



DUVAL INTERNATIONAL CORPORATION

844 WEST HASTINGS STREET

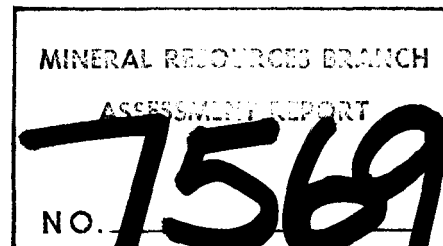
VANCOUVER BRITISH COLUMBIA V6C 1C8 CANADA TELEPHONE (604) 685-5523

REPORT  
on the  
GEOLOGY and GEOCHEMISTRY  
of the  
TOW 1, 2, 3 and 4 CLAIMS

Lillooet Mining Division  
NTS 92 I/12 W  
121° 53'W, 50° 32'N

Owned by Duval Mining Ltd.  
Work paid for by Duval International Corp.  
Report by Gregory R. McKillop

Submitted September 24, 1979





# DUVAL INTERNATIONAL CORPORATION

844 WEST HASTINGS STREET

VANCOUVER BRITISH COLUMBIA V6C 1C8 CANADA TELEPHONE (604) 685-5523

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## INTRODUCTION

### Summary

Geological mapping, geochemical sampling and prospecting were undertaken on the TOW 1, 2, 3 and 4 Claims during July and August, 1979. Molybdenite mineralization was found to be associated with a moderately dipping tabular-shaped quartz diorite intrusion where it is cut by a northwesterly trending structure.

The geochemistry outlined two zones anomalous in molybdenum and copper, coincident with quartz diorite stocks.

### Location

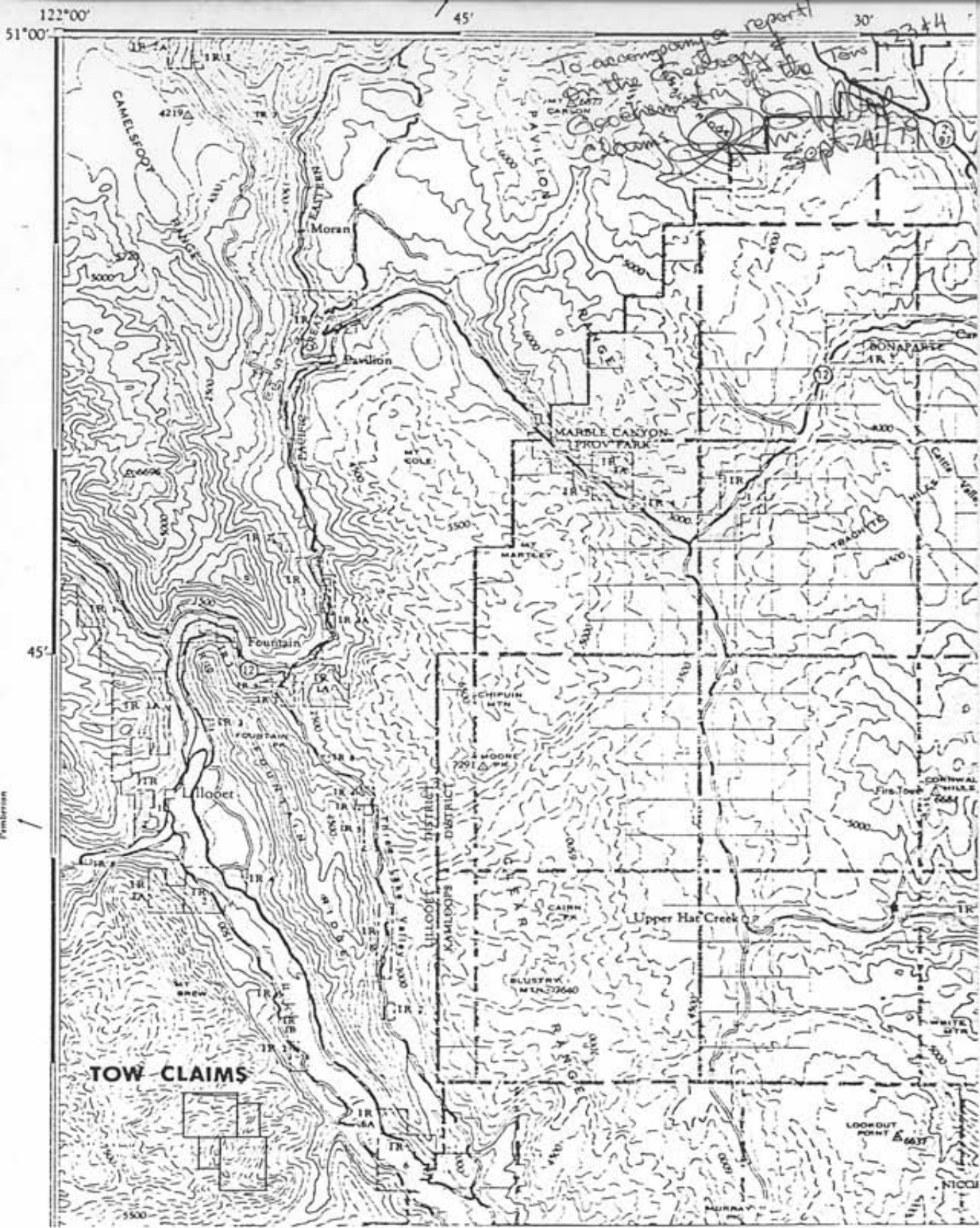
Mineral claims TOW 1, 2, 3 and 4 are located in the drainages of Towinock and Spray creeks in the Lillooet Range, about 16 km southerly of the town of Lillooet in NTS division 92 I/12W. The center of the claims lies at 50°32'N latitude and 121°53'W longitude. See index map (Map 1).

### Access

Rugged terrain renders access by land impractical, although the Texas Creek road along the Fraser River lies only 4.5 km to the northeast of the center of the claims. Access by helicopter is the most practical route, and several natural landing sites exist on the claims.

### Topography and vegetation

The claims cover a series of barren ridges rising up to 8000' (2200 m), and intervening valleys with alpine meadows. The lower elevations of the northern and eastern portions of the claims are well treed with fir and spruce. Steep slopes are very common and highly fractured and loose rock makes these slopes inaccessible for



Transverse Mercator Projection  
 North American Datum 1927  
 Contour Interval 500 feet  
 Elevations in feet above Mean Sea Level

Projection Transverse de Mercator  
 Réseau géodésique nord-américain unifié (1927)  
 Equidistance des courbes: 500 pieds  
 Élévations en pieds au-dessus du niveau moyen de la mer

# ASHCROFT

## BRITISH COLUMBIA

WEST OF SIXTH MERIDIAN - OUEST DU SIXIÈME MÉRIDIEN

MAP 1

Page 2

Scale 1:250,000 Échelle



mapping and sampling.

Claims

The mineral claims covered by this report are described as follows:

<u>Claim Name</u>	<u>Number of units</u>	<u>Tag number</u>	<u>Record number</u>	<u>Date of record</u>
TOW 1	20	38394	635 (7)	July 11, 1978
TOW 2	20	38395	647 (7)	July 31, 1978
TOW 3	6	48131	688 (7)	October 6, 1978
TOW 4	6	48132	689 (7)	October 6, 1978

Refer to Map 2 for relative positions of the claims.

These claims are all owned by Duval Mining Ltd., Free Miners Certificate number 168696, and the work described in this report was performed by Duval International Corporation.

Old claim posts found on the property indicate that it has been staked at least twice before. Although there is little record of work done, it appears that most exploration took place during the late 1960's when the claims were owned by Terrence Toop. Duval International Corp. is currently exploring the claims to determine their molybdenum potential. Work done by Duval in 1978 has previously been reported by Victor Hollister.

WORK DONE

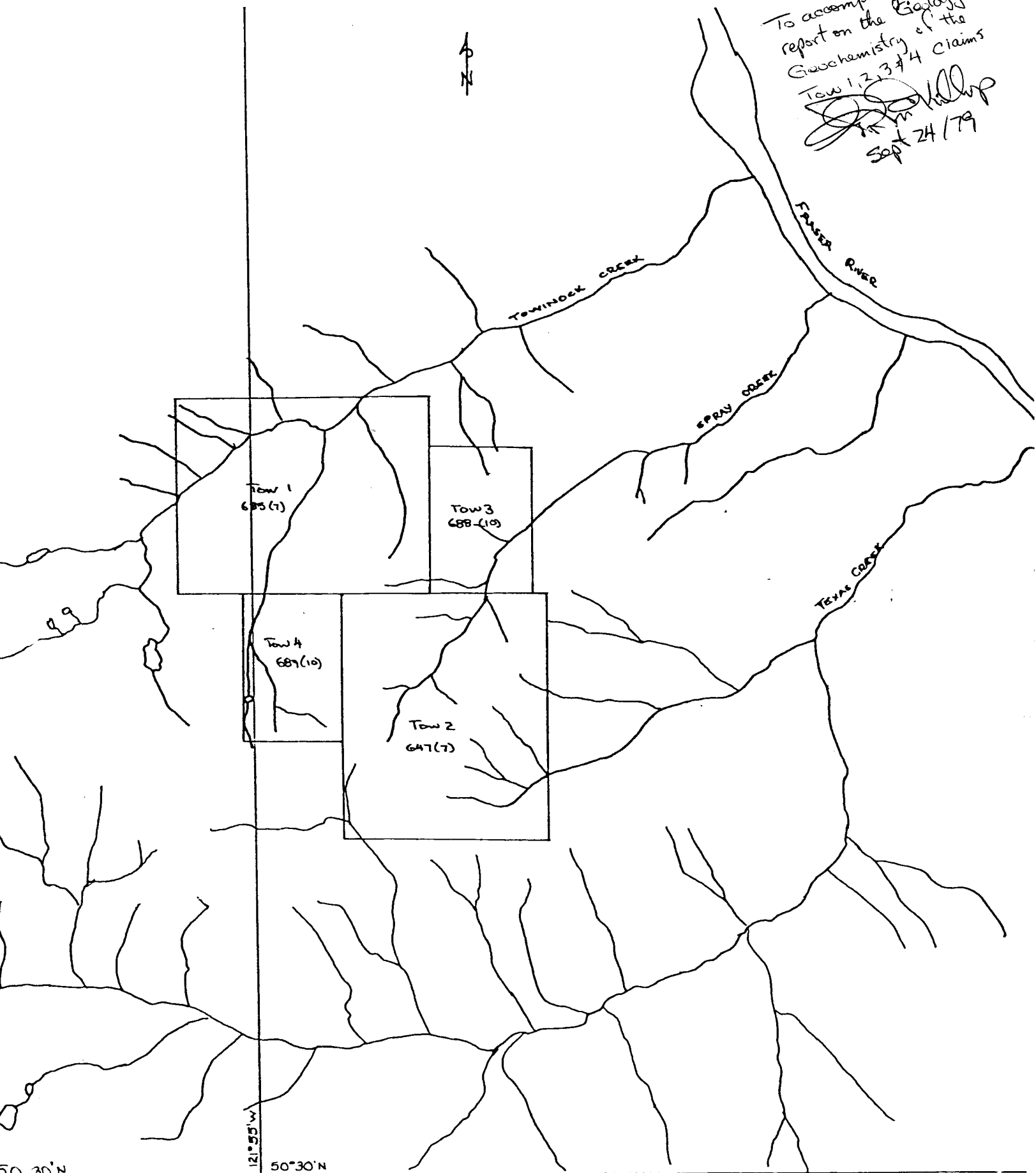
Work was performed on the TOW claims over three periods during July and August of 1979:

July 24 to July 26 - Gregory McKillop and Michael Tippet camped on the claims while mapping and sampling the northern quartz diorite and the Spray Creek Basin.

August 2 and 3 - Gregory McKillop and Rudolph Durfeld mapped and

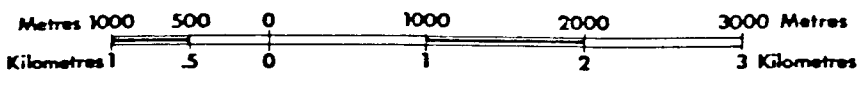
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To accompany a  
report on the Geology and  
Geochemistry of the  
Tow 1, 2, 3 & 4 Claims  
*[Signature]*  
Sept 24/79



N.T.S. 92 I / 12 W  
LILLOET MINING DIVISION

TOW CLAIMS  
LOCATION MAP



1:50,000



sampled the northern quartz diorite body.

August 7 and 8 - Gregory McKillop, Rudolph Durfeld, Catherine Capell and Douglas Oneschuk mapped, sampled and prospected previously un-mapped areas on the claim group.

### Geological Survey

Geological mapping, at a scale of 1:10,000, was completed in accessible areas missed during the 1978 preliminary mapping. In addition, much of the area mapped in 1978 was re-mapped to better define known areas of mineralization. 1979 mapping include most of the 1300 hectares covered by the TOW claims.

### Geochemical Survey

During 1979 the following samples were collected on and immediately adjacent to the claims:

Rock chip samples - 91  
soil samples - 10  
silt samples - 19.

These samples were all analysed for Cu, Pb, Zn and Mo. In addition, most samples were also analysed for W and some were analysed for Ag and Au. Pulps from the 62 rock chip samples collected in 1978 were analysed for Cu.

### GEOLOGY

The geology of the TOW claims can briefly be described as a series of four small quartz diorite stocks which intrude a well faulted sequence of metasediments and metavolcanics. Late stage dacite dykes, possibly related to the quartz diorite, are seen to cut both the quartz diorite and the country rock. Mineralization, consisting primarily of molybdenite in quartz veins and on fractures,

.../...

is found in the quartz diorite and adjacent bleached sediments. Map 3 describes the geology.

#### Metasediments and metavolcanics

No attempt was made to differentiate this unit for the 1:10,000 scale mapping. The unit consists mainly of argillite with minor limestone and conglomerate, andesite flows, felsic tuffs and related phyllites and schists. The argillite is quite variable with bedding ranging from several millimeters thick to several meters. Graded bedding was seen occasionally and gave conflicting evidence of tops. Little limestone was seen in place, although limestone float is not uncommon. Limy argillite was also noted on the ridge between the forks of Towinock Creek.

The conglomerate consists of pebbles to cobbles, generally flattened, in a fine-grained dark matrix.

Andesite flows occur interspersed erratically with the sediments. One andesite dyke was also noted. There is some indication that the relative amount of andesite increases at lower elevations.

Felsic tuffs occur in several locations in the valley of Spray Creek. They are generally slightly foliated and carry limonite on fractures. The tuff is not thought to be very extensive.

As a whole the stratified rocks are slightly metamorphosed, with grade of metamorphism appearing to be greater on the ridge tops. This anomalous situation may be due to thrust faulting, but no other evidence for thrusting was noted.

#### Intrusive rocks

Five bodies of biotite quartz diorite are known on the claims. The largest or north body appears to have an irregular tabular shape, northwest strike, and moderate southwest dip. The southernmost

three bodies are not as well defined and their shapes are not known. However, the three bodies line up along a trend very similar to the assumed strike of the northern body. At depth they may join to form tabular, or at least elongate, shape similar to the northern body.

A very small occurrence of quartz diorite observed on the west side of Spray Creek, above the helicopter site indicated on the geology map, is interpreted as a dyke. Abundant quartz diorite float was found on the ridge in the south central area of TOW 2, but the source was not identified.

The quartz diorite is fairly consistent in composition, containing plagioclase, quartz, biotite and hornblende. Both granitic and porphyritic textures were observed.

Fine-grained dacite dykes were observed cutting all other rock types. The dominant trend is northeasterly, but other trends are also seen. The dacite is similar in composition to the quartz diorite, but with hornblende more common than biotite. The emplacement of the dacite appears to have been structurally controlled as dyke swarms commonly occur parallel to the major faults on the property.

#### Alteration

Secondary biotite, sericite and clays were noted in the quartz diorite. These alteration minerals occur erratically with fault control being likely for the sericite and clays. The zoning pattern previously reported by Hollister was not confirmed.

Alteration in the northern quartz diorite body appears to be related to a northwesterly trending set of quartz veins. Alteration of the quartz diorite decreases with distance from the veins.

The southernmost quartz diorite body is poorly exposed due to its recessive weathering nature caused by moderate sericite and

clay alteration and strong fracturing.

The other exposures of quartz diorite are for the most part relatively fresh.

The metasediments and metavolcanics are often, but not always, bleached near the contact with the quartz diorite. This bleaching is due to the destruction of mafic minerals, the development of sericite and clays, and the introduction of pyrite or pyrrhotite. Bleaching is most prominent near the contacts of the northernmost and southernmost quartz diorite bodies. Some hornfelsing was noted at the contacts of the central quartz diorite bodies.

### Structure

The most prominent structural feature of the TOW claims is the extensive faulting. Some of the faults are readily discernible from the air as they form steep sided gullies and abrupt cliffs of sheared rock, accented by sub-parallel dyke swarms. Smaller faults were noted while mapping.

Most of the faulting follows a northwesterly trend, but northeasterly, northerly and easterly trends are also present. Wherever determined, the faults exhibited right hand displacement. The age of the faulting is uncertain, but at least some post-dacite movement has shattered the dyke swarms along the major northwest trending fault (named the TOW fault by Hollister).

In the northern quartz diorite body quartz veining is often sub-parallel to faulting, although many other directions were identified. In addition to quartz the veins carry, in decreasing order of abundance; pyrrhotite, pyrite, molybdenite, and chalcopyrite. Veins vary from 0.3 cm to almost 1 m in width. In areas of intense veining quartz micro-veinlets are common and may carry sulfides.

Bedding attitudes were determined in a number of locations over the claims. Attitudes were very erratic, as might be expected in a highly faulted terrane.

The increase in metamorphic grade at higher elevations, as discussed earlier, is an indication that thrust faulting may also be present in the claims area.

### Mineralization

Molybdenite mineralization occurs as disseminations, in quartz veins, and as fracture coatings in the quartz diorite and bleached country rocks. The main area of molybdenite mineralization (north zone) is in the northern quartz diorite. Molybdenite is also found in the southernmost quartz diorite (south zone). Mapping and prospecting to date indicate that the other intrusions are practically barren.

Very rugged terrain in the north zone has made evaluation difficult. A helicopter landing site was constructed at the base of the talus in the canyon of the south fork of Towinock Creek and traverses have been made up the cliffs on either side of the creek. These traverses have outlined a northwesterly trending zone of more intense quartz (-sulfide) veining within the quartz diorite and adjacent bleached country rock.

Pyrrhotite and chalcopyrite are common associations with the molybdenite in quartz veins, but are less common in the higher grade zones. Disseminated and fracture plane coating pyrrhotite and lesser pyrite are also common. Ferrimolybdite is common where veins are weathered.

Molybdenite occurs as disseminations and in small quartz veins in the south zone. The zone is poorly exposed and is not believed

to be very large.

Scheelite has been recovered by panning stream gravel collected from Towinock Creek below the north zone. No scheelite was recovered from samples collected above the north zone. However, no scheelite was identified in outcrop in the north zone.

#### GEOCHEMISTRY

Geochemical sampling was carried out in conjunction with mapping and prospecting traverses. As much of the claim area is inaccessible due to rugged terrain, these traverses were not laid out in a systematic grid pattern. Sample locations were determined variously by compass and topofil, pacing or topography and altimeter. Messrs. Durfeld, McKillop, Oneschuk and Tippett and Miss Capell all participated in the sampling. As detailed earlier, samples collected this year consisted of 91 rock chip samples, 10 soil samples and 19 silt samples obtained on or adjacent to the claims. Some or all of the samples were analysed for Cu, Pb, Zn, Mo, W, Ag and Au. 62 samples collected last year were analysed for Cu. Map 4 indicates the locations of all samples collected from the claims to date.

Most rock chip samples were collected from outcrop over a minimum distance of 10 m. Most samples exceeded 2 kg in weight. Sample locations were marked with plastic flagging tape on which the sample number was written. Samples were transported in 12" x 18" plastic sample bags.

Soil samples for the most part were actually talus fines samples as soil development is very poor. Soils were collected at depths ranging from 15 cm to 30 cm and were transported in waterproof kraft sample envelopes.

Silt samples were collected from active streams and con-

sisted of coarse sand to fine silt. Samples were transported in waterproof kraft sample envelopes.

Analyses

All samples were shipped to Min-En Laboratories Ltd. at 705 W. 15th Street, North Vancouver, B.C., V7M 1T2, for preparation and analysis. The lab reported that after rock samples were crushed to -200 mesh and soil and silt samples dried and sieved to -80 mesh, they were analysed using the following procedures:

<u>Element</u>	<u>Digestion</u>	<u>Analysis</u>
Mo	Nitric, perchloric	Atomic absorption
Cu	Nitric, perchloric	Atomic absorption
Pb	Nitric, perchloric	Atomic absorption
Zn	Nitric, perchloric	Atomic absorption
W	Carbonate flux fusion	Colorimetric extraction with dithiol
Ag	Nitric, perchloric	Atomic absorption
Au	Aqua Regia	Atomic absorption

Check analyses were run on the Mo content of samples MT-1 through MT-8. The pulps of these samples were submitted to Bondar-Clegg and Company Ltd. and Vangeochem Lab. Ltd., both of North Vancouver, and then the pulps were resubmitted to Min-En. These results are tabulated below in ppm Mo:

<u>Sample Number</u>	<u>Min-En</u> (Initial)	<u>Bondar-Clegg</u>	<u>Vangeochem</u>	<u>Min-En</u> (Check)
MT-1	23	35	23	24
2	132	190	130	156
3	37	45	39	43
4	156	270	200	250
5	40	57	52	58

.../...

<u>Sample Number</u>	<u>Min-En</u> (Initial)	<u>Bondar-Clegg</u>	<u>Vangeochem</u>	<u>Min-En</u> (Check)
MT-6	12	15	15	13
7	2	3	6	3
8	3	9	6	7

Bondar-Clegg used a hot aqua regia extraction and atomic absorption analysis, and Vangeochem used a similar procedure with addition of an Al standard during digestion.

It can readily be seen that the three labs correlate as far as determining the relative amounts of Mo in each sample, but they differ somewhat as to the absolute value of molybdenum content. It may be assumed that the values reported on the Mo geochemistry map in this report (Min-En initial results) are somewhat low.

There was also some difficulty with analyses for W. Min-En Labs changed the strength of its digestion reagents between analysing 1978 samples and 1979 samples. As a result it is impractical to compare values obtained this year with last year's values. Multiplying the 1978 values by a correction factor of 2 makes the comparison somewhat more useful, but still not wholly satisfactory.

### Mo Geochemistry

All of the 1979 samples were analysed for Mo. The results of these analyses are plotted on Map 5. This map shows two areas of anomalous Mo in rock, the previously described north and south zones. In the north zone the geochemistry outlines an area of at least 20 hectares with Mo in rock exceeding 25 ppm. Values range up to 1025 ppm and values in excess of 100 ppm are common. This zone is open to the northwest and southeast.

Sample density in the south zone is poor, but it appears

.../...



that Mo in rock exceeds 25 ppm over an area of perhaps 10 hectares. Of the five samples yielding values over 25 ppm Mo, two were over 100 ppm and the highest was 120 ppm Mo. More sampling is required in this area. Highly anomalous stream sediments were collected at the base of this slope.

Sporadic higher values near the headwaters of Spray Creek should be investigated further as their source has not been identified.

#### W Geochemistry

All but eight of the 1979 samples were analysed for W and the results of the analyses are plotted on Map 6. The change by the laboratory of analytical procedure for W determinations, as described earlier, has made comparisons with 1978 sample results awkward. However, it can safely be said that W content of the samples is everywhere quite low, the highest value being 27 ppm W. Background values (1979) range from 3 to 6 ppm and the areas of higher values are again the north and south intrusive zones, with the north zone being most anomalous.

#### Zn Geochemistry

The results of Zn analyses on all samples collected in 1979 are plotted on Map 7. This map demonstrates that the north zone is relatively depleted in Zn, with most values being less than 100 ppm Zn. Soil and sediment analyses are almost everywhere higher than nearby rock analyses, indicating that Zn is concentrated in the weathering cycle.

#### Cu Geochemistry

All 1979 samples and the pulps of 62 rock samples collected in 1978 were analysed for Cu. The results of these analyses are plotted

on Map 8. This map shows Cu anomalism associated with the north zone quartz diorite where copper values reach 128 ppm. Background values are less than 50 ppm Cu.

#### Pb Geochemistry

The results of Pb analyses for all 1979 samples are plotted on Map 9. This map indicates that there is very little variation in Pb content over the claim area, the highest value of Pb in rock being 33 ppm and the lowest being 3 ppm. Most values lie in the range of 8 ppm to 15 ppm Pb.

#### Ag and Au Geochemistry

Only 19 samples, all from the main zone, were analysed for Ag and Au. The results of these analyses are plotted on Maps 10 and 11, respectively. These maps indicate low values for both metals. The highest Ag value is 0.9 ppm Ag. The highest Au value is 550 ppb Au and the next highest value is 55 ppb Au. Most samples returned values of 5 ppb or less.

### DISCUSSION of RESULTS

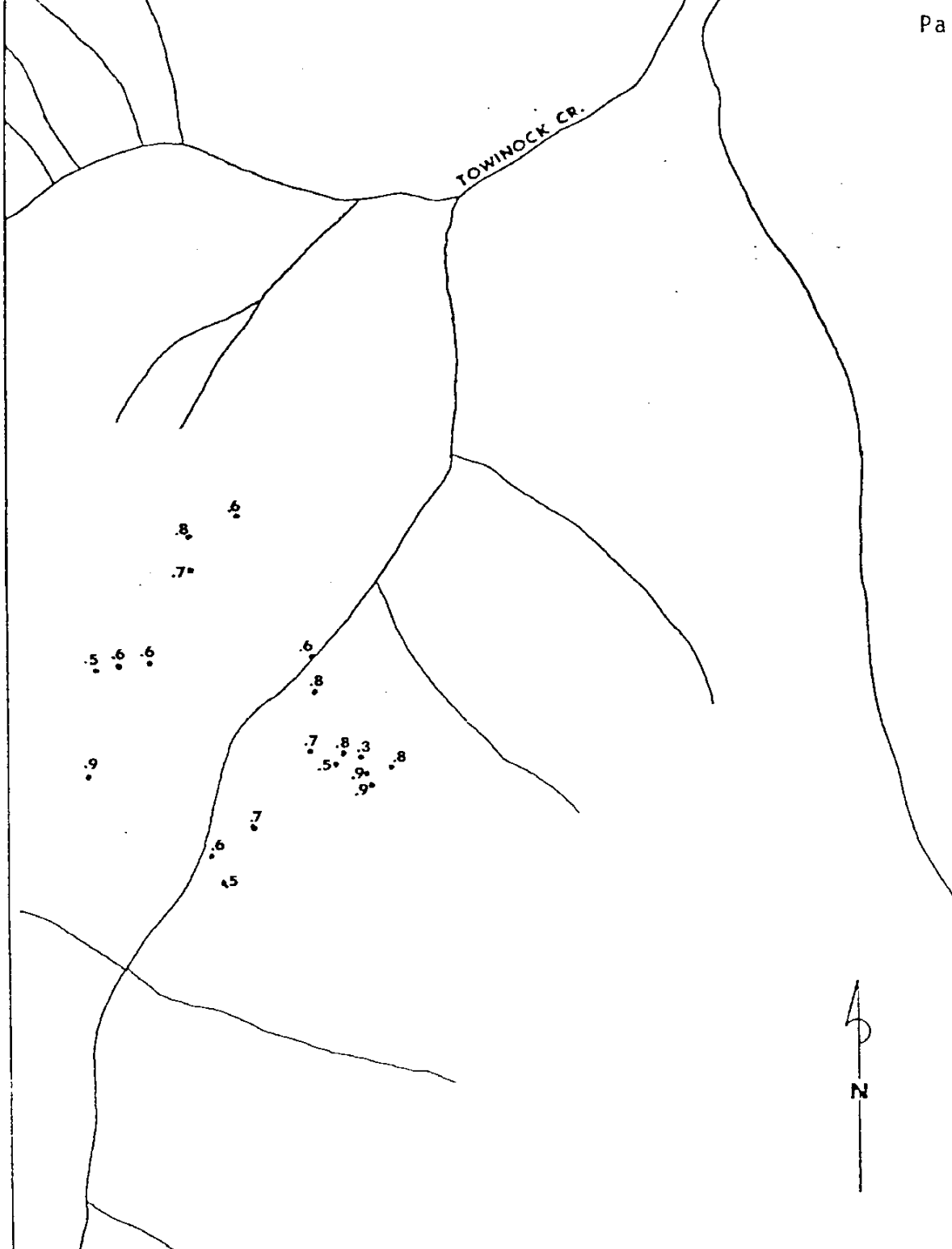
#### Geology

Mapping and prospecting to date has outlined two areas of interest on the TOW claims: the north zone and the south zone. The north zone is the larger of the two and has the best showings, but rugged topography has made it difficult to evaluate.

In both cases mineralization consists of molybdenite occurring as disseminations and fracture coatings and in quartz veins with variable amounts of pyrrhotite and chalcopyrite. The veins occur in quartz diorite and bleached country rock near the quartz diorite con-

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TOWINOCK CR.



LCP  
TOW 1

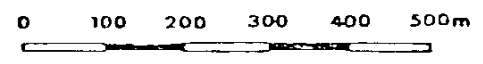
LCP  
TOW 4

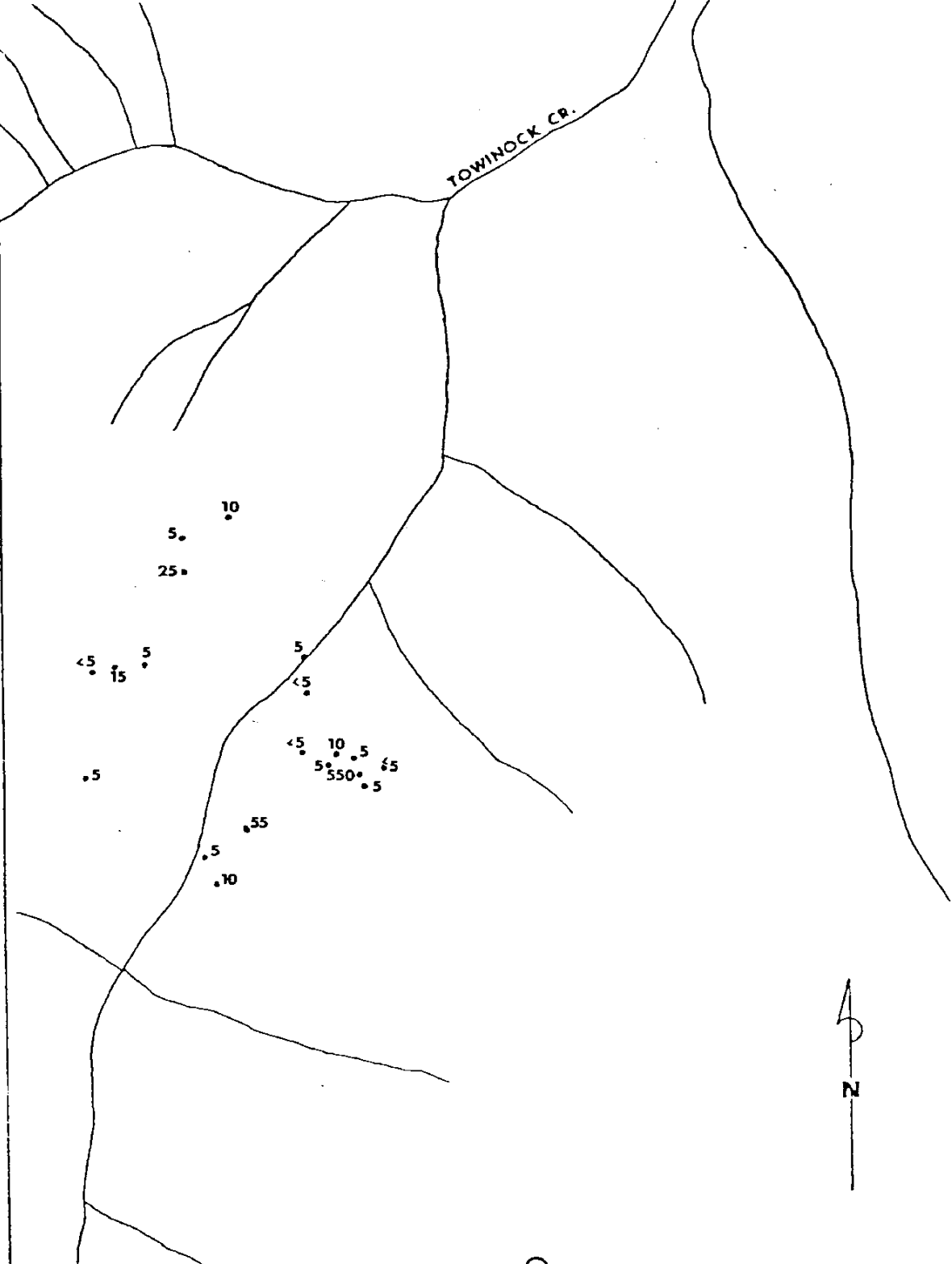
To accompany a report on  
the Geology and Geochemistry of  
the Tow 1, 2, 3 & 4 claims

*William Killip*  
Sept 24 / 19

TOW CLAIMS  
NORTH ZONE  
Ag Geochemistry (ppm)

MAP # 10





LCP  
TOW 1

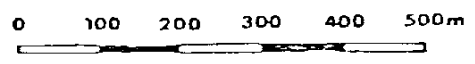
To accompany a report on  
the Geology and Geochemistry  
of the Towinock 1, 2, 3 & 4 claims.

*[Signature]*  
Sept 24/79

LCP  
TOW 4

TOW CLAIMS  
NORTH ZONE  
Au Geochemistry (ppb)

MAP # 11



tact.

The north mineralized zone follows a northwest trend sub-parallel to the trend of the quartz diorite. This trend is thought to represent the intersection of a major structure with the quartz diorite. The shape of the south mineralized zone is not well known.

### Geochemistry

Analyses were made of Mo, W, Zn, Cu, Pb, Ag and Au in rocks on the TOW claims. The Mo, W, Zn, and Cu analyses proved to be the most useful. The north zone has been shown to be anomalous in Mo, W and Cu, and deficient in Zn. The south zone is anomalous in Mo and W. Insufficient analyses for Ag and Au limit their usefulness and prevent the determination of background or anomalism.

The north zone contains an area, open at both ends, of approximately 20 hectares where rock Mo content exceeds 25 ppm. Values range up to 1025 ppm Mo.

The south zone was not well sampled but there are indications of an area of about 10 hectares where rock Mo content exceeds 25 ppm Mo.

### RECOMMENDATIONS

To date, the evaluation of this prospect has been encouraging. Additional sampling and mapping should be completed in the north zone to define the northwest and southeast extent of mineralization. The south zone warrants additional mapping and sampling as well because the large area of altered sediments associated with this zone may indicate the presence at shallow depth of a mineralized intrusion. However, the north zone should receive highest priority.

Diamond drilling should be considered in the near future

.../...

to test mineralization at depth in the north zone. It should be acknowledged at this point that diamond drilling will be extremely difficult due to very precipitous terrain.

A handwritten signature in black ink, appearing to read 'G. R. McKillop', with a large, stylized flourish above the name.

G. R. McKillop,  
Geologist.

Sept 24/79



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FINANCIAL STATEMENT

Analytical Costs

Min-En Labs. Ltd.

- July 31: 8 rock samples, prep. and analyses  
for Mo, Cu, Pb, Zn.....\$ 41.60
- Aug. 09: 19 rock samples, prep. and analyses  
for Mo, Cu, Pb, Zn, Ag, Au, W.....\$ 258.40
- Aug. 15: 64 rock samples, 19 silt samples, 10 soil  
samples, prep. and analyses for Mo, Cu,  
Pb, Zn and W.....\$ 832.35

Bondar-Clegg and Co. Ltd.

- Aug. 17: 8 pulps for Mo analysis.....\$ 10.80

Vangeochem Lab. Ltd.

- Aug. 27: 8 pulps for Mo analysis.....\$ 12.00

Helicopter Costs

Okanagan Helicopters

- July 24: 3.9 hrs @ \$350/hr. + fuel.....\$1,464.90
  - July 26: 1.7 hrs @ \$350/hr. + fuel.....\$ 635.70
  - Aug. 01: 2.1 hrs (
  - Aug. 03: 1.6 hrs ( 11.5 hrs @
  - Aug. 07: 3.8 hrs ( \$350/hr. + fuel
  - Aug. 08: 4.0 hrs (
- \$4,338.50

Salaries

- M. C. Tippett 3 days @ \$150/day.....\$ 450.00
- R. Durfeld 4 days @ \$135/day.....\$ 540.00
- G. R. McKillop 7 days (fieldwork) @ \$110/day.....\$ 770.00
- 4 days (office) @ \$110/day.....\$ 440.00
- D. Oneschuk 2 days @ \$53/day.....\$ 106.00
- C. C. Capell 2 days @ \$55/day.....\$ 110.00

.../...

Camp Expenses

McKillop and Tippett	3 days @ \$20/man day.....\$	120.00
McKillop and Durfeld	2 days @ \$20/man day.....\$	80.00

Report reproduction, typing \$ 200.00

TOTAL.....\$10,410.25.

Certified Correct,

Date: Sept 24 / 79



G. R. McKillop.





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STATEMENTS of QUALIFICATIONS

TO WHOM IT MAY CONCERN

Douglas Oneschuk had, at the time of his work on the TOW claims, completed 3 years of a four year course of studies leading to a Bachelor of Science degree at McMaster University at Hamilton, Ontario. He had one field season of experience with the Ontario Geological Survey prior to working for Duval International Corp.

He is a capable field assistant, well trained in geochemical sampling techniques, prospecting, and reconnaissance mapping.

Sept 24/79

G. R. McKillop,  
District Geologist,  
Duval International Corp.



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TO WHOM IT MAY CONCERN

Miss Catherine C. Capell was employed by Duval International Corporation as a field assistant after completion of her third year of studies towards a Bachelor of Science degree in Geology at McMaster University in Hamilton, Ontario. She had one field season of geological experience with the Ontario Geological Survey prior to working for Duval International Corp.

She is a capable field assistant, well trained in geochemical sampling techniques, prospecting, and reconnaissance mapping.



G. R. McKillop,

Sept 24/79

District Geologist,  
Duval International Corp.



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TO WHOM IT MAY CONCERN

Rudolph Durfeld graduated with a B.Sc. degree in Geology from the University of British Columbia in 1972. Prior to graduation he worked two field seasons for mining companies. Since graduation he has spent six years employed as a geologist, primarily with Amoco Canada Petroleum Co. Ltd., and Norcen Energy Resources. At the time field work was conducted on the TOW claims in 1979 he was working as a geologist on a contract basis for Duval International Corp.

A handwritten signature in black ink, appearing to read "G. R. McKillop".

Sept 24/79

G. R. McKillop,  
District Geologist,  
Duval International Corp.



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TO WHOM IT MAY CONCERN

Michael C. Tippet graduated with a Bachelor of Science degree from Stanford University in 1962 and obtained a Master of Science degree from the University of Nevada at Reno in 1967. He has been employed by Duval Corporation as a geologist since 1963 and is currently Director of International Exploration for Duval.

G. R. McKillop,

District Geologist,  
Duval International Corp.

Sept 24/79



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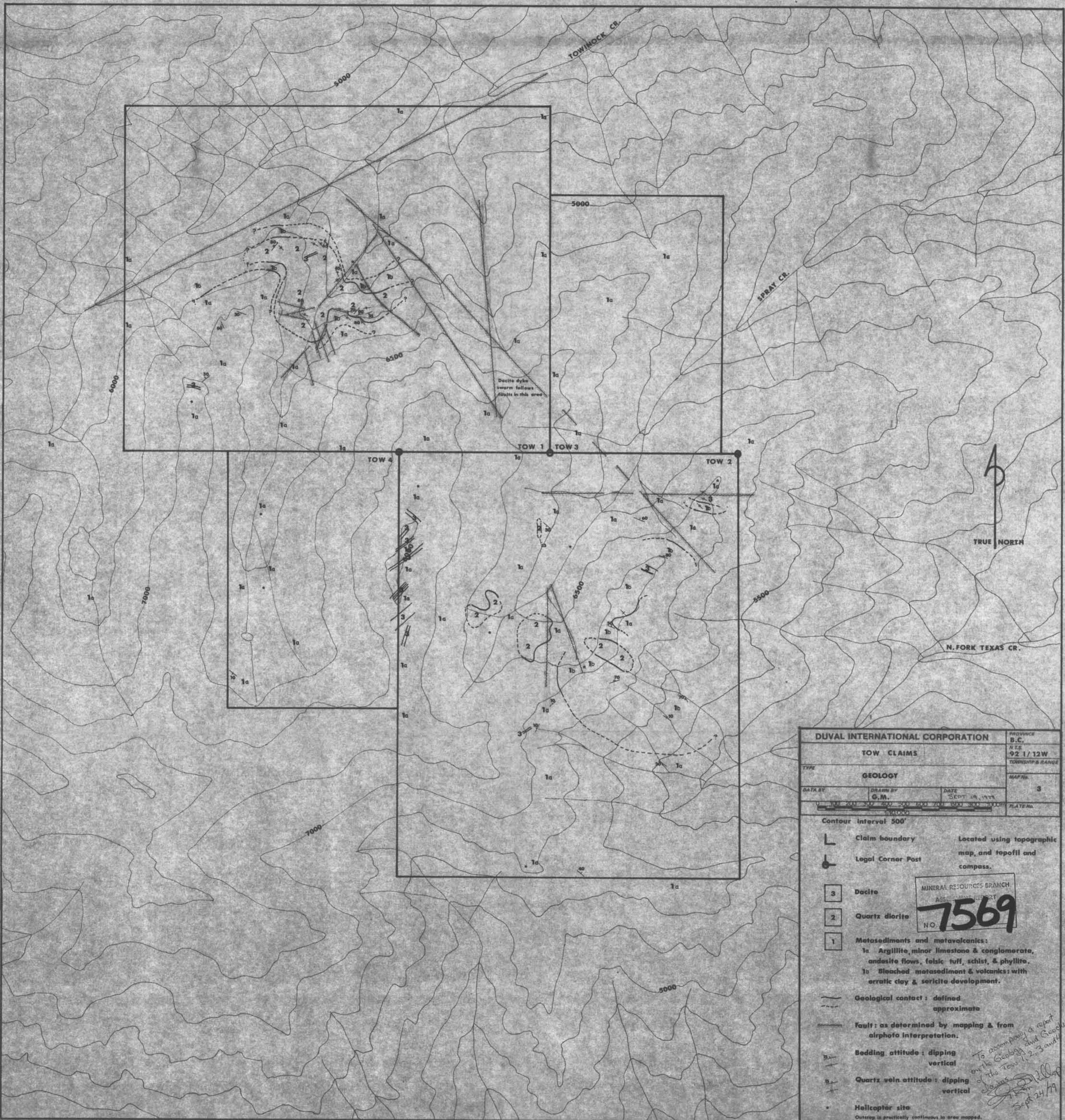
TO WHOM IT MAY CONCERN

I, Gregory R. McKillop, graduated from the University of British Columbia with a Bachelor of Science degree in Honours Geology in 1973. Prior to graduation I worked for five field seasons for various mining companies in British Columbia. Since graduation I have been employed as a geologist for Duval International Corporation.

G. R. McKillop,

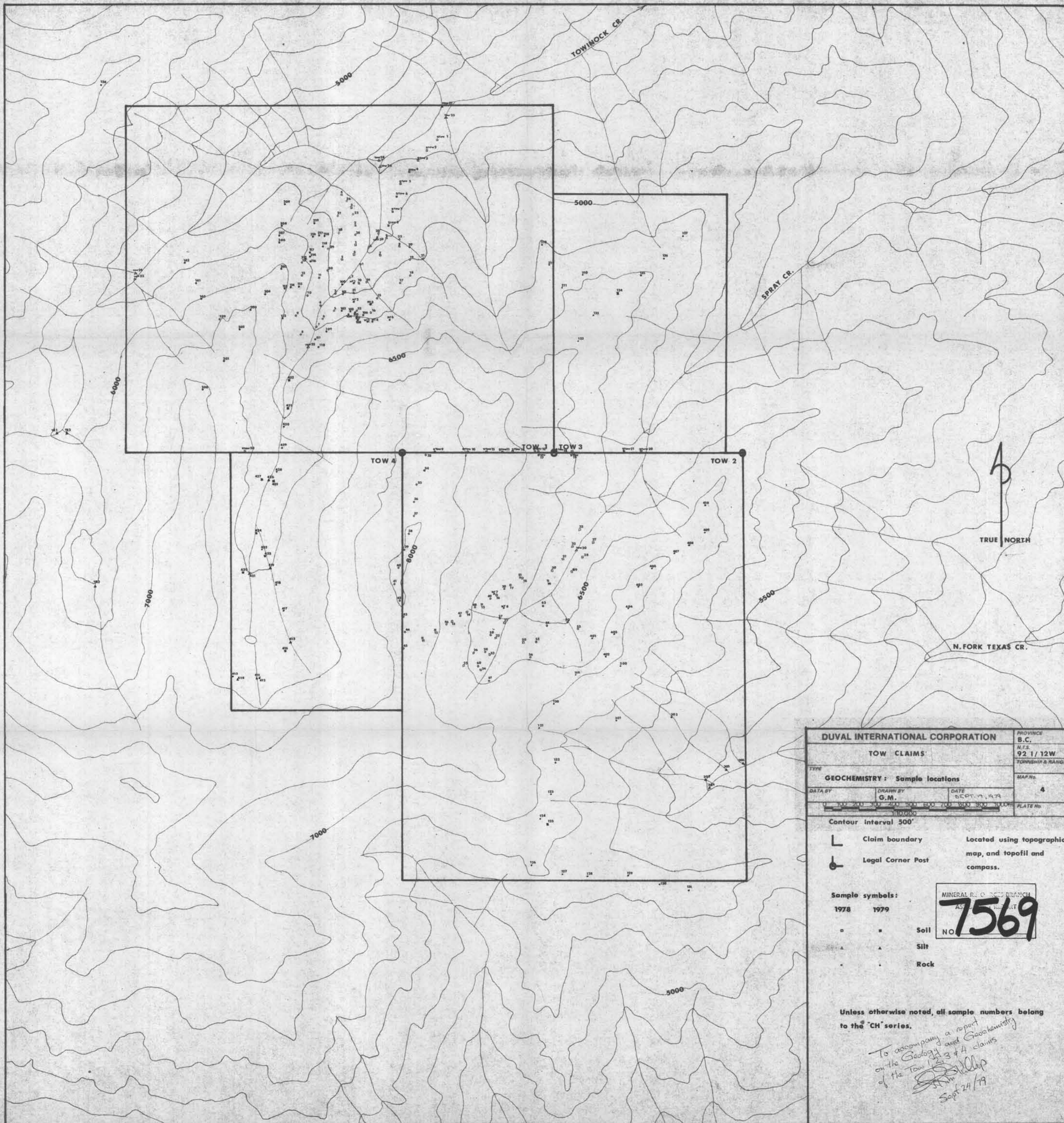
District Geologist,  
Duval International Corp.

Sept 24 / 79



<b>DUVAL INTERNATIONAL CORPORATION</b>			PROVINCE B.C.
<b>TOW CLAIMS</b>			ATS 92 1/12W
TYPE			TOWNSHIP & RANGE
<b>GEOLOGY</b>			MAP No. 3
DATE BY G.M.	DRAWN BY G.M.	DATE SEPT 19, 1978	PLATE No.
0 100 200 300 400 500 600 700 800 900 1000 FEET REGION			
Contour Interval 500'			
	Claim boundary	Located using topographic map and topofil and compass.	
	Legal Corner Post		
	Dacite	MINERAL RESOURCES BRANCH ASSESSMENT REPORT <b>7569</b> NO.	
	Quartz diorite		
	Metasediments and metavolcanics:		
	1a Argillite, minor limestone & conglomerate, andesite flows, felsic tuff, schist, & phyllite.		
	1b Bleached metasediment & volcanics; with erratic clay & sericite development.		
	Geological contact: defined		
	approximate		
	Fault: as determined by mapping & from airphoto interpretation.		
	Bedding attitude: dipping		
	vertical		
	Quartz vein attitude: dipping		
	vertical		
	Helicopter site		
	Outcrop is practically continuous in area mapped.		

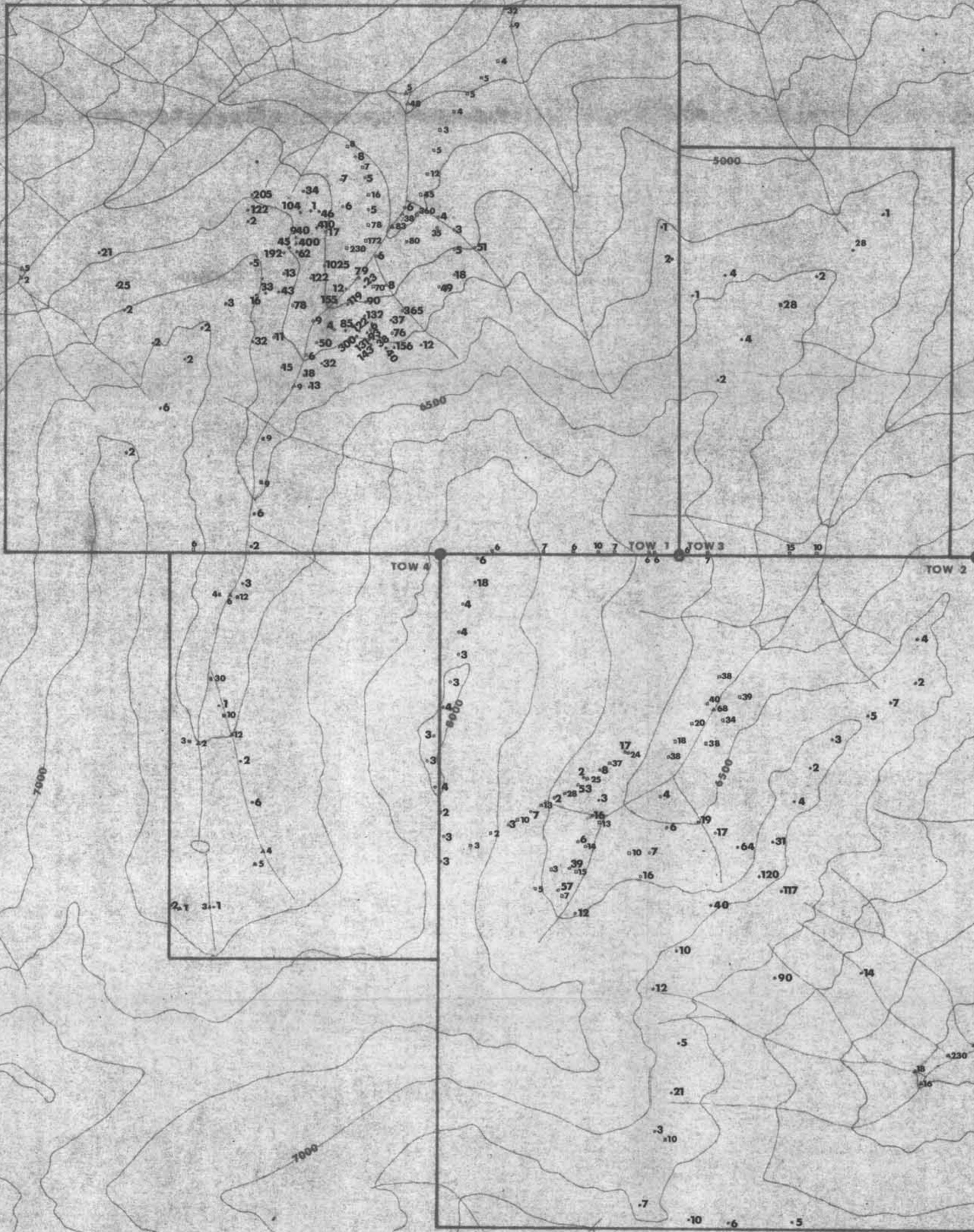
*To accompany report on the Geology and Geochemistry of the Tows 1, 2, 3 and 4*  
*Sept 24/79*



<b>DUVAL INTERNATIONAL CORPORATION</b>			PROVINCE B.C.						
<b>TOW CLAIMS</b>			M.T.S. 92 1 / 12W						
TYPE <b>GEOCHEMISTRY: Sample locations</b>			TOWNSHIP & RANGE						
DATA BY	DRAWN BY G.M.	DATE SEPT. 19, 1979	MAP No. 4						
			PLATE No.						
Contour interval 500'									
	Claim boundary	Located using topographic map, and topofil and compass.							
	Legal Corner Post								
Sample symbols:		<table border="1"> <tr> <td colspan="2">MINERAL RESOURCES BRANCH</td> </tr> <tr> <td colspan="2">ASST. REGISTRAR</td> </tr> <tr> <td colspan="2">NO. <b>7569</b></td> </tr> </table>		MINERAL RESOURCES BRANCH		ASST. REGISTRAR		NO. <b>7569</b>	
MINERAL RESOURCES BRANCH									
ASST. REGISTRAR									
NO. <b>7569</b>									
1978	1979								
□	■	Soil							
▲	▲	Silt							
•	•	Rock							

Unless otherwise noted, all sample numbers belong to the "CH" series.

*To accompany a report on the Geology and Geochemistry of the Tows 1, 2, 3 & 4 claims*  
  
 Sept 24/79



DUVAL INTERNATIONAL CORPORATION			PROPERTY B.C.
TOW CLAIMS			12W
GEOCHEMISTRY : Mo (ppm)			5
DATE BY	DRAWN BY	DATE	PLATE NO.
	G.M.	SEPT 19, 1979	

Contour interval 500'

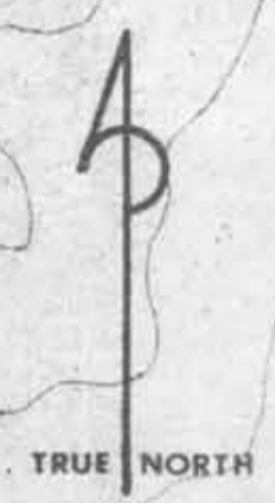
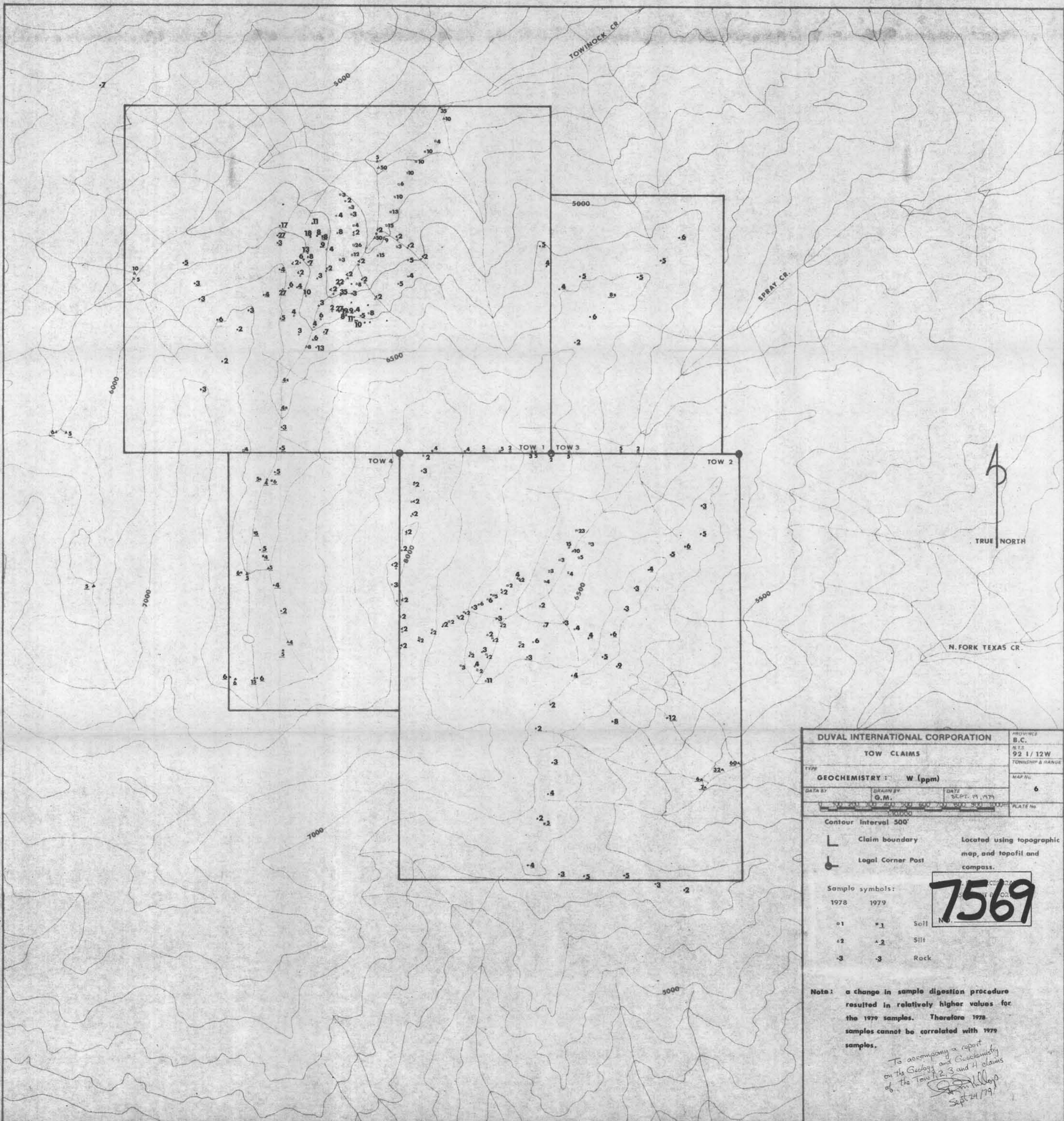
Claim boundary      Located using topographic map and topofil and compass.  
 Legal Corner Post

1978	1979	
07	07	Soil
08	08	Silt
09	09	Rock

MINERAL RESOURCES BRANCH  
 AUSTIN REGION  
**7569**  
 NO.

To accompany a report on the  
 Geology and Geochemistry of  
 the Tow 1, 2, 3 & 4 claims.  
  
 Sept 24/79



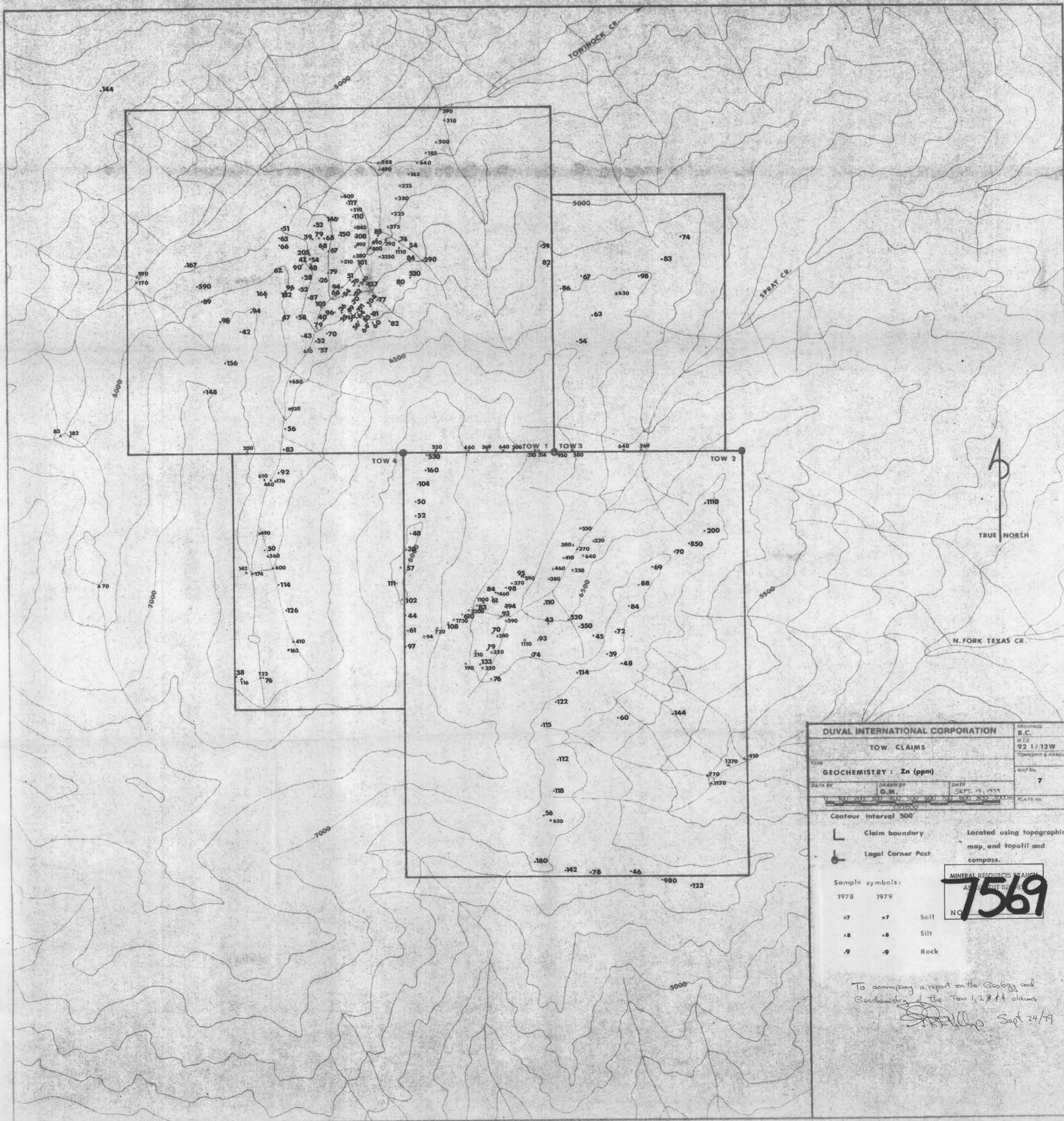


<b>DUVAL INTERNATIONAL CORPORATION</b>		PROVINCE B.C.
<b>TOW CLAIMS</b>		NETS 92 1 / 12W
TYPE <b>GEOCHEMISTRY : W (ppm)</b>		TOWNSHIP & RANGE
DATA BY	DRAWN BY G.M.	DATE SEPT. 19, 1979
		MAP No. 6
Contour Interval 500'		
	Claim boundary	Located using topographic map, and topofil and compass.
	Legal Corner Post	
Sample symbols:		
1978	1979	
01	01	Soil
02	02	Silt
03	03	Rock

7569

**Note:** a change in sample digestion procedure resulted in relatively higher values for the 1979 samples. Therefore 1978 samples cannot be correlated with 1979 samples.

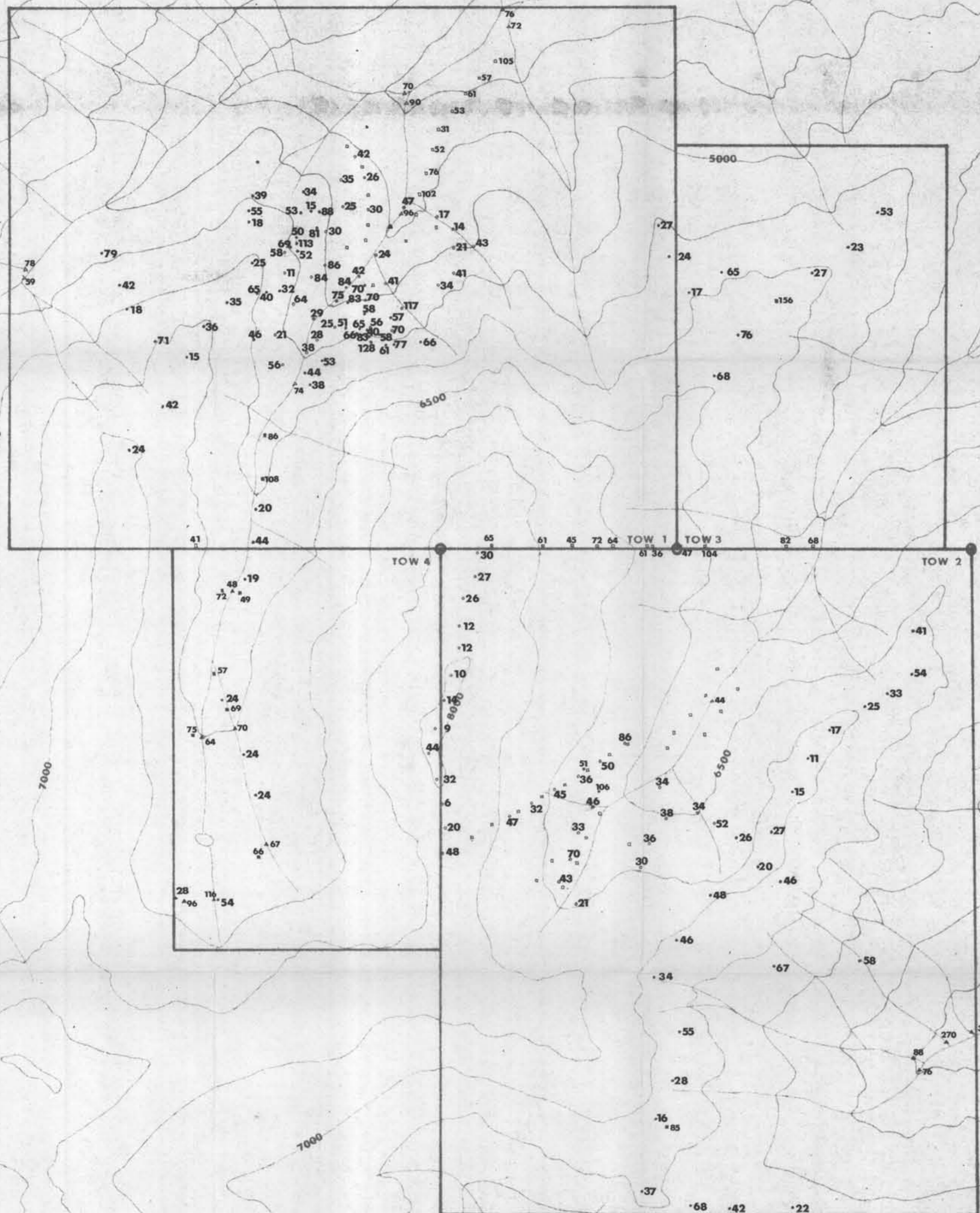
*To accompany a report on the Geology and Geochemistry of the Tows 1, 2, 3 and 4 claims*  
  
 Sept 24/79



DUVAL INTERNATIONAL CORPORATION		PROVINCE
TOW CLAIMS		B.C.
GEOCHEMISTRY: Zn (ppm)		N.T.S.
DATE BY: G.M.		92 1 / 12W
DATE: SEPT. 19, 1979		TOWNSHIP & RANGE
DRAWN BY: G.M.		7
MAP No.		
PLATE No.		
Contour Interval 500'		
L	Claim boundary	Located using topographic map, and topofil and compass.
⊙	Legal Corner Post	
Sample symbols:		
1978	1979	
07	07	Soil
08	08	Silt
09	09	Rock

MINERAL RESOURCES BRANCH  
ASBESTOS REPORT  
**7569**  
NO

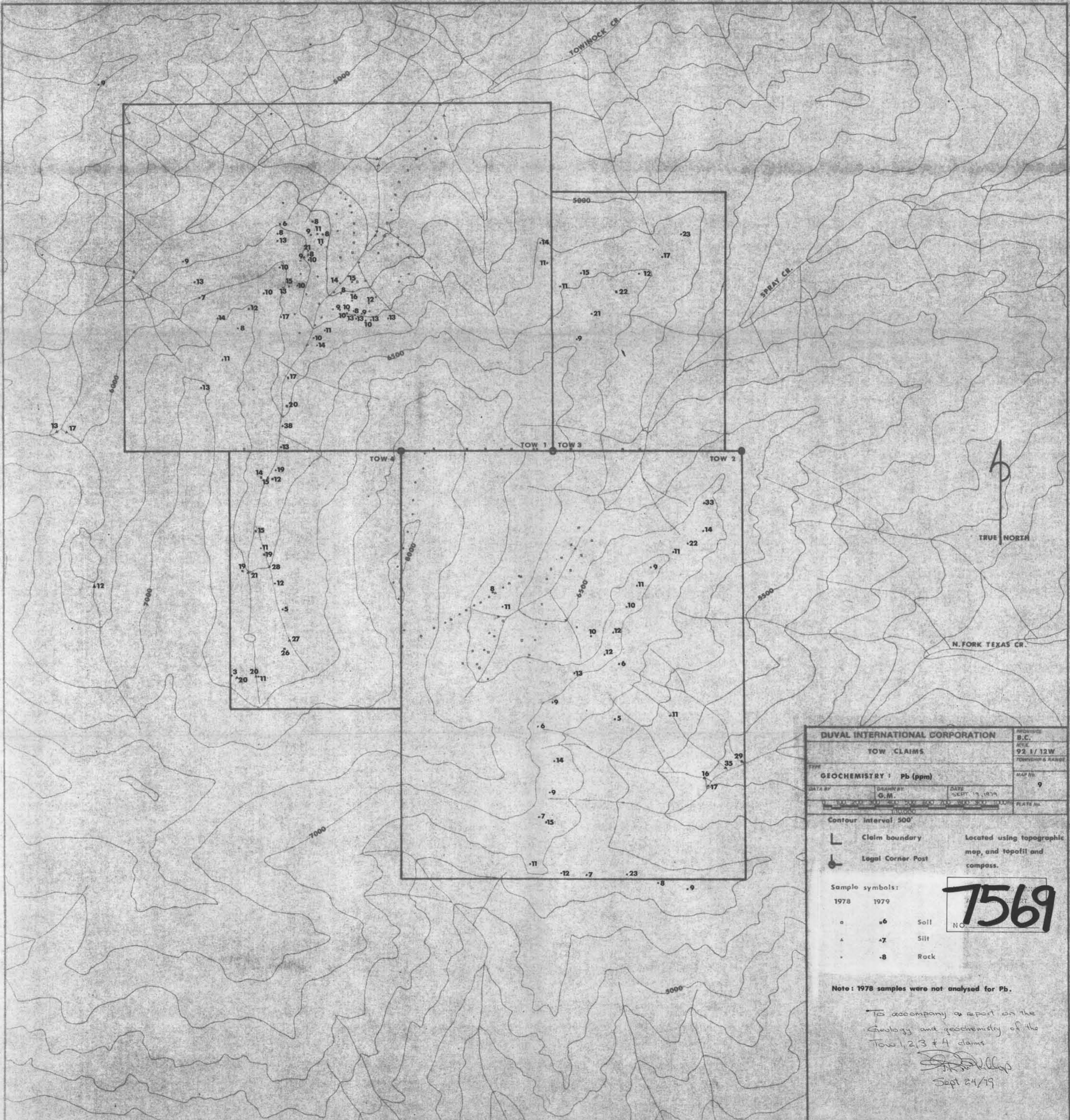
To accompany a report on the Geology and Geochemistry of the Tow 1, 2, 3 & 4 claims  
*[Signature]* Sept 24/79



DUVAL INTERNATIONAL CORPORATION			PROVINCE B.C.
TOW CLAIMS			N.E.S. 92 1/2 W
GEOCHEMISTRY : Cu (ppm)			TOWNSHIP & RANGE
DATA BY	DRAWN BY	DATE	MAP NO.
	G.M.	SEPT. 19, 1979	8
<small>0 100 200 300 400 500 600 700 800 900 1000 FEET</small>			
Contour Interval 500'			
L	Claim boundary	Located using topographic map, and topofil and compass.	
⊙	Legal Corner Post		
Sample symbols:			<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <small>DUVAL INTERNATIONAL CORPORATION ASSESSMENT REPORT</small>  <b>7569</b>  <small>NO.</small> </div>
78	79	Soil	
8	8	Silt	
9	9	Rock	

Note: Most 1978 soil samples were not analysed for Cu.

To accompany a report on the  
Geology and Geochemistry of  
the Tows 1, 2, 3 & 4 claims.  
*[Signature]*  
Sept 24/79



<b>DUVAL INTERNATIONAL CORPORATION</b>		ARIZONA B.C.
<b>TOW CLAIMS</b>		REV. 1/12W
TYPE <b>GEOCHEMISTRY : Pb (ppm)</b>		TOWNSHIP & RANGE
DATA BY	DRAWN BY <b>G.M.</b>	MAP NO. <b>9</b>
DATE SEPT 19, 1979		PLATE NO.
Contour Interval 500'		
	Claim boundary	Located using topographic map, and topofil and compass.
	Legal Corner Post	
Sample symbols:		
1978	1979	
o	.6	Soil
△	.7	Silt
.	.8	Rock

7569

Note: 1978 samples were not analysed for Pb.

To accompany a report on the Geology and geochemistry of the Tow 1, 2, 3 & 4 claims

*[Signature]*  
Sept 24/79