REPORT ON GEOLOGY & GEOCHEMISTRY

OF THE

LEO LION AND CROWN MINERAL CLAIM GROUPS

Whitehorse Mining District, Yukon Territory

Longitude: 139° 24'W

Latitude: 62° 49'N

N.T.S. 115-J-14

Work done in the period June 29 - August 2, 1970

By:

W. O. Karvinen, Geologist

G. H. K. Pearse, Geologist, P.Eng.

D. Brabec, Geochemist

ATLAS EXPLORATIONS LIMITED

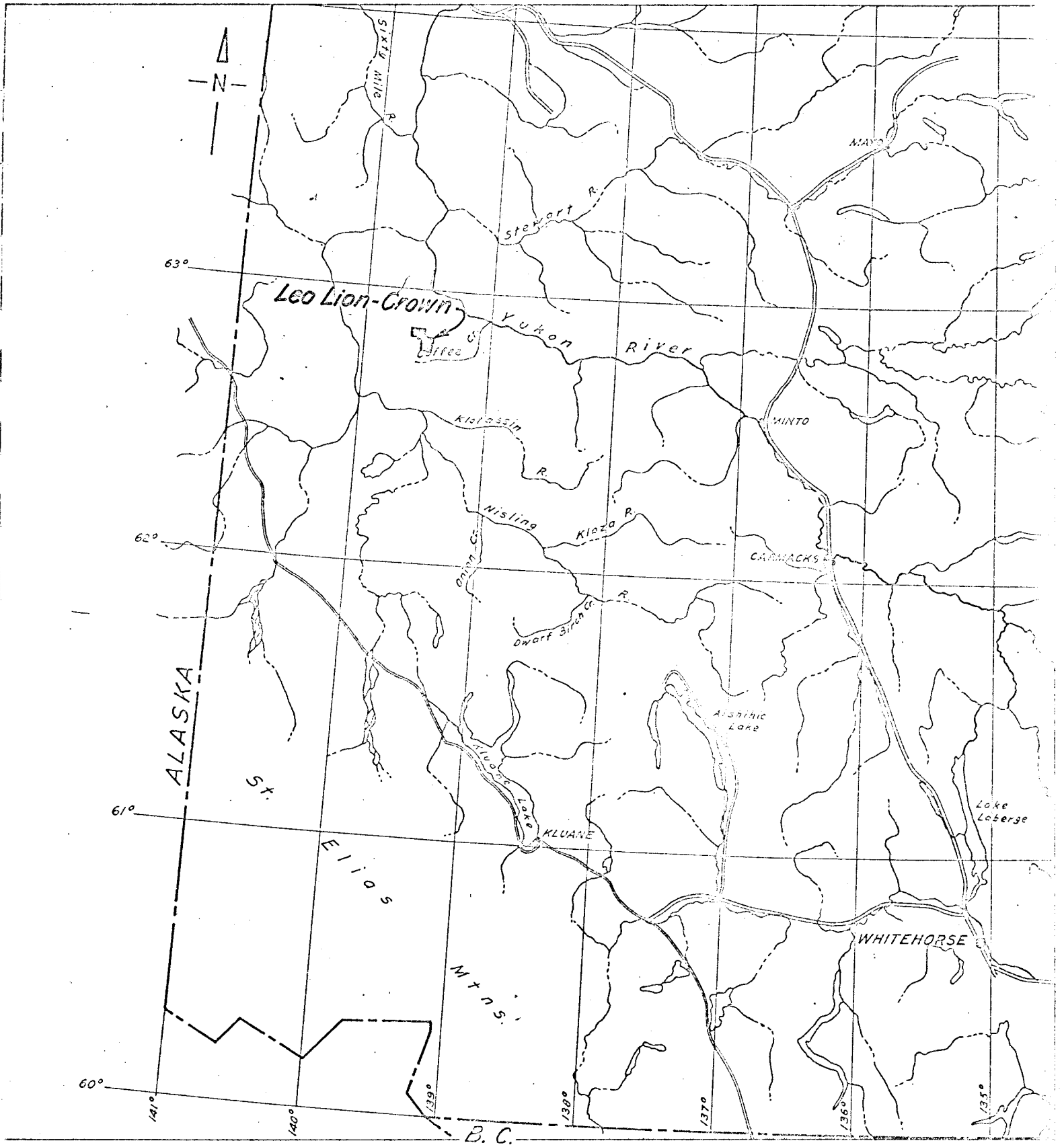
November 3, 1970

Oc

TABLE OF CONTENTS

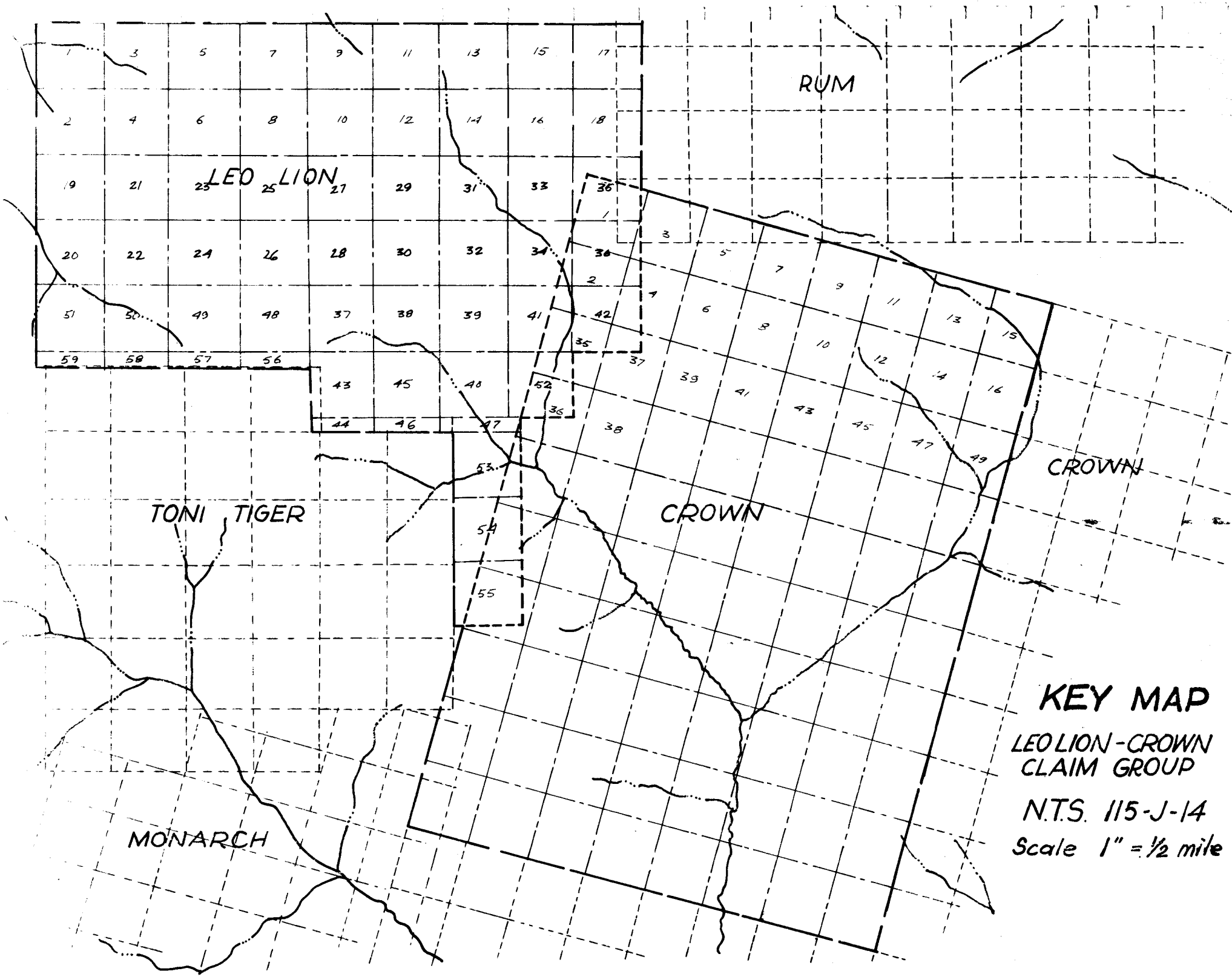
LIST OF CLAIMS

Claim Number		Grant Number	Recording Date
LEO LION	1 - 42	Y43241-Y43282	December 5, 1969
	43 - 59	Y53826-Y53842	July 29, 1970
CROWN	1 - 16	Y43329-Y43344	December 5, 1969
	35 - 50	Y43363-Y43378	December 5, 1969
	69 - 84	Y43397-Y43412	December 5, 1969
	103 - 118	Y43431-Y43446	December 5, 1969
	177 - 192	Y43505-Y43520	December 5, 1969



Scale: 1" = 32 miles

KEY MAP SHOWING
LEO LION - CROWN CLAIM GROUP LOCATION
DAWSON RANGE - YUKON


RUM
LEO
LION
CROWN
TONI
TIGER
CROWN
MONARCH
KEY MAP
LEO LION - CROWN
CLAIM GROUP
N.T.S. 115-J-14
Scale 1" = ½ mile

TELEPHONE 685-4331

ATLAS EXPLORATIONS LIMITED
(N.P.L.)
330 MARINE BUILDING
355 BURRARD STREET
VANCOUVER 1, B.C.

REPORT ON GEOLOGY & GEOCHEMISTRY ON THE LEO LION AND CROWN MINERAL CLAIM GROUPS

NTRODUCTION

Leo Lion and Crown Claims were staked over favourable geology and geochemistry adjacent to Tony Tiger claims (held by Archer, Cathro, Dawson Project Syndicate) which lie between the two major easterly flowing branches of Coffee Creek in the Dawson Range. This promising ground was located during a reconnaissance geology and geochemical program carried out during the latter half of the 1969 field season. Interest in the area was stimulated by the discovery of the Casino porphyry copper body earlier in the summer. The claims lie about 20 air miles northwest of Casino.

LOCATION

The claims are in the Dawson Range located in N.T.S. area 115-J-14 at approximately 62° 49'N latitude and 139° 24'W longitude. They lie near the headwaters between the two major western branches of Coffee Creek which flows north into Yukon river. The area is about 200 air miles northwest of Whitehorse.

ACCESS

Access to Leo Lion and Crown claims is from Polaris air strip

six miles southeast of the property. Supplies from Whitehorse were flown to the strip in fixed wing aircraft of various types up to including a DC-3. From there, supplies were relayed to the property by helicopter. The Casino strip served as an alternative when weather conditions at Polaris strip were adverse.

PROPERTY AND OWNERSHIP

The property consists of 139 claims numbered as follows:

LEO LION	1 to 59
CROWN	1 to 16, 35 to 50, 69 to 84, 103 to 118, and 177 to 192

All are wholly owned by Atlas Explorations Limited.

TOPOGRAPHY

Leo Lion and Crown claims lie in the Dawson Range a subdued mountainous portion of Yukon Plateau. Elevation in the general area vary from less than 1500 feet at Yukon River 7 miles to the north, up to over 5500 feet along the axis of the range 6 miles to the southwest. The claims lie between 4000' and 4500' a.s.l.

The area has not been modified by glaciation. Hills are rounded and for the most part bedrock is buried beneath felsenmeer and moss.

The region is efficiently drained by fast flowing creeks fed by closely spaced tributaries which empty into Yukon River.

The area is low in precipitation.

HISTORY

Placer gold and silver-lead veins in the Casino area have been worked since the early part of this century. The first discovery of porphyry copper mineralization in the region was made in 1968 at Casino. This event gave impetus to exploration on a large scale by numerous companies and the country between Mount Nansen,west of Carmacks to the Sixty Mile area near Dawson was intensively explored.

GENERAL GEOLOGY

Rock Types

Rocks in the area of the claim groups can be divided into six mappable units; amphibole-rich rocks, biotite granite gneiss, and quartzose schist of the Yukon Group and coarse biotite granite, coarse leucogranite, and altered leucogranite of the intrusion.

YUKON GROUP

Amphibole-rich rocks: Rocks of this unit are represented mainly by amphibolite (meta-ultramafic rocks) and amphibole gneiss with minor amounts of chlorite schist and chlorite-amphibole schist.

These are in contact with the intrusion the whole length of

the area mapped (see map). In general they contain sulfides, mainly pyrite and pyrrhotite and minor chalcopyrite, up to 1%. Magnetite is a common mineral making up the oxide assemblage.

Biotite granite gneiss:

This unit is a mass of well-foliated granitic rock which contains on the average about 15-20% biotite and/or hornblende. In general, it is very 'dry-looking' and in only a few places were any specks of sulfides found. It outcrops over fairly large areas to the south of the above-described amphibole-rich rocks. Minor horizons of quartzite, quartz-schist and marble were found within it.

Quartzose schist:

Rocks of this unit include many biotite and/or sericite quartz schist and schistose quartzite with minor intercalations of chloritic quartz schist, graphitic schist and amphibole schist. These rocks outcrop in the southern part of the area and in general carry minor amounts of pyrite and pyrrhotite. No significant mineralization, however, was detected within this unit.

YOUNGER INTRUSIVE ROCKS

Coarse biotite granite:

A large part of the intrusive mass is represented by a very fresh, coarse-grained biotite granite which outcrops commonly as spires or castles on the tops of hills and crests of ridges.

Petrologically, this unit consists of quartz (about 45-50%), biotite (7-10%) and feldspars interlocked in a hypidiomorphic fashion. In general, the orthoclase appears to be more abundant than plagioclase and is recognized by its perthitic texture. Hornblende was found in minor amounts (about 2%) associated with abundant amphibole-rich inclusions at the west end of the Leo Lion.

This unit is fresh except for minor alteration in proximity tc fault zones where feldspars are cloudy and stained with manganese, biotite is either rusty or chalky. No mineralization was found in this unit.

Coarse leucogranite:

Pink and often rusty granite devoid of any mafic mineral are characteristic of this rock type. It resembles the coarse biotite granite in mineralogy and texture but is lacking in biotite or hornblende.

These rocks outcrop only in the eastern and northeastern margins of the claim groups and have not been studied to any extent. In the northern part of the Leo Lion, leucogranite is fresh, pink, coarse-grained and has minor phases of leuco-syenite and leucogranite with up to 3% biotite. Zones of alteration and rust are not uncommon, however, no mineralization was detected.

It is believed that this unit represents a phase of the same intrusion as the coarse biotite granite.

Altered leucogranite:

Rocks of this unit appear to be favourable for mineralization. Everywhere they have been examined, the rocks are rusty, contain rusty cavities, have sericite and/or kaolin pseudomorphic after feldspar and are the host rock for mineralized veins. The rocks are mainly leucogranite with only minor phases of altered leucosyenite and consist of quartz (about 50%), altered feldspars, and hydrous iron oxides. In areas of mineralization, it is highly silicified containing up to 70% quartz.

Altered leucogranite underlies most of the low-lying areas where it is usually concealed by overlying blocks of biotite granite but is readily mappable in frost boils (see map). A cursory glance at the map indicates that it is intimately associated with zones of faulting within the intrusive mass.

Minor rock types:

Rocks which were recognized in the field but were of minor abundance include aplite dikes, alaskitic and aplitic, fresh and fine-grained contact rocks, and aphanitic rhyolitic rocks containing magnetite. Aplite dikes were most common in the biotite granite, with only a few detected within leucogranite and altered leucogranite. In all areas, aplite appears to be the latest intrusive rock. Along the contact, boulders of aphanitic to fine-grained, leucocratic pink, granite were found. The extent of these rocks is unknown, however, it appears to be minor, probably a chilled phase of the main intrusion.

Another rock type, which was extensively mapped is a cherty mylonite and mylonitic breccia. These rocks outline fault zones and are the key to mineralization in the area. They will be described in a later section under 'Mineralization'.

Structural Geology

Structures of the first recognizeable event of folding and metamorphism are evident in the rocks of the Yukon Group. Minor structures of this event, recognized and measured in the field, were a prominent penetrative lineation, minor parasite folds and cleavages.

Only the most common foliation which reflects the composition layering was measured in order to understand the general trend of the rock units. Normal folding about a westerly plunging axis is evident from the dips and strikes seen on the map.

Structures developed during post intrusion tectonism are large, transverse faults and non-penetrative cleavages and joints. These structures cross-cut all earlier structures, including the granite intrusion, and appear to have occurred at a much later time. The faults trend about NW-SE, are nearly vertical, and displace the granite-Yukon Group contact and stratigraphy of the contact rocks in a right lateral sense (see geologic map). In the area of the claim groups, three such faults have been outlined; all appear to off-set strata, have mylonite and breccia along their strikes, and follow obvious lineaments.

Minor structures related to this event are the non-penetrative cleavages and joint patterns most commonly seen in the granite. Such planar elements appear to be related to the orientation of regional stress fields which produced the transverse faulting.

Minor small scale faults, observed on some outcrops, were sub-parallel to the general trend of faulting and invariably reflected a right-hand sense of movement.

TABLE OF FORMATIONS

Tertiary(?)

Post Intrusion Tectonism and Mineralization:

8- mylonite, breccia (mineralized).

7- altered leucogranite (coarse-grained, often silicified and rusty).

Cretaceous (?) to Tertiary (?)

Intrusive Rocks

6- coarse-grained leucosyenite (porphyritic, rusty).

5- fresh coarse-grained leucogranite

4- coarse-grained biotite granite, some mafic inclusions, hornblende in places.

Early Palaeozoic (?)

Yukon Group Metasediments

3- chlorite schist, amphibole schist, greenstone, amphibole gneiss, usually carries pyrite.

2- biotite granite gneiss, feldspar augen in places.

1- muscovite quartz schist, biotite quartz schist, graphite quartz schist, quartzite.

ECONOMIC GEOLOGY

Mineralization

All significant mineralization in the area is related to brecciation and mylonitization of both Yukon Group rocks and intrusive rocks associated with regional transverse faulting. This event was accompanied by the introduction of silica and ore-bearing fluids which mineralized the areas of mylonitization and silicified and altered adjacent leucogranite rocks.

Breccia and Mylonite Zones

Zones of brecciated granitic rock and siliceous mylonite are most common in the granite intrusion. The widest and best exposed zone of such rocks outcrops at the north end of the Crown group where it can be followed along strike for about one-half mile. Other similar zones are found in the central part of the Leo Lion and in Yukon Group rocks at the eastern margin of the Crown. In all localities, the mylonite is a dark to black, aphanitic, cherty, rock which displays a good tectonic fabric and often contains lensoidal particles of less sheared rock. Mineralization in the mylonite is mainly in the form of pyrite and arsenopyrite. An assay of a grab sample of such a rock gave the following results:

Ag	0.14 oz. per ton
Pb	0.02%
Zn	Tr.
Cu	0.02%
Mo	Tr.
Au	Tr.
As	0.02%

Intimately associated and intermingled with the mylonite is a silicified, mylonitized breccia which is easily recognized by its angular fragments and tectonic sub-fabric. In general the fragments are granitic. Mineralization is not as common in the breccia, however, specimens which carry mineralization usually contain pyrite and minor chalcopyrite.

Quartz-galena-sphalerite Veins

The adjacent intrusive country rocks of all fault zones is an altered and silicified leucogranite (see map). Within these silicified zones and adjacent and within the fault zones are veins of milky-white quartz which carry galena, sphalerite, tetrahedrite, jamesonite (?) and pyrite. Five such veins were discovered. All such material was in loose float form, however, it is believed that they are very near to their source. A study of the dispersion of boulders of such vein material indicated that the veins are sub-parallel to the fault zones. In general the veins are less than 10 ft. wide and a few tens of feet long.

Contact Zone Mineralization

Minor mineralization in the form of pyrite, pyrrhotite, chalcopyrite and magnetite occurs ubiquitously in the amphibole-rich rocks at the contact of the granite intrusion. In general, the sulfides make up about 1% with pyrite and pyrrhotite being most common and chalcopyrite present only in a few localities (see map). Magnetite, often in very massive form, occurs very close to the contact and is intergrown with chromite in

chlorite-amphibole rocks.

The disseminated nature of these minerals, their ubiquity, and association with meta-ultramafic rocks indicate that the sulfides and magnetite have been remobilized from the host rock during metamorphism. Thus, the extent of this mineralization appears to be of minor importance.

DESCRIPTION OF MINERAL SHOWINGS

For convenience of locating, the various localities of mineralization are labelled with capital letters on the map. The following is a brief description of these localities.

Showing 'A'

This showing is a vein of quartz (about 10 ft by 25 ft.) in silicified and altered leucogranite located at the north end of the Crown group and west of the major zone of faulting. It strikes about 155 degrees and is lenticular in outline. The major minerals detected from hand specimen study are as follows in decreasing abundance:

1. Galena - vein-filling and disseminated clusters
2. Sphalerite - associated with galena
3. Jamesonite (?)
4. Tetrahedrite - often with very adamantine lustre-(Ag rich)
5. Pyrite

An assay of a grab sample revealed the following metal content:

Ag	11.00 oz per ton
Pb	2.20%
Zn	0.20%
Mo	0.002%

Results from chips taken across the full length and width (6' x 25'). of the vein are as follows:

Ag	9.00 oz per ton
Pb	1.32%
Zn	0.13%
Cu	0.07%
As	0.004%
Sb	0.48%

Showing 'B'

This showing is a small guartz vein (about 2 ft. by 10 ft.) within the silicified breccia zone at the north end of the Crown. Its mineral assemblage is similar to that of showing 'A' and appears to have a similar trend. Assay results are:

Ag	14.60 oz per ton
Pb	1.75%
Zn	0.28%
Cu	0.05%
Sb	2.13%
As	0.03%

Showing 'C'

A quartz vein, measuring a few inches across occurs within silicified and altered leucogranite. The main minerals are galena, sphalerite and possibly tetrahedrite.

Showing 'D'

This showing is representative of magnetite mineralization in the contact zone. It is located at the north-central part of the Crown, just south of camp. It consists of massive magnetite and chromite (?) within a talc-chlorite-amphibole rock. Assay results are as follows:

Ag	0.16 oz per ton
Pb	0.02%
Mo	Tr.

Showing 'E'

This is contact-zone type mineralization located at the south eastern corner of the Leo Lion. Mineralization is in the form of pyrite (1%), pyrrhotite (1%) and specks of chalcopyrite in a massive amphibolite-meta-pyroxenite rock. Its extent appears to be minor.

Showing 'F'

This showing is from a locality where both contact effects and later faulting have resulted in mineralization. It is located in the western part of the Crown where the granite-Yukon Group contact is offset by a major NW-trending fault (see map). Here sulfides in the form of pyrite (1-2%), pyrrhotite (1%), and chalcopyrite (½%), occur in disseminated form within a sheared and brecciated amphibole rock.

The extent of this mineralization is not known due to poor outcrop exposure, however, it has been traced in float form

for about 1500 ft. along the contact.

Showing 'G'

This showing, located in the central area of the Leo Lion and just west of a major fault zone, consists of quartz vein material carrying galena, sphalerite and pyrite. It is in float form but probably not too far from the source; its trend is unknown.

Assay of a grab sample indicates the following metal content:

Au	0.01 oz per ton
Ag	12.00 oz per ton
Pb	2.30%
Zn	(not assayed for)

Showing 'H'

This showing, located at the northern margin of the Leo Lion and just west of a shear zone within silicified and altered leucogranite, is a small vein of milky quartz containing galena. The galena is in the form of rather curious platey and elongated crystal which at first glance resemble stibnite, however, it displays good cubic cleavage. The extent of this vein is very limited; it has a trend of about 150 degrees.

MISCELLANEOUS ASSAY RESULTS

1. Grab sample described as a fine grained black mineral and pyrite in a quartz vein with galena (may be molybdenite).

Pb	0.05%
Mo	0.002%

The "galena" it would appear is more likely stibnite.

2. Grab sample described as a black cherty mylonite with pyrite and galena.

Ag	0.14 oz per ton
Pb	0.02%
Zn	Tr.
Cu	0102%
Mo	Tr.

3. Grab sample described as quartz-breccia-mylonite rock with pyrite, arsenopyrite and other metallic minerals (?).

Au	Tr.
Ag	0.12
As	0.02

PROSPECTING

The showings described in the previous section were located during the course of detailed mapping by a company geologist and by conventional prospecting done by an able prospector.

GEOCHEMICAL REPORT

a) Sampling Technique

At an initial stage, silt, soil and rock chip samples were taken mostly along slope traverses. A detailed geochemical survey consisted of soil sampling over the following three grids:

1. Leo Lion North Grid, sampled every 200 ft. along northerly lines spaced at 800 ft.

2. Leo Lion South Grid, sampled every 200 ft. along northeasterly lines spaced at 1000 ft.

3. Crown Grid, sampled every 200 ft. along east-northeasterly lines spaced at 800 ft.

Samples were taken of residual soil from B-horizon wherever practical and rock chips from either outcrop or float. Stream sediment samples consisted predominantly of fine sand to silt size material.

b) Analytical Methods

After drying, all silt and soil samples were sieved to -80 mesh and the fines retained for analysis. Rock samples were crushed in a jaw crusher and then pulverized in a grinder with steel plates. The resulting powder was reduced by quartering to a 20-30g working sample.

0.5g of each sample was digested with concentrated HNO3, diluted to 10 mls and allow to settle. The concentrations of Cu, Pb and Zn in the solutions were determined with a Perkin-Elmer 303 atomic absorption spectrophotometer. Molybdenum content was determined with a Techtrom AA.4 atomic absorption instrument in the Whitehorse Assay Office, using acetylene-nitrous oxide flame.

Analytical precision for Cu, Pb and Zn controlled by including a soil sample selected as standard with every 20 samples to be analyzed, was found to be $\pm$ 30%. Mo precision was not determined due to the lack of suitable standard.

Lower detection limit for all elements sought was 2 ppm.

c) Presentation of Data

Analytical results from grids are plotted on a scale of 400 ft. to the inch, and anomalous areas outlined by contouring or symbols. Data for stream sediments and soils collected outside of grids are plotted on a scale of ½ mile to the inch.

INTERPRETATION OF RESULTS

General distribution of values indicates that the following concentrations can be adopted as anomaly thresholds:

Cu	-	50 ppm
Pb	-	30 ppm
Zn	-	100 ppm
Mo	-	4 ppm

1. Variations outside of grid areas.

No anomalous values were found in stream sediments during reconnaissance survey in the area. Several rocks taken from a mineralized area on the south part of Leo Lion Group proved to be Cu-anomalous, but low in other metals. Several soil samples on Crown Claim Group were slightly anomalous in Cu and/or Zn (see Fig. 4).

2. Leo Lion North Grid

Cu values over the whole grid are at a very low level, mostly below 20 ppm. A number of low-anomalous Pb values was noted, some of them clustered in the northeast part of the Group. Results for Zn are very low, with only 3 samples running over

100 ppm. Mo values slightly over threshold are concentrated in the northeast corner of the Group and in this respect follow the distribution of lead.

3. Leo Lion South Grid

Values higher than 50 ppm Cu, with a peak at 320 ppm generally define a northwesterly trending anomalous zone at least 3000 ft. long and open toward southeast and southwest (Fig. 5). Anomalous rock samples taken during reconnaissance work also come from this area in which contact mineralization carrying some chalcopyrite has been found (see the description of showing 'E' in geologic report).

Most of soil samples very high in Cu were also slightly anomalous in Pb, whereas Mo values are low throughout the grid.

4. Crown Grid

A number of Cu - high samples roughly defines a northwesterly zone which is an extension of a Cu anomaly found on Leo Lion Group and generally follows an intrusive contact (compare with geologic map, Fig. 3). Scattered Zn highs do not seem to coincide with the Cu anomaly. Occasional Pb - anomalous samples were taken from areas where veins with galena have been observed (see the section on geology of the claim groups).

Mo values over the whole of the claim group are uniformly low.

SUMMARY

Reconnaissance geology and geochemistry during the 1969 field season led to staking the Leo Lion and Crown groups. Geology, geochemistry and prospecting were done during part of the 1970 season.

Mineralization occurs in the form of small local lead, zinc, silver, antimony veins along major fault zones and as disseminated pyrite, pyrrhotite, and minor chalcopyrite in mafic rocks along the intrusive contact.

Altered leucogranite which is associated with zones of faulting is the most favourable unit economically.

A 3000 ft. long zone of anomalous copper geochemistry coincides with the intrusive contact which contains minor disseminated sulphides. Elsewhere, the only other significant anomalies are those of lead which occur in the areas of lead, zinc, silver antimony veins.

CONCLUSIONS

All geochemical anomalies have been adequately accounted for geologically. Anomalies reflect disseminated sulphides within amphibolitic rocks in contact with the intrusion, and quartz sulphide veins along the fault zones both of which are considered subeconomic.

RECOMMENDATIONS

No further work is recommended on the Leo Lion and Crown claims.

Respectfully submitted,

G.H.K. Pearse, P.Eng.
Geologist

November, 1970

L 48N

L 40N

L 32N

L 24N

L 16N

L 8N

L 0

L 8S

L 16S

L 24S

L 32S

L 40S

CROWN

BASE LINE 0

Sample Attack: aqua regia

△ Rock Samples

• Soil Samples

o Silt Samples

● Values above 50 ppm Cu

Cu
57
Mo 2 : 11 Pb Order of Values
21
Zn

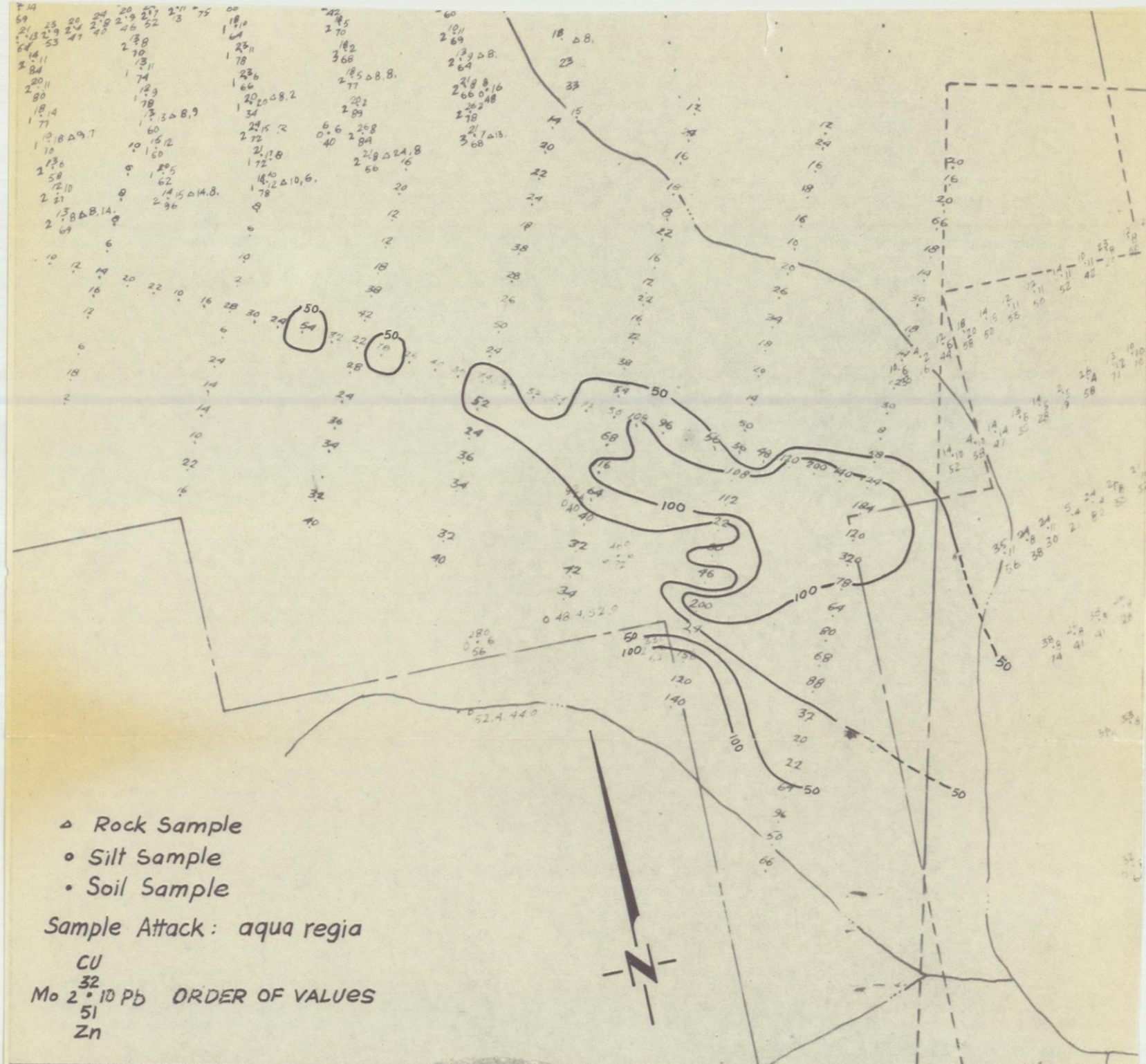
ATLAS EXPLORATIONS LIMITED

LEO LION - CROWN MINERAL CLAIMS

Geochemical Survey - Distribution of Copper

Crown Claims Grid

N. T. S.: 115 J 14		SCALE: 1" = 1000'
DATE OF SURVEY:		PARTY CHIEF:
DATE DRAFTED: 17.11.70		DRAFTED BY: J.A.D.
DATE REVISED		REVISED BY:
CHECKED BY:		FIGURE No.:



△ Rock Sample
○ Silt Sample
• Soil Sample

Sample Attack: aqua regia

Cu
Mo 32 • 2 • 10 Pb ORDER OF VALUES
51
Zn

ATLAS EXPLORATIONS LIMITED

LEO-LION-CROWN CLAIMS Dawson Range

Geochemical Survey - Distribution of Copper - Leo Lion South Grid - Contours

N. T. S.:		SCALE:
115-J-14		1" = 1000'

DATE OF SURVEY:	PARTY CHIEF:
DATE DRAFTED: 17·11·70	DRAFTED BY: J.D.
DATE REVISED	REVISED BY:
CHECKED BY:	FIGURE No.:

LEO LION

RUM

TONI TIGER

CROWN

showing 'H' galena

showing 'G'

showing 'E'

showing 'A'
py. tetrahedrite galena, jamesonite(?) in qtz vein 4' wide

showing 'F'
brecciated amph. PY, cpy, py

showing 'D'
magnetite, py, galena

showing 'B'

TRENCH
brecciated, fractured silicified bio-granite gneiss abundant qtz. veining MoS_2 (?), cpy, py

aplite

marble

graphitic qtz. mylonite

sheared amphibolite

sheared, mylonite amph-chl rock

leucocyenite altered

amph gn.

border gr

bio. gr. gn

amph.

aplite dykes 180/ne

22,875,000 N
22,870,000 N
22,865,000 N
22,860,000 N
22,855,000 N
22,850,000 N
22,845,000 N
250,000 E
255,000 E
260,000 E
265,000 E
270,000 E
275,000 E
280,000 E

936	mylonite, breccia; mineralized	Post-intrusion tectonism & mineralization
918	Altered leucogranite; crs-gr often silicified; rusty	
924	crs-gr. leucocyenite porphyrite; rusty	Intrusive Rocks
921	fresh crs-gr leucogranite < 3% bio.	
922	crs.-gr. fresh. bio granite some mafic inclusions; some hbd in places	
932	chlorite schist, amph. schist; greenstone amph gneiss; usually carries py.	Yukon Group
946	bio. granite gneiss augen in places	
934	musc.-qtz.-schist; bio-qtz-schist, graphite-qtz-schist chl-qtz. schist - usually rusty; quartzite	

ATLAS EXPLORATIONS LIMITED

LEGEND

- Improved road
- Secondary road
- Track or trail
- Railway
- Contours — 4100
- Cut line
- River
- Stream
- Intermittent stream
- Swamp
- Spot elevation — 4190
- Horizontal control — △ STA 16
- Vertical control — V-4710-57

SYMBOLS

- penetrative foliation
- non-penetrative fracture cleavage jointing
- penetrative lineation
- parasite fold axial attitude
- assumed fault
- Geological contact, assumed
- Observed outcrop
- boulders
- dykes
- AD aplite dykes
- B breccia
- M mylonite
- vein

SHOWINGS

- 'A' qtz. vein & py, galena, tetrahedrite, Jamesonite, sphalerite
- 'B' qtz. vein & py, galena, tetrahedrite, Jamesonite, sphalerite
- 'C' qtz. vein & py & galena
- 'D' magnetite in amphibolite - possible galena & MoS_2 (?)
- 'E' py., po, cpy. in meta-ultramafic & green-stone
- 'F' py, po, cpy. in meta-ultramafic & green-stone in brecciated & sheared contact rocks
- 'G' galena, sphalerite in qtz. vein float
- 'H' galena, sphalerite in qtz. vein float

LEO LION-CROWN CLAIMS

YUKON TERRITORY

MAP SCALE

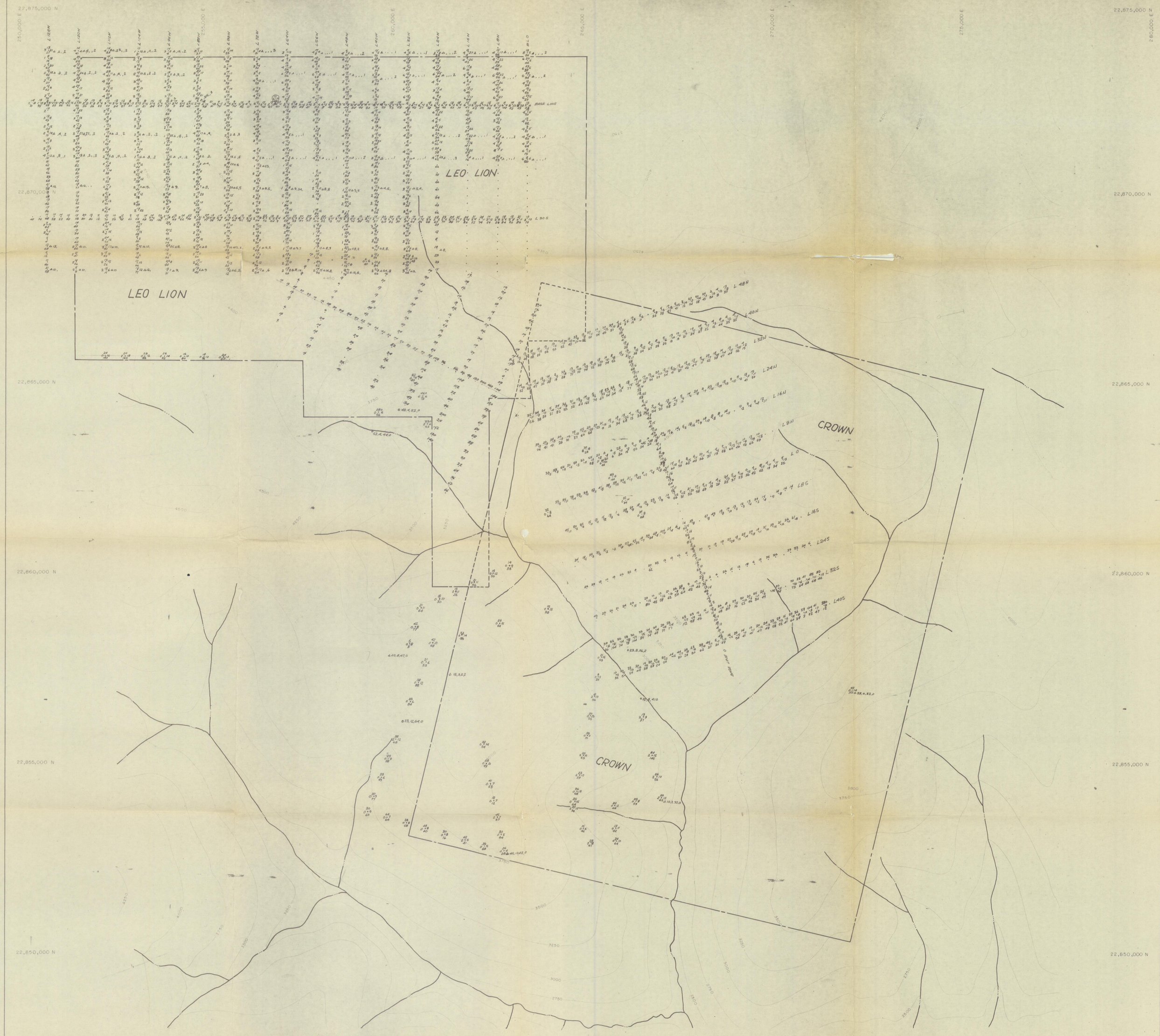
FEET 1000 500 0 1000 2000 3000 FEET

CONTOUR INTERVAL 50'

ATLAS EXPLORATIONS LIMITED

LEO LION - CROWN MINERAL CLAIMS
GEOLOGY

N. T. S.: 115·J·14		SCALE: 1" = 1000'
DATE OF SURVEY: JULY 70		PARTY CHIEF: KMD WAK.
DATE DRAFTED: NOV. 9, 1970		DRAFTED BY: J.A Dennison
DATE REVISED		REVISED BY:
CHECKED BY:		FIGURE No.:



LEGEND

- Improved road
- Secondary road
- Track or trail
- Railway
- Contours 4500
- Cut line
- River
- Stream
- Intermittent stream
- Swamp
- Spot elevation 4190
- Horizontal control △ STA 16
- Vertical control V-4710-57

ATLAS EXPLORATIONS LIMITED

LEO LION-CROWN CLAIMS

YUKON TERRITORY

MAP SCALE

FEET 1000 500 0 1000 2000 3000 FEET

CONTOUR INTERVAL 50

Sample Attack : aqua regia

LEGEND

SYMBOLS	ORDER OF VALUES	
· Soil Sample	Cu	Cu, Pb, Zn, Mo } Silt
o Silt Sample	Mo 2 20 10 Pb 62 Zn	o 20, 10, 62, 2 } Rock
△ Rock Sample	Soil	△ 20, 10, 62, 2 Cu, Pb, Zn, Mo
× Water Sample		

ATLAS EXPLORATIONS LIMITED		
LEO LION-CROWN MINERAL CLAIMS GEOCHEMICAL SURVEY		
N. T. S.: 115-J-14		SCALE: 1" = 1000'
DATE OF SURVEY:		PARTY CHIEF:
DATE DRAFTED: NOV. 17, 1970		DRAFTED BY: J.A.D.
DATE REVISED		REVISED BY:
CHECKED BY:		FIGURE No.:

LIST OF PERSONNEL

W. o. Karvinen	Party Chief	Vancouver, B.C.
K. M. Dawson	Geologist-in-charge, Prop.	Vancouver, B.C.
D. Brabec	Geochemist	Vancouver, B.C.
M. Delich	Assistant	Vancouver, B.C.
T. Skonseng	Prospector	Whitehorse, Y.T.
R. Etzel	Prospector	Ross River, Y.T.
R. Blake	Sampler	Vancouver, B.C.
C. Ollie	Sampler	Ross River, Y.T.
W. Hamilton	Sampler	Carrot River, Sask.
L. Carlik	Sampler	Carrot River, Sask.
J. Goschl	Cook	Whitehorse, Y.T.