1,235.60	500	9.53
Stewart 12	8	494.24	200	3.81
Stewart 13	4	247.12	100	1.91
Reverted Crown Grants				
Houlton L4626	1	46.00	18.61	0.35
Princess Nol L4627	1	51.64	20.90	0.40
Maggie L5144	1	31.00	12.54	0.24
Royal L5322	1	51.65	20.90	0.40
Free Silver L2902) Ruby L2904)	1	55.96	22.65	0.43

Cost Breakdown

1. Labour

- company		$16,022.82
- non company		5,209.29
	Total	21,323.11

From Table 3, the time distribution for the 1979 field season is:

Table 4

Classification	Abbrev(1)	Man Days	% Total Field Time	Total Expenditures
General				
De/Mobilization	M	22	5.38	1,142.07
Recon. geol. mapping	Gr	82	20.28	4,308.71
Prospecting	P	46	11.25	2,387.96
Office, Rain	O	19	4.64	986.33
Silt sampling	SS	6	1.47	311.49
Trench sampling	T	26	6.36	1,349.72
Travel	Tr	19	4.64	986.33
Specific				
Detailed geol. mapping	Gd	119	29.09	6,177.55
Soil sampling	S	25	6.11	1,297.80
Magnetometer survey	Ma	36	8.80	1,868.84
EM Survey	EM	8	1.96	415.30

(1) See abbreviations on Table 3.

2. Field Equipment

Items included are: axes
flagging tape
compasses
field testing kits
etc.

5,209.29

3. Office Materials

Items included are: pencils
pens
notebooks

164.91

4. Fuel and Lubricants

Items included are: stove oil
gasoline
naptha

126.62

5. Tools

Items included are: wrenches

38.70

6. Drafting Supplies

Items included are: mylar film
drafting pens
squares
etc.

101.34

7. Camp Supplies

Items included are: tents
frames
lumber
groceries
etc.

7,177.79

8. Orthophoto Preparation

Item cost: 18,225.00

9. General Contractors

Items included are: radio telephone
greyhound bus
courier service

1,306.70

10. Analytical Costs

Because assays were made on samples taken from all points on the property, no attempt was made to relegate costs to specific claims or groupings. Therefore all assay costs are classified under a general heading.

General Assays

Table 5

# of Units	Analysis	Cost/Unit	Total Expense
10	Mo	6.00	60.00
13	Pb	5.50	71.50
9	WO_3	9.00	81.00
1	Zn	5.50	5.50
1	Pb,Zn	11.50	11.50
13	Au,Ag	9.00	117.00
2	Au	12.00	12.00
3	Sn	9.00	27.00
2	Ag	9.00	18.00
3	Cu	5.00	15.00
32	MoW	15.00	480.00
		Total	893.50

Supplies for trench sampling 431.57

Silt Sampling

# of Units	Analysis	Cost/Unit	Total Expense
42	Mo,Ag,Zn,Sn,W,F,Cu	30.38	1,276.04

Specific
Soil Sampling

# of Units	Analysis	Cost/Unit	Total Expense
1009	Cu,Zn,Ag,Mo,W	4.49	4,530.40

11. Geophysics			
	Items included are:	magnetometer rental base station rental	
			3,021.44
12. Linecutting			
	Service item cost:		18,936.05
13. Contract Transportation			
	Items included are:	4 wheel drive truck rental gasoline, oil maintenance	
			5,101.21
14. Communications			
	Items included are:	long distance tolls courier services	
			478.76
15. Travel			
	Items included are:	crew transport to and from work area hotel accomodations meals	
			3,621.61
		Total	$90,674.72

Table 3

Time Distribution 1979 Field Season (crew)

May	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Gordon W Turner																												M	M	M	Gr
Brian N. Meyer																												M	M	M	Gr
Richard A Wierzbicki																												M	M	M.	Gr
Jack N Denny																													M	M	P
Eric W Denny																													M	M	P
Douglas J Brownlee																												M	M	M	Gr

June	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Gordon W Turner	Gr	—	Tr	x	x	x	x	x	x	Tr	Ar	—	O	Gr	—	—	—	—	—	—	—	O	Gr	—	S	Gr	SS	O	SS	X
Brian N Meyer	Gr	—	—	—	—	—	—	—	—	—	—	—	O	Gr	—	—	—	—	—	—	—	O	Gr	—	S	Gr	SS	SS	S	X
Richard A Wierzbicki	Gr	—	—	—	—	—	—	—	—	—	—	—	O	Gr	—	—	—	—	—	—	—	—	—	—	S	Gr	SS	S		X
Jack N Denny	Gr	P	—	—	—	—	—	—	—	—	—	—	O	P	—	—	—	—	—	—	—	—	—	—	S	P	SS	S	SS	
Eric W Denny							P	—	—	—												P								
Douglas J Brownlee	Gr	—	—	—	—	—	—	—	—	—	—	—	—	Tr																

July	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Gordon W Turner	Gr	O	S	—	SS	Gd	S	Gd	—	—	O	S	—	Gd	—	—	—	x		X	S	Gd	—	—	Ma	Gd	—	—	O	Gd	—
Brian N. Meyer	Gr	O	S	—	Gd	S	—	Gd	—	—	O	S	—	Gd	—	—	—	—	—	X	S	—	Gd	O	O	Gd	—	—	—	—	—
Richard A Wierzbicki	Gr	O	S	—	Gd	—	S	Gd	—	—	O	S	x	X	X	Gd	—	—	—	S	—	—	Ma	—	—	—	—	—	—	—	—
Jack N Denny																P		P	—	—											
Eric W Denny																P		P		P		P									
Andy Olney												Tr	Ma	Tr																	
Peter P Slominski																	Tr	Ma	—	—	—	—	—	—	—	—	—	—	—	—	—

Table 3 (con't)

August	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Gordon W Turner	Gd					X	O	Gd						O	Gd	X	←			Gd				Tr	X	X	X	X	X	X	X
Brian K. Meyer	Gd													O	Gd							O	Gd								Tr
Richard A Wozbeck	Ma						Gd							O	Gd	X	S	S	S	Gd											Tr
Jack N Denny									P										P		P										
Eric W Denny									P										P		P										
Peter J Slominski	Ma						Tr																								

September	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Gordon W Turner	X	X	X	O		Tr	Em				Gd	M	Tr									Gd	Gd							
Brian K Meyer	X	X	X	Tr	Gd								Tr																	
Jack N Denny				P								M																		
Eric W Denny				P								M																		
Andy Olney						Tr	Em				Tr																			
[illegible] Nickelson																														

October	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Gordon W Turner															Tr	T	T	Tr												
Jack Denny																														
Ken Nickelson																														
Andy Olney															Tr	T	T	Tr												

Table 6: Specific Cost/Claim

Claim	% total grid area/ claim (1)	Soil Analytical Costs (2)	Geophys. Surveys	Linecutting	Labour (3)				Totals
					Detailed Geology	Soil Sampling	Magnetometer Survey	EM Survey	
Stewart 1	6.47	293.12	195.49	1,239.00	399.69	83.97	120.91	26.87	2,359.05
Stewart 2	37.97	1,720.20	1,147.24	7,268.80	2,345.62	492.77	709.61	157.69	13,841.93
Stewart 3	31.50	1,427.08	951.75	6,029.80	1,945.93	408.81	588.68	130.82	11,482.87
Stewart 4	9.71	439.90	293.38	1,858.50	599.84	126.02	181.44	40.33	3,539.41
Stewart 7	0.73	33.07	22.07	123.90	45.10	9.47	13.65	3.03	250.29
Stewart 8	6.04	273.64	182.49	1,156.40	373.12	78.39	112.89	25.08	2,202.01
Stewart 9	7.58	343.40	229.02	1,259.65	468.25	98.37	141.66	31.48	2,571.83
Totals	100.00	4,530.41	3,021.44	18,936.05	6,177.55	1,297.80	1,868.84	415.30	36,247.39

(1) from Table 1
(2) from Table 5
(3) from Table 4

Table 7: General Costs/Claim

Claims (1)	Stewart 1	Stewart 2	Stewart 3	Stewart 4	Stewart 5	Stewart 6	Stewart 7	Stewart 8	Stewart 9	Stewart 10	Stewart 11	Stewart 12	Stewart 13	Houlton	Princess #1	Maggie	Royal	Ruby/ Free Silver	Total
Labour	1,093.34	1,093.34	1,093.34	382.12	1,093.34	874.21	656.23	1,093.34	1,093.34	1,093.34	1,093.34	437.10	219.13	40.15	45.89	29.85	45.89	49.33	11,472.62
Field Equipment	381.77	381.77	381.77	114.57	381.77	305.26	229.14	381.77	381.77	381.77	381.77	152.63	76.51	14.02	16.02	10.44	16.02	17.22	4,005.99
Office Materials	15.71	15.71	15.71	4.72	15.71	12.57	9.43	15.71	15.71	15.71	15.71	6.28	3.15	0.58	0.66	0.48	0.66	0.71	164.91
Fuel & Lubricants	12.07	12.07	12.07	3.62	12.07	9.65	7.24	12.07	12.07	12.07	12.07	4.82	2.42	0.44	0.51	0.30	0.52	0.54	126.62
Tools	3.69	3.69	3.69	1.44	3.69	2.95	2.21	3.69	3.69	3.69	3.69	1.47	0.74	0.13	0.15	0.09	0.15	0.17	38.70
Drafting Supplies	9.66	9.66	9.66	2.90	9.66	7.72	5.80	9.66	9.66	9.66	9.66	3.86	1.94	0.35	0.40	0.24	0.41	0.44	101.34
Camp Materials	684.04	684.04	684.04	205.28	684.04	546.94	410.57	684.04	684.04	684.04	684.04	273.47	137.09	25.12	28.71	17.56	28.71	33.19	7,177.76
Orthophoto Preparation	1,737.17	1,737.17	1,737.17	521.15	1,737.17	1,389.74	1,042.30	1,737.17	1,737.17	1,737.17	1,737.17	694.87	347.43	64.66	72.61	43.57	72.64	78.69	18,225.00
General Contractors	124.53	124.53	124.53	37.72	124.53	99.57	74.74	124.53	124.53	124.53	124.53	49.78	24.96	4.57	5.23	3.14	5.23	5.62	1,306.70
Analytical Costs																			
Silts	121.61	121.61	121.61	36.49	121.61	97.23	73.23	121.61	121.61	121.61	121.61	48.62	24.37	4.47	5.10	3.06	5.10	5.49	1,276.04
Assays	85.63	85.63	85.63	25.70	85.63	68.47	51.39	85.63	85.63	85.63	85.63	34.40	17.16	3.14	3.59	2.16	3.59	3.86	898.50
General	41.13	41.13	41.13	12.34	41.13	32.89	24.69	41.13	41.13	41.13	41.13	16.44	8.24	1.51	1.73	1.10	1.73	1.86	431.57
Contract Transportation	486.14	486.14	486.14	145.89	486.14	383.71	291.79	486.14	486.14	486.14	486.14	195.45	97.43	17.85	20.40	12.24	20.40	21.93	5,101.21
Communications	45.63	45.63	45.63	13.69	45.63	36.48	27.38	45.63	45.63	45.63	45.63	18.24	9.14	1.68	1.91	1.15	1.99	2.06	478.76
Travel Allowance	344.78	344.78	344.78	103.58	344.78	275.97	210.75	344.78	344.78	344.78	344.78	137.98	69.17	12.68	14.49	8.69	14.49	15.57	3,621.61
Totals	5,186.90	5,186.90	5,186.90	1,556.67	5,186.90	4,148.36	3,116.89	5,186.90	5,186.90	5,186.90	5,186.90	2,074.32	1,038.88	191.35	217.41	134.04	217.53	236.68	54,427.33

(1) % area determined from Table 1

Table 8: Total Costs Per Claim: Stewart Group, 1979

Claim	General Costs(1)	Specific Costs(2)	Total
Stewart 1	5,186.90	2,359.05	7,545.95
Stewart 2	5,186.90	13,841.93	19,028.83
Stewart 3	5,186.90	11,482.87	16,669.77
Stewart 4	1,556.67	3,539.41	5,096.08
Stewart 5	5,186.90		5,186.90
Stewart 6	4,148.36		4,148.36
Stewart 7	3,116.89	250.29	3,367.18
Stewart 8	5,186.90	2,202.01	7,388.91
Stewart 9	5,186.90	2,571.83	7,758.73
Stewart 10	5,186.90		5,186.90
Stewart 11	5,186.90		5,186.90
Stewart 12	2,074.32		2,074.32
Stewart 13	1,038.88		1,038.88
Reverted Crown Grants			
Houlton L4626	191.35		191.35
Princess No. 1 L4627	217.41		217.41
Maggie L5144	134.04		134.04
Royal L5322	217.53		217.53
Ruby/Free Silver L2902/2904	236.68		236.68
Totals	54,427.33	36,247.39	90,674.72

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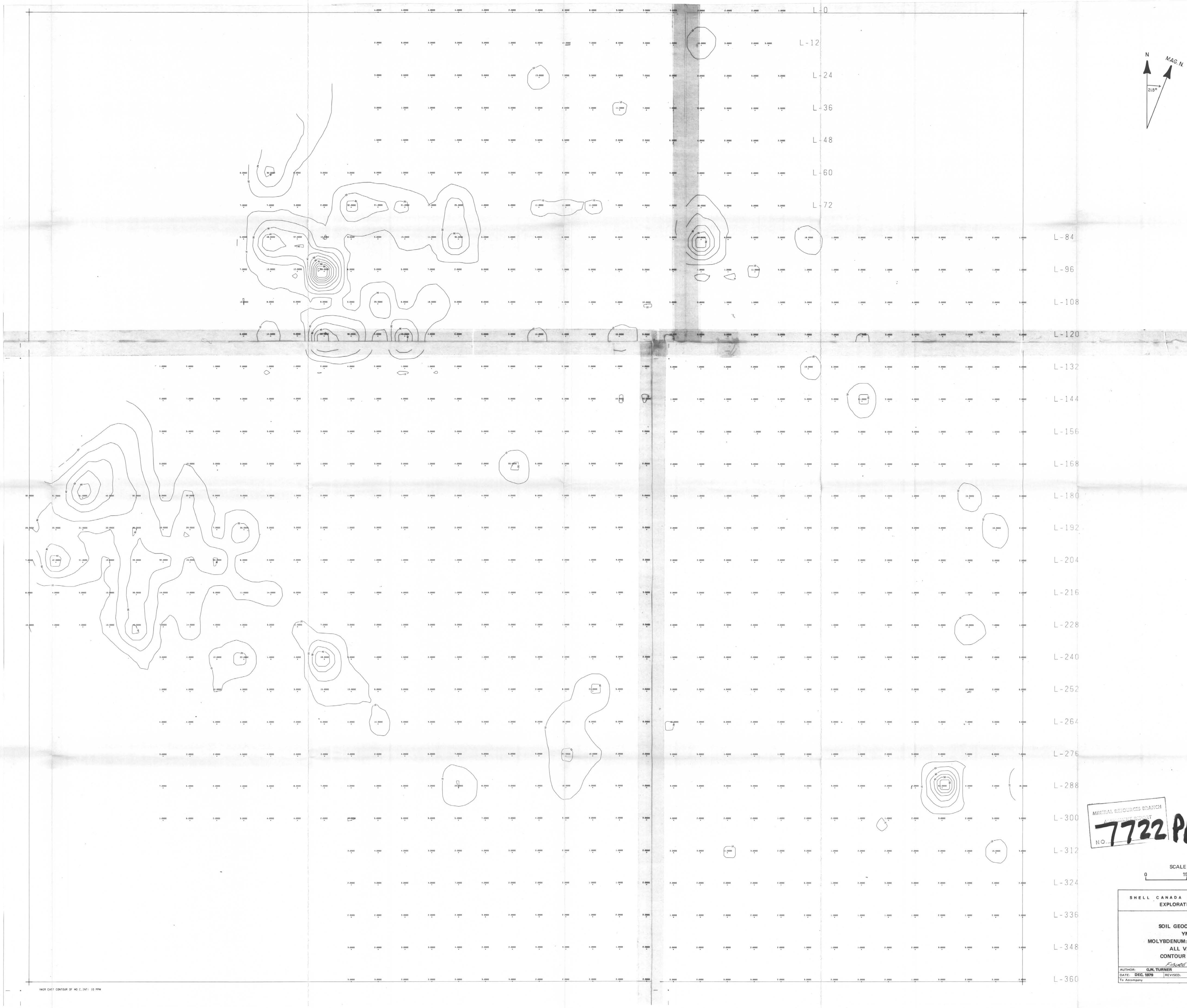


SCALE 1:5000

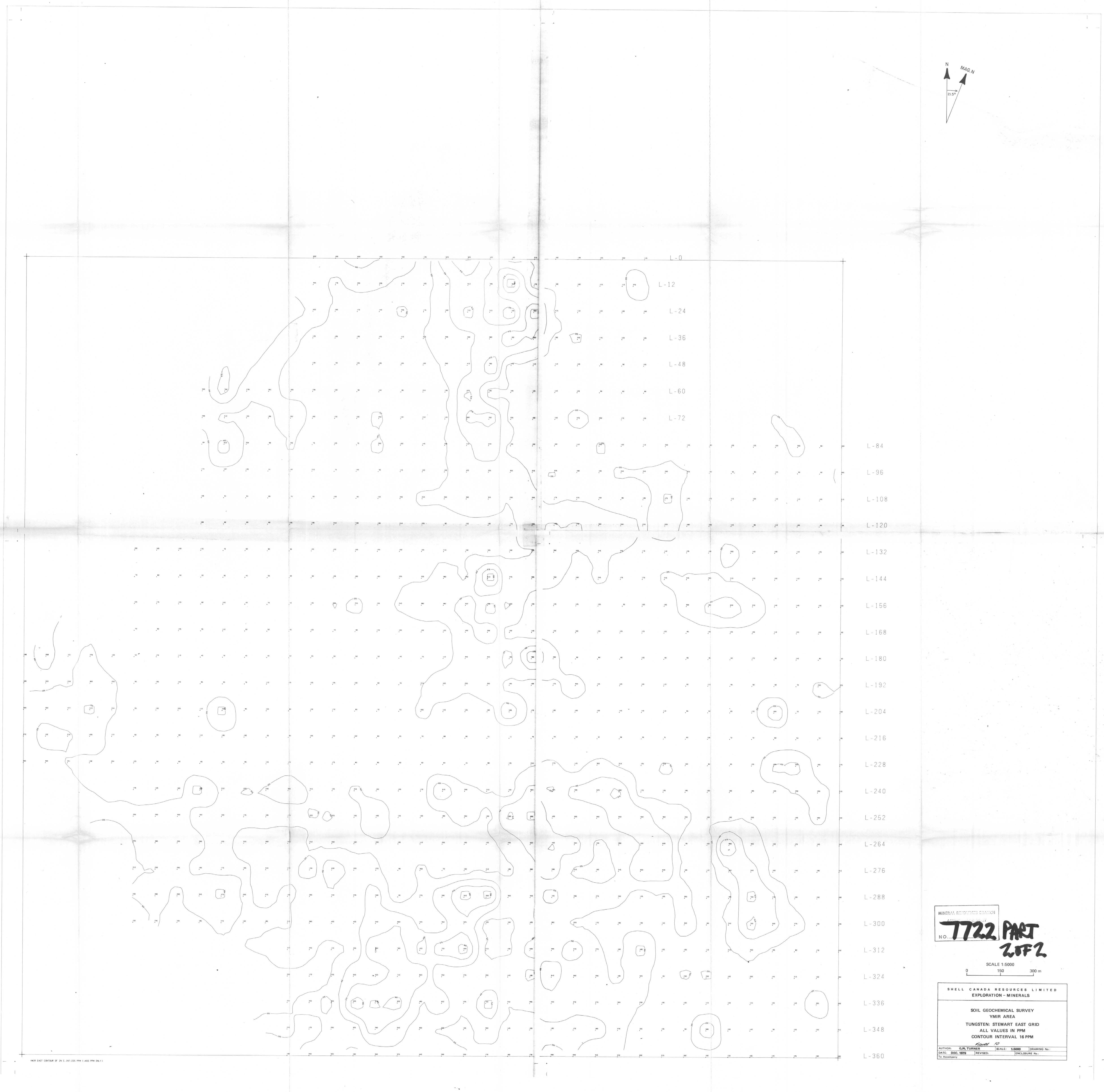
0 150 300 m

SHELL CANADA RESOURCES LIMITED
EXPLORATION - MINERALS

SOIL GEOCHEMICAL SURVEY
YMIR AREA
MOLYBDENUM: STEWART EAST GRID
ALL VALUES IN PPM
CONTOUR INTERVAL 7 PPM

FIGURE 9

AUTHOR: G.W. TURNER	SCALE: 1:5000	DRAWING No.:
DATE: DEC. 1979	REVISED:	ENCLOSURE No.:
To Accompany		



SCALE 1:5000

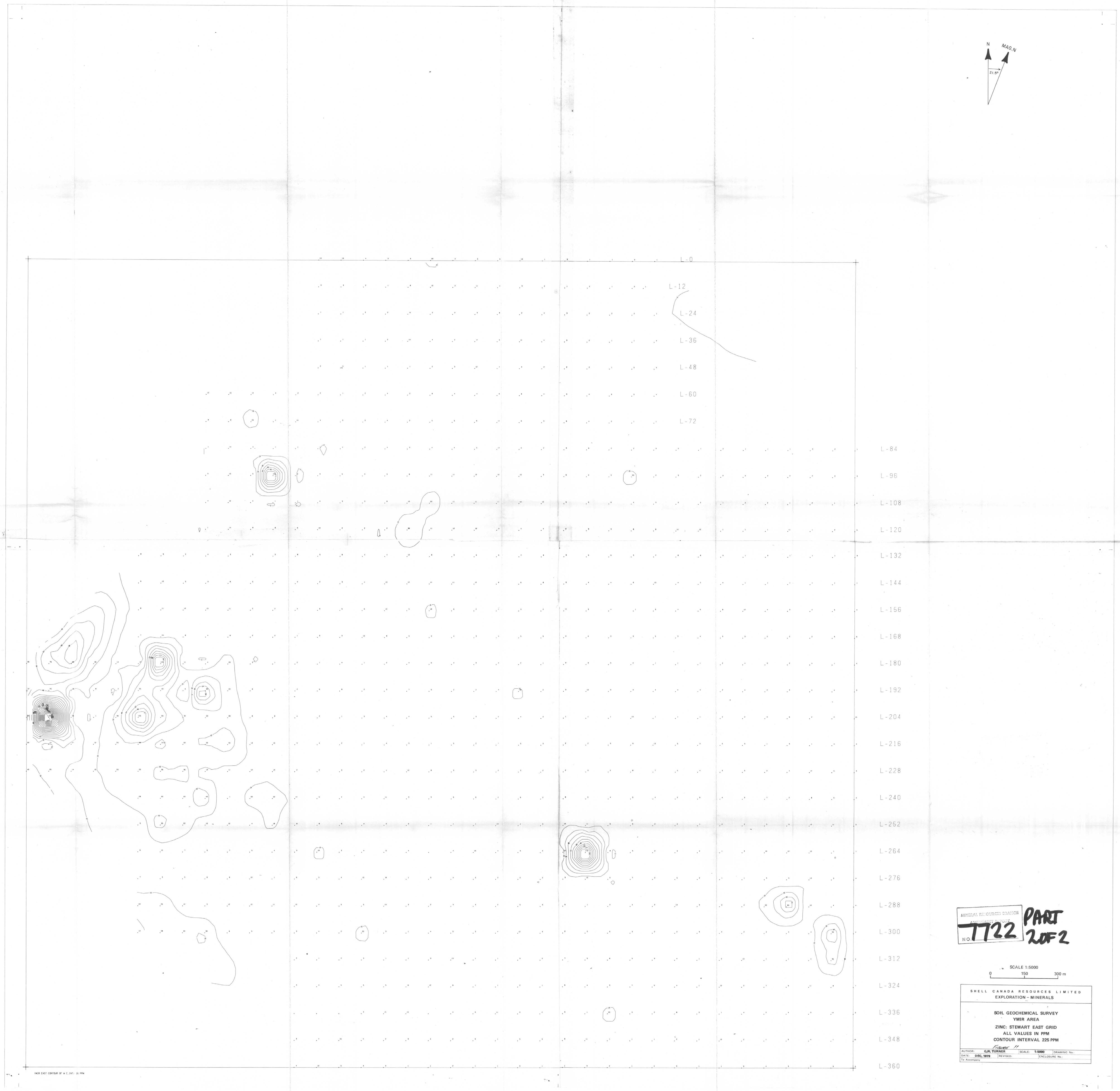
0 150 300 m

SHELL CANADA RESOURCES LIMITED
EXPLORATION - MINERALS

SOIL GEOCHEMICAL SURVEY
YMIR AREA
TUNGSTEN: STEWART EAST GRID
ALL VALUES IN PPM
CONTOUR INTERVAL 16 PPM

Figure 10

AUTHOR: G.W. TURNER		SCALE: 1:5000	DRAWING No.:
DATE: DEC. 1979	REVISED:		ENCLOSURE No.:
To Accompany			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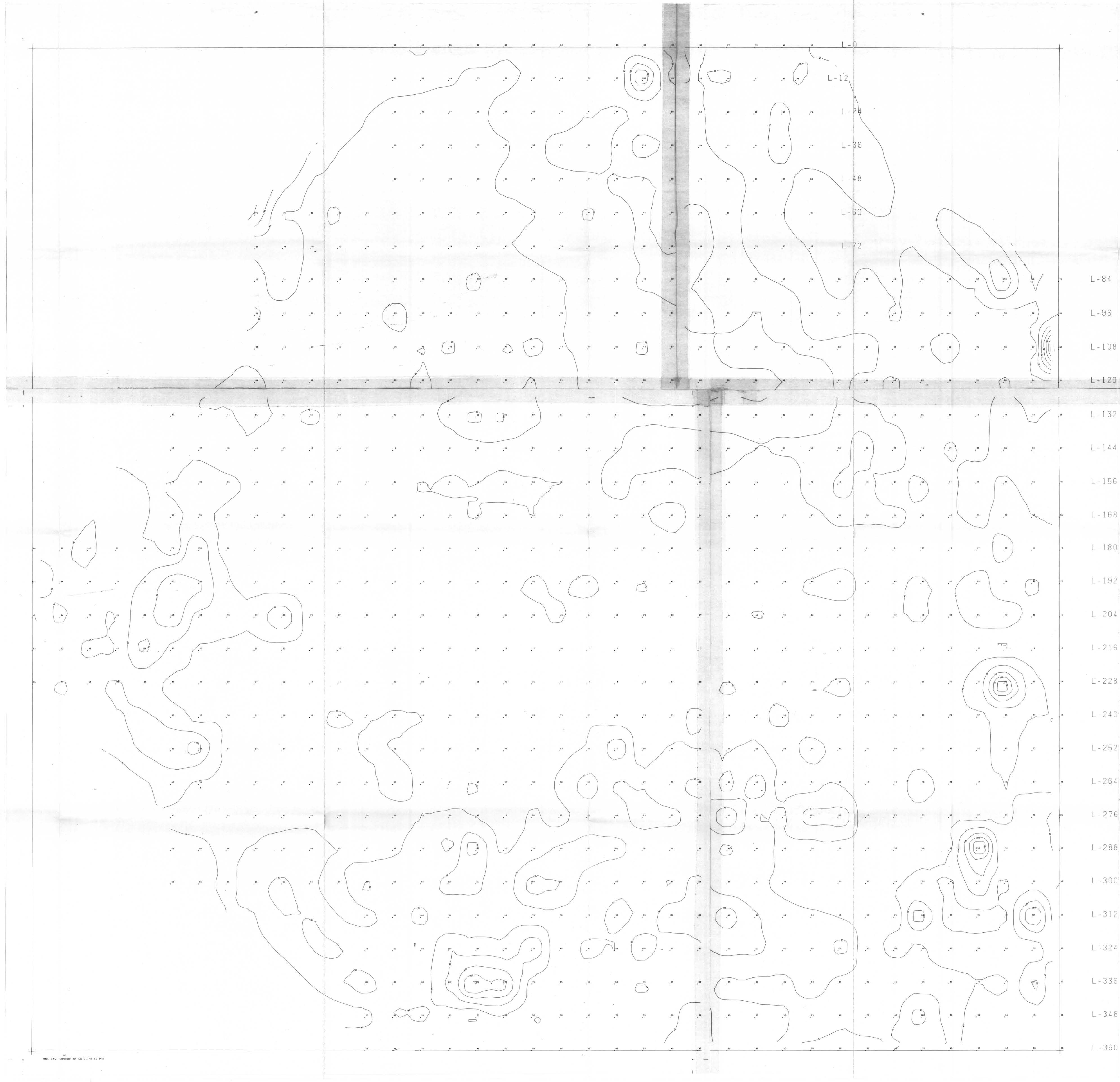
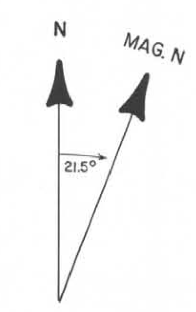
MAG.N
21.5°
L-0
L-12
L-24
L-36
L-48
L-60
L-72
L-84
L-96
L-108
L-120
L-132
L-144
L-156
L-168
L-180
L-192
L-204
L-216
L-228
L-240
L-252
L-264
L-276
L-288
L-300
L-312
L-324
L-336
L-348
L-360
MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 7722
PART 2 OF 2
SCALE 1:5000
0
150
300 m
SHELL CANADA RESOURCES LIMITED
EXPLORATION – MINERALS
SOIL GEOCHEMICAL SURVEY
YMIR AREA
ZINC: STEWART EAST GRID
ALL VALUES IN PPM
CONTOUR INTERVAL 225 PPM
Figure 11
AUTHOR: G.W. TURNER
SCALE: 1:5000
DRAWING No.:
DATE: DEC. 1979
REVISED:
ENCLOSURE No.:
To Accompany





SCALE 1:5000

0 150 300 m

SHELL CANADA RESOURCES LIMITED
EXPLORATION – MINERALS

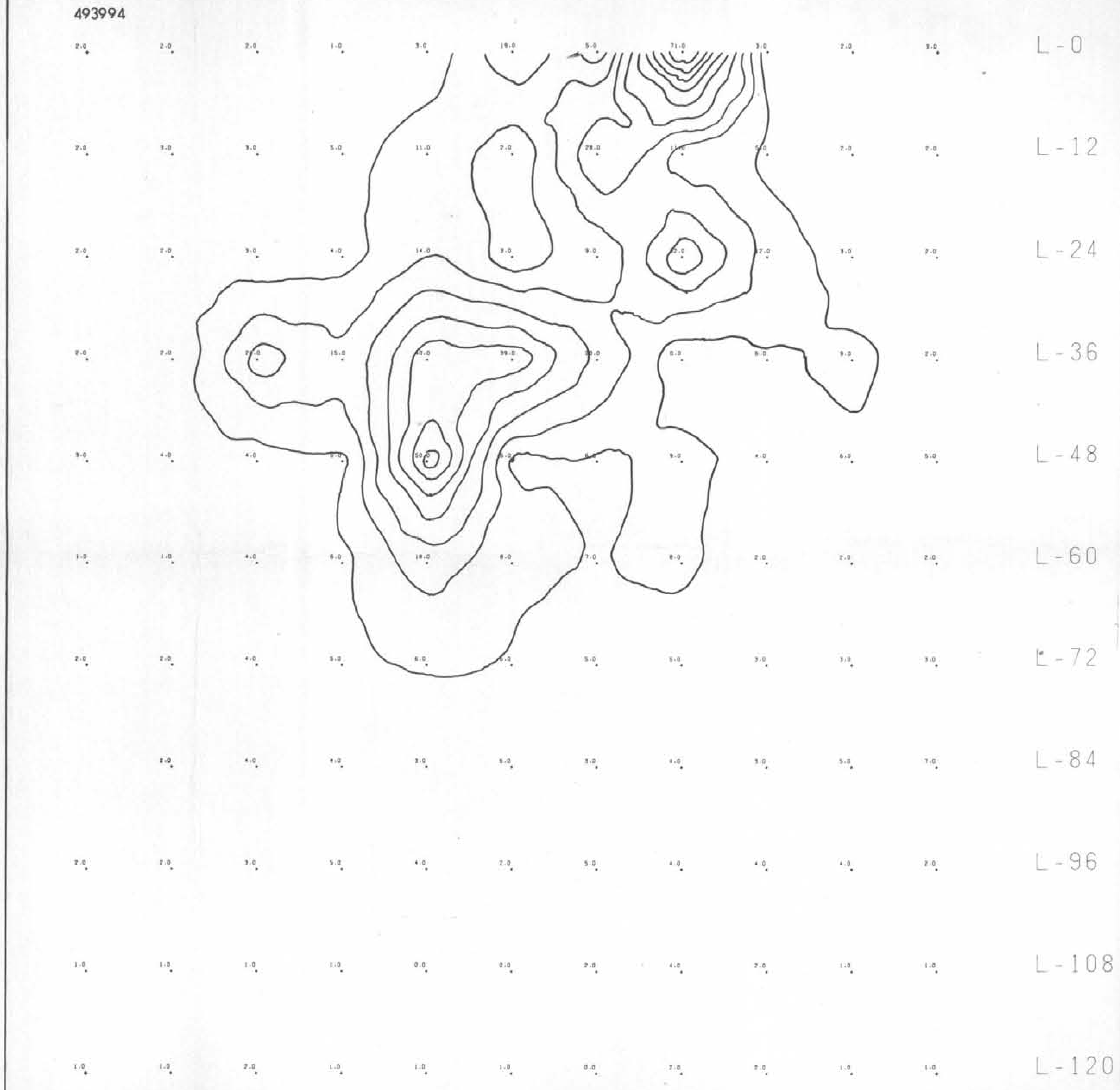
SOIL GEOCHEMICAL SURVEY
YMIR AREA
COPPER: STEWART EAST GRID
ALL VALUES IN PPM
CONTOUR INTERVAL: 45 PPM

FIGURE 12

AUTHOR: G.W. TURNER	SCALE: 1:5000	DRAWING No.:
DATE: DEC. 1979	REVISED:	ENCLOSURE No.:
To Accompany		

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 7722

PART 2 OF 2



N
MAG. N 21½°

CONTOUR INTERVAL: 7 PPM
ALL VALUES IN PPM

SCALE 1:5000
0 150 300 m

SHELL CANADA RESOURCES LIMITED
EXPLORATION – MINERALS

SOIL GEOCHEMICAL SURVEY

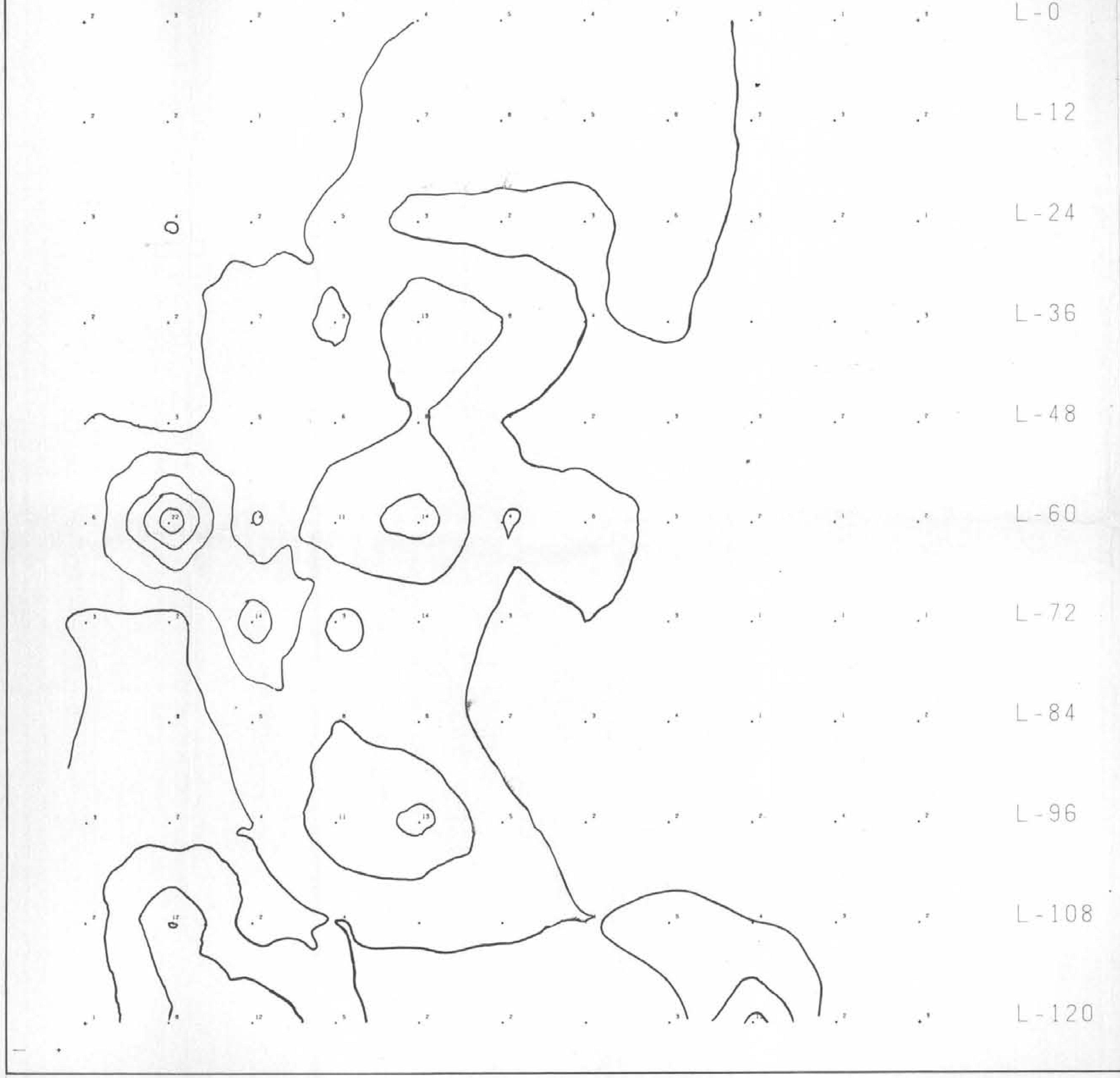
YMIR AREA

MOLYBDENUM: STEWART WEST GRID

FIGURE 1B

AUTHOR: G. TURNER	SCALE: 1:5000	DRAWING No.:
DATE: DEC. '79	REVISED:	ENCLOSURE No.:
To Accompany		

493993



PART 2 OF 2

N
MAG. N
21½°

CONTOUR INTERVAL: 4 PPM
ALL VALUES IN PPM

SCALE 1:5000
0 150 300 m

SHELL CANADA RESOURCES LIMITED
EXPLORATION – MINERALS

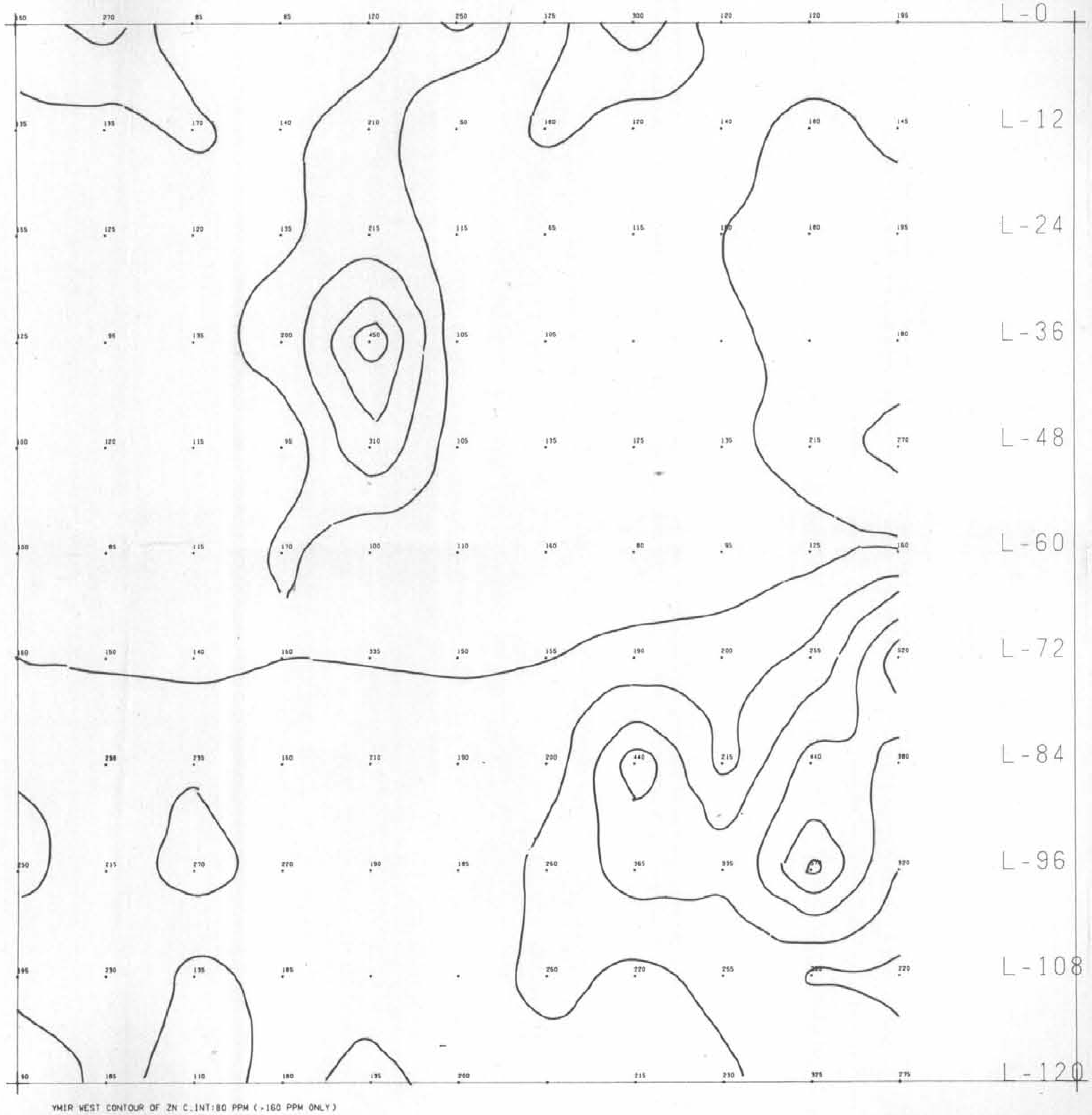
SOIL GEOCHEMICAL SURVEY
YMIR AREA
TUNGSTEN: STEWART WEST GRID

FIGURE 14

AUTHOR: G. TURNER	SCALE: 1:5000	DRAWING No.:
DATE: DEC. '79	REVISED:	ENCLOSURE No.:
To Accompany		

493118

PART 2 OF 2



CONTOUR INTERVAL: 80 PPM
ALL VALUES IN PPM

SCALE 1:5000
0 150 300 m

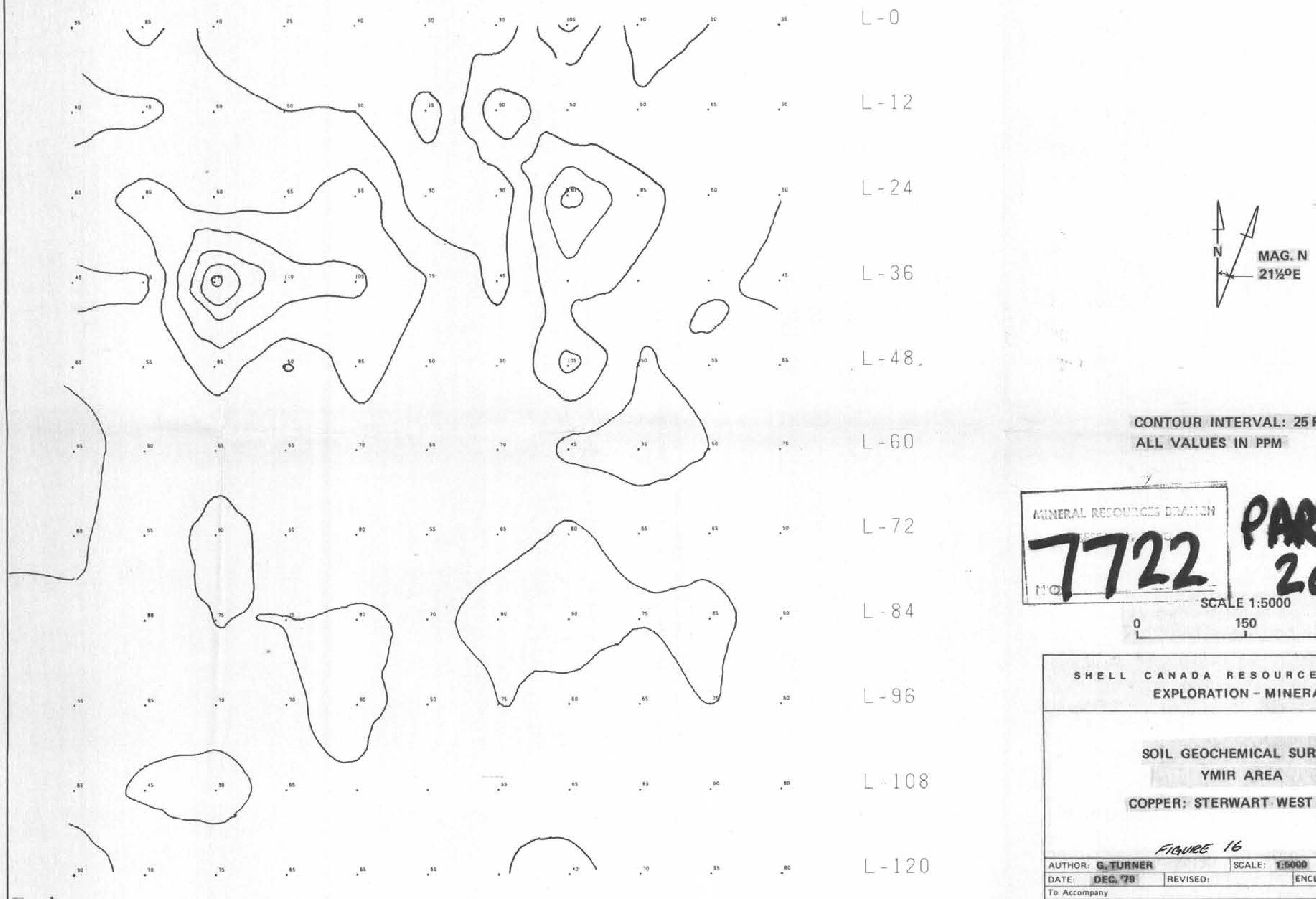
SHELL CANADA RESOURCES LIMITED
EXPLORATION - MINERALS

SOIL GEOCHEMICAL SURVEY
YMIR AREA
ZINC: STEWART WEST GRID

FIGURE 15

AUTHOR: G. TURNER	SCALE: 1:5000	DRAWING No.:
DATE: DEC. '79	REVISED:	ENCLOSURE No.:
To Accompany		

494773



CONTOUR INTERVAL: 25 PPM
ALL VALUES IN PPM

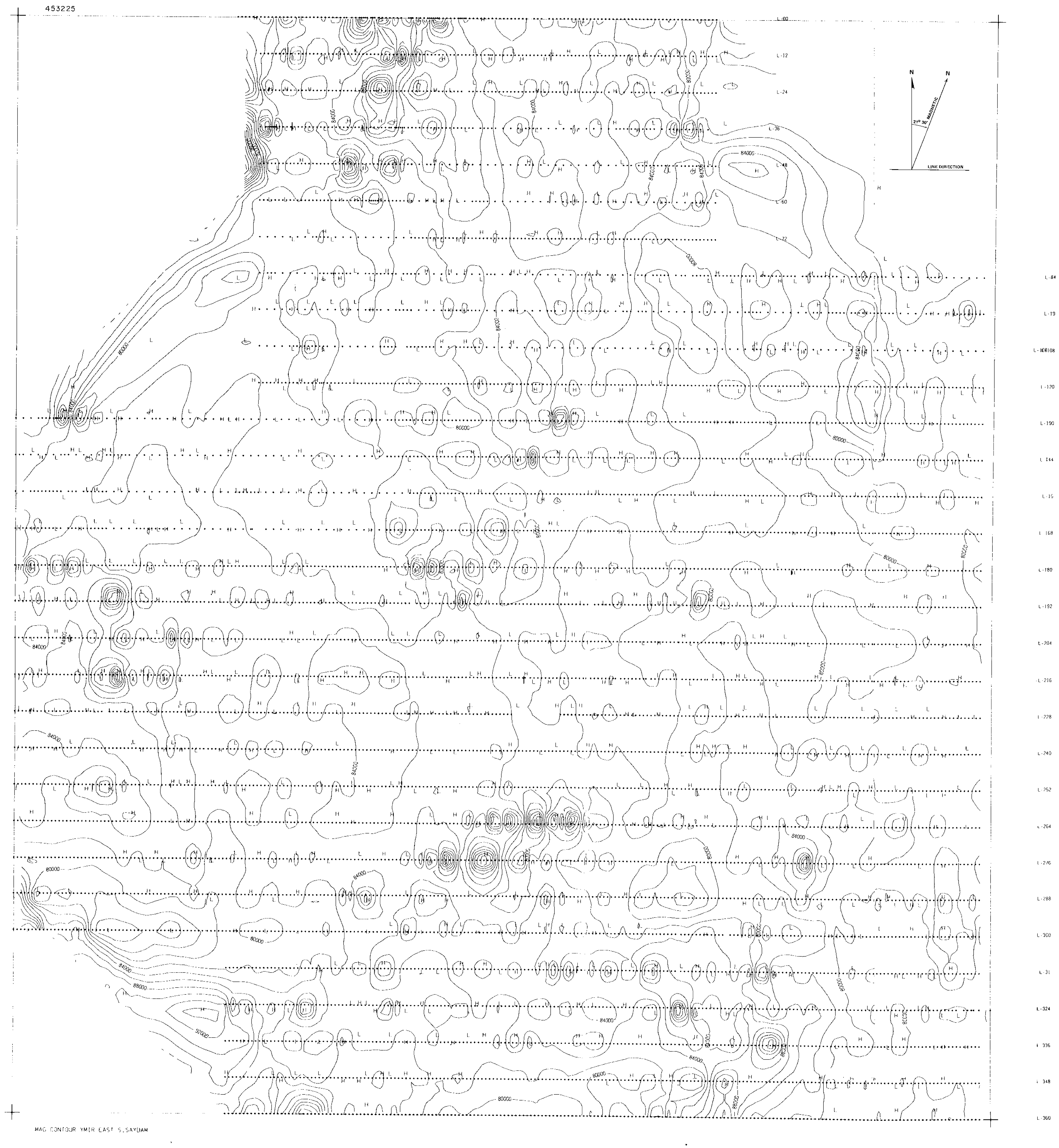
SCALE 1:5000
0 150 300 m

SHELL CANADA RESOURCES LIMITED
EXPLORATION – MINERALS

SOIL GEOCHEMICAL SURVEY
YMIR AREA
COPPER: STERWART WEST GRID

FIGURE 16

AUTHOR: G. TURNER	SCALE: 1:5000	DRAWING No.:
DATE: DEC. '79	REVISED:	ENCLOSURE No.:
To Accompany		



7722 PART 2 OF 2

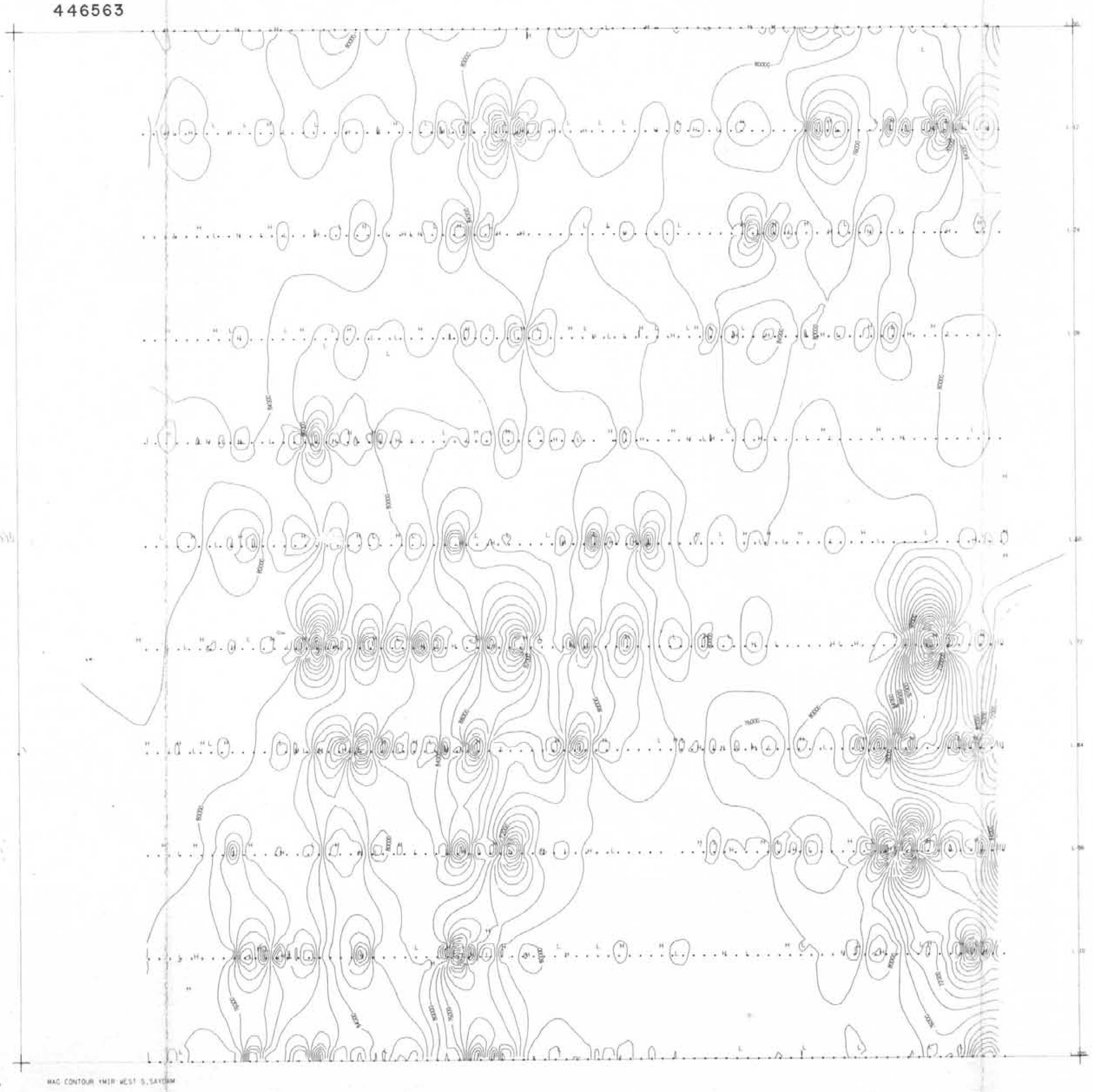
(FINAL CONTOUR VALUE: 50.000 GAMMAS SUBTRACTED FROM FIELD READINGS AND MULTIPLIED BY 10)

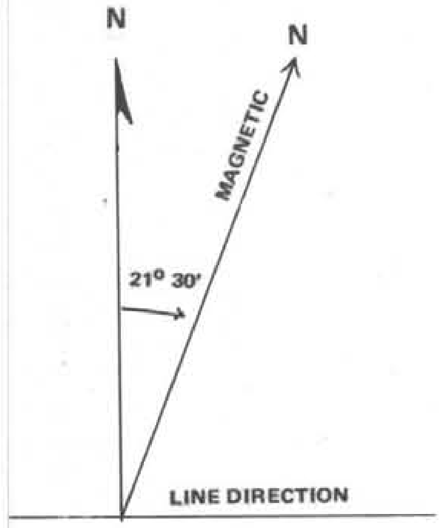
SHELL CANADA RESOURCES LIMITED
EXPLORATION – MINERALS

YMIR PROJECT
No. 3991-K
YMIR EAST GRID
CONTOUR OF TOTAL FIELD MAGNETICS
CONTOUR INTERVAL: 200 GAMMAS
SCALE: 1:5000

Figure 17   100 M

AUTHOR:	S. SAYDAM	SCALE:	1:5000	DRAWING No.:	
DATE:	DEC. '78	REVISED:		ENCLOSURE No.:	
To Accompany					





PART 2 OF 2

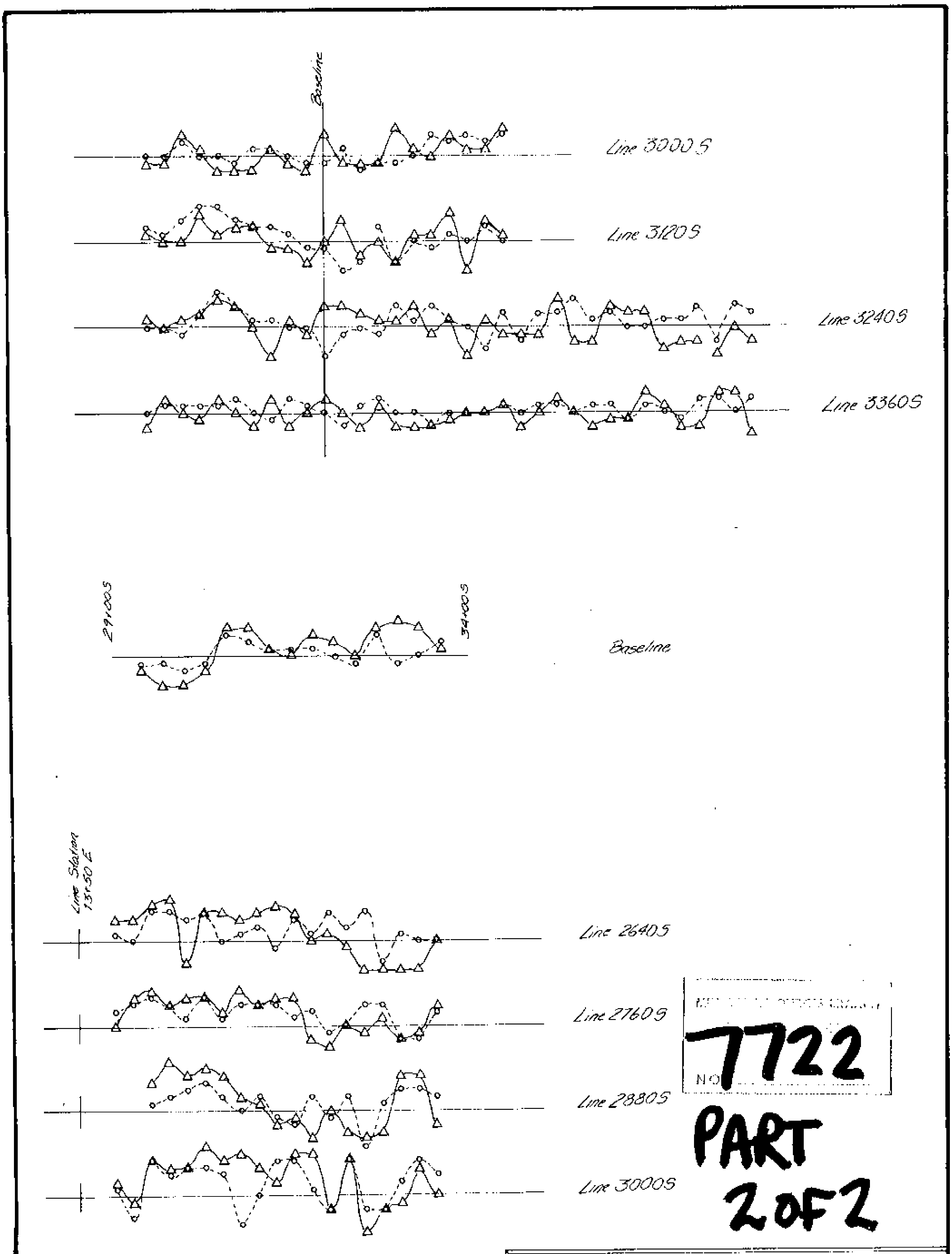
(FINAL CONTOUR VALUE: 50.000 GAMMAS SUBTRACTED FROM FIELD READINGS AND MULTIPLIED BY 10)

SHELL CANADA RESOURCES LIMITED
EXPLORATION – MINERALS

YMIR PROJECT
No. 3991-K
YMIR WEST GRID
CONTOUR OF TOTAL FIELD MAGNETICS
CONTOUR INTERVAL: 200 GAMMAS
SCALE: 1:5000

FIGURE 18 — 100 m

AUTHOR: S. SAYDAM	SCALE: 1:5000	DRAWING No.:
DATE: DEC. '79	REVISED:	ENCLOSURE No.:
To Accompany		



Stewart East Grid

Crone EM Shootback Survey

scale 1:5000 / 1cm 5°

-Δ- 1830 Hz Resultant Tilt Angle

-o- 5010 Hz Resultant Tilt Angle

FIGURE 19