

YUENDUMU MINING COMPANY N.L.

PRELIMINARY RECONNAISSANCE BL7830

BUGER & TERRY'S AREAS

MOUNT DOREEN 1:250,000 SHEET SF52-12

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DATE: MARCH 1993

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YUENDUMU MINING COMPANY N.L.

REPORT NO: 001  
TITLE: PRELIMINARY RECONNAISSANCE EL /830  
BUGER & TERRY'S AREAS  
AUTHOR: F.D. BAARDA  
DATE: MARCH 1993

1.0 SUMMARY

Historical information, corroborated by favourable geology led Yuendumu Mining Co. to apply for EL /830 on 5/5/92. The Exploration Licence was granted on 2/12/92.

This report outlines the historical/geological background as well as detailing preliminary geochemical results.

2.0 HISTORICAL INFORMATION

Is detailed in Appendix A.

3.0 GEOLOGICAL INFORMATION

During 1990/91 the BMK and NIGS combined to re-map the Mt.Doreen 1:250 000 sheet area. During much of this re-mapping the relevant personnel were based at Yuendumu Mining Company's exploration office. D.H. Blake was responsible for re-mapping the Vaughan 1:100 000 sheet, and kindly made his preliminary results available.

Two areas of Lander Rock beds (which had previously been mapped as "pre-Cambrian schist") are herewith named the "Buger Area"(after the nearby Buger Creek) and "Terry's Area"(after Michael Terry ...see Appendix A).

The Buger Area has an east-west trending granite/metamorphic contact zone at least 7 Km. long along strike and an interesting body of metadolerite and metagabbro of more than 1 Km. strike length at its eastern end. Airborne magnetic data (BMK 1976, 1.5 km spacing) reveal magnetic anomalism which appeared to be spacially related to the contact-zone.

Terry's area has approx. 30 sq.km. of Lander Rock beds outcrop and sub-crop but no significant magnetic character at the scale of the survey. The Vaughan 1:100 000 geology map reveals no clear-cut metamorphic /igneous contact zones, it does however show a large three km long fault ridge near the southern edge of this area which consists of sheared brecciated veins of recrystallised quartz enveloped in highly foliated to mylonitic rocks.

The Lander Rock beds are traversed by numerous faults and are tightly folded in places.

#### 4.0 GEOCHEMICAL SAMPLING

##### 4.1 Buger Area

Priority was given to this area because of its magnetic character (not evident at Jerry's Area).

A grid at 250x500 metre spacing was soil sampled. A total of 185 samples were taken. Samples were sieved and the <80# fraction analysed for Au (one batch @ 0.2ppb D.L. and another at 0.001ppm), As, Cu, Pb, & Zn. The first batch was also analysed for Fe & Mn.

Results were disappointing in that no definite patterns were detected, although some low order anomalous samples may warrant follow-up at some future time when the geology and geochemistry of the area is better understood as a result of further work in the region.

A single rock sample from near the granite contact assayed .05ppm of Gold.(see Appendix B). A further 10 rock samples were recently submitted for analysis and results are expected next month.

Outcrops of meta-basalt are common and are a possible explanation for the magnetic character of the area.

##### 4.2 Jerry's Area

Two vehicles were "leap-frogged" to carry out reconnaissance sampling of this area. Soil samples were taken mostly from alluvial planes at the base of scree slopes at places "draining" large areas of outcrop (e.g. at the intersection of two scree-slopes). A GPS unit was used to record whence the samples came. A total of 54 soil samples were taken as well as a few rock samples. At eight locations an additional sample of coarser material was taken from the surface and/or small drainage channels ("stream/lag" samples).

The soil samples revealed an area of high Arsenic values of at least four kilometres of strike length. The peak value was 76 ppm As, with over one quarter of the samples exceeding 8 ppm. Gold values vaguely correlate with the As values and have a peak value of 4.5 ppb.

The assays for the rock samples and the "stream/lag" samples are expected next month. The "stream/lag" samples were sieved into various fractions for orientation purposes.

#### 4.3 Jerry's Pit

Subsequent to the above sampling M. Jerry's notes were searched (see Appendix A.) and airphotos examined which considerably reduced the area in which the pit was likely to be located. A permanent water hole in a creek (Midgin-parnta) was located and the GPS used to navigate to the pit location according to Jerry's notes. This location turned out to consist of Nicker beds outcrops approx. one kilometre from the pit. The GPS was then used to navigate to the location of the highest soil arsenic value, and the pit was then located on a hill approx. 300 metres further.

In the pit was a mulga wood post which had clearly fallen into it and had started to decay at its bottom end (originally the top). On the post were carved the initials "S.O.G./B.N." (Stan O'Grady and Ben Nicker members of Jerry's party) and on the other side "15(?)/5/33". The pit was cleaned out and several rock chip samples taken, as well as some other rock samples further afield.

The pit is located in the middle of a quartz reef approx. 45 m long pinching out at both ends. The reef has a strike of 94 degrees magnetic and is near vertical. At its thickest the reef is 1.2 m wide (at the pit). The pit is 1.5-2 m deep, 1.3m wide along strike and 2.2m wide across strike. As well as the reef itself it has been excavated for about one metre into metasediments south (up-slope) of the reef.

A sample of handpicked arsenopyrite bearing material from the mullock heap yielded assays of 0.66 ppm Au & 15.6% As as well as 1.1 ppm Ag and 29 ppm Bi.

Rock sample assay results from the pit and elsewhere in Jerry's area are tabulated in Appendix B.

#### 5.0 AIR-PHOTO MAP

An air-photo interpretation map at a scale of 1:25 000 for the Jerry's area was drawn. Whereas the map does not add much to the geological information available from Blake's 1:100 000 map, it has more detail and the scale is better suited to enable geochemical results to be overlain.

South-east of the area of Lander Rock beds outcrops, there is an area of distinctly different character: lighter colour, bedding trends almost absent, low-undulating country. Possible explanations for the different character are that this is an area of Nicker beds sub-crop, or perhaps the area has been altered by intrusives, resulting in recessive weathering and probable lateritic effects.

6.0 CONCLUSIONS

The confirmation of the existence of gold at Terry's pit, although of no economic significance per se, enhances the potential of the area, particularly in view of the now known extensive zone of high arsenic values.

7.0 PROPOSED PROGRAMME

After "stream/lag" sample assay results are received, it is intended to discuss with Poseidon Gold and Poseidon Exploration (our joint venture partners in the Barrow Creek area) how best to approach further exploration of EL 7830.

A regional sampling programme is proposed, but at this stage the most suitable methods (sample type, sample spacing etc.), have as yet to be decided on.

YUENDUMU MINING COMPANY N.L.

REPORT NO: 001 APPENDIX A  
TITLE: HISTORICAL BACKGROUND EL 7830  
AUTHOR: A. WINWOOD-SMITH  
DATE: MARCH 1993

In 1901 Maurice and Murray took an expedition from Fowler's Bay in South Australia to Cambridge Gulf in the Kimberleys. In August of that year they camped six and a half miles west of Mt. Davenport. They described the country thus:

"...The slate and quartz formation here looks very promising for prospecting and this is a very likely strip of country..."

In 1932 and 1933 Michael Terry led two prospecting expeditions through this area on behalf of the Adelaide based Emu Mining Co.

A book titled "Sand and Sun" written by Terry and published in 1937 contains the following:

"...From this place (Vaughan Springs) we returned to the area west of Davenport where many reefs had been tried on the previous trip (1932). For two weeks the area was combed; over 70 samples were panned, without gold being traced, *because a sample, assayed after the other trip, had given a return of a few pennyweights to the ton. ...*"

An article written by Terry for the Geographical Journal, titled "Explorations Near the Border of Western Australia" and published in 1934, contains the following:

"...West of Mount Davenport there is a strong development of hornblende granite and in its western limit a considerable area of schist where nicely mineralised reefs caused us to put in detailed work. Apart from iron and some copper, the only encouraging stone was an occurrence of arsenical pyrites with gold, silver and bismuth(?) (\*) in small quantities. No payable gold values could be found, which tallies with the reports of Thompson, who tried close to here in 1927...."

(\*) In our copy of a copy the word "bismuth" is almost unreadable. We are trying to obtain a better copy from another source.

On learning that Terry's notebooks and journals were now in the possession of the South Australian Museum, we made arrangements to view them with the aim of narrowing down the location of the gold bearing sample. The following are various entries of interest and relevance to EL 7830:

No.35 August 2 (1932):

"Travelled from 9:07am till 6:17pm did 17.4m around northern base of Davenport to camp 4m WNW of Eva Springs, *did best to find good reef area mentioned by Murray and Maurice 1901 crossed tracks.*"

August 3rd:

"Leaking canteens delayed start to 9:36am to 5:10pm heading 11 1/4 miles to semi-open mulga country beyond the Granite hill area West of Davenport on route for Mt.Farewell."

No.58 Field work report to Emu Co. 19/12/32...sheet 5:

"...This I believe is happening now (rain) and I am most conscious of availing myself of the opportunity later next year especially because of new range we have discovered as that indicates strong exposures of country rock there in the vicinity.

Retracing our travels I recall that hereunder are valid(?) and prospective(?) quartz veins and reef country:

1. 8 miles SE of Mt.Stanley
2. 12 miles W of Mt.Davenport
3. South side of Rawlinson Range and North side of Sladen Waters
4. Vicinity Fort McKellar and north side of Rawlinson Range
5. Warburton Range

Quartzites with quartz reefs were tried extensively in the country west of Singleton and Davenport. In fact every exposure of whatever character was conscientiously tried by O'Grady who never failed in his keenness and thorough work. The conclusion I have come to as a result of this expedition which coupled with the work of three prior attempts to find gold, is that it is useless to prospect east of our present line of travel for although *no-one may tell in what unusual manner gold may occur*, it will be far better in future to concentrate upon eliminating the land inside the borders of Western Australia, at any rate south of Latitude 22 degrees S. Once the area about Lake Mackay has been tried we must turn our eyes to W.A. in hope of a discovery which will stand inspection by a qualified mining engineer...."



The following extracts are from "Log of Michael Terry Leader of Emu Mining Co. Expedition to Lake Mackay 1933":

C 15 (Camp No.15) Tuesday May 9:

"...After lunch Nicker and I and *the boys* worked on the reef and by 5pm had got a costean across it 5 feet wide and to a depth of 3 foot or to just below surface level(\*). Most of the stone is hungry but on the northern or hanging wall a *strong shoot of arsenical pyrites was exposed*. It started at the schist and for 1 1/2 feet extended into the reef. The stone looked very well from this extension of ore is encouraging although this far we have not tested it for gold. Fired two shots each of the plug to loosen the stone. O'Grady dollyed 11 samples after lunch for no gold, but had to quit because the repair of the dolly did not stand up to work. Tomorrow I must try to do it another way. None of the samples from the quartzite granite contact near Oomatchee(\*\*) revealed gold although some of the stone had iron pyrites..."

(\*) The reef sticks out almost one metre from the surface at this location.

(\*\*) =Yurnmaji: near Central Pacific Mineral's Bigriyi uranium prospect, north central part of the Mt.Doreen 1:250 000 sheet.

Wednesday May 10:

"O'Grady and Nicker worked all day and deepened the costean about 2 ft.... Work is revealing that the arsenical pyrites is due to small reef contact with the big one. The latter is generally hungry quartz and sinking is now showing a small mineralised one breaking away. However this may be due to a small cause(?) of schist in the reef and one will have to see if the reef rejoins. The big one is for all practical purposes vertical in dip."

Thursday May 11:

"...Had to put 3 to 4 shots to loosen the stone today for although the reef is still good to deal with the schist is getting very dense. The last test samples of ferruginous schist and burnt arsenical pyrites stone showed no gold but we are going to deepen for another day to see if any change occurs to observe how the reef behaves. We are now over 7 feet below the cap."

May 12:

"...The reef seems to be pinching badly in the southern or hanging wall and is being replaced by schist..."

C 16 (Camp No.16) May 19:

"...got a largish reef showing a little *copper*, the first trace in this area. But even this panned no gold...."

We are unable to determine from the notes where exactly this copper occurrence is, except that it is further west and not very far (probably inside EL 7830). We will have to rely on regional geochemistry to locate it in the future.

Additional information was extracted from the material at the South Australian Museum, such as distances and bearings and descriptions of the country traversed (vegetation and physiographic features). This data together with air photos enabled us to narrow down the likely location of the pit which we found on the first day of our search on the 2/3/93, almost 60 years from the time it was excavated.

YUENDUMU MINING COMPANY N.L.

REPORT NO: 001 APPENDIX B  
 TITLE: ROCK SAMPLE ASSAY RESULTS EL 7830  
 DATE: MARCH 1993

SAMPLE EAST NORTH Description:

Jerry's Pit:

B2273 659680 7530830 Lumps of qtz. from mullock-heap  
 B2274 Blue-grey heavy material from mullock  
 arsenopyrite/scorodite(?)  
 B2275 Composite of ferrug. material from  
 "claystone"/qtz. contact zone (N-side)  
 B2276 Composite barren qtz. reef material 1.5m  
 below original surface, west wall.  
 B2277 Squary qtz. pod (20cm thick) & some south  
 contact zone material, west wall.  
 B2278 Distorted qtz. reef material, east wall  
 south contact zone.  
 B2279 Material from small prospecting pit app.  
 10m. NE from coast. Small lenses of mica  
 rich pegmatitic qtz. in metasediments.  
 B2280 659550 7530860 Very ferruginous qtz. reef material with  
 some sulphide box-works. On strike with,  
 and a probable extension of the reef at  
 Jerry's pit (see photo).

Jerry's Area:

B2272 660600 7529500 Mn stained Nicker beds(?)  
 B2281 659020 7531020 Material from small prospecting pit  
 in qtz. vein in metaseds., flat country.  
 B2282 659115 7530730 Ironstone reef 20m. long, 1-2m. wide. Strike  
 259 degrees mag. Dip 45 degrees N.  
 B2283 657000 7527950 Material from prospecting pit, ferruginous  
 quartz in siltstone (Nicker beds).  
 B2284 Qtz. vein material from small prospecting  
 pits in Nicker beds siltstone. Located  
 on barren ground east of creek east of  
 sample B2283.

Buqer Area:

B2210 668550 7543170 Material from a small qtz. reef conformable  
 with a v/small occurrence of banded chert  
 (BIF??) near the metased./granite contact.



Final

ANALYTICAL REPORT

1488/

SAMPLE	Au	AuDp1	Cu	Pb	Zn	Mn	Fe
B2272	<0.001	--	9	4	20	930	1.32%
B2273	0.005	--	6	30	18	85	5.30%
B2274	0.66	0.68	15	<4	4	30	7.00%
B2275	0.007	0.005	8	5	24	115	2.64%
B2276	0.003	--	6	5	9	170	3.40%
B2277	0.060	--	22	8	30	65	5.70%
B2278	0.002	--	11	25	26	110	5.10%
B2279	<0.001	--	13	11	38	190	2.74%
B2280	0.080	--	140	8	13	150	11.0%
B2281	<0.001	--	21	20	25	125	3.74%
B2282	<0.001	--	60	72	230	80	40.0%
B2283	<0.001	--	30	6	92	70	21.0%
B2284	<0.001	--	16	18	23	110	4.52%

CLASSIC LABORATORIES:-

<u>ADDENDUM</u>	<u>Au</u>	<u>As</u>	<u>Cu</u>	<u>Pb</u>	<u>Zn</u>
B2210	0.05	<50	47	6	30
UNITS	ppm	ppm	ppm	ppm	ppm
DET. LIM.	0.01	50	2	4	2
SCHEME	AAS7N	AAS2	AAS2	AAS2	AAS2

UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DET. LIM	0.001	0.001	1	4	2	5	5
SCHEME	AAS9	AAS9	AAS9	AAS9	AAS9	AAS9	AAS9

Final

ANALYTICAL REPORT

SAMPLE	Ag	Bi	Cd	Co	As
B2272	<0.1	<1	<0.1	6	4
B2273	<0.1	<1	<0.1	<2	4750
B2274	1.1	29	<0.1	<2	15.6%
B2275	<0.1	<1	<0.1	4	1100
B2276	<0.1	<1	<0.1	<2	560
B2277	0.1	9	0.1	7	8.70%
B2278	0.1	3	<0.1	3	4550
B2279	<0.1	<1	<0.1	5	270
B2280	1.4	5	<0.1	3	1540
B2281	0.1	<1	<0.1	2	490
B2282	<0.1	<1	0.3	12	2150
B2283	<0.1	<1	0.3	8	155
B2284	<0.1	<1	<0.1	3	28

10/1 /

UNITS	ppm	ppm	ppm	ppm	ppm
DET.LIM	0.1	1	0.1	2	1
SCHEME	AAS9	AAS9	AAS9	AAS9	XRF1L XRF1L

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REPORT NO: 001 APPENDIX C  
TITLE: PHOTOGRAPHS TERRY'S AREA EL 7830  
TAKEN BY: A. WINWOOD-SMITH  
DATE: MARCH 1993



MIDGINPARNTA WATERHOLE (AMG 658/50E /528550N)



THE INITIALLED MULGA POST



TERRY'S PIT LOOKING NORTH



TERRY'S PIT LOOKING SOUTH (UP-SLOPE)



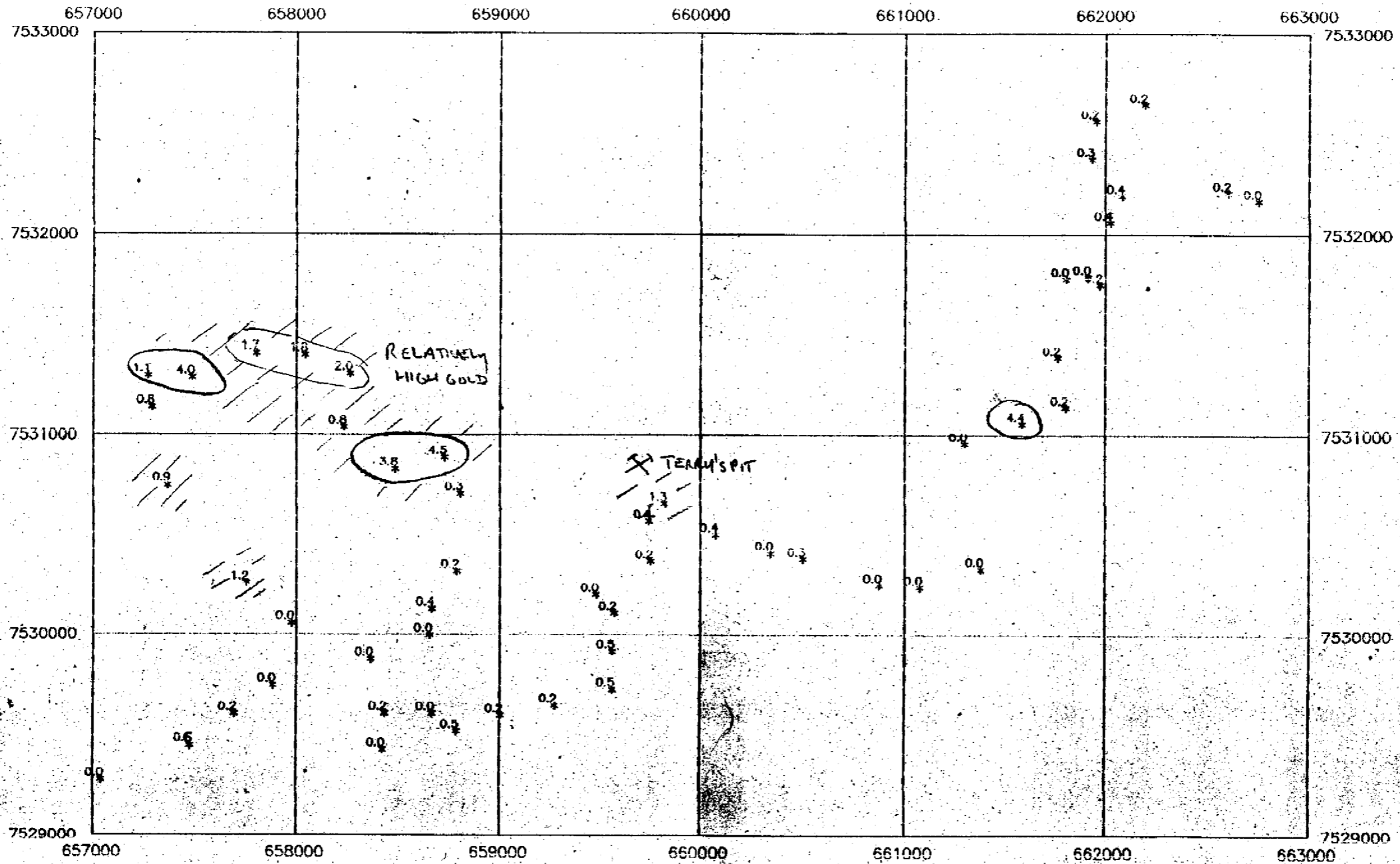
SUSPECTED LOCATION OF TERRY'S "CAMP 15" (North of Pit)  
Pit can be seen top right hand corner of photograph.



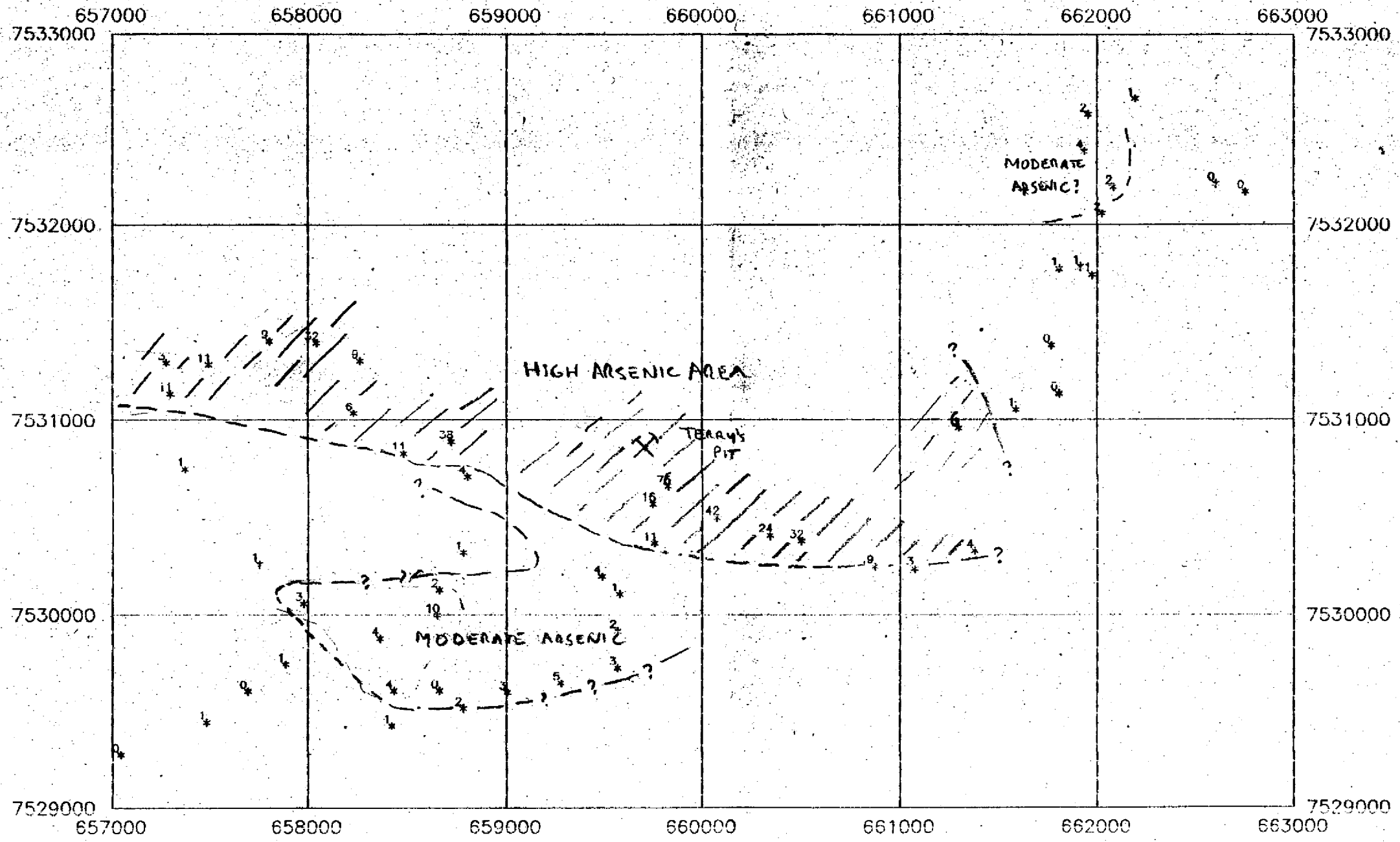
LOCATION OF SAMPLE B2280 (FOREGROUND)  
Photo looking East..costeanned qtz reef top centre of photo.



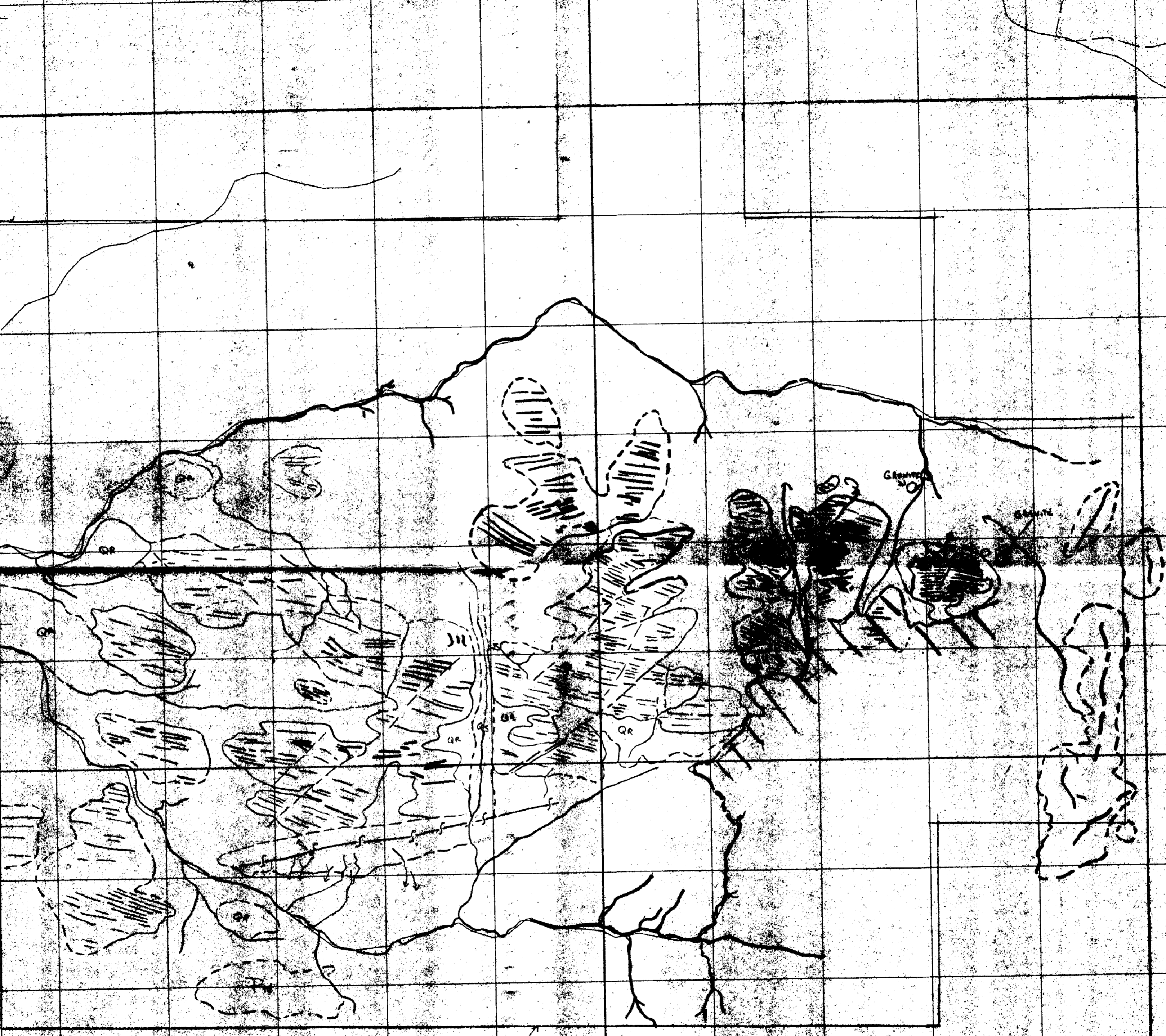
# TERRY'S AREA GOLD (ppb)



TERRY'S AREA RECONNAISSANCE ARSENIC (PPM)



7537000  
7536000  
7535000  
7534000  
7533000  
7532000  
7531000  
7530000  
7529000  
7528000  
7527000



B.L. 7830 boundary

665000E

660000E

665000E

-22°20'00"