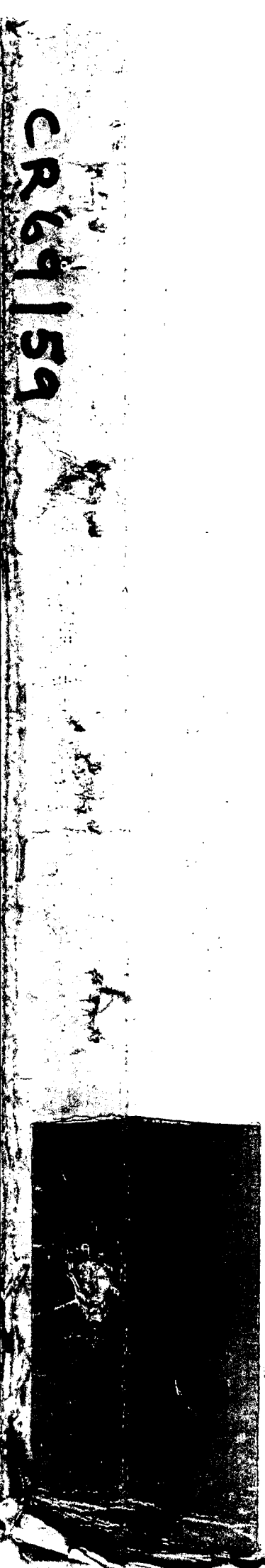

CONTENTS cont.

CONTENTS

LIST OF MAPS

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M26.
M27.

MINERAL DEPOSITS LIMITED

(INCORPORATED IN NEW SOUTH WALES)

81 ASHMORE ROAD, SOUTHPORT
QUEENSLAND, AUSTRALIA 4215

POSTAL ADDRESS: P.O. BOX 44, SOUTHPORT, QUEENSLAND, AUSTRALIA 4215

TELEPHONE: GOLD COAST 39-9055 CABLES: MINDEPOSIT SOUTHPORT QUEENSLAND TELEX: MINDEP AA 40438

DAR/sas

OPEN FILE

8th March, 1972.

Director of Mines,
Mines & Water Resources Branch,
DARWIN, N.T. 5790.

Dear Sir,

re: Prospecting Authority No.2377 - February Report 1972:

During February the wet conditions prevailing in this area did not permit field work.

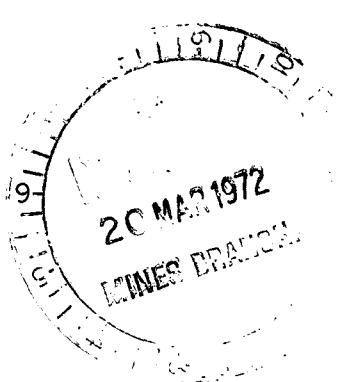
A review of geochemical sampling results continued during February. Attached please find copies of all geochemical results obtained to date. Also attached please find a geological cross section, stratigraphic column, and A. to P. map indicating all barite occurrences and geochemical sample locations. A map showing the geochemical grid of the Thompsons Pocket B Area is currently in preparation and will be submitted when completed.

DAVID A. RHOADES,
MINERAL DEPOSITS LIMITED

For: D. Drake.

David A. Rhoades

c.c. Mr. D. Drake,
Darwin.



AF2377 2625. 32

MINERAL DEPOSITS LIMITED

(INCORPORATED IN NEW SOUTH WALES)
81 ASHMORE ROAD, SOUTHPORT
QUEENSLAND, AUSTRALIA 4215
POSTAL ADDRESS: P.O. BOX 44, SOUTHPORT, QUEENSLAND, AUSTRALIA 4215

TELEPHONE: GOLD COAST 39-9055 CABLES: MINDEPOSIT SOUTHPORT QUEENSLAND TELEX: MINDEP AA.40438

CON/MG A3 August 5, 1970

The Administrator,
Administrative Branch,
Department of Territories,
Mitchell Street,
DARWIN. N.T. 5790

Attention: Mr. Martin Finger
Assistant Administrator

Dear Sir,

RE - DORISVALE BARITES.

This Company has entered into an agreement with Messrs. Drake, Moar and Casey, holders of various Prospecting Authorities and Lease Applications, to conduct prospecting and mining operations on the areas so held.

For the last ten months this Company has carried out a most active prospecting campaign as a result of which we have spent over $35,000 direct expenditure, and have estimated the reserves of barites at 1,415,000 tons. Additional prospecting is expected to increase the reserves. The quality of the barites is excellent and it will be most satisfactory for grinding for oil and gas drilling muds.

The Company is confident of establishing business for the export of run of mine ore from Darwin to Singapore. Also, it believes that there is a good chance of establishing a grinding mill near Darwin for the grinding of barites and its export in a fully processed condition.

4,000 TON SHIPMENT OCTOBER - NOVEMBER, 1970

As the first step in the exploitation of the barites deposits, the Company wishes to mine barites at the Pony Pocket Bore lode and to transport it by road to Pine Creek - a distance of 81 miles. At a location adjacent to the rail at Pine Creek a stockpile will be built up, subsequently railed to Darwin and loaded over the iron ore installation into a charter vessel.

Such a consignment would not only introduce the Northern Territory material to the market but would permit a close

...../2

evaluation of unforeseen mining difficulties and costs.

This consignment has three pre-requisites:-

(a) Ship

We have to obtain a suitable charter and advise the Administration that we wish to proceed.

(b) Road.

The road from Dorisvale Homestead to the Daly River - distance 18.8 miles - contains patches of sand totalling about 3 miles which are only trafficable to light traffic. It is necessary for these sections to be gravelled to carry semi-trailer tippers hauling 25 ton. It is requested that the Department of Works arrange for the necessary repairs on our advice that we have a ship.

The road from Dorisvale Homestead to the Pony Pocket orebody, a distance of 5½ miles, requires grading and attention to creek crossings.

The Company will have this work done at its own expense. To save the added cost of bringing plant to the area, the Company would like to have the work done by the Plant of the Department of Works, or of its Contractor.

(c) Schedule

The Company will advise the Northern Territory Administration not later than Monday, August 10, of its wish to proceed with the first shipment. Should we wish to proceed we would have to start carting not later than Monday, September 7. Our Contractor for mining and carting will be Henry & Walker Pty.Ltd., P.O. Box 1973, Darwin.

On this basis the Department would have three weeks in whichto complete the work. I would appreciate your advice if this is out of the question.

PRODUCTION FROM 1971

The reserves and the market indicate that the annual production of run of mine ore and ground barites will be between 30,000 and 50,000 tons. At the higher figure the life of the deposits will exceed 28 years.

The current price for run of mine barites F.O.B. Darwin is around $A. 20.00. It will be seen that transportation costs from mine to rail at distances varying from 82 miles to 100 miles will control the economics of these orebodies.

...../3

Highly efficient, low cost per ton mile trucking is required and it will be necessary to have roads of a standard which will permit the dry weather operation of road trains comprising a bogie drive truck and two bogie/bogie dogs with a total payload of 70 ton (assuming a load limit of 16 ton per bogie).

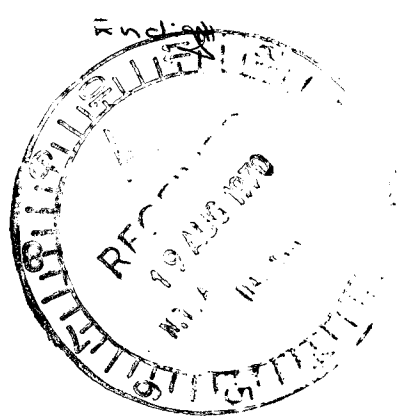
Commonly the crossing of the Daly River is not trafficable for 4½ months during the "Wet." This, coupled with the uncertainty of early and late storms, is a most serious and frustrating difficulty. The Company's needs would be met reasonably if a low level structure was provided so that a flow of 5 feet over the present river bed width could occur before overtopping commenced.

It is requested that the Administration investigate the most satisfactory and economic way of providing a road to the required standard from the Stuart Highway to the Thompson's Pocket turn off, approximately 8 miles south of Dorisvale Homestead. This road has a length of 69 miles and is marked on the accompanying copy of the Fergusson River Sheet.

The Company is doing a feasibility study of the mining, transportation, milling and shipping of barites from the Dorisvale area. A most crucial part of this is the matter of road and transportation costs. Therefore, we request a discussion in Darwin with your appropriate Officers when investigation into the road is complete.

Yours faithfully,
MINERAL DEPOSITS LIMITED

C. O. Newey
Director of Mining



AP.

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MINERAL DEPOSITS LIMITED

(INCORPORATED IN NEW SOUTH WALES)

81 ASHMORE ROAD, SOUTHPORT
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POSTAL ADDRESS: P.O. BOX 44, SOUTHPORT, QUEENSLAND, AUSTRALIA 4215

TELEPHONE: GOLD COAST 39-9055 CABLES: MINDEPOSIT SOUTHPORT QUEENSLAND TELEX: MINDEP AA 40438

CON: DAY

A3

14th May 1971

Mr. M. R. Finger,
Assistant Administrator,
Northern Territory Administration,
Mitchell Street,
DARWIN. N.T. 5790 20.5.71 TPI.

See f 23 & 32
I assume you will acknowledge
MRF

Dear Sir,

Re Dorisvale Barites

I refer to correspondence and discussion with you concerning this Company's plans to mine near Dorisvale and to export bulk barites ore in 10 - 15,000 ton shipments using the iron ore belt conveyor installation. The Company also planned to construct, at a later date, a grinding mill and to export ground barites.

In February last the Commonwealth Railways advised that they could not handle barites ore to the Port for shipments of up to 15,000 tons.

It is therefore apparent that our proposal must wait on the completion of the East Arm installation and we made representation to the Standing Committee on Public Works to allot to us an area served by one of the bulk reclaimers.

We have no doubt that the Dorisvale deposits will be mined when the capacity exists to export bulk ore in reasonable tonnages. However, there still remains the road from the Daly River crossing, both of which make the transport of ore difficult and costly.

It is requested that the Administration investigate these two matters as previously requested.

Yours faithfully,
MINERAL DEPOSITS LIMITED

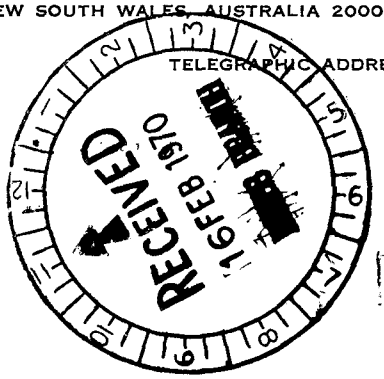
C. O. Newey
Manager - Planning & Development

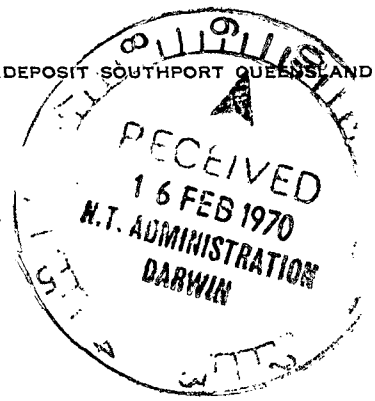
MEMO:- Photostat copy attached to file, 70/1466 H, at folio 16.
[illegible]
27/5/71.

23

MINERAL DEPOSITS LIMITED

(INCORPORATED IN NEW SOUTH WALES)
55 BRIGHTON PARADE, SOUTHPORT
QUEENSLAND, AUSTRALIA 4215
POSTAL ADDRESS: P.O. BOX 44 SOUTHPORT, QUEENSLAND, AUSTRALIA 4215
HEAD OFFICE 16-20 BRIDGE STREET, SYDNEY
NEW SOUTH WALES, AUSTRALIA 2000
TELEPHONE GOLD COAST 2.2101 TELEGRAPHIC ADDRESS: MINDEPOSIT SOUTHPORT QUEENSLAND





JR MWI

Martin Finger, Esq.,
Acting Administrator,
DARWIN N.T. 5790

Dear Sir,

Dorisvale Baryte Deposit, N.T. - AP 2377

My Company, Mineral Deposits Ltd., has taken an option on the above AP 2377 owned by Messrs. Moar, Casey and Drake, with a view to testing and developing baryte deposits which occur within the AP and some 12 miles westward of Dorisvale Station.

2. Mineral Deposits Ltd. are acting for Baroid of Australia Pty. Ltd., both companys being subsidiaries of National Lead Co. of America. The Baroid Division of National Lead Company has been a major provider of technical drilling services and supplies of drilling muds and catalysts to the oil industry since its infancy.

3. It is hoped that we will be able to develop a supply of barytes for oil search and drilling activities in north Australia and south East Asia. Other usages for baryte are in paint manufacture and in the chemical industry.

4. We aim to establish minimum reserves of barytes on which to base a mining operation. Physical testing of the Dorisvale baryte deposits was begun in November. Geological mapping and some diamond drilling has already been completed but more testing work is required and the programme is to be continued after the "Wet". Initially an annual production target of 10-15,000 long tons of barite is envisaged which hopefully will increase to 30,000 tons per year as demand grows in S.E. Asian and north Australian off-shore areas.

MWI
MWS.

5. A feasibility study will be initiated to examine the economics of mining, beneficiating, transporting, milling and shipping baryte out of Darwin. Beneficiation could be accomplished at the mine site or at the Daly River crossing.

6. Transport of the ore from Dorisvale to Darwin imposes an adverse freight cost on the product when compared with other world deposits. Transport from mine to railhead will involve 84 miles of bush track and recently formed road. The Daly River unless properly bridged will curtail carting operations during the "Wet". A road to rail truck loading facility will be necessary at Cullen siding and unloading and re-loading facilities will be required at the Company's Darwin mill site.

P.O. Box 469,
DARWIN. N.T.

28

5th. August, 1970.

The Director of Mines & Water Resources,
Northern Territory Administration,
D A R W I N - N.T.

Dear Sir, re: AUTHORITY TO PROSPECT NO.2377

We hereby apply for renewal of the Authority to Prospect over the whole area covered by the above A.P., namely 240 square miles, for a further period of twelve calendar months as from midnight on the 17th. instant.

From reports submitted to you covering our activities and through our working arrangement with Mineral Deposits Limited, it will be noted that a great deal of work has been carried out, particularly in the Pony Pocket and Thompsons Pocket areas, where some thirteen diamond drill holes were drilled and extensive costeaning was done with the view to determining the volume of the deposits.

It is from these particular areas that the Mining Company is basing its feasability study and planning for the commencement of mining with the view to establishing a barytes industry in the Northern Territory.

Already, two mineral leases have been applied for in these areas, and it is hoped that a trial shipment of ore will shortly be made to Singapore for processing. Should the feasability study prove successful, it is intended to set up a processing plant close to Darwin.

In addition to the above, considerable prospecting has been carried out by the Mining Company's geological team in company with our Mr. Moar, and we are pleased to report that further lodes of barite have been discovered, and in particular, one very extensive deposit in the Piker Pocket Creek area, with indications of this lode extending to the south easterly section of A.P.2377.

Although aerial reconnaissance has been carried out over the entire area of the A.P., the terrain in certain sections is such that surface inspection may have to be done by horseback and pack-horse, and perhaps helicopter, and this is now being seriously considered.

Should there be any further information required, you will no doubt contact the writer, who will give any important matters his immediate attention.

Yours faithfully,

D Drake

.....

Douglas Drake.

Agent for D.Drake, T.Moar and W.E.Casey.

Encl. Cheque for the amount of $240.00 is enclosed herewith.

COPY

GENERAL REPORT ON DORISVALE BARITE PROSPECT

NORTHERN TERRITORY - AP 2377

L. G. JHONSON

SUMMARY

Following a three month exploratory programme involving diamond drilling, costeaning and mapping, reserves of barite totalling 1,415,000 tons have been estimated. Two leases have been applied for totalling 61.6 acres to cover 202,000 tons of barite in the Pony Pocket Bore area.

Expenditure on the recent diamond drilling programme was approximately that budgeted for (19,000).

The total direct expenditure on the Dorisvale Prospect is approximately $33,000.

INTRODUCTION

The original diamond drilling programme was centred in Thompson's Pocket. Ten holes were planned totalling 1,180 feet of drilling. Nine holes totalling 1,019 feet were actually drilled; five holes drilled in Thompson's Pocket and four holes in Pony Pocket.

An earth-moving company was contracted to do 100 hours of bulldoser work with a Caterpillar D8 testing ripability of country rock and barite and checking outcrops by costeaning.

Two previously unknown areas of barite outcrop were discovered viz. Pony Pocket and Pikers Pocket.

A seismic survey was carried out by Hastings Deering Queensland Pty Ltd. The information from the report from Hastings Deering has no bearing geologically. Information obtained is of an engineering nature.

DIAMOND DRILLING

Ausdrill Pty Ltd of Darwin provided a diamond drill rig for the duration of the programme. The progress made by the drillers was satisfactory but the condition of the drilling rig, spare parts and back-up service from the base in Darwin left much to be desired.

Two areas were drilled:

(1) Thompson's Pocket Area.

Five holes were drilled along a single outcrop. Drill hole at Site F+10 was renamed Site Zero and holes were spaced along the outcrop on each side of Site Zero.

At Site Zero a fan of two diamond-drill holes during the initial drilling programme in 1969 showed barite with a true width of about 8 feet dipping near-vertically to 100 feet below the surface. Of the holes drilled during the second programme in Thompson's Pocket area DDH 1200 N intersected 6½ feet of barite the core of which was recovered successfully and DDH 800 S intersected 4 feet of barite in a shatterzone but only 6 inches of this was recovered. Traces of barite occurred in the other holes drilled but no cores were obtained.

This lack of success could be attributed to the difficult type of material through which the diamond-drill was boring. It is obvious from the results that small diameter diamond-drilling is not the most favourable means of achieving success in areas where the weathering profiles extend below target depths.

The following is a table showing diamond drilling in Thompson's Pocket:

THOMPSON POCKET AREA

DDH		Barite Intersection	Total Depth	Remarks
800N	41°		142'	Trace of barite at 89'
1200N	40°	54'6" - 61'	127'	Trace width 4.2 feet.
800S	40°	71'6" - 75'6"	130'	Highly shattered zone, only 6" of barite recovered in core. True width 2.6 feet.
1200S	40°	-	111'	
2400S		-	99'	Trace of barite 47 feet.
			609'	

/3

(2) Pony Pocket Bore Area.

Following the discovery of a wide and seemingly high-grade outcrop of barite in an area closer ot Dorisvale Station, the original drilling programme was abandoned and the investigation was then centred on Pony Pocket Bore Area where the outcrop averaged about 8 feet wide for 2,000 feet long.

Four holes were drilled:

PONY POCKET BORE AREA

DDH		Barite Intersection	Total Depth	Remarks
Zero(1)	49°	57'9" - 69'9"	84'	True width 7.9 feet.
(2)	65°	79' - 109'	120'	True width 16.8 feet.
400E	55°	58' - 104'	110'	True width 26.2 feet.
800W	55°	-	96'	Traces barite at 50' and 81'
			410'	

Although DDH 800 W was drilled into a continous section of outcrop no barite was encountered. This was the last hole of the programme and at this stage the diamond-drilling rig was vibrating excessively. This may be the factor responsible for the failure to core barite that may have been intersected. Two pits dug on each side of the outcrop by the bulldozer within 150 ft. of the drilling site indicated that the barite continued without thinning down to at least twelve feet.

COSTEANING

Costeans were cut across lines of suspected outcrops in both Pony Pocket Black Soil Area and Thompson's Pocket Area resulting in the extension of known outcrops. Pits were also dosed along the edge of outcrops in Thompson's Pocket and Pony Pocket to test ripability and to provide additional information on the depth of the barite.

MAPPING AND CONTOURING

All known outcrops of barite in the Dorisvale area have been mapped, i.e.

(1) Thompsons Pocket "A" Area.
(2) Thompsons Pocket "B" Area.
(3) Thompsons Pocket Fence Creek Area.
(4) Pony Pocket Bore Area.
(5) Pony Pocket Yard Area.
(6) Pony Pocket Black Soil Area.
(7) Pikers Pocket Area.

Contouring of Thompsons Pocket "A" and "B" Areas has been completed.
The relief in the Pony Pocket Bore Area was not great enough to warrant contouring.

ESTIMATED BARITE RESERVES, DORISVALE - NORTHERN TERRITORY

Area.	Dimensions (ft) Length	Breadth	Depth	Tonnage	Classification
Pony Pocket Bore	800	10	100	100,000	Measured
	1020	8	100	102,000	Indicated
" " Yard	600	8	100	60,000	Inferred
" " Black Soil	1440	8	100	144,000	Inferred
Pikers Pocket	5760	8	100	576,000	Inferred
Thompsons Pocket Fence Creek	630	8	100	63,000	Inferred
"A"	2600	4	100	130,000	Indicated
"B"	2400	8	100	240,000	Inferred

The estimated total reserves of barite is 1,415,000 tons.

RESULTS OF LABORATORY TESTING

The A.P.I. Specification for Oil-Well Drilling-Fluid Materials states a Specific Gravity of 4.2 minimum for barite. The average Specific Gravity for samples taken from Pony Pocket Bore Area is 4.4. The silica and strontium content for the samples are 1.6% and 1.4% respectively.

The average Specific Gravity of the cores from Thompsons Pocket obtained during the initial diamond-drilling programme is 4.38.

The result sheet for samples taken from core of DDH Zero (2) and DDH 400 E is attached as Appendix "A".

GEOLOGICAL DISCUSSION

The barite outcrops found in the area under discussion have strikes ranging between 300° magnetic and 330° magnetic. The dip of the barite is near-vertical.

In Thompson's and Pony Pockets the barite is occurring in the flat-lying Antrim Plateau Volcanics and the Bynoe Formation. An unconformity exists between these two units. The rocks in which the barite occurrs were originally mapped as Waterbag Creek Formation, however some doubt still exists as to what formations occur in Thompsons Pocket and it is probable that all three are involved.

The Dorisvale Fault is likely to be associated with the implacement of the barite in Pony Pocket. At this stage it seems as though the barite is implaced by Hydrothermal solutions, the temperatures associated with the implacement were relatively low as there was no alteration between the contact of the barite and the country rock. At Pikers Pocket the barite occurs in limestone and again there is no evidence of high temperatures. (High temperature ver., salinity etc and temps. major contributing factors)

Most of the faulting in the Dorisvale Area appears to have a common trend and it is very likely that the barite in Thompson's Pocket and Pikers Pocket is also from hydrothermal solutions which have travelled along zones of weakness caused by faulting.

CONCLUSIONS & RECOMMENDATION

These barite deposits are unique because although they are hydrothermal deposits and extend over long distances the amount of contamination with other minerals is negligible. The widths of the outcrops are from inches to thirty feet. The depths of the veins have been shown to be greater than one hundred feet.

Small outcrops have been located away from areas mapped and these also could prove to be surface expressions of large buried deposits.

As soon as the barite has been proved by testing the bulk sample the remaining areas should be covered by leases.

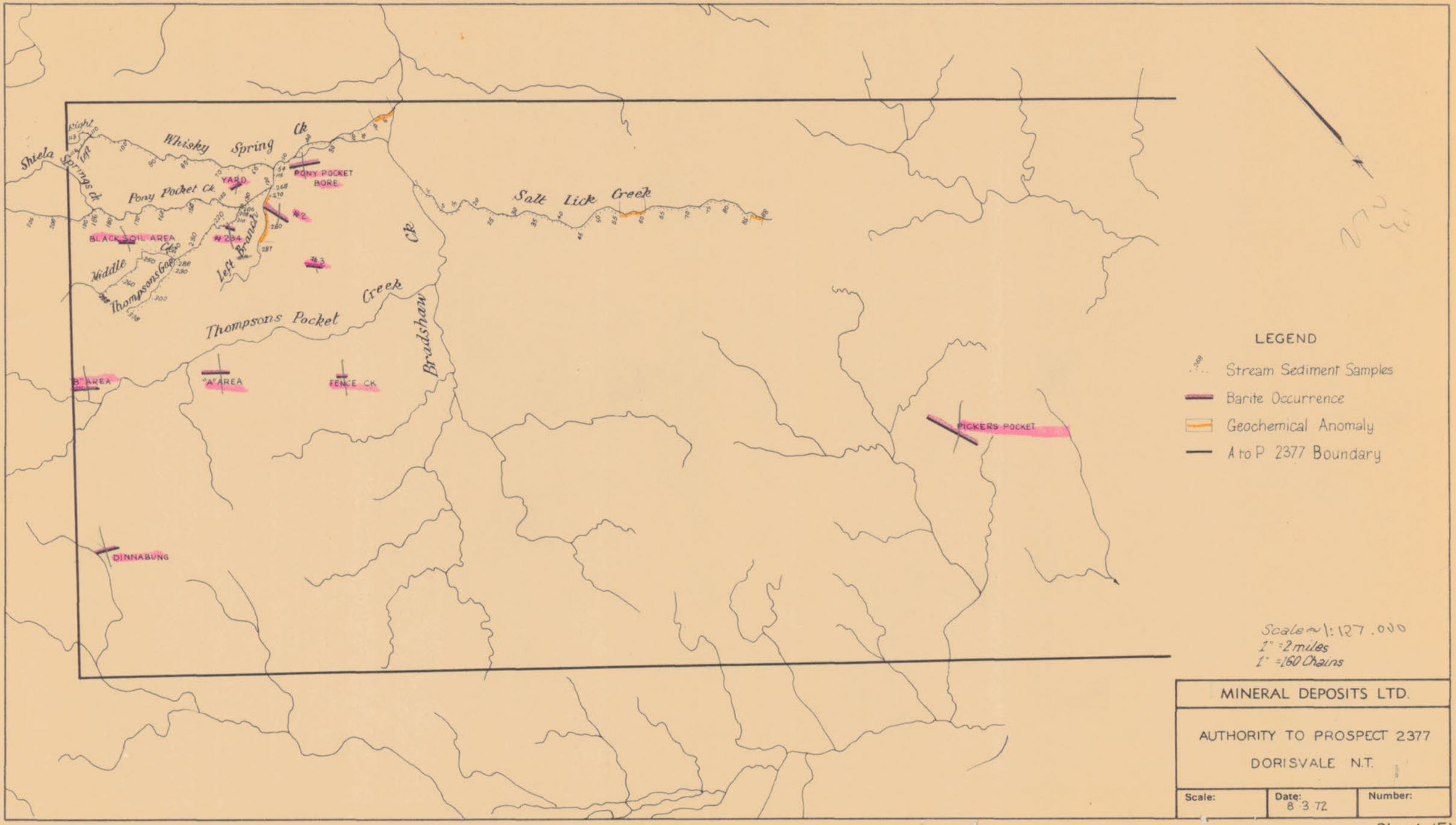
All relevant plans and sections are available in the general file of plans in the Exploration strong room.

Attached as Appendix "B" is a locality plan showing approximate positions of the outcrops mapped.

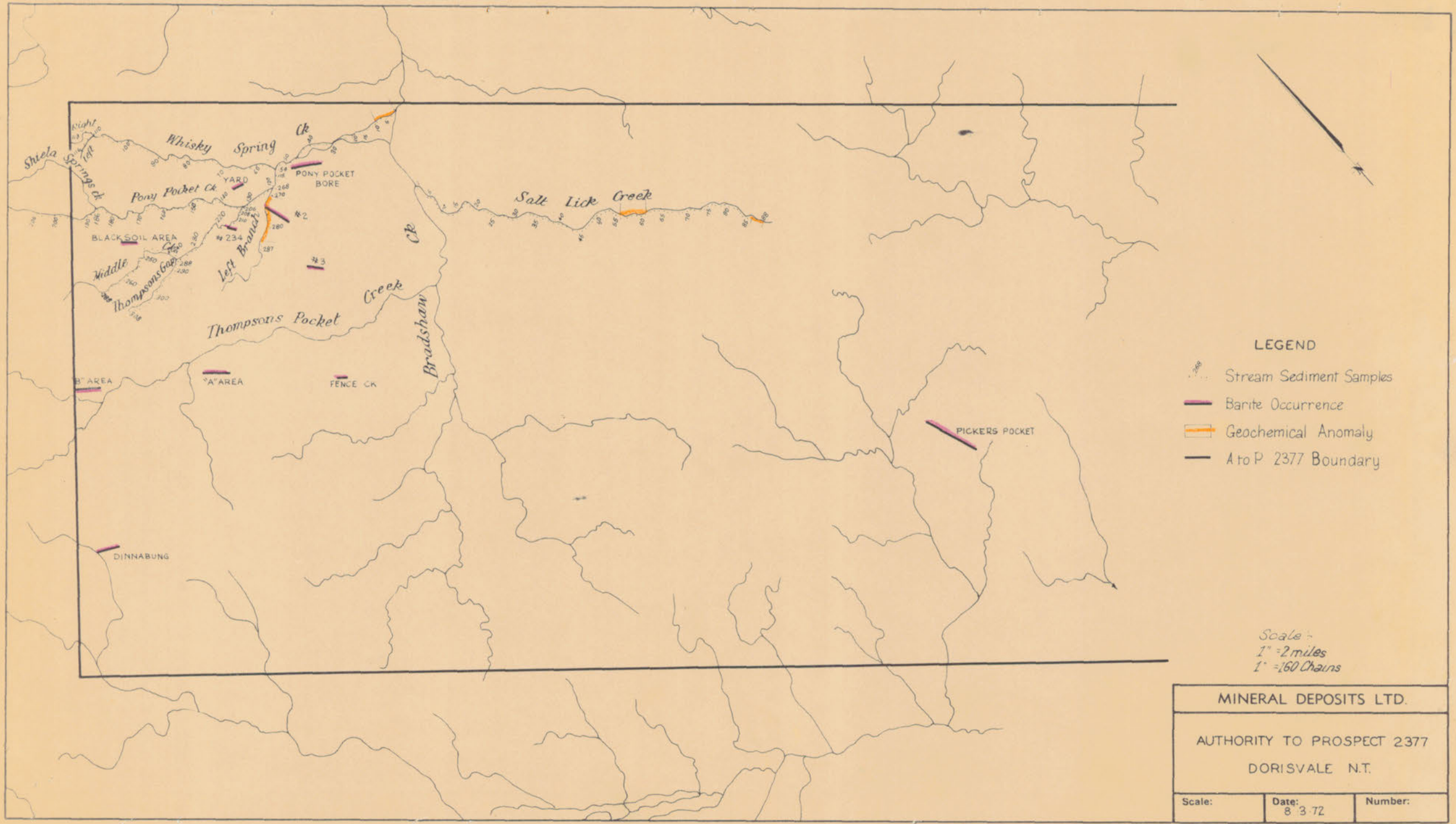
The leases applied for ("Jessie Mack" and "Rosemarie") were granted on 18th September, 1970.

Signed.
L.J. JOHNSON
Geologist.

LOJ:JR
21.9.70.


Whisky Spring Ck
Shiela Springs Ck
Pony Pocket Ck
YARD
PONY POCKET BORE
#2
#3
#234
BLACK SOIL AREA
Middle Ck
Left Branch
Thompsons Gap
Thompsons Pocket Creek
Bradshaw Ck
Salt Lick Creek
"B" AREA
"A" AREA
FENCE CK
DINNABUNG
PICKERS POCKET
LEGEND
Stream Sediment Samples
Barite Occurrence
Geochemical Anomaly
A to P 2377 Boundary
Scale ≈ 1:127,000
1" = 2 miles
1" = 160 Chains
MINERAL DEPOSITS LTD.
AUTHORITY TO PROSPECT 2377
DORISVALE N.T.
Scale:
Date: 8 3 72
Number:

Sheet 'E'


Shiela Springs Ck
Whisky Spring Ck
Pony Pocket Ck
YARD
PONY POCKET BORE
#2
#234
#3
BLACK SOIL AREA
Middle Ck
Thompsons Gap
Left Branch
Thompsons Pocket Creek
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Salt Lick Creek
"B" AREA
"A" AREA
FENCE CK
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PICKERS POCKET
LEGEND
Stream Sediment Samples
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DORISVALE N.T.
Scale:
Date: 8 3 72
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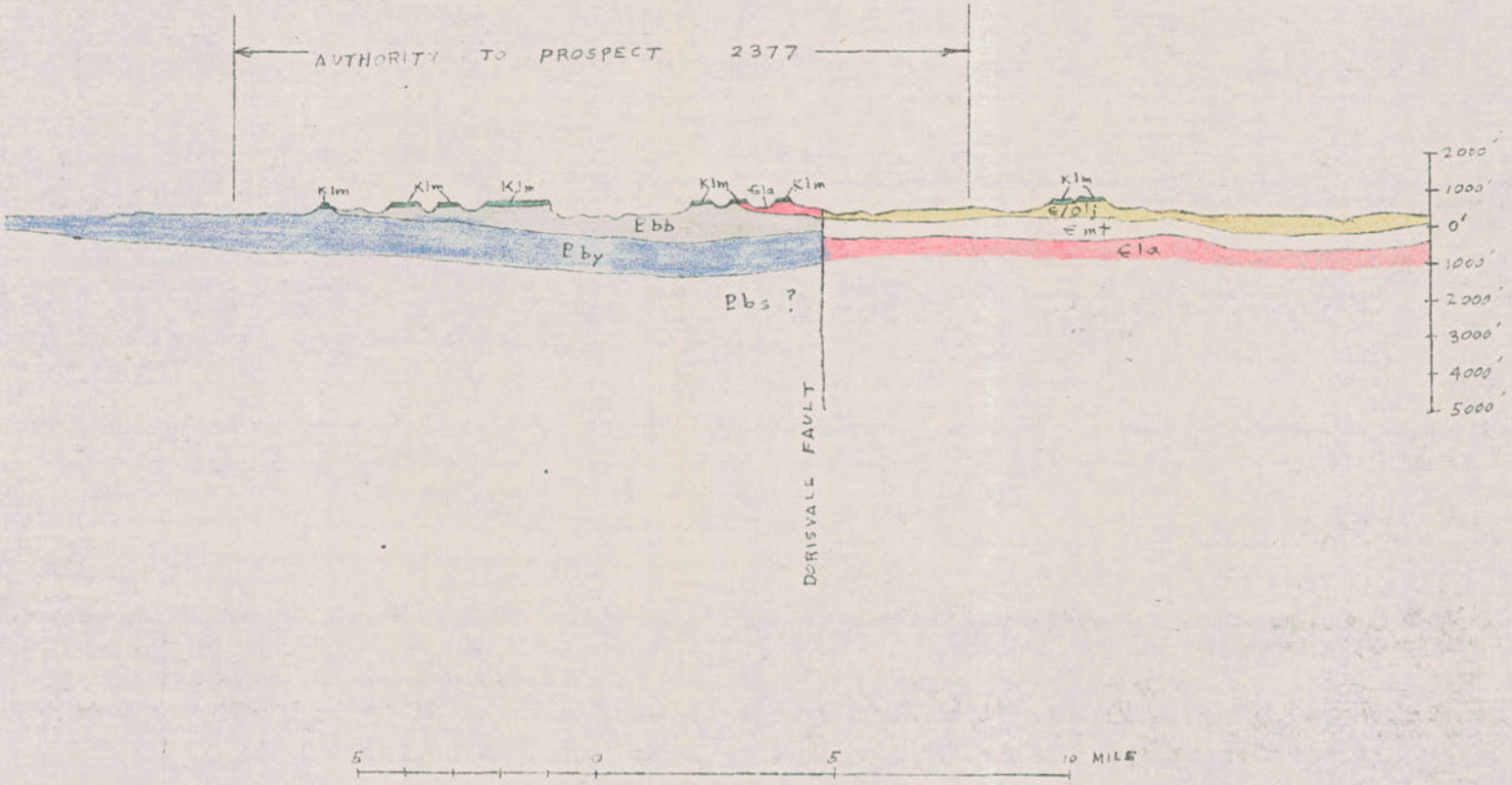
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DORISVALE FAULT
2000'
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1000'
2000'
3000'
4000'
5000'
5
0
5
10 MILES

			SYMBOL			POSSIBLE MINERALIZATION
Cainozoic	Quaternary		Qa	Alluvial deposits	*	Sn
			Czs	Residual sand and soil	*	
			Csl	Laterite	*	Fe
Mesozoic	Lower Cretaceous	Mullaman Beds	Klm	Sandstone and siltstones	*	Sn
Palaeozoic	Middle Cambrian to Lower Ordovician	Jinduckin Formation (Daly River Group)	€/Olj	Ferruginous sandstone and siltstone, minor marl, dolomite and chert	*	
	Middle Cambrian	Tindall Limestone (Daly River Group)	€mt	Limestone		
	Lower Cambrian	Antrim Plateau Volcanics	€la	Basalt, minor agglomerate, sandstone, rarely limestone	*	Cu, Ba
Proterozoic	Adelaidean or Carpentarian	Waterbag Formation	Ptg	Ferruginous sandstone and siltstone, minor dolomite		Cu, Fe
		Banyan Formation (Sullita Group)	Pbb	Limestone and dolomite, minor siltstone and sandstone, chert bands	*	
		Bynoe Formation (Sullita Group)	Pby	Siltstone, dolomitic siltstone and minor dolomite	*	
		Skull Creek Formation (Sullita Group)	Pbs	Limestone, dolomite and chert		
	Carpentarian	Allia Granite	Pga	Adamellite, granodiorite and tonalite		Sn
		Cullen Granite	Pgc	Granite, adamellite and syenite		U
		Soldiers Creek Granite	Pgs	Granite and adamellite		Sn
	Lower Proterozoic	Burrell Creek Formation (Finniss River Group)	Plb	Siltstone, shale greywacke		Au, W
		Noltenius Formation (Finniss River Group)	Pln	Greywacke, conglomerate, siltstone and shale; schist		Au, Sn

* Units exposed on A. to P. 2377

DORIS VALE

David Jen will show you where the samples come from on one of the maps. I will send you copies of the maps Jen submitted as soon as possible to

GEOCHEMICAL PROGRAMME

CANYON HILLS

Pine Creek Limited

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1		PP1			120	60	25		
2		2			150	90	40		
3		3			135	125	45		
4		4			140	100	40		
5		5			145	100	40		
6		6			150	125	55		
7		7			125	120	40		
8		8			130	125	40		
9		9			100	65	25		
10		10			95	70	30		
11		11			115	65	30		
12		12			55	30	25		
13		13			85	65	25		
14		14			55	55	15		
15		15			85	75	25		
16		16			75	55	20		
17		17			85	70	30		
18		18			100	75	25		
19		19			75	65	20		
20		20			90	70	30		
21		21			100	110	35		
22		22			90	55	35		
23		23			85	90	30		
24		24			85	45	20		
25		25			105	70	30		

COMMENTS

BLUE

GEOCHEMICAL PROGRAMME

[redacted] NT
DORIS VALE

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1		PP26			95	55	20		—
2		27			100	70	20		—
3		28			115	70	15		—
4		29			95	70	25		—
5		30			90	70	25		—
6		31			85	35	30		—
7		32			100	55	30		—
8		33			105	60	25		—
9		34			115	85	25		—
10		35			125	70	30		—
11		36			85	35	20		—
12		37			125	90	35		—
13		38			100	70	30		—
14		39			100	65	25		—
15		40			120	70	20		—
16		41			110	65	25		—
17		42			110	70	25		—
18		43			115	05	30		—
19		44			125	70	25		—
20		45			95	70	25		—
21		46			80	35	15		—
22		47			70	50	25		—
23		48			85	45	20		—
24		49			85	35	20		—
25		50			80	55	20		—

COMMENTS

GEOCHEMICAL PROGRAMME

AREA OF [redacted]
DORIS VALE NT

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1		PP51.			120	70	30		
2		52			90	90	40		
3		53			110	90	35		
4		54			95	90	25		
5		WS 55			105	65	25		
6		56			130	70	30		
7		57			110	55	30		
8		58			120	45	25		
9		59			90	50	20		
10		60			75	35	15		
11		61			125	70	10		
12		62			90	55	20		
13		63			120	60	15		
14		64			110	55	20		
15		65			135	55	25		
16		66			105	45	30		
17		67			115	50	20		
18		68			110	35	10		
19		69			120	55	40		
20		70			170	55	30		
21		71			80	35	10		
22		72			75	50	20		
23		73			85	35	20		
24		74			45	25	<10		
25		75.			45	20	<10		

COMMENTS

GEOCHEMICAL PROGRAMME

~~CALEDON FIELD~~ DORIS VALLEY N.T.

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1		WS 76			85	30	15		
2		77			85	35	10		
3		78			75	30	<10		
4		79			65	25	20		
5		80			75	25	<10		
6		81			85	35	15		
7		82			85	25	25		
8		83			90	50	20		
9		84			85	45	15		
10		85			60	35	10		
11		86			85	30	15		
12		87			85	70	30		
13		88			45	55	15		
14		89			65	25	15		
15		90			85	35	20		
16		91			75	20	10		
17		92			70	25	20		
18		93			85	30	20		
19		94			85	30	20		
20		95			40	20	15		
21		96			30	20	10		
22		97			55	25	<10		
23		98			35	15	<10		
24		99			45	20	15		
25		100			50	20	<10		

COMMENTS

GEOCHEMICAL PROGRAMME

CAETON HILLS

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1		WS 101			65	25	15		
2		102			70	25	<10		
3		103			45	20	20		
4		104			35	20	15		
5		105			20	20	20		
6		106			40	45	20		
7		107			75	35	10		
8		108			50	30	15		
9		109			85	40	20		
10		110			70	80	60		
11		111	Right		35	15	15		
12		112	"		25	10	15		
13		113	"		95	10	20		
14		114	Left		30	40	15		
15		115	"		95	45	10		
16		116	"		105	50	20		
17									
18									
19									
20		—							
21		—							
22		—							
23		—							
24		—							
25		109 +			90	75	25		

COMMENTS

GEOCHEMICAL PROGRAMME

~~CALTON HILLS~~ DONISVALE NT

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	PP	116			110	130	30		
2		117			85	70	30		
3		118			90	70	20		
4		119			95	70	30		
5		120			100	60	20		
6		121			90	60	20		
7		122			100	70	30		
8		123			100	70	30		
9		124			75	65	25		
10		125			100	65	30		
11		126			70	70	25		
12		127			85	50	20		
13		128			80	65	20		
14		129			85	70	25		
15		130			100	90	40		
16		131			105	95	40		
17		132			100	95	35		
18		133			90	90	35		
19		134			85	70	30		
20		135			105	100	35		
21		136			95	90	40		
22		137			90	90	25		
23		138			90	75	30		
24		139			85	90	40		
25		140			70	80	35		

COMMENTS

GEOCHEMICAL PROGRAMME

~~CALTON HILLS~~ Bonnvale N.T. Rock.

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1.	PP	141			130	75	30		
2		142			115	70	25		
3		143			80	70	15		
4		144			90	80	25		
5		145			90	65	25		
6		146			90	75	15		
7		147			90	90	25		
8		148			95	90	20		
9		149			65	80	25		
10		150			75	70	25		
11		151			90	80	25		
12		152			80	70	20		
13		153			95	85	20		
14		154			80	70	15		
15		155			65	70	15		
16		156			90	85	15		
17		157			70	75	<10		
18		158			85	70	30		
19		159			85	90	30		
20		160			105	85	25		
21		161			90	70	30		
22		162			90	65	25		
23		163			95	70	30		
24		164			110	70	35		
25		165			90	55	25		

COMMENTS

GEOCHEMICAL PROGRAMME

CALTON HILLS
DORIS VALE NT

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	PP	191			105	45	25		
2		192			140	35	25		
3		193			120	55	20		
4		194			135	55	30		
5		195			130	60	15		
6		196			115	90	40		
7		197			90	70	30		
8		198			120	95	40		
9		199			90	65	35		
10		200			135	130	45		
11		201			135	115	35		
12		202			110	110	35		
13		203			135	110	35		
14		204			105	90	30		
15		205			100	55	35		
16	MP	206			60	50	30		
17		207			65	50	25		
18		208			70	40	25		
19		209			50	55	20		
20		210			55	35	25		
21		211			60	30	30		
22		212			45	55	35		
23		213			90	50	35		
24		214			60	40	25		
25		215			65	45	35		

COMMENTS

GEOCHEMICAL PROGRAMME

~~[illegible]~~

DORISVALE N.T. Block

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	PP	166			80	75	40	—	
2		167			35	85	45	—	
3		168			90	70	40	—	
4		169			105	85	35	—	
5		170			90	70	35	—	
6		171			90	70	35	—	
7		172			95	90	40	—	
8		173			60	55	30	—	
9		174			65	55	30	—	
10		175			90	85	35	—	
11		176			85	75	35	—	
12		177			60	65	25	—	
13		178			90	85	25	—	
14		179			95	80	30	—	
15		180			90	75	35	—	
16		181			90	75	35	—	
17		182			90	95	45	—	
18		183			105	90	50	—	
19		184			90	80	30	—	
20		185			90	90	55	—	
21		186			95	90	50	ST JUNCTION	
22		187			95	70	35	—	
23		188			100	55	20	—	
24		189			80	50	20	—	
25		190			100	55	25	—	

COMMENTS

GEOCHEMICAL PROGRAMME

[redacted] N [redacted] S

DORISVALE NT. RED.

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	MP	216			45	50	20		
2		217			45	55	20		
3		218			45	45	20		
4		219			40	45	20		
5		220			35	35	35		
6		221			45	45	25		
7		222			70	55	25		
8		223			70	45	25		
9		224			50	40	20		
10		225			55	50	25		
11		226			60	45	25		
12		227			75	40	25		
13		228			80	55	25		
14		229			45	35	20		
15		230			80	45	20		
16		231			65	40	20		
17		232			85	35	20		
18		233			70	35	20		
19		234			60	45	20		
20		235			75	45	25		
21		236			80	40	30		
22		237			85	50	25		
23		238			60	40	25		
24		239			50	35	10		
25	—	—	—	—	—	—	—	—	—

COMMENTS

GEOCHEMICAL PROGRAMME

~~CRETON KELLY~~ DORIS VALE NT

BLOCK W

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	MP		240			10	< 10		
2			241			20	10		
3			242			20	15		
4			243			20	15		
5			244			25	15		
6			245			35	20		
7			246			40	20		
8			247			45	30	BADLY OUTCROP	
9			248			35	25		
10			249			35	30		
11			250			25	15		
12			251			55	25		
13			252			50	25		
14			253			40	20		
15			254			70	30		
16			255			55	25		
17			256			65	35		
18			257			35	15		
19			258			50	15		
20			259			65	30		
21			260			40	20		
22			261			45	20		
23			262			50	20		
24			263			30	15		
25			264			70	40		

GEOCHEMICAL PROGRAMME

CALTON HILLS

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	M P	265				55	25		
2		266				70	30		
3		267				70	25		
4		268				80	40		
5	L 8	268				70	30		
6		269				85	35		
7		270				70	30		
8		271				90	30		
9		272				115	50		
10		273				105	40	[illegible]	
11		274				120	55		
12		275				105	50	[illegible]	
13		276				95	50		
14		277				140	45	[illegible]	
15		278				100	55		
16		279				130	75		
17		280				115	55		
18		281				45	35		
19		282				40	40		
20		283				40	45		
21		284				45	35		
22		285				30	25		
23		286				35	25		
24		287				30	25		
25									

GEOCHEMICAL PROGRAMME

C[redacted]

[illegible] N.J. [illegible]

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	TC	288				25	20		
2		289				50	25		
3		290				35	20		
4		291				55	35		
5		292				50	35		
6		293				45	20		
7		294				40	20		
8		295				45	20		
9		296				55	20		
10		297				55	25		
11		298				50	20		
12		299				45	15		
13		300				45	20		
14		301				55	20		
15		302				50	25		
16		303				45	25		
17		305				45	20		
18		306				55	20		
19		307				40	15		
20		308				70	20		
21		[redacted]							
22									
23									
24									
25									

GEOCHEMICAL PROGRAMME

~~CALTON HILLS~~ D[illegible]ville

THOMPSONS POCKET B AREA

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	00	5W			2100				
2		10W			295				
3		50W			295				
4		100W			180				
5		150W			535				
6		200W			240				
7		5E			320				
8		10E			130				
9		50E			145				
10		100E			85				
11		150E			65				
12		200E			25				
13	50S	5E			140				
14		10E			110				
15		50E			45				
16		100E			60				
17		150E			65				
18		200E			50				
19		5W			720				
20		10W			465				
21		50W			260				
22		100W			250				
23		150W			150				
24		200W			225				
25									

COMMENTS

GEOCHEMICAL PROGRAMME

CALTON HILLS

THOMPSONS POCKET B AREA DOG-LEG

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	50N	5W			485				
2		10W			550				
3		50W			130				
4		100W			125				
5		150W			185				
6		200W			275				
7		5E			255				
8		10E			100				
9		50E			90				
10		100E	no	soil Core					
11		150E			90				
12		200E			125				
13	100N	5W			130				
14		10W			135				
15		50W			130				
16		100W			75				
17		150W			120				
18		200W			240				
19		5E			60				
20		10E			95				
21		50E			110				
22		100E			100				
23		150E			115				
24		200E			110				
25									

COMMENTS

GEOCHEMICAL PROGRAMME

CANYON HILLS

THOMPSONS POCKET B AREA DORIS VALE

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	100S	5W			225				
2		10W			250				
3		50W			160				
4		100W			150				
5		150W			250				
6		200W			195				
7	100S	5E			135				
8		10E			145				
9		50E			90				
10		100E			125				
11		150E			60				
12		200E			60				
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

COMMENTS

200
0 - 20 40 60 80

GEOCHEMICAL PROGRAMME

~~CALTON HILLS~~ DORIS VALE NT THOMPSON. Pocket B AREA

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	100 N	200E				195	35		
2		150E				180	30		
3		100E				95	25		
4		50E				150	25		
5		10E				105	15		
6		5E				70	15		
7		5W				90	50		
8		10W				60	45		
9		50W				55	40		
10		100W				55	50		
11		150W				45	25		
12		200W				70	30		
13	50N	5E				105	25		
14		10E				50	20		
15		50E				160	35		
16		100E				100	20		
17		150E				90	45		
18		200E				70	35		
19		5W				150	35		
20		10W				70	25		
21		50W				55	10		
22		100W				70	20		
23		150W				45	25		
24		200W				70	30		
25	00	5E				145	35		

COMMENTS

GEOCHEMICAL PROGRAMME

~~CANTON MILLS~~

DORIVACE NT THOMPSONS POCKET B AREA

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	00	10 E				100	25		
2		50 E				135	30		
3		100 E				80	35		
4		150 E				45	25		
5		200 E				35	10		
6		5 W				95	30		
7		10 W				105	25		
8		50 W				35	10		
9		100 W				40	10		
10		150 W				30	10		
11		200 W				35	10		
12	50S	5 W				120	35		
13		10 W				90	25		
14		50 W				60	15		
15		100 W				70	15		
16		150 W				20	<10		
17		200 W				80	20		
18		5 E				140	30		
19		10 E				200	40		
20		50 E				80	25		
21		100 E				55	15		
22		150 E				60	15		
23		200 E				50	10		
24	100S	5 W				50	15		
25		10 W				30	15		

COMMENTS

GEOCHEMICAL PROGRAMME

~~CALTON HILLS~~

Dori Wall[?] NT

THOMPSONS POCKET B AREA (rows 1–10)

SALT LICK CREEK (rows 11–25)

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	1005	50 W				55	20		
2		100 W				40	10		
3		150 W				55	15		
4		200 W				70	25		
5		5 E				65	20		
6		10 E				85	20		
7		50 E				55	20		
8		100 E				70	25		
9		150 E				75	10		
10		200 E				70	10		
11	SL	1				55	30		
12		2				105	40		
13		3				65	35		
14		4				30	20		
15		5				70	30		
16		6				35	25		
17		7				45	20		
18		8				20	15		
19		9				30	15		
20		10				20	15		
21		11				<10	<10		
22		12				30	15		
23		13				50	30		
24		14				60	25		
25		15				55	30		

COMMENTS

GEOCHEMICAL PROGRAMME

~~CALTON HILLS~~
DORIS VALE (NT)

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	SL	16				55	20		
2		17				45	25		
3		18				40	20		
4		19				40	25		
5		20				55	20		
6		21				95	25		
7		22				80	30		
8		23				70	25		
9		24				30	15		
10		25				45	20		
11		26				55	15		
12		27				55	20		
13		28				65	20		
14		29				45	15		
15		30				40	10		
16		31				45	10		
17		32				50	15		
18		33				40	15		
19		34				40	10		
20		35				70	15		
21		36				30	15		
22		37				50	15		
23		38				180	115		
24		39				35	15		
25		40				30	10		

COMMENTS

GEOCHEMICAL PROGRAMME

~~CALTON HILLS~~
DORIS VALE NT

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1		SL	41			15	<10		
2			42			30	<10		
3			43			30	10		
4			44			35	<10		
5			45			55	10		
6			46			30	10		
7			47			35	15		
8			48			50	20		
9			49			40	15		
10			50			105	30		
11			51			105	30		
12			52			100	20		
13			53			90	20		
14			54			70	25		
15			55			70	20		
16			56			120	25		
17			57			110	30		
18			58			140	35		
19			59			130	30		
20			60			65	20		
21			61			135	30		
22			62			70	20		
23			63			80	20		
24			64			25	15		
25									

COMMENTS

GEOCHEMICAL PROGRAMME

~~CALTON HILLS~~
DORIS VALE

S-Blue

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1		5L	65			55	20	—	
2			66			55	10	—	
3			67			55	10	—	
4			68			50	20	—	
5			69			30	20		
6			70			30	<10	—	
7			71			80	35	—	
8			72			30	10	—	
9			73			70	40	—	
10			74			30	<10		
11			75			20	0		
12			76			15	0		
13			77			30	15		
14			78			20	<10		
15			79			10	0	—	
16			80			45	10		
17			81			55	10	—	
18			82			70	15	—	
19			83			40	15	—	
20			84			70	25	—	
21			85			20	<10	—	
22			86			105	30		
23			87			105	20	—	
24			88			130	20		
25									

COMMENTS

COPY

P. O. Box 469,
Darwin - N.T.

May 27th.1970

The Director of Mines & Water Resources,
N. T. Administration,
D A R W I N - N.T.

A/5

Dear Sir,

Authority to Prospect - 2377.
Report for April 1970.

I apologise for the delay in rendering this report, but due to difficulties in communication, I have been awaiting details of expenditure incurred for the period.

Early in April a geologist from Mineral Deposits Limited, with which company we have a working agreement, visited Darwin and arranged with Ausdrill Pty. Ltd., to continue drilling at the site.

Mineral Deposits Ltd., also made preparations for the field season, when company gear and equipment were assembled and a programme of work prepared for the next phase of testing of the barytes deposits.

Mr. Lawrence Johnson, Geologist and field assistants left Southport, Queensland on 26/4/70 for Dorisvale, arriving there on 3rd. instant, just prior to the arrival of the Ausdrill equipment.

Heavy equipment was hired from Pine Creek to level certain hazardous crossings, to provide access for drilling rigs and other equipment. Drilling is now proceeding satisfactorily.

Expenditure for the month of April 1970 amounted to $1050.00.

Yours faithfully,

D Drake

(Douglas Drake).
Agent for D.Drake, T. Moar & W.E.Casey.

dd/re

COPY

P.O.Box 469,
DARWIN N.T. 5794

20th November, 1970

The Director of Mines and Water Resources,
Northern Territory Administration,
DARWIN N.T. 5790.

Dear Sir,

AUTHORITY TO PROSPECT NO.2377.
REPORT FOR OCTOBER, 1970.

In addition to the extensive work already carried out in the Pony Pocket and Thompson's Pocket areas of this A.P. further prospecting and exploration was carried out during October.

For your information, we are attaching copy of General Report dated 21/9/70, covering our activities to that date.

In view of the difficulties which normally confront us during the wet season, it is requested that we may be relieved from field conditions of the Prospecting Authority until the beginning of April, 1971.

Yours faithfully,

D Drake

(D.Drake)
Agent for D.Drake, T.Moar and W.E.Casey.

Encl:

P.O.Box 469,
DARWIN N.T. 5794

14th December, 1970

The Director of Mines and Water Resources,
Northern Territory Administration,
DARWIN N.T. 5790.

Dear Sir,

AUTHORITY TO PROSPECT NO.2377.
REPORT FOR NOVEMBER, 1970.

During the above period, feasibility studies have continued on the Dorisvale Barytes Prospect.

Investigations regarding the purity of ore have continued and an average of 1.6% silica and 1.4% strontium was determined.

Because of the impending wet season, no further field work has been initiated.

Yours faithfully,

D Drake

(D.Drake)
Agent for D.Drake, T.Hoar
and W.E.Casey

P.O.Box 469,
DARWIN N.T. 5794.

14th December, 1970

The Director of Mines and Water Resources,
Northern Territory Administration,
DARWIN N.T. 5790.

Dear Sir,

AUTHORITY TO PROSPECT NO.2625.
REPORT FOR NOVEMBER, 1970.

Investigations of this area are closely associated with those carried out on Authority to Prospect No. 2377, which adjoins Authority to Prospect No.2625.

Following the aerial survey of Authority to Prospect No.2625, it has been decided to postpone field investigation until after the wet season so that a full exploration programme can be commenced without being broken by the isolating conditions caused by the anticipated heavy rains.

Yours faithfully,

D Drake

(D.Drake)
Agent for D.Drake, E.Noar
and W.E.Casey

P.O.Box 469,
DARWIN N.T. 5794.

5th January, 1971.

The Director of Mines and Water Resources,
Northern Territory Administration,
DARWIN N.T. 5790.

Dear Sir,

AUTHORITY TO PROSPECT NO.2625.
REPORT FOR DECEMBER, 1970.

Literature studies have continued for this period for the area concerned, so that field investigations will be commenced after the Wet season on areas most likely to contain mineralization, especially along the Dorisvale Fault which runs through both Authority to Prospect No.2377 and Authority to Prospect No.2625.

Yours faithfully,

D Drake

(D. Drake)
Agent for D.Drake, T.Moar
and W.E.Casey

P.O.Box 439,
DARWIN N.T. 5794.

14th December, 1970.

The Director of Mines and Water Resources,
Northern Territory Administration,
DARWIN N.T. 5790.

Dear Sir,

AUTHORITY TO PROSPECT NO.2664.
REPORT FOR NOVEMBER, 1970.

Prospecting and general reconnaissance of Authority to Prospect No.2664 has continued during this period.

Further samples have been sent to Mineral Deposits Limited at Southport for investigation regarding manganese content.

Unfortunately, the samples referred to in the last report (October) have not been encouraging with respect to manganese. The full analysis is listed below:-

Sample No.	%Fe	%Mn
AE.1564	50.0	0.85
AE.1565	47.0	0.30

Yours faithfully,

D Drake

(D.Drake)
Agent for L.Moar and D.Drake

P.O.Box 469,
DARWIN N.T. 5790.

5th January, 1971.

The Director of Mines and Water Resources,
Northern Territory Administration,
DARWIN N.T. 5790.

Dear Sir,

AUTHORITY TO PROSPECT NO.2664.
REPORT FOR DECEMBER, 1970.

Because of the impending Wet season, no further exploration work has been carried out on the area covered by the Authority during this period.

Yours faithfully,

D Drake

(D.Drake)
Agent for L.Moar and D.Drake

P.O.Box 469,
DARWIN N.T. 579 4.

5th January, 1971

The Director of Mines and Water Resources,
Northern Territory Administration,
DARWIN N.T. 5790.

Dear Sir,

AUTHORITY TO PROSPECT NO.2377.
REPORT FOR DECEMBER, 1970.

During this period, no field work has been attempted on the Authority.

However, a survey of available geological literature on the areas is being carried out at present, and all instances of previously recorded mineralization are being studied in detail, so that centres for investigation can be established for the commencement of the field season of 1971.

Yours faithfully,

D Drake.

(D. Drake)
Agent for D.Drake, T.Moar
and W.E.Casey

7. Ideally the Company's mill site would be located close to or at a harbour waterfront. As a new port is to be established at the Quarantine area on East Arm it is felt that this company's possible requirements for land and access loading facilities both bagged and bulk will be given consideration in any early planning.

8. As barite products are adversely affected by iron ore dust, a most deleterious contaminant, it would be necessary to bear this in mind in the overall planning and allocation of areas.

9. My Company through its representatives will keep the Administrator informed of the progress and status of its investigations and planning and looks forward to the possibility of establishing a barite mining and processing operation in the Territory.

Yours faithfully,
MINERAL DEPOSITS LIMITED

O. D. Paterson

O. D. Paterson
Managing Director

REPORT ON AUTHORITY TO PROSPECT 83, DORISVALE STATION

NORTHERN TERRITORY

INTRODUCTION

Following initial investigations by a company Geologist (June, 1969) and an inspection by the Managing Director, Mr. Paterson, and the Chief Geologist, Mr. Gibson, an option over this area was taken out by Mineral Deposits Limited in October, 1969.

Available information at this stage was limited to Bureau of Mineral Resources regional mapping data, combined with local knowledge of the existence of outcroppings of barite.

EXPLORATION ACTIVITIES

The processing of samples of barite collected during the early work indicated the existence of a fairly pure deposit of considerable size.

Basic survey work designed to indicate the extent of surface outcrops was completed by company geologists in late November and early December. One north-south trending tabular ore body with a surface length of 1,500' and width of 12' was selected for evaluation at depth.

Diamond drilling in the area commenced on 27th November. Initial work was aimed at determining the thickness and grade of the ore body at depths of 50 feet and 100 feet below surface respectively.

The initial drilling programme called for the placement of four holes, two from each of two sites, 500' apart along the strike to be drilled to intersect the barite at the required depths.

Two holes were completed from F + 10' site. A third hole was commenced at site C + 60' but was abandoned due to wall collapse after penetrating to a depth of 32 feet. Borehole logs of the completed holes are attached as Appendix "A".

Following torrential rains on the 15th and 16th December operations were suspended until the end of the Monsoon season due to the difficulties of access and supply.

CONCLUSIONS

The existence of the barite ore body at a depth of 100 feet below surface has been proven at one point and samples of the core obtained sent to the Company's Southport Laboratories for assay and testing. These results will be provided when they become available.

Results of the survey work are also awaiting compution and plotting. It is suspected that mapping will confirm the theory that the barite outcrops are part of one continuous bed.

A considerable amount of additional drilling is still required before a reliable feasibility study can be made, but results to date have proved most encouraging.

P. J. Barrett

C. R. Gibson

Bore Logs - Dorisvale, N.T.

Site F + 10'

Hole 1 Angle 41° 10'

0' - 30'	Weathered sandstone - no core recovery
30' - 39'	Purplish - brown fine-grained sandstone
39' - 44'	Compact grey sandstone with fracture fillings of ? chlorite
44' - 50'	Grey-white sandstone, heavily fractured with ferruginous weathering products along fractures.
50' - 59'	Hard purplish sandstone with heavy fracturing and some ? chlorite along fracture planes.
59' - 68'	Hard grey to red-brown sandstone with heavy fracturing
68' - 82'6"	Dark red-brown sandstone with thin barite veins (up to 5m.m.) and vesicles of barite.
82'6-83'6	Soft brown sandstone - no core
83'6- 87'	Pink barite
87' - 88'	Weathered barite
88' - 89'6	Pink barite
89'6-95'6	Purple sandstone with thin barite veins

Hole 2 Angle 57°

0' - 40'	Weathered sandstone - no core
40' - 60'	Purplish brown sandstone with heavy fracturing
60' - 81'	Dark brown sandstone with barite-filled vughs and fracture-fillings
81' - 110'	Hard dark brown sandstone with barite crystals and veins up to 2" thickness.
110'-124'6	Pink barite
124'6 - 152'6	Dark red-brown sandstone with barite veins and vugh-fillings.

Site C + 60'

Hole 3 Angle 42°

0' - 32'	Weathered sandstone and boulders - no core.

* Hole abandoned at 32 feet due to wall collapse.

PROSPECTING AUTHORITY No. 2377

Report for Year Ending 17 August, 1972

Prospecting continued for barytes and other minerals.

In September and October a field investigation was again carried out, locating new barite occurrences and further examining the rocks along the Dorisvale fault. It was decided to continue the geochemical sampling programme.

Both reconnaissance stream sediment sampling and detailed soil sampling have been accomplished. The stream sediment samples are taken from both creek banks initially at 400 foot intervals and at all creek junctions. Anomalous or interesting areas are resampled at 200 foot intervals. All sampling points are marked by aluminium tags attached to the nearest tree.

Sampling has been completed in the Salt Lick Creek and Pony Pocket areas. These areas were sampled to prospect for mineralization occurring along the Dorisvale fault. Four areas are worthy of more detailed sampling. (see Figure 1) At the junction of Bradshaw Creek and Pony Pocket Creek an area 2800 feet long shows zinc values at two times threshold and copper values at 1.6 times threshold. Most of the samples collected along Left Branch show zinc values 1.5 times threshold and copper values up to two times threshold. These represent 5600 feet of sampling. Barite outcrops along the creek bed in this locality. Along Salt Lick Creek an area 2640 feet long contains anomalous zinc values up to twice threshold values and an area 1320 feet long at the end of the creek also contains anomalous zinc values up to twice the threshold value. All of these areas should be grid sampled to determine the significance of the anomalous values.

A soil sampling grid has been completed around known sulfide occurrences in the Thompsons Pocket "B" area. An area 400 feet by 300 feet has been sampled on a 50 foot grid pattern. This grid disclosed zinc values increasing at the northern limit of the survey. The highest zinc value at the northern corner of the grid is 1.65 times the threshold. This grid should be extended to the north. (see Figure 2)

David A. Rhoades

(David A. Rhoades)

MINERAL DEPOSITS LIMITED

(INCORPORATED IN NEW SOUTH WALES)

81 ASHMORE ROAD, SOUTHPORT
QUEENSLAND, AUSTRALIA 4215

POSTAL ADDRESS: P.O. BOX 44, SOUTHPORT, QUEENSLAND, AUSTRALIA 4215

TELEPHONE: GOLD COAST 39-9055 CABLES: MINDEPOSIT SOUTHPORT QUEENSLAND TELEX: MINDEP AA.40438

DAR/sas

8th March, 1972.

Director of Mines,
Mines & Water Resources Branch,
DARWIN, N.T. 5790.

Dear Sir,

re: Prospecting Authority No.2377 - February Report 1972:

During February the wet conditions prevailing in this area did not permit field work.

A review of geochemical sampling results continued during February. Attached please find copies of all geochemical results obtained to date. Also attached please find a geological cross section, stratigraphic column, and A. to P. map indicating all barite occurrences and geochemical sample locations. A map showing the geochemical grid of the Thompsons Pocket B Area is currently in preparation and will be submitted when completed.

DAVID A. RHOADES,
MINERAL DEPOSITS LIMITED

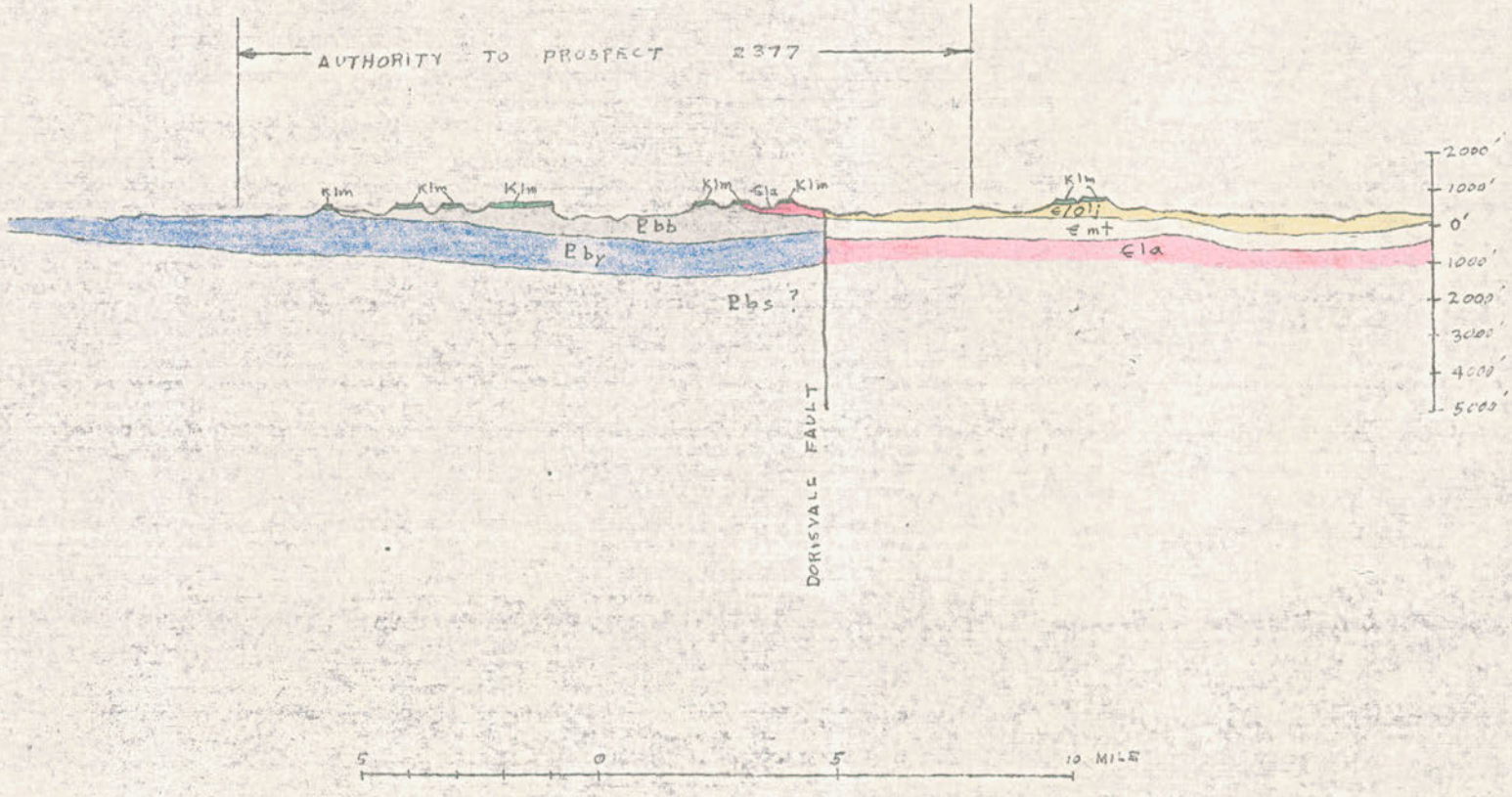
For: D. Drake.

David a. Rhoades

c.c. Mr. D. Drake,
Darwin.


Whisky Spring Ck
Sheila Springs Ck
Right
Left
Pony Pocket Ck
YARD
PONY POCKET BORE
#2
#234
#3
BLACK SOIL AREA
Middle Ck
Left Branch
Thompsons Gorge
Thompsons Pocket Creek
2·1 miles to "Spring" Barite Lode
Salt Lick Creek
Bradshaw Ck
"B" AREA
"A" AREA
FENCE CK
DINNABUNG
PIKERS POCKET
LEGEND
Stream Sediment Samples
Barite Occurrence
Geochemical Anomaly
A to P 2377 Boundary
Scale -
1" = 2 miles
1" = 160 Chains
MINERAL DEPOSITS LTD.
AUTHORITY TO PROSPECT 2377
DORISVALE N.T.
Scale:
Date: 8-3-72
Number:

Figure 1


AUTHORITY TO PROSPECT 2377
Klm
Klm
Klm
Klm
Cla
Klm
Klm
Pbb
Pby
Pbs ?
Cla
Cmt
Clj
DORISVALE FAULT
2000'
1000'
0'
1000'
2000'
3000'
4000'
5000'
5
0
5
10 MILE

			SYMBOL			POSSIBLE MINERALIZATION
Cainozoic	Quaternary		Qa	Alluvial deposits	*	Sn
			Czs	Residual sand and soil	*	
			Csl	Laterite	*	Fe
Mesozoic	Lower Cretaceous	Mullaman Beds	Klm	Sandstone and siltstones	*	Sn
Palaeozoic	Middle Cambrian to Lower Ordovician	Jinduckin Formation (Daly River Group)	€/Olj	Ferruginous sandstone and siltstone, minor marl, dolomite and chert	*	
	Middle Cambrian	Tindall Limestone (Daly River Group)	€mt	Limestone		
	Lower Cambrian	Antrim Plateau Volcanics	€la	Basalt, minor agglomerate, sandstone, rarely limestone	*	Cu, Ba
Proterozoic	Adelaidean or Carpentarian	Waterbag Formation	Ptg	Ferruginous sandstone and siltstone, minor dolomite		Cu, Fe
		Banyan Formation (Bullita Group)	Pbb	Limestone and dolomite, minor siltstone and sandstone, chert bands	*	
		Bynoe Formation (Bullita Group)	Pby	Siltstone, dolomitic siltstone and minor dolomite	*	
		Skull Creek Formation (Bullita Group)	Pbs	Limestone, dolomite and chert		
	Carpentarian	Allia Granite	Pga	Adamellite, granodiorite and tonalite		Sn
		Cullen Granite	Pgc	Granite, adamellite and syenite		U
		Soldiers Creek Granite	Pgs	Granite and adamellite		Sn
	Lower Proterozoic	Burrell Creek Formation (Finniss River Group)	Plb	Siltstone, shale greywacke		Au, W
		Noltenius Formation (Finniss River Group)	Pln	Greywacke, conglomerate, siltstone and shale; schist		Au, Sn

* Units exposed on A. to P. 2377

Austwide Mining Title Management Pty Ltd

A.C.N. 064 099 109

Post Office Box 1434
Wangara WA 6947
Western Australia

Telephone: (08) 9409 6951
Facsimile: (08) 9309 9335
Mobile: 041 990 2407
Email: reception@austwidemining.com.au
Web: www.austwidemining.com.au

→ ZIA 6/11/02

GEOSCIENCE / TG

Director
Minerals & Energy Titles
Department of Primary Industry, Fisheries & Mines
GPO Box 3000
DARWIN NT 0801

Dear Sir,

SURRENDER REPORT –
EL 22530 - ELKEDRA DIAMONDS NL.

Please find enclosed for your attention a disk containing the abovementioned report.

We will be pleased to provide you with any other information you may require in respect of this matter and I look forward to your acknowledgement of the report in due course.

Yours faithfully,

L.D. (Alf) Valentine
Mining Title Consultant

26th October 2005

ENTERED ON COMPUTER
Date: 31.10.05 SS
By: HG

DEPT. PRIMARY INDUSTRY, FISHERIES & MINES
28 OCT 2005
RECEIVED - BRF
CORPORATE INFORMATION MANAGEMENT

TRIM Registered
Date: 28/10/05 Time: 11.37 AM / PM
Trim File No: mt2003/0999
Trim Doc No: mtDOC2005/1468

David I'll show you where the samples come from on one of the maps. I will send you copies of the maps I've submitted as soon as possible to Pine Creek. Laura

GEOCHEMICAL PROGRAMME

GREEN HILLS

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1		PP1			120	60	25		
2		2			150	40	40		
3		3			135	125	45		
4		4			140	100	40		
5		5			145	100	42		
6		6			150	125	55		
7		7			125	120	40		
8		8			130	125	40		
9		9			100	65	25		
10		10			95	70	30		
11		11			115	65	30		
12		12			55	50	25		
13		13			85	65	25		
14		14			55	55	15		
15		15			85	75	25		
16		16			75	55	20		
17		17			85	70	30		
18		18			100	75	25		
19		19			75	65	20		
20		20			90	70	30		
21		21			100	90	35		
22		22			90	55	35		
23		23			85	80	30		
24		24			80	45	20		
25		26.			105	70	30		

COMMENTS

GEOCHEMICAL PROGRAMME

CARLTON WELLS
DOME DALE NT

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1		PP26			95	55	20		
2		27			100	70	20		
3		28			115	70	15		
4		29			95	70	25		
5		30			90	70	25		
6		31			85	35	30		
7		32			100	55	30		
8		33			105	60	25		
9		34			115	85	25		
10		35			125	70	30		
11		36			85	35	20		
12		37			125	90	35		
13		38			100	70	30		
14		39			100	65	25		
15		40			120	70	20		
16		41			110	65	25		
17		42			110	70	25		
18		43			115	65	30		
19		44			125	70	25		
20		45			115	70	25		
21		46			90	35	15		
22		47			70	50	25		
23		48			85	45	20		
24		49			85	35	20		
25		50			80	55	20		

COMMENTS

GEOCHEMICAL PROGRAMME

CAL[illegible]ES
DORISVALE NT

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1		PP51.			120	70	30		
2		52			90	90	40		
3		53			110	90	35		
4		54			95	90	25		
5		WS 55			105	65	25		
6		56			130	70	30		
7		57			110	55	30		
8		58			120	45	25		
9		59			90	50	20		
10		60			75	35	15		
11		61			125	70	10		
12		62			90	55	20		
13		63			120	60	15		
14		64			110	55	20		
15		65			135	55	25		
16		66			105	45	30		
17		67			115	50	20		
18		68			110	35	10		
19		69			120	55	40		
20		70			170	55	30		
21		71			80	35	10		
22		72			75	50	20		
23		73			85	35	20		
24		74			45	25	<10		
25		75.			45	20	<10		

COMMENTS

GEOCHEMICAL PROGRAMME

~~CALICO RIDGE~~ DORIS VALE N.T.

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1		W5 76			85	30	15		
2		77			85	35	10		
3		78			75	30	<10		
4		79			65	25	20		
5		80			75	25	<10		
6		81			85	35	15		
7		82			85	25	25		
8		83			90	50	20		
9		84			85	45	15		
10		85			60	35	10		
11		86			85	30	15		
12		87			85	70	30		
13		88			45	55	15		
14		89			65	25	15		
15		90			85	35	20		
16		91			75	20	10		
17		92			70	25	20		
18		93			85	30	20		
19		94			85	30	20		
20		95			90	30	15		
21		96			30	20	10		
22		97			55	25	<10		
23		98			35	15	<10		
24		99			45	20	15		
25		100			50	20	<10		

COMMENTS

GEOCHEMICAL PROGRAMME

CALTON HILLS

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1		W.S 101			65	25	15		
2		102			70	35	10		
3		103			45	30	20		
4		104			35	20	15		
5		105			80	20	20		
6		106			40	45	20		
7		107			75	35	10		
8		108			50	30	15		
9		109			85	40	20		
10		110			90	80	60		
11		111	right		35	15	15		
12		112	"		25	10	15		
13		113	"		45	10	20		
14		114	left		80	40	15		
15		115	"		95	45	10		
16		116	"		105	50	20		
17									
18									
19									
20		—							
21		—							
22		—							
23		—							
24		—							
25		109A.			90	75	05		

COMMENTS

GEOCHEMICAL PROGRAMME

~~CARTON PROPERTY~~ DORISVALE NT

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	FP	116			110	130	30		
2		117			85	70	30		
3		118			90	70	20		
4		119			95	70	30		
5		120			100	60	20		
6		121			90	60	20		
7		122			100	70	30		
8		123			100	70	30		
9		124			75	65	25		
10		125			100	65	30		
11		126			70	70	25		
12		127			85	50	20		
13		128			80	65	20		
14		129			85	70	25		
15		130			100	90	40		
16		131			105	95	40		
17		132			100	95	35		
18		133			90	90	35		
19		134			85	70	30		
20		135			105	100	35		
21		136			95	90	40		
22		137			90	90	25		
23		138			90	75	30		
24		139			85	90	40		
25		140			70	80	35		

COMMENTS

GEOCHEMICAL PROGRAMME

~~[illegible] HILLS~~

Borrisdale N.T. Red.

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	F.F.	141			130	75	30	—	
2		142			115	70	25	—	
3		143			80	70	15	—	
4		144			90	80	25	—	
5		145			90	65	25	—	
6		146			90	75	15	—	
7		147			90	90	25	—	
8		148			95	90	20	—	
9		149			65	80	25	—	
10		150			75	70	25	—	
11		151			90	80	25	—	
12		152			80	70	20	—	
13		153			95	85	20	—	
14		154			80	70	15	—	
15		155			65	70	15	—	
16		156			90	85	15	—	
17		157			70	75	<10	—	
18		158			85	70	30	—	
19		159			85	90	30	—	
20		160			105	85	25	—	
21		161			90	70	30	—	
22		162			90	65	25	—	
23		163			95	70	30	2 —	
24		164			110	70	35	—	
25		165			90	55	25	—	

COMMENTS

GEOCHEMICAL PROGRAMME

~~[illegible]S~~

DORISVALE N.T. Black

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	PP	166			80	75	40		
2		167			35	85	45		
3		168			90	70	40		
4		169			105	85	35		
5		170			90	70	35		
6		171			90	70	35		
7		172			95	90	40		
8		173			60	55	30		
9		174			65	55	30		
10		175			90	85	35		
11		176			85	75	35		
12		177			60	65	25		
13		178			90	85	25		
14		179			95	80	30		
15		180			90	75	35		
16		181			90	75	35		
17		182			90	95	45		
18		183			105	90	50		
19		184			90	80	30		
20		185			90	90	35		
21		186			95	90	50	ST JUNCTION	
22		187			95	70	35		
23		188			100	55	20		
24		189			80	50	20		
25		190			100	55	25		

COMMENTS

GEOCHEMICAL PROGRAMME

CALTON HILLS
DORISVALE NT

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	PP	191			105	45	25	—	
2		192			140	35	25	—	
3		193			120	55	20	—	
4		194			135	55	30	—	
5		195			130	60	15	—	
6		196			115	40	40	—	
7		197			90	70	30	—	
8		198			120	95	40	—	
9		199			90	65	35	—	
10		200			135	130	45	—	
11		201			135	115	35	—	
12		202			110	110	35	—	
13		203			135	110	35		
14		204			105	90	30		
15		205			100	55	35		
16	MP	206			60	50	30		
17		207			65	50	25		
18		208			70	40	25		
19		209			50	55	20		
20		210			55	35	25		
21		211			60	30	30		
22		212			45	55	35		
23		213			90	50	35		
24		214			60	40	25		
25		215			65	45	35		

COMMENTS

GEOCHEMICAL PROGRAMME

[redacted] N [redacted] S

DORISVALE NT. RED.

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	MP	L16			45	50	20		
2		217			45	55	20		
3		218			45	45	20		
4		219			40	45	20		
5		220			35	35	35		
6		221			45	45	25		
7		222			70	55	25		
8		223			70	45	25		
9		224			50	40	20		
10		225			55	50	25		
11		226			60	45	25		
12		227			75	40	25		
13		228			80	55	25		
14		229			45	35	20		
15		230			80	45	20		
16		231			65	40	20		
17		232			85	35	20		
18		233			70	35	20		
19		234			60	45	20		
20		235			75	45	25		
21		236			80	40	30		
22		237			85	50	25		
23		238			60	40	25		
24		239			50	35	10		
25	—	—	—	—	—	—	—	—	—

COMMENTS

GEOCHEMICAL PROGRAMME

~~CARTON TALLS~~ DORIVAL NT

BLOCK W

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	MP		240			10	< 10		
2			241			20	10		
3			242			20	15		
4			243			20	15		
5			244			25	15		
6			245			35	20		
7			246			40	20		
8			247			45	30	DARYTE + TRACE	
9			248			35	25		
10			249			35	20		
11			250			25	15		
12			251			55	25		
13			252			50	25		
14			253			40	20		
15			254			70	30		
16			255			55	25		
17			256			65	35		
18			257			35	15		
19			258			50	15		
20			259			65	30		
21			260			40	20		
22			261			45	20		
23			262			50	20		
24			263			30	15		
25			264			70	40		

GEOCHEMICAL PROGRAMME

CATTON HILLS

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	m	265				55	25		
2		66				70	30		
3		67				70	25		
4		68				80	40		
5	L6	6X				70	30		
6		69				85	35		
7		270				70	30		
8		271				90	30		
9		272				110	50		
10		273				105	40		
11		274				120	55		
12		275				105	50		
13		276				95	30		
14		277				160	215		
15		278				100	55		
16		279				130	75		
17		280				115	55		
18		281				95	35		
19		282				90	45		
20		283				90	45		
21		284				95	35		
22		285				30	25		
23		286				35	25		
24		287				30	25		
25									

GEOCHEMICAL PROGRAMME

CE[redacted]

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	TC	288				25	20		
2		289				50	25		
3		290				35	20		
4		291				55	35		
5		292				50	35		
6		293				45	20		
7		294				40	20		
8		295				45	20		
9		296				55	20		
10		297				55	35		
11		298				50	20		
12		299				45	15		
13		300				45	20		
14		301				55	20		
15		302				50	35		
16		303				45	25		
17		305				45	20		
18		306				55	20		
19		307				40	15		
20		308				70	20		
21		[redacted]							
22									
23									
24									
25									

GEOCHEMICAL PROGRAMME

~~CALTON HILLS~~ DORIVALE

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	00	5 W			2100				
2		10 W			295				
3		50 W			295				
4		100 W			180				
5		150 W			535				
6		200 W			240				
7		5 E			320				
8		10 E			130				
9		50E			145				
10		100E			85				
11		150E			65				
12		200E			25				
13	50S	5E			140				
14		10E			110				
15		50E			95				
16		100E			60				
17		150 E			65				
18		200E			50				
19		5W			720				
20		10W			465				
21		50W			260				
22		100W			250				
23		150W			150				
24		200W			225				
25									

COMMENTS

GEOCHEMICAL PROGRAMME

~~CASTON HILLS~~ DORIVALE

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	50N	5W			485				
2		10W			550				
3		50W			130				
4		100W			125				
5		150W			185				
6		200W			275				
7		5E			255				
8		10E			100				
9		50E			90				
10		100E	no	sample					
11		150E			90				
12		200E			125				
13	100N	5W			130				
14		10W			135				
15		50W			180				
16		100W			275				
17		150W			120				
18		200W			240				
19		5E			60				
20		10E			95				
21		50E			110				
22		100E			100				
23		150E			115				
24		200E			110				
25									

COMMENTS

GEOCHEMICAL PROGRAMME

~~CALTON HILLS~~
DORISVALE

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	1005	5W			225				
2		10W			250				
3		50W			160				
4		100W			150				
5		150W			250				
6		200W			195				
7	1005	5E			135				
8		10E			145				
9		50E			90				
10		100E			125				
11		150E			60				
12		200E			60				
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

COMMENTS

GEOCHEMICAL PROGRAMME

~~CALTON HILLS~~

DORIVACE NT

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	00	10 E				100	25		
2		50 E				135	30		
3		100 E				80	35		
4		150 E				45	25		
5		200 E				35	10		
6		5 W				95	30		
7		10 W				105	25		
8		50 W				35	10		
9		100 W				40	10		
10		150 W				30	10		
11		200 W				35	10		
12	50S	5 W				120	35		
13		10 W				90	25		
14		50 W				60	15		
15		100 W				70	15		
16		150 W				20	<10		
17		200 W				80	20		
18		5 E				140	30		
19		10 E				200	40		
20		50 E				80	25		
21		100 E				55	15		
22		150 E				60	15		
23		200 E				50	10		
24	100S	5 W				50	15		
25		10 W				30	15		

COMMENTS

GEOCHEMICAL PROGRAMME

~~CALTON HILLS~~

DORIS VALE NT Thompson; Pocket B AREA

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	100 N	200E				175	35		
2		150E				120	30		
3		100E				95	25		
4		50E				150	25		
5		10E				105	15		
6		5E				70	15		
7		5W				90	50		
8		10W				60	45		
9		50W				55	40		
10		100W				55	50		
11		150W				45	25		
12		200W				70	30		
13	50 N	5E				105	25		
14		10E				50	20		
15		50E				160	35		
16		100E				100	20		
17		150E				90	45		
18		200E				70	35		
19		5W				150	35		
20		10W				70	25		
21		50W				55	10		
22		100W				70	20		
23		150W				45	25		
24		200W				70	30		
25	00	5E				145	35		

COMMENTS

GEOCHEMICAL PROGRAMME

~~CALDON HILLS~~
DORIS LAKE NT

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	100S	50W				55	20		
2		100W				40	10		
3		150W				55	15		
4		200W				70	25		
5		5E				65	20		
6		10E				85	20		
7		50E				55	20		
8		100E				70	25		
9		150E				75	10		
10		200E				70	10		
11	SL	1				55	30		
12		2				105	40		
13		3				65	35		
14		4				30	20		
15		5				70	30		
16		6				35	25		
17		7				45	20		
18		8				20	15		
19		9				30	15		
20		10				20	15		
21		11				<10	<10		
22		12				30	15		
23		13				50	30		
24		14				60	25		
25		15				55	30		

COMMENTS

GEOCHEMICAL PROGRAMME

~~CALTON HILLS~~
DORIS VALENT

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1	SL	16				55	20		
2		17				45	25	—	
3		18				40	20		
4		19				40	25		
5		20				55	20	—	
6		21				95	25		
7		22				80	30	—	
8		23				70	25		
9		24				30	15	—	
10		25				45	20		
11		26				55	15	—	
12		27				55	20		
13		28				65	20		
14		29				45	15		
15		30				40	10		
16		31				45	10	—	
17		32				50	15	—	
18		33				40	15	—	
19		34				40	10	—	
20		35				70	15	—	
21		36				30	15		
22		37				50	15	—	
23		38				180	115	—	
24		39				35	15		
25		40				30	10	—	

COMMENTS

GEOCHEMICAL PROGRAMME

~~GALTON HILLS~~
DORIS DALE NT

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	Sb (ppm)
1		SL	41			15	<10		
2			42			30	<10		
3			43			30	10		
4			44			35	<10		
5			45			55	10		
6			46			30	10		
7			47			35	15	—	
8			48			50	20	—	
9			49			40	15	—	
10			50			105	30	—	
11			51			105	30	—	
12			52			100	20	—	
13			53			90	20	—	
14			54			70	25	—	
15			55			70	20	—	
16			56			120	25		
17			57			110	30	—	
18			58			140	35	—	
19			59			130	30	—	
20			60			65	20	—	
21			61			135	30		
22			62			70	20		
23			63			80	20	—	
24			64			25	15		
25									

COMMENTS

GEOCHEMICAL PROGRAMME

CALTON HILLS

DORIS VALE

	CODE	LINE NO.	HOLE NO.	DEPTH OF SAMPLE	Pb (ppm)	Zn (ppm)	Cu (ppm)	Ni (ppm)	(
1		5L	65			55	20	—	
2			66			55	10	—	
3			67			55	10		
4			68			50	20	—	
5			69			30	20		
6			70			30	<10		
7			71			80	35	—	
8			72			30	10		
9			73			70	40	—	
10			74			30	<10		
11			75			20	[illegible]		
12			76			15	[illegible]		
13			77			30	15		
14			78			20	<10		
15			79			10	[illegible]		
16			80			45	10		
17			81			55	10	—	
18			82			70	15	—	
19			83			40	15		
20			84			70	25	—	
21			85			20	<10	—	
22			86			105	30		
23			87			105	20		
24			88			130	20		
25									

COMMENTS

MINERAL DEPOSITS LIMITED

(INCORPORATED IN NEW SOUTH WALES)

81 ASHMORE ROAD, SOUTHPORT.
QUEENSLAND, AUSTRALIA 4215

POSTAL ADDRESS: P.O. BOX 44, SOUTHPORT, QUEENSLAND, AUSTRALIA 4215

TELEPHONE: GOLD COAST 39-9055 CABLES: MINDEPOSIT SOUTHPORT QUEENSLAND TELEX: MINDEP AA 40438

DAR/sw

18 August 1972

Director of Mines
Mines & Water Resources Branch,
DARWIN, N.T. 5790

Prospecting Authority 2377 - July Report

Dear Sir:

During July geochemical sampling was re-commenced after the wet season.

A detailed soil geochemical program was continued in the Thompson's Pocket B Area to determine the extent of the zinc geochemical anomaly located last season. Sampling was completed and results are pending.

The reconnaissance stream sediment sampling program was extended in the Salt Lick Creek area to investigate the anomaly occuring at the limit of last season's program. Also in Salt Lick Creek detailed stream sediment sampling was completed in an area shown to be anomalous by last season's work. These sample results are also pending.

Expenditure for July was as follows:

Sampler	$220.00
Geologist	770.00
Overhead	500.00
	$1,490.00

David A. Rhoades
MINERAL DEPOSITS LIMITED

David a. Rhoades

for: D. Drake

c.c. Mr. D. Drake

LGJ/sw

7th September, 1972

Director of Mines
Mines & Water Resources Branch
DARWIN, N.T. 5790

577

Prospecting Authority 2377 - August Report

Dear Sir:

During August geochemical sampling was continued after the wet season.

Geochemical results were plotted and a small anomaly was outlined in Thompsons Pocket which will be investigated at a later date.

A sediment sampling program was commenced and completed in Bradshaw Creek and a program in Dolly Dolly Creek was commenced.

Expenditure for August is estimated to be:

Sampler	$495
Geologist	770
Lab.charges	250
Overhead	757
	$2272

L.G. Johnson
MINERAL DEPOSITS LIMITED

For: D. Drake

c.c. Mr. D. Drake,
Darwin, N.T.

DAR/sw

25 August 1972

Director of Mines
Mines and Water Resources Branch
DARWIN, N.T. 5790

Prospecting Authority 2377
Report for Year Ending 17 August, 1972

Dear Sir:

Enclosed please find two copies of the general report for the past 12 months, in fulfilment of the requirements of P.A. 2377.

Yours faithfully,

David A. Rhoades

David A. Rhoades
Mineral DEPOSITS LIMITED

for: D. Drake.

c.c. Mr. D. Drake.

PROSPECTING AUTHORITY No. 2377

Report for Year Ending 17 August, 1972

Prospecting continued for barytes and other minerals.

In September and October a field investigation was again carried out, locating new barite occurrences and further examining the rocks along the Dorisvale fault. It was decided to continue the geochemical sampling programme.

Both reconnaissance stream sediment sampling and detailed soil sampling have been accomplished. The stream sediment samples are taken from both creek banks initially at 400 foot intervals and at all creek junctions. Anomalous or interesting areas are resampled at 200 foot intervals. All sampling points are marked by aluminium tags attached to the nearest tree.

Sampling has been completed in the Salt Lick Creek and Pony Pocket areas. These areas were sampled to prospect for mineralization occurring along the Dorisvale fault. Four areas are worthy of more detailed sampling. (see Figure 1) At the junction of Bradshaw Creek and Pony Pocket Creek an area 2800 feet long shows zinc values at two times threshold and copper values at 1.6 times threshold. Most of the samples collected along Left Branch show zinc values 1.5 times threshold and copper values up to two times threshold. These represent 5600 feet of sampling. Barite outcrops along the creek bed in this locality. Along Salt Lick Creek an area 2640 feet long contains anomalous zinc values up to twice threshold values and an area 1320 feet long at the end of the creek also contains anomalous zinc values up to twice the threshold value. All of these areas should be grid sampled to determine the significance of the anomalous values.

A soil sampling grid has been completed around known sulfide occurrences in the Thompsons Pocket "B" area. An area 400 feet by 300 feet has been sampled on a 50 foot grid pattern. This grid disclosed zinc values increasing at the northern limit of the survey. The highest zinc value at the northern corner of the grid is 1.65 times the threshold. This grid should be extended to the north. (see Figure 2)

David A. Rhoades

(David A. Rhoades)

MINERAL DEPOSITS LIMITED

(INCORPORATED IN NEW SOUTH WALES)

81 ASHMORE ROAD, SOUTHPORT
QUEENSLAND, AUSTRALIA 4215

POSTAL ADDRESS: P.O. BOX 44, SOUTHPORT, QUEENSLAND, AUSTRALIA 4215

TELEPHONE: GOLD COAST 39-9055 CABLES: MINDEPOSIT SOUTHPORT QUEENSLAND TELEX: MINDEP AA 40438

DAR/sas

4th April, 1972.

Director of Mines,
Mines & Water Resources Branch,
DARWIN, N.T. 5790

Dear Sir,

re: Prospecting Authority No.2377 - March Report, 1972:

During March the wet conditions prevailing in the area did not permit field work.

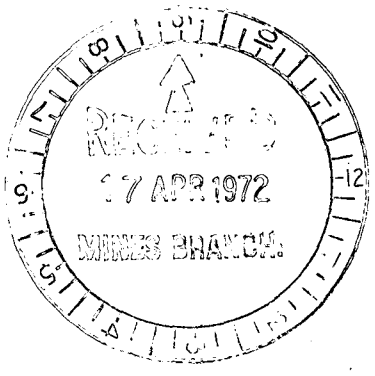
A review of the geochemical sampling results was completed earlier. Attached please find a copy of a map showing the lead and zinc values obtained from the geochemical grid of the Thompsons Pocket B area. It is intended that this soil sampling program will be continued when the wet conditions have subsided.

David A. Rhoades

DAVID A. RHOADES,
MINERAL DEPOSITS LIMITED

For: D. Drake

c.c. Mr. D. Drake,
Darwin.



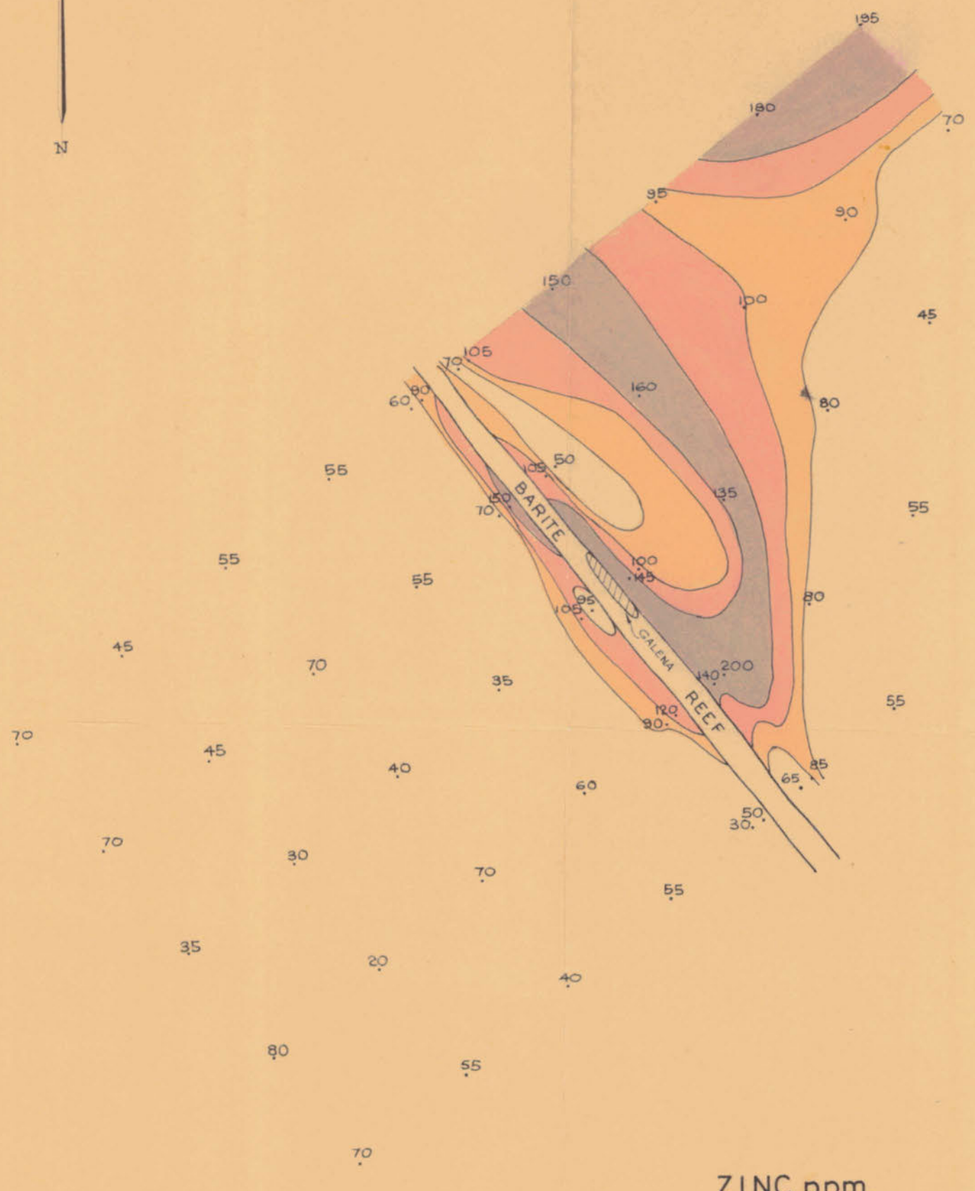
89

N

LEAD ppm.

> 400
= 200 — 399
= 160 — 199

N



ZINC ppm.

> 130
= 100 - 129
= 85 - 99

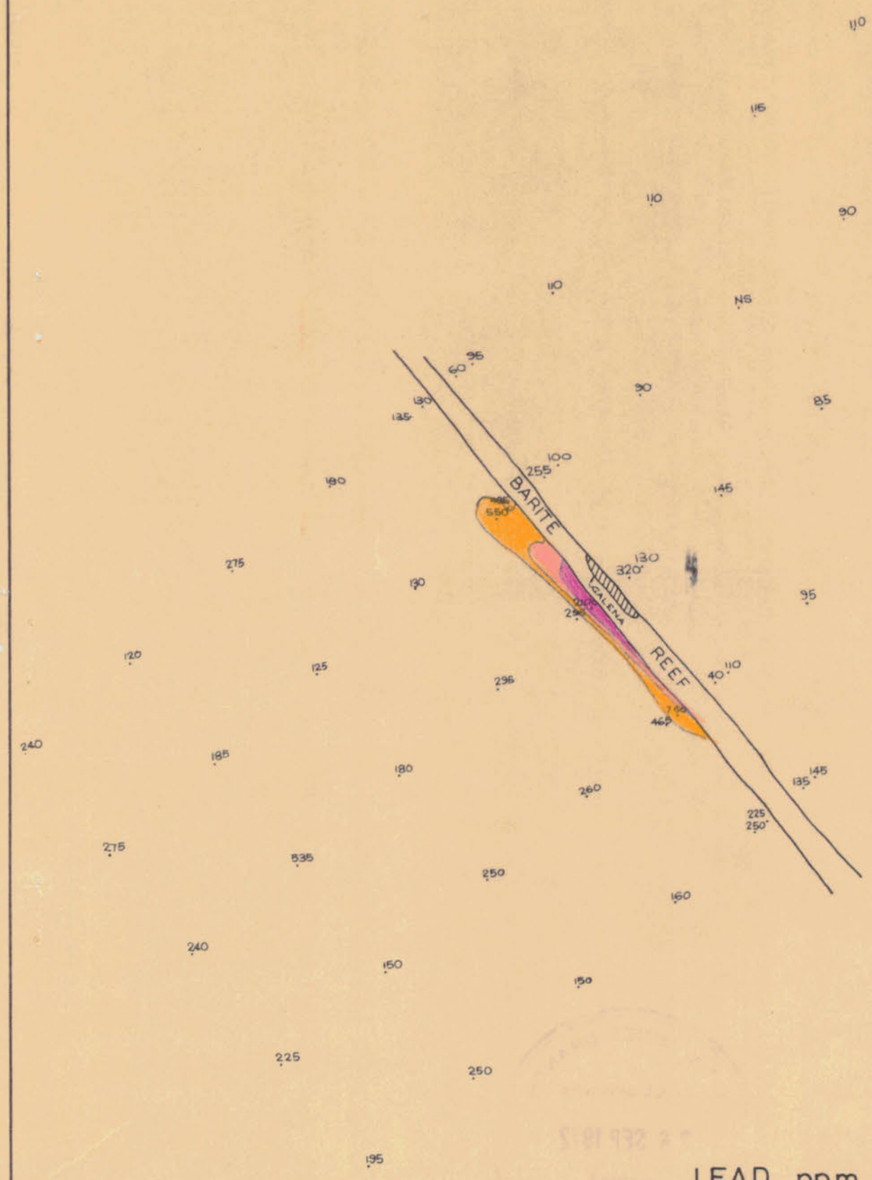
DATE	AMENDMENTS
SHEET OF	

MINERAL DEPOSITS LIMITED
CR 69/59

A to P 2377
DORISVALE N T
THOMPSONS POCKET 'B' AREA
GEOCHEMICAL RESULTS

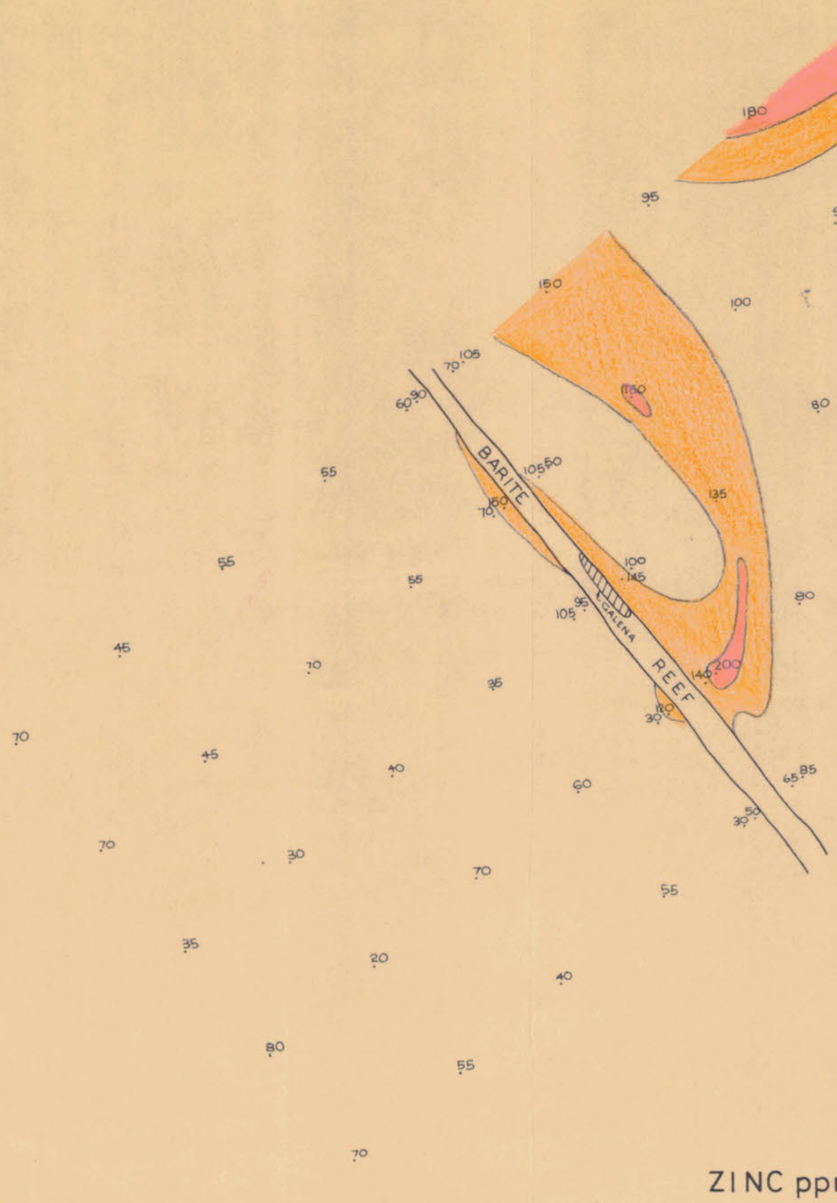
Scale:	Date:	Number:
50' = 1"	4 . 4 . 72	QTD 11

Sheet 'D'



LEAD ppm.

> 999
> 777
> 493



ZINC ppm.

> 159
> 118

CR 69/59

DATE	AMENDMENTS
SHEET ..... OF	

MINERAL DEPOSITS LIMITED

A to P 2377
DORISVALE N.T.
THOMPSONS POCKET B AREA
GEOCHEMICAL RESULTS

Scale:	Date:	Number:
50' = 1"	1 · 5 · 72	QTD 12

Figure 2

Sheet 'D'