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GEOLOGICAL REPORT
OF THE
REGAL PETROLEUM LTD. PROPERTY
SWAYZE AREA
PORCUPINE MINING DIVISION
ONTARIO
PROJECT 5433

August 10, 1984
Timmins, Ontario

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Geological Services Inc.

TABLE OF CONTENTS CONT'D

FIGURES

APPENDICIES

TABLE OF CONTENTS

TABLE OF CONTENTS CONT'D

1.0 SUMMARY

During the 1984 field season Regal Petroleum Limited contracted the firm of David R. Bell Geological Services Inc. to undertake a geological assessment of their Swayze Area property. The property consists of a contiguous group of 173 unpatented and 9 patented mineral claims. This report covers all but the 3 claims comprising the Shaft Group surrounding the former Halcrow-Swayze Mine shaft.

The property was found to be underlain by a meta-volcanic-metasedimentary assemblage dominated by massive to foliated andesites intercalated with discontinuous bands of fine to medium grained sediments. Banded iron formation was located in many places on the property, occuring as discontinuous pockets or lenses. Granitic rocks occupy the west central and northwest portions of the property representing the eastern margin of a pluton.

Although no economic values were obtained, the mapping and sampling program did succeed in defining 12 zones of interest. The character of these zones with respect to mineralization, alteration and some anomalous gold values merit them further evaluation. With this in mind a follow-up program is recommended.

A four phase program is proposed at a cost of:

Phase I	$ 3,000.00
Phase II	78,600.00
Phase III	130,900.00
Total proposed costs	$260,500.00

2.0 INTRODUCTION

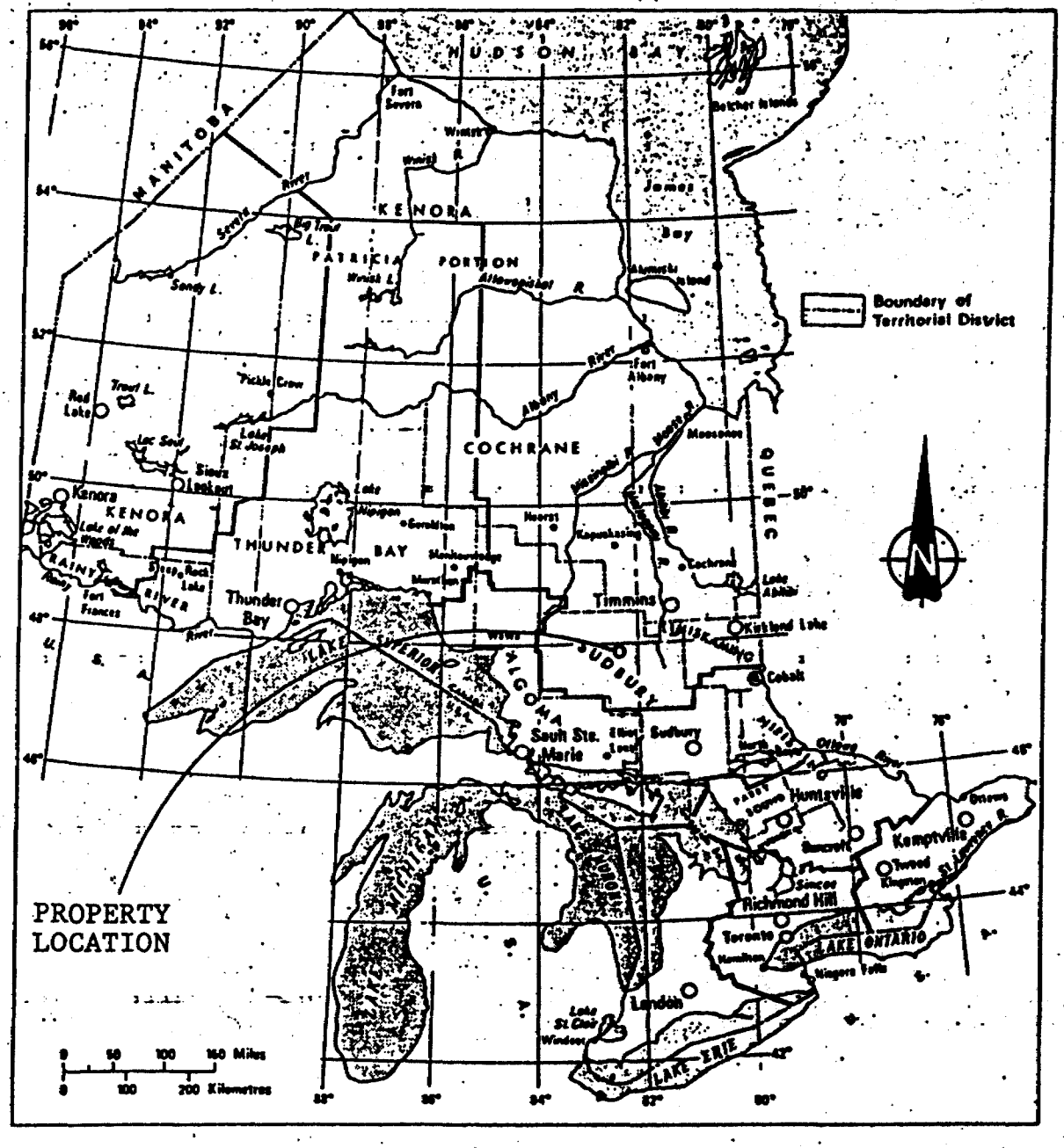
During the summer of 1984 David R. Bell Geological Services Inc. undertook a geological assessment of the Swayze Area property of Regal Petroleum Limited.

Renewed interest in gold exploration in Ontario has resulted in re-examination of old gold mines and showings by both major and junior exploration companies in the immediate area of the property. Examination of the Regal claims was undertaken to investigate the property geology and any relationships to the known gold mineralization of the former Halcrow-Swayze Mine, discovered during the 1930's. It was further intended to delineate, by mapping, prospecting and rock assaying, other promising showings and structures on the property.

3.0 LOCATION AND ACCESS

The Regal property is located approximately 25 miles east of the town of Chapleau and 85 miles southeast of Timmins, Ontario (Figure 1).

The area was actively logged up until the late 1960's and lumber roads provide good access to the southeast part of the property. These roads were found to be in good condition during the summer field season but deteriorate badly during the spring and fall. These roads originate from the small town of Kormak where the lumber mill was located, some 10 miles due south of the property. Kormak is situated on the CPR main transcontinental line and is connected by an all weather road to Chapleau and Timmins. Highway 101 connecting Chapleau to Timmins lies some 10 miles north of the north boundary of the property.



DAVID R. BELL GEOLOGICAL SERVICES INC.
REGAL PETROLEUM LTD.
SWAYZE AREA PROPERTY LOCATION MAP
PORCUPINE MINING DIVISION, ONTARIO
July 17, 1984 | Figure 1

Currently the easiest access is by float plane through charter operators located in Chapleau 25 miles to the west, or from Ivanhoe Lake, 35 miles north. Ski plane service is available in the winter months from Gogama and helicopter charter is available in Chapleau in the summer months or from Timmins year round.

4.0 PROPERTY AND OWNERSHIP STATUS

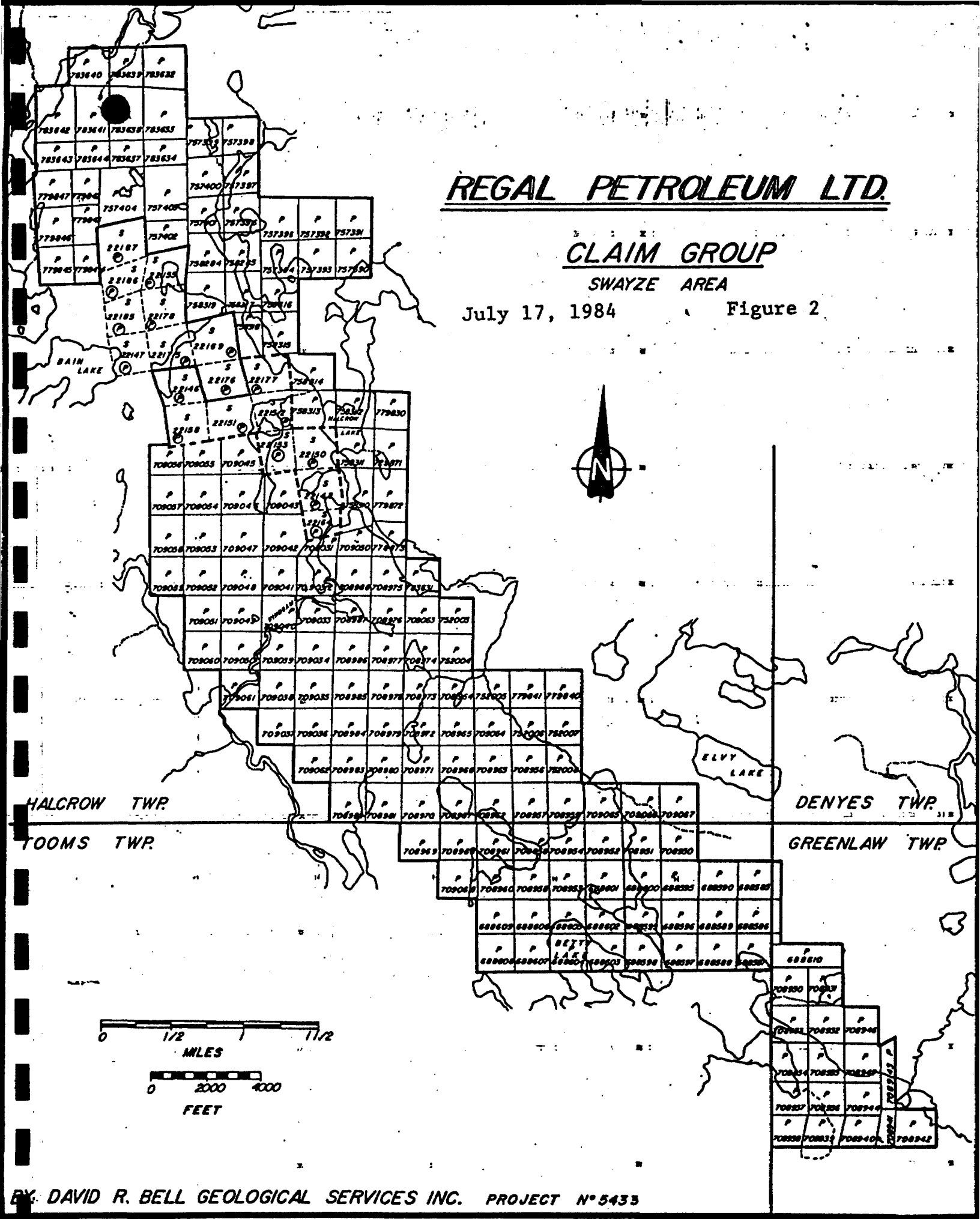
The property consists of a contiguous group of 173 unpatented and 6 patented mineral claims (Figure 2) as shown on Ministry of Natural Resources plans numbered M-906, M-1159 and M-895 of Halcrow, Tooms and Greenlaw Townships respectively. The property is in the District of Sudbury, Porcupine Mining Division, Ontario.

At the time this report was written no assessment work had been recorded on the property and most of the claims are presently under extension.

5.0 TOPOGRAPHY

Most of the property is covered by moderately deep overburden consisting of glacial deposits of sand and till. Rock outcrops were found to be scarce, predominantly confined to the northwest, southwest and southeast parts of the property and a few scattered exposures elsewhere on the property.

Changes in elevation rarely exceeded 100 feet, with much of the claim group occupying flat, poorly drained ground due to its proximity to the Lake Huron-Hudson Bay drainage divide. However, a few prominent eskers were observed on the property, particularly in the area southwest of Halcrow Lake, some showing elevations of up to 150 feet. Swampy areas were found scattered throughout the property, making travel in some areas difficult.



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6.0 VEGETATION

Vegetation is dense in the central and northwest portions of the property, consisting of mature stands of poplar, jackpine and birch with lesser balsam, spruce and cedar. Undergrowth is abundant and consists primarily of alder and second-growth maple. Swampy areas are dominated by spruce and cedar growth.

7.0 CLIMATE

The climate is typical of northern Ontario. Winters are long and cold with abundant snowfall, while the summers are usually hot, with moderate amounts of rain. However the past summer has been one of abundant rainfall and unusually poor weather. Spring and fall often experience cool temperatures, and abundant precipitation is not unusual.

8.0 WATER AND POWER

Abundant water for exploration purposes is available within the claim group from numerous lakes, rivers and creeks on the property. However, most of these lakes are shallow and production water might have to be pumped from the Kinogama or Ivanhoe Rivers which bisect the north central and northwest portions of the property respectively.

There is no nearby power source for production requirements with the nearest transmission line located at Chapleau.

9.0 ANCILLARY SERVICES

Supplies and services for exploration can be acquired in Chapleau or Foleyet, 35 miles to the north while major development and mining goods would have to come from Timmins.

10.0 HISTORY OF EXPLORATION

The earliest recorded work in the area dates back to 1931. The discovery of gold to the east of the property, in Swayze Township in 1931, lead to extensive prospecting throughout the region. This prospecting resulted in a number of discoveries being developed by trenching and diamond drilling in the early 1930's (Esson, 1983). Two of these discoveries, one located approximately 2 miles east of the property in Greenlaw Township and the other in Halcrow Township, which is presently held by Regal Petroleum, although not covered by this report, were developed by shafts and underground workings.

The area has undergone brief surges of exploration over the past 50 years. In the late 1960's and 1970's exploration was oriented towards the search for base metals and in recent years the area has once again become the target of gold exploration by numerous major mining and junior exploration companies. For a summary of the exploration history of the area consult Appendix II, and the accompanying map. A summary of the diamond drilling which was undertaken as a result of this exploration can also be found listed in Appendix II and on the accompanying map (Fig. II-1).

Companies presently involved in the area and examining former gold prospects are Collingwood Energy, holding the former Lee Gold Mines property as well as the Greenlaw occurrence, Noranda Exploration in partnership

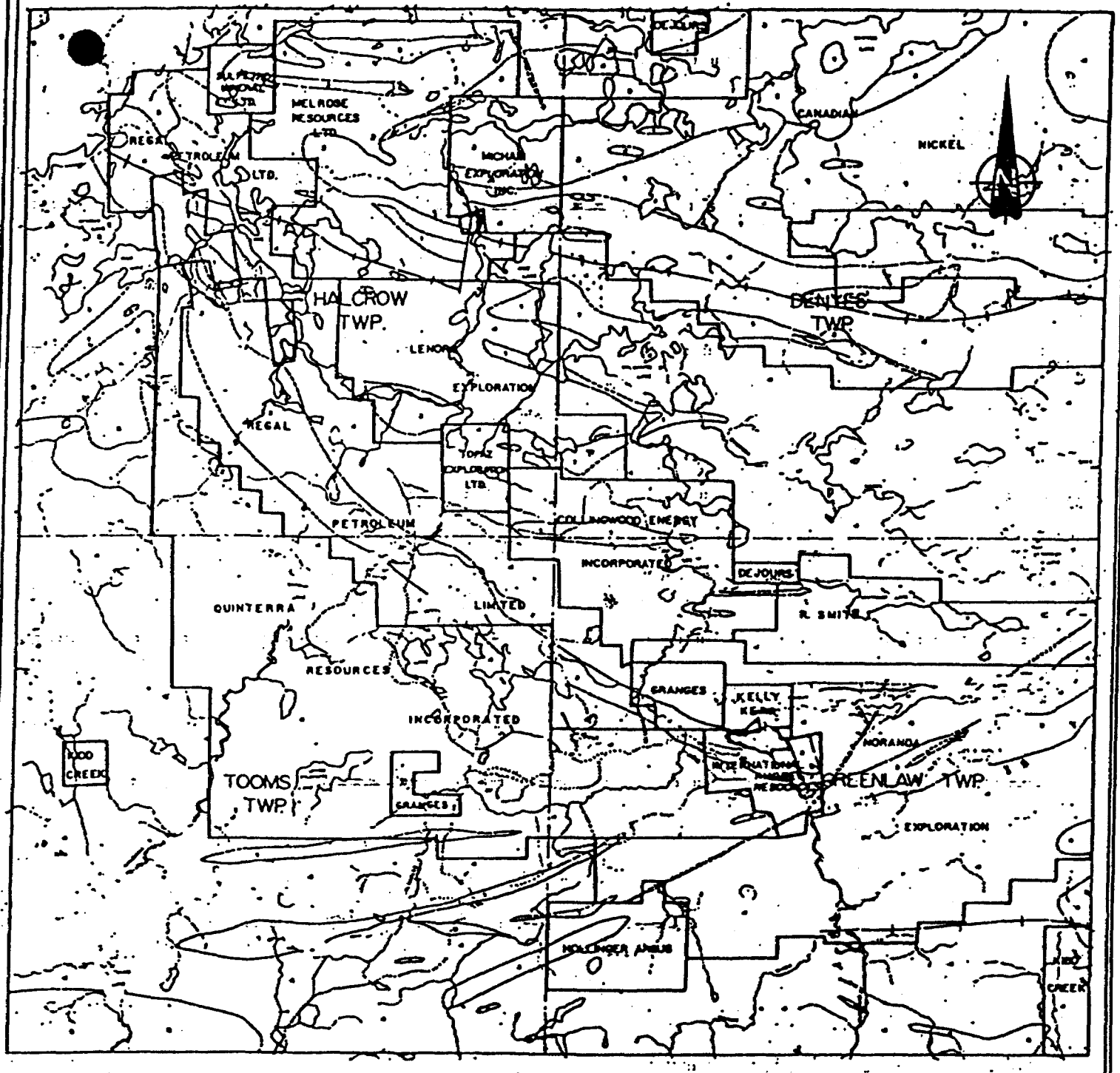
with International Rhodes Resources, exploring the former Hotstone Minerals property, Sulpetro Minerals Ltd. holdings the Lyall-Beidelman occurrence and Quinterra Resources which is presently examining the northern portion of the former Halcrow-Swayze patented claims. Other companies involved in the area include Canadian Nickel Co. Ltd., Kidd Creek Exploration, Granges Exploration, Hollinger Argus, Micham Exploration, Melrose Resources, Lenora Exploration, Dejour Mines and Kelly-Kerr Energy (Figure 3).

11.0 REGIONAL GEOLOGY

The regional geology was described by J.F. Donovan (1968) in the Ontario Department of Mines Report 63 "Geology of the Halcrow-Ridout Lakes Area" (after Esson, 1983).

"The area is underlain by Precambrian rocks, consisting of acid-to-basic volcanic rocks, sedimentary rocks, and intrusive igneous rocks.

Intermediate-to-basic volcanic rocks are dominant and trend in an east-west direction across the area. Acid volcanic rocks are abundant in Denyes Township, but elsewhere acid volcanic rocks are intercalated with the intermediate-to-basic volcanic rocks. Two major belts of sedimentary rocks transverse the map-area and form part of a major synclinal structure. The sedimentary rocks are predominantly conglomerate and quartzite with minor pelitic rocks, greywacke, and arkose. An intrusive granite cuts the western part of Halcrow and Tooms Townships, and a contact metamorphic zone is developed by the granite. A few bodies of intrusive diorite are closely associated with the basic volcanic rocks, and numerous northwest and northeast-trending diabase dikes transect all other rock types. Pleistocene and Recent deposits cover much of the area.



GEOLOGY MAP

LEGEND

DAVID R. BELL GEOLOGICAL SERVICES INC.	
REGAL PETROLEUM LTD.	
SWAYZE GOLD BELT PROPERTY MAP	
PORCUPINE MINING DIVISION, ONTARIO	
July 17, 1984	Figure 3

The rocks are steeply dipping, and tightly folded about an eastwest-trending synclinal fold axis. The syncline is doubly plunging and its north limb is overturned; facing south. Major north-south trending fault zones are found along the Kinogama and Wakami Rivers; elsewhere small faults offset lighologic units."

Donovan (1968) summarized the geological succession in the following table of formations:

TABLE OF FORMATIONS

PRECAMBRIAN

INTRUSIVE ROCKS

Late Basic Intrusive Rocks

Diabase

Intrusive Contact

Intermediate to Ultrabasic Intrusive Rocks:

Diorite, gabbro, lamprophyre, serpentine.

Intrusive Contact

Granitic Rocks:

Granite, syenite, monzonite, quartz, monzonite grandiorite, quartz diorite, gneissic granite.

Intrusive Contact

INTERMEDIATE TO BASIC VOLCANIC ROCKS:

Massive andesite and basalt, pillow andesite and basalt, chlorite-hornblende-feldspar schist, basic tuff, grey massive andesite, volcanic breccia, amphibolite, hornblende-mica-feldspar schist, diorite and gabbro (flows or intrusions), porphyritic andesite and basalt.

Iron Formation: Banded iron formation, schistose iron formation.

SEDIMENTARY ROCKS:

Shale, argillite, slate, conglomerate, quartzite, greywacke, arkose, paragneiss, mica-hornblende-plagioclase-quartz schist

ACID VOLCANIC ROCKS:

Massive rhyolite, acid tuff, volcanic breccia, sericite-quartz-feldspar schist, banded rhyolite, silicified rhyolite, rhyolite porphyry, feldspar porphyry.

12.0 PROPERTY GEOLOGY

The property geology is shown on Plans 543-84-4-1 to 543-84-4-4 (in pocket). As mentioned much of the property is covered by glacial sand and till with few outcroppings of rock visible. Outcrops, when encountered, generally required extensive stripping.

12.1 Mafic Volcanic Rocks

Andesite

Fine to medium-grained, massive to well foliated, dark grey-green andesite was the most abundant volcanic rock type found on the property. Numerous other rock types were found enclosed by and associated with the andesites; iron formations and bands of sediments are often enclosed in them while granite, quartz monzonite, diorite and diabase intrude and transect the andesites.

Pyroclastic rocks, agglomerate and tuff were found scattered throughout the property. Tuff is most abundant, however thick continuous units of agglomerate were also noted. The agglomerate was considered to be of volcanic origin and not a sedimentary conglomerate as mapped by Donovan (1968). The matrix often appeared relatively well-lithified containing ash to lapilli-sized fragments mixed with fine-grained sedimentary particles. The clasts are well-rounded and stretched, varying in composition from andesitic to rhyolitic, characteristically much more siliceous than the matrix. Compression cracks were frequently observed in the rhyolitic clasts.

Making this distinction between a pyroclastic agglomerate and a sedimentary conglomerate will significantly redefine the geology of the area. Any of the previous outcrops comprising the lower belt of sediments (Donovan, 1968, pg.9) which were mapped as conglomerate, are now believed to be volcanic in origin.

The andesitic tuffs observed, were dark grey-green, fine grained often well-bedded, showing moderate to strong foliation. Banding in these tuffs was best observed on the weathered surface, where preferential weathering of the mineral grains stand out in relief. Whereas on the fresh surfaces the beds may be poorly defined with gradational

borders (Donovan, 1968). The tuffs appear similar in composition to the massive andesite, and this along with a close spatial association possibly indicate a common origin. The tuffs contain small angular, rock fragments of the same composition as the matrix with plagioclase the dominant constituent fragment. Within the matrix chloritization and carbonatization are common and pervasive as they are in the massive andesites.

Basalt

On rare occasions outcrops of basalt were noted on the property. The rock was fine-grained, dark coloured and usually massive. Due to the lack of bedrock exposure inidividual flows and contacts were not observed.

12.2 Intermediate to Felsic Volcanic Rocks

Dacite

Dacite was observed in a number of outcrops on the property exhibiting textural variations ranging from massive to tuffaceous, with a light grey-green to buff-green colour. The diagnostic properties used to identify this rock type were predominantly colour and hardness. There is some question as to whether some of the outcrops mapped may have been silicified andesites.

12.3 Sedimentary Rocks

Sedimentary rocks were found at various locations across the claim block, being restricted to small discontinuous bands, often enclosed in the andesitic flows and tuffs.

The fine-grained mudstones, predominantly siltstone and claystone where exposed, are found widely scattered throughout the property. They were often observed proximal to the pyroclastic agglomerates as grey-brown finely laminated beds and frequently showed strong deformation and small scale faulting. Small scale chevron folds were commonly noted as were "S" and "Z" folds, however no large scale fold closures were mapped.

The coarser grained sandstones mapped on the property were dominated by quartzites and arkosic quartzites. The rocks are typically light coloured, medium grained and poorly to well bedded. Good bedding was observed on the west shore of Shunsby Lake where the quartzites are interbedded with fine-grained argillites. Also observed at this location, were the deflections of the cleavage traces in beds of differing competency. The prefix arkosic was applied to those quartzites with a high percentage of detrital feldspar grains which usually imparted a pink colour to the rock. Although good bedding was observed on a number of occasions, graded beds were seldom observed and a determination of tops was possible in only a few isolated cases.

12.4 Iron Formation

Iron formation was located in many places on the property. It was generally found to occur as discontinuous pockets or lenses often obscured by overburden, making them difficult to trace. Only one type of iron formation was found; the typical banded chert-magnetite iron formation. These banded iron formations were found to dip steeply north and parallel the local stratigraphy, while being associated with both volcanic and sedimentary rocks.

The banded iron formations are typically comprised of alternating layers of chert and thinly bedded

magnetite such as on LN180E, 6+80S. A carbonate-Iron Formation association has been found in only a few instances, however, when present it is pervasive and may also be present as small fracture fillings as is the case on Line 120W, 3+75S. Pyrite mineralization was often noted as fine-grained disseminated cubes and stringers within the iron formation and enclosing rocks in variable amounts to a maximum of 10%.

Some unique features were noted in the iron formation on Line 120W, 3+75S, which merit further mention. This banded iron formation represents the chert-magnetite association previously described. However some of the chert layers exhibit an uncharacteristic ping-green colour. The pink colouration can be attributed to the presence of alkali feldspars, perhaps originating from the same source as the surrounding arkosic quartzite, while the green colour may represent the alteration of the alkali feldspars to epidote. In addition to the magnetite present, minor pyrite and trace chalcopyrite, malachite and jarosite were also observed. Magnetite and specular hematite were also noted in the adjacent formations.

12.5 Intrusive Rocks

Granitic Rocks

Granitic rocks were located along the west central and northwest property boundaries extending in as far as 2,000 feet into the property. Some variety in texture and composition was noted but the dominant rock type observed was a pinkish, fine to medium grained, massive quartz monzonite. The main constituents, as described by Donovan, are quartz, orthoclase, microline, plagioclase (An_{20}) the hornblende, with minor biotite, epidote, magnetite and pyrite and secondary minerals sericite, chlorite, and calcite. Although quartz monzonite predominates, some granite, quartz diorite and

quartz syenite exposures were also noted. The compositional variations are believed to be gradationally separate units, that due to the lack of exposure, could not be mapped.

Contact Metamorphic Aureole

A wide and well-defined contact metamorphic aureole was defined in the northwest part of the property between the Ivanhoe River and the northeast corner of Hewson Lake. This aureole, occurred where the granitic intrusive was in contact with the andesites, and is found to extend approximately 2,000 feet into the volcanic rocks.

The most prominent features of this aureole were the increase in schistosity and coarser-grained appearance of the andesites as you approach the intrusive contact. Numerous granitic dikes were noted some distance from the pluton, presumably apophysises of the intrusion. Hornblende and biotite were commonly seen as were recrystallized quartz and plagioclase. These rocks also appear more resistant to weathering.

Intermediate to Ultramafic Intrusive Rocks

Intermediate to ultramafic intrusive rocks were mapped in a few widely scattered locations across the property. These rocks varied in composition from gabbro to lamprophyre and were observed as dikes, (seldom over a few feet wide) and small plug-like structures. The lamprophyre dikes contained visible biotite phenocrysts, along with xenoliths of the country rock, and chill margins. The dikes did not appear to follow any preferred orientation as they were found to crosscut as well as parallel the regional foliation.

Outcrops of ultramafic rock were also located adjacent the property boundary near the end of line 32E and 36E. These rocks were medium to coarse grained,

dark green to black in colour, and contained abundant pyroxene. Lithogeochemical analysis defined these rocks as ultramafic komatiites (Appendix III).

Late Mafic Intrusive Rocks

Diabase dikes were generally found to cross cut the local stratigraphy, but at one location (93+00W, 37+00N) it appears as if the observed dike has been intruded parallel to the country rocks. These dikes are seldom over 20 feet wide and could not be traced more than 100 feet before being obscured by overburden. The diabase is typically dark green on the fresh surface weathering to a brittle, brown-grey surface, commonly exhibiting two well developed joint sets. The diabase commonly exhibits a strong magnetic attraction due to the presence of magnetite. Pyrite was often present as well, as was saussuritization of the constituent plagioclase.

12.6 Pleistocene and Recent

Glacial landforms from the Pleistocene are found throughout the property as both erosional and depositional features. Prominent among these features are the many eskers, moraines and erratic boulders located on the property, particularly south of Halcrow Lake. Recent deposits are represented by the many small lakes and swamps present on the property. Much of the property is covered by drift and sandy overburden. The draft cover is comprised predominantly of sand, gravel and occasional boulders which

may vary from a few feet to several feet in thickness. The areas of sandy overburden are less widespread and are typified by the deposits in the Betty Lake area. These deposits are comprised of fine-grained, buff coloured sand above which sparse vegetation is common. Such areas are most commonly covered by tall widely-spaced stands of jackpine.

13.0 STRUCTURAL GEOLOGY

During the mapping program several structural features, such as, foliation, small scale offsets (microfaults), bedding and six genetically related types of folding were noted.

The most prominent small scale regional feature observed was a moderately to well defined, northwest-southeast trending penetrative foliation. This foliation was visible in all of the extrusive metavolcanic rocks as well as the pelitic metasedimentary rocks (mudstones). The foliation planes may represent either relict bedding surfaces or a response to the applied stress of regional metamorphism.

Faulting was visually observed as small scale offsets or microfaults, with offsets rarely exceeding six inches. Numerous shear zones, possibly related to faulting, occurred in both the metavolcanic and metasedimentary rocks and was, in most cases, found to parallel the dominant foliation of the host rock. One shear zone located to the southwest of the Halcrow Lake-Kinogama River system has been traced for approximately 5,000 feet. This zone trends northwest-southeast and in fact may be related to the mineralized shear on the Shaft Group of patent claims.

The best examples of bedding and graded bedding were generally noted in the metasedimentary rocks, although

one exposure of the (L136W, 28N) exhibited graded bedding. Here as exposed in the andesitic tuffs (L136W, 28N), the bedding showed younging to the south, while a graded quartzite (L33W, 42N) indicated younging to the north.

Closely associated with and generally confined to the bedded rocks, is a secondary structure, cleavage. When observed on the Regal property the cleavage is usually found parallel to sub-parallel to the bedding planes. However, on the southwest shore of Shunsby Lake it was refracted when penetrating a sequence of interbedded mudstones and competent quartzites. This location also offered well developed examples of axial planar cleavage.

Six genetically related types of folding were mapped during this property examination. The most common types, chevron folds and kink banding along with small scale antiformal and synformal folds, were found at numerous locations across the claim group. The remaining fold types, Z and S-folds were generally the parasitic expression of large regional fold types.

Although those structural field observations have been made, lack of good consistent information, makes it difficult to formulate any detailed structural interpretation. Generally it can be stated that the Regal property is underlain by Precambrian rocks, which have been deformed into a partially overturned southeasterly plunging anticline.

It would appear as if the south limb of this anticline is delineated by the andesitic tuffs and mudstones from where younging determinations and Z-folds were mapped. The exposures of graded bedding, found at L110W, 23N and 136W, 28N show that tops face southwest, while the Z-folds were located along strike at L70W, 3+50N and 66+50W, 13+50S. As further support for this anticlinal structure, the north limb is delineated by a sequence of interbedded quartzites and siltstones at

L33W, 42N. The graded beds as observed in these metasediments show younging, or tops, that face northeast. The corresponding S-folds however were not found in these bedrock exposures.

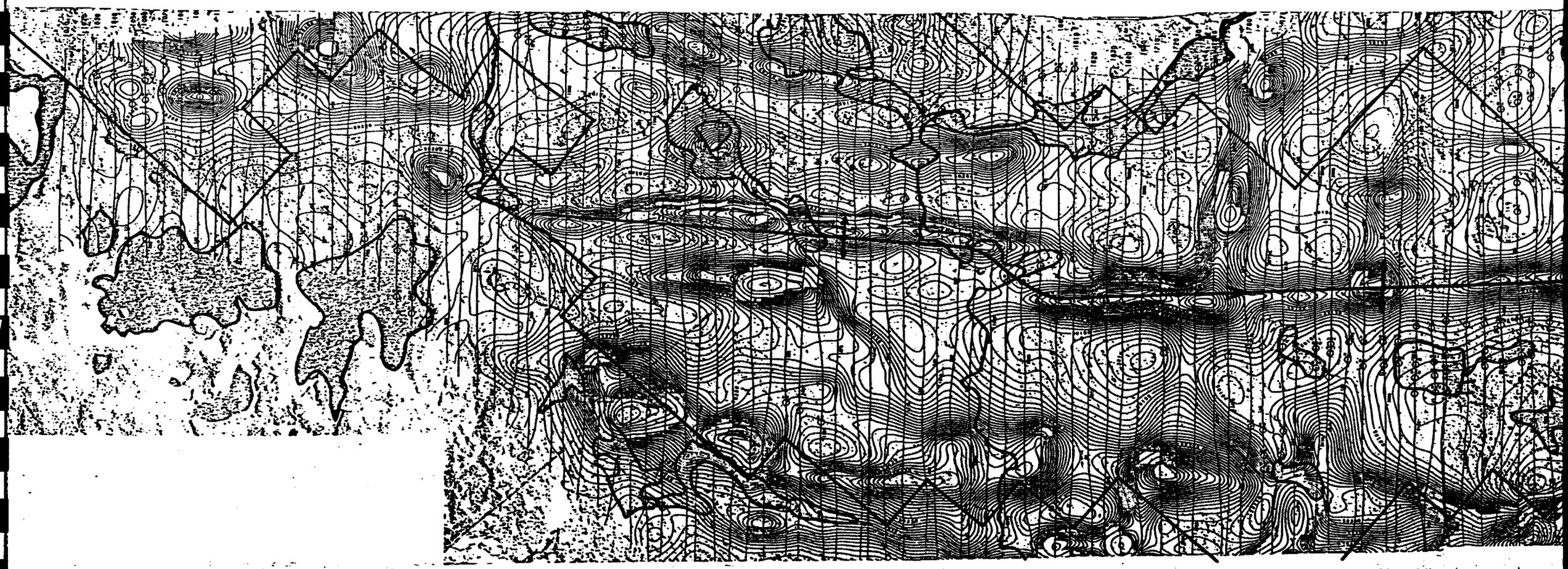
The results of the airborne magnetometer survey show a pattern of magnetic signatures that tend to confirm this overturned anticline hypothesis (see figure 4). Two linear zones of low magnetic susceptability, flank a central zone of higher magnetic response. This central core would correspond to the andesitic flows (L70W, 32N and L40E, BLO) and diabase exposures (96W, 36N) as examined during the mapping program. The exact implications of this structural interpretation are at present unknown.

14.0 ALTERATION

Alteration was noted throughout the property with carbonatization being the most prominent alteration type observed. Carbonate was often found to be pervasive in the rocks, but was also noted as fracture fillings, some of which were stained. Silicification which was also prominent in many outcrops made the distinction between a silicified andesite and a dacite most difficult. Sericite was noted in a few locations usually associated with shearing. Another alteration type, commonly found associated with the shear zones, was the formation of gossan surfaces reflecting the presence of pyrite within the shear.

15.0 MINERALIZATION

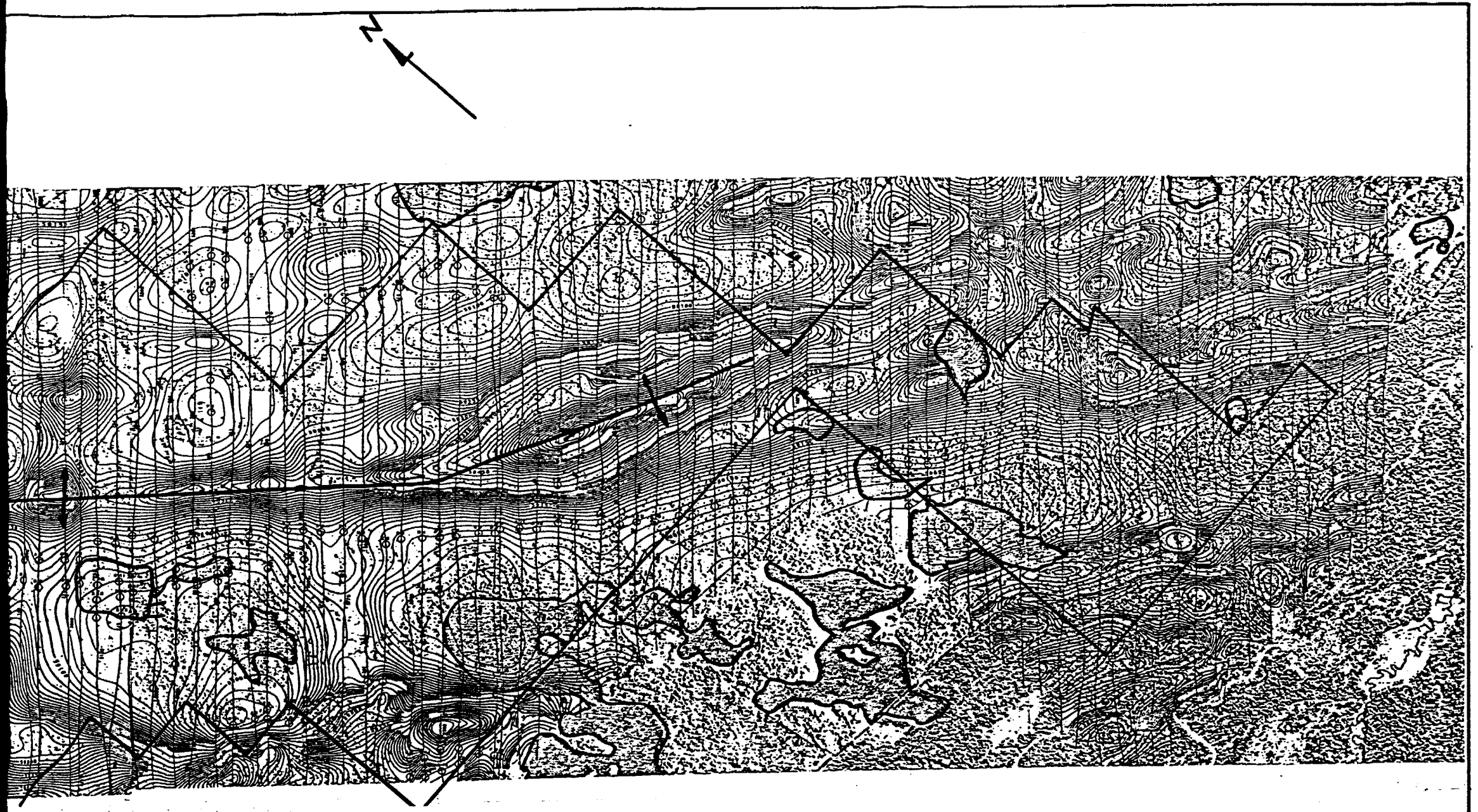
Pyrite, in the form of fine to medium-grained cubes as well as stringers was the most abundant metallic mineral encountered during the mapping program. This



LEGEND

Property Boundary
- assumed

Anticlinal Axis
- with plunge



David R. Bell Geological Services Inc.

REGAL PETROLEUM LTD.

TOTAL FIELD MAGNETICS

with

PROPOSED ANTICLINAL AXIS

TWP/AREA Swayze Area		PROVINCE Ontario
MINING DIVISION Porcupine		PROJECT No. 5433
REFERENCES Aerodat Ltd.-Magnetic Survey		N.T.S. No.
DRAWN SWC	DRAFTED	CHECKED SWC
SCALE 1"=0.37 mi	DATE August 1984	SHEET No. Figure 4

mineralization was found to some extent in all rock types, with the best mineralization found in the volcanic and sedimentary rocks.

Magnetite and chalcopyrite were also found on the property. The magnetite was confined to the banded iron formations in the form of thin layers interbedded with thicker chert horizons and as fine-grained disseminations in the surrounding units elsewhere. Pyrite was often associated with the iron formation, usually as a fine-grained disseminations within the rock and occasionally as stringers. The rocks enclosing the iron formation commonly contained variable concentrations of pyrite and occasionally magnetite. Minor chalcopyrite, in the form of scattered flecks was observed in the sheared margin of a quartz vein.

Anomalous rock assays were received from grab samples taken at several locations on the property. The highest gold assays returned from this sampling were 301 ppb and 309 ppb (approximately 0.009 oz Au/ton) from L156+35E, 4+25S and L219+00W, TL122+00N respectively.

Twelve mineralized showings have been delineated by the mapping program and have been given a priority rating based upon assay results, visually detected alteration, and spatial distribution. The first priority zones are catagorized as Zone A-1 through A-3, while the second priority zones have been classified as Zone B-1 through B-4 (figure 6). A description of the mineralized showings as included in the respective zones, is presented below.

Zone A-1

230+50W, TL122N

This outcrop consisted of an essentially massive, silicified sediment exhibiting carbonate alteration and 10% to 15% pyrite in the form of stringers and fine-grained disseminations. A grab sample from this location assayed 182 ppb.

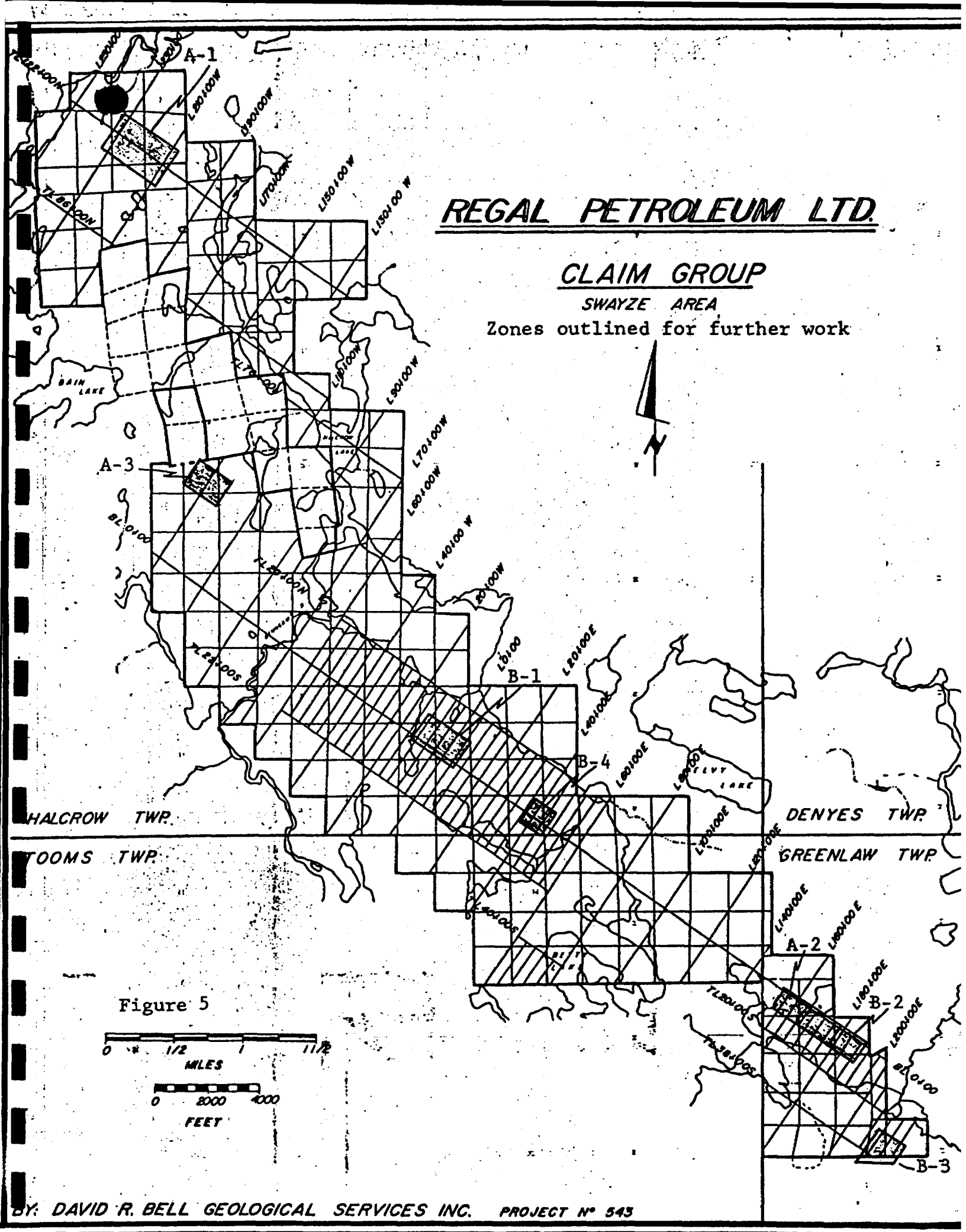


Figure 5

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216+00W, TL122N

This outcrop consisted of a strongly foliated andesite containing numerous small shear zones. Most of these shears which measured 1" to 3" in width, but may be up to 6", contained upwards of 20% pyrite and could be traced over several feet due to their gossanous surfaces. A quartz vein striking parallel to the foliation and showing clots of fine-grained chlorite with no visible sulphides was also present. Grab samples from the shears returned values of 118 ppb, 115 ppb and 101 ppb while the chloritic quartz vein returned only 8 ppb.

217+00W, 123+00N

This zone consists of a quartz monzonite, exhibiting gradational margins to a coarse-grained, massive center. The surface is well-broken and has a red-brown weathered colouration. The contacts with the enclosing andesitic tuffs are moderately sheared and exhibit silca and carbonate alteration. The monzonite contains up to 5% pyrite as fine-grained disseminations. Grab samples of the quartz monzonite returned values of 309 ppb, 194 ppb Au and 53 ppb Au while a sample from the enclosing andesite returned 82 ppb Au.

215+00W, 117+00N

This isolated outcrop of foliated andesite possesses a fine-grained ground mass with a grey-green fresh surface. Carbonate veining, coplanar to the foliation, exhibits abundant fine-grained pyrite and a grab sample of this material returned 222 ppb gold.

Zone A-2
159+65E, 3+65S

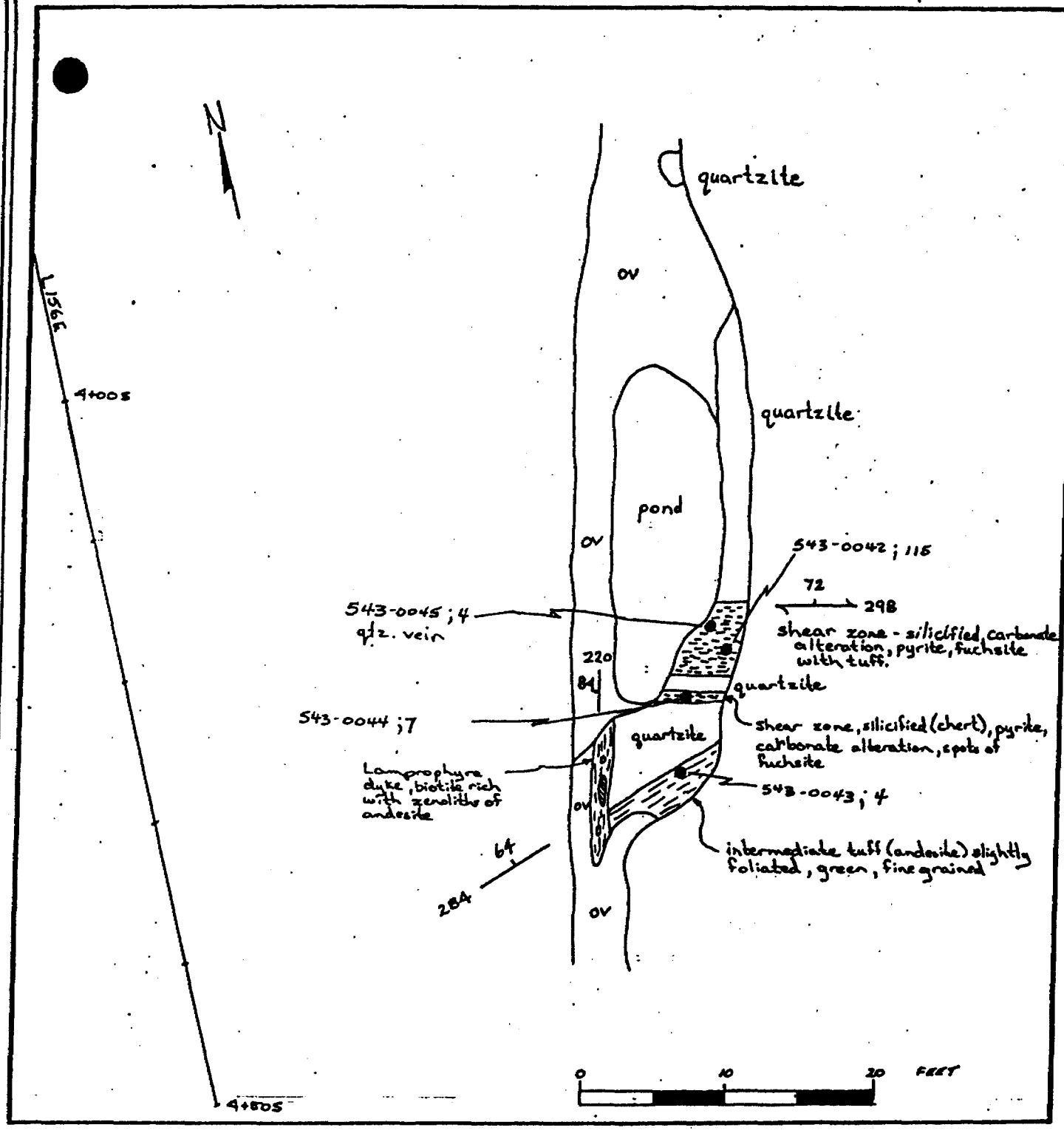
Between 159+00E and 159+70E three old trenches were found. The exposed rock consists of a layer of quartzite interbedded with andesitic tuffs. Within the 10 foot wide quartzite horizon a 7 foot alteration zone is visible exhibiting a gossan surface along with quartz veining, carbonate, sericite and finely disseminated pyrite. An assay of 115 ppb Au was received from the andesitic tuff just above the contact with the quartzite. Grab samples from the quartzite hosted alteration zone returned assays of 7 ppb and 4 ppb Au, while the quartzite returned a 29 ppb Au assay.

156+35E, 4+30S (see figure 6)

A trench was found at this location, 330 feet along strike to the west from the trenches described above, in which similar geology was observed. At this location a 10 foot wide trench exposes a pair of shear zones within a quartzite unit near the southern contact with an andesitic tuff. These shears are silicified and carbonatized and exhibit abundant fine-grained pyrite and flecks of fuchsite. An assay of 301 ppb Au was returned from the five foot shear zone, while the smaller, one foot, shear returned 7 ppb Au.

Zone A-3
L130W, 34+50N

At this location is an eight foot wide shear zone that borders a strongly foliated andesite to the



DAVID R. BELL GEOLOGICAL SERVICES INC.
REGAL PETROLEUM LTD.
SHOWING 156+35E, 4+30S GEOLOGY & SAMPLE LOCATION
Figure 6 | 1 inch = 10 feet

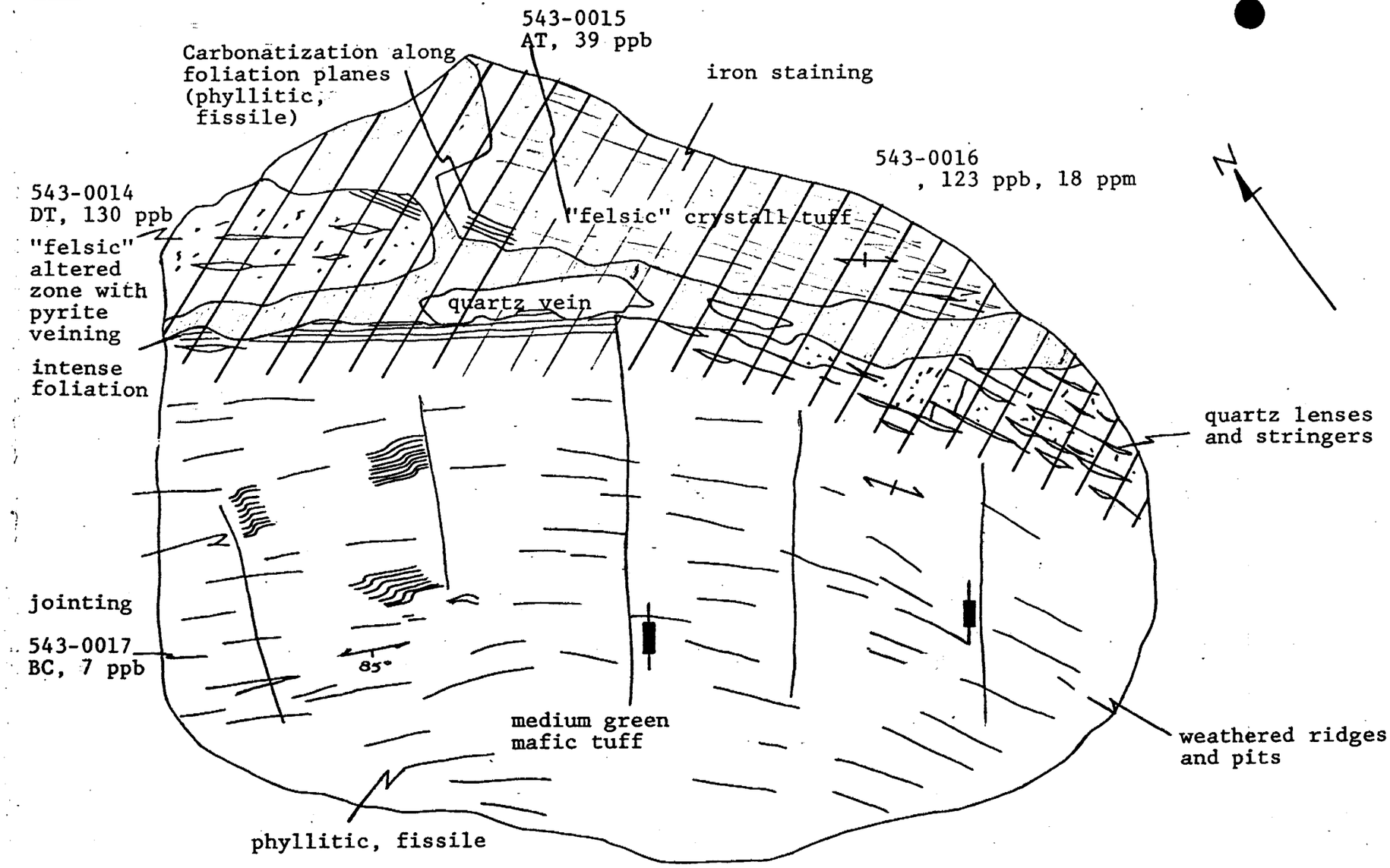
south. The shear is silicified, weakly carbonatized and contains sericite. Quartz veins form a continuous penetrative network concordant to the foliation throughout the zone. Pyrite is present as fine-grained disseminations and stringers. A grab sample from this zone returned a gold assay of 171 ppb.

Zone B-1
4+50W, 6+50N (see figure 7)

This outcrop consists of a well foliated andesitic tuff and crystal tuff. The rock has been altered and exhibits carbonate (siderite, ankerite) in seams parallel to the foliation, as well as lesser sericitization and hematization. Small quartz veinlets are present as lenticular clots parallel to the foliation and a larger massive quartz vein containing isolated grains of pyrite is also present. The contact between the altered tuff and the enclosing rocks is gradational but marked by a rubbled and heavily fractured zone. Pyrite mineralization is observed as fine-grained disseminations or as narrow seams and bands throughout the zone of alteration. Assay values of 130 ppb Au and 39 ppb Au were obtained, from the altered zone, 123 ppb Au from the quartz vein and 7 ppb Au from the unaltered country rock.

Zone B-2
180+40E, 6+80S

A banded (chert-magnetite) iron formation containing disseminated and stringers of pyrite was examined at this location. In contact with the iron formation to the south is a meta-siltstone containing



Altered zone
-silicification, carbonatization hematization, sericitization and pyritic mineralization

rubbly, weathered contact zone

543-0014 —— sample number
DT, 130 ppb, 1.8 ppm - Ag assay
Au assay
geochemically derived rock name

0 2 4 6
feet

Figure 7

David R. Bell Geological Services Inc.

REGAL PETROLEUM LTD.

SHOWING

4+50W, 6+50N

GEOLOGY & SAMPLE LOCATION

TWP/AREA Halcrow Township		PROVINCE Ontario
MINING DIVISION Porcupine		PROJECT No. 5433
REFERENCES		N.T.S. No.
DRAWN MCS	DRAFTED SWC	CHECKED SWC
SCALE 1"=3'	DATE Aug /84	SHEET No.

disseminated magnetite and stringers of pyrite. Assays of 78 ppb and 23 ppb gold were returned from the iron formation.

182+50E, 7+00S

This exposure is comprised of a translucent chert (predominant) with minor associated iron formation. The chert contains trace to 1% pyrite, while assay results of 85 ppb, 25 ppb, and 15 ppb Au were received.

Zone B-3
150' West of Post #2, Claim #708942

At this location a small outcrop of sheared andesite was observed. This shear was silicified and showed small quartz veinlets containing minor disseminations (1% to 2%) of fine-grained pyrite. A value of 137 ppb Au was returned from a grab sample taken here.

Zone B-4
43+10E, 1+00N

A banded iron formation, consisting of thick chert layers and thin bands of magnetite and disseminated pyrite was located at 43+10E, 1+00N. A sample from this location returned a gold assay of 74 ppb.

16.0 GEOCHEMISTRY

Three types of geochemical sampling were conducted in conjunction with the mapping program. Rock

samples were collected for geochemical and lithogeochemical analysis while limited soil geochemistry surveys were conducted over selected areas as delineated during the mapping program.

16.1 Rock Geochemistry and Lithogeochemistry

Sampling of bedrock exposures was conducted during the mapping program. The specimens collected were used for delineation of auriferous horizons (rock geochemistry), geochemical determination of rock names and alteration patterns (lithogeochemistry) and maintaining a consistent set of rock classifications across the property.

16.1.1 Rock Geochemistry

Sulphide bearing and strongly altered (visual determination) rock samples were geochemically analyzed for precious metal content. If the respective samples contain anomalous quantities of gold, then a detailed follow-up program can be recommended. The highest assays received from the Regal property were 301 ppb Au (543-0051) and 309 ppb Au (543-0193), while numerous samples returned geochemically anomalous gold values (see section 15.0 Mineralization). A complete listing of sample results and locations can be found in Appendix III and on the Sample Location and Assay Plans (Plan No's 543-84-3-1 through 543-84-3-4).

16.1.2 Lithogeochemistry

Sample results as received from the lithogeochemical analysis were utilized to chemically differentiate lithological units, where field mapping allowed

only a general catagorization of bedrock exposures. This procedure was also used to indicate the nature and extent of rock type alteration products. These results are listed in Appendix IV.

All three sub-alkalic chemical trends are represented in the precambrian rocks that underlie the Regal property. The Tholeiitic trend is the most dominant, with dacitic, andesitic, basaltic, iron rich and magnesium rich varieties being present. It is generally believed that the tholeiitic trends are characteristic of primitive crustal rocks as formed at ths spreading centers and accretionary margins of the oceanic basins (i.e., Mid-Atlantic Ridge, East Pacific Rise). The andesitic flows and tuffs are predominantly tholeiitic, while minor calc-alkalic exposures may represent contamination of the original magma with alkalic minerals.

The andesitic tuff agglomerates have been chemically classified as calc-alkalic, with both andesitic and basaltic types being represented. This is probably due to the presence of the felsic fragments in the mafic tuff matrix.

The komatiitic trend is generally represented by the ultramafic intrusions. The one exception is the altered rhyolitic tuff that was mapped on L80E, 40N. In hand specimen this rock is white to buff white in colour, has an overall hardness of five to six, and shows green micaceous clots, but the lithogeochemical analysis shows this specimen to be a komatiitic basalt, (generally dark green to black). Since only two exposures were seen, the nature and significance of this type of alteration is unknown.

Overall the lithogeochemistry shows a very consistent sequence of mafic metavolcanics that remain predominantly tholeiitic basalts across the property.

16.2 Soil Geochemistry

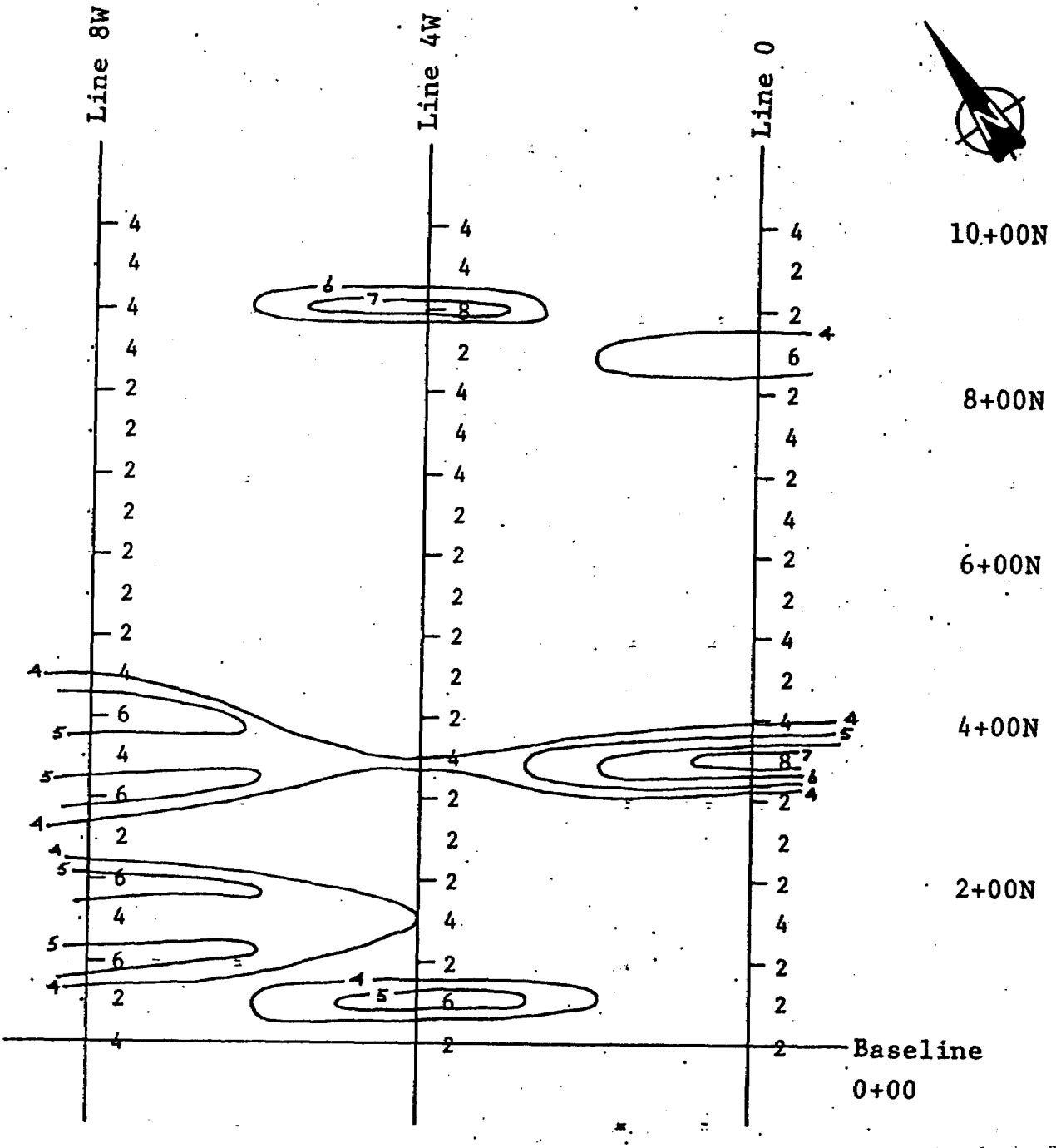
A limited soil survey consisting of 133 samples was conducted across selected outcrops located in the central & southeast portions of the property. Soil geochemistry was utilized over these areas to aid in evaluating the extent and economic potential of the mineralization found during the mapping program.

A statistical analysis of the results defined the values to be used in contouring the data. The average value of each sample population was defined as the mean value. The mean plus twice the standard deviation defined the threshold value and the mean plus three times the standard deviation the anomalous value. These values, as well as the other assay values and date pertaining to sample location, depth of sample, etc., are contained in Appendix V.

Soil sampling was performed at 50 foot intervals over small areas in which overburden cover precluded meaningful evaluation of mineralized zones delineated during the mapping program. Contouring the results of the survey (Figure 8 and 9) has developed trends which parallel the preferred orientation of the rock and may reflect mineralization hidden below overburden soils.

17.0 CONCLUSIONS

From geological mapping it can be concluded that the property is underlain by a metavolcanic-metasedimentary assemblage hosting minor, discontinuous chemical sediments.



Contour Legend

- 4ppb
- 6ppb (threshold)
- 7ppb (anomalous)

Figure 8

David R. Bell Geological Services Inc.

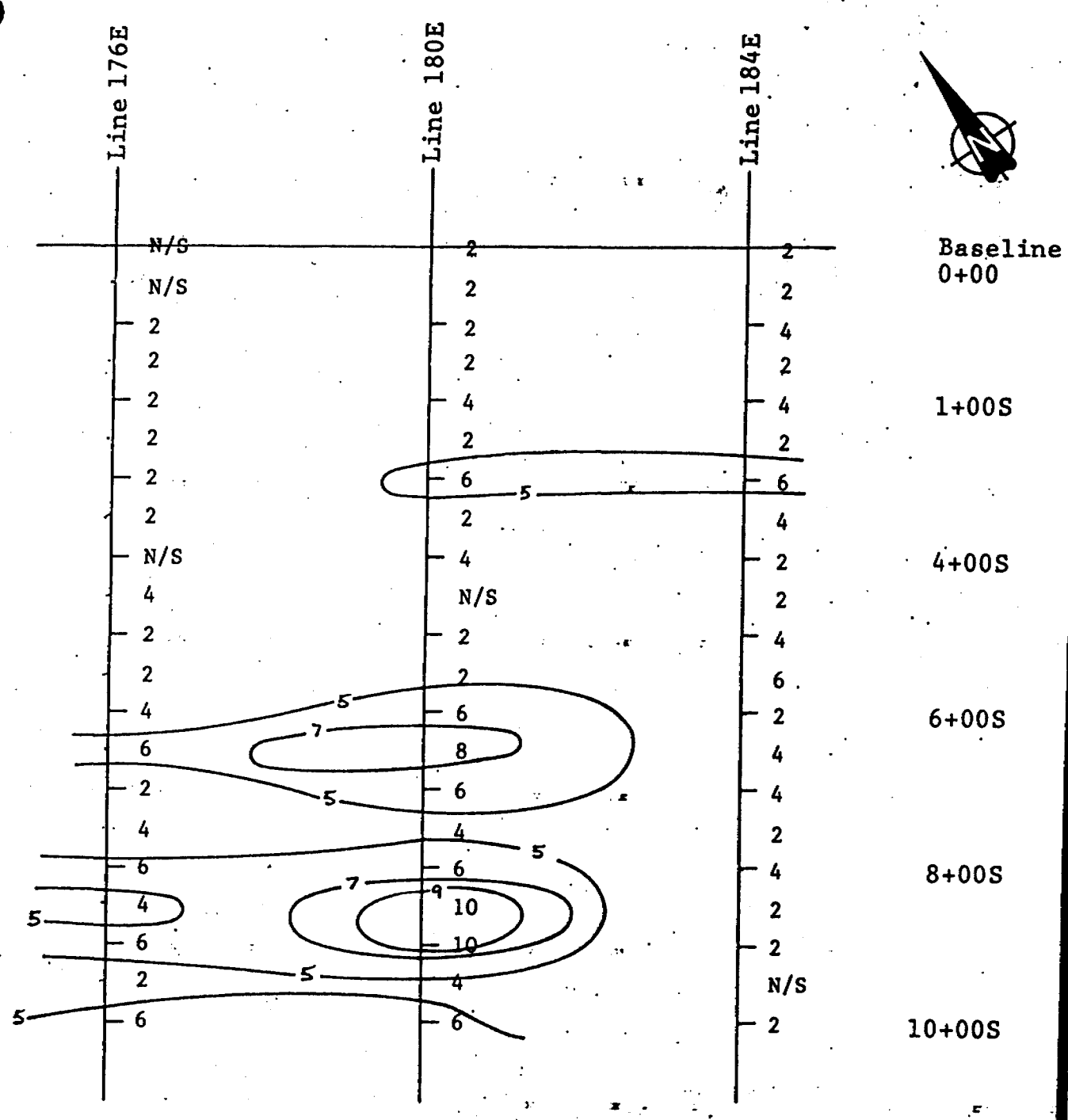
REGAL PETROLEUM LTD.

SOIL GEOCHEMISTRY

GOLD

Ln0, Ln4W & Ln8W

TWP/AREA Halcrow Twp.		PROVINCE. Ontario
MINING DIVISION Porcupine		PROJECT No. 5433
REFERENCES		N.T.S. No. 41 O/10
DRAWN R. Reukl	DRAFTED K. Bazinet	CHECKED R. Reukl
SCALE 1"=200'	DATE July 17, 1984	SHEET No.



Contour Legend

- 5ppb
- 7ppb (threshold)
- 9ppb (anomalous)

Figure 9

David R. Bell Geological Services Inc.

REGAL PETROLEUM LTD.

SOIL GEOCHEMISTRY

GOLD

Ln176E, Ln180E, Ln184E

TWP/AREA Greenlaw Township		PROVINCE Ontario
MINING DIVISION Porcupine		PROJECT No. 5433
REFERENCES		N.T.S. No. 41 O/15
DRAWN R. Reukl	DRAFTED K. Bazinet	CHECKED R. Reukl
SCALE 1"=200'	DATE July 17,1984	SHEET No.

This sequence contacts a large body of granite in the west-central and northwest portions of the claim group resulting in a well-defined metamorphic aureole. Late Precambrian Diabase dikes cut all other rocks mapped on the property. Large portions of the property are covered by glacial drift and sandy overburden giving scattered amounts of bedrock exposure, therefore the mapping program was somewhat restricted.

Although no economic values were returned from the geological mapping of the property, several zones of anomalous gold values were outlined in alteration zones condusive to gold mineralization. Therefore, a multi-phase follow-up program has been recommended to further investigate these zones.

18.0 RECOMMENDATIONS

A four phase follow-up program is recommended, to evaluate both, the seven zones as delineated by the mapping program, and the geophysical data received from the Aerodat airborne surveys.

As the first phase of the follow-up program the interpretation of the airborne geophysical surveys should be conducted, prior to the initiation of the following phases. By conducting the program in this manner airborne anomalies, which may warrant further work, can be examined at the same time as the geologically delineated zones.

The last three phases have been recommended to evaluate the seven (previously described) zones as outlined by the geological program. Of the seven zones, three merit a first priority rating while the remaining

four are classed as second priority targets. Consideration of airborne targets has not been included.

First Priority Targets

-includes areas which returned anomalous gold values

Zone A-1: 230+50W, TL122N; 216+00W, TL122N; 217+00W, 123+00N; 215+00W, 117+00N
Zone A-2: 159+65E, 3+65S; 156+35E, 4+30S
Zone A-3: L130W, 34+50N

Second Priority Targets

-includes areas which returned anomalous gold values

Zone B-1: 4+50W, 6+50N
Zone B-2: 180+40E, 6+80S; 182+50E, 7+00S
Zone B-3: 150' west of Post #2, claim #708942
Zone B-4: 43+10E, 1+00N

These recommendations as presented have been prepared, so as to delineate the showings by a cost effective method, but at the same time to gain useful and relevant geological and mineralogical data.

Phase I

This first phase would consist of an interpretation of the data from the airborne geophysical surveys. A qualified geophysicist, familiar with the interpretation of airborne magnetometer, VLF and EM surveys, should be contracted for this work.

Phase II

The second phase programs generally consists of four components. Although some of these components may appear redundant (i.e., mapping), the showings, or zones, as delineated by this summers field program can only be classed as "raw prospects." Anomalous gold assays have been received, but the mapping program only allowed for identification of such zones and not for detailed examinations.

Zone A-1 and Zones A-2 & B-2

It is recommended that linecutting, detailed mapping, magnetometer, VLF-EM and geochemical surveys be conducted across these areas. The linecutting should be completed so as to give a 200 foot spacing to the grid system. A 50 foot station spacing should be used for the geophysical and geochemical surveys, therefore giving enough detail to allow for a meaningful interpretation and correlation with the geology. The linecutting and geophysical portions of phase two should be completed prior to initiation of the mapping and geochemistry portions.

Zone A-3

Since this zone is essentially composed of a shear zone where one anomalous assay was returned, it is recommended that the geophysical surveys be eliminated from this phase. The outcrop exposure is such that detailed mapping and geochemical surveys should provide meaningful data from which the next phase can be recommended.

Zones B-1, B-3 & B-4

The initiation of phase two in these areas, can be deferred until the work on the higher priority zones has been completed. These second priority zones should be examined by the same techniques as described above, linecutting, geophysical, mapping and geochemistry surveys.

Phase III

Once a better understanding of the various showings has been gained, through the completion of phase two, a definition and delineation program should be conducted. This program should be aimed at defining the on surface parameters of the mineralized zones (i.e., width, length and gold content). Therefore the initiation of phase three will be dependent upon the results of phase two. This program should be composed of exploration techniques such as trenching, channel sampling and along strike exposure of the zone via mechanical stripping and hydraulicking.

Phase IV

If the results of phase three warrant, diamond drilling is recommended as the fourth phase. An exploratory program consisting of 7,000 feet (BQ core) is recommended to test for down dip extensions of favourable zones.

18.1 Cost Estimates

Phase I

Interpretation of Airborne Surveys -estimate (all incl. cost)	$3,000.00

Phase II - contingent upon the results of Phase I

Linecutting Program

Linecutting Costs

11.7 miles @ $350./line mile	$4,095.00

Transport Costs

Float plane	975.00

Geophysical Program

Survey Costs

Magnetometer Survey	
-13.5 line miles @ $150./line mile	2,025.00
VLF-EM Survey	
-13.5 line miles @ $150./line mile	2.025.00

Transport Costs

Float Plane	500.00

Geological Program

Mapping Costs

-crew of 4 (2 geologists-2 assistants)
-13.5 line miles @ ½ line miles/man/ day = 13.5 man days

Geologist	
2 x 13.5 day/man @ $270./day/man	7,290.00
Assiatant	
2 x 13.5 day/man @ $160./day/man	4,320.00

Assaying

Geochemical	
-200 samples @ $15./sample	3,000.00

Lithogeochemical	
-30 samples @ $50./sample	1,500.00
Equipment - estimate	
-axes, hammer mattocks, etc.	100.00
Supplies - estimate	
-gas, oil, etc.	200.00
Accommodations	
Food - 14 days @ $20./man/day	1,120.00
Lodging -estimate	600.00
-tents, camp supplies, motels, etc.	
Transport	
Truck - 1800km @ $0.35/km	630.00
Supplies - estimate	300.00
-gas, oil, etc.	
Float Plane	975.00

Geochemical Program

Soil Survey Costs	
29 man days (1424 samples @ 50 samples/man/day)	
37 man days @ $200./day	
-includes mob & demob	7,400.00
Assaying	
1424 samples @ $15./sample	21,360.00
Accomodation	
Food - 9 days @ $20./man/day	720.00
- crew of 4	

Lodging - estimate	$ 300.00	
Transport - included with mapping program		
Compilation & Preparation of Field Data		
-7 days @ $300./day	2,100.00	
Map Preparation		
-14 days @ $160./day	2,240.00	
Report Preparation		
-14 days @ $270./day	3,780.00	
Supervision		
-7 days @ $270./day	1,890.00	
Total Phase II	$66,645.00	
Plus 15% contingencies	9,996.75	
	$76,641.75	say $76,700.00

Phase III - contingent upon the results of Phase II

Stripping, hydraulicking, trenching, channel sampling - estimate	
-all inclusive costs	
30 days @ $1,000./day	30,000.00
Assaying	
Geochemical	
-200 samples @ $15./sample	3,000.00
Lithogeochemical	
-30 samples @ $50./sample	1,500.00

Compilation & Preparaton of Field Data

-5 days @ $300./day	1,500.00

Map Preparation

-7 days @ $160./day	1,120.00

Report Preparation

-7 days @ $270./day	1,890.00

Supervision

-10 days @ $270./day	2,700.00
Total Phase III	$41,710.00
	6,256.50
	$47,966.50 say $48,000.00

Phase IV - contingent upon the results of Phase III

Diamond Drilling - (BQ core)

7,000 ft @ $25./foot	175,000.00

Assaying

Geochemical	
-700 samples @ $15./sample	10,500.00
Lithogeochemical	
-100 samples @ $50./sample	5,000.00

Engineering (1 geologist, 1 helper)

90 days @ $430./day	38,700.00

Supervision

25 days @ $270./day	6,750.00

Transport & Supplies	8,000.00		
Map Preparation			
12 days @ $160./day	1,920.00		
Report Preparation			
14 days @ $270./day	3,780.00		
Total Phase IV	$249,650.00		
Plus 15% Contingencies	37,447.50		
	$287,097.50	say	$287,100.00
			$414,800.00

Total Cost Estimates

Phase I	$ 3,000.00
Phase II	76,700.00
Phase III	48,000.00
Phase IV	287,100.00
	$414,800.00

August 10, 1984
Timmins, Ontario

Respectfully submitted,
Per: David R. Bell
Geological Services Inc.

by: Robert Reukl

Supervised by: Stephen Conquer, B.Sc.

CERTIFICATE OF QUALIFICATIONS

I, Robert Reukl hereby certify:

1. that I am a geologist employed by David R. Bell Geological Services Inc., Suite 4, 251 Third Avenue, Timmins, Ontario

2. that I am presently completing a Bachelor of Science degree from Lakehead University in Thunder Bay, Ontario

3. that I am a member in good standing of the Canadian Institute of Mining and Metallurgy, and the Prospectors and Developers Association

4. that I do not have nor do I expect to receive either directly or indirectly, any interest in this property of Regal Petroleum Ltd.

August 10, 1984
Timmins, Ontario

Robert Reukl

CERTIFICATE OF QUALIFICATIONS

I, Stephen W. Conquer hereby certify:

1. that I am a geologist employed by David R. Bell Geological Services Inc., Suite 4, 251 Third Avenue, Timmins, Ontario

2. that I am a graduate of the University of Waterloo, holding a Bachelor of Science degree (1979)

3. that I have been practising my profession as a geologist since 1979

4. that I do not have nor do I expect to receive either directly or indirectly, any interest in this property or the securities of Regal Petroleum Ltd.

Timmins, Ontario
August 10, 1984

By: Stephen W. Conquer, B.Sc.

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Timmins, Ontario	June 21/84 to June 22/84
P4N 7J5	
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P4N 7J5	
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Michael Moore — June 13/84 to June 29/84
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APPENDICES TO

GEOLOGICAL REPORT

REGAL PETROLEUM LTD.

SWAYZE AREA PROPERTY

PORCUPINE MINING DIVISION

ONTARIO

PROJECT 5433

APPENDIX I

REGAL PETROLEUM LTD. SWAYZE AREA CLAIMS

REGAL PETROLEUM LTD. SWAYZE AREA CLAIMS

Claim Number	Recording Date	Township
P688585	March 4, 1983	Tooms
P688586	March 4, 1983	Tooms
P688587	March 4, 1983	Tooms
P688588	March 4, 1983	Tooms
P688589	March 4, 1983	Tooms
P688590	March 4, 1983	Tooms
P688595	March 4, 1983	Tooms
P688596	March 4, 1983	Tooms
P688597	March 4, 1983	Tooms
P688598	March 4, 1983	Tooms
P688599	March 4, 1983	Tooms
P688600	March 4, 1983	Tooms
P688601	March 4, 1983	Tooms
P688602	March 4, 1983	Tooms
P688603	March 4, 1983	Tooms
P688604	March 4, 1983	Tooms
P688605	March 4, 1983	Tooms
P688606	March 4, 1983	Tooms
P688607	March 4, 1983	Tooms
P688608	March 4, 1983	Tooms
P688609	March 4, 1983	Tooms
P688610	March 4, 1983	Greenlaw
P708930	March 4, 1983	Greenlaw
P708931	March 4, 1983	Greenlaw
P708932	March 4, 1983	Greenlaw
P708933	March 4, 1983	Greenlaw
P708934	March 4, 1983	Greenlaw
P708935	March 4, 1983	Greenlaw
P708936	March 4, 1983	Greenlaw
P708937	March 4, 1983	Greenlaw

REGAL PETROLEUM LTD. SWAYZE AREA CLAIMS CONT'D

Claim Number	Recording Date	Township
P708938	March 4, 1983	Greenlaw
P708939	March 4, 1983	Greenlaw
P708940	March 4, 1983	Greenlaw
P708941	March 4, 1983	Greenlaw
P708942	March 4, 1983	Greenlaw
P708943	March 4, 1983	Greenlaw
P708944	March 4, 1983	Greenlaw
P708945	March 4, 1983	Greenlaw
P708946	March 4, 1983	Greenlaw
P708950	March 4, 1983	Tooms
P708951	March 4, 1983	Tooms
P708952	March 4, 1983	Tooms
P708953	March 4, 1983	Tooms
P708954	March 4, 1983	Tooms
P708955	March 4, 1983	Halcrow
P708956	March 4, 1983	Halcrow
P708957	March 4, 1983	Halcrow
P708958	March 4, 1983	Tooms
P708959	March 4, 1983	Tooms
P708960	March 4, 1983	Tooms
P708961	March 4, 1983	Tooms
P708962	March 4, 1983	Halcrow
P708963	March 4, 1983	Halcrow
P708964	March 4, 1983	Halcrow
P708965	March 4, 1983	Halcrow
P708966	March 4, 1983	Halcrow
P708967	March 4, 1983	Halcrow
P708968	March 4, 1983	Tooms
P708969	March 4, 1983	Tooms
P708970	March 4, 1983	Halcrow
P708971	March 4, 1983	Halcrow

REGAL PETROLEUM LTD. SWAYZE AREA CLAIMS CONT'D

Claim Number	Recording Date	Township
P708972	March 4, 1983	Halcrow
P708973	March 4, 1983	Halcrow
P708974	March 4, 1983	Halcrow
P708975	March 4, 1983	Halcrow
P708976	March 4, 1983	Halcrow
P708977	March 4, 1983	Halcrow
P708978	March 4, 1983	Halcrow
P708979	March 4, 1983	Halcrow
P708980	March 4, 1983	Halcrow
P708981	March 4, 1983	Halcrow
P708982	March 4, 1983	Halcrow
P708983	March 4, 1983	Halcrow
P708984	March 4, 1983	Halcrow
P708985	March 4, 1983	Halcrow
P708986	March 4, 1983	Halcrow
P708987	March 4, 1983	Halcrow
P708988	March 4, 1983	Halcrow
P709030	March 4, 1983	Halcrow
P709031	March 4, 1983	Halcrow
P709032	March 4, 1983	Halcrow
P709033	March 4, 1983	Halcrow
P709034	March 4, 1983	Halcrow
P709035	March 4, 1983	Halcrow
P709036	March 4, 1983	Halcrow
P709037	March 4, 1983	Halcrow
P709038	March 4, 1983	Halcrow
P709039	March 4, 1983	Halcrow
P709040	March 4, 1983	Halcrow
P709041	March 4, 1983	Halcrow
P709042	March 4, 1983	Halcrow

REGAL PETROLEUM LTD. SWAYZE AREA CLAIMS CONT'D

Claim Number	Recording Date	Township
P709043	March 4, 1983	Halcrow
P709045	March 4, 1983	Halcrow
P709046	March 4, 1983	Halcrow
P709047	March 4, 1983	Halcrow
P709048	March 4, 1983	Halcrow
P709049	March 4, 1983	Halcrow
P709050	March 4, 1983	Halcrow
P709051	March 4, 1983	Halcrow
P709052	March 4, 1983	Halcrow
P709053	March 4, 1983	Halcrow
P709054	March 4, 1983	Halcrow
P709055	March 4, 1983	Halcrow
P709056	March 4, 1983	Halcrow
P709057	March 4, 1983	Halcrow
P709058	March 4, 1983	Halcrow
P709059	March 4, 1983	Halcrow
P709060	March 4, 1983	Halcrow
P709061	March 4, 1983	Halcrow
P709062	March 4, 1983	Halcrow
P709063	March 4, 1983	Halcrow
P709064	March 4, 1983	Halcrow
P709065	March 4, 1983	Halcrow
P709066	March 4, 1983	Halcrow
P709067	March 4, 1983	Halcrow
P709068	March 4, 1983	Tooms
P757390	May 5, 1983	Halcrow
P757391	May 5, 1983	Halcrow
P757392	May 5, 1983	Halcrow
P757393	May 5, 1983	Halcrow
P757394	May 5, 1983	Halcrow

REGAL PETROLEUM LTD. SWAYZE AREA CLAIMS CONT'D

Claim Number	Recording Date	Township
P757395	May 5, 1983	Halcrow
P757396	May 5, 1983	Halcrow
P757397	May 5, 1983	Halcrow
P757398	May 5, 1983	Halcrow
P757399	May 5, 1983	Halcrow
P757400	May 5, 1983	Halcrow
P757401	May 5, 1983	Halcrow
P757402	May 5, 1983	Halcrow
P757403	May 5, 1983	Halcrow
P757404	May 5, 1983	Halcrow
P758284	May 5, 1983	Halcrow
P758285	May 5, 1983	Halcrow
P758310	May 5, 1983	Halcrow
P758311	May 5, 1983	Halcrow
P758312	May 5, 1983	Halcrow
P758313	May 5, 1983	Halcrow
P758314	May 5, 1983	Halcrow
P758315	May 5, 1983	Halcrow
P758316	May 5, 1983	Halcrow
P758317	May 5, 1983	Halcrow
P758318	May 5, 1983	Halcrow
P758319	May 5, 1983	Halcrow
P752003	December 23, 1983	Halcrow
P752004	December 23, 1983	Halcrow
P752005	December 23, 1983	Halcrow
P752006	December 23, 1983	Halcrow
P752007	December 23, 1983	Halcrow
P752008	December 23, 1983	Halcrow
P779840	December 23, 1983	Halcrow

REGAL PETROLEUM LTD. SWAYZE AREA CLAIMS CONT'D

Claim Number	Recording Date	Township
P779841	December 23, 1983	Halcrow
P779842	December 23, 1983	Halcrow
P779843	December 23, 1983	Halcrow
P779844	December 23, 1983	Halcrow
P779845	December 23, 1983	Halcrow
P779846	December 23, 1983	Halcrow
P779847	December 23, 1983	Halcrow
P779870	December 23, 1983	Halcrow
P779871	December 23, 1983	Halcrow
P779872	December 23, 1983	Halcrow
P779873	December 23, 1983	Halcrow
P783631	December 23, 1983	Halcrow
P783632	December 23, 1983	Halcrow
P783633	December 23, 1983	Halcrow
P783634	December 23, 1983	Halcrow
P783637	December 23, 1983	Halcrow
P783638	December 23, 1983	Halcrow
P783639	December 23, 1983	Halcrow
P783640	December 23, 1983	Halcrow
P783641	December 23, 1983	Halcrow
P783642	December 23, 1983	Halcrow
P783643	December 23, 1983	Halcrow
P783644	December 23, 1983	Halcrow

APPENDIX II

REGAL PETROLEUM LTD. SWAYZE AREA CLAIMS

SUMMARY OF EXPLORATION 1932-1983

TYPE OF WORK

Numbers below represent the year in which the work was done; e.g., 68 for 1968.

	EXPLORATION DATA / COMPANY/AUTHOR	GEOLOGICAL	GEOCHEMICAL	TRENCHING, STRIPPING	DRILLING	ASSAY DATA	UNDERGROUND WORK	PROSPECTUS, NOTES, CORRESPONDENCE	AIRBORNE MAGNETOMETER	AIRBORNE ELECTROMAGNETIC	AIRBORNE RADIOMETRIC	GROUND MAGNETOMETER	GROUND ELECTROMAGNETIC	GROUND RADIOMETRIC	INDUCED POLARIZATON	SELF POTENTIAL	RESISTIVITY	METALLURGICAL		
1	Halcrow-Swayze Mines Limited	32-33		32-33	33-34 37	33-34	33-37											33		
2	Lyall-Beidelman	33-34		33-34		33-34														
3	Lee Gold Mines Ltd.	32-34		32-33		32-34	34	32-34												
4	W. Hammerstrom	46		46		46														
5	Hotstone Minerals Ltd.	46-47		46-47	46-47	46-47														
6	The Anaconda Co(Can) Ltd.				60								59							
7	G. Bastarache				66															
8	Canadian Nickel Co. Ltd.				67															
9	Canadian Nickel Co. Ltd.				68															
10	Armac Securities Ltd.				68	68														
11	P.G. Allen											71	71							
12	Canex Aerial Exploration Ltd.	72										72	72							

TYPE OF WORK		Numbers below represent the year in which the work was done; e.g., 68 for 1968.																		
EXPLORATION DATA		GEOLOGICAL	GEOCHEMICAL	TRENCHING, STRIPPING	DRILLING	ASSAY DATA	UNDERGROUND WORK	PROSPECTUS, NOTES, CORRESPONDENCE	AIRBORNE MAGNETOMETER	AIRBORNE ELECTROMAGNETIC	AIRBORNE RADIOMETRIC	GROUND MAGNETOMETER	GROUND ELECTROMAGNETIC	GROUND RADIOMETRIC	INDUCED POLARIZATON	SELF POTENTIAL	RESISTIVITY	TILL SAMPLING		
COMPANY/AUTHOR																				
13	Mattagami Lake Mines Ltd.				76	76							75	75						
14	Granges Exploration AB				77															
15	Gulf Minerals Canada Ltd.				77															
16	Granges Exploration AB				79-81															
17	Gossan Resources Ltd.	80				80														
18	Sulpetro Minerals Ltd.		81										82	82				80		
19	Johns-Manville Canada Inc.												82	82						
20	Dejour Mines Ltd.												82-83	82-83						
21	Quinterra Resources				82-83	83												83		
22	Collingwood Energy Inc.			83									83	83						
23	Noranda Exploration Ltd.	84		83-84																

DRILL HOLE SUMMARY

Location Number	Company Name	Company Drill Hole Number	Date Drilled	Bearing Azimuth	Initial Dip of Hole	Thickness of Overburden	Total Length of Hole	Mineralization Noted in Log	Assay Data Included for
				Degrees	Degrees	Feet	Feet		
1	Halcrow-Swayze Mines Ltd.	Total of 4,330' of diamond drilling from 1932-34 (2,328' from underground workings). Additional drilling in 1937, extent unknown.							
3	Lee Gold Mines Ltd.	Total of 2,000' diamond drilling in 11 holes, assay values reported from 4 of the 11 hole ranged from 0.25 to 0.64 oz Au/ton.							
5	Hotstone Minerals Ltd.	1-15	1946-47				8960'		#8-0.26 oz/t across 4.1' in core #9-0.47 oz/t across 30' in sludge
		17-21	1946-47				492'		
		29-33	1946-47				500'		
		25					9952'		
6	The Annaconda Co. (Canada) Ltd.	B-1	Oct/60	S25W	-50	23.0	420.0	py	---
		B-2	Oct/60	N25E	-60	26.5	205.0	po, cpy, py	---
		B-3	Oct/60	S30W	-50	51.0	206.0	po	
7	G. Bastarche	1	Aug/66	S	-45	--	101.0	py, po, cpy	---
		2	Aug/66	S	-60	5.0	75.0	py	---
		3	Aug/66	N	-45	--	50.0	py	---
		4	Aug/66	N	-45	--	35.0	py	---
		5	Aug/66	N	-45	3.0	102.0	py	---
		6	Aug/66	N	-45	--	37.0	po, py	---
8	Canadian Nickel Co. Ltd.	31935	July/67	N	-45	8.0	211.0	py	---
		31936	July/67	N	-55	25.0	199.0	--	---

DRILL HOLE SUMMARY

Location Number	Company Name	Company Drill Hole Number	Date Drilled	Bearing Azimuth Degrees	Initial Dip of Hole Degrees	Thickness of Overburden Feet	Total Length of Hole Feet	Mineralization Noted in Log	Assay Data Included for
10	Armac Securities Ltd.	T1	Aug/67	003	-46	101.0	239.0	py, po, cpy, sph	---
		T2	Aug/67	003	-45	50.0	235.0	py, po, cpy	Au, Cu, Ni
		T3	Aug/67	003	-51	40.0	385.0	py, po	Au, Cu, Ni
		T4	Aug/67	003	-60	6.0	300.0	po, cpy, py	Au, Cu, Ni
		T5	Aug/67	183	-55	88.0	341.0	py, po, cpy, sph	Au, Cu, Zn Ni
		T6	Aug/67	003	-50	50.0	310.0	py, mag	Ni
		T7	Aug/67	003	-49	3.0	263.0	py, po, cpy	Cu, Ni
		T8	Aug/67	003	-61	33.0	316.0	py, po, cpy, mag	Cu, Ni
		T9	Sept/67	003	-68	82.0	612.0	py, po, cpy, spy, mo	Au, Cu, Zn Ni
9	Canadian Nickel Co. Ltd.	31960	May/68	S	-45	36.0	401.0	---	---
13	Mattagami Lake Mines Ltd.	S-3-76-1	Jan/76	S	-50	58.0	334.0	py, po, mag	Zn, Cu, Pb
		S-4-76-2	Jan/76	S	-50	36.0	457.0	py	Zn, Cu
		S-1-76-4	Feb/76	S	-50	20.0	407.0	py	Cu, Zn, Pb
		S-2-76-3	Feb/76	S	-50	79.0	417.0	py	Ag, Zn, Cu
		S-8-76-5	Feb/76	S	-50	49.5	346.0	py, po	Cu, Zn, Pb
		S-8-76-6	Mar/76	S	-50	10.5	406.0	py	Au, Cu, Zn Pb

DRILL HOLE SUMMARY

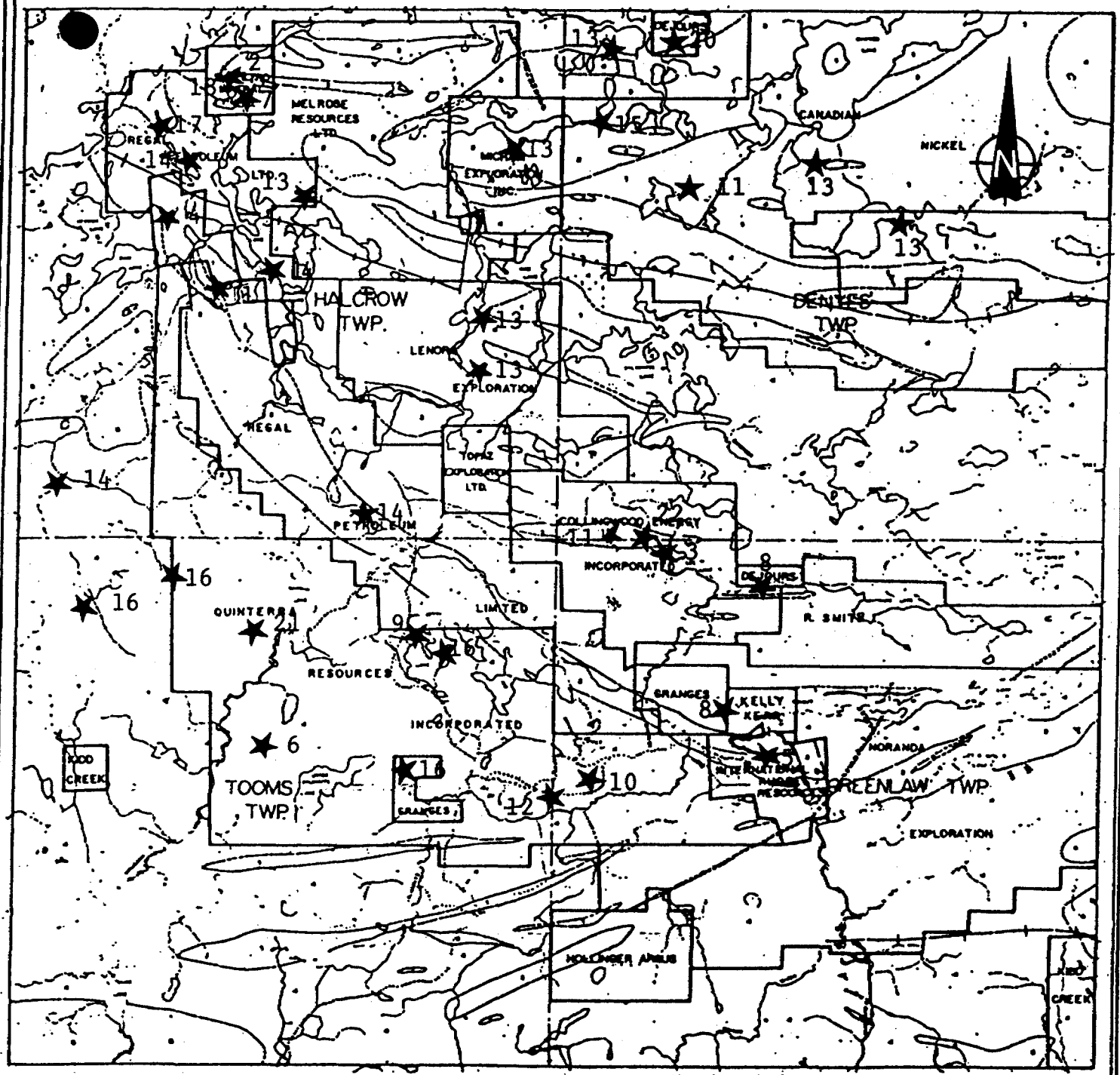
Location Number	Company Name	Company Drill Hole Number	Date Drilled	Bearing Azimuth Degrees	Initial Dip of Hole Degrees	Thickness of Overburden Feet	Total Length of Hole Feet	Mineralization Noted in Log	Assay Data Included for
14	Granges Exploration AB	SW-5	Feb/77	S	-55	105.5	223.0	py	---
		SW-7	Feb/77	S	-60	24.0	289.0	py	---
		SW-10	Feb/77	W	-65	104.0	214.0	py	---
		SW-14	Feb/77	S	-65	106.0	201.0	py	---
		SW-18	Mar/77	S	-60	22.0	201.0	py	---
15	Gulf Minerals Canada Ltd.	DE2-1	Mar/77	S	-45	46.0	507.0	py, mag	---
16	Granges Exploration AB	SW-62	July/79	S	-65	52.0	599.0	po, py, cpy, mag	Au, Ag, Cu, Zn, Ni, Co
		SW-63	July/79	S	-55	17.0	249.0	py, po, cp	Au, Ag, Cu, Zn, Ni, Co
		SW-65	July/79	S	-65	205.0	318.0	py, po, mag	Au, Ag, Cu, Zn, Ni, Co
		SW-66	July/79	S	-50	32.0	220.0	py, po, cpy	Au, Ag, Cu, Zn, Ni, Co
		SW-67	July/79	S	-55	50.0	167.0	py, po, cpy	Au, Ag, Cu, Zn, Ni
		SW-68	Aug/79	S	-55	132.0	225.0	po, cpy, sph	Au, Ag, Cu Zn, Ni
		SW-74	Sept/79	N	-55	79.0	217.0	py, po	Au, Ag, Cu, Zn, Ni
		SW-75	Oct/79	N	-55	20.0	227.0	py, po	Au, Ag, Cu, Zn, Ni
		SW-76	Oct/79	N	-55	22.0	250.0	py, po, cpy	Au, Ag, Cu, Zn, Ni

DRILL HOLE SUMMARY

Location Number	Company Name	Company Drill Hole Number	Date Drilled	Bearing Azimuth Degrees	Initial Dip of Hole Degrees	Thickness of Overburden Feet	Total Length of Hole Feet	Mineralization Noted in Log	Assay Data Included for
	Granges Exploration AB (cont'd)	SW-77	Oct/79	E	-55	4.0	213.0	py, po	Au, Ag, Cu, Zn, Ni
		SW-78	Oct/79	E	-55	16.0	137.0	po	Au, Ag, Cu, Zn, Ni
		SW-79	Oct./79	E	-55	6.0	207.0	py, po	Au, Ag, Cu, Zn, Ni
		SW-80	Oct/79	E	-55	6.0	157.0	py, po	Au, Ag, Cu, Zn, Ni
		SW-81	Nov/79	N50W	-55	16.0	125.0	py, po, cpy	Au, Ag, Cu, Zn, Ni
		SW-86	Dec/80	S	-55	75.0	273.0	py, po	Au, Ag, Cu, Zn, Ni
		SW-98	Feb/81	S	-59	77.0	197.0	py	Au, Ag, Cu, Zn
		SW-99	Feb/81	S	-50	42.0	275.0	py, po, cpy, mag	Au, Ag, Cu, Zn
		SW-100	Feb/81	S	-50	32.0	164.0	py	Au, Ag, Cu, Zn
		SW-101	Mar/81	S	-60	75.0	199.0	py	Au, Ag, Cu, Zn
		SW-102	Mar/81	S	-55	17.0	247.0	py, po, cpy	Au, Ag, Cu, Zn, Ni
21	Quniterra Resources	SC-1	Dec/82	190	-45	39.0	606.0	py, cpy	---
		SC-2	Dec/82	190	-45	71.5	597.0	py, cpy	---
		SC-3	Dec/82	190	-45	90.0	291.0	py, mag	---
		SC-6	Jan/83	200	-45	20.0	747.0	py,, po, cpy, mo?	---

DRILL HOLE SUMMARY

Location Number	Company Name	Company Drill Hole Number	Date Drilled	Bearing Azimuth Degrees	Initial Dip of Hole Degrees	Thickness of Overburden Feet	Total Length of Hole Feet	Mineralization Noted in Log	Assay Data Included for
	Quenterra Resources (Cont'd)	SC-14	Oct/83	190	-45	211.0	382.0	py	---
		SC-16	Oct/83	550W	-45	21.0	500.0	py, cpy	---



GEOLOGY MAP

LEGEND

DAVID R. BELL GEOLOGICAL SERVICES INC.	
REGAL PETROLEUM LTD.	
SWAYZE GOLD BELT EXPLORATION LOCATION MAP PORCUPINE MINING DIVISION, ONTARIO	
July 17, 1984	Figure II-1

APPENDIX III
SAMPLE LOCATIONS AND ASSAY VALUES

DAVID R. BELL GEOLOGICAL SERVICES INC.

251 THIRD AVE., SUITE 6
BOX 1250
TIMMINS, ONTARIO
P4N 7J5
(705) 264-4288

SAMPLE LOCATION SHEET

COMPANY: Regal Petroleum Ltd. PROJECT No. 5433

TWP. (AREA): Halcrow, Tooms, Greenlaw NTS: 41 0/10 - 41 0/15

Sample No.	Location	Footage	Length	Au ppb	Ag ppb			Remarks
543-0001	Ore Bin		Grab	0.102 oz				Crushed rock fro Halcrow-Swayze
543-0002	800' 530°W from Shaft		Grab	4 ppb				New Shear Zone
543-0003	Trench 9 furthest E		6' chip	0.286 oz				
543-0004	Near old mill site		Grab	5.09 oz				Concentrate?
543-0005	750' NW of shaft		Grab	0.050 oz				near draw, old pit 30'S
543-0006	750'N 65°W of shaft		Grab	0.066 oz				Basic rock with fine sulphides
543-0007	175'N 30°W of shaft		Grab	0.202 oz				granitic rock (qtz dio) py,cpy
543-0008	L80 + 70E 40+00N	trench B	Grab	Whole rock				fel.lap, tuff green mica sil,ser
543-0009	" "	trench B	"	22	1.8			" "
543-0010	" "	" "	"	8	1.0			" "
543-0011	L80+10E 40+00N	trench A	"	8	2.8			" "
543-0012	" "	" "	"	4	2.2			" "
543-0013	L80+70E 40+00N	trench B	"	2	1.0			qt vn trench B tr py
543-0014	4+50W 6+50N		"	Whole Rock				alt'd felsic crystal tuff
543-0015	" "		"	" "				" "
543-0016	" "		"	123	1.8			qtz vn in alt'd zone
543-0017	" "		"	Whole Rock				unalt'd mafic tuff next to alt'n
543-0018	178+00E 33+00S		"	23	1.0			qtz vn in old trench
543-0019	43+10E 1+00N		"	74	2.8			BIF,chert-oxide facies
543-0020	182+50E 7+00S		"	85	3.0			BIF,chert,minor py, siliceous
543-0021	" "		"	25	1.6			BIF, chert
543-0022	" "		"	15	2.6			BIF,chert,fg py more silica than 20
543-0023	L180+40E 6+80S		"	23	2.6			BIF-oxide facies
543-0024	" "		"	78	5.4			BIF-oxide facies sulphide string.
543-0025	71+60E 42+00S		"	Whole Rock				Mafic tuff
543-0026	" "		"	" "				Int. tuff
543-0027	500'W of P. 709068		"	" "				Serpentinized Ultra mafic
543-0028			"	" "				fol. and.,med. green chl.flakes
543-0029	L16E 16+00N		"	" "				Andesite
543-0030	L12+30E 5+30N		"	" "				"
543-0031	72+00E 4+80S		"	" "				fol.andesite dk green chloritic
543-0032	66+00E 20+00S		"	2				qtz vn,chl fract in And. tuff

DAVID R. BELL GEOLOGICAL SERVICES INC.

251 THIRD AVE., SUITE 6
BOX 1250
TIMMINS, ONTARIO
P4N 7J5
(705) 264-4286

SAMPLE LOCATION SHEET

COMPANY: Regal Petroleum Ltd. PROJECT No. 5433

TWP. (AREA): Halcrow, Tooms, Greenlaw NTS: 41 0/10 - 410/15

Sample No.	Location	Footage	Length	Au ppb				Remarks
543-0033	400'N of P_2 708942		Grab	3				fractures qtz v tr py,chl frac
543-0034	L216E 32+00S		"	10				sh'd dacite? ser minor py
543-0035	L204E 35+70S		"	14				Basalt (fg) 1% py
543-0036	50+50E 36+00S		"	Whole Rock				And,slightly fol'd cb alt'n
543-0037	PW543-43		Grab	Whole Rock				Mafic lap. tuf 20% fel.frags
543-0038	PL,196+00E		"	14				Fel.vn in mas.An minor py(<1%)
543-0039	100'W of P#1 of 709066		"	Whole Rock				mg.dia.with coar euh.py crystal
543-0040	BLO 165+80E		"	Whole Rock				coliated And.
543-0041	L176E/ 13+00S		"	" "				mg andesite
543-0042	159+65E 3+65S		"	115	0.2			inter tuff NE & in contact wi qzitein old trenc
543-0043	159+65E 3+65S		"	4	0.2			inter tuff,SW-in contact with qtz in old trench
543-0044	159+65E 3+65S		"	7	0.4			carb alt'n in mineralized zon py hosted qtzit in old trench
543-0045	159+65E 3+65S		"	4	0.2			qtz vn in alt'n zn hosted qtzit in old trench
543-0046	159+65E 3+65S		"	29	0.4			qtzite in old trench
543-0047	BS-543-06 L90E,24+00 S of BL		"	Whole Rock				pyroclastic breccia
543-0048	L102E/ 37S		"	Whole Rock				flowandesite
543-0049	L180E,13+00S		"	" "				Diorite(?)
543-0050	L180E,10+00S		"	" "				tuff
543-0051	trench 156+35E/4+25S		"	301				shear zone sil. tuff(?)with fuch & py;carb alt'n
543-0052	trench 156+35E/4+29S		"	7				shear zone sil. with py,carb,& spots of fuchite
543-0053	156+18E/ 5+35S		"	10				banded iron form (chert facies)z with sec. py
543-0054	150'W of #2 post claim708942		"	137				sheared and.twi qtz fill. & mino (1-2% py)

DAVID R. BELL GEOLOGICAL SERVICES INC.

231 THIRD AVE., SUITE 6
BOX 1250
TIMMINS, ONTARIO
P4N 7J5
(705) 264-4286

SAMPLE LOCATION SHEET

COMPANY: Regal Petroleum Ltd. PROJECT No. 5433

TWP. (AREA): Halcrow, Tooms & Greenlaw NTS: 41 0/10 - 41 0/15

Sample No.	Location	Footage	Length	Au ppb	Remarks
543-0055	150'E of Road along N. cl.ln.towards #1 post #708942		Grab	4	Dacitic tuff
543-0056	L212E 27+60S		"	8	massive andes minor (1%) py
543-0057	L216E, 33S		"	3	sil.and.minor (1%)cb.fg cub
543-0058	45W,32S		"	Whole Rock	mas.And. mino carb.frac.tr
543-0059	45W,34+40S		"	" "	Dia. cg well jointing,magn
543-0060	20'NE of P3 cl#P209037		"	2	Mass.And. mod fol.carb frac minor py (1%)
543-0061	67+50W,8+75N (portage trial E) side of river		"	3	And.tuff aggl str. fol.rust with qtz vn minor py
543-0062	L90W - 4300N		"	Whole Rock	highly shrd c sil inter tuf
543-0063	L89+60W 13+90S		"	Whole Rock	Mas.And. mod. fol. blue qtz
543-0064	L80W- 4325N		"	2	mod.shrd And. tuff carb. slightly silic
543-0065	L80W- 4175N		"	2	shrd slightly s carb metaseds finely lam mud- stone/siltston
543-0066	L80W 4100N		"	Whole Rock	Heavily shrd c And. tuff (Fe carb)
543-0067	L80W/ 3950N		"	2	Fol.And.tuff Heav.carb.along fol.Fe oxide staining
543-0068	135'@305° from L80W/44N			41	smeared qtzite slightly sil. well carb tr py
543-0069	135' @ 305° from L80W/44N		"	2	shd And.tuff chl.well carb. minor sulphides (bornite)
543-0070	135' @ 305° -L40W/44N		"	Whole Rock	shd.And.xtal tu no qtz fragment
543-0071	135' @ 305° from L80W 44N		"	" "	Dac.xtal tuff slightly shrd carb minor diss sulphides
543-0072	135'@305° from L80W 44N		"	" "	slightly shrd qtzite,carb. minor sulphides dk vision mnral
543-0073	300'@ 305° at L80W/44N		"	2	slightly shrd qtzite,slightly sil. qtz veinin

DAVID R. BELL GEOLOGICAL SERVICES INC.

251 THIRD AVE., SUITE 6
BOX 1250
TIMMINS, ONTARIO
P4N 7J5
(705) 264-4286

SAMPLE LOCATION SHEET

COMPANY: Regal Petroleum Ltd. PROJECT No. 5433

TWP. (AREA): Halcrow, Tooms, Greenlaw NTS: 41 0/10 - 41 0/15

Sample No.	Location	Footage	Length	Au ppb	Remarks
543-0074	300' @ 305° from L80W/44N		Grab	2	And. lapilli tuff
543-0075	40' @ 305° from 680W/44N		"	2	slightly shrd qtzite, carb. minor sulphide
543-0076	11+80W/ 29+70N		"	3 Whole Rock	Fol.mafic-Inter And.chl.rich, carb. alt'n
543-0077	11+80W /33+00N		"	2	shrd mafic tuff carb. alt'n,py & lightly chlzd
543-0078	35+50W/ 39+50W		"	2	lightly shrd.si mudstone with carb. alt'n & pyrite
543-0079	35+00W/ 39+25N		"	2	qtz carb vein within shear zn minor pyrite
543-0080	33+60W/ 37+80N		"	Whole Rock	Fol.inter.to ma and. with carb. alter'n
543-0081	33+60W/ 42+30N		"	Whole Rock	accretionary la tuff,carb.alt'n
543-0082	34+36W/ 41+00N		"	2	shrd qtzite wit py & carb alt'n
543-0083	65+00W/ 37+80N		"	2	ltly shrd.argil & qtzite carb alt'n (py)
543-0084	64+30W/ 38+20N		"	Whole Rock	Fol.And.,with carb.alt'n, minor (py)
543-0085	64+75W/ 38+20N		"	3	ltly shrd qzite with carb alt'n (py)
543-0086	63+95W/ 39+00N		"	2	qtz carb vn with in shear zone
543-0087	64+00W/ 39+40N		"	3	ltly shrd argil. & qzite, carb alt'n (py)
543-0088	65+50W/ 41+00N		"	2	" "
543-0089	65+40W 41+00N		"	2	qtz carb vn with in shear zone
543-0090	67+00W 43+00N		"	23	dkgreen siltston with py magnetit
543-0091	93+00W/ 79+00N		"	Whole Rock	mas lt green And carb alt'n
543-0092	BS543-29 43+00N/38+00N		"	18	carb.meta.argil. (5-7%) pyrite
543-0093	L110/ 43+60N		"	3	Fel(sil)qtzite-crystal tuff? 5-7%

DAVID R. BELL GEOLOGICAL SERVICES INC.

231 THIRD AVE., SUITE 6
BOX 1250
TIMMINS, ONTARIO
P4N 7J8
(705) 264-4286

SAMPLE LOCATION SHEET

COMPANY: Regal Petroleum Ltd. PROJECT No. 5433

TWP. (AREA): Halcrow, Tooms, Greenlaw NTS: 41 0/10 - 41 0/15

Sample No.	Location	Footage	Length	Au ppb				Remarks
543-0094	93+00W/ 38+00N		Grab	Whole Rock				Diabase
543-0095	L83W/ 45+60N		"	2				carb silt/mud- stone graded finely laminate
543-0096	135' @ 305° from L80W 44N		"	2				qtz carb.vn in Andesitic Xtal tuff tourmalin
543-0097	L83N 36N		"	2				sil. finely la silt/mudstone
543-0098	L83W 36N		"	2				qtz carb in shr and. tuff(ser.) near sed/tuff contact
543-0099	L83W 36N		"	2				Fol.And.tuff carb/foliation
543-0100	L83W 35N trench		"	8				shrd carb mud/ siltstone Fe oxide Fe carb// foliation
543-0101	L90W/17S		"	2				And. tuff cb vn tr py
543-0102	L90W/ 21+60S		"	2				chert with fg, diss py
543-0103	L90W/ 21+60S		"	3				chert with fg di py,qz-cb vn py, ma
543-0104	L90W/ 21+80S		"	Whole Rock				Gabbro
543-0105	L90W/ 22+80S		"	2				Xtal tuff 1-2% py
543-0106	L90W/ 28+50S		"	2				Qzvn,(And.tuff) tr py minor hem
543-0107	L110W/ 69+40N		"	Whole Rock				Dacitic tuff
543-0108	TL68N/ 109W		"	" "				Mass andesite
543-0109	95W/ 38+80N		"	4				sil.sed with 1-2% py str.
543-0110	99W/ 16S		"	2				Fol.gabbro with fg diss py
543-0111	82W/ 49+50N		"	Whole Rock				mafic flow shrd carb alt'n
543-0112	P -522164		"	49				sil.siltstone 1-2% py in shr zn
543-0113	91+00W/ 85+00N		"	Whole Rock				massive andesite with carbonate
543-0114	125+00W/ 89+00N		"	" "				fol. andesite with carbonate
543-0115	149+50W/ 92+50N		"	" "				mass. And. with carb-minor py
543-0116	142W/ 133+50N		"	63				shrd qzite with carb-low pyrite
543-0117	P S22164		"	Whole Rock				And. fol. carb pervasive
543-0118	440'S of P -22176		"	" "				Mas.and.carb iro staining minor py
543-0119	126+50W 71+40N		"	" "				Dac.mass.,fg grey-green
543-0120	TL78N, 125W		"	15				qzvn in shr zn carb & iron stn minor py (1%)

DAVID R. BELL GEOLOGICAL SERVICES INC.

231 THIRD AVE., SUITE 6
BOX 1250
TIMMINS, ONTARIO
P4N 7J5
(705) 264-4286

SAMPLE LOCATION SHEET

COMPANY: Regal Petroleum Ltd. PROJECT No. 5433

TWP. (AREA): Halcrow, Tooms, Greenlaw NTS: 41 0/10 - 41 0/15

Sample No.	Location	Footage	Length	Au ppb	Ag ppm	Zn ppm	Pb ppm	Cu ppm	Remarks
543-0121	NE corner of lake~113W,73N		Grab	Whole Rock					Mass.dacite-lt grey-green
									fresh surface
543-0122	L130W/ 34+50N		Grab	171	0.4				shr-zn-sil.carb serized dis.py
543-0123	L130W/ 33+00N		Grab	Whole Rock					andesitic flow
543-0124	L83W 35N(trench)		Grab	3					well sheared & tuff-carb
543-0125	L100W 22+70N		Grab	4					fol and tuff, carb
543-0126	L125W 33+00N		"	10					fol. and tuff, carb, py
543-0127	L125W 15+40N		"	Whole Rock					fol. & flow carb py red min
543-0128	L125W 12+40N		"	10					lam.mudstone carb near BIF
543-0129	L125N 12+40N		"	4					chert-mag BIF carb, chlorite
543-0130	L125W 640N		"	11					Fol. & tuff carb red min
543-0131	L125W BLO		"	10					and.tuff in co with qz sy(vg?
543-0132	L120N 17N 110'NW		"	7					argillite,carb sulphides
543-0133	L120W 3+75S		"	Whole Rock					chert-mag, BIF-malachite, py
543-0134	L120W 3+75S		"	7					shrd qtzite diss py, mag
543-0135	174W 102+00N		"	23					well fol. and flow,carb,py
543-0136	Shunsby 174W 101+00N		"	3					shrd qtzite Fe, carb
543-0137	L130W 34+80N		"		No Sample Sent				shr zn between and. & qtzite
543-0138	L128W 3+50N		"	7					sheared fol. andesite
543-0139	L130W 3+50N		"	Whole Rock					med. grained gabbro
543-0140	L130W 14N		"	"	"				med. grained syenite
543-0141	L130W 11+80N		"	3					And.silicified carbonatized
543-0142	L135W 31N		"	7					Andesitic tuff sil. carb
543-0143	L165NW 97N Shunsby		"	Whole Rock					Andesite
543-0144	L133W 87N		"	7					shear zone in quartzite
543-0145	L134W 32+80N		"	10					Fol. andesite sil.carb.py
543-0146	115' W of L120W,375S		"	3					Arkosic qtzite -epidote
543-0147	L120W 3+10S		"	4		93/N.D.			dio(?)-diss sul carb,"silver"
543-0148	Traverse Line 175W,84+50N		"	4				140	And.wall rock aside qtzvn-carb
									minor py,cpy
543-0149	Traverseline 175W,84+50N		"	3					qtzvn fract.iron staining-clots of fg

DAVID R. BELL GEOLOGICAL SERVICES INC.

231 THIRD AVE., SUITE 6
BOX 1250
TIMMINS, ONTARIO
P4N 7J5
(705) 264-4286

SAMPLE LOCATION SHEET

COMPANY: Regal Petroleum Ltd. PROJECT No. 5433

TWP. (AREA): Halcrow-Tooms-Greenlaw NTS: 41 O/10 - 41 O/15

Sample No.	Location	Footage	Length	Au ppb	Ag ppm	Zn ppm	Pb ppm	Cu ppm	Remarks
543-0150	Traverseline 175W/85+50N		Grab	Whole Rock					shrd And. from margin of qtvn
543-0151	L128W/ 3+50N		"	No Sample Sent					5-7% diss py in fol.and.min.qzv
543-0152	L130W/ 3+50N		"	No Sample Sent					syenite(qtz-monzonite?)
543-0153	L130W/ 3+50N		"	No Sample Sent					foliated medium gabbro?
543-0154	L129W/ 1+00N		"	No Sample Sent					
543-0155	L184W/ 1+6N		"	Whole Rock					foliated-fine andesite
543-0156	L190W/ 120N		"	"	"				Int. sili.fdspr porphyry
543-0157	L191W/ 114+50N		"	"	"				massive andesit
543-0158	L189/ 104+50N		"	12					sil.shrd carb. qzite 3-5% py
									minor malachite
543-0159	175'N of post #3 758284-178W.87+50N		"	Whole Rock					mass. gabbro coarse gr. flow
543-0160	215'N of Post#3 758284(478W.87+80N)		"	3		18/N.D.			mass dac-mag rusty fractures
									minor po (1%)
543-0161	Traverse line 175W 101+00N		"	2					ark.qzite-fol. shrd with qzvn
									carb. ir. py
543-0162	171+80W/ 116+50N		"	Whole Rock					mass. andesite with carbonate
543-0163	177+00W/ 132+00N		"	Whole Rock					fol. andesite with carb and
									minor pyrite
543-0164	TL122+00N/ 178+00W		"	4					shrd ark qzite with carb-
									minor pyrite
543-0165	178+50W 115+50N		"	Whole Rock					mass, andesite carb, alt
543-0166	185+00W 130+00N		"	"	"				fol.And. carb alt
543-0167	129+00W 1+00N		"	"	"				intermediate tuff
543-0168	206+00W 135+00N		"	2					sheared sandston carb. py
543-0169	200+00W 125+54N		"	8					sheared qtzite carb. py
543-0170	200+00W 131+50N		"	5					shrd siltstone carb.alt. py
543-0171	230+35W 125+85N		"	11					mass. qtzite carb.Fe.Alt.py
543-0172	225+00W 141+00N		"	8					shrd.arkosic qz carb.alt..py
543-0173	225+00W 143+00N		"	5					shrd mudstone carb, alt
543-0174	225+00W 137+50N		"	4					shrd mudstone carb.alt.mnr py

DAVID R. BELL GEOLOGICAL SERVICES INC.

231 THIRD AVE., SUITE 6
BOX 1250
TIMMINS, ONTARIO
P4N 7J5
(705) 264-4286

SAMPLE LOCATION SHEET

COMPANY: Regal Petroleum Ltd. PROJECT No. 5433

TWP. (AREA): Halcrow, Tooms, Greenlaw NTS: 41 0/10 - 41 0/15

Sample No.	Location	Footage	Length	Au ppb	Ag ppm			Remarks
543-0175	225+00W 136+80N		Grab	15				shrd mudstone carb alt
543-0176	91+50W/ 87+50N		"	2				shrd siltstone qzvn,carb alt
543-0177	195W/118N		"	5				int.tuff,carb alt; minor py
543-0178	195W/ 118+00N		"	Whole Rock				crystal tuff
543-0179	195W/ 118+75N		"	Whole Rock				med. grained gabbro
543-0180	122N/ 230+50W		"	182				mas.sil,seds carb;10-15% py
543-0181	TL80N 237+50W		"	4				And.tuff;carb sil; garnets
543-0182	220W/ 85N		"	8				qzvn; minor py
543-0183	220W/ 73N		"	12				in maficmudston qzvn in And.tu qz-dior,intrusi
543-0184	220W/ 129N		"	Whole Rock				fol.dacite car in fractures
543-0185	219+30W/ 122+20N		"	23				mass. And./ gabbro 1-2% py
543-0186	122N/ 216W		"	115				shrd andesite 1-2" shr zones
543-0187	122N/ 216W		"	118				3" sr zn in And ?20% py in cubes
								and stringers
543-0188	122N/ 216W		"	8				chl.qz vn in shrd andesite
543-0189	122N/ 216W		"	101				shrd And,1-3" py rich zones
543-0190	217W/ 123N		"	53				mass qz monz. potassic alt;
								2-5% pyrite
543-0191	217W/ 123+03N		"	82				fol.And. tuff carb alt + py
543-0192	217W/ 123+08N		"	104				mass qtz monz carb.alt + py
543-0193	122N/ 219W		"	309				shrd qtz monz sil. with py
543-0194	214W/ 107+60N		"	7				shrd qzite,chert carbzed.py
543-0195	215W/ 117N		"	222				shrd And; eun py;carb veins
543-0196	214W/ 108+40N		"	11				chevron folded carb qzite;tr py
543-0197	213+75W/ 108N		"	70				cherty qzite;1-3% diss sul;carb al
543-0198	210W/ 110+50N		"	3				shrd silicious tuff; trace py
543-0199	165W/ 84N		"	Whole Rock				mass dac; carb, fractures; py
543-0200	160W/ 79N		"	"	"			feldspar, porphy dike, siliceous
543-0201	trench 8W 0+0.66		"	2468 ppb 0.088 oz				qz vn in arkosic quartzite
543-0202	trench 8W 0+13		"	99 ppb	0.6			qz vn in arkosic quartzite

DAVID R. BELL GEOLOGICAL SERVICES INC.

251 THIRD AVE., SUITE 6
BOX 1250
TIMMINS, ONTARIO
P4N 7J5
(705) 264-4286

SAMPLE LOCATION SHEET

COMPANY: Regal Petroleum Ltd. PROJECT No. 5433

TWP. (AREA): Halcrow, Tooms, Greenlaw NTS: 41 0/10 - 41 0/15

Sample No.	Location	Footage	Length	Au ppb	Ag ppm			Remarks
543-0203	trench 8W 0+11		Grab	11	0.2			rusty shear in ark qtzite
543-0204	trench 3W 0+00		"	2516 0.086	0.4			rusty shear ca qzite, cb,ser
543-0205	trench 3W 0+8		"	671	0.4			sh zone, ark,q ite 5-7% sulph
543-0206	trench 3W 0+8.66		"	Whole Rock				biotite lamprophyre
543-0207	trench 9W 0+16		"	1129 0.029	0.8			shr zn ark qzit 10-20% pyrite
543-0208	trench 9W		"	1228 0.030	0.6			qzvn 5-7% py, cpy
543-0209	trench 9W 0+10		"	759	0.8			qtzv 5% sulphides
543-0210	trench 9W 0+26'-0+29'		3' chip	103	0.4			sh zn, akr qzit 3% py, cb
543-0211	trench 9W 0+44'		Grab	713	0.8			shzn,ark,qzite mnr qz sul,mal
543-0212	trench 9W 0+72'		"	Whole Rock				sheared quartz diorite
543-0213	trench 2E 0+0		"	7269 0.215	0.6			sh zone,ark qzite py CO_2
543-0214	trench 2E 0+9		"	2674 0.080	0.6			sh zone 5-7% py
543-0215	trench 3E 0+25		"	1028 0.038	0.2			qv 3% py
543-0216	trench 3E		"	15	0.4			mafic tuff,fol'd and cb
543-0217	trench 3E		"	0.145 oz	0.2			shr zn, ark qzite 3-5% py
543-0218	trench 3E 0+14'		"	1782 0.076	0.2			qzite,cb,py in contact with mafic tuff
543-0219								
543-0220								
543-0221	Sample tags not used							
543-0222	at present time							
543-0223								
543-0224								
543-0225								
543-0226	trench 6W-N 0+11'		grab	562	0.8			ark, qtzite
543-0227	trench 6W-N 0+15'		"	0.073	2.0			sh'd sulphide stained qzite
543-0228	trench 6W-N 0+24'		"	880	1.0			sh'd qzite,with diss py
543-0229	trench 6W-N 0+31		"	0.096	1.0			sh'd qzite with 2-3% diss py
543-0230	trench 6W-N 0+53		"	0.680	0.8			sh'd pyritic quartzite
543-0231	trench 6W-N 0+57		"	255	0.6			sh'd qtz vein
543-0232	trench 6W-N 0+57'		"	7910 0.230	0.6			next to qv S side qzite with py, carb

DAVID R. BELL GEOLOGICAL SERVICES INC.

231 THIRD AVE., SUITE 8
BOX 1250
TIMMINS, ONTARIO
P4N 7J5
(705) 264-4286

SAMPLE LOCATION SHEET

COMPANY: Regal Petroleum Ltd. PROJECT No. 5433

TWP. (AREA): Halcrow, Tooms, Greenlaw NTS: 41 0/10 - 41 0/15

Sample No.	Location	Footage	Length	Au ppb	Ag ppm			Remarks
543-0233	trench 6W-N 0+57'		Grab	0.095	0.8			next to qv, N side qzite,py.
543-0234	trench 6W-N 0+100'		"	510	1.2			sh'd mg qtz diorite
543-0235	trench 7W 0+5'		"	33	0.2			fg-mg qtzite
543-0236	trench 7W 0+15.5'		"	140	0.2			sh'd pyritic quartzite
543-0237	trench 7W 0+21'		"	26	0.2			fg qtzite
543-0238	trench 7W 0+30'		"	43	0.4			sh'd pyritic, qzite with cb
543-0239	trench 2W 0+9'		"	504	0.4			pyritic, fol'd qtzite
543-0240	trench 2W 0+17'		"	16	0.4			biotite lamprophyre
543-0241	trench 2W 0+16'		"	155	0.6			pyritic qzite S side lamp dy
543-0242	west pit 127'N		"	41	0.4			sh'd mg qzite
543-0243	west pit 157'N		"	18	0.4			chl,vfg-fg qzi to sil stringe
543-0244	west pit 40'S		"	0.412	0.6			sh'd pyritic qtzite
543-0245	west pit 42'S		"	69	0.6			sh'd mafic tuff
543-0246	trench 4E 0+18'		"	1549 0.040	0.6			pyritic sheare quartzite
543-0247	trench 4E 0+37'		"	56	0.2			quartzite
543-0248	trench 5E 0+14		"	510	0.4			sh'd pyritic qtz.tc
543-0250	trench 6E 0+8'		"	217	0.6			sh'd pyritic quartzite
543-0251	trench 7E 0+14'		"	59	0.4			sh'd qtzite
543-0252	trench 8E 0+8'		"	214	0.4			sh'd pyritic quartzite
543-0253	trench 9E 0+21'		"	16	0.2			sh'd qtzite
543-0254	trench 9E 0+35'		"	3,435 0.110	5.2			3cm py vn in qtzite
543-0255	trench 10E 0+15		"	0.625	30.6			4"-6" pyrite v in qtzite
543-0256	trench 10E 0+31'		"	0.371	11.6			sil'd py vn in qtzite
543-0257	trench 10E 0+31'		"	0.130	9.0			diss py in sh' qtzite
543-0258	trench 10E 0+16'S		"	7.13	10.6			3cm py vein in qtzite
543-0259	trench 10E 0+75'		"	0.174	2.6			diss py in sh' qtzite
543-0260	L110W/ 2100N		"	Whole Rock				qtz monzonite
543-0261	L105W/ 1150N		"	" "				medium grained diabase
543-0262	L105W/ 2150N		"	" "				Int. tuff
543-0263	L110W/ 43+60N		"	2				Int. tuff, sil 5-7% py
543-0249	Trench 5E 0+21'		"	195	0.2			sh'd pyritic qtzite

BELL-WHITE ANALYTICAL LABORATORIES LTD.
P.O. BOX 187, HAILEYBURY, ONTARIO TEL: 672-3107

Certificate of Analysis

NO. B401-84 DATE: May 31, 1984

SAMPLE(S) OF: Rock (11)
Core (13) RECEIVED: May, 1984

SAMPLE(S) FROM: Mr. Stephen Conquer
David R. Bell Geological Services Inc. Project #5433

Sample No.	Gold/ppb	Gold/oz.	Silver/ppm
543-0001	3143	0.102**	
-0002	4		
-0003	8588	0.286**	
-0004		5.09 **	
-0005	1474	0.050	
-0006	2030	0.066	
-0007	5588	0.202**	
543-0009	22		1.8
-0010	8		1.0
-0011	8		2.8
-0012	4		2.2
543-0013	2		1.0
543-0016	123		1.8
543-0018	23		1.0
-0019	74		2.8
-0020	85		3.0
-0021	25		1.6
-0022	15		2.6
-0023	23		2.6
-0024	78		5.4**
543-0032	2		
-0033	3		
-0034	10		
-0035	14		

** Checked

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

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BELL - WHITE ANALYTICAL LABORATORIES LTD.
P.O. BOX 187, HAILEYBURY, ONTARIO TEL: 672-3107

Certificate of Analysis

NO. B428-84 DATE: June 6, 1984

SAMPLE(S) OF: Rock (13) RECEIVED: May, 1984

SAMPLE(S) FROM: St. Stephen Conquer
David R. Bell Geological Services Inc. Project #5433

Sample No.	Gold/ppb	Silver/ppm
543-0038	14	
543-0042	115	0.2
-0043	4	0.2
-0044	7	0.4
-0045	4	0.2
-0046	29	0.4
543-0051	301**	1.6
-0052	7	0.2
-0053	10	0.4
-0054	137**	
-0055	4	
-0056	8	
-0057	3	

** Checked

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BELL-WHITE ANALYTICAL LABORATORIES LTD.
P.O. BOX 187, HAILEYBURY, ONTARIO TEL: 672-3107

Certificate of Analysis

NO. B487-84 DATE: June 18, 1984

SAMPLE(S) OF: Rock (39) RECEIVED: June, 1984

SAMPLE(S) FROM: Mr. Stephen Conquer
David R. Bell Geological Services Inc. Project #5433

Sample No.	Au/ppb	Sample No.	Au/ppb
5433-0060	2	5433-0089	2
-0061	3	5433-0090	23
-0064	2	-0092	18
-0065	2	-0093	3
-0067	2	-0095	2
-0068	41	-0096	2
-0069	2	-0097	2
5433-0073	2	-0098	2
-0074	2	-0099	2
-0075	2	5433-0100	8
-0076	3	-0101	2
-0077	2	-0102	2
-0078	2	-0103	3
-0079	2	-0105	2
5433-0082	2	-0106	2
-0083	2	-0109	4
-0085	3	5433-0110	2
-0086	2	5433-0124	3
-0087	3	-0125	4
-0088	2		

ACCORDANCE WITH LONG-ESTABLISHED NORTH MERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED TH WISE GOLD AND SILVER VALUES REPORTED ON HE SHEETS HAVE NOT BEEN ADJUSTED TO COMPEN- AT FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

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P.O. BOX 187, HAILEYBURY, ONTARIO TEL: 672-3107

Certificate of Analysis

NO. B591-84 DATE: July 5, 1984

SAMPLE(S) OF: Rock (31) RECEIVED: June, 1984

SAMPLE(S) FROM: Mr. R. Reukl
David R. Bell Geological Services Inc. Project #5433

Sample No.	Au/ppb	Sample No.	Au/ppb	Ag/ppm
543-112	49	543-138	7	0.2
-116	63	-141	3	0.2
-120	15	-142	7	0.2
-126	10	-144	2	0.2
-128	10	-145	10	0.2
-129	4	-158	12	
-130	11	-168	2	
-131	10	-169	8	
-132	7	-170	5	
-134	7	-171	11	0.2
-135	23	-172	8	
		-173	5	
		-174	4	
		-175	15	
		-176	2	
		-177	5	
		-180	182	0.6
		-181	4	0.2
		-182	8	
		-183	12	

ACCORDANCE WITH LONG-ESTABLISHED NORTH MERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED TH WISE GOLD AND SILVER VALUES REPORTED ON HES SHEETS HAVE NOT BEEN ADJUSTED TO COMPEN- AT FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

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Certificate of Analysis

NO. B611-84 DATE: July 9, 1984

SAMPLE(S) OF: Rock (12) RECEIVED: June, 1984

SAMPLE(S) FROM: Mr. Stephen Conguer
David R. Bell Geological Services Inc. Project #326, 541, 543

Sample No.	Au/ppb	Au/oz.	Ag/ppm	Cu/ppm
543-0122	171		0.4	

** Checked

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Certificate of Analysis

NO. B644-84 DATE: July 12, 1984

SAMPLE(S) OF: Rock (3) RECEIVED: June, 1984

SAMPLE(S) FROM: Mr. R. Reukl
David R. Bell Geological Services Inc. Project #5433

Sample No.	Zinc/ppm	Lead/ppm	Copper/ppm
543-0147	93	N.D.	
-0148			140
-0160	18	N.D.	360

N.B.: N.D. denotes "Not Detected"

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Certificate of Analysis

NO. B627-84 DATE: July 11, 1984

SAMPLE(S) OF: Rock (9) RECEIVED: June, 1984

SAMPLE(S) FROM: Mr. R. Reukl
David R. Bell Geological Services Inc. Project #5433

Sample No.	Au/ppb
543-0136	3
-0146	3
-0147	4
-0148	4
-0149	3
-0160	3
-0161	2
-0164	4
543-0263	2

ACCORDANCE WITH LONG-ESTABLISHED NORTH
ERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED
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ASSAY PROCESS.

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BELL-WHITE ANALYTICAL LABORATORIES LTD.
P.O. BOX 187, HAILEYBURY, ONTARIO TEL: 672-3107

Certificate of Analysis

NO. B590-84 DATE: July 5, 1984

SAMPLE(S) OF: Rock (14) RECEIVED: June, 1984

SAMPLE(S) FROM: Mr. R. Reukl
David R. Bell Geological Services Inc. Project #5433

Sample No.	Au/ppb	Ag/ppm
543-185	23	
-186	115	
-187	118	
-188	8	
-189	101	
-190	53	0.2
-191	82	0.2
-192	104	0.2
-193	309	0.2
-194	7	0.2
-195	222	0.2
-196	11	0.2
-197	70	0.2
-198	3	0.2

I ACCORDANCE WITH LONG-ESTABLISHED NORTH
ME ICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED
TH WISE GOLD AND SILVER VALUES REPORTED ON
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ASSAY PROCESS.

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APPENDIX IV
LITHOGEOCHEMICAL ROCK CLASSIFICATION

DAVID BELL GEOLOGICAL SERVICES INC. LITHOGEOCHEMISTRY PROJECT #5433

SAMPLE NUMBER	Co-od	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Mo ppm	Co ppm	Cd ppm	CO_2%	SiO_2	Al_2O_3	CaO	MgO	Na_2O	K_2O	Fe_2O_3	MnO	TiO_2	P_2O_5	Cr_2O_3	LOI	Rb ppm	Sr ppm	Zr ppm	Ba ppm	Nb ppm	Y ppm	JC	COMMENTS
543-0008	80+70E 40+00N	4	NSS	49	18	53	300	<1	42	1	18.9	45.5	8.84	4.83	11.3	2.40	1.66	6.47	0.11	0.43	0.17	0.12	18.3	<10	270	60	340	30	<10	BK	Alteration
543-0014	4+50W 6+50N	130	1.0	53	16	66	7	3	9	1	0.9	67.2	11.3	2.94	0.53	5.67	0.41	7.49	0.10	0.51	0.12	0.01	2.00	<10	120	230	NA*	40	<10	DT	Alteration
543-0015	4+50W 6+50N	39	1.5	16.0	6	120	4	<1	8	1	0.6	66.2	12.7	1.07	0.94	3.20	1.6	10.8	0.07	0.76	0.19	0.01	2.08	<10	60	300	NA	40	40	AT	Alteration
543-0017	4+50W 6+50N	7	<0.5	3.5	12	120	110	<1	32	1	4.0	53.6	13.8	5.47	5.43	4.20	0.02	8.79	0.17	0.75	0.15	0.01	7.16	<10	100	110	NA	30	<10	BC	Rock Type
543-0025	71+60E 42+00S	3	0.5	210	10	130	26	<1	46	1	1.8	51.1	12.0	6.99	3.43	2.35	0.23	18.0	0.23	1.73	0.12	0.01	3.85	<10	140	100	NA	20	20	FT	Rock Type
543-0026	71+60E 42+00S	<2	<0.5	9.5	8	38	6	<1	5	1	1.3	66.0	15.8	3.88	1.09	5.78	1.88	2.8	0.05	0.33	0.10	0.01	3.31	<10	290	70	NA	20	<10	RC	Rock Type
543-0027	500'W of P_2-709068	<2	<0.5	16.0	8	12	1700	<1	120	1	2.6	38.2	0.90	0.09	37.1	0.10	<0.01	9.11	0.07	0.04	0.01	0.41	13.1	<10	<10	<10	NA	20	<10	UK	Rock Type
543-0028	183+20E 33+00S	<2	1.0	330	10	47.0	86	<1	37	<1	2.5	47.7	14.3	10.0	8.08	0.84	0.01	11.4	0.17	0.78	0.07	0.09	6.39	20	190	10	NA	30	20	BT	Rock Type
543-0029	16+00E 16+00N	<2	NSS	47	8	87	76	<1	30	1	0.8	54.3	15.1	6.65	6.41	1.94	0.12	9.22	0.15	0.80	0.20	0.01	4.39	20	200	120	NA	10	<10	BC	Rock Type
543-0030	12+30E 5+30N	<2	1.0	4	12	65	22	<1	30	1	2.8	49.0	17.1	5.94	4.51	5.11	0.07	9.69	0.15	1.52	0.09	0.01	5.62	<10	50	70	NA	30	<10	BC	Rock Type
543-0031	72+00E 4+80S	<2	0.5	30	14	61	100	<1	51	1	3.8	47.2	14.1	8.78	7.30	1.49	0.01	12.0	0.18	0.90	0.06	0.06	7.70	10	170	10	NA	30	20	BT	Rock Type
543-0036	50+50E 36+00S	3	0.5	99	8	43	69	<1	29	1	1.3	49.6	13.6	11.9	6.65	2.13	0.17	11.3	0.20	0.66	0.06	0.03	3.16	<10	90	10	NA	30	20	BT	Rock Type
543-0037	22+00E 18+00N	2	NSS	23	6	62	66	1	25	<1	1.0	58.7	14.2	6.35	5.16	3.04	0.15	7.92	0.11	0.70	0.15	0.02	2.93	10	190	90	NA	20	30	BC	Rock Type
543-0039	100'W of P_1-709066	3	0.5	140	8	40	76	<1	41	1	0.7	48.9	15.1	8.97	7.14	1.91	0.01	12.6	0.15	0.89	0.07	0.03	4.00	20	180	50	NA	20	30	BT	Rock Type
543-0040	165+80E 0+00	<2	1.0	26	10	62	34	<1	34	1	1.7	47.9	12.7	8.65	6.24	2.90	0.06	14.3	0.21	1.39	0.10	0.01	4.31	<10	110	60	NA	20	<10	BT	Rock Type
543-0041	176+00E 13+00S	<2	0.5	140	6	50	42	<1	33	1	0.2	48.9	13.5	10.5	6.80	1.91	0.05	14.1	0.22	0.96	0.07	0.01	2.47	10	130	30	NA	30	<10	BT	Rock Type
543-0047	90+00E 24+00S	<2	0.5	91	6	98	130	<1	41		0.3	56.3	19.5	0.97	3.54	3.41	1.69	9.42	0.12	0.79	0.09	0.02	3.85	60	200	100	NA	10	20	AC	Rock Type

*NA - not analyzed for NSS - not sufficient sample

DAVI[illegible]. BELL GEOLOGICAL SERVICES INC. LITHOGEOCHEMISTRY PROJECT # 5433

SAMPLE NUMBER	Co-od	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Mo ppm	Co ppm	Cd ppm	CO_2	SiO_2	Al_2O_3	CaO	MgO	Na_2O	K_2O	Fe_2O_3	MnO	TiO_2	P_2O_5	Cr_2O_3	LOI	Rb ppm	Sr ppm	Zr ppm	Ba ppm	Nb ppm	Y ppm	JC	Comment
543-0048	102+00E 37+00S	3	<0.5	120.	6	37	72	<1	27	<1	0.4	49.5	14.2	11.8	7.73	1.29	0.27	11.3	0.22	0.70	0.06	0.03	2.77	30	130	10	NA	30	<10	BT	Rock Type
543-0049	180+00E 13+00S	<2	0.5	87	10	87	50	<1	40	<1	1.8	48.8	12.9	10.1	6.75	1.72	0.04	13.4	0.21	0.86	0.07	0.01	4.47	<10	120	30	NA	20	10	BT	Rock Type
543-0050	188+00E 10+00S	<2	0.5	69	10	45	97	<1	38	<1	1.6	50.1	12.9	12.1	7.01	1.34	0.03	11.3	0.21	0.69	0.07	0.07	3.85	10	140	50	NA	40	10	BT	Rock Type
543-0058	45+00W 32+00S	<2	0.5	130.	8	78	110	<1	43	<1	1.3	46.1	15.4	8.20	8.09	2.71	0.16	13.9	0.21	1.03	0.09	0.03	4.39	10	160	50	NA	60	10	BT	Rock Type
543-0059	45+00W 34+40S	<2	0.5	40	10	90	75	<1	49	<1	<0.1	45.4	15.7	8.57	6.73	2.96	0.98	14.7	0.18	3.23	0.72	0.01	0.15	10	790	100	NA	50	10	BT	Rock Type
543-0062	90+00W 43+00N	<2	0.5	8.5	20	54	40	<1	29	<1	12.8	46.7	5.69	12.6	6.04	1.15	0.51	8.25	0.22	0.34	0.05	0.01	17.5	20	90	<10	NA	10	10	BK	Alteration
543-0063	89+60W 13+90S	<2	<0.5	46	8	87	38	<1	21	<1	1.9	61.0	15.0	3.18	3.33	3.68	1.80	6.57	0.08	0.68	0.16	0.01	4.16	50	80	110	NA	20	40	AC	Alteration
543-0066	80+00W 41+00N	<2	<0.5	46	14	88	62	<1	30	<1	7.0	46.1	14.3	7.53	2.92	3.29	0.08	16.5	0.19	0.80	0.13	0.01	8.47	10	110	130	NA	30	30	FT	Alteration
543-0070	135'@305° to 40W, 44N	4	1.0	140.	6	93	99	<1	44	<1	0.1	56.7	15.0	7.16	3.11	2.51	0.85	11.2	0.15	1.11	0.07	0.02	2.31	40	870	140	NA	10	10	AT	Alteration
543-0071	135'@305° from 80W, 44N	<2	0.5	29	6	73	84	2	15	<1	<0.1	61.8	16.2	4.06	1.48	4.95	0.73	7.41	0.09	0.74	0.07	0.02	2.16	30	1200	100	NA	10	10	DT	Rock Type
543-0072	135'@305° from 80W, 44N	46	0.5	100.	14	42	52	<1	28	<1	0.7	65.1	14.9	2.87	1.23	5.48	0.86	4.89	0.06	0.51	0.07	0.02	2.93	40	710	50	NA	20	10	DC	Rock Type
543-0080	33+60W 37+80N	<2	0.5	110.	16	92	100	<1	47	<1	5.1	47.4	14.5	6.94	7.43	2.22	0.01	11.8	0.14	0.78	0.06	0.02	9.00	<10	60	20	NA	10	20	BT	Rock Type
543-0081	33+60W 42+30N	<2	<0.5	17	12	72	28	<1	13	<1	3.7	61.7	14.7	4.00	2.51	5.38	1.38	4.39	0.07	0.43	0.21	0.01	5.31	60	1200	140	NA	10	10	AC	Rock Type
543-0084	64+30W 38+20N	<2	0.5	130.	12	110.	92	<1	52	<1	3.7	51.9	16.1	6.63	4.80	4.04	0.14	8.88	0.25	1.03	0.08	0.01	5.93	10	130	40	NA	10	10	BC	Rock Type
543-0091	93+00 79+00N	<2	1.0	120.	16	87	150	<1	51	<1	6.3	45.7	14.9	12.8	4.48	1.96	0.02	11.1	0.22	0.95	0.08	0.02	7.70	<10	150	50	NA	20	20	BC	Rock Type
543-0094	93+00W 38+00N	<2	0.5	77	10	75	70	<1	42	<1	2.2	49.1	14.6	9.00	5.80	1.72	0.09	13.2	0.24	0.99	0.08	0.01	4.47	<10	110	30	NA	10	10	BT	Rock Type
543-0104	90+00W 21+80S	<6	0.5	190.	8	60	32	<1	25	<1	0.2	50.6	13.5	9.68	5.92	2.13	0.79	14.9	0.22	1.11	0.12	0.01	1.08	30	120	70	NA	40	10	FT	Rock Type

DAVID H. BELL GEOLOGICAL SERVICES INC. — LITHOGEOCHEMISTRY — PROJECT # 5433

SAMPLE NUMBER	Co-od	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Mo ppm	Co ppm	Cd ppm	CO_2%	SiO_2	Al_2O_3	CaO	MgO	Na_2O	K_2O	Fe_2O_3	MnO	TiO_2	P_2O_5	Cr_2O_3	LOI	Rb ppm	Sr ppm	Zr ppm	Ba ppm	Nb ppm	Y ppm	JC	COMMENTS
543-0107	110+00W 69+40N	<2	<0.5	140.	4	27	49	<1	24	<1	0.1	48.9	15.5	12.5	7.92	2.23	0.18	9.97	0.17	0.48	0.04	0.01	2.16	<10	150	<10	NA	60	20	MT	Rock Type
543-0108	TL68+00N 109+00W	<2	0.5	150.	14	70	57	<1	41	<1	6.7	51.3	13.9	9.67	4.71	3.42	0.25	7.28	0.20	1.01	0.09	0.01	8.62	20	100	50	NA	30	20	BC	Rock Type
543-0111	82+00W 49+50N	12	0.5	26	28	72	27	1	9	<1	5.0	59.5	14.9	5.12	2.10	5.12	2.62	4.23	0.09	0.48	0.23	0.01	5.54	100	1570	180	NA	30	<10	DC	Alteration

DAVID BELL GEOLOGICAL SERVICES INC. LITHOGEOCHEMISTRY PROJECT # 5433

SAMPLE NUMBER	Co-od	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Mo ppm	Co ppm	Cd ppm	CO_2%	SiO_2	Al_2O_3	CaO	MgO	Na_2O	K_2O	Fe_2O_3	MnO	TiO_2	P_2O_5	Cr_2O_3	LOI	Rb ppm	Sr ppm	Zr ppm	Ba ppm	Nb ppm	Y ppm	JC
543-0113	91+00W 85+00N	<2	0.5	130.	16	110.	92	1	59	<1	5.7	43.4	14.2	7.38	5.84	1.58	0.16	16.7	0.31	0.91	0.08	0.01	9.70	10	50	50		10	<10	FT
543-0114	125+00W 89+00N	<2	1.0	160.	18	90	85	1	51	<1	7.9	44.0	13.5	10.5	4.81	1.27	0.99	12.9	0.24	0.91	0.07	0.01	10.8	30	40	30		20	10	FT
543-0115	149+50W/ 92+50N	<2	0.5	130.	8	63	62	1	40	<1	1.0	49.3	13.6	9.46	6.95	2.46	0.33	13.0	0.21	0.87	0.07	0.01	3.16	<10	170	40		<10	20	BT
543-0117	P_2 S22164	<2	1.0	170.	12	92	110	1	65	<1	3.5	55.4	17.0	5.64	3.97	3.39	1.34	6.42	0.15	1.04	0.09	0.01	5.38	40	90	40		<10	20	AC
543-0118	440'S of P_1 22176	<2	1.0	78	20	89	84	1	48	<1	7.8	46.0	13.2	10.4	3.72	3.08	0.08	12.0	0.34	0.84	0.07	0.01	10.2	20	60	20		20	10	FT
543-0119	126+50W 71+40N	<2	1.0	140.	20	120.	110	1	59	<1	7.2	46.2	13.9	9.10	4.84	2.64	0.03	12.6	0.31	0.88	0.07	0.01	9.54	<10	140	30		10	20	FT
543-0121	113W, 73N	<2	1.0	99	12	86	73	1	39	<1	2.8	51.5	15.3	8.20	5.81	2.42	0.02	9.42	0.20	1.01	0.08	0.01	5.31	10	120	30		10	20	BC
543-0123	L130W/ 33+00N	3	1.0	98	16	100.	130	1	60	<1	3.4	50.7	13.1	5.76	7.76	2.39	0.01	11.7	0.19	0.76	0.08	0.06	6.93	20	50	30		30	10	BT
543-0127	L125W 15+40N	<2	0.5	94	8	48	31	1	24	<1	1.1	50.2	14.5	9.42	7.72	2.70	0.12	11.0	0.21	0.59	0.05	0.01	3.08	10	110	<10		20	20	BT
543-0139	L130N 3+50N	<2	0.5	160.	8	47	15	1	19	<1	0.4	49.3	12.9	8.27	5.76	3.19	0.27	16.6	0.24	1.60	0.14	0.01	1.00	<10	60	90		10	20	FT
543-0140	L130N 14N	<2	<0.5	26	6	30	11	2	9	<1	0.5	68.0	15.8	2.04	0.99	7.01	1.58	2.54	0.03	0.37	0.11	0.01	1.70	40	660	110		10	<10	RC
543-0143	L165NW 97N	<2	1.0	110.	10	110.	200	1	63	<1	1.3	51.4	17.9	7.47	4.08	3.84	0.06	9.90	0.20	0.99	0.07	0.04	4.54	10	140	30		20	20	BC
543-0150	175W/ 85+50N	<2	1.0	12	14	120.	73	1	32	<1	3.5	43.0	17.2	7.54	6.88	2.07	0.76	14.0	0.24	1.14	0.07	0.01	7.39	50	60	50		20	40	BT
543-0155	L184W/ 116+00N	<2	1.0	140	18	110.	69	1	45	<1	5.8	47.4	13.8	9.38	4.91	2.20	0.56	10.8	0.25	0.93	0.07	0.01	9.23	30	60	40		20	<10	BT
543-0156	L190W/ 120N	<2	0.5	64	14	72	50	1	20	<1	2.2	61.0	14.9	4.82	3.38	5.34	0.04	5.33	0.11	0.58	0.29	0.01	3.31	10	320	180		20	10	AC
543-0157	L191W/ 114+50N	<2	1.0	160.	12	77	91	1	50	<1	2.2	50.4	14.6	9.48	6.30	3.35	0.04	9.89	0.21	0.87	0.07	0.02	5.16	<10	140	30		10	20	BT
543-0159	175'N of Post #3 758284-	<2	1.0	160.	20	59	71	2	31	<1	0.1	48.8	14.3	12.0	6.49	1.80	0.46	13.2	0.26	0.93	0.07	0.02	1.77	30	110	30		20	30	BT

DAVID BELL GEOLOGICAL SERVICES INC. LITHOGEOCHEMISTRY PROJECT #5433

SAMPLE NUMBER	Co-od	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Mo ppm	Co ppm	Cd ppm	CO_2%	SiO_2	Al_2O_3	CaO	MgO	Na_2O	K_2O	Fe_2O_3	MnO	TiO_2	P_2O_5	Cr_2O_3	LOI	Rb ppm	Sr ppm	Zr ppm	Ba ppm	Nb ppm	Y ppm	JC
543-0162	171+80W / 116+50N	<2	1.0	130.	16	94	77	<1	46	<1	6.3	48.5	13.8	8.70	5.28	2.85	0.09	10.5	0.24	0.95	0.08	0.01	9.31	10	70	20		20	10	BT
543-0163	177+00W / 132+00N	<2	1.0	140.	18	86	90	<1	49	<1	6.8	46.1	14.4	9.04	5.11	0.70	1.55	11.9	0.22	0.92	0.07	0.01	8.93	60	70	30		10	10	BT
543-0165	178+50W 115+50N	<2	1.0	130.	12	73	93	<1	46	<1	2.7	47.6	14.9	11.8	5.96	1.67	0.03	10.9	0.18	0.86	0.07	0.01	5.77	<10	120	50		10	30	BT
543-0166	185+00W 130+00N	<2	1.0	120.	14	93	87	<1	51	<1	3.4	48.0	14.8	10.1	4.78	2.57	0.10	12.5	0.23	0.96	0.07	0.01	6.23	<10	80	30		10	30	FT
543-0167	129+00W 1+00N	<2	0.5	58	6	40	52	1	38	<1	0.3	60.7	15.6	5.29	2.04	5.83	0.55	7.11	0.16	0.86	0.15	0.01	1.08	10	220	190		10	40	DT
543-0178	195W/ 118+50N	<2	1.0	140.	14	100.	58	<1	47	<1	3.9	51.5	13.5	8.34	5.93	2.13	0.03	10.2	0.19	1.12	0.08	0.01	7.00	20	150	50		10	20	BT
543-0179	195W/ 118+75N	<2	0.5	47	8	76	110	<1	40	<1	0.9	48.4	14.8	10.0	7.86	1.86	0.22	11.7	0.19	0.87	0.07	0.03	3.93	20	140	20		20	20	BT
543-0184	220W/ 129N	<2	1.0	110.	20	52	100	<1	40	<1	7.7	45.2	12.1	15.4	4.70	2.39	0.04	9.90	0.23	0.74	0.06	0.02	9.39	10	120	10		<10	10	BT
543-0199	165W 84N	<2	0.5	180.	4	43	40	<1	49	<1	0.1	49.1	13.8	10.9	7.01	2.05	0.26	13.7	0.29	0.87	0.08	0.01	1.85	<10	100	30		20	10	BT
543-0200	160W/ 79N	<2	1.5	93	36	70	550	1	76	<1	27.4	25.5	4.34	14.1	12.3	0.61	0.65	11.1	0.26	2.72	0.45	0.08	27.5	30	930	340		160	20	BK
543-0206	trench 3W 0+8.66	5	1.5	220.	28	49	280	<1	91	<1	7.0	34.0	5.72	12.9	14.1	0.22	1.29	14.5	0.22	4.54	0.61	0.11	10.8	110	320	350		140	20	BK
543-0212	trench 9W 0+72'	14	1.0	400.	28	100.	58	1	27	<1	4.8	54.2	13.8	6.71	4.46	4.62	1.69	6.88	0.13	0.66	0.34	0.02	6.54	70	980	140		20	30	BC
543-0260	L110W/ 21+00N	<2	<0.5	20	6	54	13	2	8	<1	0.2	68.5	16.0	2.47	1.05	6.01	1.56	2.62	0.04	0.37	0.12	0.01	1.39	40	960	100		10	10	RC
543-0261	L105W/ 11+50N	<2	0.5	100	8	38	36	1	22		0.6	50.5	14.2	10.5	8.54	2.73	0.27	10.1	0.18	0.49	0.05	0.03	2.85	10	210	30		<10	20	MT
543-0262	L105W/ 21+50N	<2	1.0	59	6	78	110	2	39		0.1	56.9	17.9	8.13	1.81	4.19	0.87	7.35	0.15	0.95	0.15	0.07	1.54	40	870	90		20	10	DT

X-RAY ASSAY LABORATORIES LIMITED

1885 LESLIE STREET, DON MILLS, ONTARIO M3B 3J4

PHONE 416-445-5755 TELEX 06-986947

CERTIFICATE OF ANALYSIS

TO: DAVID R. BELL GEOLOGICAL SERVICES INC.
ATTN: STEPHEN CONQUER
251 THIRD AVENUE, SUITE 4
BOX 1250
TIMMINS, ONTARIO P4N 7J5

CUSTOMER NO. 621

DATE SUBMITTED
7-JUN-84

REPORT 21362

REF. FILE 17004-P5

20 ROCKS

WERE ANALYSED AS FOLLOWS:

	METHOD	DETECTION LIMIT
AU PPB	FADCP	2.000
CO2 %	WET	0.100
WRMAJ %	XRF	0.010
CO PPM	DCP	1.000
NI PPM	DCP	1.000
CU PPM	DCP	0.500
ZN PPM	DCP	0.500
WRMIN PPM	XRF	10.000
MO PPM	DCP	1.000
AG PPM	DCP	0.500
CD PPM	DCP	1.000
PB PPM	DCP	2.000

CORRECTED REPORT

X-RAY ASSAY LABORATORIES LIMITED

DATE 26-JUL-84

CERTIFIED BY .....

SAMPLE	AU PPB	CO2 %	CO PPM	NI PPM	CU PPM
543-0008	4	18.9	42	300	49.0
543-0014	130	0.9	9	7	53.0
543-0015	39	0.6	8	4	16.0
543-0017	7	4.0	32	110	3.5
543-0025	3	1.8	46	26	210.
543-0026	<2	1.3	5	6	9.5
543-0027	<2	2.6	120	1700	16.0
543-0028	--	--	--	--	--
543-0029	<2	0.8	30	76	47.0
543-0030	<2	2.8	30	22	4.0
543-0031	<2	3.8	51	100	30.0
543-0036	3	1.3	29	69	99.0
543-0037	--	--	--	--	--
543-0039	3	0.7	41	76	140.
543-0040	<2	1.7	34	34	26.0
543-0041	<2	0.2	33	42	140.
543-0047	<2	0.3	41	130	91.0
543-0048	3	0.4	27	72	120.
543-0049	<2	1.8	40	50	87.0
543-0050	<2	1.6	38	97	69.0

SAMPLE	ZN PPM	MO PPM	AG PPM	CD PPM	PB PPM
543-0008	53.0	<1	NSS	<1	18
543-0014	66.0	3	1.0	<1	16
543-0015	120.	<1	1.5	<1	6
543-0017	120.	<1	<0.5	<1	12
543-0025	130.	<1	0.5	<1	10
543-0026	38.0	<1	<0.5	<1	8
543-0027	12.0	<1	<0.5	<1	8
543-0028	--	--	--	--	--
543-0029	87.0	<1	NSS	<1	8
543-0030	65.0	<1	1.0	<1	12
543-0031	61.0	<1	0.5	<1	14
543-0036	43.0	<1	0.5	<1	8
543-0037	--	--	--	--	--
543-0039	40.0	<1	0.5	<1	8
543-0040	62.0	<1	1.0	<1	10
543-0041	50.0	<1	0.5	<1	6
543-0047	98.0	<1	0.5	<1	6
543-0048	37.0	<1	<0.5	<1	6
543-0049	87.0	<1	0.5	<1	10
543-0050	45.0	<1	0.5	<1	10

NSS - NOT SUFFICIENT SAMPLE

```
X      X      RRRRR          A        LL
XX    XX      RR   RR       AAA       LL
 XX  XX       RR    RR     AA AA      LL
  XXX         RR   RR     AA   AA     LL
  XXX         RRRRR      AAAAAAA     LL
 XX  XX       RR   RR     AA   AA     LL
XX    XX      RR    RR    AA   AA     LLLLLLL
X      X      RR     R     AA   AA     LLLLLLL
```

XRF - WHOLE ROCK ANALYSIS

DAVID R BELL GEOLOGICAL SERVICES INC.
Attn: STEPHEN CONQUER
251 THIRD AVENUE, SUITE 4
BOX 1250
TIMMINS, ONTARIO , P4N 7J5

CUSTOMER No. 621

DATE SUBMITTED
7-JUN-84

REPORT 21362 REF. FILE 17004 DATE REPORTED 26-JUL-84

XRF W. R. A. SUMS INCLUDE ALL ELEMENTS DETERMINED.
FOR SUMMATION ELEMENTS ARE CALCULATED AS OXIDES.

SAMPLE	SIO2	AL203	CAO	MGO	NA20	K20	FE203	MNO	TIO2	P205	CR203	LOI	SUM
543-0008	45.5	8.84	4.83	11.3	2.40	1.66	6.47	0.11	0.43	0.17	0.12	18.3	100.2
543-0014	67.2	11.3	2.94	0.53	5.67	0.41	7.49	0.10	0.51	0.12	0.01	2.00	98.3
543-0015	66.2	12.7	1.07	0.94	3.20	1.60	10.8	0.07	0.76	0.19	<0.01	2.08	99.7
543-0017	53.6	13.8	5.47	5.43	4.20	0.02	8.79	0.17	0.75	0.15	0.01	7.16	99.6
543-0025	51.1	12.0	6.99	3.43	2.35	0.23	18.0	0.23	1.73	0.12	<0.01	3.85	100.1
543-0026	66.0	15.8	2.88	1.09	5.78	1.88	2.80	0.05	0.33	0.10	<0.01	3.31	100.1
543-0027	38.2	0.90	0.09	37.1	0.10	<0.01	9.11	0.07	0.04	0.01	0.41	13.1	99.1
543-0028	47.7	14.3	10.0	8.08	0.84	0.01	11.4	0.17	0.78	0.07	0.09	6.39	99.9
543-0029	54.3	15.1	6.65	6.41	1.94	0.12	9.22	0.15	0.80	0.20	0.01	4.39	99.3
543-0030	49.0	17.1	5.94	4.51	5.11	0.07	9.69	0.15	1.52	0.09	<0.01	5.62	98.8
543-0031	47.2	14.1	8.78	7.30	1.49	<0.01	12.0	0.18	0.90	0.06	0.06	7.70	99.8
543-0036	49.6	13.6	11.9	6.65	2.13	0.17	11.3	0.20	0.66	0.06	0.03	3.16	99.5
543-0037	58.7	14.2	6.35	5.16	3.04	0.15	7.92	0.11	0.70	0.15	0.02	2.93	99.5
543-0039	48.9	15.1	8.89	7.14	1.91	0.01	12.6	0.15	0.89	0.07	0.03	4.00	99.7
543-0040	47.9	12.7	8.65	6.24	2.90	0.06	14.3	0.21	1.39	0.10	<0.01	4.31	98.8
543-0041	48.9	13.5	10.5	6.80	1.91	0.05	14.1	0.22	0.96	0.07	<0.01	2.47	99.5
543-0047	56.3	19.5	0.97	3.54	3.41	1.69	9.42	0.12	0.79	0.09	0.02	3.85	99.8
543-0048	49.5	14.2	11.8	7.73	1.29	0.27	11.3	0.22	0.70	0.06	0.03	2.77	99.9
543-0049	48.8	12.9	10.1	6.75	1.72	0.04	13.4	0.21	0.86	0.07	<0.01	4.47	99.3
543-0050	50.1	12.9	12.1	7.01	1.34	0.03	11.3	0.21	0.69	0.07	0.07	3.85	99.7

SAMPLE	RB	SR	Y	ZR	NB	BA
[redacted]0008	<10	270	<10	60	30	340
543-0014	<10	120	<10	230	40	—
543-0015	<10	60	40	300	40	—
543-0017	<10	100	<10	110	30	—
543-0025	<10	140	20	100	20	—
543-0026	<10	290	<10	70	20	—
543-0027	<10	<10	<10	<10	20	—
543-0028	20	190	20	10	30	—
543-0029	20	200	10	120	10	—
543-0030	<10	50	<10	70	30	—
543-0031	10	170	20	10	30	—
543-0036	<10	90	20	10	30	—
543-0037	10	190	30	90	20	—
543-0039	20	180	30	50	20	—
543-0040	<10	110	<10	60	20	—
543-0041	10	130	<10	30	30	—
543-0047	60	200	20	100	<10	—
543-0048	30	130	<10	10	30	—
543-0049	<10	120	10	30	20	—
543-0050	10	140	10	50	40	—

X-RAY ASSAY LABORATORIES

SYMBOL TABLE

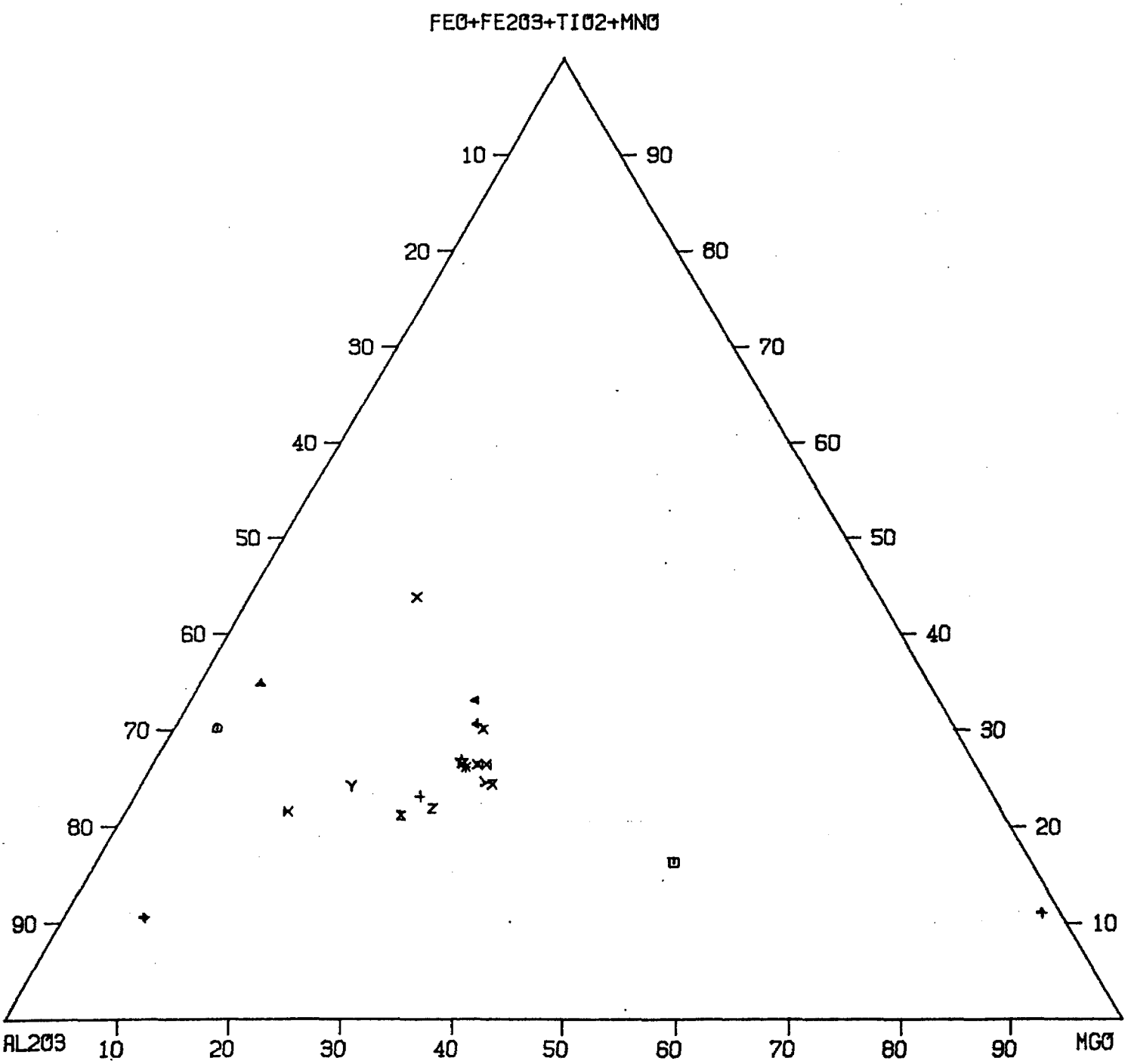
CODE	SYMBOL	CODE	SYMBOL
1	▫	14	★
2	⊙	15	◂
3	▲	16	✦
4	+	17	×
5	×	18	➢
6	✦	19	✖
7	✦	20	✖
8	x	21	✦
9	z	22	✖
10	Y	23	⅄
11	×	24	✦
12	✱	25	✖
13	⧗	26	≺

JENSEN CATION PLOT - SYMBOL REFERENCE

UK - ULTRAMAFIC KOMATIITE
BK - BASALTIC KOMATIITE
FT - IRON RICH BASALT
MT - HIGH MAGNESIUM BASALT
AT - THOLEIITIC ANDESITE
DT - THOLEIITIC DACITE
RT - THOLEIITIC RHYOLITE
BC - CALC-ALKALIC BASALT
AC - CALC-ALKALIC ANDESITE
DC - CALC-ALKALIC DACITE
RC - CALC-ALKALIC RHYOLITE
BT - THOLEIITIC BASALT
** - NOT DEFINED

D. R. BELL GEOLOGICAL SERVICES 22-JUN-84

JENSEN CATION PLOT



RAPH 1 DATE 22-JUN-84

SAMPLE	JC	CODE	FEO+FE2O3+TIO2+MNO	AL2O3	MGO
543-0008	BK	1	16.24	32.01	51.75
543-0011	DT	2	30.20	65.89	3.91
543-0015	AT	3	34.85	59.57	5.58
543-0017	BC	4	23.11	51.34	25.55
543-0025	FT	5	43.86	41.24	14.91
543-0026	RC	6	10.59	82.24	7.17
543-0027	UK	7	10.97	1.68	87.35
543-0028	BT	8	24.37	44.11	31.52
543-0029	BC	9	21.89	50.82	27.28
543-0030	BC	10	24.16	56.87	18.97
543-0031	BT	11	26.39	44.48	29.13
543-0036	BT	12	26.12	45.65	28.23
543-0037	BC	13	21.22	53.98	24.80
543-0039	BT	14	26.55	45.97	27.49
543-0040	BT	15	33.06	41.29	25.66
543-0041	BT	16	30.66	42.36	26.98
543-0047	AC	17	21.60	63.76	14.64
543-0048	BT	18	24.59	44.66	30.75
543-0049	BT	19	30.16	42.03	27.81
543-0050	BT	20	26.40	43.62	29.98

S. JENSEN(1976): A NEW CATION PLOT FOR CLASSIFYING SUBALKALIC VOLCANIC ROCKS. ONTARIO DIVISION OF MINES, MISCELLANEOUS PAPER 66.

E.C. GRUNSKY(1981): NO.16 AN ALGORITHM FOR THE CLASSIFICATION OF SUBALKALIC VOLCANIC ROCKS USING THE JENSEN CATION PLOT.
SUMMARY OF FIELD WORK. ONTARIO DIVISION OF MINES, MISCELLANEOUS PAPER 100.

X-RAY ASSAY LABORATORIES LIMITED

1885 LESLIE STREET, DON MILLS, ONTARIO M3B 3J4

PHONE 416-445-5755 TELEX 06-986947

CERTIFICATE OF ANALYSIS

TO: DAVID R. BELL GEOLOGICAL SERVICES INC.
ATTN: STEPHEN CONQUER
251 THIRD AVENUE, SUITE 4
BOX 1250
TIMMINS, ONTARIO P4N 7J5

CUSTOMER NO. 621

DATE SUBMITTED
28-JUN-84

REPORT 21655

REF. FILE 17245-PH

2 PULPS ON HAND W.O.#17004

WERE ANALYSED AS FOLLOWS:

	METHOD	DETECTION LIMIT
AU PPB	FADCP	2.000
CO2 %	WET	0.100
CO PPM	DCP	1.000
NI PPM	DCP	1.000
CU PPM	DCP	0.500
ZN PPM	DCP	0.500
MO PPM	DCP	1.000
AG PPM	DCP	0.500
CD PPM	DCP	1.000
PB PPM	DCP	2.000

X-RAY ASSAY LABORATORIES LIMITED

DATE 20-JUL-84

CERTIFIED BY S. Moore per mg.

NOTE

*** UNLESS INSTRUCTED OTHERWISE WE WILL DISCARD PULPS 180 DAYS ***
AND REJECTS 90 DAYS FROM DATE OF THIS REPORT

SAMPLE	AU PPB	CO2 %	CO PPM	NI PPM	CU PPM
543-0028	<2	2.5	37	86	330.
543-0037	<2	1.0	25	66	23.0

SAMPLE	ZN PPM	MO PPM	AG PPM	CD PPM	PB PPM
543-0028	47.0	<1	1.0	<1	10
543-0037	62.0	1	NSS	<1	6

NSS - NOT SUFFICIENT SAMPLE

X-RAY ASSAY LABORATORIES LIMITED

1885 LESLIE STREET, DON MILLS, ONTARIO M3B 3J4

PHONE 416-445-5755 TELEX 06-986947

CERTIFICATE OF ANALYSIS

TO: DAVID R. BELL GEOLOGICAL SERVICES INC.
ATTN: STEPHEN CONQUER
251 THIRD AVENUE, SUITE 4
BOX 1250
TIMMINS, ONTARIO P4N 7J5

CUSTOMER NO. 621

DATE SUBMITTED
20-JUN-84

REPORT 21548

REF. FILE 17135-J3

17 ROCKS PROJ. 5433

WERE ANALYSED AS FOLLOWS:

	METHOD	DETECTION LIMIT
AU PPB	FADCP	2.000
CO2 %	WET	0.100
WRMAJ %	XRF	0.010
CO PPM	DCP	1.000
NI PPM	DCP	1.000
CU PPM	DCP	0.500
ZN PPM	DCP	0.500
WRMIN PPM	XRF	10.000
MO PPM	DCP	1.000
AG PPM	DCP	0.500
CD PPM	DCP	1.000
PB PPM	DCP	2.000

X-RAY ASSAY LABORATORIES LIMITED

DATE 11-JUL-84

CERTIFIED BY .....

SAMPLE	AU PPB	CO2 %	CO PPM	NI PPM	CU PPM
543-0058	<2	1.3	43	110	130.
543-0059	<2	<0.1	49	75	40.0
543-0062	<2	12.8	29	40	8.5
543-0063	<2	1.9	21	38	46.0
543-0066	<2	7.0	30	62	46.0
543-0070	4	0.1	44	99	140.
543-0071	<2	<0.1	15	84	29.0
543-0072	46	0.7	28	52	100.
543-0080	<2	5.1	47	100	110.
543-0081	<2	3.7	13	28	17.0
543-0084	<2	3.7	52	92	130.
543-0091	<2	6.3	51	150	120.
543-0094	<2	2.2	42	70	77.0
543-0104	6	0.2	25	32	190.
543-0107	<2	0.1	24	49	140.
543-0108	<2	6.7	41	57	150.
543-0111	12	5.0	9	27	26.0

MPLE	ZN PPM	MO PPM	AG PPM	CD PPM	PB PPM
543-0058	78.0	<1	0.5	<1	8
543-0059	90.0	<1	0.5	<1	10
543-0062	54.0	<1	0.5	<1	20
543-0063	87.0	<1	<0.5	<1	8
543-0066	88.0	<1	<0.5	<1	14
543-0070	93.0	<1	1.0	<1	6
543-0071	73.0	2	0.5	<1	6
543-0072	42.0	<1	0.5	<1	14
543-0080	92.0	<1	0.5	<1	16
543-0081	72.0	<1	<0.5	<1	12
543-0084	110.	<1	0.5	<1	12
543-0091	87.0	<1	1.0	<1	16
543-0094	75.0	<1	0.5	<1	10
543-0104	60.0	<1	0.5	<1	8
543-0107	27.0	<1	<0.5	<1	4
543-0108	70.0	<1	0.5	<1	14
543-0111	72.0	1	0.5	<1	28

XRF - WHOLE ROCK ANALYSIS

DAVID R. BELL GEOLOGICAL SERVICES INC.
Attn: STEPHEN CONQUER
251 THIRD AVENUE, SUITE 4
BOX 1250
TIMMINS, ONTARIO , P4N 7J5

CUSTOMER No. 621

DATE SUBMITTED
20-JUN-84

REPORT 21548 REF. FILE 17135 DATE REPORTED 11-JUL-84

XRF W. R. A. SUMS INCLUDE ALL ELEMENTS DETERMINED.
FOR SUMMATION ELEMENTS ARE CALCULATED AS OXIDES.

SAMPLE	SIO2	AL203	CAO	MGO	NA20	K20	FE203	MNO	TIO2	P205	CR203	LOI	SUM
543-0058	46.1	15.4	8.20	8.09	2.71	0.16	13.9	0.21	1.03	0.09	0.03	4.39	100.3
543-0059	45.4	15.7	8.57	6.73	2.96	0.98	14.7	0.18	3.23	0.72	<0.01	-0.15	99.1
543-0062	46.7	5.69	12.6	6.04	1.15	0.51	8.25	0.22	0.34	0.05	0.01	17.5	99.1
543-0063	61.0	15.0	3.18	3.33	3.68	1.80	6.57	0.08	0.68	0.16	<0.01	4.16	99.7
543-0066	46.1	14.3	7.53	2.92	3.29	0.08	16.5	0.19	0.80	0.13	<0.01	8.47	100.3
543-0070	56.7	15.0	7.16	3.11	2.51	0.85	11.2	0.15	1.11	0.07	0.02	2.31	100.3
543-0071	61.8	16.2	4.06	1.48	4.95	0.73	7.41	0.09	0.74	0.07	0.02	2.16	99.9
543-0072	65.1	14.9	2.87	1.23	5.48	0.86	4.89	0.06	0.51	0.07	0.02	2.93	99.0
543-0080	47.4	14.5	6.94	7.43	2.22	0.01	11.8	0.14	0.78	0.06	0.02	9.00	100.3
543-0081	61.7	14.7	4.00	2.51	5.38	1.38	4.39	0.07	0.43	0.21	0.01	5.31	100.3
543-0084	51.9	16.1	6.63	4.80	4.04	0.14	8.88	0.25	1.03	0.08	0.01	5.93	99.8
543-0091	45.7	14.9	12.8	4.48	1.96	0.02	11.1	0.22	0.95	0.08	0.02	7.70	100.0
543-0094	49.1	14.6	9.00	5.80	1.72	0.09	13.2	0.24	0.99	0.08	0.01	4.47	99.3
543-0104	50.6	13.5	9.68	5.92	2.13	0.79	14.9	0.22	1.11	0.12	0.01	1.08	100.1
543-0107	48.9	15.5	12.5	7.92	2.23	0.18	9.97	0.17	0.48	0.04	0.01	2.16	100.1
543-0108	51.3	13.9	9.67	4.71	3.42	0.25	7.28	0.20	1.01	0.09	0.01	8.62	100.5
543-0111	59.5	14.9	5.12	2.10	5.12	2.62	4.23	0.09	0.48	0.23	<0.01	5.54	100.2

SAMPLE	RB	SR	Y	ZR	NB
54[redacted]58	10	160	10	50	90
543-0059	10	790	10	100	80
543-0062	20	90	10	<10	40
543-0063	50	80	40	110	50
543-0066	10	110	30	130	60
543-0070	40	870	10	140	40
543-0071	30	1200	<10	100	30
543-0072	40	710	10	50	50
543-0080	<10	60	20	20	40
543-0081	60	1200	<10	140	40
543-0084	10	130	10	40	40
543-0091	<10	150	20	50	50
543-0094	<10	110	10	30	40
543-0104	30	120	10	70	70
543-0107	<10	150	20	<10	90
543-0108	20	100	20	50	60
543-0111	100	1570	<10	180	60

X-RAY ASSAY LABORATORIES

SYMBOL TABLE

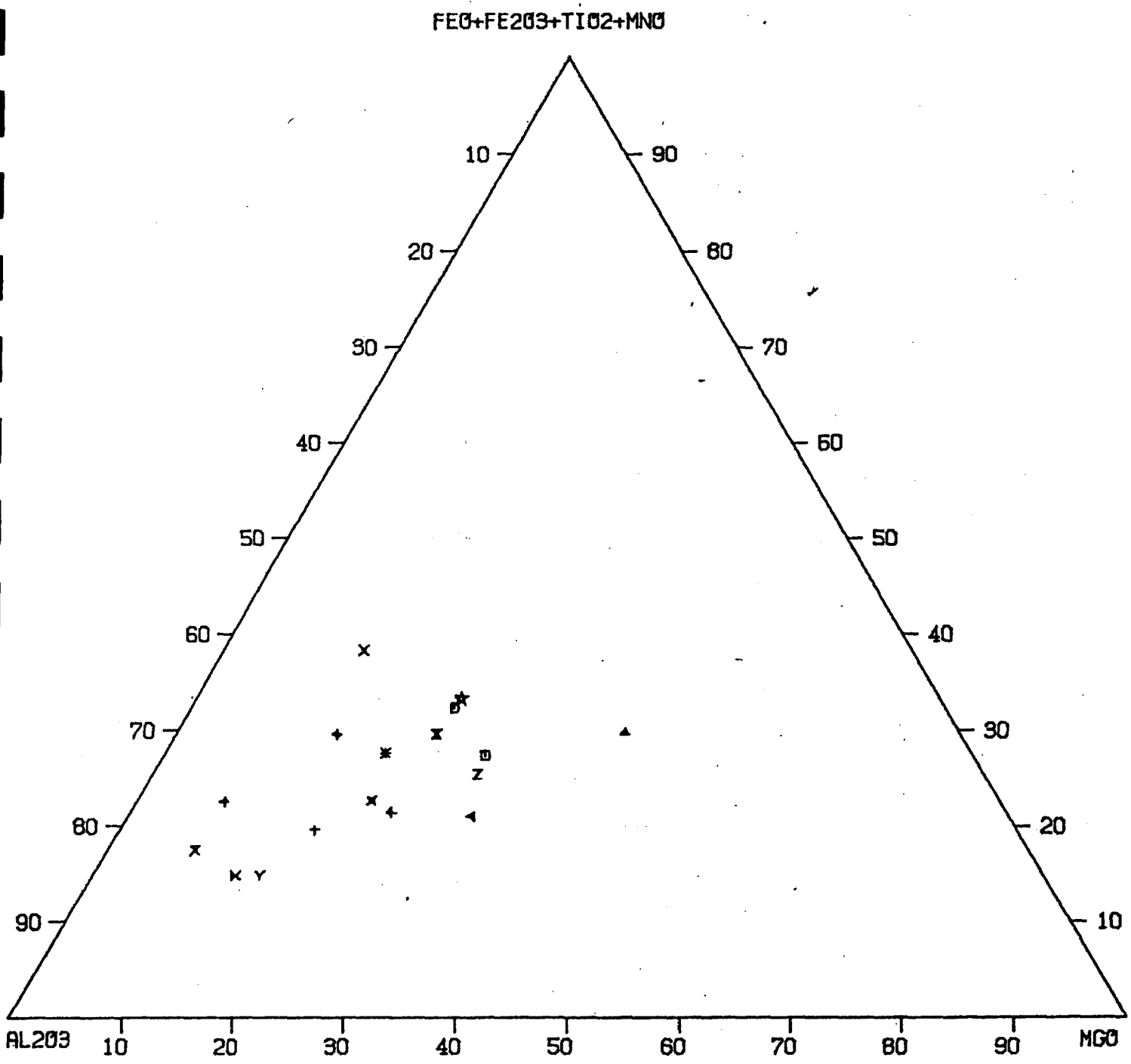
CODE	SYMBOL	CODE	SYMBOL
1	▫	14	★
2	○	15	◂
3	▲	16	✦
4	+	17	×
5	×	18	➢
6	✦	19	×
7	+	20	✖
8	x	21	✦
9	z	22	x
10	Y	23	⅄
11	×	24	✦
12	✱	25	×
13	x	26	≺

JENSEN CATION PLOT - SYMBOL REFERENCE

UK - ULTRAMAFIC KOMATIITE
BK - BASALTIC KOMATIITE
FT - IRON RICH BASALT
MT - HIGH MAGNESIUM BASALT
AT - THOLEIITIC ANDESITE
DT - THOLEIITIC DACITE
RT - THOLEIITIC RHYOLITE
BC - CALC-ALKALIC BASALT
AC - CALC-ALKALIC ANDESITE
DC - CALC-ALKALIC DACITE
RC - CALC-ALKALIC RHYOLITE
BT - THOLEIITIC BASALT
** - NOT DEFINED

D. R. BELL GEOLOGICAL SERVICES 10-JUL-84

JENSEN CATION PLOT



RAPH 1 DATE 10-JUL-84

SAMPLE	JC	CODE	FEO+FE2O3+TIO2+MNO	AL2O3	MGO
543-0058	BT	1	27.42	43.61	28.97
543-0059	BT	2	32.35	43.87	23.78
543-0062	BK	3	29.74	29.99	40.26
543-0063	AC	4	19.61	62.77	17.62
543-0066	FT	5	38.33	49.01	12.66
543-0070	AT	6	29.62	55.76	14.62
543-0071	DT	7	22.57	69.41	8.02
543-0072	DC	8	17.50	74.70	7.80
543-0080	BT	9	25.39	45.27	29.34
543-0081	AC	10	14.89	69.99	15.11
543-0084	BC	11	22.69	56.14	21.17
543-0091	BC	12	27.63	52.43	19.94
543-0094	BT	13	29.62	46.84	23.53
543-0104	FT	14	33.09	43.04	23.87
543-0107	MT	15	21.03	47.97	31.00
543-0108	BC	16	21.49	54.96	23.55
543-0111	DC	17	14.89	72.23	12.88

L. S. JENSEN(1976): A NEW CATION PLOT FOR CLASSIFYING SUBALKALIC VOLCANIC ROCKS. ONTARIO DIVISION OF MINES, MISCELLANEOUS PAPER 66.
E. C. GRUNSKY(1981): NO.16 AN ALGORITHM FOR THE CLASSIFICATION OF SUBALKALIC VOLCANIC ROCKS USING THE JENSEN CATION PLOT.
SUMMARY OF FIELD WORK. ONTARIO DIVISION OF MINES, MISCELLANEOUS PAPER 100.

X-RAY ASSAY LABORATORIES LIMITED

1885 LESLIE STREET, DON MILLS, ONTARIO M3B 3J4

PHONE 416-445-5755 TELEX 06-986947

CERTIFICATE OF ANALYSIS

TO: DAVID R. BELL GEOLOGICAL SERVICES INC.
ATTN: MATTHEW EGNER
251 THIRD AVENUE, SUITE 4
BOX 1250
TIMMINS, ONTARIO , P4N 7J5

CUSTOMER NO. 621

DATE SUBMITTED
3-JUL-84

REPORT 21714

REF. FILE 17273-G4

32 ROCKS PROJ. 5433

WERE ANALYSED AS FOLLOWS:

	METHOD	DETECTION LIMIT
AU PPB	FADCP	2.000
CO2 %	WET	0.100
WRMAJ %	WR	0.010
CO PPM	DCP	1.000
NI PPM	DCP	1.000
CU PPM	DCP	0.500
ZN PPM	DCP	0.500
WRMIN PPM	WR	10.000
MO PPM	DCP	1.000
AG PPM	DCP	0.500
CD PPM	DCP	1.000
PB PPM	DCP	2.000

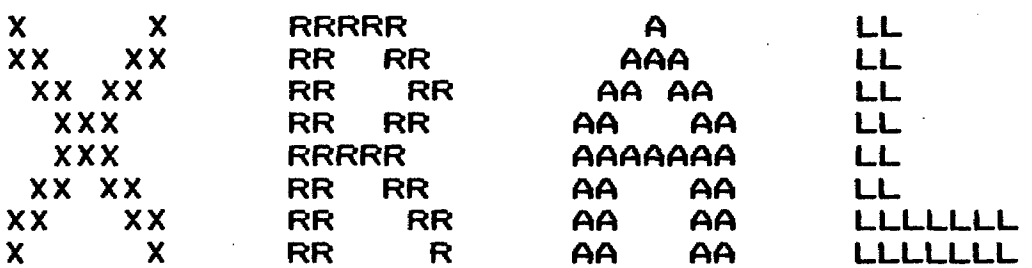
X-RAY ASSAY LABORATORIES LIMITED

DATE 25-JUL-84

CERTIFIED BY .....

SAMPLE	AU PPB	CO2 %	CO PPM	NI PPM	CU PPM
543-0113	<2	5.7	59	92	130.
543-0114	<2	7.9	51	85	160.
543-0115	<2	1.0	40	62	130.
543-0117	<2	3.5	65	110	170.
543-0118	<2	7.8	48	84	78.0
543-0119	<2	7.2	59	110	140.
543-0121	<2	2.8	39	73	99.0
543-0123	3	3.4	60	130	98.0
543-0127	<2	1.1	24	31	94.0
543-0139	<2	0.4	19	15	160.
543-0140	<2	0.5	9	11	26.0
543-0143	<2	1.3	63	200	110.
543-0150	<2	3.5	32	73	12.0
543-0155	<2	5.8	45	69	140.
543-0156	<2	2.2	20	50	64.0
543-0157	<2	2.2	50	91	160.
543-0159	<2	0.1	31	71	160.
543-0162	<2	6.3	46	77	130.
543-0163	<2	6.8	49	90	140.
543-0165	<2	2.7	46	93	130.
543-0166	<2	3.4	51	87	120.
543-0167	<2	0.3	38	52	58.0
543-0178	<2	3.9	47	58	140.
543-0179	<2	0.9	40	110	47.0
543-0184	<2	7.7	40	100	110.
543-0199	<2	0.1	49	40	180.
543-0200	<2	27.4	76	550	93.0
543-0206	5	7.0	91	280	220.
543-0212	14	4.8	27	58	400.
543-0260	<2	0.2	8	13	20.0
543-0261	<2	0.6	22	36	100.
543-0262	<2	0.1	39	110	59.0

SAMPLE	ZN PPM	MO PPM	AG PPM	CD PPM	PB PPM
543-0113	110.	<1	0.5	<1	16
543-0114	90.0	<1	1.0	<1	18
543-0115	63.0	<1	0.5	<1	8
543-0117	92.0	<1	1.0	<1	12
543-0118	89.0	<1	1.0	<1	20
543-0119	120.	<1	1.0	<1	20
543-0121	86.0	<1	1.0	<1	12
543-0123	100.	<1	1.0	<1	16
543-0127	48.0	<1	0.5	<1	8
543-0139	47.0	<1	0.5	<1	8
543-0140	30.0	2	<0.5	<1	6
543-0143	110.	<1	1.0	<1	10
543-0150	120.	<1	1.0	<1	14
543-0155	110.	<1	1.0	<1	18
543-0156	72.0	1	0.5	<1	14
543-0157	77.0	<1	1.0	<1	12
543-0159	59.0	2	1.0	<1	20
543-0162	94.0	<1	1.0	<1	16
543-0163	86.0	<1	1.0	<1	18
543-0165	73.0	<1	1.0	<1	12
543-0166	93.0	<1	1.0	<1	14
543-0167	40.0	1	0.5	<1	6
543-0178	100.	<1	1.0	<1	14
543-0179	76.0	<1	0.5	<1	8
543-0184	52.0	<1	1.0	<1	20
543-0199	43.0	<1	0.5	<1	4
543-0200	70.0	1	1.5	<1	36
543-0206	49.0	<1	1.5	<1	28
543-0212	100.	1	1.0	<1	28
543-0260	54.0	2	<0.5	<1	6
543-0261	38.0	1	0.5	<1	8
543-0262	78.0	2	1.0	<1	6



XRF - WHOLE ROCK ANALYSIS

DAVID R. BELL GEOLOGICAL SERVICES INC.
Attn: MATTHEW EGNER
251 THIRD AVENUE, SUITE 4
BOX 1250
TIMMINS, ONTARIO , P4N 7J5

CUSTOMER No. 621

DATE SUBMITTED
3-JUL-84

REPORT 21714 REF. FILE 17273 DATE REPORTED 25-JUL-84

XRF W. R. A. SUMS INCLUDE ALL ELEMENTS DETERMINED.
FOR SUMMATION ELEMENTS ARE CALCULATED AS OXIDES.

X-RAY ASSAY LABORATORIES 25-JUL-84 REPORT 21714 REFERENCE FILE 17273 PAGE 1

SAMPLE	SIO2	AL203	CAO	MGO	NA2O	K2O	FE203	MNO	TIO2	P2O5	CR203	LOI	SUM
543-0113	43.4	14.0	7.38	5.84	1.58	0.16	16.7	0.31	0.91	0.08	0.01	9.70	100.1
543-0114	44.0	13.5	10.5	4.81	1.27	0.99	12.9	0.24	0.91	0.07	0.01	10.8	100.1
543-0115	49.3	13.6	9.46	6.95	2.46	0.33	13.0	0.21	0.87	0.07	0.01	3.16	99.4
543-0117	55.4	17.0	5.64	3.97	3.39	1.34	6.42	0.15	1.04	0.09	0.01	5.39	99.9
543-0118	46.0	13.2	10.4	3.72	3.08	0.08	12.0	0.34	0.84	0.07	0.01	10.2	100.0
543-0119	46.2	13.9	9.10	4.84	2.64	0.03	12.6	0.31	0.88	0.07	0.01	9.54	100.1
543-0121	51.5	15.3	8.20	5.81	2.42	0.02	9.42	0.20	1.01	0.08	0.01	5.31	99.3
543-0123	50.7	13.1	5.76	7.76	2.39	0.01	11.7	0.19	0.76	0.08	0.06	6.93	99.5
543-0127	50.2	14.5	9.24	7.72	2.70	0.12	11.0	0.21	0.59	0.05	0.01	3.08	99.4
543-0139	49.3	12.9	8.27	5.76	3.19	0.27	16.6	0.24	1.60	0.14	<0.01	1.00	99.3
543-0140	68.0	15.8	2.04	0.99	7.01	1.58	2.54	0.03	0.37	0.11	0.01	1.70	100.3
543-0143	51.4	17.9	7.47	4.08	3.84	0.06	9.90	0.20	0.99	0.07	0.04	4.54	100.5
543-0150	43.0	17.2	7.54	6.88	2.07	0.76	14.0	0.24	1.14	0.07	0.01	7.39	100.3
543-0155	47.4	13.8	9.38	4.91	2.20	0.56	10.8	0.25	0.93	0.07	0.01	9.23	99.6
543-0156	61.0	14.9	4.82	3.38	5.34	0.04	5.33	0.11	0.58	0.29	0.01	3.31	99.2
543-0157	50.4	14.6	9.48	6.30	3.35	0.04	9.89	0.21	0.87	0.07	0.02	5.16	100.4
543-0159	48.8	14.3	12.0	6.49	1.80	0.46	13.2	0.26	0.93	0.07	0.02	1.77	100.1
543-0162	48.5	13.8	8.70	5.28	2.85	0.09	10.5	0.24	0.95	0.08	0.01	9.31	100.3
543-0163	46.1	14.4	9.04	5.11	0.70	1.55	11.9	0.22	0.92	0.07	0.01	8.93	99.0
543-0165	47.6	14.9	11.8	5.96	1.67	0.03	10.9	0.18	0.86	0.07	0.01	5.77	99.8
543-0166	48.0	14.8	10.1	4.78	2.57	0.10	12.5	0.23	0.96	0.07	0.01	6.23	100.4
543-0167	60.7	15.6	5.29	2.04	5.83	0.55	7.11	0.16	0.86	0.15	<0.01	1.08	99.4
543-0178	51.5	13.5	8.34	5.93	2.13	0.03	10.2	0.19	1.12	0.08	0.01	7.00	100.1
543-0179	48.4	14.8	10.0	7.86	1.86	0.22	11.7	0.19	0.87	0.07	0.03	3.93	100.0
543-0184	45.2	12.1	15.4	4.70	2.39	0.04	9.90	0.23	0.74	0.06	0.02	9.39	100.2
543-0199	49.1	13.8	10.9	7.01	2.05	0.26	13.7	0.29	0.87	0.08	0.01	1.85	99.9
543-0200	25.5	4.34	14.1	12.3	0.61	0.65	11.1	0.26	2.72	0.45	0.08	27.5	99.8
543-0206	34.0	5.72	12.9	14.1	0.22	1.29	14.5	0.22	4.54	0.61	0.11	10.8	99.1
543-0212	54.2	13.8	6.71	4.46	4.62	1.69	6.88	0.13	0.66	0.34	0.02	6.54	100.2
543-0260	68.5	16.0	2.47	1.05	6.01	1.56	2.62	0.04	0.37	0.12	0.01	1.39	100.3

SAMPLE	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
543-0261	50.5	14.2	10.5	8.54	2.73	0.27	10.1	0.18	0.49	0.05	0.03	2.85	100.5
543-0262	56.9	17.9	8.13	1.81	4.19	0.87	7.35	0.15	0.95	0.15	0.07	1.54	100.1

SAMPLE	RB	SR	Y	ZR	NB
543-0113	10	50	<10	50	10
543-0114	30	40	10	30	20
543-0115	<10	170	20	40	<10
543-0117	40	90	20	40	<10
543-0118	20	60	10	20	20
543-0119	<10	140	20	30	10
543-0121	10	120	20	30	10
543-0123	20	50	10	30	30
543-0127	10	110	20	<10	20
543-0139	<10	60	20	90	10
543-0140	40	660	<10	110	10
543-0143	10	140	20	30	20
543-0150	50	60	40	50	20
543-0155	30	60	<10	40	20
543-0156	10	320	10	180	20
543-0157	<10	140	20	30	10
543-0159	30	110	30	30	20
543-0162	10	70	10	20	20
543-0163	60	70	10	30	10
543-0165	<10	120	30	50	10
543-0166	<10	80	30	30	10
543-0167	10	220	40	190	10
543-0178	20	150	20	50	10
543-0179	20	140	20	20	20
543-0184	10	120	10	10	<10
543-0199	<10	100	10	30	20
543-0200	30	930	20	340	160
543-0206	110	320	20	350	140
543-0212	70	980	30	140	20
543-0260	40	960	10	100	10

SAMPLE	RB	SR	Y	ZR	NB
54[redacted]61	<10	210	20	30	<10
543-0262	40	870	10	90	20

X-RAY ASSAY LABORATORIES

SYMBOL TABLE

CODE	SYMBOL	CODE	SYMBOL
1	▫	14	★
2	⊙	15	◂
3	▲	16	✦
4	+	17	⋉
5	×	18	≻
6	✦	19	✕
7	✦	20	⋈
8	✕	21	✦
9	Z	22	✕
10	Y	23	⅄
11	✕	24	✦
12	✱	25	⋊
13	✕	26	≺

JENSEN CATION PLOT - SYMBOL REFERENCE

UK - ULTRAMAFIC KOMATIITE
BK - BASALTIC KOMATIITE
FT - IRON RICH BASALT
MT - HIGH MAGNESIUM BASALT
AT - THOLEIITIC ANDESITE
DT - THOLEIITIC DACITE
RT - THOLEIITIC RHYOLITE
BC - CALC-ALKALIC BASALT
AC - CALC-ALKALIC ANDESITE
DC - CALC-ALKALIC DACITE
RC - CALC-ALKALIC RHYOLITE
BT - THOLEIITIC BASALT
** - NOT DEFINED

GRAPH 1 DATE 24-JUL-84

SAMPLE	JC	CODE	FEO+FE2O3+TIO2+MNO	AL2O3	MGO
[redacted]3-0113	FT	1	34.90	42.62	22.48
[redacted]3-0114	FT	2	31.46	47.25	21.29
543-0115	BT	3	28.69	43.32	28.00
543-0117	AC	4	18.11	63.22	18.67
[redacted]3-0118	FT	5	32.04	50.10	17.86
[redacted]3-0119	FT	6	30.60	48.18	21.22
543-0121	BC	7	23.10	51.95	24.95
[redacted]3-0123	BT	8	26.10	42.25	31.65
[redacted]3-0127	BT	9	23.73	45.58	30.69
543-0139	FT	10	36.88	40.34	22.78
[redacted]3-0140	RC	11	9.93	83.46	6.61
[redacted]3-0143	BC	12	23.53	59.36	17.11
543-0150	BT	13	27.53	48.13	24.35
543-0155	BT	14	27.71	49.86	22.43
[redacted]3-0156	AC	15	16.73	64.71	18.56
[redacted]3-0157	BT	16	23.73	49.34	26.93
543-0159	BT	17	29.03	45.09	25.88
[redacted]3-0162	BT	18	26.76	49.36	23.88
[redacted]3-0163	BT	19	28.57	49.31	22.13
543-0165	BT	20	25.40	49.54	25.06
[redacted]3-0166	FT	21	29.59	49.99	20.42
[redacted]3-0167	DT	22	22.25	66.71	11.03
543-0178	BT	23	25.96	47.60	26.44
543-0179	BT	24	24.81	44.98	30.21
[redacted]3-0184	BT	25	27.83	48.40	23.77
[redacted]3-0199	BT	26	29.56	42.89	27.55
543-0200	BK	1	31.17	15.01	53.82
[redacted]3-0206	BK	2	34.33	15.95	49.72
[redacted]3-0212	BC	3	20.16	56.68	23.17
543-0260	RC	4	10.06	83.05	6.89
[redacted]3-0261	MT	5	21.61	44.53	33.87
[redacted]3-0262	DT	6	21.12	69.93	8.94

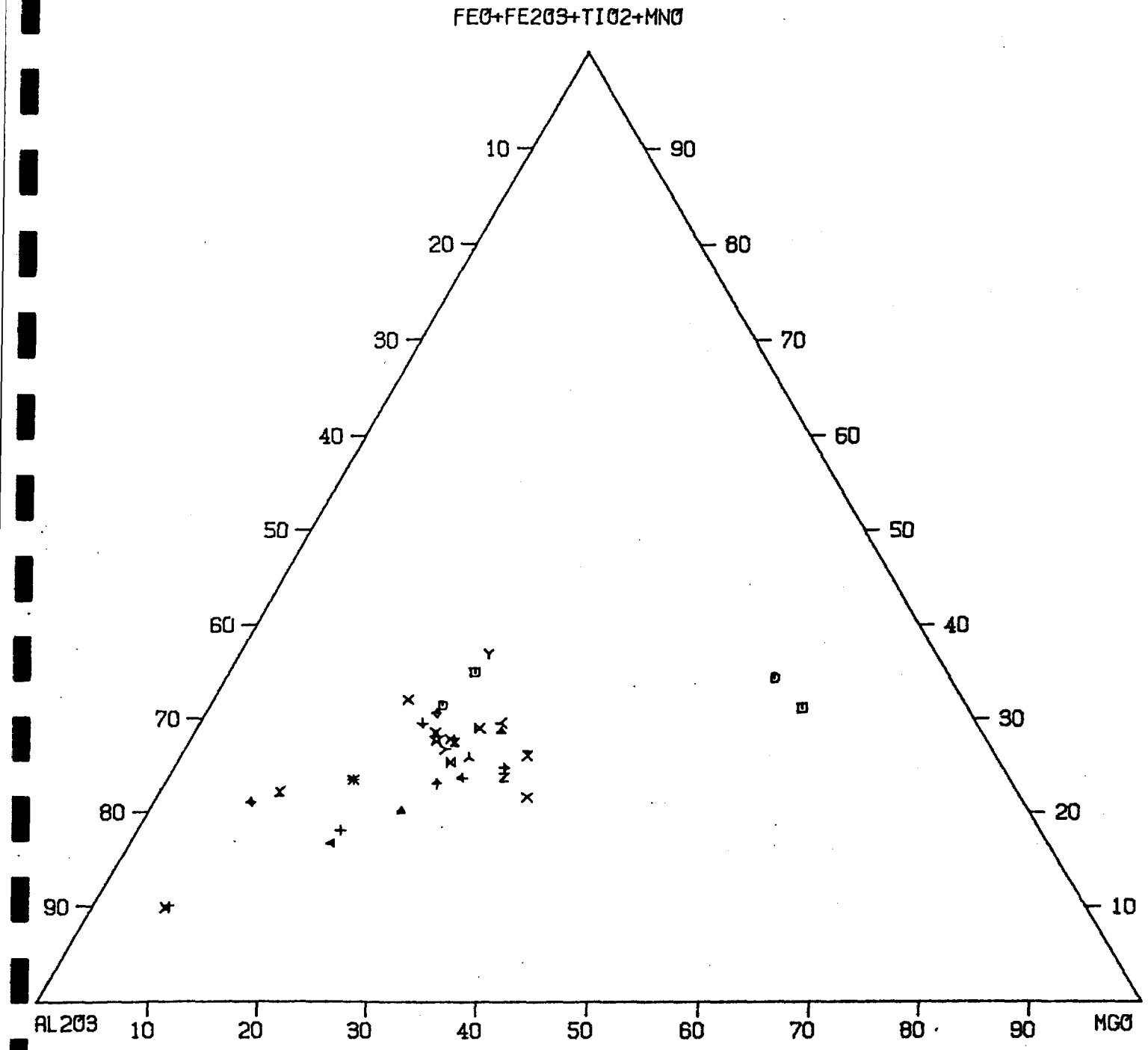
[redacted]. S. JENSEN(1976): A NEW CATION PLOT FOR CLASSIFYING SUBALKALIC VOLCANIC ROCKS. [redacted]NTARIO DIVISION OF MINES, MISCELLANEOUS PAPER 66.

[redacted]. C. GRUNSKY(1981): NO.16 AN ALGORITHM FOR THE CLASSIFICATION OF SUBALKALIC VOLCANIC ROCKS USING THE JENSEN CATION PLOT.

[redacted]MMARY OF FIELD WORK. ONTARIO DIVISION OF MINES, MISCELLANEOUS PAPER 100.

D.R. BELL GEOLOGICAL SERVICES 24-JUL-84

JENSEN CATION PLOT



APPENDIX V
SOIL COLLECTION DATA AND ASSAY VALUES

Appendix V

Soil Survey Collection Data and Assay Values

Legend

N/S	No sample taken
I/S	Insufficient sample for analysis
lt	light
dk	dark
br	brown
or	orange
wh	white
gy	grey
yel	yellow
Jp	Jackpine
Po	Poplar
Bi	Birch
Ba	Balsam
Sp	Spruce
Al	Alder
Cd	Cedar

STATION	SAMPLE NUMBER	DEPTH	HORIZON	SLOPE	COLOUR	TEXTURE	% ORGANICS	TREE TYPE	REMARKS	ANALYTICAL RESULTS Au ppb	Ag ppm	Pb ppm	Zn ppm
LNO													
0+00BL	MCS-01	8"	--	5°S	lt br	sandy clay	15	Jp, Po		2	0.2		
0+50N	MCS-02	8"	--	---	lt br	sandy clay	10	Jp, Bi		2	0.4		
1+00N	MCS-02	10"	--	10°S	red-br	sandy clay	5	Jp, Bi		2	0.2		
1+50N	MCS-04	8"	--	10°S	red-br	snady clay	5	Jp, Bi		4	0.2		
2+00N	MCS-05	8"	--	10°S	red-br	sandy clay	5	Jp, Po, Ba		2	0.2		
2+50N	MCS-06	8"	--	30°S	red-br	sandy clay	5	Jp, Po, Ba		2	0.2		
3+00N	MCS-07	8"	--	30°S	red-br	sandy clay	5	Jp, Bi		2	0.2		
3+50N	MCS-08	8"	--	30°S	red-br	sandy clay	5	Jp, Bi, Ba		8	0.2		
4+00N	MCS-09	8"	--	25°S	red-br	sandy clay	10	Jp, Po, Bi		4	0.6		
4+50N	MCS-10	8"	--	20°SE	red-br	sandy clay	10	Po, Jp		2	0.4		
5+00N	MCS-11	8"	--	15°E	red-br	sandy clay	10	Po, Ba		4	0.6		
5+50N	MCS-12	10"	--	15°E	red-br	sandy clay	10	Pa, Ba		2	0.2		
6+00N	MCS-13	10"	--	25°E	red-br	sandy clay	10	Po, Jp		2	0.2		
6+50N	MCS-14	10"	--	25°NE	red-br	sandy clay	10	Po, Jp, Bi		4	0.2		
7+00N	MCS-15	8"	--	25°NE	lt-br	sandy clay	10	Jp, Po, Ba		2	0.2		
7+50N	MCS-16	8"	--	30°NE	lt-br	sandy clay & cobbles	10	Po, Ba		4	0.2		
8+00N	MCS-17	12"	--	30°E	lt red-br	sandy clay & cobbles	10	Po, Jp		2	0.4		
8+50N	MCS-18	8"	--	50°NE	lt red-br	sandy clay	10	Po, Bi		6	0.2		
9+00N	MCS-19	12"	--	40°N	lt red-br	sandy clay	10	Po, Bi, Bi		2	0.4		
9+50N	MCS-20	12"	--	35°N	lt br	sandy clay	10	Bi, Al		2	0.4		
10+00N	MCS-21	8"	--	30°E	red-br	sandy clay	10	Bi, Jp, Al		4	0.4		

STATION	SAMPLE NUMBER	DEPTH	HORIZON	SLOPE	COLOUR	TEXTURE	% ORGANICS	TREE TYPE	REMARKS	ANALYTICAL RESULTS Au ppb	Ag ppm	Pb ppm	Zn ppm
Ln4W													
10+00N	MCS-22	8"	--	5°S	red-br	sandy clay & boulders	10	Po, Jp		4	0.2		
9+50N	MCS-23	8"	--	15°S	red-br	sandy clay	10	Po, Al		4	0.4		
9+00N	MCS-24	8"	--	--	red-br	sandy clay	10	Po, Al		8	0.4		
8+50N	MCS-25	8"	--	10°N	red-br	sandy clay & cobbles	10	Po, Jp, Al		2	0.2		
8+00N	MCS-26	8"	--	5°N	red-br	sandy clay	10	Po, Jp, Al		4	0.2		
7+50N	MCS-27	6"	--	10°N	red-br	sandy clay	10	Po, Al		4	0.2		
7+00N	MCS-28	6"	--	15°N	red-br	sandy clay	10	Po, Al		4	0.4		
6+50N	MCS-29	8"	--	15°NE	red-br	sandy clay & rock fragments	10	Jp, Po		2	0.4		
6+00N	MCS-30	8"	--	15°N	red-br	sandy clay	10	Jp, Bi, Po		2	0.2		
5+50N	MCS-31	12"	--	10°N	red-br	sandy clay & rock fragments	10	Jp, Ba, Bi		2	0.2		
5+00N	N/S *							Jp, Bi, Ba		2	0.2		
4+50N	MCS-32	8"	--	25°S	red-br	sandy clay	10	Jp, Bi, Ba		2	0.2		
4+00N	MCS-33	8"	--	20°S	red-br	sandy clay	10	Jp, Bi, Ba		2	0.2		
3+50N	MCS-34	10"	--	40°S	red-br	sandy clay & rock fragments	10	Jp, Bi, Po		4	0.2		
3+00N	MCS-35	8"	--	15°S	red-br	sandy clay	10	Jp, Po, Bi		2	0.2		
2+50N	MCS-36	8"	--	15°S	red-br	sandy clay	10	Po, Jp, Ba		2	0.2		
2+00N	MCS-37	8"	--	10°S	red-br	sandy clay	10	Po, Al, Bi		2	0.6		
1+50N	MCS-38	8"	--	5°N	red-br	sandy clay	10	Po, Jp		4	0.4		
1+00N	MCS-39	8"	--	10°S	red-br	sandy clay	10	Bi, Jp		2	0.4		
0+50N	MCS-40	8"	--	--	red-br	sandy clay	10	Bi, Jp		6	0.4		

* No Sample

STATION	SAMPLE NUMBER	DEPTH	HORIZON	SLOPE	COLOUR	TEXTURE	% ORGANICS	TREE TYPE	REMARKS	ANALYTICAL RESULTS Au ppb	Ag ppm	Pb ppm	Zn ppm
0+00BL	MCS-41	8"	--	--	red-br	sandy clay	10	Jp, Bi		2	0.4		
LN8W													
10+00N	MCS-42	8"	--	15°NW	red-br	sandy clay	10	Jp, Bi		4	0.2		
9+50N	MCS-43	8"	--	10°NW	red-br	sandy clay	10	Po, Jp		4	0.2		
9+00N	MCS-44	6"	--	10°N	red-br	sandy clay	10	Po, Ba, Jp		4	0.4		
8+50N	MCS-45	8"	--	5°N	red-br	sandy clay	10	Jp, Bi, Po		4	0.4		
8+00N	MCS-46	8"	--	5°N	red-br	sandy clay	10	Po, Sp		2	0.4		
7+50N	MCS-47	10"	--	10°N	red-br	sandy clay	10	Jp, Po		2	0.2		
7+00N	MCS-48	8"	--	5°N	red-br	sandy clay	10	Ba, Po, Jp		2	0.2		
6+50N	MCS-49	12"	--	10°N	red-br	sandy clay	10	Po, Ba		2	0.2		
6+00N	MCS-50	8"	--	15°NW	red-br	sandy clay & cobbles	10	Po, Al, Ba		2	0.6		
5+50N	MCS-51	12"	--	20°NW	red-br	sandy clay	10	Jp, Bi, Ba		2	0.4		
5+00N	MCS-52	10"	--	20°S	red-br	sandy clay	10	Jp, Ba		2	0.2		
4+50N	MCS-53	8"	--	15°S	red-br	sandy clay	10	Jp, Ba, Bi		4	0.4		
4+00N	MCS-54	10"	--	5°SW	red-br	sandy clay	10	Jp, Ba		6	0.6		
3+50N	MCS-55	12"	--	5°S	red-br	sandy clay	10	Jp, Bi, Al		4	0.4		
3+00N	MCS-56	10"	--	--	red-br	sandy clay	10	Po, Ba		6	0.4		
2+50N	MCS-57	10"	--	5°W	red-br	sandy clay	10	Po, Jp		2	0.2		
2+00N	MCS-58	10"	--	10°SW	red-br	sandy clay	10	Jp, Bi		6	0.2		
1+50N	MCS-59	10"	--	5°SW	red-br	sandy clay	10	Jp, Ba, Bi		4	0.4		
1+00N	MCS-60	10"	--	5°S	red-br	sandy clay	10	Jp, Bi		6	0.6		
0+50N	MCS-61	10"	--	--	red-br	sandy clay	10	Jp, Ba, Bi		2	0.2		
0+00BL	MCS-62	10"	--	5°S	red-br	sandy clay	10	Jp, Bi, Ba		4	0.2		

STATION	SAMPLE NUMBER	DEPTH	HORIZON	SLOPE	COLOUR	TEXTURE	% ORGANICS	TREE TYPE	REMARKS	ANALYTICAL RESULTS Au ppb	Ag ppm	Pb ppm	Zn ppm
Ln180E													
10+00S	BS-01	--	B	S	or-br	--	3	Bi, Ba		6	0.2		
9+50S	BS-02	--	B	N	or	--	5	Bi, Ba		4	0.2		
9+00S	BS-03	--	B	N	or-yel	--	3	Bi, Ba		10	0.2		
8+50S	BS-04	--	B	N	or-br	--	5	Bi, Ba		10	0.2		
8+00S	BS-05	--	A	--	wh-gy	--	0	Bi, Ba		6	0.4		
7+50S	BS-06	--	A	N	wh-gy	--	0	Ba		4	0.2		
7+00S	BS-07	--	B	--	or-yel	--	5	Ba, Sp		6	0.2		
6+50S	BS-08	--	B	N	or-br	--	3	Sp, Ba, Bi		8	0.2		
6+00S	BS-09	--	B	--	or-yel	--	1	Sp, Ba, Bi		6	0.2		
5+50S	BS-10	--	B	N	yel	--	1	Sp, Ba		2	0.2		
5+00S	BS-11	--	A	N	wh-gy	--	1	Sp, Ba		2	0.2		
4+50S	N/S	--							Swamp				
4+00S	BS-12	--	B	S	dk br	--	5	Sp, Ba		4	0.2		
3+50S	BS-13	--	B	--	or	--	3	Sp		2	0.2		
3+00S	BS-14	--	B	--	or	--	1	Sp		6	0.2		
2+50S	BS-15	--	B	--	or	--	1	Sp		2	0.2		
2+00S	BS-16	--	B	--	or	--	5	Sp		4	0.2		
1+50S	BS-17	--	B	S	or-br	--	1	Sp		2	0.2		
1+00S	BS-18	--	B	S	or-br	--	3	Sp, Bi		2	0.2		
0+50S	BS-19	--	B	S	br	--	5	Sp, Bi		2	0.2		
0+00BL	BS-20	--	B	S	br-yel	--	5	Sp, Jp		2	0.2		

STATION	SAMPLE NUMBER	DEPTH	HORIZON	SLOPE	COLOUR	TEXTURE	% ORGANICS	TREE TYPE	REMARKS	ANALYTICAL RESULTS Au ppb	Ag ppm	Pb ppm	Zn ppm
Ln184E													
10+00S	BS-21	--	B	--	or	--	5	Sp		6	0.2		
9+50S	BS-22	--	B	S	or-yel	--	5	Sp		2	0.4		
9+00S	BS-23	--	B	--	br	--	3	Sp, Bi		6	0.2		
8+50S	BS-24	--	B	--	br-red	--	3	Sp, Bi		4	0.2		
8+00S	BS-25	--	B	N	yel-br	--	1	Sp, Bi		6	0.2		
7+50S	BS-26	--	B	N	br	--	5	Ba		4	0.2		
7+00S	BS-27	--	B	N	br	--	5	Ba		2	0.9		
6+50S	BS-28	--	B	--	yel-or	clay	3	Sp, Ba		6	0.4		
6+00S	BS-29	--	B	N	or-br	sand	3	Sp, Ba		4	0.2		
5+50S	BS-30	--	B	N	br	sand	5	Sp, Ba		2	0.2		
5+00S	BS-31	--	B	--	br	--	5	Sp, Ba		2	0.2		
4+50S	BS-32	--	B	--	or	--	5	Ba		4	I/S		
4+00S	N/S								Swamp				
3+50S	BS-33	--	B	S	or	--	5	Ba, Bi		2	0.2		
3+00S	BS-34	--	B	--	or-br	--	3	Ba, Bi		2	0.2		
2+50S	BS-35	--	B	--	red-br	--	1	Sp		2	0.2		
2+00S	BS-36	--	B	--	or	--	3	Sp, Bi		2	0.2		
1+50S	BS-37	--	B	N	or-br	--	3	Ba, Sp		2	0.2		
1+00S	BS-38	--	B	N	or-br	--	5	Ba, Sp		2	0.2		
0+50S	N/S								Swamp				
0+00BL	N/S								Swamp				

STATION	SAMPLE NUMBER	DEPTH	HORIZON	SLOPE	COLOUR	TEXTURE	% ORGANICS	TREE TYPE	REMARKS	ANALYTICAL RESULTS Au ppb	Ag ppm	Pb ppm	Zn ppm
LN176E													
0+00BL	BS-39	--	B	--	dk br	--	1	Sp, Bi		2	0.2		
0+60S	BS-40	--	A	--	gy	--	1	Sp, Bi		2	0.2		
1+00S	BS-41	--	B	W	or	--	3	Sp, Bi		4	0.2		
1+50S	BS-42	--	B	--	or-br	--	3	Sp, Ba		2	0.2		
2+00S	BS-43	--	B	--	yel-or	--	1	Sp, Ba		4	0.4		
2+50S	BS-44	--	B	--	red-or	--	1	Sp, Bi		2	0.2		
3+00S	BS-45	--	B	--	or-yel	--	1	Sp, Bi		6	0.2		
3+50S	BS-46	--	B	N	or	--	1	Sp, Bi		4	0.2		
4+00S	BS-47	--	B	--	br-yel	--	1	Sp, Bi		2	0.2		
4+50S	BS-48	--	B	--	br	--	1	Sp, Bi		2	0.2		
5+00S	BS-49	--	B	--	red-br	--	1	Sp		4	0.2		
5+50S	BS-50	--	B	--	or	--	1	Sp		6	0.4		
6+00S	BS-51	--	B	--	br-or	--	1	Sp		2	0.2		
6+50S	BS-52	--	B	--	yel-or	--	1	Sp, Bi		4	0.2		
7+00S	BS-53	--	B	N	yel-or	--	1	Sp, Bi		4	0.2		
7+50S	BS-54	--	B	--	or	--	3	Sp, Bi		2	0.2		
8+00S	BS-55	--	B	--	red-br	--	5	Sp, Bi		4	0.2		
8+50S	BS-56	--	B	--	red-br	--	3	Sp, Bi		2	0.2		
9+00S	BS-57	--	B	--	dk br	--	3	Sp, Bi		2	0.2		
9+50S	N/S												
10+00S	BS-58	--	B	--	red-br	--	5	Sp, Bi	Swamp	2	0.2		

STATION	SAMPLE NUMBER	DEPTH	HORIZON	SLOPE	COLOUR	TEXTURE	% ORGANICS	TREE TYPE	REMARKS	ANALYTICAL RESULTS Au ppb	Ag ppm	Pb ppm	Zn ppm
Ln156E													
0+00BL	DG-01	6"	--	W	red-br	fine sand	2	Bi, Ba		6	0.4		
0+50S	DG-02	5"	--	S	red-br	sand	2	Bi, Ba		6	0.2		
1+00S	DG-03	4"	--	S	lt-br	sandy clay	2	Bi, Ba, Cd		2	0.2		
1+50S	DG-04	8"	--	S	lt-br	sandy clay	2	Al, Ba		2	0.2		
2+00S	DG-05	3"	--	SE	red-br	pebble sand	5	Cd, Ba		2	0.2		
2+50S	DG-06	8"	--	SE	br	sandy clay	5	Cd, Ba		2	0.2		
3+00S	N/S								Swamp				
3+50S	DG-07	3"	--	NE	red-br	pebble sand	5	Ba, Po		2	0.2		
4+00S	DG-08	3"	--	NE	red-br	pebble sand	5	Ba, Po, Sp		4	0.2		
4+50S	DG-09	3"	--	E	red-br	sand	2	Ba, Bi		4	0.2		
5+00S	DG-10	2"	--	SW	red-br	pebble sand	5	Ba, Sp, Bi		4	0.2		
5+50S	DG-11	2"	--	SW	red-br	pebble sand	5	Ba, Bi		4	0.2		
6+00S	DG-12	3"	--	SW	red-br	fine sand	2	Ba, Bi		4	0.4		
6+50S	DG-13	8"	--	SW	lt-br	clay	2	Ba, Sp		2	0.2		
7+00S	N/S								Cedar Swamp				
7+50S	N/S								Swamp				
8+00S	N/S								Creek				
8+50S	N/S								Balsam Swamp				
9+00S	N/S								Balsam Swamp				
9+50S	N/S								Balsam Swamp				
10+00S	N/S								Balsam Swamp				

BELL - WHITE ANALYTICAL LABORATORIES LTD.
P.O. BOX 187, HAILEYBURY, ONTARIO TEL: 672-3107

Certificate of Analysis

NO. B475-84 DATE: June 18, 1984

SAMPLE(S) OF: Soil (58) RECEIVED: June, 1984

SAMPLE(S) FROM: Mr. Stephen Conquer
David R. Bell Geological Services Inc. Project #5433

Sample No.	Au/ppb	Sample No.	Au/ppb	Sample No.	Au/ppb
543-BS-001	6	543-BS-020	2	543-BS-040	2
-002	4	-021	6	-041	4
-003	10	-022	2	-042	2
-004	10	-023	6	-043	4
-005	6	-024	4	-044	2
-006	4	-025	6	-045	6
-007	6	-026	4	-046	4
-008	8	-027	2	-047	2
-009	6	-028	6	-048	2
543-BS-010	2	-029	4	-049	4
-011	2	543-BS-030	2	543-BS-050	6
-012	4	-031	2	-051	2
-013	2	-032	4	-052	4
-014	6	-033	2	-053	4
-015	2	-034	2	-054	2
-016	4	-035	2	-055	4
-017	2	-036	2	-056	2
-018	2	-037	2	-057	2
-019	2	-038	2	-058	2
		-039	2		

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P.O. BOX 187, HAILEYBURY, ONTARIO TEL: 672-3107

Certificate of Analysis

NO. B514-84 Page 1 of 3 DATE: June 20, 1984

SAMPLE(S) OF: Soil (132) RECEIVED: June, 1984

SAMPLE(S) FROM: Mr. Stephen Conguer
David R. Bell Geological Services Inc. Project #5433

Sample No.	Ag/ppm	Sample No.	Ag/ppm
543-BS-001	0.2	543-BS-030	0.2
-002	0.2	-031	0.2
-003	0.2	-032	Insufficient Sample
-004	0.2	-033	0.2
-005	0.4	-034	0.2
-006	0.2	-035	0.2
-007	0.2	-036	0.2
-008	0.2	-037	0.2
-009	0.2	-038	0.2
543-BS-010	0.2	-039	0.2
-011	0.2	543-BS-040	0.2
-012	0.2	-041	0.2
-013	0.2	-042	0.2
-014	0.2	-043	0.4
-015	0.2	-044	0.2
-016	0.2	-045	0.2
-017	0.2	-046	0.2
-018	0.2	-047	0.2
-019	0.2	-048	0.2
543-BS-020	0.2	-049	0.2
-021	0.2	543-BS-050	0.4
-022	0.4	-051	0.2
-023	0.2	-052	0.2
-024	0.2	-053	0.2
-025	0.2	-054	0.2
-026	0.2	-055	0.2
-027	0.4	-056	0.4
-028	0.4	-057	0.2
-029	0.2	-058	0.2

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Certificate of Analysis

NO. B477-84 DATE: June 18, 1984

SAMPLE(S) OF: Soil (62) RECEIVED: June, 1984

SAMPLE(S) FROM: Mr. Stephen Conquer
David R. Bell Geological Services Inc. Project #5433

Sample No.	Au/ppb	Sample No.	Au/ppb	Sample No.	Au/ppb
543-MCS-001	2	543-MCS-022	4	543-MCS-043	4
-002	2	-023	4	-044	2
-003	4	-024	8	-045	4
-004	4	-025	2	-046	2
-005	2	-026	4	-047	2
-006	2	-027	4	-048	2
-007	2	-028	4	-049	2
-008	8	-029	2	543-MCS-050	2
-009	4	543-MCS-030	2	-051	2
543-MCS-010	2	-031	2	-052	2
-011	4	-032	2	-053	4
-012	2	-033	2	-054	6
-013	4	-034	4	-055	4
-014	2	-035	2	-056	6
-015	4	-036	2	-057	2
-016	4	-037	2	-058	6
-017	2	-038	4	-059	4
-018	6	-039	2	543-MCS-060	6
-019	2	543-MCS-040	6	-061	2
543-MCS-020	2	-041	2	-062	4
-021	4	-042	4		

BELL-WHITE ANALYTICAL LABORATORIES LTD.

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BELL-WHITE ANALYTICAL LABORATORIES LTD.
P.O. BOX 187, HAILEYBURY, ONTARIO TEL: 672-3107

Certificate of Analysis

NO. B514-84 Page 3 of 3 DATE: June 20, 1984

SAMPLE(S) OF: Soil (132) RECEIVED: June, 1984

SAMPLE(S) FROM: Mr. Stephen Conquer
David R. Bell Geological Services Inc. Project #5433

Sample No.	Ag/ppm	Sample No.	Ag/ppm
543-MCS-001	0.2	543-MCS-032	0.2
-002	0.4	-033	0.2
-003	0.2	-034	0.2
-004	0.2	-035	0.2
-005	0.2	-036	0.2
-006	0.2	-037	0.6
-007	0.2	-038	0.2
-008	0.2	-039	0.4
-009	0.6	543-MCS-040	0.4
543-MCS-010	0.4	-041	0.4
-011	0.6	-042	0.2
-012	0.2	-043	0.2
-013	0.2	-044	0.2
-014	0.2	-045	0.4
-015	0.2	-046	0.4
-016	0.2	-047	0.2
-017	0.4	-048	0.2
-018	0.2	-049	0.2
-019	0.4	543-MCS-050	0.6
543-MCS-020	0.4	-051	0.4
-021	0.4	-052	0.2
-022	0.2	-053	0.4
-023	0.4	-054	0.6
-024	0.4	-055	0.4
-025	0.2	-056	0.4
-026	0.2	-057	0.2
-027	0.2	-058	0.2
-028	0.4	-059	0.4
-029	0.4	543-MCS-060	0.6
543-MCS-030	0.2	-061	0.2
-031	0.2	-062	0.2

N ACCORDANCE WITH LONG-ESTABLISHED NORTH
M CAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED
T RWISE GOLD AND SILVER VALUES REPORTED ON
H SHEETS HAVE NOT BEEN ADJUSTED TO COMPEN-
A FOR LOSSES AND GAINS INHERENT IN THE FIRE
ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER

Ontario

Ministry of Natural Resources

File _____

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) Geological

Township or Area Halcrow, Tooms, Greenlaw

Claim Holder(s) Regal Petroleum Ltd.

Survey Company David R. Bell Geological Services

Author of Report Robert Reukl

Address of Author 251 Third Ave., Suite 4, Timmins, Ont.

Covering Dates of Survey May 8/84 to July 17/84 (linecutting to office)

Total Miles of Line Cut 71.35 miles

SPECIAL PROVISIONS CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

DAYS per claim

- Geophysical
  - –Electromagnetic _____
  - –Magnetometer _____
  - –Radiometric _____
  - –Other _____
- Geological 20
- Geochemical _____

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____ (enter days per claim)

DATE: July 17/84 SIGNATURE: Robert Reukl (Author of Report or Agent)

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

See Attached List
(prefix) (number)

If space insufficient, attach list

TOTAL CLAIMS 173

OFFICE USE ONLY

837 (5/79)

Ontario

Ministry of Natural Resources

File _____

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

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	DAYS per claim
Geophysical	
–Electromagnetic	
–Magnetometer	
–Radiometric	
–Other	
Geological	20
Geochemical	

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: July 17/84 SIGNATURE: Robert Reukl
Author of Report or Agent

Res. Geol. _____ Qualifications 2.5873

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

See Attached List
(prefix) (number)

TOTAL CLAIMS 173

If space insufficient, attach list

OFFICE USE ONLY

837 (5/79)

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS – If more than one survey, specify data for each type of survey

Number of Stations _____ Number of Readings _____

Station interval _____ Line spacing _____

Profile scale _____

Contour interval _____

MAGNETIC

Instrument _____

Accuracy – Scale constant _____

Diurnal correction method _____

Base Station check-in interval (hours) _____

Base Station location and value _____

_____

ELECTROMAGNETIC

Instrument _____

Coil configuration _____

Coil separation _____

Accuracy _____

Method: ☐ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line

Frequency _____
(specify V.L.F. station)

Parameters measured _____

GRAVITY

Instrument _____

Scale constant _____

Corrections made _____

_____

Base station value and location _____

_____

Elevation accuracy _____

INDUCED POLARIZATION / RESISTIVITY

Instrument _____

Method ☐ Time Domain ☐ Frequency Domain

Parameters – On time _____ Frequency _____

– Off time _____ Range _____

– Delay time _____

– Integration time _____

Power _____

Electrode array _____

Electrode spacing _____

Type of electrode _____

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

_____

Corrections made _____

_____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth – include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

_____

Additional information (for understanding results) _____

_____

_____

AIRBORNE SURVEYS

Type of survey(s) _____

Instrument(s) _____

(specify for each type of survey)

Accuracy _____

(specify for each type of survey)

Aircraft used _____

Sensor altitude _____

Navigation and flight path recovery method _____

_____

Aircraft altitude _____ Line Spacing _____

Miles flown over total area _____ Over claims only _____

GEOCHEMICAL SURVEY – PROCEDURE RECORD

Numbers of claims from which samples taken _____

_____

_____

Total Number of Samples _____

Type of Sample _____
(Nature of Material)

Average Sample Weight _____

Method of Collection _____

_____

Soil Horizon Sampled _____

Horizon Development _____

Sample Depth _____

Terrain _____

_____

Drainage Development _____

Estimated Range of Overburden Thickness _____

_____

_____

SAMPLE PREPARATION
(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis _____

_____

_____

_____

General _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

ANALYTICAL METHODS

Values expressed in: per cent ☐
p. p. m. ☐
p. p. b. ☐

Cu, Pb, Zn, Ni, Co, Ag, Mo, As,-(circle)

Others _____

Field Analysis (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Field Laboratory Analysis

No. (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Commercial Laboratory (_____ tests)

Name of Laboratory _____

Extraction Method _____

Analytical Method _____

Reagents Used _____

General _____

_____

_____

_____

_____

_____

_____

_____

_____

TECHNICAL DATA STATEMENT

ATTACHMENT LIST

July 17, 1984

Project No. 5433

20 Days Geological Credit Requested for Regal Petroleum Ltd.

173 Claims Situating Halcrow, Tooms and Greenlaw Townships

MINING CLAIMS TRAVERSED

Claim Number	Claim Number	Claim Number
P688585	P708932	P708959
P688586	P708933	P708960
P688587	P708934	P708961
P688588	P708935	P708962
P688589	P708936	P708963
P688590	P708937	P708964
P688595	P708938	P708965
P688596	P708939	P708966
P688597	P708940	P708967
P688598	P708941	P708968
P688599	P708942	P708969
P688600	P708943	P708970
P688601	P708944	P708971
P688602	P708945	P708972
P688603	P708946	P708973
P688604	P708950	P708974
P688605	P708951	P708975
P688606	P708952	P708976
P688607	P708953	P708977
P688608	P708954	P708978
P688609	P708955	P708979
P688610	P708956	P708980
P708930	P708957	P708981
P708931	P708958	P708982

Claim Number	Claim Number	Claim Number
P708983	P709059	P758317
P708984	P709060	P758318
P708985	P709061	P758319
P708986	P709062	P752003
P708987	P709063	P752004
P708988	P709064	P752005
P709030	P709065	P752006
P709031	P709066	P752007
P709032	P709067	P752008
P709033	P709068	P779840
P709034	P757390	P779841
P709035	P757391	P779842
P709036	P757392	P779843
P709037	P757393	P779844
P709038	P757394	P779845
P709039	P757395	P779846
P709040	P757396	P779847
P709041	P757397	P779870
P709042	P757398	P779871
P709043	P757399	P779872
P709045	P757400	P779873
P709046	P757401	P783631
P709047	P757402	P783632
P709048	P757403	P783633
P709049	P757404	P783634
P709050	P758284	P783637
P709051	P758285	P783638
P709052	P758310	P783639
P709053	P758311	P783640
P709054	P758312	P783641
P709055	P758313	P783642
P709056	P758314	P783643
P709057	P758315	P783644
P709058	P758316	

ADDENDUM TO THE
GEOLOGICAL REPORT
OF THE
REGAL PETROLEUM LTD. PROPERTY
SWAYZE AREA
PORCUPINE MINING DIVISION
ONTARIO
PROJECT 5433

September 10, 1984
Timmins, Ontario

By: Peter Whittaker, Ph.D.
Stephen Conquer, B.Sc.
Per: David R. Bell
Geological Services Inc.

TABLE OF CONTENTS

TABLE OF CONTENTS CONT'D

0 SUMMARY

The No. 1 vein as outlined by Halcrow-Swayze Mines is located in Trench 6W-N and, at least one surface is of minor extent. The No. 2 vein was located in the remaining trenches, and was usually found in the southern portion of these trenches next to contact with the mafic (chlorite schist) tuff. Several minor, subsidiary shears were also located,

Assay results were variable across and along the main zone, with the best results correlating with high pyrite contact and alteration.

The humus or A_H-horizon appears to be the best sampling medium for the purpose of geochemically delineating the main or alternate zones.

0 INTRODUCTION

This addendum to the geological report of Regal Petroleums' Swayze Area property, covers the three patented claims called the Shaft Group (Conquer 1984a). These three claims are part of an original block of 18 claims, which initially were controlled by Halcrow-Swayze Mines Ltd. Regal Petroleum now holds a total of nine of these claims under option from the owners. Such details as location, access, property and ownership status, can be found in a previous report by this author (Conquer, 1984a).

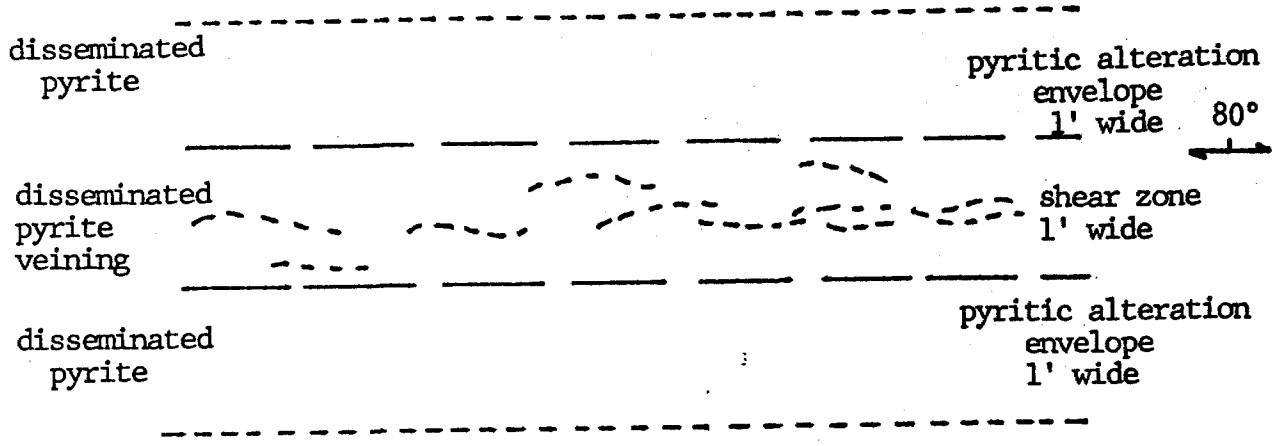
Due to time constraints, exploration of these three claims only entailed trench cleaning, mapping and sampling along with an orientation geochemistry survey.

The trenches were mapped at 1":5' and 1":10' scales, depending on their lengths. Mapping was done with stainless steel and glass fibre 100' tapes and silva compass with clinometer.

3.0 GENERAL GEOLOGY

Outcrop exposed by trenches 9W to 10E includes mafic tuff, arkosic (?) quartzite, greywacke, siliceous siltstone, quartz diorite and biotite lamprophyre. These are represented in a composite stratigraphic column (Figure 1). The stratigraphy is oriented approximately SE to NW with steep northeasterly dips.

All lithologies are dipping near vertical and are sheared to variable degrees. Shear zones are the main structural feature and range from 8" to 4' wide. They generally are best developed in the southern ends of the trenches in the arkosic (?) quartzite.



DAVID R. BELL GEOLOGICAL SERVICES INC.

REGAL PETROLEUM LTD.

Diagrammatic Representation of
Shear Zone in Arkosic (?) Quartzite
Shaft Area: Halcrow-Swayze Mine

Figure 1	Not to Scale

3.1 Mineralization

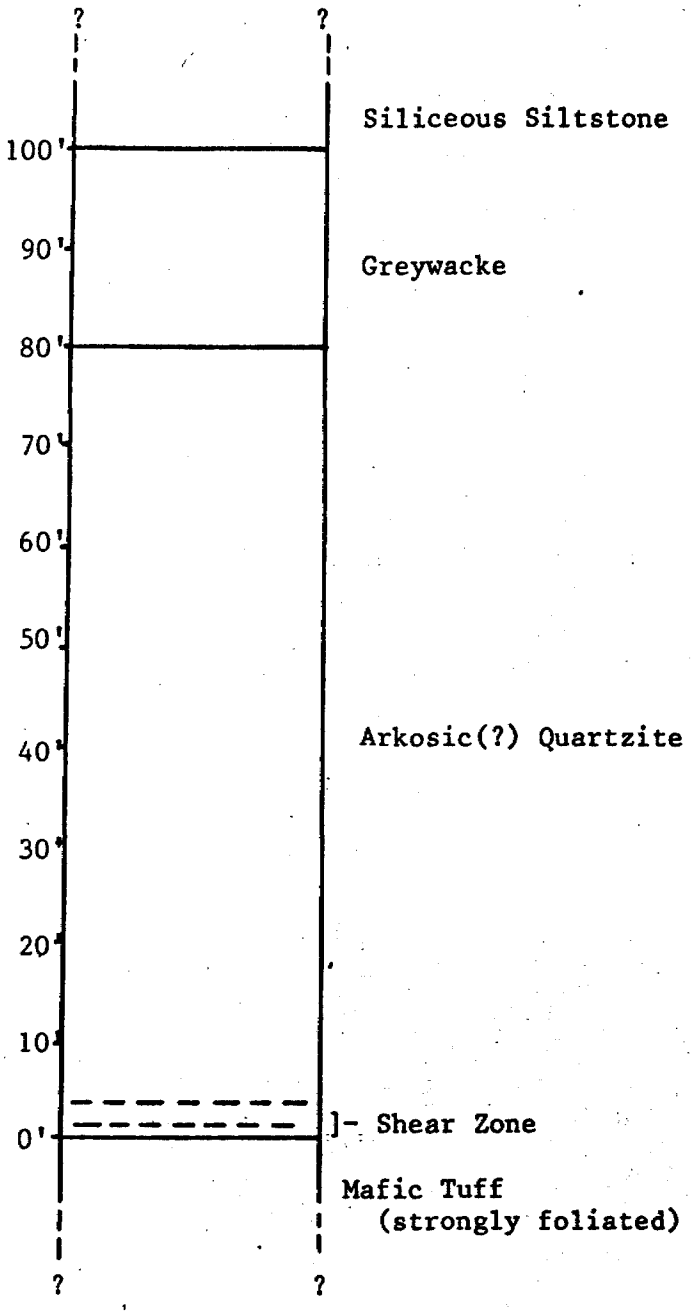
Associated with the shear zones in the arkosic (?) quartzites are zones of the sulphide (pyrite) mineralization in disseminated form. In addition, carbonatization and/or sericitization occur. Silicification within some shear zones often forms vein-like centers and exhibits angular-vesicular texture. This texture is identical to that of "Si-sinter" formed at presently active geothermal hotsprints in the Yellowstone Park area, SW Montana. Sulphide mineralization in shear zones is disseminated or forms sulphide veinlets or stringers. At the easternmost trench, Trench 10E, massive aggregate sulphide veins occur, also in the main shear zone. Sulphide minerals are predominantly pyrite, while minor chalcopyrite leads to scattered malachite staining. Pyrite ranges from very fine-grained (vfg) to medium-grained (mg) and is usually euhedral. In veinlets or stringers, pyrite reaches medium-grained size whereas disseminated pyrite is almost always very fine-grained.

Outside of shear zones, pyrite forms finely disseminated texture in the wallrock (i.e., quartzite) and may form a "sulphide alteration envelope" extending up to 1' on either side of the shear zone. This leads to a zone of burnt black-brown weathering wider than the actual shear zone (Figure 2).

3.2 Alteration

Shear zones are variably altered by sericitization, silicification and/or carbonatization in addition to the presence of disseminated sulphides or sulphide stringers.

Sericitization is weakly developed in shear zones and gives a waxy green to brownish-green lustre and colour. It occurs in patchy and discontinuous forms across the trenched area.



From Halcrow-Swayze Mine: trenches
Thickness is true due to near vertical dip

David R. Bell Geological Services Inc.

Regal Petroleum Ltd.

Composite Stratigrapic Column
Shaft Area

Figure 2: | Scale: 1"= 20'

Silicification occurs throughout most of the shear zones with or without pyrite mineralization. It forms actual quartz veins, barren of other mineralization, within shear zones or results in silicified pyritic quartzite. Silicified quartzite shows a sintery (angular vesicularity) texture which may also represent infilling of cavities or replacement in the shear zone. Silicified quartzite is usually stained dark reddish-brown and exhibits a porcelain-like texture on freshly broken surfaces.

Carbonatization is variably present in shear zones, usually where pyrite is present. It imparts a fine granular texture with pale colouration to the sheared rock. Colours range from colourless to pale orange-brown or tan.

4.0 TRENCH SUMMARIES

4.1 Trench 9W

Massive to foliated arkosic (?) quartzite cut by 5 narrow shear zones. The northend of the outcrop area is in contact with medium-grained dark grey quartz diorite which is cut by 1 narrow (2"-3") shear zone. The shear zone at the southernmost end of the outcrop area, and at small pit, is pyritic. Both the quartzite and intrusive quartz diorite are cut by late quartz and quartz - chlorite veins.

4.2 Trench 8W

All sheared arkosic (?) quartzite with carbonate blebs in shear zone. Carbonate also forms a thin film (0.05mm) along shear surfaces. Chlorite is abundant in shear zone matrix. Several centimeter wide discontinuous quartz veins crosscut the quartzite, blocks in blasted rubble indicate a main quartz vein possibly 60-80 cm wide.

Quartz veins contain minor disseminated pyrite and chalcopyrite with malachite. Carbonate occurs in some quartz veins.

4.3 Trench 7W

Arkosic (?) quartzite cut by two shear zones, is fine to medium-grained. Shear zone at the southern end of the trench is on strike with shear zone running through trench 6W-N. Shear zones have rusty Fe-staining from disseminated pyrite. Carbonation alteration forms veinlets in the southern shear zone and is both pervasive and in veinlets in the northern shear zone.

4.4 Trench 6W-N

Trench 6W is buried under mine muck, trench 6W-N is approximately 120 feet NNW of trench 6W.

Arkosic quartzite throughout the trench in fine to medium-grained. A 1" wide shear zone discontinuously runs throughout the trench. The shear zone carried disseminated pyrite and carbonate in veinlets along shear surfaces. Quartz veining strikes along the shear zone and widens to about 6" and is barren of mineralization. On both sides of this part of the shear zone, finely disseminated pyrite occurs in the arkosic (?) quartzite wallrock. Scattered 1" wide and discontinuous quartz veins occur elsewhere in the quartzite. The east end of the trench (east end of 15' deep water filled pit) is in contact with sheared, chloritic, medium-grained quartz diorite.

4.5 Trench 6W, 5W, 4W

Trenches 6W, 5W and 4W are buried by mine muck in the shaft area.

4.6 Trench 3W

Arkosic (?) quartzite cut by shear zones and a biotite lamprophyre dike. The quartzite is carbonatized with carbonate in small clots and as thin films on foliation planes. The main shear zone is in the southern half of the trench and has trace amounts of disseminated sulphides and is carbonatized and sericitized. The smaller shear zone, in the central part of the trench, is on the south side of a magnetic biotite lamprophyre dike. Quartzite in this shear zone carried 5-7% fine-grained disseminated pyrite.

4.7 Trench 2W

Arkosic (?) quartzite underlies the trenched area and is cut by a biotite lamprophyre dike (magnetic) through the central part of the trench. The quartzite is very fine-grained to fine-grained throughout and where not sheared has a weak foliation and is jointed. The southern part of the outcrop is weakly foliated and has scattered sulphide-stained patches. These patches are elongate, parallel to the foliation and are up to 6" x 3' in size. Staining results from weathering of 5-7% very fine-grained disseminated pyrite. There is minor silicification and no carbonatization.

4.8 West Pit

West Pit has primarily arkosic (?) quartzite with the northern end outcrop being of siliceous siltstone and the southern end in mafic tuff. Minor shear zones, less than 1' wide, cut the central part of the trench and the northern is a wider shear zone about 50' wide. Quartzite appears to coarsen northwards. The shear zones exhibit weak sericitization and shearing in the siliceous siltstone

has scattered, 3" diameter, sulphide stained patches. Mafic tuff forms the south of the south pit. It is strongly foliated chlorite with 1% (?) of very fine-grained disseminated pyrite.

4.9 Trench 2E

Arkosic (?) quartzite underlies the trenched area and is very fine to fine-grained. A major shear zone, approximately 5' wide runs through the trench. Sheared quartzite in the trench has both disseminated and stringer pyrite. Carbonate occurs pervasively throughout the shear zone as well as on shear surfaces.

At the west end of the trench a 1' wide quartz vein cuts the foliated quartzite. The quartz vein is white and barren of other mineralization on surface.

4.10 Trench 3E

Arkosic (?) quartzite occurs throughout the trench. The south end is strongly sheared with the shear zone, in places being crenulated. The shear zone also hosts stringers of quartz, carbonate and chlorite. Pyrite is disseminated throughout the shear zone (3-5%) and is fine-grained.

A biotite lamprophyre dikes cuts the outcrop, 15' north of the shear zone.

4.11 Trench 4E

Outcrop in the trench is arkosic (?) quartzite cut by a 5' wide shear zone. The sheared quartzite has 3-5% disseminated pyrite and 1"-2" wide veins and stringers of pyrite. A narrow zone, 6" wide, carried ¼" sulphide nodules. These form approximately 5-7% of the zone and are oxidized to rusty (hematite and limonite) nodular spheroids. The shear zone also is silicified in parts, carbonate is absent.

4.12 Trench 5E

Arkosic quartzite occurs throughout the pit and is very fine to fine-grained. A shear zone is developed through the central part of the trench and carried pyrite in stringers. The pyrite is fine-grained and euhedral. Quartzite on either side of the shear zone is stained to orange-brown by sulphides.

4.13 Trench 6E

Trench 6E exposes arkosic (?) quartzite which is fine-grained and equigranular (well-sorted). The south end of the outcrop is cut by a shear zone at least 8' wide. Scattered patches of very fine-grained disseminated pyrite give rusty patches on weathered surfaces within the shear zone. The shear zone is sericitized and silicified with pyrite giving the orange-brown Fe-staining.

4.14 Trench 7E

Arkosic (?) quartzite underlies the trench between two pits in overburden. The exposed shear zone is 14 feet wide measured from the south end. Quartzite in the shear zone is fissile, sericitic and is Fe-stained to a pale orange-brown. Strongest staining is along shear surfaces. Quartzite throughout the trench shows a weak trend of northward coarsening. Minor quartz veining, some with chlorite clots is developed in quartzite a few feet north of the main shear zone.

4.15 Trench 8E

Outcrop exposed in the trench is arkosic (?) quartzite which is cut by a shear zone in the southern part of the trench. The exposed part of the shear zone is 9 feet wide and in places

highly fissile, the quartzite breaking into ½ inch plates. Fe-staining is best developed along shear surfaces and sericitization is weakly developed. Disseminated pyrite occurs in the shear zone (2-3%) and is very fine-grained and sub to euhedral. Composite quartz and chlorite veins, ½" x 6", occur in quartzite starting 5' north of the shear zone and strike to the northeast.

4.16 Trench 9E

Trench 9E is underlain by arkosic (?) quartzite in the southern portion and by greywacke in the northern part. The arkosic (?) quartzite is fine to medium-grained and is cut by narrow (1') shear zones. The narrowest shear, about 1"-2" wide, is pyritic and appears slightly silicified, carbonate is absent. This narrow zone is 30% or greater pyritic with fine to medium-grained pyrite cubes. In the northern part of the trench massive, jointed greywacke outcrops. It is fine to medium-grained with 20% angular medium-grained quartz, 60% grey-white plagioclase and 20% chlorite (clay) matrix.

4.17 Trench 10E

Trench 10E is underlain by arkosic (?) quartzite and is cut by 1' wide biotite lamprophyre dike in its eastern end. A 4' wide shear zone parallels the trench outcrop in the eastern part and disappears under cover along the central part, north side. Within the shear zone are discontinuous stringer veins of pyrite with minor chalcopyrite and accompanying malachite staining. Two pyrite veins, 2" to 6" wide also cut the sheared quartzite and are conformable with the shear zone. Pyrite in the veins is massive and fine to medium-grained. Finer-grained pyrite is subhedral and medium grained pyrite forms euhedral cubes. The pyrite veins weather

to a crumbly and sandy consistency. Discontinuous quartz to Si-sinter veins run parallel to and centrally within the wider parts of the pyrite vein. Silified (sintery) wallrock is in contact with the pyrite veins and is about ¼" to ½" thick before going to unsilicified sheared quartzite (Figure 3). A similar pyrite vein occurs in sheared quartzite in the SE arm of the main trench at 16'S.

5.0 ROCK GEOCHEMISTRY

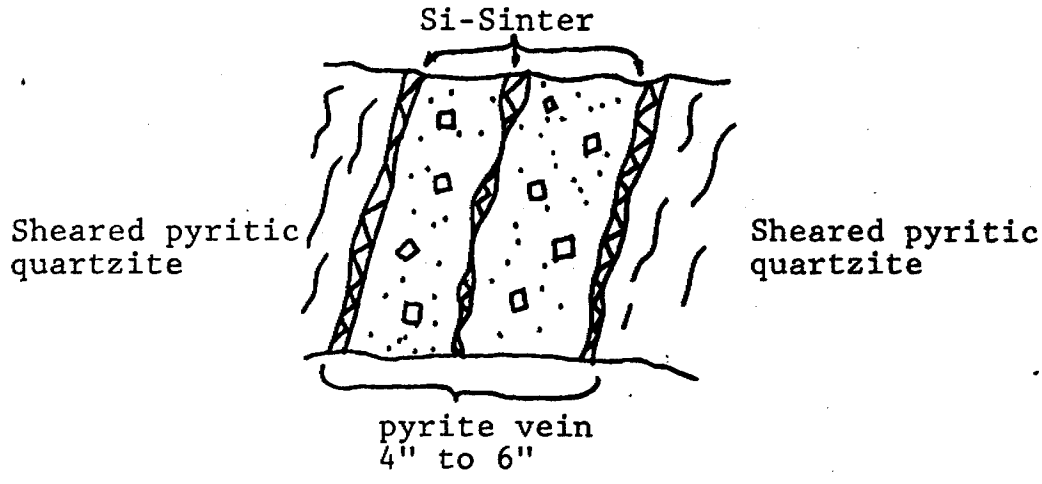
A total of 52 grab samples were collected from the 16 exposed trenches. The shear zone as located in Trench 6W-N represents the No. 1 Vein, as developed by Halcrow-Swayze Mines Ltd. The remaining trenches, Trench 9W through Trench 10E have opened up the No. 2 Vein, where Halcrow-Swayze had received their best results.

5.1 Gold Geochemistry

All of the 52 grab samples were analyzed for their gold content, with values ranging from 11 ppb Au to 7.13 oz Au/ton. The best results are obtained from various sections of the arkosic (?) quartzite, with the gold quantity being governed by the degree of shearing, alteration and pyrite content. The best gold results come from the sections of the shear zone where the pyrite is found in veins along with disseminations.

5.2 Silver Geochemistry

Of the 52 samples collected, 51 were analyzed for their silver content. The silver results ranged from 0.2 ppm Ag to 30.6 ppm Ag (0.876 oz Ag/ton). Generally samples containing higher gold content will also return high silver results, although a direct 1:1 correlation cannot be made. In future work it would be auspicious to, at least periodically, check for the silver content.



DAVID R. BELL GEOLOGICAL SERVICES INC.	
REGAL PETROLEUM LTD.	
Sketch across a pyrite vein showing "Si-Sinter" alteration zones, Representative of silicification	
Figure 3	Not to Scale

5.3 Lithogeochemistry (Whole Rock)

Two of the collected samples were sent for lithogeochemical analysis. Sample 541-0206, initially mapped as a biotite lamprophyre, was placed in the komatiitic basalt catagory by chemical analysis, while sample 543-0212, initially mapped as a quartz diorite was chemically catagorized as a calc-alkaline basalt.

6.0 ORIENTATION SOIL GEOCHEMISTRY SURVEY - SUMMARY

In preparation for a detailed soil geochemistry survey over these three claims, a orientation survey was conducted. The intent of this survey was to determine whether samples collected from the B-horizon or the A_H-horizon (humus) would give the most accurate indication of the known mineralized shear zone.

From the results of the rock geochemistry (grab sampling) program, it was determined where the soil samples should be collected. These samples were collected from pace and compass traverses, as well as line L130E, while using the newly surveyed baseline as a reference line. Two of these lines were positioned over portions of the zone which apparently contains "ore grade" gold values. (trench 2E, 0.215 oz Au/ton; trench 10E, 7.13 oz Au/ton)

The third line was located intermediate to those lines, but crossing over the zone in an area of only geochemically anomalous gold values (trench 6E, 217 ppb Au).

A variable station spacing was used during this survey, with stations 10 feet apart for 50 feet on either side of the zone, and a 25 foot sampling interval for 100 feet, on the flanks of this detailed zone. A total of 60 humus (A_H) and 56 B-horizon samples were collected during this program, with the analysis being confined to gold.

6.1 Orientation Soil Geochemistry Survey - Results

6.1.1 A_H-horizon (Humus)

The best results, as returned, from the humus survey were received from the samples collected approximately 10 feet west of trench 2E. These results define a zone of about 34 feet in width, that is found to overlie the main mineralized shear zone. The results were statistically analyzed, but the ensuing threshold and anomalous zone boundaries were believed to be suspect due to the number of samples collected and the dramatic difference in results. Therefore anomalous values were arbitrarily determined to be 100 ppb Au or greater.

This anomalous zone trends to the southeast, but ends up displaced to the south of the shear zone in trench 10E. The exact cause of this zone is at present unknown.

A second zone, although much weaker than the first, can be recognized if the threshold values were taken to be between 40 ppb and 100 ppb Au. This zone is located approximately 110 feet grid south of the mineralized shear on the west end, but only 50 feet to the south or the east end. At present this zone is only defined by three assay results, as well as no bedrock exposure, consequently the exact cause is unknown.

6.1.2 B-Horizon

The results from the soil survey tend to confirm the presence of the zone as defined by the humus survey. It is apparent that, for whatever reasons, the B-horizon material does not appear to be as sensitive towards the collection of gold as the A_H horizon.

As with the humus results, the statistical analysis of the B-horizon data does not present contour intervals, that allow immediate detection of the anomalous zones. Therefore it is by looking at the B-horizon values and comparing them with the humus results that a correlation between the zones can be made.

The more southerly of the two geochemically determine zones, cannot be differentiated by the available B-horizon assay results.

7.0 CONCLUSIONS

The major structure controlling mineralization is a SE trending shear zone with steep to vertical dip. The shear zone follows the quartzite-mafic tuff (chlorite schist) contact which is exposed in the southern end of most trenches. South east from the shaft area the shear zone becomes wider and more continuous with disseminated and stringer pyrite throughout. The southernmost trench shows massive vein-pyrite in 4" wide veins which similarly trend parallel to the shear zone. Silicification is the most pervasive type of alteration with carbonatization and sericitization being discontinuous.

The mineralized and silicified portion of the shear zone appears best developed at the SE end of the trenches. From here it would be likely that the shear zone, and possibly the increasingly intense pyrite mineralization and silicification extend further to the southeast.

Additional trenching could be done along several hundred feet of low ridge before the gound drops off to a lake.

In regards to a detailed soil geochemical program, the orientation survey results suggests that a humus sampling program would best define any continuation to the main shear

zone (No. 2 Vein) or parallel mineralized sections. It should be remembered that the overburden depth will have a large effect on the quality of these geochemical results. Overburden depths in excess of 25 to 30 feet may render the results from this type of survey useless.

Respectfully submitted,

Stephen Conquer, B.Sc.

September 10, 1984
Timmins, Ontario

Peter Whittaker, Ph.D.

REFERENCES

Conquer, S.W. 1984a — Unpublished Report...Introductory Report, Regal Petroleum Ltd., Swayze Area, Patent Claim Group

CERTIFICATE OF QUALIFICATIONS

I, Peter J. Whittaker, do hereby certify:

1. that I am a resident of Toronto, Ontario

2. that I am a graduate of Laurentian University of Sudbury, Ontario in 1976 with the degree of Hons. B.Sc in geology

3. that I am a graduate of McMaster University of Hamilton in 1978 with the degree of M.Sc in geology

4. that I worked as a geologist of the Ontario Geological Survey from 1978-1980 with the Mineral Deposits Section

5. that I have completed a Ph.D. degree in geology at Carleton University in Ottawa (1983)

6. that I do not have, nor do I expect to have, direct or indirect, any interest in the property of Regal Petroleum Ltd.

P.J. Whittaker

Timmins, Ontario
September 10, 1984

Peter J. Whittaker, B.Sc., M.Sc., Ph.D.

CERTIFICATE OF QUALIFICATIONS

I, Stephen W. Conquer hereby certify:

1. that I am a geologist employed by David R. Bell Geological Services Inc., Suite 4, 251 Third Avenue, Timmins, Ontario

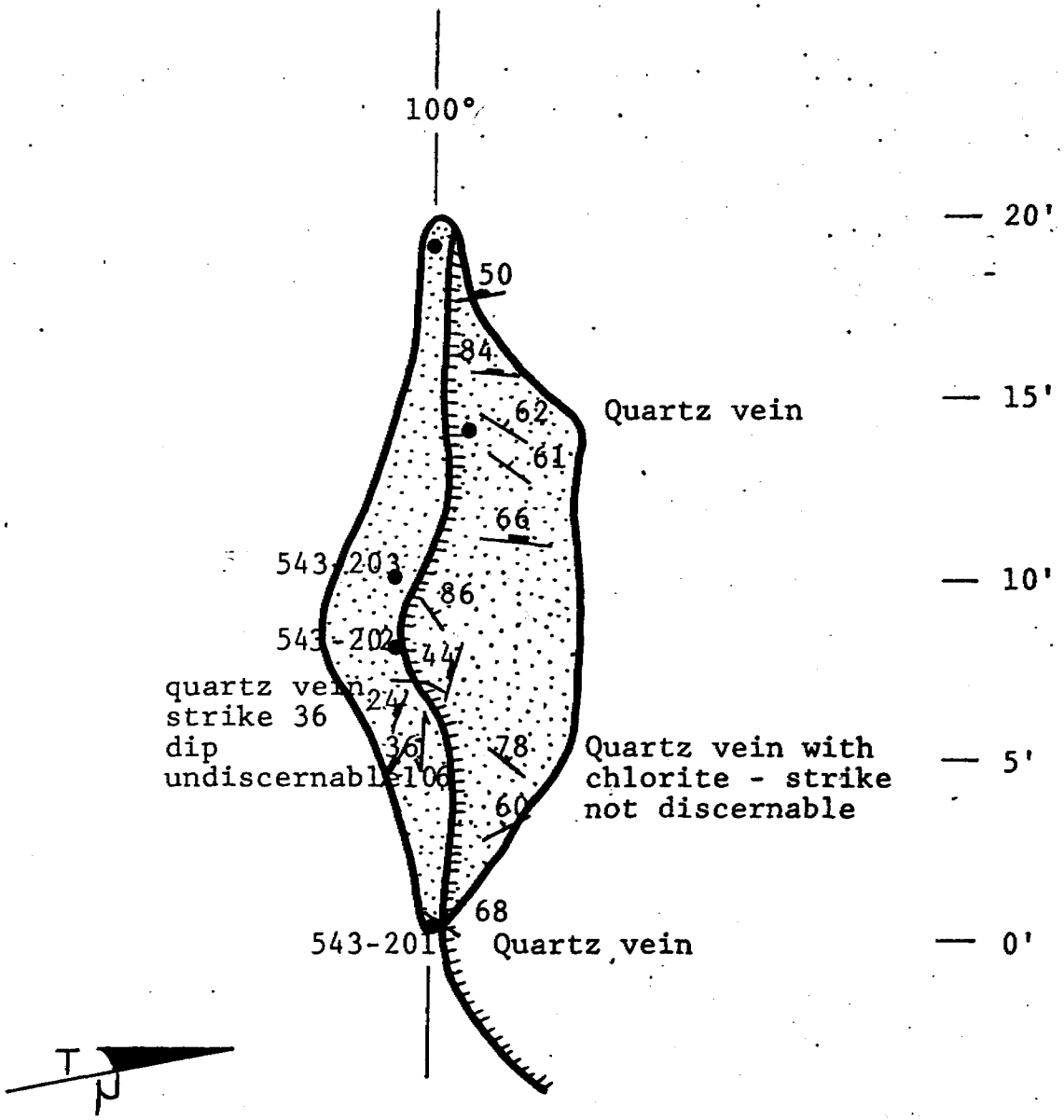
2. that I am a graduate of the University of Waterloo, holding a Bachelor of Science degree (1979)

3. that I have been practising my profession as a geologist since 1979

4. that I do not have nor do I expect to receive either directly or indirectly, any interest in this property or the securities of Regal Petroleum Inc.

Stephen W. Conquer, B.Sc.

Timmins, Ontario
September 10, 1984



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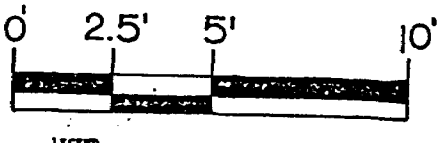


LEGEND

- substrate
- siliceous siltstone
- greywacke
- arkosic quartzite
- biotite lamprophyre
- biotite lamprophyre dike
- quartz diorite
- mafic tuff
- sulphide stained patches
- quartz vein

SYMBOLS

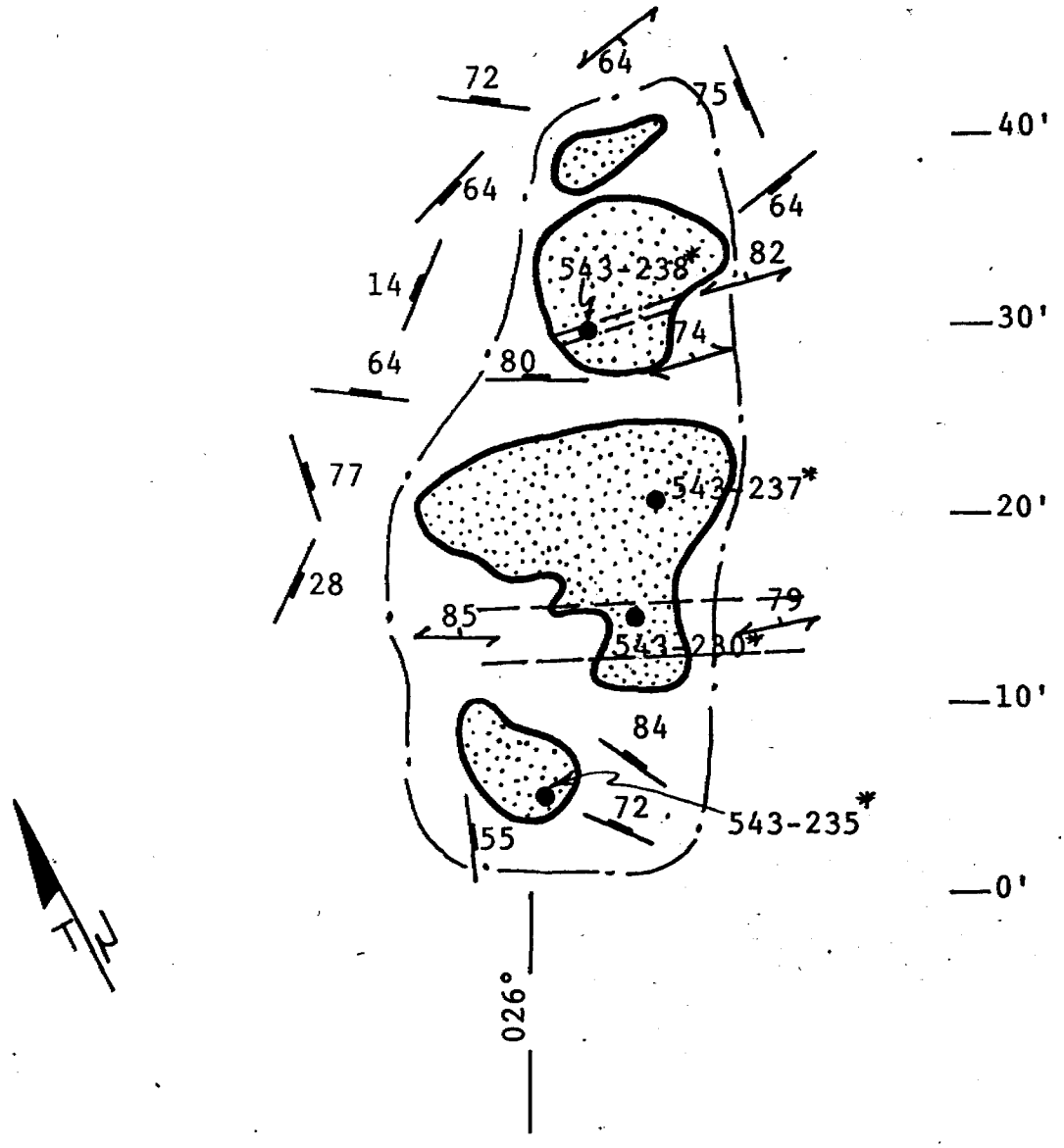
- shear zone
- contact
- assumed contact
- water
- ridge
- trench boundary
- sample location and number
- assay for Au and Ag
- foliation: inclined, vertical
- jointing: inclined, vertical

DAVID R. BELL GEOLOGICAL SERVICES INC.

REGAL PETROLEUM LTD.

TRENCH #8W

September 10, 1984 | 5433-84-2



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LEGEND

- substrate
- siliceous siltstone
- greywacke
- arkosic quartzite
- biotite lamprophyre
- biotite lamprophyre dike
- quartz diorite
- mafic tuff
- sulphide stained patches
- quartz vein

SYMBOLS

- shear zone
- contact
- assumed contact
- water
- ridge
- trench boundary
- sample location and number
- assay for Au and Ag
- Foliation; inclined, vertical
- Jointing; inclined, vertical

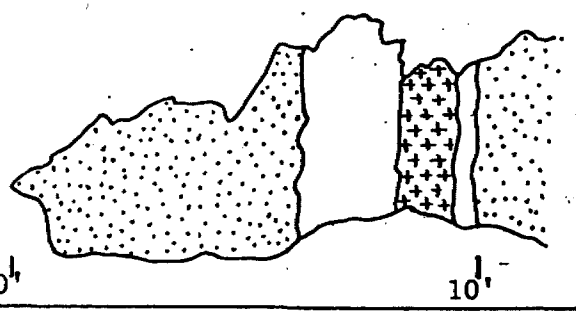
DAVID R. BELL GEOLOGICAL SERVICES INC.

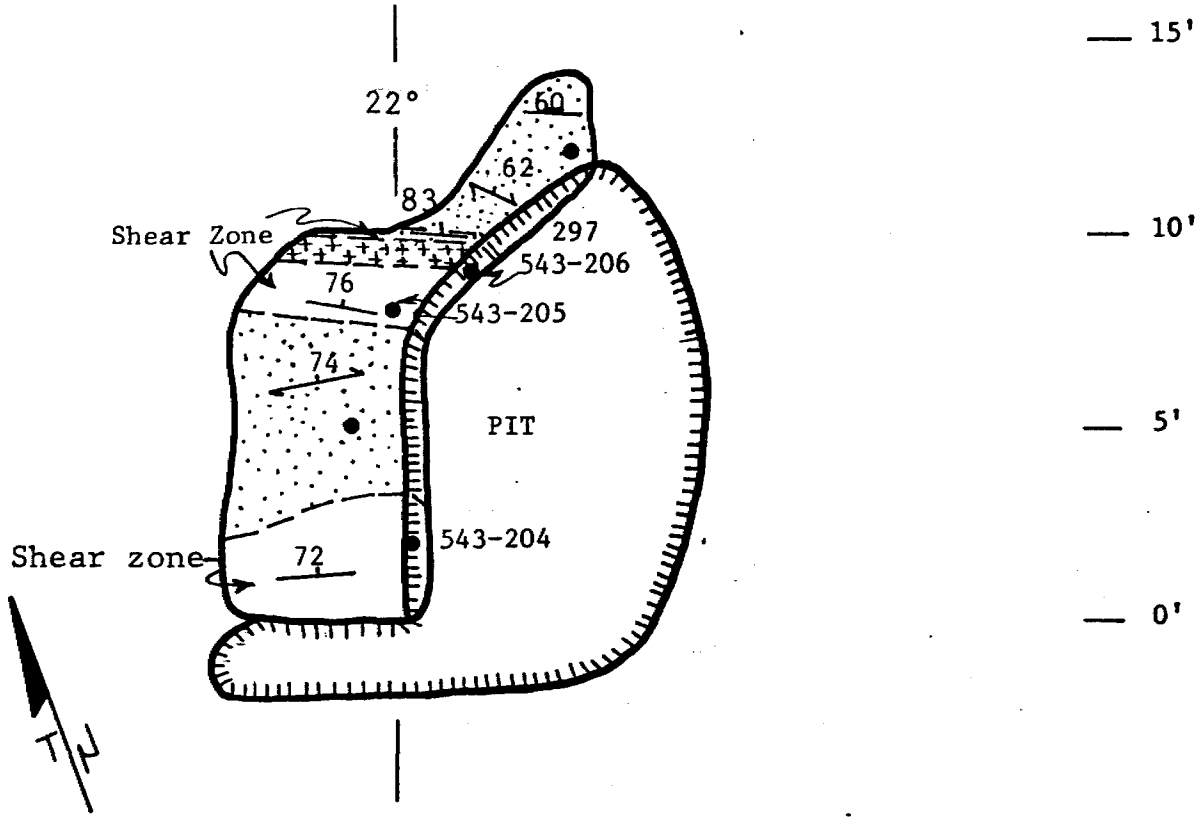
REGAL PETROLEUM LTD.

TRENCH #7W

September 10, 1984 | 5433-84-3

TRENCH CROSS-SECTION





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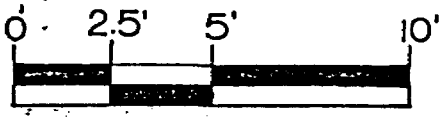


LEGEND

SYMBOLS

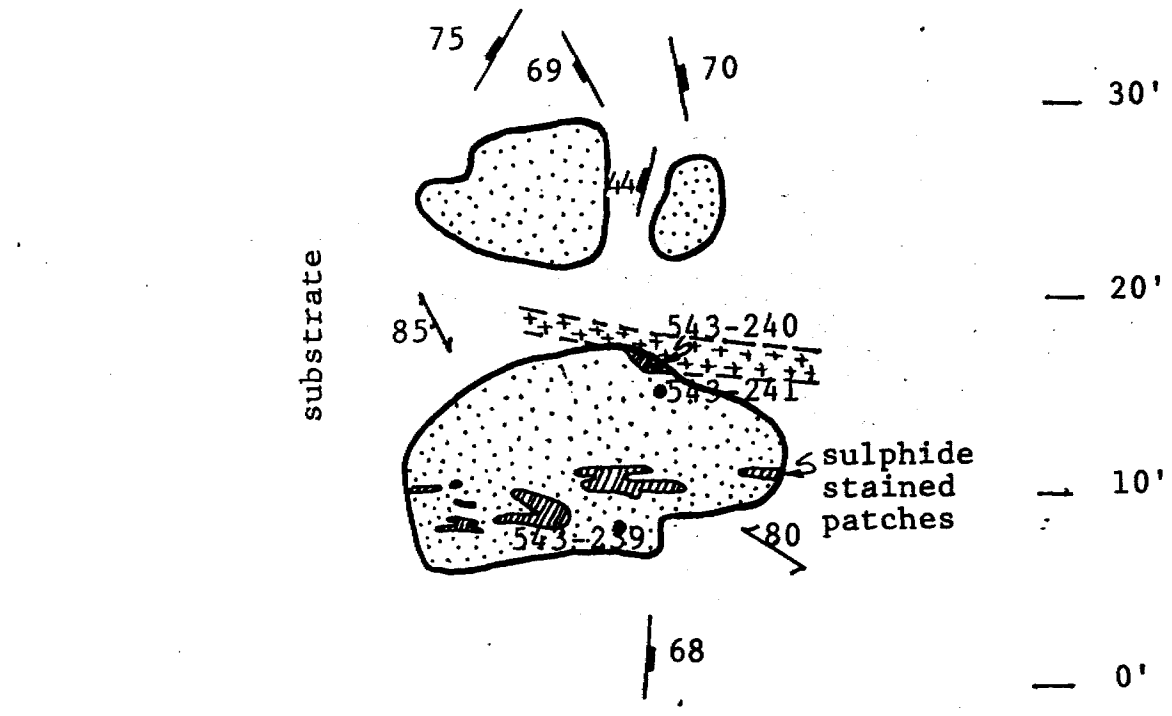
- substrate
- siliceous siltstone
- greywacke
- arkosic quartzite
- biotite lamprophyre
- biotite lamprophyre dike
- quartz diorite
- mafic tuff
- sulphide stained patches
- quartz vein
- shear zone
- contact
- assumed contact
- water
- ridge
- trench boundary
- sample location and number
- assay for Au and Ag
- Foliation: inclined, vertical
- Jointing: inclined, vertical

DAVID R. BELL GEOLOGICAL SERVICES INC.

REGAL PETROLEUM LTD.

TRENCH #3W

September 10, 1984 | 5433-84-5



Scale 1"=10'

0' 5' 10' 20'

LEGEND

- substrate
- siliceous siltstone
- greywacke
- arkosic quartzite
- biotite lamprophyre
- biotite lamprophyre dike
- quartz diorite
- mafic tuff
- sulphide stained patches
- quartz vein

SYMBOLS

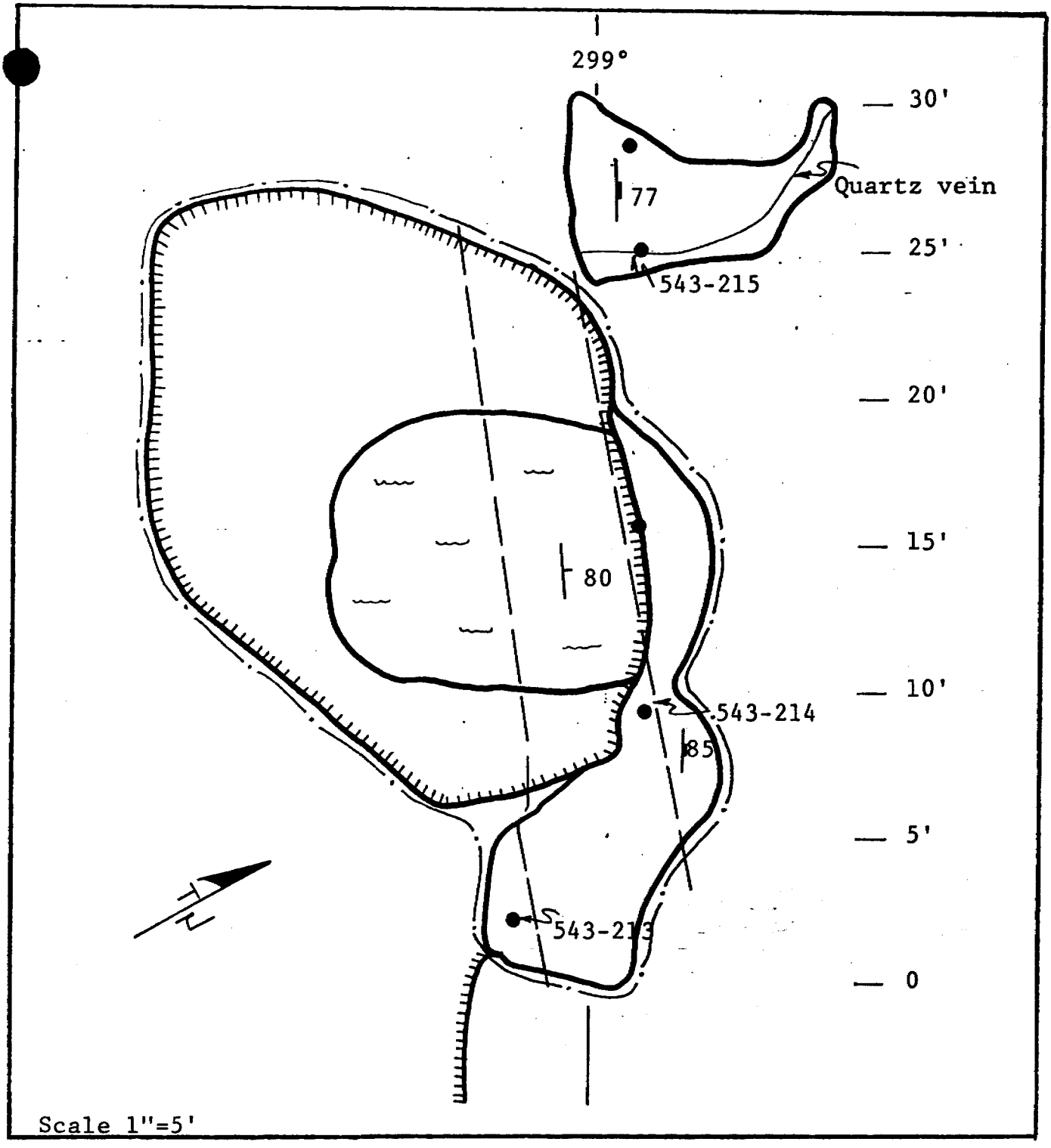
- shear zone
- contact
- assumed contact
- water
- ridge
- trench boundary
- sample location and number
- assay for Au and Ag
- Foliation; inclined, vertical
- Jointing; inclined, vertical

DAVID R. BELL GEOLOGICAL SERVICES INC.

REGAL PETROLEUM LTD.

TRENCH #2W

September 10, 1984 | 5433-84-6



0' 2.5' 5' 10'

LEGEND

- substrate
- siliceous siltstone
- greywacke
- arkosic quartzite
- biotite lamprophyre
- biotite lamprophyre dike
- quartz diorite
- mafic tuff
- sulphide stained patches
- quartz vein

SYMBOLS

- shear zone
- contact
- assumed contact
- water
- ridge
- trench boundary
- sample location and number
- assay for Au and Ag
- Foliation: inclined, vertical
- Jointing: inclined, vertical

DAVID R. BELL GEOLOGICAL SERVICES INC.

REGAL PETROLEUM LTD.

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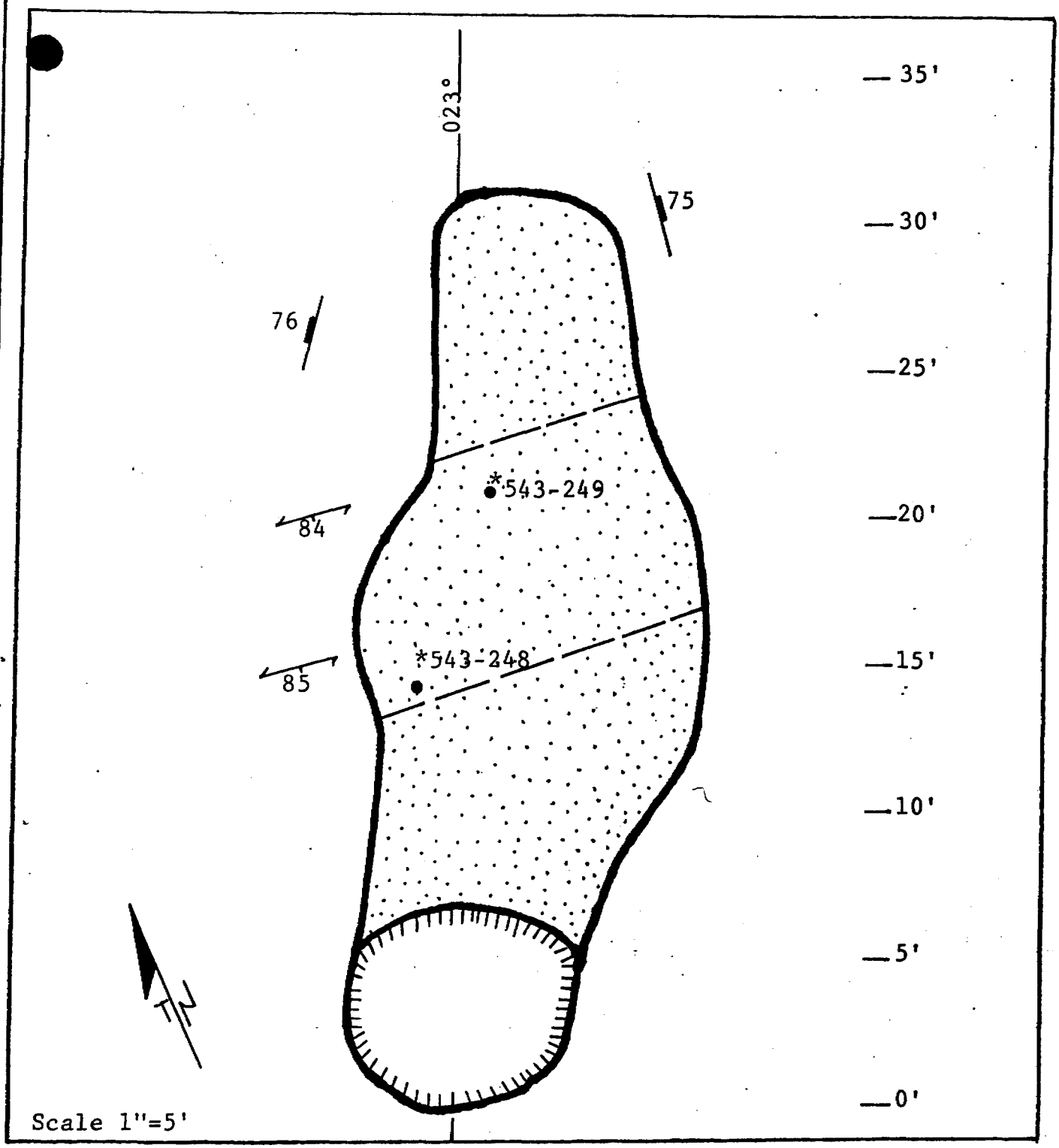
September 10, 1984 | 5433-84-8



LEGEND

- substrate
- siliceous siltstone
- greywacke
- orhoeic quartzite
- biotite lamprophyre
- biotite lamprophyre dike
- quartz diorite
- mafic tuff
- sulphide stained patches
- quartz vein

SYMBOLS

- shear zone
- contact
- assumed contact
- water
- ridge
- trench boundary
- sample location and number
- assay for Au and Ag
- Foliation: inclined, vertical
- Jointing: inclined, vertical

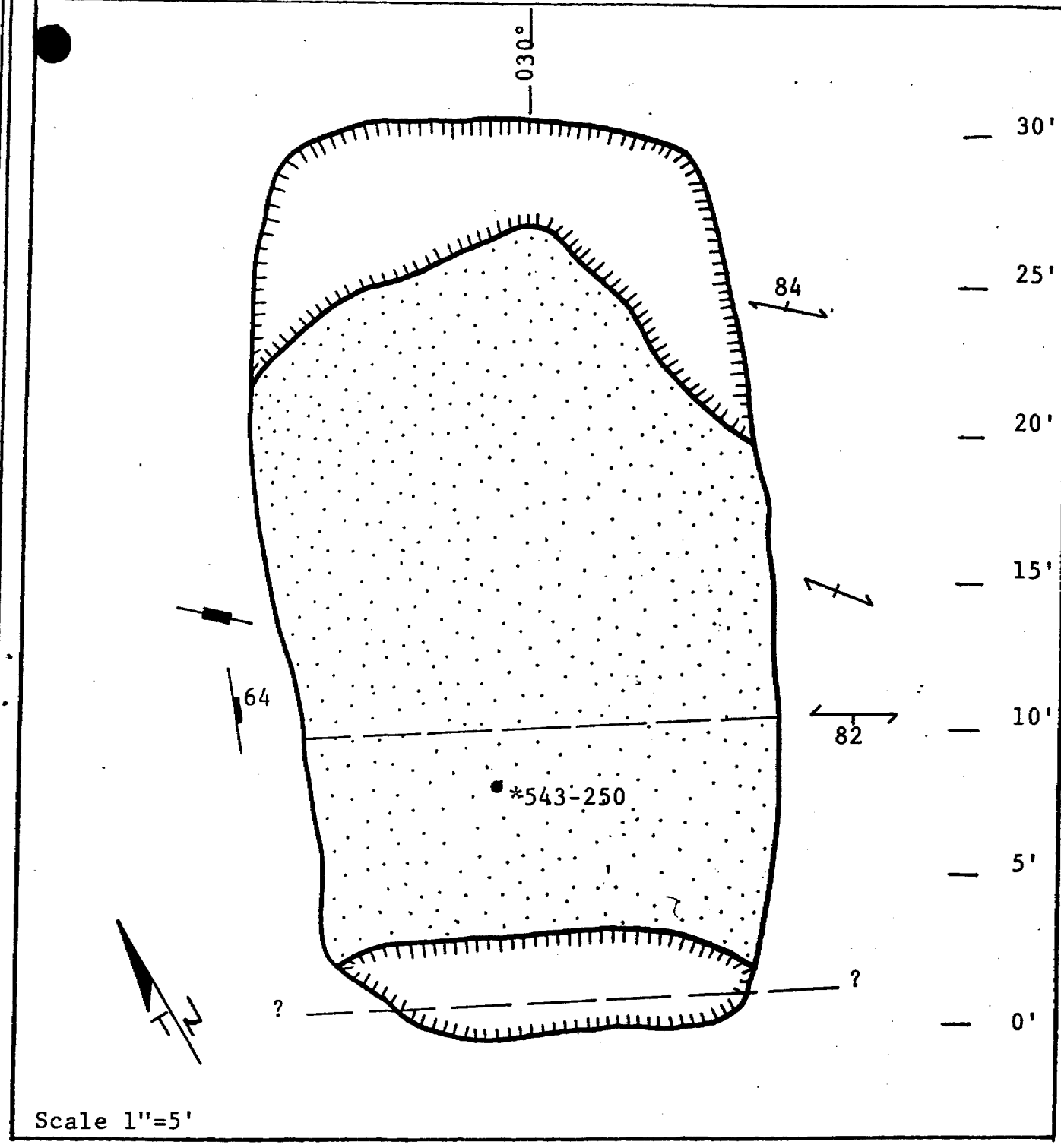
0 2.5' 5' 10'

DAVID R. BELL GEOLOGICAL SERVICES INC.

REGAL PETROLEUM LTD.

TRENCH #5E

September 10, 1984 | 5433-84-11



Scale 1"=5'

0' 2.5' 5' 10'

LEGEND

- substrate
- siliceous siltstone
- greywacke
- arkosic quartzite
- biotite lamprophyre
- biotite lamprophyre dike
- quartz diorite
- mafic tuff
- sulphide stained patches
- quartz vein

SYMBOLS

- shear zone
- contact
- assumed contact
- water
- ridge
- trench boundary
- sample location and number
- assay for Au and Ag
- Foliation: inclined, vertical
- Jointing: inclined, vertical

DAVID R. BELL GEOLOGICAL SERVICES INC.

REGAL PETROLEUM LTD.

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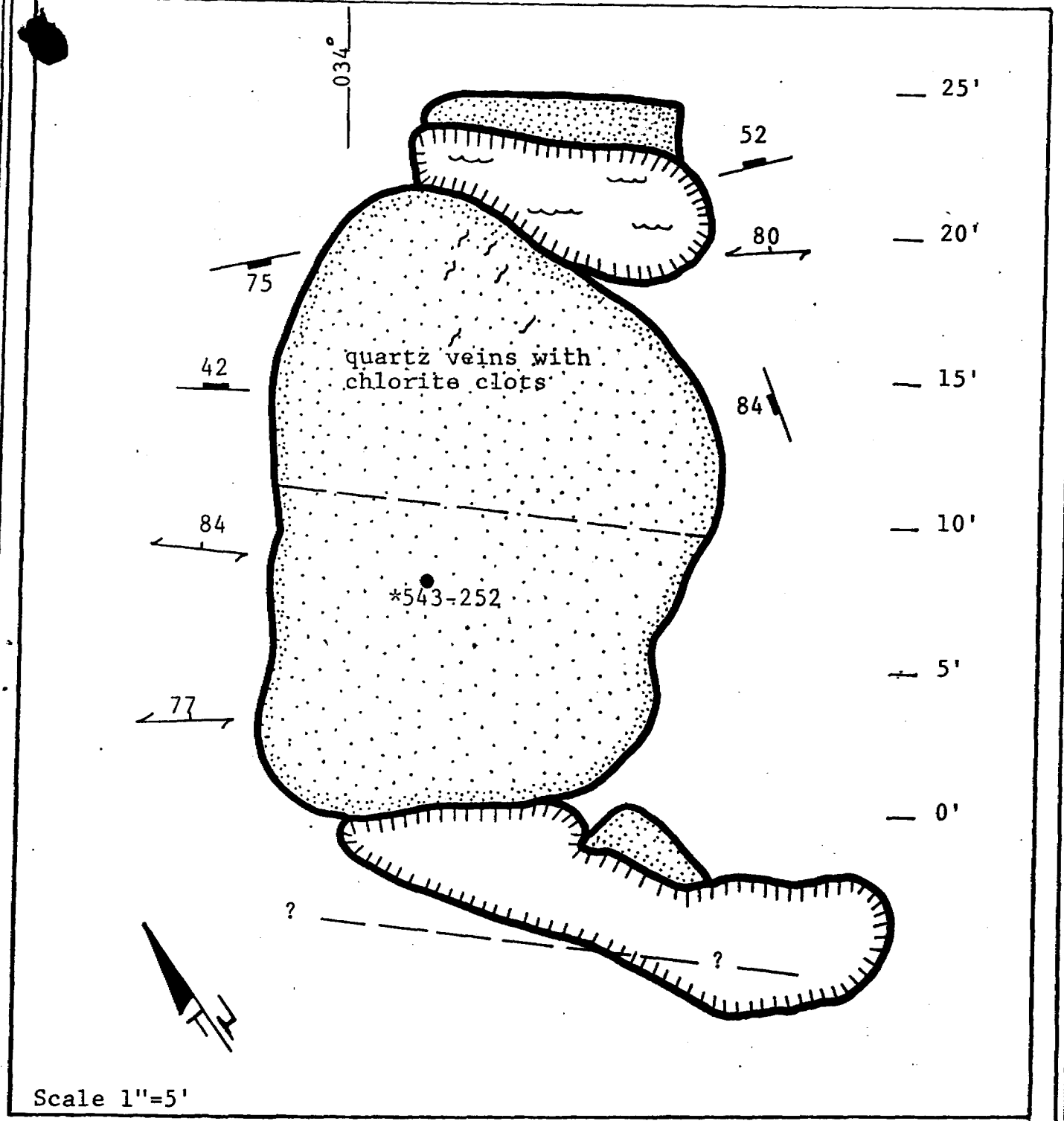
September 10, 1984 | 5433-84-12



0 2.5' 5' 10'

LEGEND

- substrate
- siliceous siltstone
- greywacke
- arkosic quartzite
- biotite lamprophyre
- biotite lamprophyre dike
- quartz diorite
- mafic tuff
- sulphide stained patches
- quartz vein

SYMBOLS

- shear zone
- contact
- assumed contact
- water
- ridge
- trench boundary
- sample location and number
- assay for Au and Ag
- foliation; inclined, vertical
- jointing; inclined, vertical

DAVID R. BELL GEOLOGICAL SERVICES INC.

REGAL PETROLEUM LTD.

TRENCH #8E

September 10, 1984 | 5433-84-14

900

Mining Lands Section

File No 2 8113

Control Sheet

TYPE OF SURVEY

____ GEOPHYSICAL

__V__ GEOLOGICAL

____ GEOCHEMICAL

____ EXPENDITURE

MINING LANDS COMMENTS:

-Plans not signed.

L.D.

Sgd.

J. Hurst

Signature of Assessor

85-05-29

Date

Ministry of Natural Resources
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

#1898/85-2.8113

5433 pg 1 of 3

The Mining Act

Instructions: – Please type or print.
– If number of mining claims traversed exceeds space on this form, attach a list.
Note: – Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
– Do not use shaded areas below.

Type of Survey(s)	Township or Area
GEOLOGY AND LINECUTTING	Tonny, Greenlaw and Halcrow

Claim Holder(s)	Prospector's Licence No.
REGAL PETROLEUM LTD.	T-1309

Address: 1550-609 Granville St., P.O. Box 10108, Vancouver B.C. V7Y 1C6

Survey Company	Date of Survey (from & to)	Total Miles of line Cut
DAVID R. BELL GEOLOGICAL SERVICES	Day 8 Mo. 5 Yr. 84 to Day 17 Mo. 7 Yr. 84	71.35

Name and Address of Author (of Geo-Technical report)
Robert Renkle c/o DAVID R. BELL GEOLOGICAL SERVICES INC P.O. BOX 1250, TIMMINS, ONT P4N 7J5

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
For each additional survey: using the same grid: Enter 20 days (for each)	- Other	
	Geological (linecutting +	40
	Geochemical	
Man Days Complete reverse side and enter total(s) here	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	
Airborne Credits Note: Special provisions credits do not apply to Airborne Surveys.		Days per Claim
	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
P	688585				
	et al.				
	see				
	attached				
	list of				
	claims				
	2 pgs				

RECEIVED
MAY 29 1985
MINING LANDS SECTION

RECORDED
MAY 15 1985
Receipt No. 19

Total number of mining claims covered by this report of work: 173.

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures $ ÷ 15 = Total Days Credits

RECEIVED
PORCUPINE MINING DIVISION
MAY 13 1985
A.M. 7 8 9 10 11 12 1 2 3 4 5 6 P.M.

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Date	Recorded Holder or Agent (Signature)
May 13/1985	R.A. Bell

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
6,920	May 13/85	Stanley
	Date Approved as Recorded 85:06:01	Branch Director

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying
R.A. Bell c/o David R. Bell Geological Services, P.O. Box 1250
Timmins, Ontario P4N 7J5

Date Certified	Certified by (Signature)
May 13, 1985	R.A. Bell

1362 (81/9)

TECHNICAL DATA STATEMENT

ATTACHMENT LIST

July 17, 1984

Project No. 5433

20 Days Geological Credit Requested for Regal Petroleum Ltd.

173 Claims Situating Halcrow, Tooms and Greenlaw Townships

MINING CLAIMS TRAVERSED

Claim Number	Claim Number	Claim Number
P688585	P708932	P708959
P688586	P708933	P708960
P688587	P708934	P708961
P688588	P708935	P708962
P688589	P708936	P708963
P688590	P708937	P708964
P688595	P708938	P708965
P688596	P708939	P708966
P688597	P708940	P708967
P688598	P708941	P708968
P688599	P708942	P708969
P688600	P708943	P708970
P688601	P708944	P708971
P688602	P708945	P708972
P688603	P708946	P708973
P688604	P708950	P708974
P688605	P708951	P708975
P688606	P708952	P708976
P688607	P708953	P708977
P688608	P708954	P708978
P688609	P708955	P708979
P688610	P708956	P708980
P708930	P708957	P708981
P708931	P708958	P708982

Claim Number	Claim Number	Claim Number
P708983	P709059	P758317
P708984	P709060	P758318
P708985	P709061	P758319
P708986	P709062	P752003
P708987	P709063	P752004
P708988	P709064	P752005
P709030	P709065	P752006
P709031	P709066	P752007
P709032	P709067	P752008
P709033	P709068	P779840
P709034	P757390	P779841
P709035	P757391	P779842
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P709037	P757393	P779844
P709038	P757394	P779845
P709039	P757395	P779846
P709040	P757396	P779847
P709041	P757397	P779870
P709042	P757398	P779871
P709043	P757399	P779872
P709045	P757400	P779873
P709046	P757401	P783631
P709047	P757402	P783632
P709048	P757403	P783633
P709049	P757404	P783634
P709050	P758284	P783637
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P709053	P758311	P783640
P709054	P758312	P783641
P709055	P758313	P783642
P709056	P758314	P783643
P709057	P758315	P783644
P709058	P758316	

1985 05 21 File: 2.8113

Mining Recorder
Ministry of Natural Resources
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Sir:

We received reports and maps on May 15, 1985 for a Geological Survey submitted under Special Provisions (credit for Performance and Coverage) and Data for Assaying on Mining Claims P 688585, et al, in the Townships of Halcrow, Tooms and Greenlaw.

This material will be examined and assessed and a statement of assessment work credits will be issued.

We do not have a copy of the report of work which is normally filed with your office prior to the submission of this technical data. Please forward a copy as soon as possible.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-4888

A. Barr:mc

cc: Regal Petroleum Ltd
Suite 1550
609 Granville Street
Vancouver, B.C.
V7Y 1C6
cc: David R. Bell Geological Services
251 Third Avenue
Suite 4
Timmins, Ontario
P4N 7J5

DAVID R. BELL GEOLOGICAL SERVICES INC.

251 THIRD AVE., SUITE 4
BOX 1250
TIMMINS, ONTARIO
P4N 7J5
(705) 264-4286
TELEX - 067-81638

REGISTERED

May 13, 1985

Mr. F. Mathews
Lands Administration Branch
Mining Lands Section
Ministry of Natural Resources
Room 6610
Whitney Block, Queen's Park
Toronto, Ontario
M7A 1W3

Dear Mr. Mathews:

Re: Regal Petroleum Ltd. #5433, 173 claim property, Tooms, Greenlaw, Halcrow Townships - P688585 et al

Enclosed please find 2 copies of a Geological Report (two volumes, Report and Maps) by R. Reukle covering the report of work filed with the Porcupine Mining Recorder on May 13, 1985.

Please acknowledge receipt of the reports.

Your assistance in the above matter is appreciated. Should you have any questions please do not hesitate to contact me at 416-366-1587 or 705-264-4286.

Sincerely yours,

R.A. Bell
Vice-President

RAB/kg

Encl.

cc N. Dragovan

File - 5433 - corresp., geol. reports.

RECEIVED
MAY 15 1985
MINING LANDS SECTION

Claim Number	Claim Number	Claim Number
~~P708983~~	~~P709059~~	~~P758317~~
~~P708984~~	~~P709060~~	P758318
~~P708985~~	~~P709061~~	~~P758319~~
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~~P709043NC~~	~~P757399~~	~~P779872NC~~
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~~P709057~~	~~P758315~~	~~P783644~~
~~P709058~~	~~P758316~~	779830

709310

TECHNICAL DATA STATEMENT

ATTACHMENT LIST

July 17, 1984

Project No. 5433

20 Days Geological Credit Requested for Regal Petroleum Ltd.

173 Claims Situating Halcrow, Tooms and Greenlaw Townships

MINING CLAIMS TRAVERSED

Claim Number	Claim Number	Claim Number
P688585	P708932	P708959
P688586	P708933	P708960
P688587	P708934	P708961
P688588	P708935	P708962
P688589	P708936	P708963
P688590	P708937	P708964
P688595	P708938	P708965
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P708931	P708958	P708982

L 250+00W
L 230+00W
L 210+00W
L 190+00W
L 170+00W
L 150+00W
L 130+00W

150+00N
140+00N
130+00N
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P 757390
P 757393
P 757394
P 757395
P 2217

A
Al
At
M
D
Gb
Md
Ss
Si
AKSs
QMz
QDr
Ak/Ss
Ss/Md

SHUNSBY
LAKE

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S 22158
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SURVEYED BASELINE

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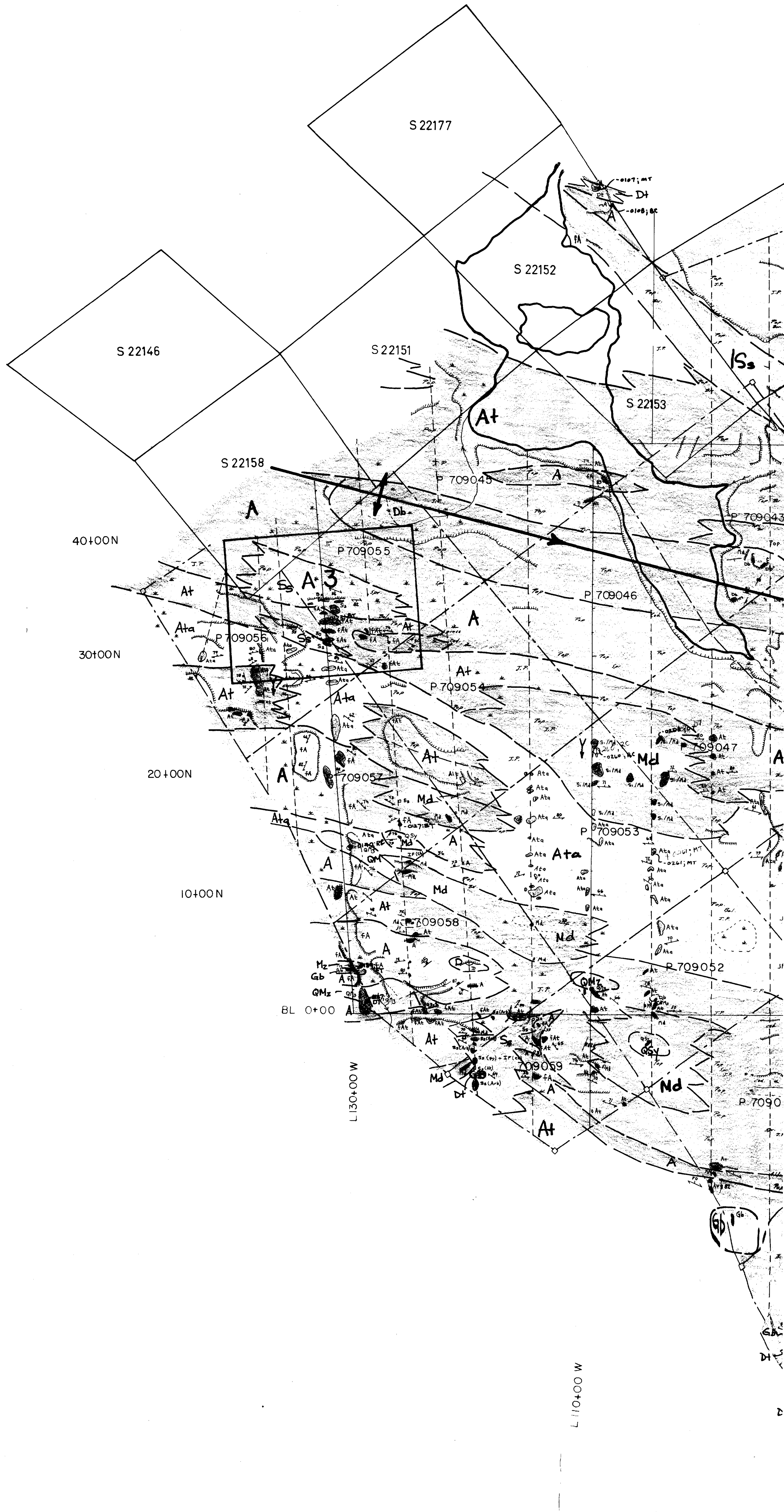
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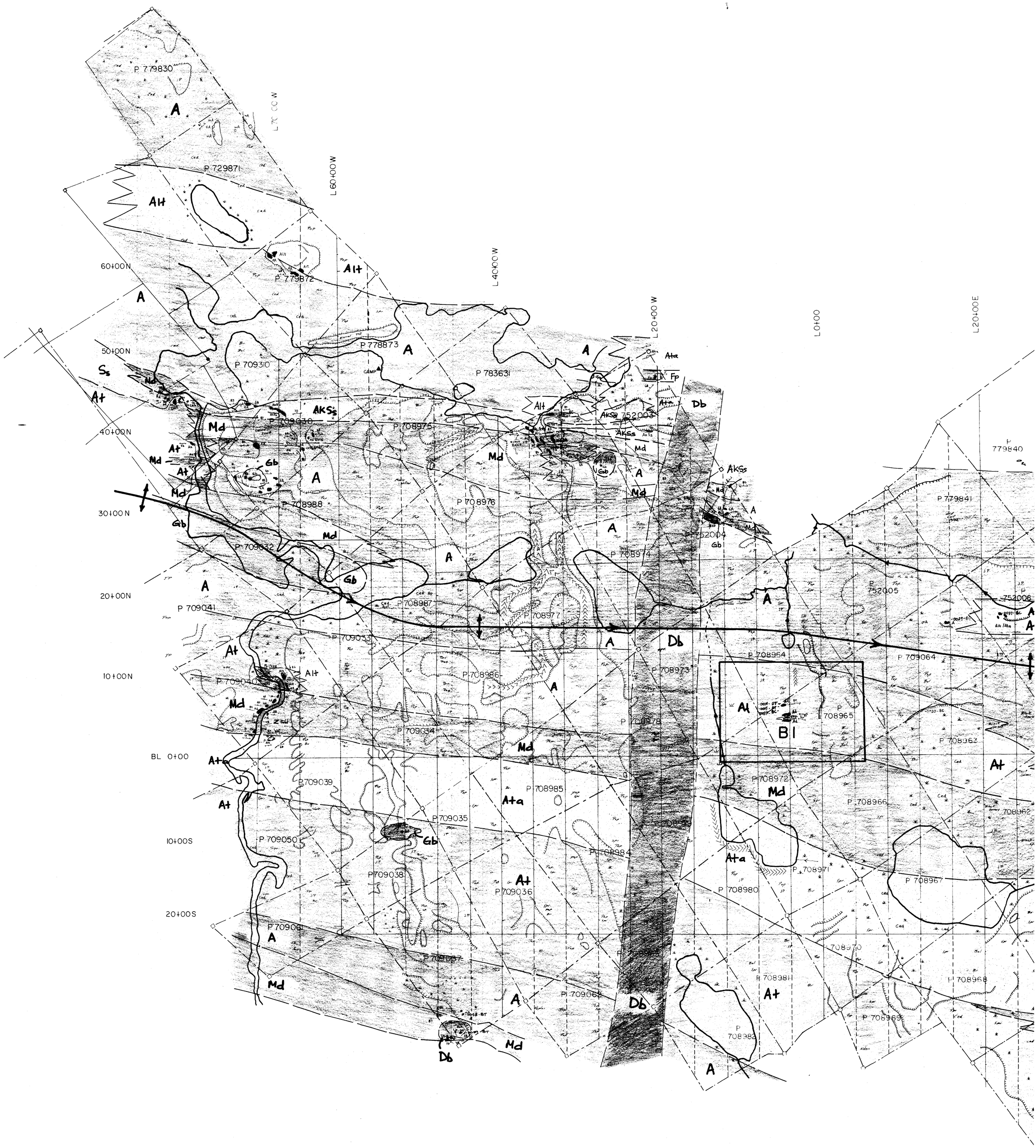
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20+00N
10+00N
BL 0+00
10+00S
20+00S
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P 708982
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P 708970
A
Alt
At
Ata
Md
Gb
Db
Bl
Ss
AkSs
Fp

L 60+00E

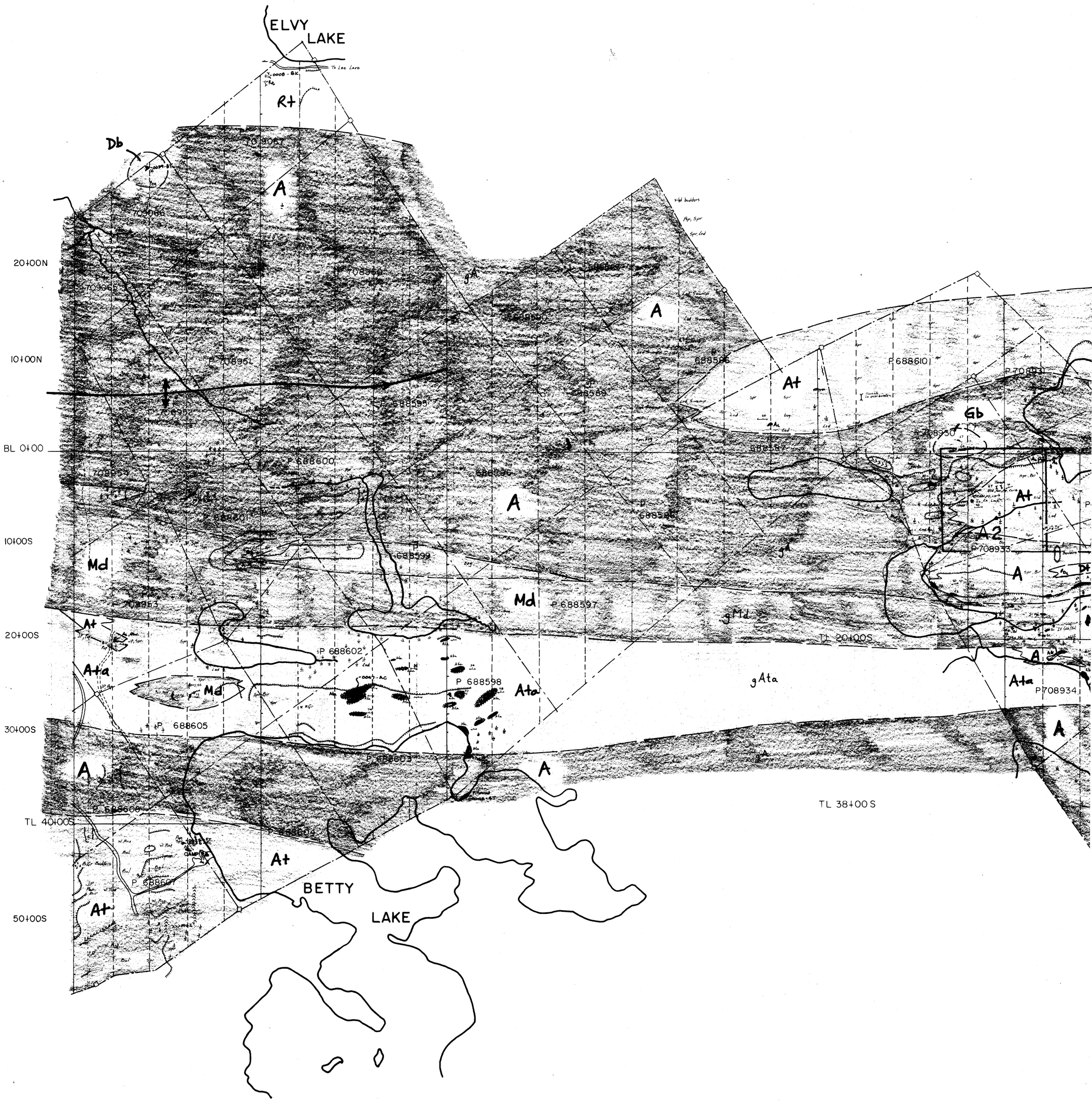
L 80+00E

L 100+00E

L 120+00E

L 140+00E

L 160+00E



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TL 99+00N
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SHUNSBY LAKE
S 22177
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SURVEYED BASELINE
S 22158
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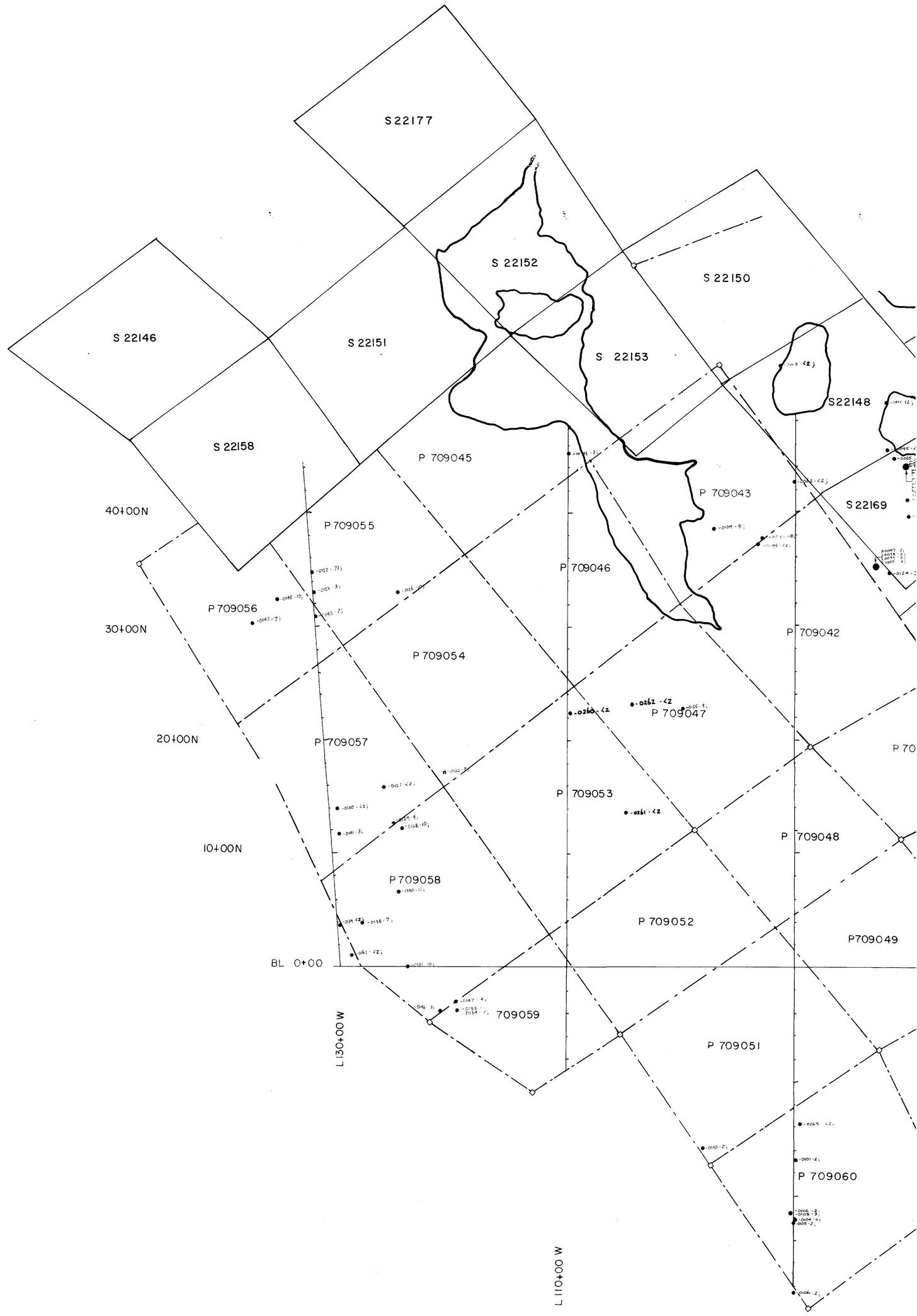
240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10+00N
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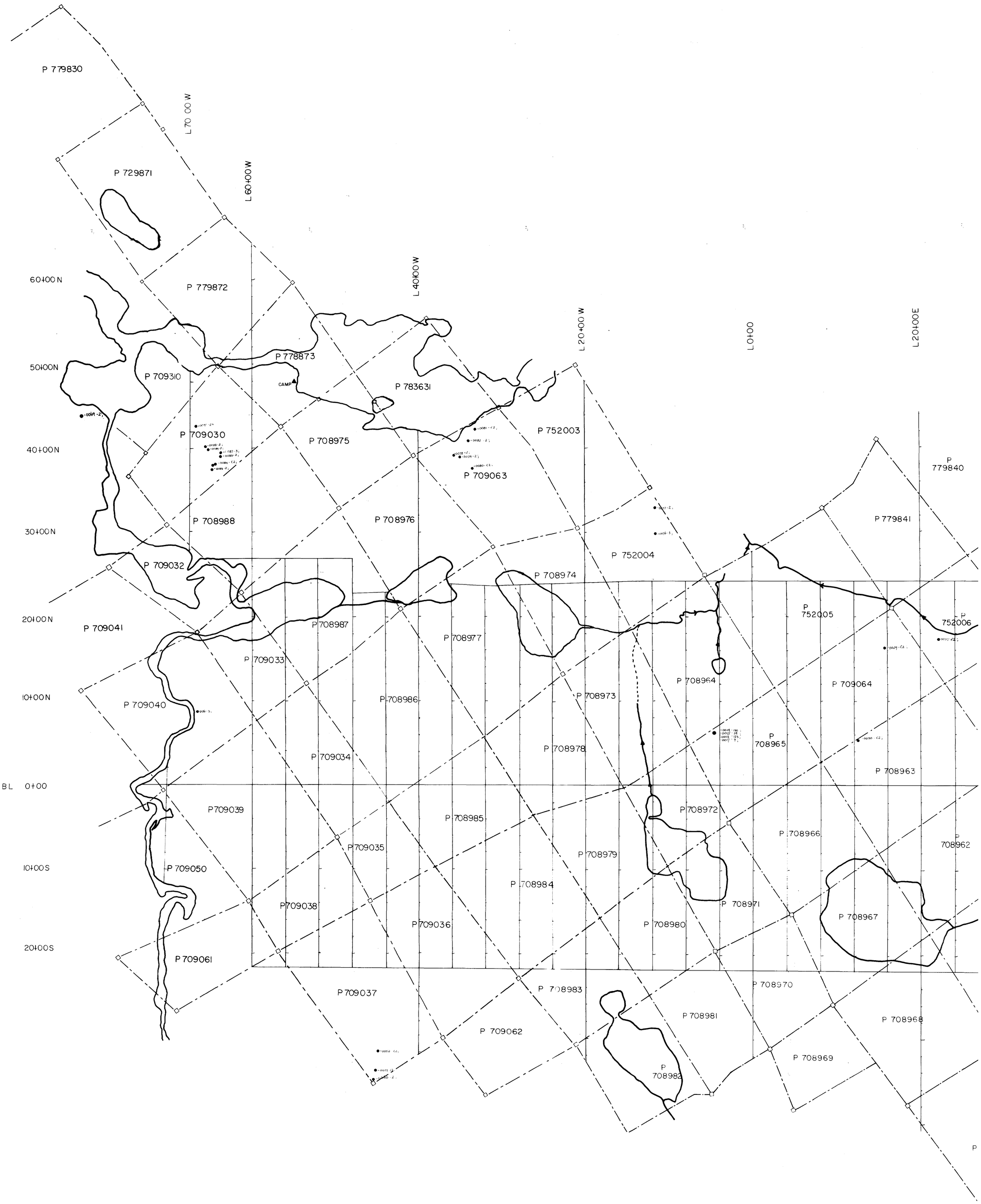
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L 20+00 W
L 0+00
L 20+00E
50+00N
P 709310
P 778873
CAMP
P 783631
P 709030
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P 752003
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40+00N
P 708988
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30+00N
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P 709062
P 708969
P 708982

L 60+00E
L 80+00E
L 100+00E
L 120+00E
L 140+00E

ELVY LAKE

P 709067
P 709066
P 709065
P 708950
P 688585
P 688590
P 688586
P 688589
P 708951
P 708952
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P 688607
CAMP

20+00N
10+00N
BL 0+00
10+00S
20+00S
30+00S
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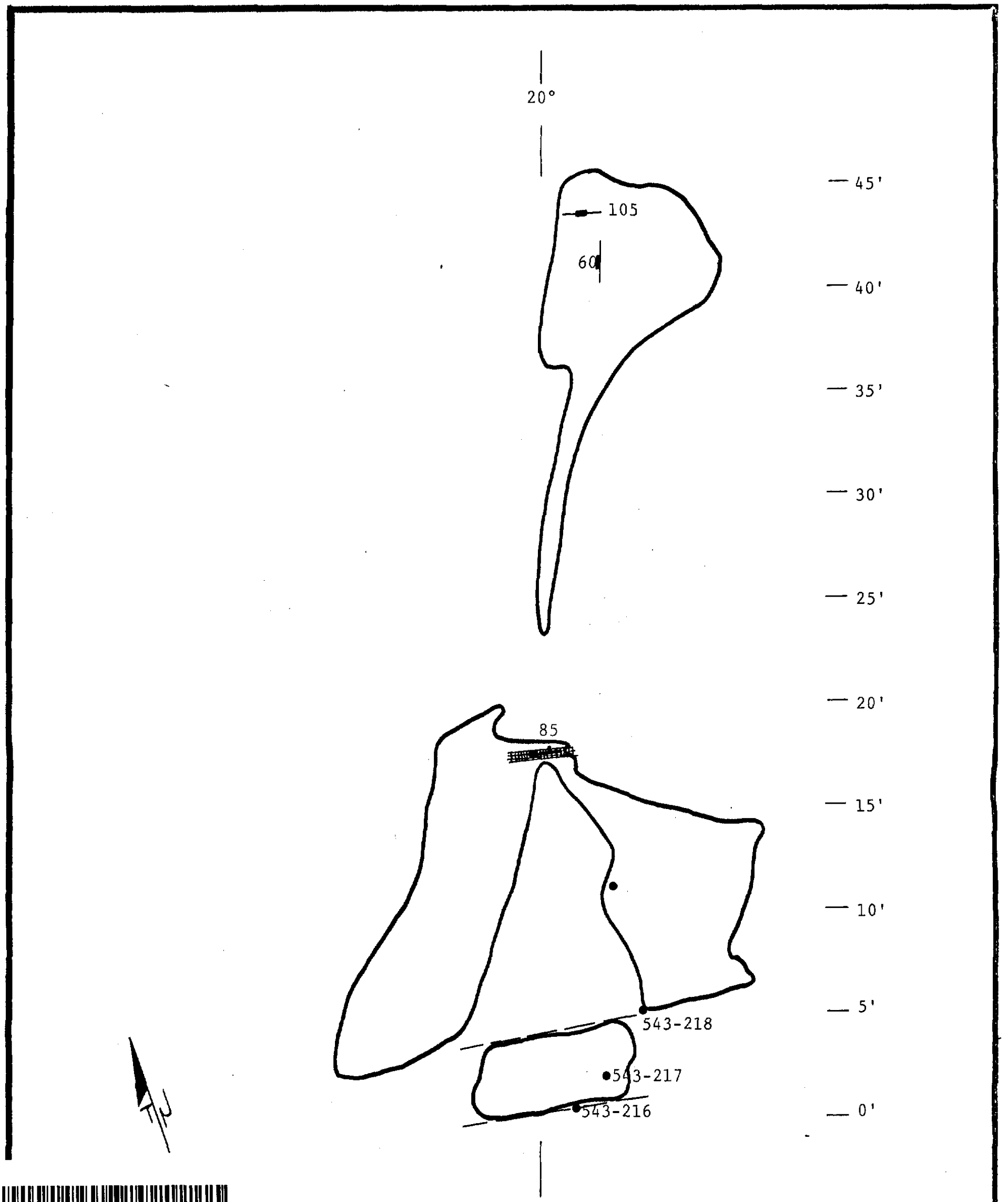
L 140+00E



280

LEGEND

- substrate
- siltceous siltstone
- greywacke
- arkosic quartzite
- biotite lamprophyre
- biotite lamprophyre dike
- quartz diorite
- mafic tuff
- sulphide stained patches
- quartz vein

SYMBOLS

- shear zone
- contact
- assumed contact
- water
- ridge
- trench boundary
- sample location and number
- assay for Au and Ag
- Foliation: inclined, vertical
- Jointing: inclined, vertical

1"=5'

0 2.5' 5' 10'

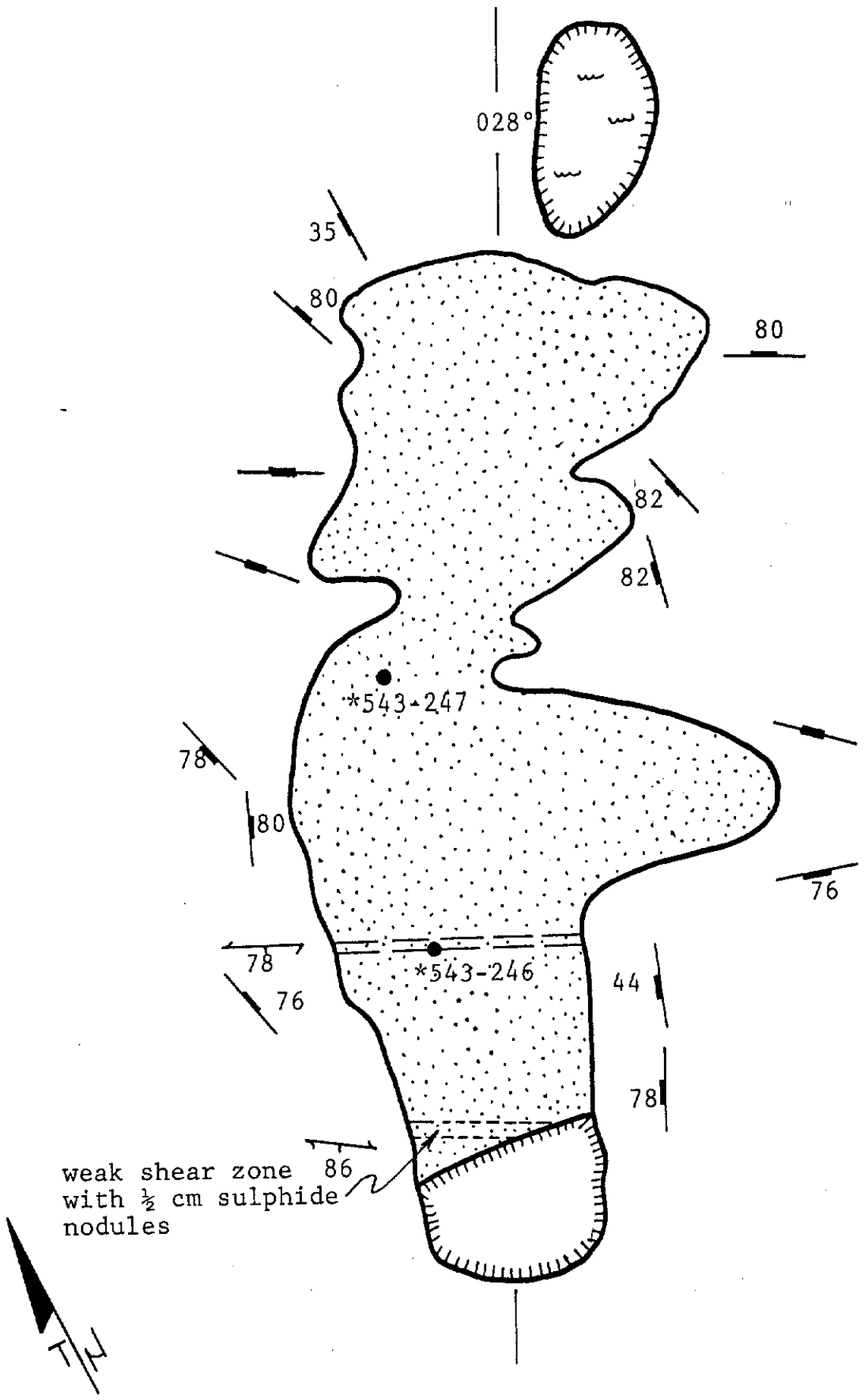
DAVID R. BELL GEOLOGICAL SERVICES INC.

REGAL PETROLEUM LTD.

TRENCH #3E

September 10, 1984 | 5433-84-9

2.8113



290

LEGEND

- substrate
- siliceous siltstone
- greywacke
- arkosic quartzite
- biotite lamprophyre
- biotite lamprophyre dike
- quartz diorite
- mafic tuff
- sulphide stained patches
- quartz vein

SYMBOLS

- shear zone
- contact
- assumed contact
- water
- ridge
- trench boundary
- sample location and number
- assay for Au and Ag
- foliation; inclined, vertical
- jointing; inclined, vertical

1"=10'

0' 5' 10' 20'

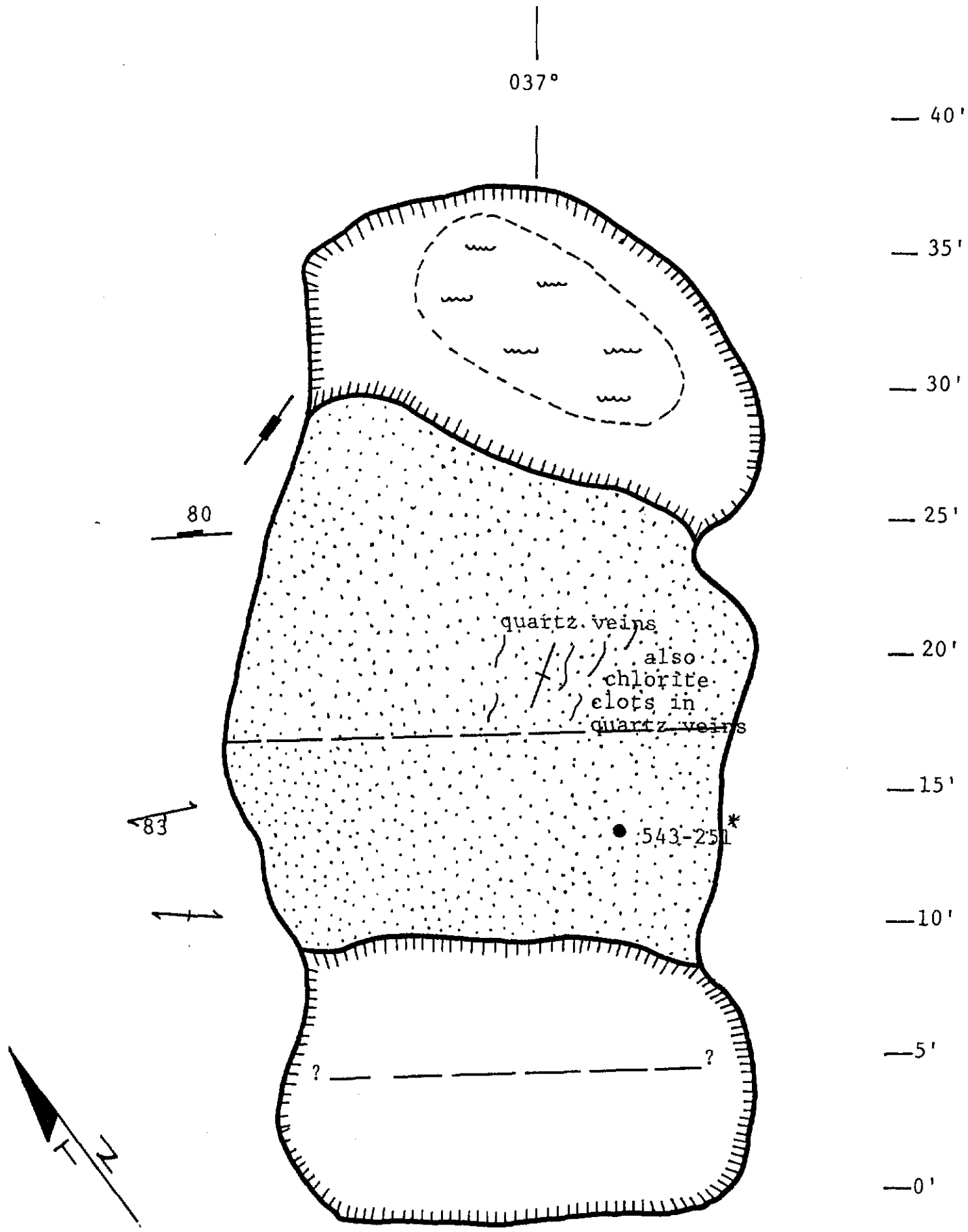
DAVID R. BELL GEOLOGICAL SERVICES INC.

REGAL PETROLEUM LTD.

TRENCH #4E

September 10, 1984 | 5433-84-10

2.8113



4101SS#0083 2.8113 HALCROW

300

LEGEND

- substrate
- siliceous siltstone
- greywacke
- arkosic quartzite
- biotite lamprophyre
- biotite lamprophyre dike
- quartz diorite
- mafic tuff
- sulphide stained patches
- quartz vein

SYMBOLS

- shear zone
- contact
- assumed contact
- water
- ridge
- trench boundary
- sample location and number
- assay for Au and Ag
- Foliation: inclined, vertical
- Jointing: inclined, vertical

1"=5'

0' 2.5' 5' 10'

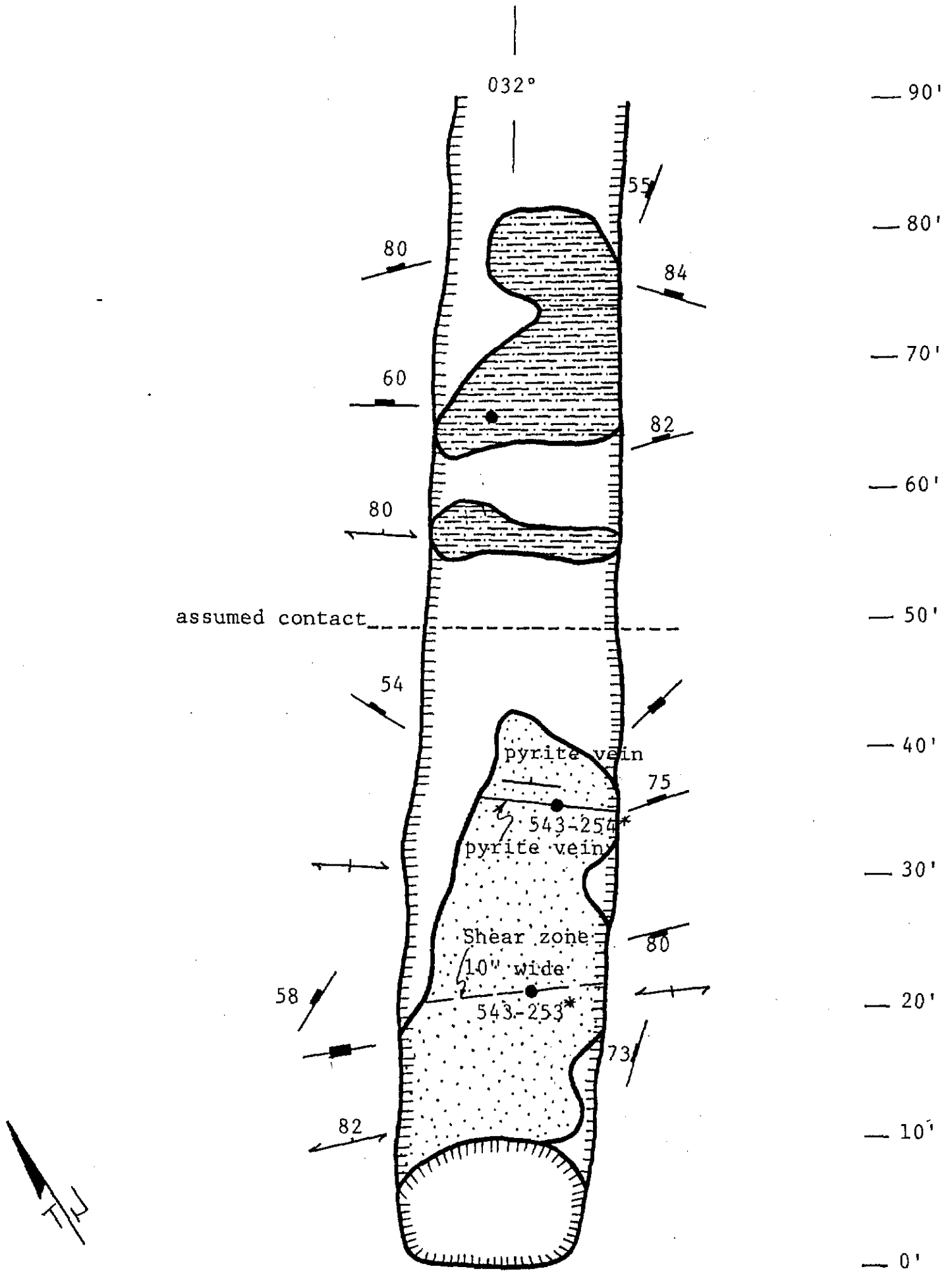
DAVID R. BELL GEOLOGICAL SERVICES INC.

REGAL PETROLEUM LTD.

TRENCH #7E

September 10, 1984 | 5433-84-13

2.8113



LEGEND

- subtrate
- siliceous siltstone
- greywacke
- arkosic quartzite
- biotite lamprophyre
- biotite lamprophyre dike
- quartz diorite
- mafic tuff
- sulphide stained patches
- quartz vein

SYMBOLS

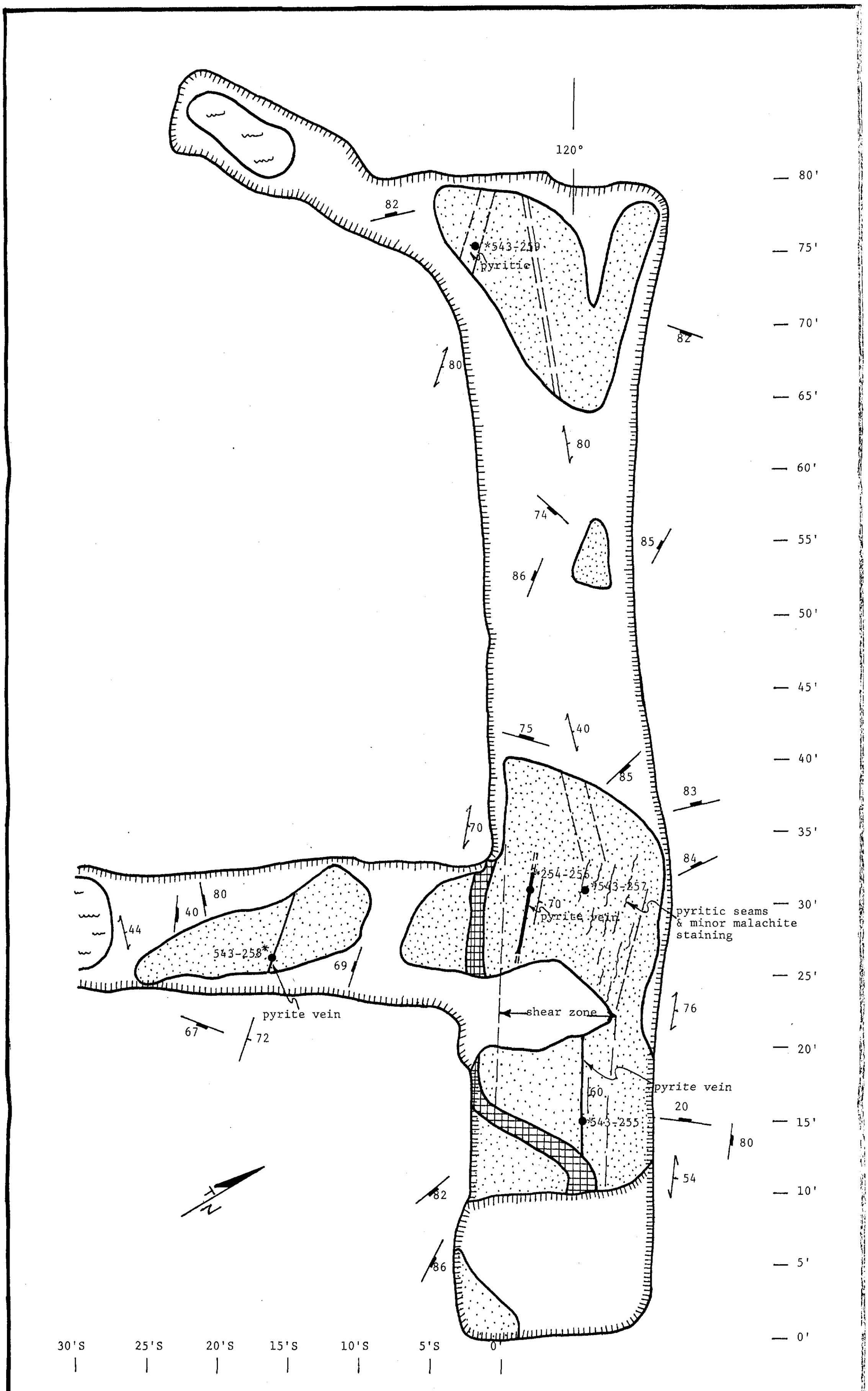
- shear zone
- contact
- assumed contact
- water
- ridge
- trench boundary
- sample location and number
- assay for Au and Ag
- foliation: inclined, vertical
- jointing: inclined, vertical

Scale 1"=10'

0' 5' 10' 20'

DAVID R. BELL GEOLOGICAL SERVICES INC.	
REGAL PETROLEUM LTD.	
TRENCH #9E	
September 10, 1984	5433-84-15

2.8113



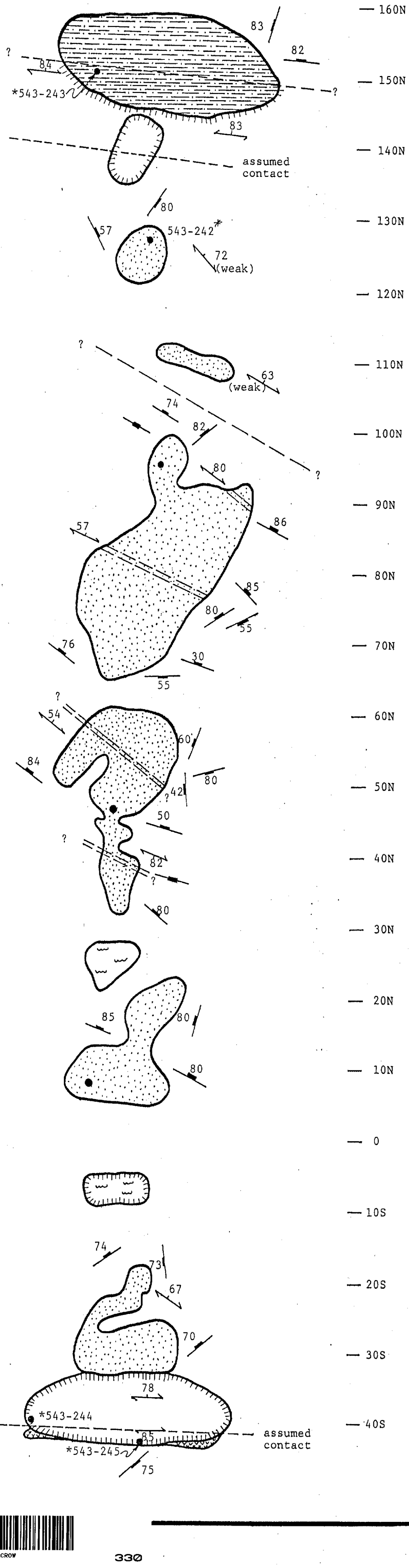
DAVID R. BELL GEOLOGICAL SERVICES INC.

REGAL PETROLEUM LTD.

TRENCH #10E

September 10, 1984 | 5433-84-16

2.8113



LEGEND

- substrate
- siliceous siltstone
- greywacke
- arkosic quartzite
- biotite lampropyre
- biotite lampropyre dike
- quartz diorite
- mafic tuff
- sulphide stained patches
- quartz vein

SYMBOLS

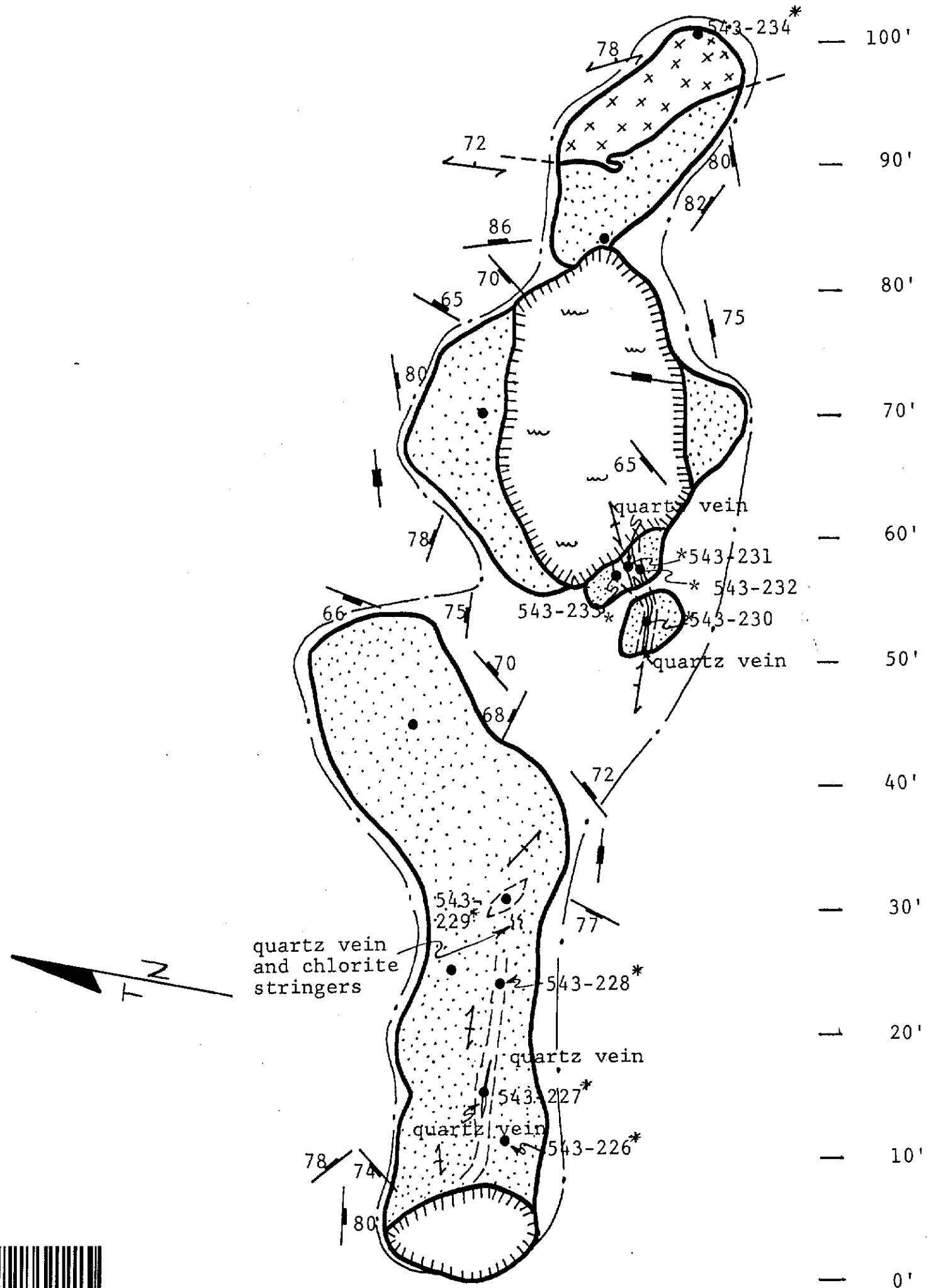
- shear zone
- contact
- assumed contact
- water
- ridge
- trench boundary
- sample location and number
- * assay for Au and Ag
- Foliation; inclined, vertical
- Jointing; inclined, vertical

1"=10'

0' 5' 10' 20'

DAVID R. BELL GEOLOGICAL SERVICES INC.	
REGAL PETROLEUM LTD.	
WEST PIT	
September 10, 1984	5433-84-7

2.8113



41015SW0083 2.8113 HALCROW

LEGEND

- substrate
- siliceous siltstone
- greywacke
- arkosic quartzite
- biotite lamprophyre
- biotite lamprophyre dike
- quartz diorite
- mafic tuff
- sulphide stained patches
- quartz vein

SYMBOLS

- shear zone
- contact
- assumed contact
- water
- ridge
- trench boundary
- sample location and number
- assay for Au and Ag
- Foliation: inclined, vertical
- Jointing: inclined, vertical

Scale 1"=10'

0' 5' 10' 20'

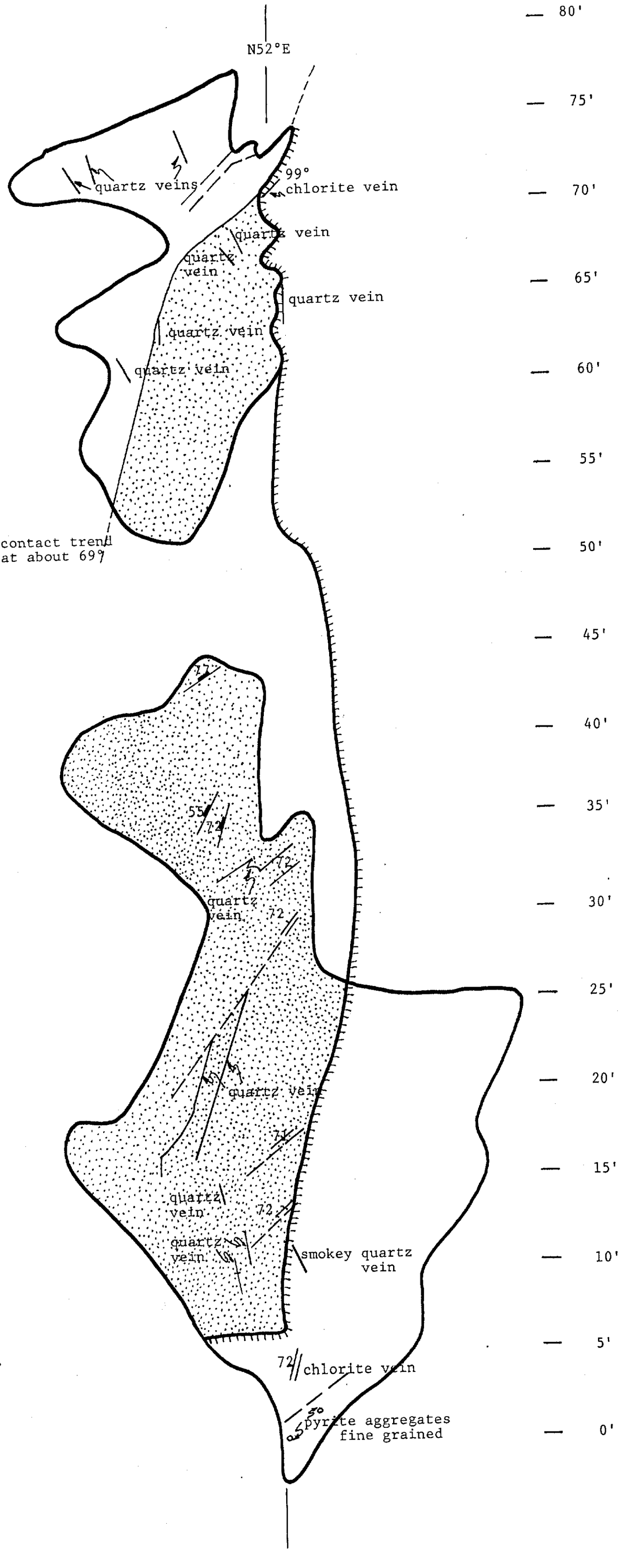
DAVID R. BELL GEOLOGICAL SERVICES INC.

REGAL PETROLEUM LTD.

TRENCH 6W-N

September 10, 1984 | 5433-84-4

2.8113



LEGEND

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- mafic tuff
- sulphide stained patches
- quartz vein

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- contact
- assumed contact
- water
- ridge
- trench boundary
- sample location and number
- assay for Au and Ag
- Foliation; inclined, vertical
- Jointing; inclined, vertical

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0 2.5' 5' 10'

DAVID R. BELL GEOLOGICAL SERVICES INC.

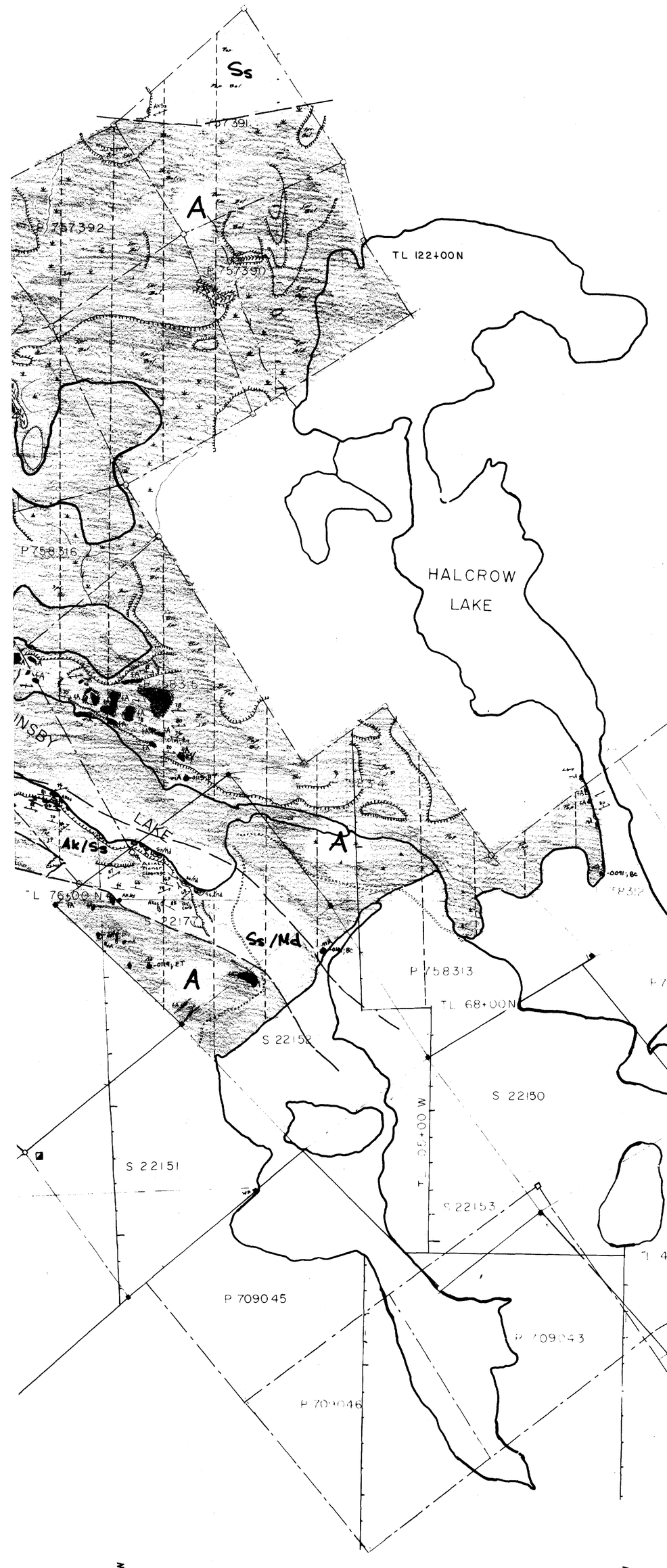
REGAL PETROLEUM LTD.

TRENCH #9W

September 10, 1984 | 5433-84-1

2.8113

L130+00W



130+00N

PRECAMBRIAN
INTRUSIVE ROCKS

- Db - Diabase
- Gb - Gabbro
- Lp - Lamprophyre
- Dr - Diorite
- QDr - Quarrz Diorite if Q) 5%
- Sy - Syenite
- QSy - Quarrz Syenite if Q) 5%
- Gd - Granodiorite
- Ms - Monzonite
- QMs - Quarrz Monzonite if Q) 5%
- Fp - Feldspar Porphyry

EXTRUSIVE ROCKS - Intermediate to Felsic

- D - Dacite
- Dt - Dacitic Tuff
- RT - Rhyolitic Tuff

CHEMICAL SEDIMENTARY ROCKS

- IF - Iron Formation
- Io - Oxide facies
- Ic - Carbonate facies
- Is - Sulphide facies
- Ch - Chert

CLASTIC SEDIMENTARY ROCKS

- Ss - Sandstone
- LSs - Lithic Sandstone
- Ak - Arkose
- Gw - Wacke
- Md - Mudstone
- Si - Siltstone

Extrusive Rocks - Mafic

- M - Ultramafic
- B - Basalt
- Bc - Basaltic tuff
- A - Andesite
- At - Andesitic tuff
- Alt - Andesitic lapilli tuff
- Ata - Andesitic tuff agglomerate

SYMBOLS

- Foliation or Schistocity
- Lineation with plunge
- Bedding
- Jointing
- Elevation Contours
- Swamp or bog
- Geologic contact (observed-assumed)
- Stream
- Fault (observed - assumed)
- Esker
- Grid line
- Outcrop
- Trench
- Shaft
- Diamond drill hole
- Camp location
- Road
- Trail
- Old road
- Claim post and number
- Claim post assumed
- Claim line
- Claim line (surveyed)

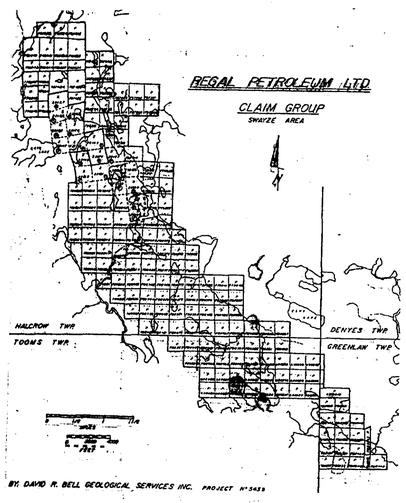
ABBREVIATIONS

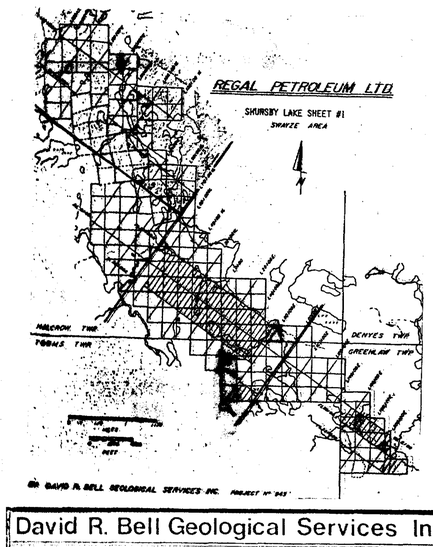
S	Sulphides
p	Pyrite
cpy	Chalcopyrite
sil	Silicification
carb	Carbonatization
Qv	Quartz Vein
Ser	Sericitization
m	Massive
f	Foliated

Traverse lines are denoted as ----

g - geophysical inferred

Younging Direction





SCALE

200 400 800 200 FEET

0 48 96 240 METRES

All Whole Rock Sample numbers to be proceeded by 648-

L130+00W

L 90+00W

David R. Bell Geological Services Inc.

SHUSHBY LAKE SHEET
SWAYZE AREA

GEOLOGY 2.8113

TWP. AREA		PROVINCE Ontario
MINING DIVISION		PROJECT No. 8433
REFERENCES		N.T.S. No.
DRAWN B. Scott	DRAFTED B. Scott	CHECKED S. Corriveau
SCALE	DATE June 28, 1984	SHEET No.

MN. TN.

PRECAMBRIAN

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- B - Basalt
- Bt - Basaltic tuff
- A - Andesite
- At - Andesitic tuff
- Alc - Andesitic lapilli tuff
- Ata - Andesitic tuff agglomerate

I - Geophysical inferred

Younging Direction

Anticlinal Axis

SYMBOLS

- Foliation or Schistocity
- Lineation with plunge
- Bedding
- Jointing
- Elevation Contours
- Swamp or bog
- Geologic contact (observed-assumed)
- Stream
- Fault (observed - assumed)
- Esker
- Grid line
- Outcrop
- Trench
- Shaft
- Diamond drill hole
- Camp location
- Road
- Trail
- Old road
- Claim post and number
- Claim post assumed
- Claim line
- Claim line (surveyed)

ABBREVIATIONS

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p	Pyrite
cpy	Chalcopyrite
sil	Silicification
carb	Carbonatization
Qv	Quartz Vein
Ser	Sericitization
m	Massive
f	Foliated

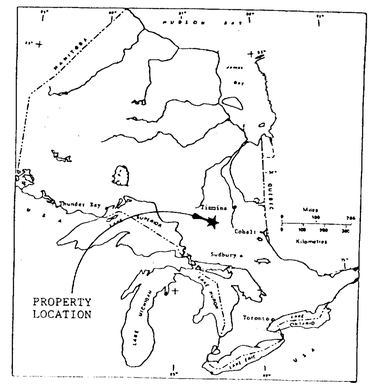
Tree Types

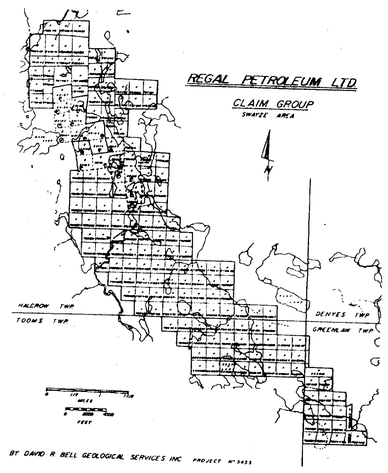
J.P.	Jack Pine
Bir	Birch
Ced	Cedar
Pop	Poplar
Ald	Alder
Bal	Balsam

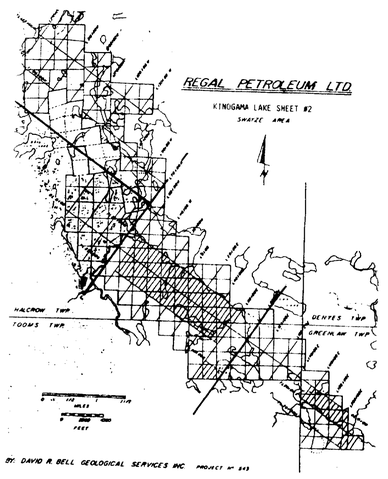
WHOLE ROCK TERMINOLOGY

- UK - Ultramafic Komatiite
- BK - Basaltic Komatiite
- FT - Iron Rich Basalt
- MT - High Magnesium Basalt
- AT - Tholeiitic Andesite
- DT - Tholeiitic Dacite
- RT - Tholeiitic Rhyolite
- CA - Calc-Alkaline Andesite
- DC - Calc-Alkaline Dacite
- RC - Calc-Alkaline Rhyolite
- BT - Tholeiitic Basalt
- ** - NOT DEFINED

Traverse lines are denoted as ----







SCALE

0 200 400 800 1200 FEET

0 40 80 240 METRES

All Whole Rock Sample numbers to be preceeded by 543-

David R. Bell Geological Services Inc.		
REGAL PETROLEUM LTD.		
KINOGAMA RIVER SHEET		
SWAYZE AREA		
GEOLOGY 2.8113		
TWP/AREA Halcrow Township		PROVINCE Ontario
MINING DIVISION Porcupine Mining Division		PROJECT No. 5433
REFERENCES O.D.M. Maps 2120 & 2121		N.T.S. No. 41-O/15
DRAWN B. Scott	DRAFTED B. Scott	CHECKED S. Cooper
SCALE 1"=400'-0"	DATE June 28, 1984	SHEET No. 5433-84-4-2

L0+00

L20+00E

L40+00E

L60+00E

L80+00E

MN. T.N.

30+00N

20+00N

10+00N

BL 0+00

10+00S

20+00S

30+00S

TL 40+00S

TL 24+00N

TL 22+00S

P 779840

P 779841

P 752007

P 752005

P 752006

P 752008

P 709066

P 709065

P 709064

P 708956

P 708955

P 708951

P 708952

P 708965

P 708962

P 708957

P 708954

P 688601

P 708966

P 708962

P 708956

P 708971

P 708967

P 708961

P 708963

P 708970

P 708968

P 708960

P 708954

P 688605

P 708969

P 688606

P 709068

P 688607

688608

Alt/Ata

Ata

A

At

B4

Gb

Md

M

AMP

PRECAMBRIAN

INTRUSIVE ROCKS

- Db - Diabase
- Gb - Gabbro
- Lp - Lamprophyre
- Dr - Diorite
- QDr - Quartz Diorite if Q) 5%
- Sy - Syenite
- QSy - Quartz Syenite if Q) 5%
- Gd - Granodiorite
- Mz - Monzonite
- QMz - Quartz Monzonite if Q) 5%
- Fp - Feldspar Porphyry

EXTRUSIVE ROCKS - Intermediate to Felsic

- D - Dacite
- Dt - Dacitic Tuff
- RT Rhyolitic Tuff

CHEMICAL SEDIMENTARY ROCKS

- If - Iron Formation
- Io - Oxide facies
- Ic - Carbonate facies
- Is - Sulphide facies
- Ch - Chert

CLASTIC SEDIMENTARY ROCKS

- Ss - Sandstone
- lSs - Lithic Sandstone
- Ak - Arkose
- Gw - Wacke
- Md - Mudstone
- St - Siltstone

Extrusive Rocks - Mafic

- M - Ultramafic
- B - Basalt
- Bt - Basaltic tuff
- A - Andesite
- At - Andesitic tuff
- Alt - Andesitic lapilli tuff
- Ata - Andesitic tuff agglomerate

Younging Direction

Anticlinal Axis

SYMBOLS

- Foliation or Schistocity
- Lineation with plunge
- Bedding
- Jointing
- Elevation Contours
- Swamp or bog
- Geologic contact (observed-assumed)
- Stream
- Fault (observed - assumed)
- Esker
- Grid line
- Outcrop
- Trench
- Shaft
- Diamond drill hole
- Camp location
- Road
- Trail
- Old road
- Claim post and number
- Claim post assumed
- Claim line
- Claim line (surveyed)

ABBREVIATIONS

S	Sulphides
P	Pyrite
cpy	Chalcopyrite
sil	Silicification
carb	Carbonatization
Qv	Quartz Vein
Ser	Sericitization
m	Massive
f	Foliated

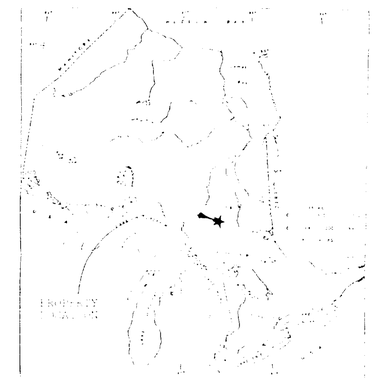
Tree Types

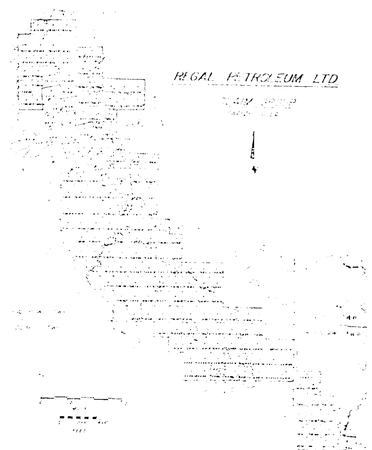
J.P.	Jack Pine
Bir	Birch
Ced	Cedar
Pop	Poplar
Ald	Alder
Bal	Balsam

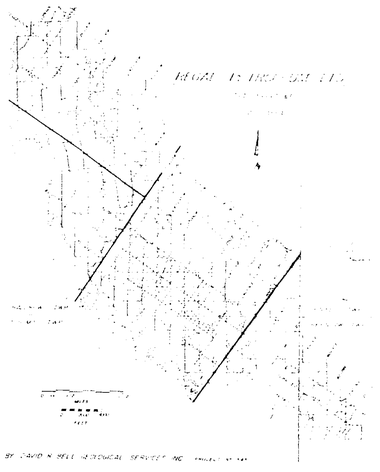
WHOLE ROCK TERMINOLOGY

- UK - Ultramafic Komatiite
- BK - Basaltic Komatiite
- FT - Iron Rich Basalt
- MT - High Magnesium Basalt
- AT - Tholeiitic Andesite
- DT - Tholeiitic Dacite
- RT - Tholeiitic Rhyolite
- AC - Calc-Alkaline Andesite
- DC - Calc-Alkaline Dacite
- RC - Calc-Alkalic Rhyolite
- BT - Tholeiitic Basalt
- ** - NOT DEFINED

Traverse lines are denoted as ----







SCALE

0 200 400 800 1200 FEET

0 48 96 240 METRES

All Whole Rock Sample numbers to be preceeded by 543-

David R. Bell Geological Services Inc.	
REGAL PETROLEUM LTD.	
GEOLOGY CENTRAL SHEET SWAYZE AREA 2.8113	
TWP/AREA Halcrow and Tooms Twp.	PROVINCE Ontario
MINING DIVISION Porcupine Mining Division	PROJECT No. 5433
REFERENCES O.D.M. Maps 2120 & 2121	N.T.S. Nos 41-P/10 41-P/15
DRAWN B. Scott	DRAFTED B. Scott
SCALE 1"=400'-0"	DATE June 28, 1984
	CHECKED S. Conquer
	SHEET No. 5433-84-4-3

L 140+00E

L 160+00E

L 180+00E

L 200+00E

L 220+00E

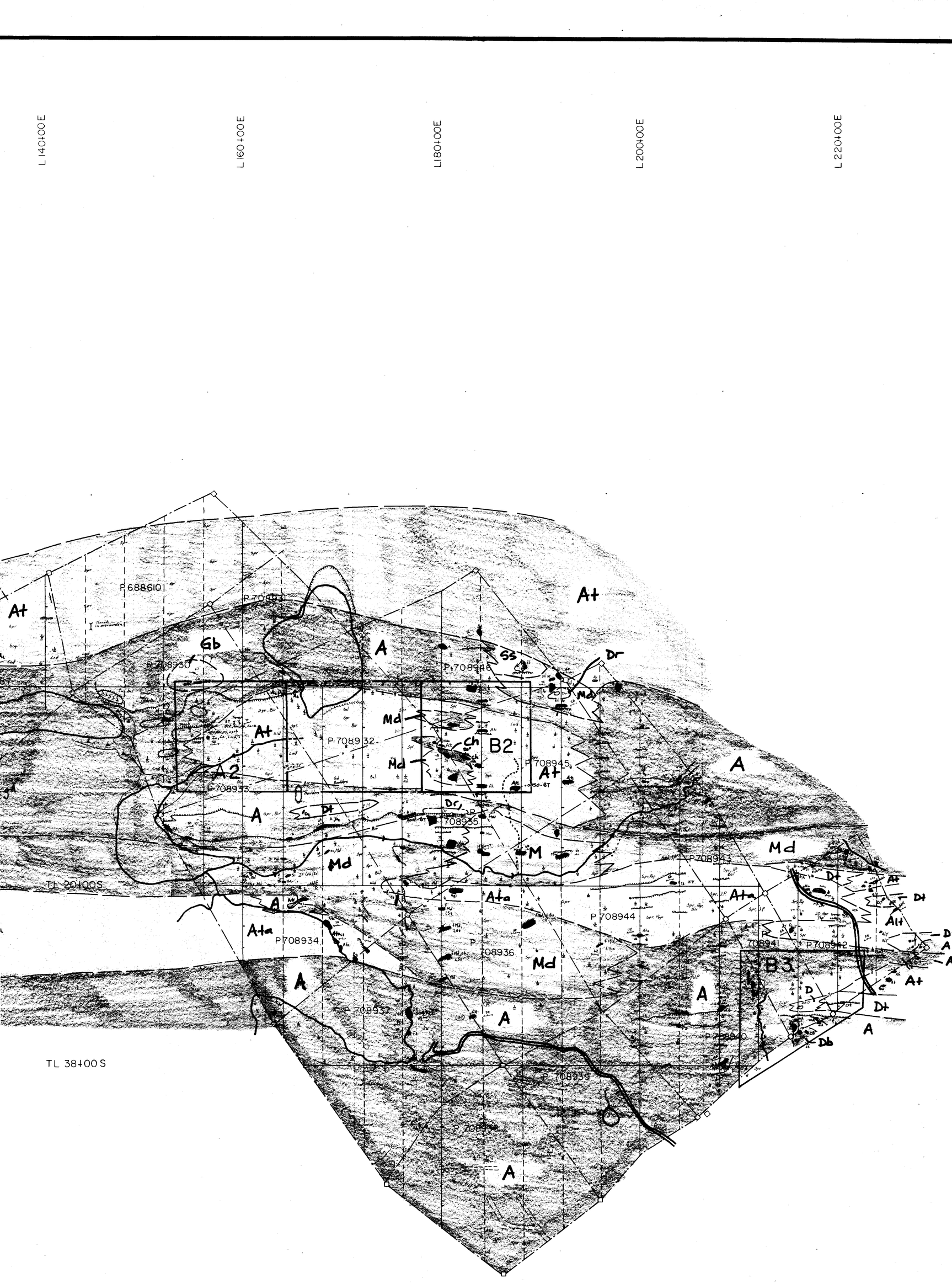
BL 0+00

10+00S

TL 20+00S

30+00S

TL 38+00S



MN. T.N.

PRECAMBRIAN

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- Gb - Gabbro
- Lp - Lamprophyre
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- At - Andesitic tuff
- Alt - Andesitic lapilli tuff
- Ata - Andesitic tuff agglomerate

& - geophysically inferred

Younging Direction

Anticlinal Axis

SYMBOLS

- Foliation or Schistocity
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- Bedding
- Jointing
- Elevation Contours
- Swamp or bog
- Geologic contact (observed-assumed)
- Stream
- Fault (observed - assumed)
- Esker
- Grid line
- Outcrop
- Trench
- Shaft
- Diamond drill hole
- Camp location
- Road
- Trail
- Old road
- Claim post and number
- Claim post assumed
- Claim line
- Claim line (surveyed)

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- P Pyrite
- cpy Chalcopyrite
- sil Silicification
- carb Carbonatization
- Qv Quartz Vein
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- m Massive
- f Foliated

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- Bir Birch
- Ced Cedar
- Pop Poplar
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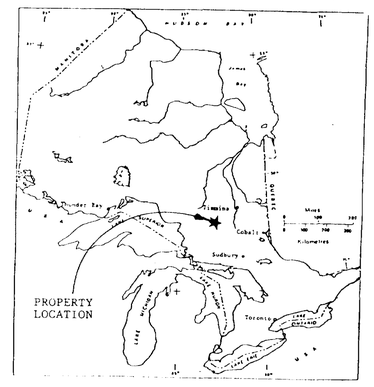
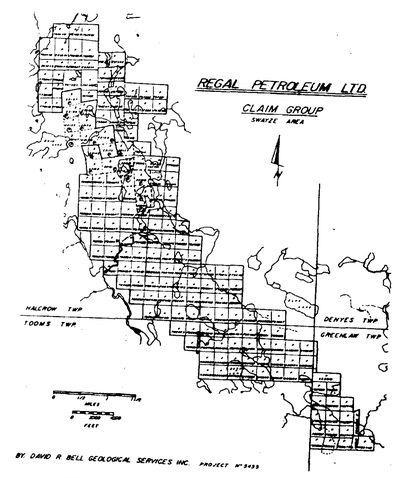
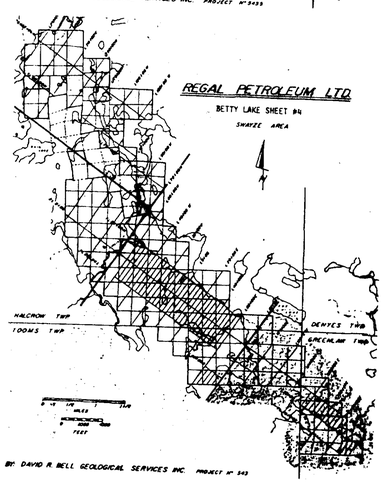
- DT - Tholeiitic Dacite
- RT - Tholeiitic Rhyolite
- BC - Calc-Alkaline Andesite
- DC - Calc-Alkaline Dacite
- RC - Calc-Alkalic Rhyolite
- BT - Tholeiitic Basalt
- ** - NOT DEFINED

Traverse lines are denoted as ----







SCALE

0 800 400 800 1200 FEET

0 40 80 240 METRES

All Whole Rock Sample numbers to be preceeded by 848-

David R. Bell Geological Services Inc.

REGAL PETROLEUM LTD.

GEOLOGY

BETTY LAKE SHEET
SWAYZE AREA 2.8113

TWP/AREA Tooms and Greenlaw twps.		PROVINCE Ontario
MINING DIVISION Porcupine Mining Division		PROJECT No. 2433
REFERENCES O.D.M. Maps 2120 & 2121		N.T.S. No. 42 A/15
DRAWN B. Scott	DRAFTED B. Scott	CHECKED S. Conquer
SCALE 1"=400'-0"	DATE June 28,1984	SHEET No. 2433-84-1

L 150+00W

L 130+00W

MN T.N.

130+00 N

P 757391

P 757392

P 757390

TL 122+00N

P 757393

P 757394

P 758316

HALCROW LAKE

P 758315

SHUNSBY LAKE

P 758314

P 779830

P 758312

TL 76+00 N

S 22177

P 729871

70+00 N

P 758313

P 758311

TL 68+00N

S 22152

60+00N

S 22150

TL 105+00 W

P 779872

S 22151

S 22153

S 22148

P778873

TL 48+00 N

P758310

S 22158

P 709045

P 709043

S 22164

P 709030

40+00N

P 709046

30+00N

30+00 N

L 130+00W

L 110+00 W

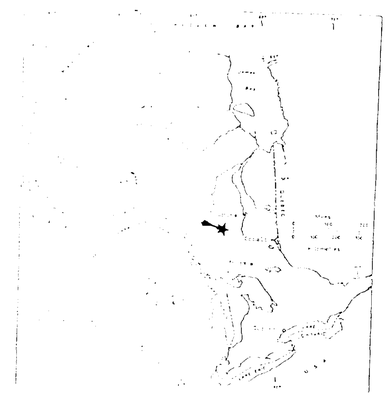
L 90+00W

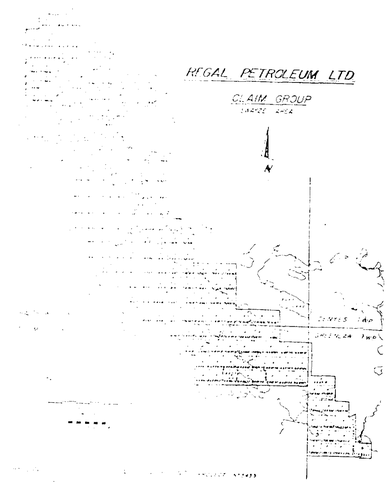
LEGEND

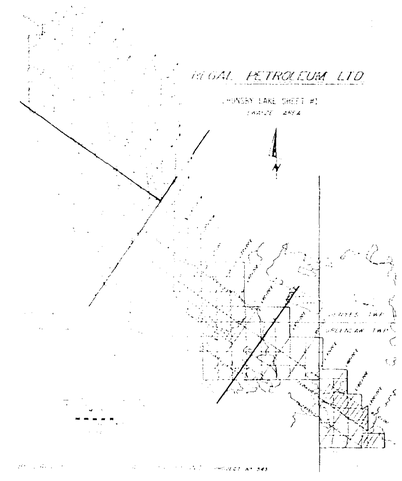
-All Sample numbers to be preceeded by 543-

followed by Au values eg. 542-0001-2;

-All Au values are in ppb's unless otherwise stated.







SCALE

0 200 400 800 1200 FEET

0 48 96 240 METRES

David R. Bell Geological Services Inc.

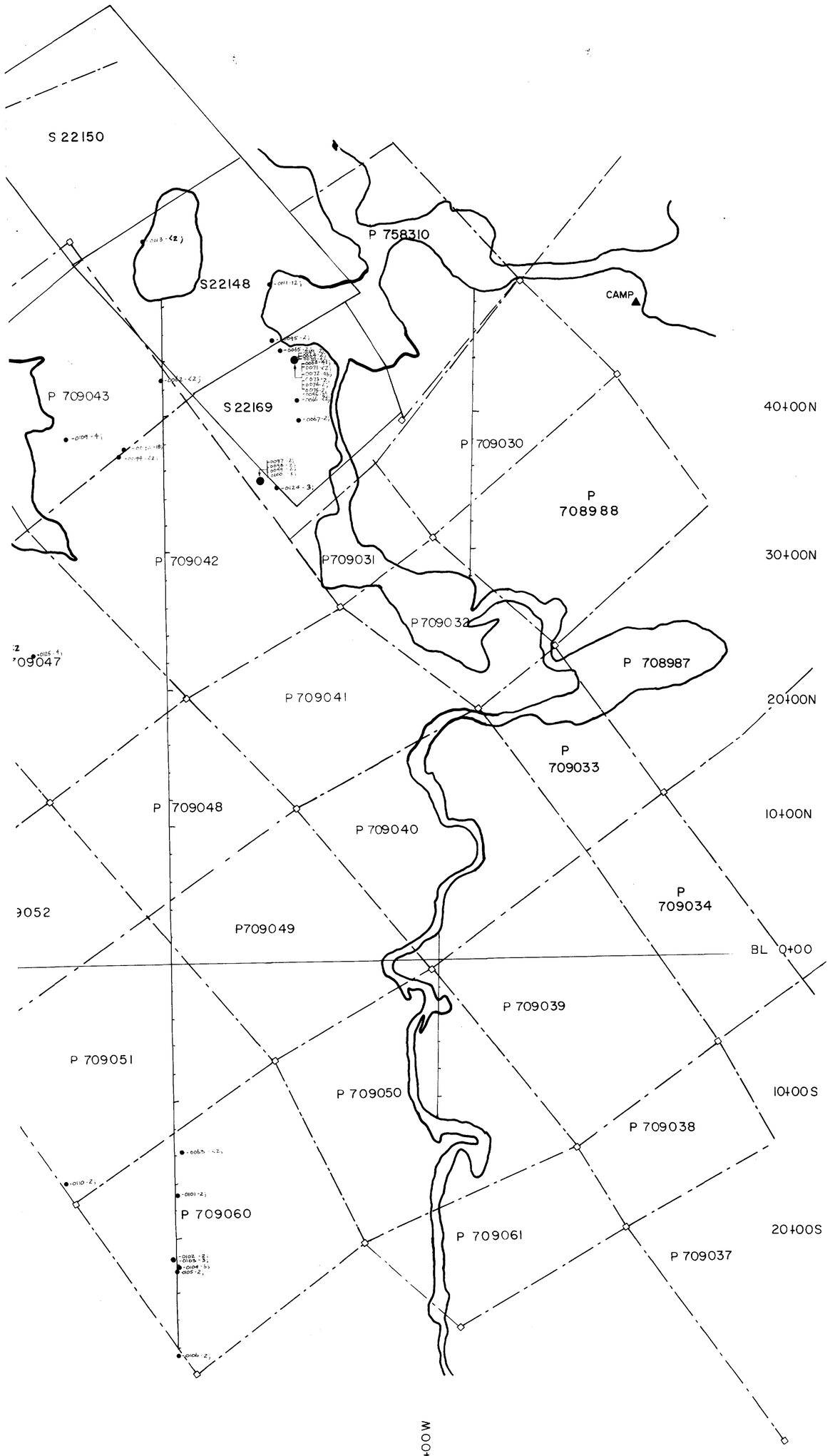
REGAL PETROLEUM LTD.

SHUNSBY LAKE SHEET

WAYZL AREA 2.813

SAMPLE LOCATIONS & ASSAY PLAN

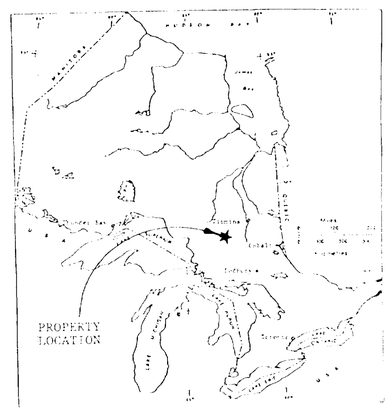
TWP/AREA [illegible] TOWNSHIP		PROVINCE Ontario
MINING DIVISION [illegible] Mining Division		PROJECT No. 5433
REFERENCES [illegible] 2120 & 2121		N.T.S. No. 41-O/15
DRAWN B. Scott	DRAFTED B. Scott	CHECKED S. Conquer
SCALE 1"=400'	DATE June 28, 1984	SHEET No. 5433-84-O-1

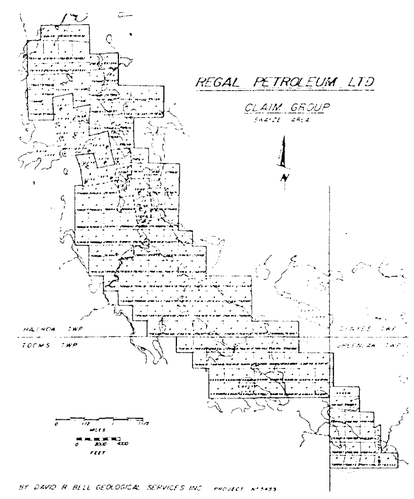


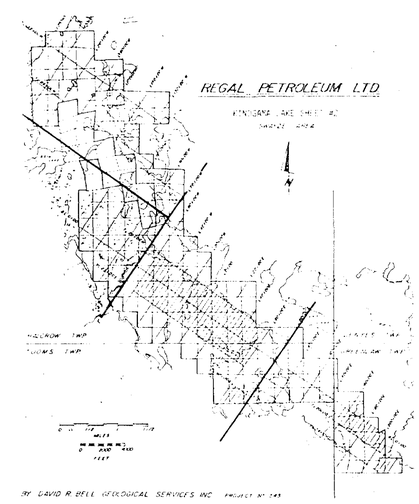
MN. T.N.

LEGEND

- All Sample numbers to be preceeded by 543-
followed by Au values eg. 543-0001-2;
- All Au values are in ppb's unless otherwise stated.







SCALE

0 200 400 800 1200 FEET

0 48 96 240 METRES

David R. Bell Geological Services Inc.		
REGAL PETROLEUM LTD.		
KINOGAMA RIVER SHEET		
SWAYZE AREA 2.81B		
SAMPLE LOCATION & ASSAY PLAN		
TWP/AREA Halcrow Township		PROVINCE Ontario
MINING DIVISION Porcupine Mining Division		PROJECT No. 5433
REFERENCES O.D.M. Maps 2120 & 2121		N.T.S. No. 41-O/13
DRAWN B. Scott	DRAFTED B. Scott	CHECKED S. Conquer
SCALE 1"=400'-0"	DATE June 28, 1984	SHEET No. 5433-84-3-2

L 20+00E

L 40+00E

L 60+00E

L 80+00E

MN. T.N.

40+00N

30+00N

20+00N

10+00N

BL 0+00

10+00S

20+00S

30+00S

TL 40+00S

50+00S

TL 24+00N

TL 22+00S

P 779840

P 779841

P 752007

P 752006

P 752008

P 709064

P 708956

P 708955

P 709066

P 709065

P 708951

P 708952

P 708963

P 708957

P 708954

P 688601

P 708962

P 708958

P 708967

P 708961

P 708953

P706958

P 708968

P 708960

P 688605

P 688606

P 709068

P 688609

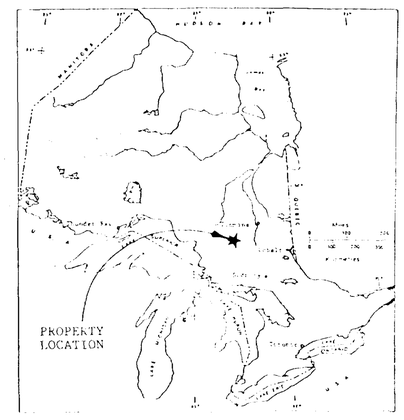
P 688607

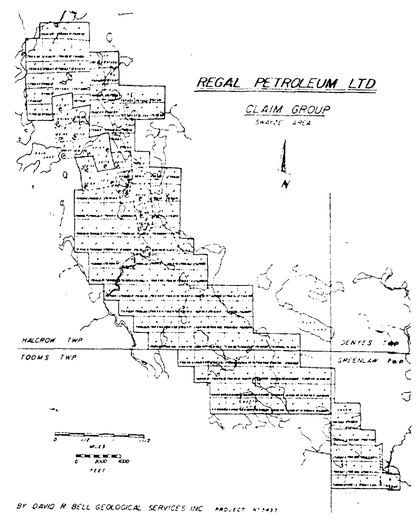
P 688608

CAMP

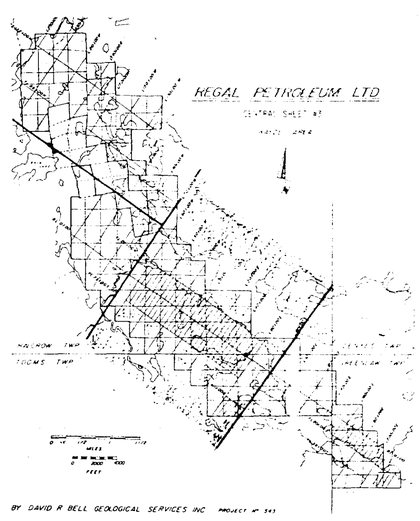
LEGEND

- All Sample numbers to be preceeded by 543-
- followed by Au values eg. 543-0001-2
- All Au values are in ppb's unless otherwise stated.





BY DAVID R BELL GEOLOGICAL SERVICES INC PROJECT N° 5433



BY DAVID R BELL GEOLOGICAL SERVICES INC PROJECT N° 543

SCALE

0 200 400 800 1200 FEET

0 48 96 240 METRES

preceeded by 5433-000

David R. Bell Geological Services Inc.

REGAL PETROLEUM LTD.

SAMPLE LOCATIONS & ASSAY PLAN

CENTRAL SHEET
SWAYZE AREA

2.8113

TWP/AREA Halcrow and Tooms Twp.		PROVINCE Ontario
MINING DIVISION Porcupine Mining Division		PROJECT No. 5433
REFERENCES O.D.M. Maps 2120 & 2121		N.T.S. No 41-O/10 41-O/15
DRAWN B. Scott	DRAFTED B. Scott	CHECKED S. Conquer
SCALE 1"=400'-0"	DATE June 28, 1984	SHEET No 5433-84-3-3

L 160+00E

L180+00E

L 200+00E

L 220+00E

MN. TN.

P 688610

P 708931

P 708930

P 708946

P 708932

P 708945

P 708933

P 708935

P 708943

TL 20+00S

P 708944

P 708934

P 708936

P 708941

P 708942

P 708937

P 708940

TL 38+00S

P 708939

P 708938

BL 0+00

TL 20+00S

TL 38+00S

L 160+00E

L180+00E

L 200+00E

L 220+00E

LEGEND

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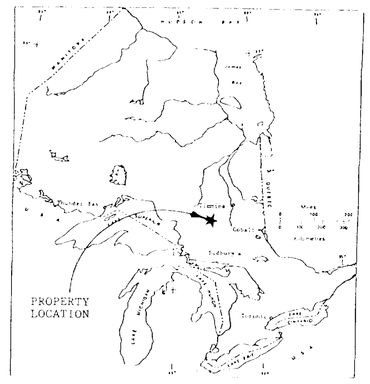
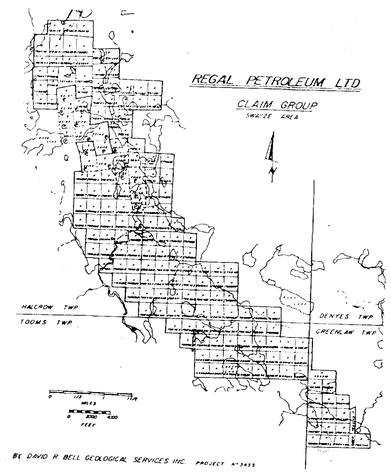
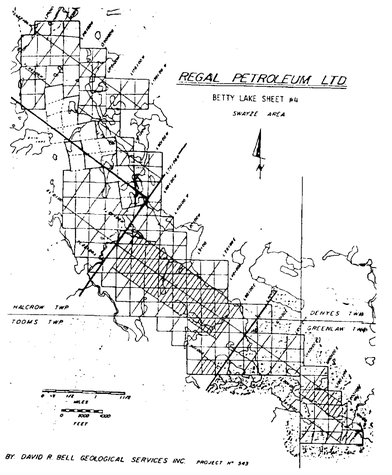
- All Au values are in ppb's unless otherwise stated.







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David R. Bell Geological Services Inc.

REGAL PETROLEUM LTD.

SAMPLE LOCATIONS & ASSAY PLAN

BETTY LAKE SHEET
SWAYZE AREA

TWP/AREA Tooms and Greenlaw twps.		PROVINCE Ontario
MINING DIVISION Porcupine Mining Division		PROJECT No. 5433
REFERENCES O.D.M. Maps 2120 & 2121		N.T.S. No. 41-O/15 41-O/16
DRAWN B. Scott	DRAFTED B. Scott	CHECKED S. Conquer
SCALE 1"=400'-0"	DATE June 28,1984	SHEET No. 5433-84-3-4

2-8113