FIFTH ANNUAL REPORT

FOR EXPLORATION LICENCE 9431

FOR THE PERIOD 13/5/2000 TO 12/5/2001

TENNANT CREEK DISTRICT, NORTHERN TERRITORY

COLT PROSPECT

BONNEY WELL 1:250,000 SHEET SF 53-02

VOLUME 1 OF 1

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DATE: JUNE 2001

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SUMMARY

REPORT NO: ADELAIDE: 28662
TITLE: FIFTH ANNUAL REPORT FOR EXPLORATION LICENCE 9431 FOR THE PERIOD 13/5/2000 TO 12/5/2001 TENNANT CREEK DISTRICT, NORTHERN TERRITORY, COLT PROSPECT, BONNEY WELL 1:250,000 SHEET SE 53-02, VOLUME 1 OF 1.

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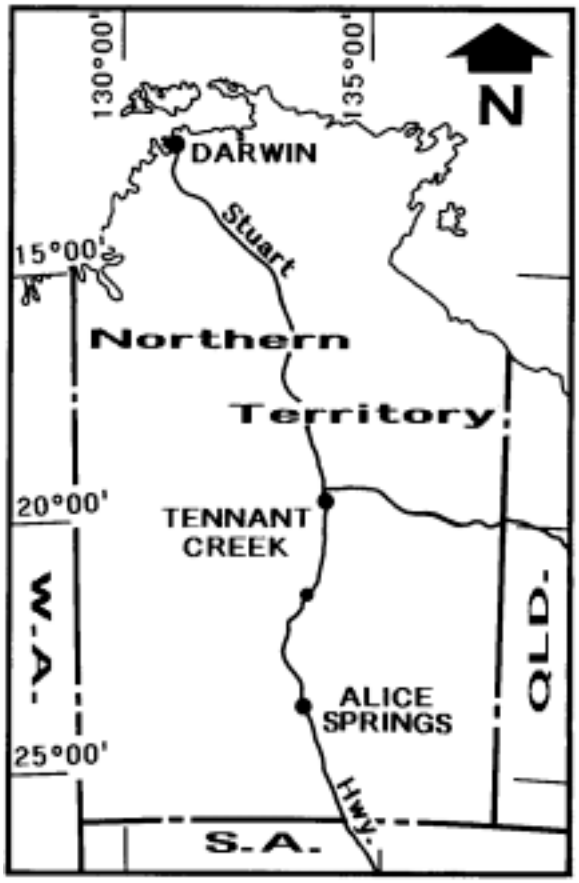

The Colt Exploration Licence 9431 is located 60km SSW of the Tennant Creek township. The tenement is managed by a Joint Venture consisting of Normandy Tennant Creek Pty Ltd (51.42%) and Anglo Australasia Limited (48.58%). Exploration in this area has targeted Tennant Creek-style ironstone hosted Au-Cu deposits, with a secondary target of auriferous quartz lodes.

Exploration Licence 9431 comprises 142 blocks and was granted on 12 May 1996 for a period of six years. The licence was reduced from 142 blocks to 97 blocks at the end of the second year of tenure in accordance with sections 26 and 27 of the Mining Act. At the end of the fourth year of tenure, a waiver of reduction under section 28 of the Mining Act was applied for and granted on the 23/5/2000. A further 85 blocks were relinquished in April 2001 leaving a total of 12 blocks retained.

The exploration on this tenement during its fifth year of tenure comprised of a helicopter-borne surface-sampling program with 95 lag, 47 soil and 19 rock chip samples collected. The surface sampling defined two small anomalies. In the sixth year of tenure these anomalies will be further defined by detailed surface sampling and if deemed appropriate drill tested by RAB.

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1 CONCLUSIONS & RECOMMENDATIONS

The helicopter-borne surface sampling program conducted over EL 9431 identified two anomalous areas worthy of follow up. The larger of the two anomalies covering 6km^2 is centred on 3999000E 7771500N (AGD66 Zone 53) contains anomalous Au up to 9.2ppb and As up to 43ppm. The second smaller anomaly centred around 393500E 7775000N contains lag gold values up to 7.8ppb.

Follow up lag sampling of the two anomalies should be conducted during the next year of tenure to tighten the shape and hopefully improve the tenor of the anomalies.

2 INTRODUCTION

EL 9431 is being explored for Tennant Creek-style ironstone hosted Au-Cu deposits and auriferous quartz lodes. This work is carried out under a Joint Venture Agreement (Desertex JV) between Normandy Gold Pty Limited (51.42%) and Anglo Australasia Limited (48.58%). Normandy Gold Pty Limited managing and operating the licence.

Exploration carried out on EL 9431 on behalf of the Desertex JV during the fifth year of tenure comprised of a helicopter-borne surface-sampling program. Surface sampling techniques consisted of composite rock chip, lag and soil.

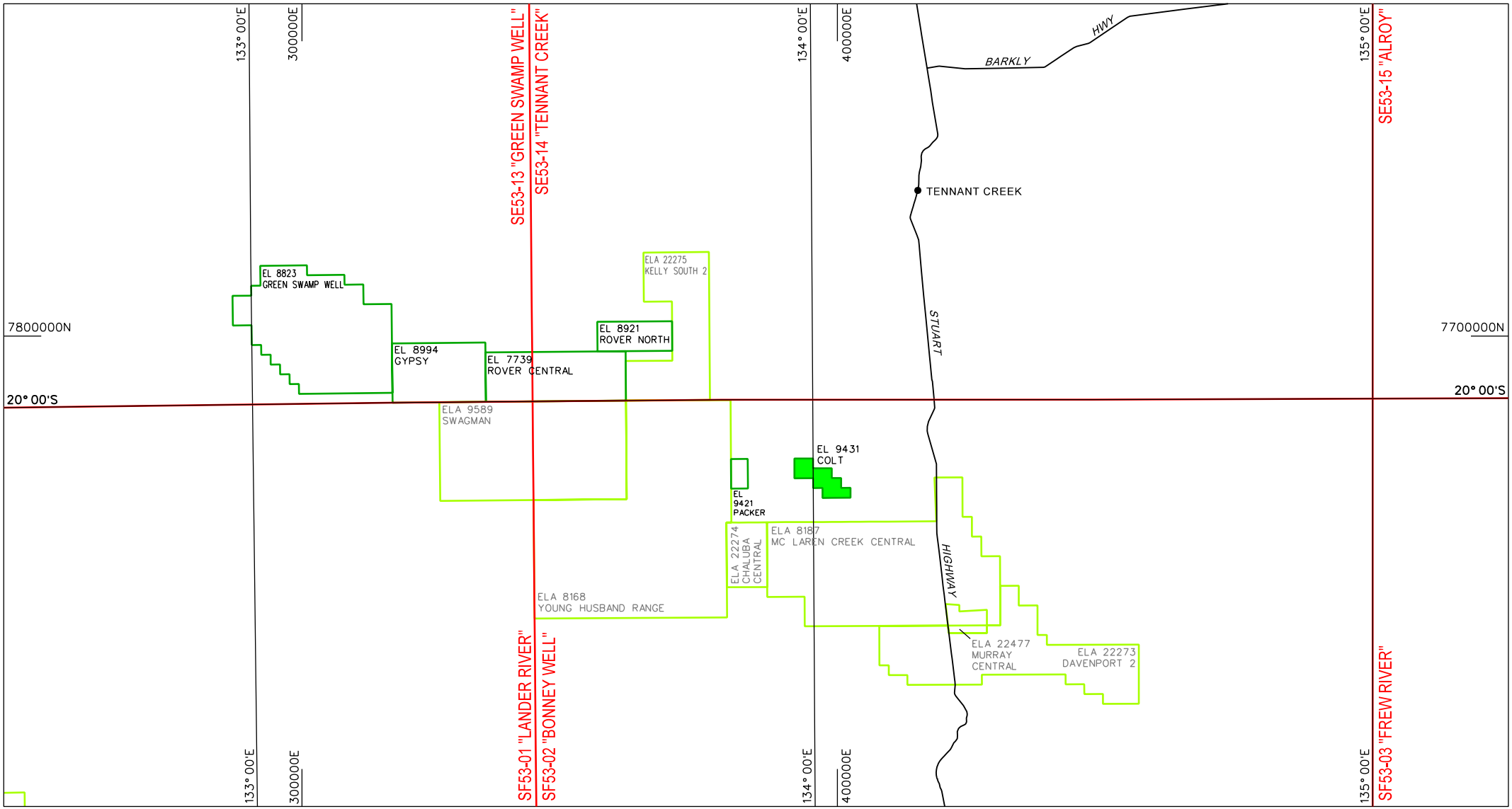
3 LOCATION & ACCESS

EL 9431 is centred approximately 60kms SSW of Tennant Creek township, within the Tennant Creek station pastoral lease (Figure 1). Access is via a station track that turns off from the Stuart Highway 35kms south of Tennant Creek. The cleared Alice Springs to Darwin railway route also passes through EL 9431 and provides access to some areas. Some minor tracks have been constructed to allow access to the central portion of the tenements. Elsewhere the terrain is relatively flat and light vehicle access to most areas is possible.

The climate of the Tennant Creek district is mild and dry through most of the autumn to spring months. The summer period is hot with seasonal heavy rainfall between January and March making access very difficult during these periods.

4 TENURE

EL 9431 comprising 142 blocks was granted on 12/05/96 for a period of six years. The licence was partially reduced at the end of the second year of tenure to 97 blocks in accordance with Sections 26 & 27 of the Mining Act. At the end of the fourth year of tenure, a waiver of reduction under section 28 of the Mining Act was applied for and granted on the May 2000. A further 85 blocks were dropped in April 2001 leaving a total of 12 blocks retained.



N
W E
S

0 50km

SCALE 1:1,000,000

UTM Zone 53 (AGD66)

Normandy NFM Limited

NORMANDY EXPLORATION PTY LTD

EL 9431 - COLT

TENEMENT LOCATION PLAN

22/05/2001

Location Diagram

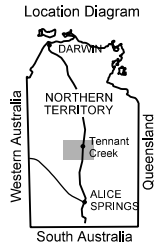


FIGURE 1

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5 REGIONAL GEOLOGY

The geological understanding of the Tennant Creek Inlier has been advanced by detailed geological mapping over the Tennant Creek and Flynn 1:100,000 map sheets (Donnellan et. al. 1995) and precision dating of stratigraphic components of the region (Compston, 1995). This work supplements previous geological mapping over the Bonney Well 1:250,000 map sheet (Wyche & Simons, 1987) and regional geophysical interpretations.

The oldest exposed Proterozoic lithofacies in the Tennant Creek Inlier are the metasedimentary rocks of the Warramunga Formation, which are the hosts to the ironstone Au-Cu-Bi mineralisation of the Tennant Creek Goldfield. These Palaeoproterozoic metasediments were deposited approximately 1860 Ma. Deformation and intrusion of the Warramunga Formation by volumous porphyries and granitoids occurred during the Barramundi Orogeny (1858 Ma to 1845 Ma).

Following deformation and uplift the volcanics and volcaniclastics of the Flynn Sub-Group were erupted (1845 Ma to 1827 Ma), with intrusion of porphyries and minor granitoids into the Warramunga Formation. An additional deformation event preceded the deposition of the Hatches Creek Group/Tomkinson Creek Sub-Group (1820 Ma to 1785 Ma) and the intrusion of late-stage granitoids and porphyries into both the Warramunga Formation and Flynn Sub-Group at 1650-1712 Ma.

6 LOCAL GEOLOGY

EL 9431 covers an area of limited outcrop, aeolian sands, and alluvium, on the southern margin of the Tennant Creek Block. Since the majority of outcrops of basement lithofacies occur within AAPA defined ‘no work’ areas geological mapping work has been largely restricted to sub-crop exposures unearthed during construction of the NT gas pipeline. Lithologies identified are dominated by subaerial felsic volcanics and volcaniclastics that are correlated with the Flynn Subgroup, recently re - defined by the NTGS in the Tennant Creek and Flynn 1:100,000 map sheet areas.

Accessible areas of outcrop were field checked against previous Northern Territory Geological Survey (NTGS) mapping. However, the majority of the basement geology is interpreted from aerial geophysics. The basement in the tenement is dominated by four stratigraphic components: Warramunga Formation metasediments, Flynn Subgroup, granitoid intrusives and Hatches Creek Group metasediments.

7 PREVIOUS WORK

Documented previous exploration in the area of EL 9431 is restricted to the period 1970 to present. Exploration companies holding previous tenure over the area includes: Australian Development Limited/Nobelex NL (ADL); GeoPeko Limited and Shell Company of Australia Ltd under the Desertex JV Agreement; Occidental Minerals Corporation of Australia (Occidental) and Roebuck Resources NL (Roebuck).

ADL explored the area under the tenure AtoP 2406 and EL 41 during the period 1970 to 1975. A low-level aerial magnetic survey was flown over AtoP 2406 including the area of EL9431. These aerial surveys defined thirteen magnetic anomalies that were considered sufficiently prospective to warrant follow up ground magnetic traverses. Two of these anomalies, referred to as GW502 and GW 504 were drill tested by RAB, RC and diamond drilling, with negative or inconclusive results (ADL, 1975).

Desertex JV partners explored the area under Exploration Licences 1129 and 2719 between 1978 and 1985. Exploration conducted included two low-level aeromagnetic surveys. Within the area of EL 9431 eleven magnetic anomalies were judged sufficiently prospective to conduct ground magnetic surveys. Six prospects were RAB drill tested with negative or inconclusive results. Data is presented in historical company reports to the NTDME (Howard, 1978a & b; Harbon, 1982 & 1983; Davidson, 1984 & 1985).

Occidental explored the area under EL 2288 in the early 1980s in joint venture with Australian Ores & Minerals Limited. An aerial magnetic-radiometric survey of the licence was flown in 1981. Four magnetic anomalies were followed up with gridding and ground magnetics. Local gravity surveys were conducted. The four anomalies refined were considered sufficiently prospective to warrant surface geochemistry, but not drill testing (Swingler, 1982).

Roebuck explored the area under the tenure EL 8169 during the period 1993 to 1995. Exploration conducted was limited to assessment of previous AMAG survey data, geological mapping, soil, lag and rock chip geochemical sampling and re-assay of previous drilling samples (Fox, 1993).

Normandy has explored the area within EL 9431 since 1996. Work completed during the first year of tenure included regolith and landform mapping, geological mapping, rock chip geochemistry and petrography, reprocessing of regional aeromagnetic survey data, regional aeromagnetics interpretation and a RAB drilling programme (12 holes, 399 metres). In addition, the Aboriginal Areas Protection Authority survey of Sacred Sites and provision of a certificate was completed. All data is presented in Stott (1997).

In the second year of tenure a low-level, close spaced aerial geophysics survey and a DGPS controlled gravity survey were conducted over the tenement area. The aerial geophysics survey identified 12 prospective magnetic anomalies. These were given prospect names. A 50m x 100m pegged grid was established over 9 of the 12 prospects and ground magnetic surveys were completed over 3 of them. The information obtained from the aerial geophysics survey and the gravity survey was used to produce a 1:100,000 geological map.

Two prospects within the tenements were tested by two RC drillholes (BTRC001, BTRC002) for a total of 378m. Unprospective felsic porphyry and Flynn Subgroup volcanics were intersected. Assay results did not exceed background values, with Au peaking at 6ppb and Cu peaking at 38ppm.

A total of 3 RC drill holes, BTRC005, BTRC007 and BTRC008, were completed during 1998, for a total of 966m. All targets were modeled on the premise of an ironstone body hosted by Warramunga Formation lithologies.

RC drill hole BTRC-005 was drilled to test a high priority magnetic anomaly in the Snooker prospect. The drill hole deviated moderately from the planned path, and only tested the northern margin of the target zone, with the hole abandoned at 355m.

BTRC-007 was drilled to 286m to test a prospective magnetic anomaly in the Hockey prospect. The drill hole did not deviate significantly from the planned direction and effectively tested the target zone.

RC drillhole BTRC-008 was designed to intersect a modeled magnetic target located at a downhole depth of 300m. The drill hole did not deviate significantly from the planned direction and effectively tested the target zone. The total depth drilled was 325m.

For BTRC005, a total of 118 three metre composite samples were submitted to AMDEL (Darwin). Preliminary Au assay results returned gold assays of <0.01g/t Au. Drill hole BTRC005 intersected sedimentary and volcaniclastic rocks of the Flynn Subgroup to a depth of 187m. From 187m to EOH the drillhole intersected quartz-feldspar porphyry and homogenised siltstones/ sandstones mixed together on a scale of metres to centimetres. This rock probably represents wet sediment/magma interaction similar to the 'peperite' documented in the Tennant Creek Field, and could be either Warramunga Formation or Flynn Subgroup.

For BTRC007 a total of 95 3m samples were submitted to ALS Alice Springs. Gold assay results showed only very low level Au anomalism, in the uppermost levels of weathered basement; with 12-15m assaying 0.03g/t Au and 15-18m assaying 0.02g/t Au. All other assays are <0.01g/t Au. Drill hole BTRC-007 intersected felsic volcanics and intrusives of the Flynn Subgroup. Weak to moderate potassic alteration and localised sericite-pyrite and chlorite-pyrite veins are not auriferous and may be associated with granitoid to the east of the prospect.

For BTRC008 a total of 108 3m samples were submitted to ALS Alice Springs. Assay results were at background levels, normally below the assay detection limit.

All assay results were presented in Lidbury et al (1999).

During the fourth year of tenure the remaining untested magnetic anomalies underwent further modelling and were determined to be of a relatively low priority. Fieldwork comprised of locating three historical Australian Development drillholes (ADL426, ADL428 and SHDH95) in the Darts prospect. One of these drill holes was sampled by the NTGS for dating purposes.

8 WORK CARRIED OUT DURING THE REPORTING PERIOD

8.1 Surface Sampling

Exploration carried out on EL 9431 on behalf of the Desertex JV during the fifth year of tenure comprised of a helicopter-borne surface-sampling program with 95 lag, 47 soil and 19 rock chip samples collected. All surface samples were located with Garmin GPSII+ units.

8.1.1 Lag Samples

Lag is any hard surficial material varying from pisolites to rock fragments. The sample is obtained from a shallow surface scrape, sieved to obtain approximately 250g of material and collected into a plastic zip seal bag. The size of the sieved fraction, which is variable from project to project, is listed in the sample logs.

A total of 95 lag samples were collected across EL9431 during the reporting period, as shown on Figure 2. Samples were collected at a nominal 500 x 500m spacing, however the actual spacings were governed heavily by the abundance of sample media. The lag samples were sent to Genalysis Laboratories for analysis of the elements listed in Table 1.

Table 1. Lag Samples

Sample Numbers	Total	Genalysis Method	Elements Analysed
5005963 – 5005978	16	B*ETA	Au (0.1ppb)
5005980 – 5005991 5005994 – 5005998 5006000 – 5006061	12 5 62	A/MS	Ag(0.1), As(1), Bi(0.01), Co(0.1), Cu(1), Fe(0.01%), Mo(0.1), Ni(1), Pb(2), Sb(0.05), Sn(0.1), Th(0.01), U(0.01), W(0.1), Zn(10)
	95	**Samples**	

8.1.2 Rock Chips

Rock chip samples are typically 4-5kg of material comprising 10 to 15 grab samples, collected from a 2m radius of the designated sample site. A description of the sample material is recorded in the sample logs.

A total of 19 rock chip samples were collected opportunistically from outcropping and subcropping areas as well as float samples. Sample locations are plotted on Figure 2. Analytical details are summarised in Table 2.

Table 2. Rock Chip Samples

Sample Numbers	Total	Genalysis	Elements Analysed (ppm)
5102573 – 5102577	5	B*ETA	Au (0.1ppb)
5102579 - 5102592	14	A/MS	Ag(0.1), As(1), Bi(0.01), Co(0.1), Cu(1), Fe(0.01%), Mo(0.1), Ni(1), Pb(2), Sb(0.05), Sn(0.1), Th(0.01), U(0.01), W(0.1), Zn(10)
	19	**Samples**	

8.1.3 Soil

Soil material was sieved to obtain approximately 200g of –0.5mm material. The samples were collected into plastic zip-seal bags that were then enclosed into another to prevent contamination during transport. Samples were generally collected where there was a lack of laggable material. Sample locations are presented in Figure 2, and details listed in Table 3.

Table 3. Soil Samples

Sample Numbers	Total	Method	Elements Analysed
5021583	1	BCL	Ag(0.1ppb), Au (0.01ppb), Cu(.01ppm)
5021588	1		
5021590 – 5021591	2		
5021593 – 5021622	30		
5021626 - 5021638	13		
	47	**Samples**	

380000E 390000E 400000E 410000E

7780000N

7770000N

EL 9431
COLT,
Area 1

EL9421
PACKER

EL 9431
COLT,
Area 2

5006032 5102591 5006033 5006037 5006034 5006036 5006018 5006019 5006022 5006021 5006023 5102587 5006024 5021634 5102592 5006035 5102586 5006020 5102588 5102589 5006027 5021635 5006038 5006039 5021629 5021631 5021632 5102590 5006030 5021636 5102585 5006025 5021633 5006028 5006026 5006031 5006029 5006015 5102584 5102583 5006016 5021630 5006014 5006040 5006013 5006017 5102582 5005969 5005968 5005967 5006041 5021621 5021622 5021604 5102573 5021628 5005980 5102574 5005981 5102575 5005986 5021627 5102576 5006043 5005985 5021626 5005970 5005987 5006042 5005977 5005971 5006045 5005984 5005988 5005963 5005972 5006044 5021603 5021637 5006050 5006012 5005976 5102581 5005966 5005973 5005975 5005978 5021605 5006051 5021609 5005965 5005974 5006052 5006011 5006053 5005964 5006010 5006009 5006054 5021610 5006061 5005983 5005989 5006005 5021611 5006046 5006060 5006059 5006047 5005990 5005982 5006004 5006048 5021612 5021599 5006058 5006003 5006008 5021593 5021594 5006049 5006055 5102577 5006002 5006007 5021600 5006056 5006057 5021591 5005991 5102580 5021595 5021601 5021608 5006001 5021613 5021616 5021598 5021638 5021607 5006000 5021617 5021590 5021602 5021606 5021588 5021597 5102579 5005994 5005998 5006006 5021583 5005995 5005997 5021618 5021619 5021620 5021596 5005996 5021614 5021615

0 2000m
SCALE 1:100,000

UTM Zone 53 (AGD66)

LEGEND
CRC Sample △
Lag Sample □
Soil Sample ⊙

Normandy NFM Limited
NORMANDY EXPLORATION PTY LTD

EL9431 - COLT

SURFICIAL SAMPLE LOCALITY PLAN

24/05/2001

FIGURE 2

T:\MSDATA\diagram\desertex\cltav001.dgn

9 EXPENDITURE STATEMENT FOR THE PERIOD 13/5/2000 TO 12/5/2001

During year five of tenure, EL 9431 incurred an allowable expenditure of $26737.5 against a covenant of $35,400. A breakdown of this expenditure follows in Table 4.

Table 4. Exploration Expenditure for EL 9431 from 13/5/2000 to 12/5/2001

EXPENSE	COST
Employee Costs	$ 8,220.52
Overheads	$ 2,298
Drilling	$
Assays	$ 2,587
Operating Costs	$ 11,351.63
Specialist Services	$ 360
Tenement Costs	$ 1,920
TOTAL	**$ 26,737.5**

The Tenement Costs exclude rental payments. A variation of covenant has been applied for, as the covenant of $35,400 was not reached.

10 RECOMMENDED WORK PROGRAM & PROPOSED EXPENDITURE FOR THE PERIOD 13/5/2001 TO 12/5/2002

The prospectivity of Normandy's Tennant Creek ground holdings are constantly reassessed using all of the available information. Anomalies remaining that constitute legitimate exploration targets that will be prioritised relative to the other targets in the inlier according to Normandy's target ranking system. The proposed program outlined below assumes that the prospects are deemed priority targets.

Exploration proposed for the sixth year of tenure includes a detailed follow up lag sampling program over surface geochemical anomalies generated from surface samples collected in the fifth year of tenure and provision for follow up RAB drilling (300m).

The proposed exploration expenditure for EL 9431 for the sixth year of tenure is as follows (Table 5):

Table 5. Proposed Exploration Expenditure for EL9431

EXPENSE	COST
Employee Costs	$ 11,200
Overheads	$ 2,800
Drilling	$ 6,200
Assays	$ 1,800
Operating Costs	$ 3,100
Specialist Services	$ 10,100
Tenement Costs	$ 200
TOTAL	**$ 35,400**

11 REFERENCES

ADL (1975): *Completion Exploration Report. Exploration Licence 41 – Swamp, Tennant Creek, Northern Territory, for the 3 years ending 30th March 1975.* Noblex NL Report to NTDME 75002.

Compston, D M (1995): *Time constraints on the evaluation of the Tennant Creek Block, northern Australia.* Precambrian Research 71, 107-29.

Clifford, B.A., Mouchet, P.O.J. (1998*): Second Annual Report for Exploration Licence 9431 for the Period 13/6/97 to 12/6/98 Tennant Creek District, Northern Territory, Colt Prospect, Volume 1 of 1*. Normandy Gold Pty Limited Report to NTDME 98051.

Davidson, G.J. (1984): *Annual Report on Exploration Licence 2719 for the period 16/2/83 to 15/2/84.* Geopeko Report to NTDME 08.2146 (84025).

Davidson, G.J., (1985): *Annual and Final Report on Exploration Licence 2719 for the period 16/2/84 to 15/2/85.* Geopeko Report to NTDME 08.2752 (85009).

Donnellan, N, Hussey, K J & Morrison, R S. (1995): *Flynn (5759) and Tennant Creek (5758) 1:100,000 Geological Map Series.* DME, NT Geol Surv.

Fowler, B (1993): *Environmental Management Plan 1993.* PosGold Limited, Report to the NTDME 93181.

Fox, K (1993): *The Bonney Well Gold Project, Exploration Licence 8169 'Murchison Range' Northern Territory. Report on previous and recent exploration.* Roebuck Resources NL Report to NTDME 93269.

Harbon, P.G. (1982): *Annual Report on Exploration Licence 2719 for the period 16/2/81 to 15/2/82.* Geopeko Report to NTDME 82038.

Harbon, P.G. (1983): *Annual Report on Exploration Licence 2719 for the period 16/2/82 to 15/2/83.* Geopeko Report to NTDME 83020.

Howard, RT (1978a*): Final Report on Area Relinquished from Exploration Licence No. 1129.* Geopeko Report to NTDME 78002.

Howard, RT (1978b): *Annual Report on Exploration Licence No. 1129.* Geopeko Report to NTDME 78008.

Lidbury, B, Clifford B (1999): *Third Annual Report on Exploration Licence 9431 for the period 13/5/98 to 12/5/99 Tennant Creek District, Northern Territory, Packer Prospect,, Bonney Well 1:250,000 Sheet SE53-02, Volume 1 of 1*. Normandy Tennant Creek Pty Ltd Report to NTDME 99046.

Keyes, RT (1979): *Final Report on Exploration Licence No. 1129.* Geopeko Report to NTDME 79005.

Orton, V. (2000): *Fourth Annual Report on Exploration Licence 9431 for the period 13/5/98 to 12/5/99 Tennant Creek District, Northern Territory, Packer Prospect,, Bonney Well 1:250,000 Sheet SE53-02, Volume 1 of 1*. Normandy Tennant Creek Pty Ltd Report to NTDME 20051.

Stott, JE (1997*): First Annual Report for Exploration Licence 9431 for the Period 13/6/96 to 12/6/97 Tennant Creek District, Northern Territory, Colt Prospect, Volume 1 of 1*. Normandy Gold Pty Limited Report to NTDME 97040.

Swingler, N (1982): *Annual Report Kelly Well Project, E. L. No. 2288.* Occidental Minerals Corporation of Australia Report to NTDME 450/75/1 (82025).

Wyche, S & Simons, B (1987): *1:250,000 Geological Map Series Explanatory Notes Bonney Well SF53-2.* Dept. Mines and Energy, Territory Geol Surv.

APPENDIX ONE

DIGITAL LOG AND ASSAYS

APPENDIX TWO

BIBLIOGRAPHIC DATA SHEET

BIBLIOGRAPHIC DATA SHEET

REPORT NUMBER:	ADELAIDE: 28662
REPORT NAME:	FIFTH ANNUAL REPORT FOR EXPLORATION LICENCE 9431 FOR THE PERIOD 13/5/2000 TO 12/5/2001 TENNANT CREEK DISTRICT, NORTHERN TERRITORY, COLT PROSPECT, BONNEY WELL.
PROSPECT NAME:	COLT
TENEMENT NUMBER:	EL 9431
OWNER/JV PARTNERS:	NORMANDY GOLD EXPLORATION PTY LTD (51.42%) ANGLOGOLD AUSTRALIA LIMITED (48.48%)
AGREEMENT:	DESERTEX JOINT VENTURE
COMMODITIES:	GOLD, COPPER
TECTONIC UNITS:	TENNANT CREEK INLIER, TENNANT CREEK BLOCK
STRATIGRAPHIC UNITS:	WARRAMUNGA FORMATION, FLYNN SUB-GROUP
1:250,000 MAP SHEET:	BONNEY WELL SF 53-02
1:100,000 MAP SHEET:	CHALUBA 5657 BONNEY 5757
KEYWORDS:	EXPLORATION REVIEW, LAG SAMPLING, ROCK CHIP SAMPLING, SOIL SAMPLING, EXPLORATION PROPOSAL