ELEMENT 92 PTY LTD

(ABN 82 119 094 423)

(Wholly Owned Subsidiary of Thundelarra Exploration Ltd)

FINAL REPORT

FOR

EL 26957 (ESMERALDA)

COPPERFIELD PROJECT, NORTHERN TERRITORY

FOR THE PERIOD

20 MAY 2012 TO 22 MARCH 2013

Compilation Date: 20/05/2013
Licensee: Element 92 Pty. Ltd.
Operator: Thundelarra Ltd.
Author/s: Philip Mill (philip.mill@thundelarra.com.au)
Contact Ph: 08 9321 9680
1:100 000 Maps: 5053,
1:250 000 Maps: SF5208
Datum: GDA94 - UTM52
Target: Base metals

Distribution: □ NT Department of Minerals and Energy
□ Element 92 Pty Ltd (Thundelarra Exploration Ltd)

TABLE OF CONTENTS

LIST OF INLINE MAPS

APPENDICES

1.0 SUMMARY

During the period of tenure for EL26957, a desktop study of the project area and its prospectivity was undertaken. This exercise involved obtaining previous geological, geochemical and geophysical data from the Northern Territory Geological Survey. Geological, geophysical and geochemical data were captured into GIS systems and assessed. An initial review of all these data indicated some potential for the presence of uranium mineralisation along the granite contact.

Numerous geological reconnaissance traverses with a handheld scintillometer and a portable gamma-ray spectrometer failed to find any evidence of uranium mineralisation. Most radioactivity in the area appears to be caused by elevated thorium associated with the Allamber Springs Granite

Due to the decreased prospectivity, the continuing weak uranium market, and a Company-wide consolidation of holdings, the title was relinquished in March 2013.

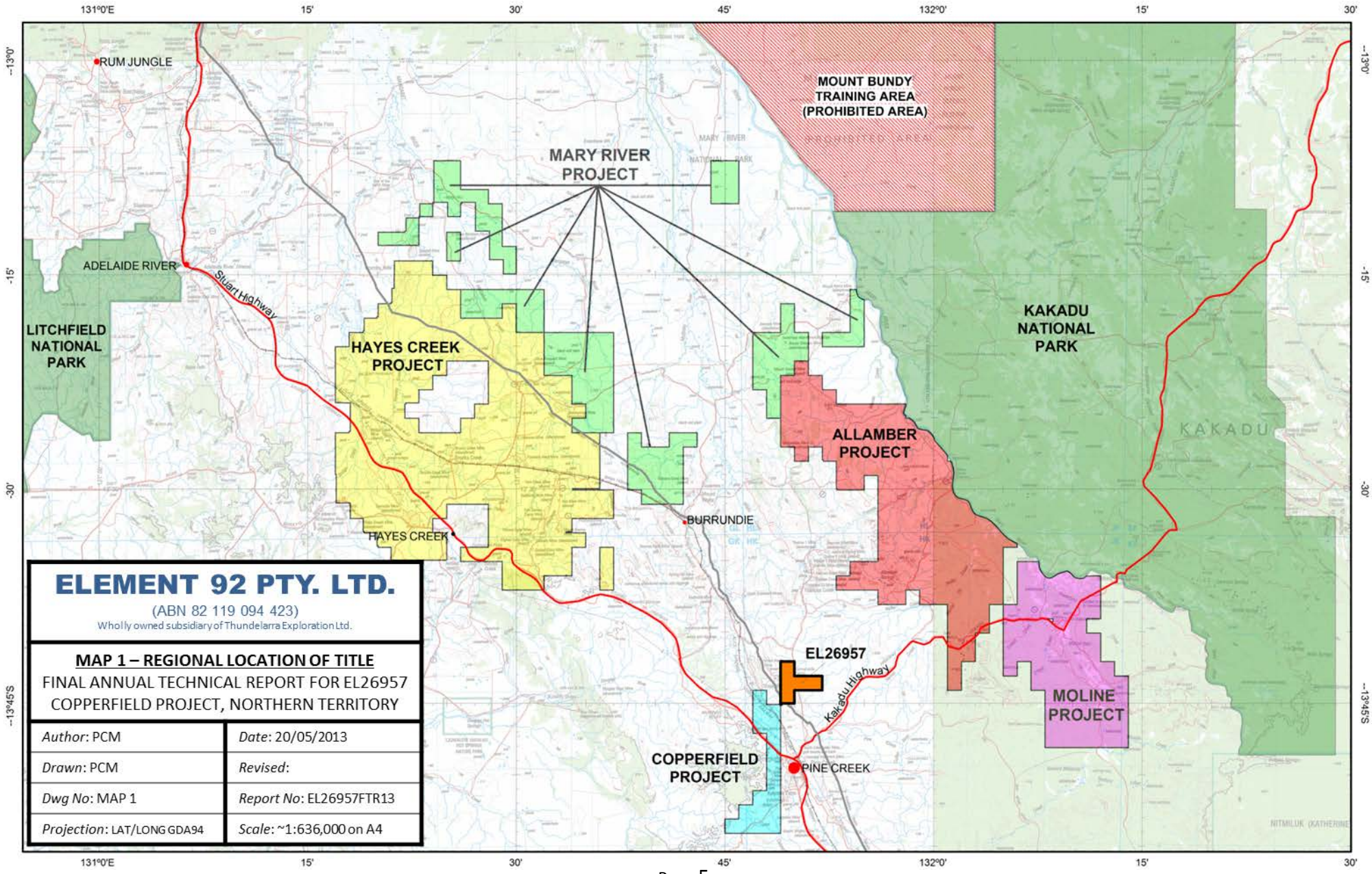
2.0 INTRODUCTION

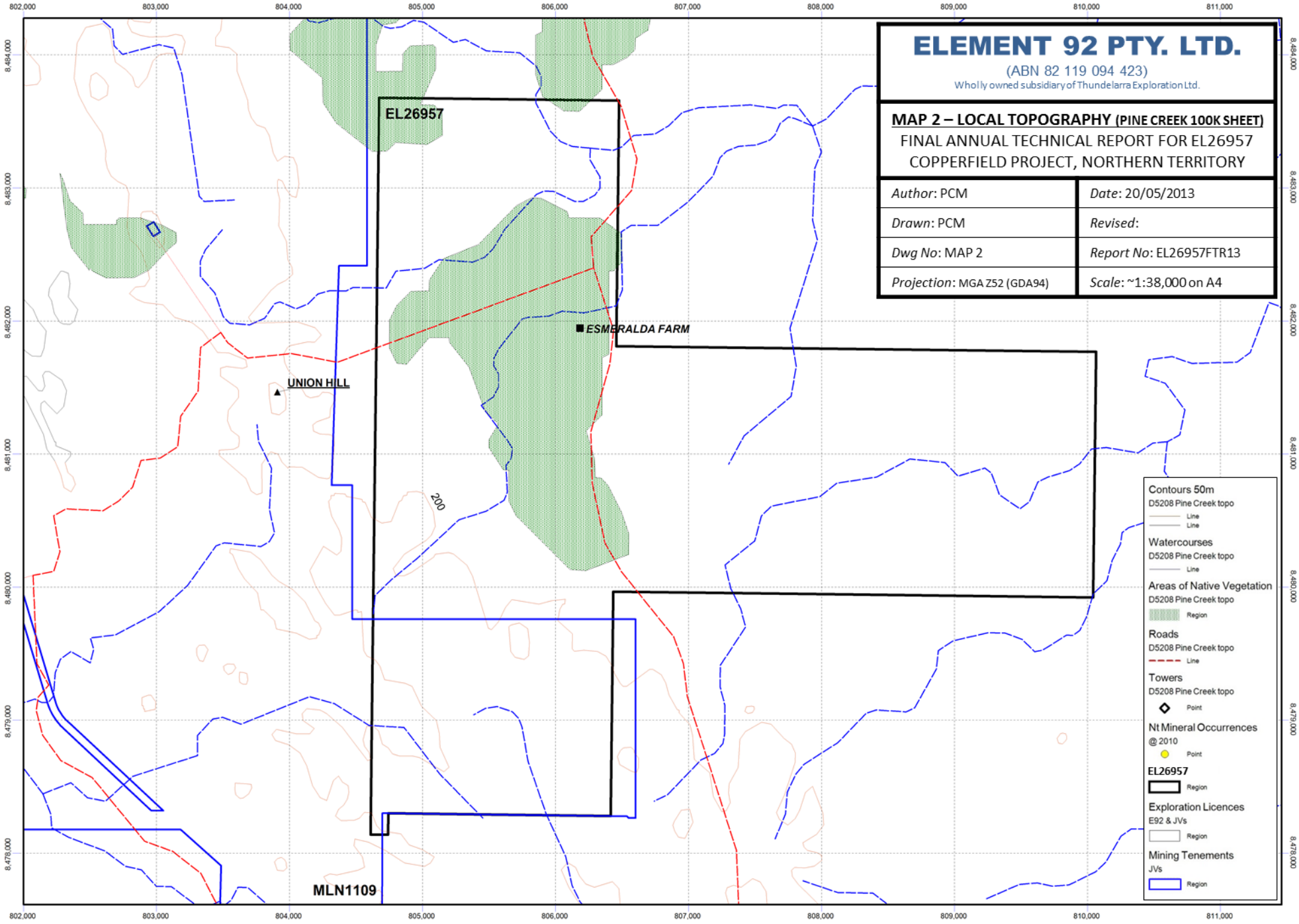
Exploration license EL26957 “Esmeralda” is located on the central part of the 1:100,000 Sheet 5270 Pine Creek, directly north of the township of Pine Creek (**Map 1**). Access to the tenement is via the Kakadu Highway and the Mt. Wells/Frances Creek Mine Road. The Darwin gas pipeline abuts the south-western corner of the tenement.

Esmeralda Farm is located within the tenement area and the Union Reefs Mine lies immediately to the west of the current tenure (**Map 2**).

3.0 TENURE

EL26957 was granted on the 20th of May 2009 to Thundelarra Exploration for a period of six years. The tenement area was reduced to five graticule blocks, or approximately 16.69 square kilometres, and is currently held by Element 92 Pty Ltd.


131°0'E
15'
30'
45'
132°0'
15'
30'
-13°0'
-15'
-30'
-13°45'S
RUM JUNGLE
MOUNT BUNDY
TRAINING AREA
(PROHIBITED AREA)
MARY RIVER
PROJECT
ADELAIDE RIVER
Stuart Highway
LITCHFIELD
NATIONAL
PARK
HAYES CREEK
PROJECT
KAKADU
NATIONAL
PARK
ALLAMBER
PROJECT
BURRUNDIE
HAYES CREEK
EL26957
Kakadu Highway
MOLINE
PROJECT
COPPERFIELD
PROJECT
PINE CREEK
ELEMENT 92 PTY. LTD.
(ABN 82 119 094 423)
Wholly owned subsidiary of Thundelarra Exploration Ltd.
MAP 1 – REGIONAL LOCATION OF TITLE
FINAL ANNUAL TECHNICAL REPORT FOR EL26957
COPPERFIELD PROJECT, NORTHERN TERRITORY
Author: PCM
Date: 20/05/2013
Drawn: PCM
Revised:
Dwg No: MAP 1
Report No: EL26957FTR13
Projection: LAT/LONG GDA94
Scale: ~1:636,000 on A4



ELEMENT 92 PTY. LTD.

(ABN 82 119 094 423)

Wholly owned subsidiary of Thundelarra Exploration Ltd.

MAP 2 – LOCAL TOPOGRAPHY (PINE CREEK 100K SHEET)

FINAL ANNUAL TECHNICAL REPORT FOR EL26957
COPPERFIELD PROJECT, NORTHERN TERRITORY

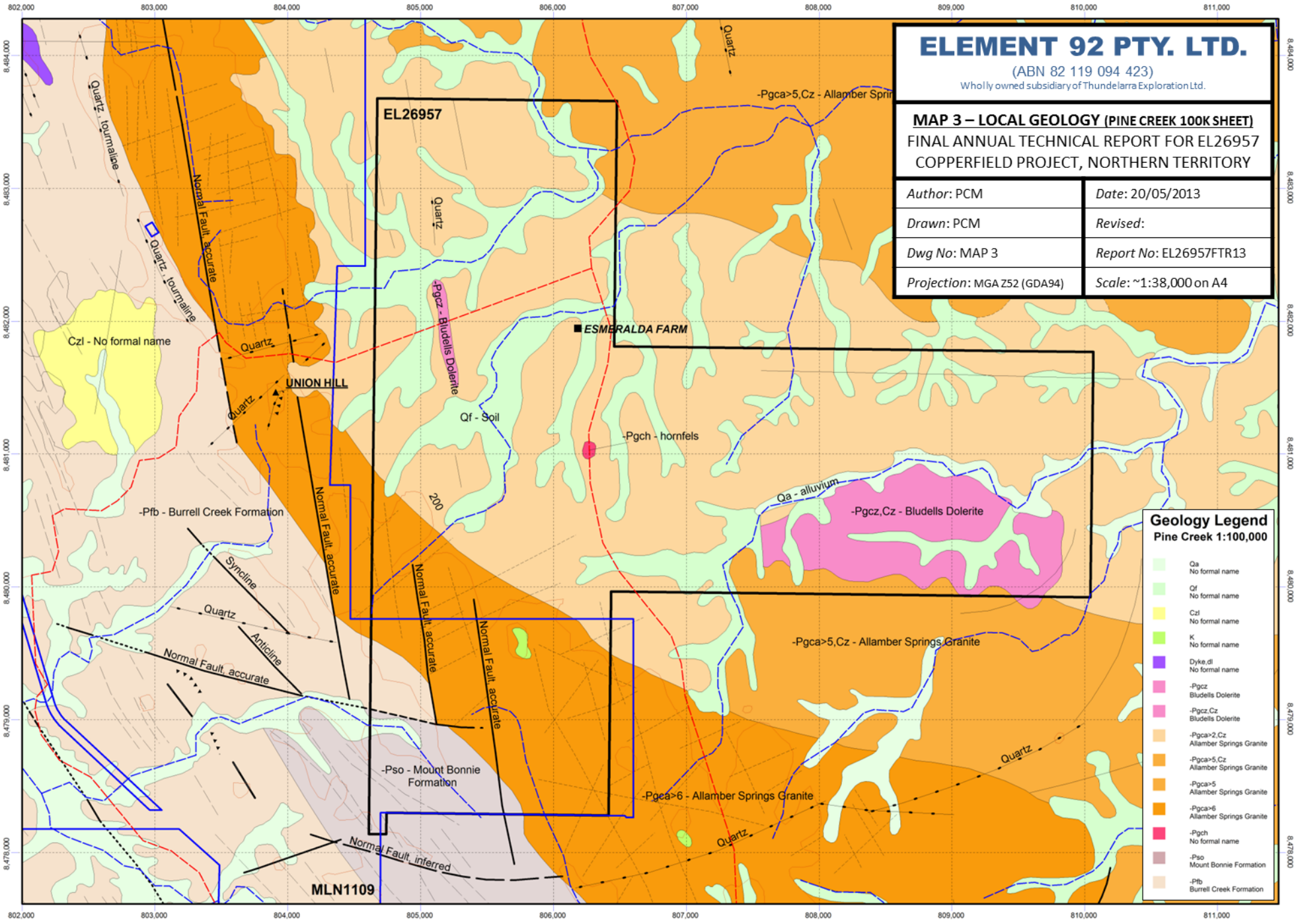
Author: PCM	*Date*: 20/05/2013
Drawn: PCM	*Revised*:
Dwg No: MAP 2	*Report No*: EL26957FTR13
Projection: MGA Z52 (GDA94)	*Scale*: ~1:38,000 on A4

4.0 GEOLOGY

The “Esmeralda” tenement lies within the central portion of the Pine Creek Orogen. The orogen consists of Early Proterozoic meta-sedimentary rocks on an interpreted granitic Archean basement. The Proterozoic rocks are tightly folded with dominant north-west trending axes and metamorphosed to greenschist facies. They are intruded by pre-deformational basic igneous rocks and post-deformational granites.

The metasediments within the area were assigned to the Mount Bonnie and Burrell Creek formations and crop out over the limited areas on the south-western corner of the tenement and are partially covered by colluvial deposits. They consist of mudstones, siltstones, greywackes, sandstones and tuffitic units.

EL 26957 is mostly covered by the Allamber Springs Granite (**Map 3**) which comprises pink and grey coarse-grained to porphyritic hornblende-biotite leucogranite. The Allamber Springs Granite intrudes the sediments in the south-western part of the tenement. The EL is adjacent to the Pine Creek Shear Zone which hosts the bulk of the gold mineralisation in the Pine Creek Goldfield. Strong magnetic features are present within the metasediments affected by this major structure. Magnetic hornfels are developed at the contact with granitic intrusions and several radiometric anomalies are present along these contacts. The uranium image shows several of these anomalies which are caused by the development of greisenised strips of granite (**Map 4**).


ELEMENT 92 PTY. LTD.
(ABN 82 119 094 423)
Wholly owned subsidiary of Thundelarra Exploration Ltd.
MAP 3 – LOCAL GEOLOGY (PINE CREEK 100K SHEET)
FINAL ANNUAL TECHNICAL REPORT FOR EL26957
COPPERFIELD PROJECT, NORTHERN TERRITORY
Author: PCM
Date: 20/05/2013
Drawn: PCM
Revised:
Dwg No: MAP 3
Report No: EL26957FTR13
Projection: MGA Z52 (GDA94)
Scale: ~1:38,000 on A4
EL26957
ESMERALDA FARM
UNION HILL
MLN1109
Czl - No formal name
Qf - Soil
Qa - alluvium
-Pgch - hornfels
-Pgcz,Cz - Bludells Dolerite
-Pgcz - Bludells Dolerite
-Pgca>5,Cz - Allamber Springs Granite
-Pgca>6 - Allamber Springs Granite
-Pso - Mount Bonnie Formation
-Pfb - Burrell Creek Formation
Quartz
Quartz, tourmaline
Normal Fault, accurate
Normal Fault, inferred
Syncline
Anticline
200
Geology Legend
Pine Creek 1:100,000
Qa No formal name
Qf No formal name
Czl No formal name
K No formal name
Dyke,dl No formal name
-Pgcz Bludells Dolerite
-Pgcz,Cz Bludells Dolerite
-Pgca>2,Cz Allamber Springs Granite
-Pgca>5,Cz Allamber Springs Granite
-Pgca>5 Allamber Springs Granite
-Pgca>6 Allamber Springs Granite
-Pgch No formal name
-Pso Mount Bonnie Formation
-Pfb Burrell Creek Formation
802,000
803,000
804,000
805,000
806,000
807,000
808,000
809,000
810,000
811,000
8,484,000
8,483,000
8,482,000
8,481,000
8,480,000
8,479,000
8,478,000

5.0 HISTORIC EXPLORATION SUMMARY

No mineral occurrences are reported by NTGS within the current tenure. A cluster of mining leases is present south of the tenement and is located along the Pine Creek Shear Zone. Most of the exploration activity within the area was directed to the new gold discoveries between the Union Reefs gold mine and Enterprise gold mine.

The Union Reefs goldfields, which are located immediately west of the current tenement, were discovered in 1873 by prospectors Adam Johns and Phil Saunders. They produced 1.76t of gold from 0.58Mt of ore during 1880-1910. The old workings consisted of 1,600 pits, open cuts and shafts concentrated in an area 5 kilometres long and 450 metres wide in two sub-parallel northwest trending zones located 200 metres apart.

In 1991, the Shell Company of Australia Ltd purchased the Union Reefs tenements and carried out detailed exploration resulting in resource delineation and open cut mining by Acacia Resources Ltd in January 1995. By 31 December 1998, 8.07t gold was produced from ore averaging 1.4 g/t Au. As of December 1998, total resources were estimated to be 17.6Mt at 1.7 g/t Au. Union North was delineated a few kilometres north of the main open cut. In April 1994, the total reserve at this ore body was 8.1Mt at 2.21 g/t Au.

Arnhem Land Mining Ltd was the only company to undertake systematic reconnaissance, geochemistry and ground radiometric surveys over the Allamber Springs Granite within the tenement area between 1979 and 1980. A total of 402 stream sediment samples were collected and assayed. Heavy mineral and rock chip sampling was also included in this program.

Several drainages were identified as containing highly leachable uranium values. Many of the samples also showed high thorium values and it was considered that much of the total uranium was bonded in resistant minerals as monazite and thorite. Within the Cleo area to the east, the radioactive sand from Nellie Creek contains these radioactive minerals and SEM work was undertaken by Greg Pooley for Thundelarra Exploration in 2009. Such minerals appear to be sourced from the late-stage granitic rocks genetically-associated with the Allamber Springs Granite.

Previous company exploration has failed to discover significant mineralisation of any kind on EL 26957.

6.0 EXPLORATION DURING PERIOD OF TENURE

The tenement was initially assessed by carrying out desktop studies of open file reports and compilation of historical data. Work carried out consisted of geological traversing and radiometric prospecting using hand-held instruments and brief mapping along the granitic contact.

6.1 Geological Traversing and Reconnaissance

Most reconnaissance effort was directed along the granite contact in the southwestern portion of the title. Numerous reconnaissance traverses with a handheld scintillometer and a portable gamma-ray spectrometer failed to find any evidence of uranium mineralisation. No geological evidence of significant uranium mineralisation was found during the traversing, but the granitic contact remains the most attractive target for mineralisation. Limited greisenised bands were encountered at the granite contact with the metasediments, but they are mostly dominated by the thorium content.

6.2 Petrological Sampling

One petrological sample was collected for microscopic analysis (**TK 651567, Map 4**) from the slightly radioactive metasediment located on the south-western margin of the Allamber Springs Granite within the Esmeralda tenement (**Table 1**).

The sample appears to be a porphyroblastic metapellite similar to the rocks found around the Corkscrew/Thunderbolt area. Thin section analysis suggests a metamorphosed felsic tuff affected by hydrothermal alteration. Strong development of sericite and muscovite was noted along the schistosity planes (**Figure 1**). The rock resembles the Gerowie Tuff lithology though the previous mapping shows only the presence of Mount Bonnie and Burrell Creek formations within the area.

Sample ID	Locality	Easting	Northing	Description
TK 651567	Esmeralda	804671	8479583	porphyroblastic metapelite, granite contact

Table 1. Details of sample taken for petrological study.

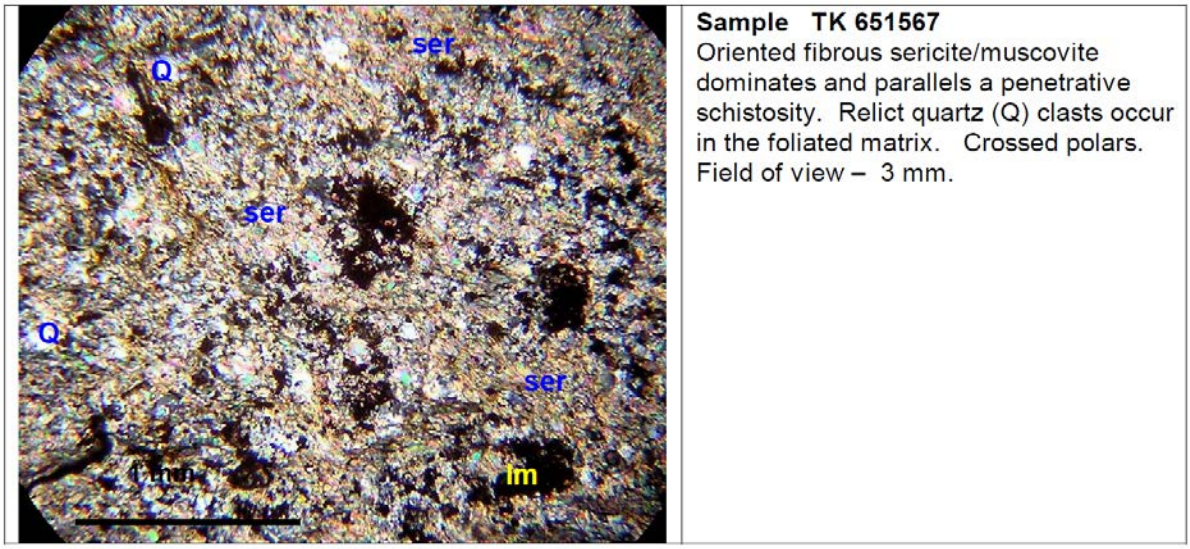
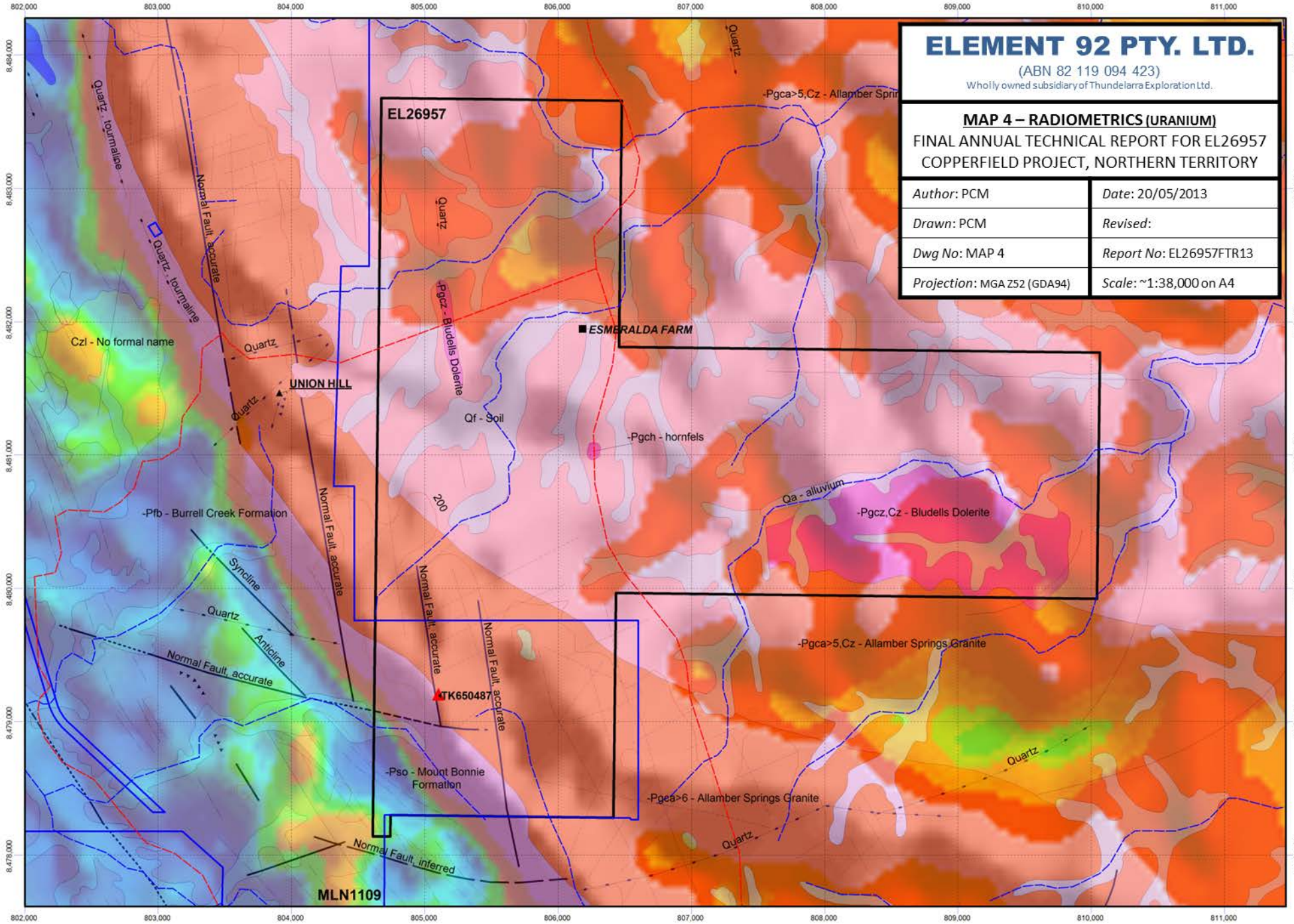


Figure 1. Thin section image of rock chip taken along the granite contact.



ELEMENT 92 PTY. LTD.

(ABN 82 119 094 423)
Wholly owned subsidiary of Thundelarra Exploration Ltd.

MAP 4 – RADIOMETRICS (URANIUM)

FINAL ANNUAL TECHNICAL REPORT FOR EL26957
COPPERFIELD PROJECT, NORTHERN TERRITORY

Author: PCM	*Date*: 20/05/2013
Drawn: PCM	*Revised*:
Dwg No: MAP 4	*Report No*: EL26957FTR13
Projection: MGA Z52 (GDA94)	*Scale*: ~1:38,000 on A4

7.0 CONCLUSIONS and RECOMMENDATIONS

During the period of tenure for EL26957, a desktop study of the project area and its prospectivity was undertaken. This exercise involved obtaining previous geological, geochemical and geophysical data from the Northern Territory Geological Survey. Geological, geophysical and geochemical data were captured into GIS systems and assessed. An initial review of all these data indicated some potential for the presence of uranium mineralisation along the granite contact.

Numerous geological reconnaissance traverses with a handheld scintillometer and a portable gamma-ray spectrometer failed to find any evidence of uranium mineralisation. Most radioactivity in the area appears to be caused by elevated thorium associated with the Allamber Springs Granite. Thin-section microscopy of a rock sample from the intruded meta-sedimentary rocks showed similarities with metamorphosed tuffitic rocks (Gerowie Tuff) found near Element 92 uranium prospects within the Hayes Creek Project.

Due to the interpreted decreased prospectivity, the continuing weak uranium market, and a Company-wide consolidation of holdings, the title was relinquished in March 2013.

APPENDIX 1

EXPENDITURE STATEMENT FOR EL26957