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ANNUAL REPORT

EXPLORATION LICENCE 5082

OCTOBER 9 1986 - OCTOBER 8 1987.

LICENSEE: F.H. ARIESON

1:250,000 Map Sheet : CALVERT HILLS

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Summary

Exploration for gold was carried out on EL 5082 during 1987. The work consisted of geological, scintillometer and lithogeochemical traverses. The results of this work were negative and no further exploration for gold is recommended.

Location and Access

The exploration licence is located between Tennant Creek and Mount Isa, its Eastern boundary is formed by the Northern Territory-Queensland boundary (see fig.1). A good track exists between Borroloola and Mount Isa, which passes along Westmoreland Homestead. From Westmoreland a reasonable (4 wheel drive) track can be followed to the licence area. Within the E.L. a large emergency airstrip (Carolina landing strip) is maintained by the Commonwealth, at regular intervals the strip is graded.

Directly North of the E.L., at Wollogorang a tourist homestead has recently been established. Supplies, fuel and four wheel drive vehicles are available, air charters to this place can be organised by contacting the owners (089-81 9455).

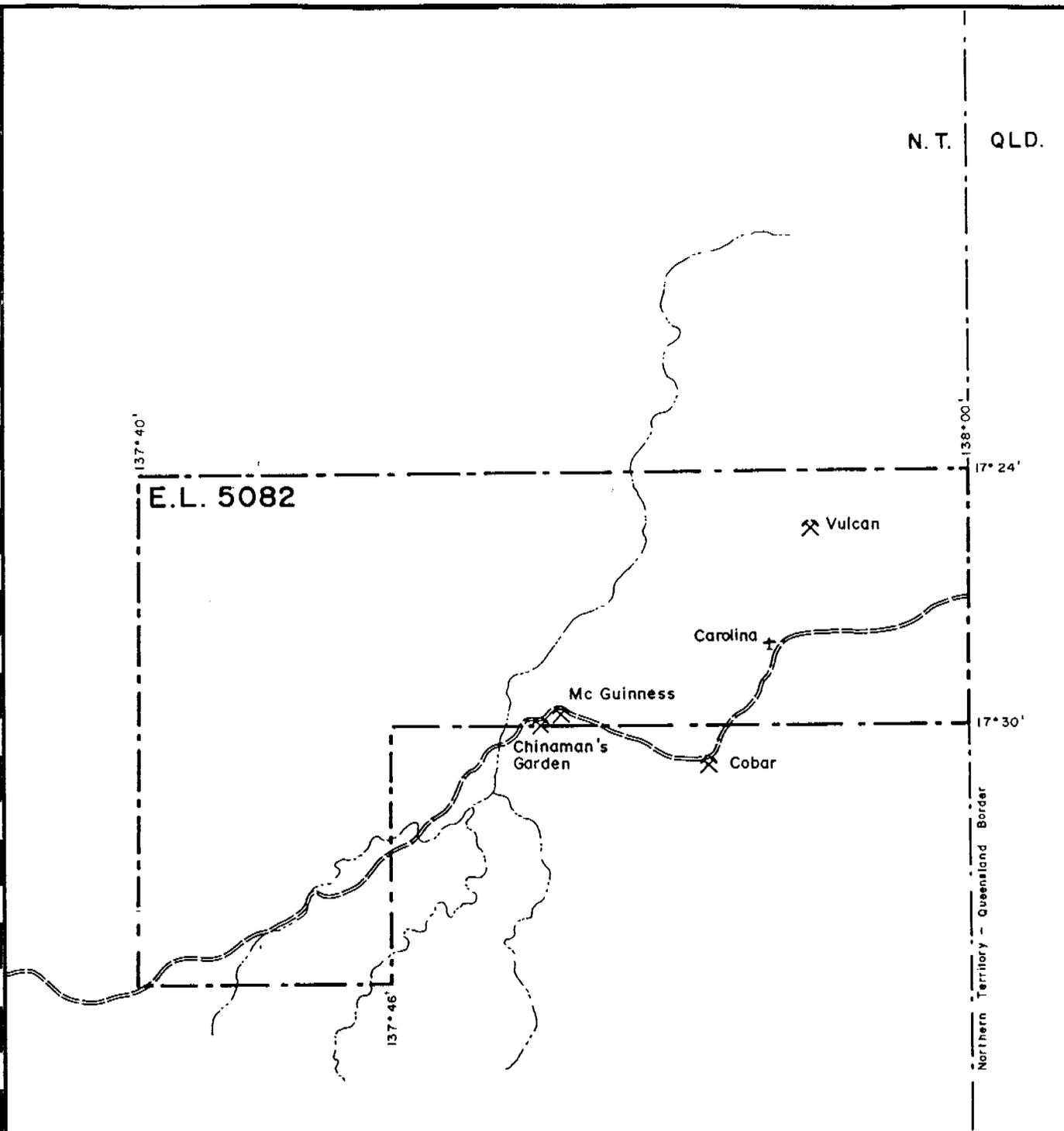
Rainfall in the area ranges from 50 to 75 cm per annum. The wet season starts in November and extends to March. Exploration is virtually impossible during this period. Two major creeks drain the E.L. and many permanent waterholes are present throughout the whole year.

In general the area comprises hilly dissected country drained by North-flowing creeks. Relative dense vegetation (Turpentine Bush) makes off road very difficult.

Previous investigations

Prospectors worked in the area in the beginning of the century. Little information is available, because that region formed part of N.S.W. during that time interval. On some old maps the area is marked as the McArthur Gold Fields, several topographic names indicate the presence of Chinese activity e.g. Chinaman's garden. The remoteness of the area, discovery of gold near Darwin and the fact that Chinese were not allowed to hold tenements, blocked the development of the region. Some copper was mined and exported from the area, but the absence of a nearby port made mining uneconomic.

Many companies have explored the Murphy Basement Block and the overlying Westmoreland Conglomerates. In the late Fifties and early Sixties some small rich uranium mines were active, the ore was hand picked and treated in Rum Jungle. Gold anomalies are mentioned in the company reports. Recent work by Kratos (74-80) revealed the presence of high grade gold, silver and uranium ore along certain fault planes. All exploration activity centered on the main faults and no attempt was made to understand and explore the regional geological setting.



NOBELEX LIMITED

E.L. 5082, CAROLINA

LOCALITY MAP

Fig. 1.

The only work in the present E.L. was carried out by Nickel Mines in the late Sixties. The main target was again uranium. Several minor anomalies (Potassium ?) were detected in the Seigal Volcanics (andesites and vesicular basalts). Some costeans and a few auger holes were executed over the mapped anomalous zones. Due to a lack of success and the declining uranium price exploration activity ceased. Nickel Mines analysed certain samples also for gold and silver. The results were too low for that time to be significant and were therefore not mentioned in their reports, only the assay sheets reveal the anomalous gold values. Most of the anomalies and the result of the augerhole drilling are not described in the reports.

In 1979-1981 Afmeco and Urangeselschaft investigated the area. Both companies only checked the surface with scintillometers and no gold analysis were carried out. Mineralization on the contact between the sediments and the overlying volcanics, partly fault controlled was recognised. No drilling was carried out to test these ideas.

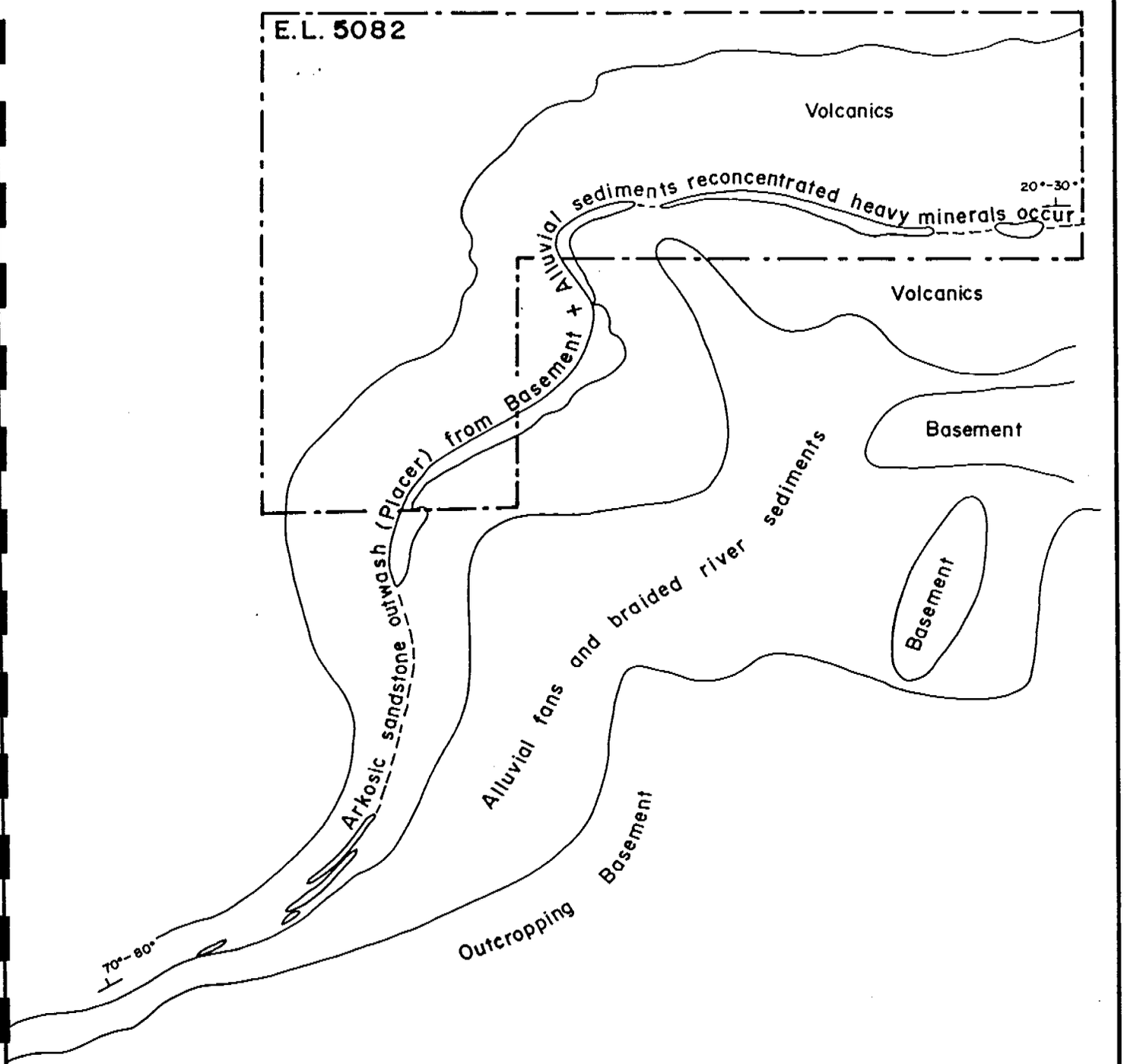
Exploration model

Previous exploration outlined the presence of high grade uranium, silver and gold mineralisation in the Murphy Tectonic Ridge. The Westmoreland Conglomerates contain several small, but very rich old uranium mines in which some gold mineralization was also described. Pockets of high grade copper mineralization were discovered in the younger volcanics.

Figure 2 shows the simplified geological setting of the area. Basement is continuously uplifted and eroded. A significant erosion pulse took place during the deposition of the Proterozoic Westmoreland Conglomerates. This unit comprises thick conglomerate lenses alternating with coarse sandstone, a total of 4 sub-units has been described. This fluvial fan/braided river system looks very similar in morphology to the huge African Pre-Cambrian fan systems derived from the old basement shields.

The basin subsidence continuous with a declining sediment input caused a transgressive setting. The overlying younger volcanics are deposited in a sub-aqueous environment. The interbedded Carolina Sandstone corresponds to an increasing sedimentation pulse. The sediments were laid down in a near shore environment, both fluviatile and offshore banks can be recognised. The presence of heavy mineral bands, described by many geologist indicates a possible strand line. The heavy mineral suite was tested for uranium, but not for gold occurrence.

Finally the whole system was drowned by a transgressive sea resulting in the deposition of dolomitic shales, dolomites and marine sands. Very little is known about these sediments as the areas are inaccessible from the south by 4 wheel drive vehicles and no mineralization has ever been described.



NOBELEX LIMITED

E.L. 5082, CAROLINA

SIMPLIFIED GEOLOGICAL SETTING

kms 5 0 5 10 15 kms

SCALE 1:250000

Fig. 2

Mineralization within the Westmoreland group is well known. The uranium is trapped, in the upper units at least, by sandstones near an active fault zone. No drilling aimed at discovering gold has every been attempted, but it seems logical to expect, that besides uranium, gold concentration has also occurred.

The Seigal Volcanics consists of numerous lava flows, most less than 20 m thick. The basal sequence is characterised by its amygdaloidal nature. The lavas, although often poorly exposed are described as very weathered or altered. The andesine-basalts form the basal part of the Seigal Volcanics, below the Carolina Sandstone. Above this sandstone it consists of amygdaloidal basalt, tuff, tuffaceous siltstone and agglomerates. Dolerite dykes cutting across could be the feeder dykes of these Volcanics or they may correspond to the formation of the younger Settlement Creek Volcanics.

Copper mineralization occurs within this unit and has been found along the major fault directions. Due to the low copper price and the remoteness of this region no modern base metal exploration was ever carried out over this volcanic unit.

Tectonic activity plays a major role in the development of a regional geological model. The Murphy Tectonic Ridge represents a thrust controlled horst block, limited by a series of E.N.E. faults parallel to strike direction of the block. At a later stage these faults may have relaxed and terrace faulting formed. Within this overall right lateral wrench system, a synthetic W.N.W. fault direction developed. The antithetic N.S. direction is poorly expressed, but controls most the present day creek flows. Normal faulting N.W. occurs mainly as fracturing and not on a larger regional scale.

An alternative interpretation would be to see the thrust direction as the synthetic and the W.N.W. as the antithetic. Folding axis would then be almost N.S. Based on this model the regional stress/strain ellipsoid would be a right lateral N.E. wrench system. With the knowledge gained in the Eromanga Basin we know that a East West right lateral wrench system controlled the Australian continent and the formation of the sedimentary basins, therefore the first solution has been adopted.

Summarising the above:

- Basement continuously eroded
- Thick alluvial fan system overlies the basement and contains several uranium mines with possible anomalous gold (Cobar II). Postulated is the re-concentration of gold and uranium within this unit, controlled by sedimentary and tectonic factors.

- Carolina Sandstone, possible gold concentration along strandlines.

- Well defined deep seated tectonic system, reactivated constantly as shown by the present day morphology. Volcanic unit shows well developed quartz vein systems along the main faults.

- Envisaged is a fluid migration trough the basement and oldest units dissolving the pre-concentrated deposits, those fluids migrate along certain fault planes. Some fluids will penetrate the porous lava flows and the dissolved material will precipitate, forming rich zones of mineralised ore.

Described gold occurrences within the E.L.

The assay list within the Nickel Mines Ltd. report shows the following results. The only data available are for the anomalous zones 3, 10, 15, 16, and 17. In total 28 anomalous (uranium) zones are mentioned but no further data are available in these reports.

Table 1 Nickel Mines Ltd. Assay Results

Anomaly	Cu(ppm)	Pb(ppm)	Zn(ppm)	Ag(Oz/t)	AU(Oz/t)
3	190	360	175	.85	.09
10	100	47	45	.15	.04
15	145	30	25	.06	.15
	90	30	15	.02	.10
	160	47	250	.11	.03
	725	30	260	.06	.11
	53	30	160	.11	.11
	1275	65	260	.06	.13
	587	260	325	.09	.22
	375	130	360	.11	.14
	295	65	410	.06	.15
	145	30	40	.04	.09
	100	30	40	.04	.07
16	190	30	50	.04	.08
	70	30	15	.06	.09
17	95	30	20	.06	.11
	100	65	40	.04	.15
	65	30	50	.04	.13
	40	30	40	.02	.24
	75	30	25	.06	.16
	120	30	15	.04	.18
	120	30	40	.02	.17
Picaninny	1.42%	65	25	.09	.13
	802	30	15	.02	.03
	750	30	25	.02	.03
	280	nil	40	.04	.17
	90	15	25	.04	.17
	145	nil	40	.22	.11
Costean	8.65%	230	65	.02	.03

No further description is provided how the assays were carried out. The way the data are presented it appears that the bottom 2 samples represent a repeated test.

The maps available in the report show the anomalies Pick Hole, 15, Picanniny Lease and a large map showing part of the original grid. With the available data it was only possible to identify the exact location of the anomaly 15 on a present day topographic map. Because all the anomalies were mapped as radioactive zones (most likely a higher potassium content of certain flows, either caused by original chemical differentiation or by later alteration).

More recent surveys show similar base metal background values, but no sampling of the anomalous gold zones has been carried out. The samples taken by Newmont and B.H.P. did not investigate the previous described anomalies. Both sampled the outcrops along the major Vulcan fault. The anomalies marked by Nickel Mines are west of this fault zone. No attempt was made to relocate the original radioactive anomalous site.

Work done

In September 1987 an exploration programme was mounted designed to verify the Nickel Mines anomalous gold values and to sample the major fault zones and uranium occurrences for gold.

Anomaly #15 was relocated using a scintilometer, and 9 rock samples were collected (see Figure 3).

Two samples were collected from radio active locations within the Vulcan Fault zone and another two from veined Carolina Sandstone (Figure 3). Samples were also collected from quartz veining near Chinaman's Garden, a radioactive fault contact north of the Hussen Uranium mine, and from a radio active vein in area of McGuinness' Workings and from the spoil heap of Cobar II, the largest uranium producer in the area (Figure).

All samples were assayed for Cu Pb Zn Ag Au (fire) Pt Pd As Th U and W.

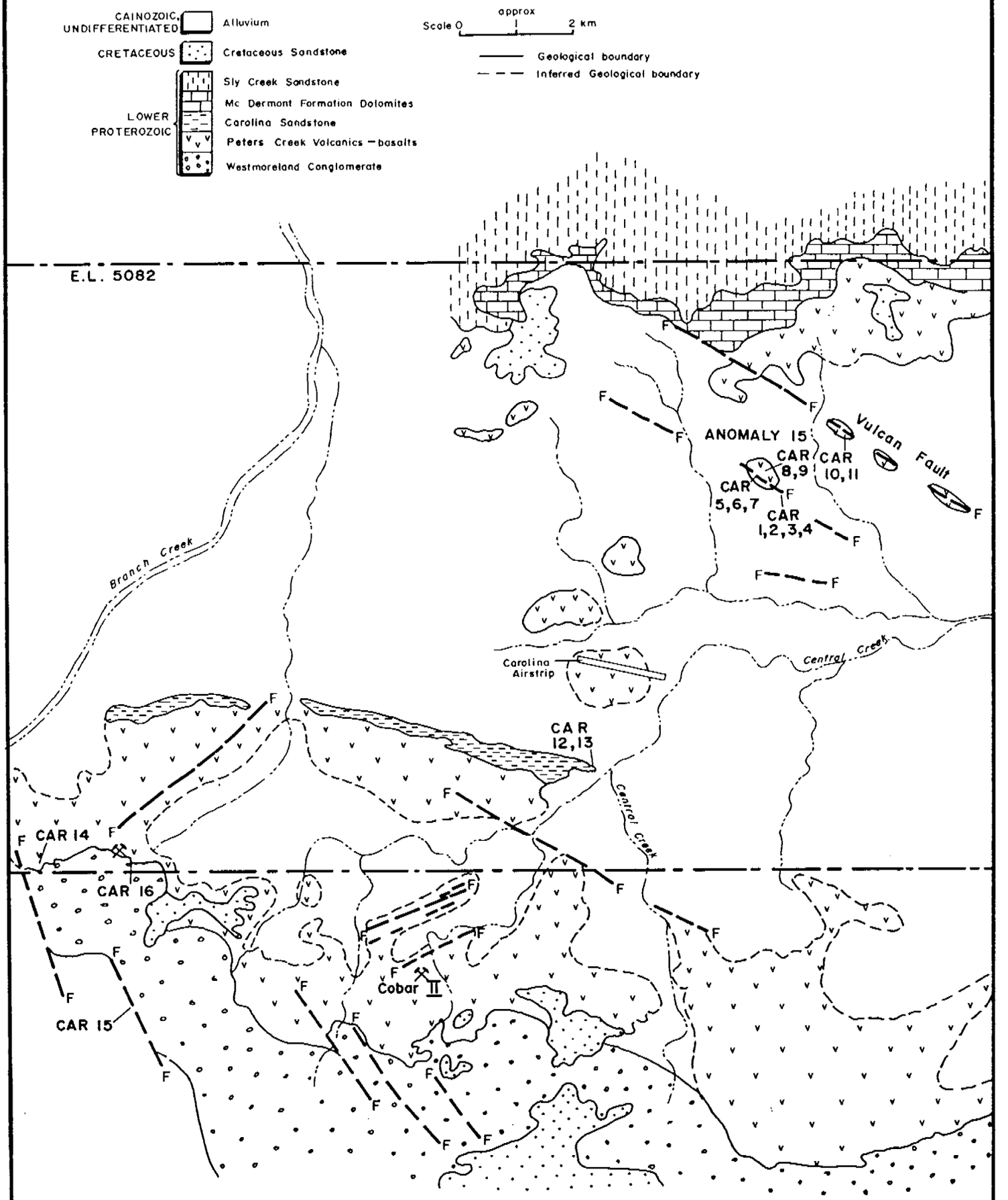
Results

Gold assay results on all samples collected were at or below the delection limit (0.01 g/t Au).

Low levels of Zinc (peak value = 65 ppm), Silver (1 ppm), Platinum (0.01ppm), Palladium (0.04ppm), Arsenic (48 ppm), Thorium (80 ppm) and Tungsten (40 ppm) were recorded.

The sample from Cobar II mine produced anomalous Copper (470 ppm), Lead (750 ppm) and Uranium (7000 ppm) values.

Table 2 sets out the details of each sample collected and Appendix 1 lists all the sample results.



NOBELEX LIMITED

E.L. 5082, CAROLINA

GEOLOGY and SAMPLE LOCATION MAP

Fig. 3

Table 2 Details of Samples - 1987 programme.

SAMPLE NO	LOCATION	DESCRIPTION
CAR 1	Anomaly 15	Massive Barite
CAR 2	Anomaly 15	Interflow sediment, silicified, brecciated, quartz veined
CAR 3	Anomaly 15	Amygdaloidal Basalt, weathered
CAR 4	Anomaly 15	Amygdaloidal Basalt, silicified lacey quartz veinlets
CAR 5	Anomaly 15	Fine grained basalt, silicified, veined
CAR 6	Anomaly 15	Fine grained basalt, vughy veins
CAR 7	Anomaly 15	Soil Sample
CAR 8	Anomaly 15	Amygdaloidal Basalt, open quartz veining
CAR 9	Anomaly 15	Amygdaloidal Basalt, silicified and veined
CAR 10	Vulcan Fault	Silicified Basalt
CAR 11	Vulcan Fault	Network quartz veining in intensely silicified basalt
CAR 12	Carolina Sandstone	Ferruginous veining
CAR 13	Carolina Sandstone	Stockwork milky quartz veining
CAR 14	Chinaman's Garden	Quartz vein in basalt
CAR 15	Hussen Mine	Fault breccia
CAR 16	McGuiness' Workings	Silicified vesicular basalt with some quartz veining
Cobar II	Cobar II Mine Spoil heap	Highly radio active pitchblende bearing ore

Conclusions and Recommendations

The total absence of anomalous gold values obtained from the sampling programme suggests that:

(a) The original Nickel Mines values were spurious

(b) The uranium mineralization within the EL does not occur with economically significant amounts of gold.

In the writer's opinion, the EL does not have good potential for the discovery of gold orebodies and no further gold exploration is recommended.

Compiled by
J.A. LEVINGS
November 1987

APPENDIX 1

ASSAY RESULTS. 1987 SAMPLING PROGRAMME

COMLABS SERVICES PTY. LTD.

305 South Road, Mile End South, South Australia 5031 Telephone (08) 43 5722 Telex LABCOM AA89323 Facsimile No. (08) 234 0321

NATA REGISTERED No. 1526

COM872457

OUR REF.:

YOUR REF.:

Mr. John Levings

2nd Floor
191 Fullarton Road
ADELAIDE
SA 5065

October 5, 1987

Dear John,

RE: JOB COM872457

Enclosed are the assays for the samples delivered to our laboratory on September 25, 1987

Yours Sincerely,
COMLABS SERVICES PTY LTD

per :

Report Length 2 pages

COMLABS SERVICES PTY. LTD.

ANALYTICAL REPORT JOB COM872457

SAMPLE	Cu	Pb	Zn	Ag	Au	Pt	Pd
Car 1	4	<4	2	<1	<0.01	<5	<1
Car 2	16	8	10	<1	<0.01	<5	<1
Car 3	32	18	18	<1	<0.01	<5	<1
Car 4	250	18	7	<1	<0.01	<5	<1
Car 5	28	10	16	<1	<0.01	<5	<1
Car 6	480	12	10	<1	<0.01	10	2
Car 7	44	16	14	<1	<0.01	5	2
Car 8	70	12	18	<1	0.01	<5	<1
Car 9	44	4	5	<1	<0.01	<5	2
Car 10	16	12	55	<1	<0.01	<5	<1
Car 11	70	6	10	<1	<0.01	<5	<1
Car 12	85	24	36	<1	<0.01	<5	4
Car 13	14	4	5	<1	<0.01	<5	2
Car 14	10	<4	9	<1	<0.01	<5	<1
Car 15	50	14	65	<1	<0.01	<5	4
Car 16	1950	80	12	1	<0.01	<5	4
Big 1	100	8	5	<1	<0.01	<5	<1
Big 2	20	<4	<2	<1	<0.01	<5	2
Big 3	165	42	75	<1	0.01	<5	<1
Cobar II	470	750	48	1	0.01	<5	4
UNITS	ppm	ppm	ppm	ppm	ppm	ppb	ppb
SCHEME	AAS1	AAS1	AAS1	AAS3	FAS1	FAS2	FAS2

ANALYTICAL REPORT JOB COM872457

SAMPLE	As	Th	U	W
Car 1	<2	<4	<4	<10
Car 2	3	8	4	<10
Car 3	16	8	8	10
Car 4	42	<4	22	10
Car 5	12	10	4	<10
Car 6	24	12	30	<10
Car 7	18	<4	4	<10
Car 8	10	6	8	10
Car 9	12	<4	<4	<10
Car 10	10	6	16	10
Car 11	5	<4	8	<10
Car 12	10	80	28	<10
Car 13	4	4	<4	<10
Car 14	2	<4	<4	<10
Car 15	7	12	30	<10
Car 16	18	55	170	15
Big 1	6	<4	<4	<10
Big 2	4	<4	4	<10
Big 3	290	6	6	<10
Cobar II	48	<4	7000	40
UNITS	ppm	ppm	ppm	ppm
SCHEME	XRF1	XRF1	XRF1	XRF1

FIELDTRIP I

TETCHEM BRISBANE
A division of Macdonald Hamilton & Co. Pty. Ltd.

Phn: (07) 277 1668 53 Suscatand St., Rocklea, Qld., 4106. Fax:(07) 277 8147, Tlx:48423

PRELIMINARY ANALYTICAL REPORT No. 52.2.13.02127

INVOICE TO:

Newmont Holdings Pty Ltd
616 Lutwyche Road

Lutwyche 4030

ORDER No.	PROJECT
B 281	E 009

DATE RECEIVED	RESULTS REQUIRED
21/08/86	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
2	28/08/86	2	38

SAMPLE NUMBERS	SAMPLE DESCRIPTION & PREPARATION	ELEMENT/METHOD
<FAR ,01/28,33/42		Cu,Pb,Zn,Ag,As114/101
<FAR ,01/28,33/42		Sb/117
<FAR ,01/28,33/42		Au/313
<FAR ,01/28,33/42		Au(R)/313

RESULTS TO:

Newmont Holdings Pty Ltd
616 Lutwyche Road

Lutwyche 4030

REMARKS:

AUTHORISED OFFICER CBarr

TETCHEM BRISBANE

PRELIMINARY ANALYTICAL DATA

SAMPLE	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	52.2.13.02127	28/08/86	B 281	1 OF 2

		Cu	Zn	As	Ag	Au	Pb	Au(R)
1.	FAR 01	130	10	<1	<0.5	0.030	20	-
2.	FAR 02	185	10	<1	<0.5	0.050	20	-
3.	FAR 03	2550	10	1	<0.5	0.010	20	-
4.	FAR 04	155	10	3	<0.5	0.025	15	-
5.	FAR 05	100	10	3	<0.5	0.010	20	-
6.	FAR 06	795	15	9	<0.5	0.010	20	-
7.	FAR 07	305	20	6	<0.5	0.025	20	-
8.	FAR 08	75	25	8	<0.5	<0.005	20	<0.005
9.	FAR 09	100	20	6	<0.5	<0.005	20	-
10.	FAR 10	315	60	13	<0.5	0.015	20	-
11.	FAR 11	135	15	<1	<0.5	0.050	15	-
12.	FAR 12	135	10	6	<0.5	<0.005	20	-
13.	FAR 13	440	60	57	<0.5	<0.005	750	-
14.	FAR 14	365	50	19	<0.5	0.005	120	-
15.	FAR 15	60	60	7	<0.5	0.010	25	-
16.	FAR 16	195	10	12	<0.5	<0.005	20	-
17.	FAR 17	95	35	9	<0.5	0.005	25	-
18.	FAR 18	55	15	2	<0.5	<0.005	30	-
19.	FAR 19	215	15	2	<0.5	0.010	20	-
20.	FAR 20	85	25	36	<0.5	<0.005	25	-
21.	FAR 21	80	45	7	<0.5	0.020	25	-
22.	FAR 22	685	20	25	<0.5	<0.005	30	-
23.	FAR 23	190	10	13	<0.5	<0.005	20	-
24.	FAR 24	50	10	<1	<0.5	<0.005	15	<0.005
25.	FAR 25	175	15	2	<0.5	<0.005	20	-

AUTHORISED OFFICER C Barr

TETCHEM BRISBANE

PRELIMINARY ANALYTICAL DATA

REPORT NUMBER 52.2.13.02127 | REPORT DATE 28/08/86 | CLIENT ORDER No. B 281 |

SAMPLE	Cu	Zn	As	Ag	Au	Pb	Au(R)
1. FAR 26	225	20	2	<0.5	0.025 •	25	-
2. FAR 27	340	10	<1	<0.5	<0.005	20	-
3. FAR 28	25	20	9	<0.5	<0.005	20	-
4. FAR 33	20	15	12	<0.5	<0.005	25	-
5. FAR 34	25	20	41	<0.5	<0.005	35	-
6. FAR 35	160	115	5	<0.5	<0.005	30	-
7. FAR 36	190	20	6	<0.5	0.005	30	-
8. FAR 37	20	50	<1	<0.5	<0.005	45	-
9. FAR 38	70	25	<1	<0.5	<0.005	20	<0.005
10. FAR 39	105	10	<1	<0.5	<0.005	15	-
11. FAR 40	20	10	2	<0.5	<0.005	15	-
12. FAR 41	10	25	<1	<0.5	<0.005	35	-
13. FAR 42	10	10	<1	<0.5	<0.005	20	-
DETECTION	5	5	1	0.5	0.005	5	0.005
UNITS	PPM	PPM	PPM	PPM	PPM	PPM	PPM
METHOD	101	101	114	101	313	101	313

AUTHORISED OFFICER CBan

NEWMONT HOLDINGS PTY. LTD.

PROJECT : Carolina

ROCK-CHIP SAMPLE LEDGER

COLLECTED BY : R.P.L. J.N.C. K.M.V SHEET No. 1 of 4

LOCATION : S.E. South McArthur Basin

LABORATORY : TETCHEM BRIS DATE : 19·8·86

SAMPLE No.	Float/ Outcrop	Map/Grid Reference	ASSAY DATA (ppm) Au	Ag	As	Cu	Pb	Zn	Sb	GEOLOGICAL DESCRIPTION
AR-1	o/c.		0.03	<0.5	<1	130	20	10		Central massive qtz. vein – basalt breccia. Partly gossanous. Composite (±20) chip sample.
2	o/c.		0.050	<0.5	<1	185	20	10		E.S.E. end of hill. Colloform (red), banded, vughy qtz. vein breccia. 85–90% qtz.
3	o/c		0.010	<0.5	1	2550	20	10		Intensely silicified, qtz. vein breccia. Vughy. Several generations of qtz. veining. 1–2% dissem^{d} Cpy.
4	o/c		0.025	<0.5	3	155	15	10		Massive banded qtz. vein zone. Weakly gossanous. Central zone.
5	o/c		0.010	<0.5	3	100	20	10		Gossanous ($CO_3^{=}$?) qtz. vein breccia. Central zone.
6	o/c		0.010	<0.5	9	795	20	15		Intensely silicified, brecciated qtz. veined central zone. ~1% dissem^{d} Cpy. Vughy.
7	o/c		0.025	<0.5	6	305	20	20		Network of thin qtz. veins with open vughs, thro' silicified brecciated basalt. Rare malachite staining.
8	o/c		<0.005	<0.5	8	75	20	25		Thin qtz vein stockwork thro' silicified basalt. Minor vughs.
9	o/c		<0.005	<0.5	6	100	20	20		Thin qtz vein stockworking thro' silicified basalt. Vughy.
10	o/c		0.015	<0.5	13	315	20	60		Silicified, stockworked, vughy qtz. veined basalt. (30–40% qtz)
11	o/c		0.050	<0.5	<1	135	15	15		Very silicified, qtz. veined vughy basalt. (~40% qtz).
12	o/c.		<0.005	<0.5	6	135	20	10		Qtz vein material : Veins generally sparse & < 5cms thick. No visible sulphides.

NEWMONT HOLDINGS PTY. LTD.

PROJECT: Carolina

ROCK-CHIP SAMPLE LEDGER

COLLECTED BY: RPL. JN.C. KM.V. SHEET No. 2 of 4

LOCATION: SOUTH McARTHUR BASIN

LABORATORY: TETCHEM BRIS. DATE: 19.8.86

SAMPLE No.	Float/ Outcrop	Map/Grid Reference	ASSAY DATA (ppm) Au	Ag	As	Cu	Pb	Zn	Sb	GEOLOGICAL DESCRIPTION
AR-13	o/c		<0.005	<0.5	57	440	750	60		Crs. crystalline, vughy qtz. veins material filling brecciated basaltic fault? traces. No. sulphides.
14	o/c.		0.005	<0.5	19	365	120	50		Crs. crystalline vughy qtz. breccia matrix. Minor Cpy (malachite) staining. Breccia zones several metres wide.
15	o/c.		0.010	<0.5	7	60	25	60		Silicified, brecciated & qtz. veined ?basalt. Angular fragments to 5cms; +50% qtz in sample. No sulphides.
16	o/c.		<0.005	<0.5	12	195	20	10		Brecciated ?basalt, angular to sub-rounded fragments .5→3cms diam. ~20% qtz. matrix. No sulphides. V. little alteration of fragments.
17	o/c		0.005	<0.5	9	95	25	35		Silicified andesite with clear crystl qtz. Contains minor Cu staining.
18	o/c		<0.005	<0.5	2	55	30	15		Silicified andesite with very fine disseminated limonite staining (after sulphides?) Jarosite staining.
19	o/c		0.010	<0.5	2	215	20	15		Highly Brecciated & fractured ~~rate~~ andesite with bladed qtz after calcite and minor exots of S. Some vughy qtz. Fine x-cutting veins. Andesite slight-mod altered.
20	o/c		<0.005	<0.5	36	85	25	25		Mod-poorly veined and brecciated andesite with vughy q.v around rock clasts Poorly altd rock, Fe altd amygdaloids. Fine x-cutting q.v. Rubbly look.
21	o/c		0.020	<0.5	7	80	25	45		As for R20 but moderately veined (30%) and less rubbly in appearance. (18, 19, 20, 21 rock grabs over 60m).
22	o/c		<0.005	<0.5	25	685	30	20		Silicified q.v. volcanic with zone/pathway of breccia with vughy qtz (milky white) and finer q. X cutting pathways and surrounding volcanic. Malachite staining-occ. in quartz vn., in amygdoloids in volc & in one 5→10cm vn-80-90%. Gossd + remnant py + qtz.
23	o/c		<0.005	<0.5	13	190	20	10		Qtz v. material varying from med. grd with fine dissem. remnant S. textr + malachite staining, to coarse crystl amethystine vughy qtz. Often brecciated with volc rock clasts; no finer q.v. within.
24	o/c		<0.005	<0.5	<1	50	15	10		Silicified, angular basaltic ?fault breccia. Approx. 20-25% vughy qtz. matrix.

NEWMONT HOLDINGS PTY. LTD.

PROJECT : CAROLINA

ROCK-CHIP SAMPLE LEDGER

COLLECTED BY : RPL. JNC. KMV SHEET No. 3 of 4

LOCATION : McARTHUR BASIN

LABORATORY : TETCHEM BRIS. DATE : 19.8.86

SAMPLE No.	Float/ Outcrop	Map/Grid Reference	ASSAY DATA (ppm) Au	Ag	As	Cu	Pb	Zn	Sb	GEOLOGICAL DESCRIPTION
AR-25	o/c		<0.005	<0.5	2	175	20	15		Silicified, angular basaltic ?fault breccia with ~35-40% qtz matrix. Vuggy.
26	o/c		0.025	<0.5	2	225	25	20		Very silicified, angular basaltic breccia with approx 50% qtz matrix. No visible sulphides or boxworks.
27	o/c.		<0.005	<0.5	<1	340	20	10		Very silicified, ang → sub-rounded basaltic fault breccia. Crs. Xstalline qtz & crs. vughs. +50% qtz. Some thin thro' going veins.
28	o/c.		<0.005	<0.5	9	25	20	20		As for 27, but more Fe staining. Approx. 35% qtz.
33	o/c		<0.005	<0.5	12	20	25	15		RED-BROWN CHERTY SILICIFIED BASALT, COMPLETE SILICIFICATION, rare calcite filled voids (vesicles).
34	o/c		<0.005	<0.5	41	25	35	20		Brown, clayey, oxidized basalt, with calcite filled vesicles.
35	o/c		<0.005	<0.5	5	160	30	115		Oxidized, clay altered vesicular basalt, common ferruginous fractures (< 1mm wide) - some open, some with calcite fill
36	o/c		0.005	<0.5	6	190	30	20		Red, clay altered basalt, 10% of rock is network of irregular open drusy quartz veins, open space sometimes with MnO_2.
37	o/c		<0.005	<0.5	<1	20	45	50		Vesicular, vuggy, oxidized basalt with irregular patches and veins of calcite with inclusions of basalt and FeO's.
38	o/c		<0.005	<0.5	<1	70	20	25		Silicified & ferruginous basalt, cut by 30% irregular network of qz veinlets to 3mm wide, open-drusy, some with $CaCO_3$ fill.
39	o/c		<0.005	<0.5	<1	105	15	10		Quartz vein fill - 5cm wide dogs tooth & sandwich with minor open space (hosted in basalt)
40	o/c.		<0.005	<0.5	2	20	15	10		Quartzite (silicified sandstone) cut by 30% stockwork of layered, & crystalline quartz veins to 3mm wide.

NEWMONT HOLDINGS PTY. LTD.

PROJECT : CAROLINA

ROCK-CHIP SAMPLE LEDGER

COLLECTED BY : RPL. JNC. KMV. SHEET No. 4 of 4

LOCATION : McARTHUR BASIN

LABORATORY : TEICHEM BRIS DATE : 19.8.86

SAMPLE No.	Float/ Outcrop	Map/Grid Reference	ASSAY DATA (ppm) Au	Ag	As	Cu	Pb	Zn	Sb			GEOLOGICAL DESCRIPTION
AR-41	o/c		<0.005	<0.5	<1	10	35	25				Oxidized, clayey, vesicular basalt - green vesicle fill (green silica - ?Cu rich)
42	o/c		<0.005	<0.5	<1	10	20	10				Silicified sandstone ≈ 30% cross cutting quartz veins to 5 mm wide - layered crystalline veins.

137°53' E

17°28' S

Ptd Ptl Kl Ptp Ptc Ptw

R22-23 R12-14 R18-21 R17,32-34 R1-11 R15-16,24-28

Main area of quartz veining and silicification

"VULCAN FAULT"

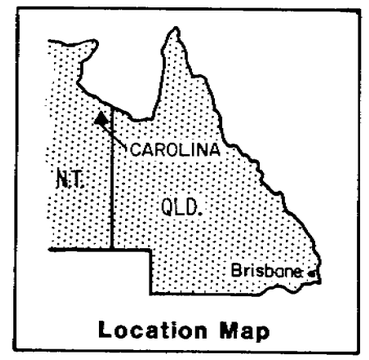
Carolina airstrip

McGuiness

Chinaman's Garden
R39-42

Reference

CAINOZOIC		Soil, sand, ferricrete.
CRETACEOUS	Kl	Siltstone, sandstone, conglomerate.
LOWER PROTEROZOIC	Ptl	Sly Creek sandstone.
	Ptd	McDermott Formation (dolomitic siltstone and sandstone)
	Ptp	Peters Creek Volcanics (andesite, agglomerate, tuff) – Renamed the "Seigal Volcanics"
	Ptc	Carolina sandstone (feldspathic sst)
	Ptw	Westmoreland conglomerate (sst, arkose, conglomerate)
	R12	Rock Sample



Location Map

0 1 2 3 4 5 km

NORTH

NEWMONT HOLDINGS PTY. LTD.

CAROLINA PROSPECT, N.T.

GEOLOGY & ROCK SAMPLING

COMPILED	JNC/RPL	SCALE	1:100,000
DRAWN	MFC	DRAWING No.	
DATE	AUG. 1986	FIGURE No.	

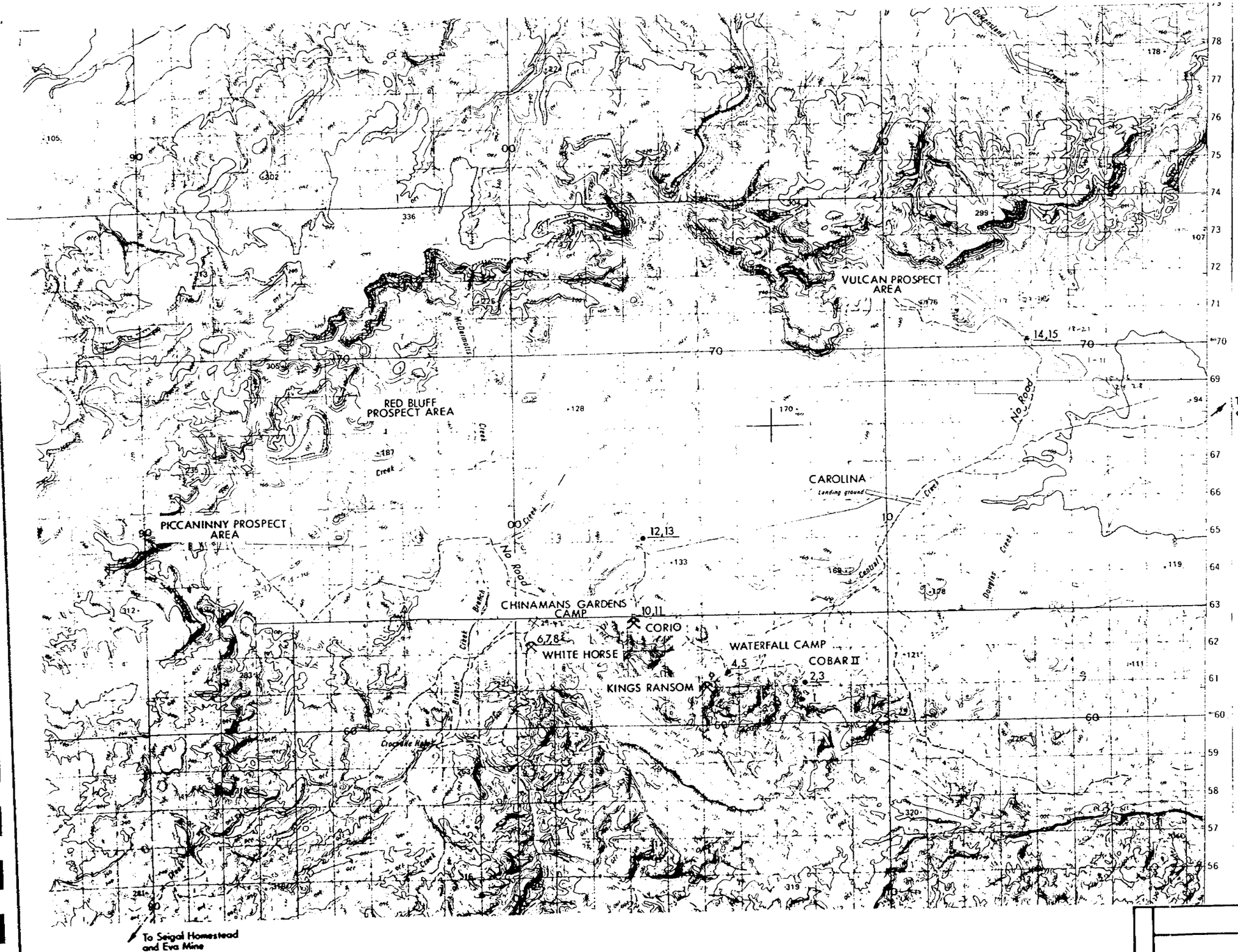
FIELD TRIP II

PILBARA TOWNSVILLE

PRELIMINARY ANALYTICAL DATA

SAMPLE	REPORT NUMBER 14.6.52.13872			REPORT DATE 16/10/86		CLIENT ORDER No. 0308		PAGE 1 OF 1
	Cu	Cu	Pb	Zn	Ag	Co	Ni	Au
CGS 001	24	-	26	92	<1	47	71	<0.005
CGS 002	1000	-	1900	60	<1	23	60	<0.005
CGS 003	15	-	28	61	<1	49	65	0.005
CGS 004	44	-	50	16	<1	8	27	<0.005
CGS 005	18	-	26	31	<1	13	25	0.055
CGS 006	10	-	7	29	<1	49	65	<0.005
CGS 007	10	-	21	20	<1	26	20	<0.005
CGS 008	44	-	42	2	<1	<5	<10	<0.005
CGS 009	152	-	31	129	<1	29	59	<0.005
CGS 010	31	-	10	25	<1	20	30	<0.005
CGS 011	424	-	<5	12	<1	10	22	0.125
CGS 012	-	10.20	27	9	17	<5	<10	0.075
CGS 013	8500	-	14	38	<1	25	38	<0.005
CGS 014	160	-	<5	12	<1	7	<10	<0.005
CGS 015	99	-	11	32	<1	12	<10	0.010
DETECTION	2	0.01	5	2	1	5	10	0.005
UNITS	PPM	%	PPM	PPM	PPPM	PPM	PPM	PPM
METHOD	140	104	140	140	140	140	140	337

AUTHORISED OFFICER



•[14] *Sample site and number*

SCALE 1:100000

0 2 4 6 km

BHP Minerals Exploration

FIELD SITES VISITED CAROLINA ELA, NORTHERN TERRITORY

Prepared: C. Gregory	Date: September 1986	FIGURE
Drawn: W. Mead	Project No.:	
Centre: Brisbane	Drawing No.: A1-441	

Revisions:

APPENDIX 2

SUMMARY OF EXPENDITURE

1986/87

FINANCIAL STATEMENT E.L. 5082

Expenses on the Carolina E.L. 5082. consist of the following stages:

- acquisition
- data preparation and exploration preparation
- Newmont fieldtrip
- B.H.P. fieldtrip
- Nobelex fieldtrip
- relinquishment

ACQUISITION

Travel	$ 1,260.00	
Accomodation	$ 560.00	
Taxi	$ 60.00	
Consultancy fees	$ 2,000.00	
Licency fees and costs	$ 862.00	
		$ 4,742.00

REGIONAL STUDY.

Consultancy fees	$ 8,500.00	
Drafting and typing	$ 220.00	
Overheads	$ 2,250.00	
		$ 10,970.00

FIELDTRIP 1.

Helicopter	$ 11,700.00	
Salaries	$ 4,200.00	
Supplies and fuel	$ 985.00	
Assays	$ 650.00	
General costs	$ 1,500.00	
		$ 19,035.00

FIELDTRIP 2.

Helicopter	$ 12,350.00	
Salaries	$ 3,800.00	
Supplies and fuel	$ 1,054.00	
Assays	$ 375.00	
Miscelleneous	$ 1,250.00	
		$ 18,829.00

FIELDTRIP 3.

Salaries	$ 3,575.00	
Assays	$ 950.00	
Vehicles	$ 2,271.68	
Fieldsupplies	$ 238.04	
Accomodation	$ 315.54	
Miscelleneous	$ 9.45	
Overheads	$ 1,200.00	
		$ 8,559.71
RELINQUISHMENT COSTS.		$ 475.00
TOTAL		$ 62,610.71