# **ELEVENTH ANNUAL REPORT FOR EL25294**Saunders Creek

# FOR PERIOD from 06/02/2019 to 06/02/2020 RUM JUNGLE PROJECT NT

Pine Creek SD5208 1:250,000 Pine Creek 5270 1:100,000 Burrundie 5270-IV 1:50,000

Titleholder: Australia Mining and Gemstone Co. Pty. Ltd

Report No. 2020-02 Australia Mining and Gemstone Co. Pty. Ltd By Mingjin HOU 27<sup>th</sup> February 2020

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#### 1. SUMMARY

EL 25294 is located 18km northeast of Hayes Creek. Hayes Creek is 170km southeast of Darwin on the Stuart Highway. The tenement is north of the Stuart Highway.

Territory Uranium Company Pty Ltd is exploring for Base Metals and Gold within this tenement. Previous exploration by TUC consisted of reviewing company reports and historical geochemical data collation and re-plotting.

Exploration in year 2 included seven RC holes for 330m. A best oxide intersect of 5m @ 1.44% Cu from 14m including 2m @ 3.35% Cu from 15m was returned from the southernmost line of holes leaving mineralization open to the south, where copper oxide was mapped in old pits 200m along strike. To follow up on this result 24 auger holes were drilled for 32m but access restrictions due to the main creek and thickness of alluvial cover prevented this program from being effective. A total of 305 RC and 33 Auger samples were submitted for multi element analysis.

In year 3 TUC, after reviewing its tenement commitments, has chosen to sell this tenement, as part of a package, to Anhui Geology and Mining Investment Ltd. This sale was established as a direct result of attending the Ministers delegation to China in 2008.

Due to the sale of this tenement to Australia Mining and Gemstone Co. Pty. Ltd Territory Uranium had not planned any exploration on this tenement for year 3. The transfer had been completed in the 8<sup>th</sup> of September of 2009. Anything is new for us; we have to review all of the information about the EL25294. We

cannot be able to do anything about the tenement except some information review.

Work carried out by AMG during Year 4 included:

- a) High precision Geomagnetism survey for 13.4Km<sup>2</sup> for all blocks of the tenement
- b) IP depth area sound for 6.99 Km<sup>2</sup> for some special areas
- c) IP section depth for one section (18 survey points)
- d) some geological surveying

At the end of year four we kept the all four blocks (Figure 1).

Work carried out during Year 5 included:

- a) IP section depth for three sections (39 survey points)
- b) geological mapping along the belt for 5.00 Km<sup>2</sup>
- c) three geological sections surveying for 4.14km
- d) Diamond drilling for 679.3m with three holes
- e) 20 drilling cores samples analysis

Works done during Year 6 included:

- a) some geological mapping along the belt
- b) some geological sections surveying

Works done during Year 7 included:

- a) All data reviews and analyses including geological and geophysical and drilling cores.
- b) Short filed trip for geological surveying

Works done during Year 8 included:

 All data reviews and analyses including geological and geophysical and drilling cores.

#### d) Short filed trip for geological surveying

Works done during Year 9 included:

- e) All data reviews and analyses including geological and geophysical and drilling cores.
- f) Short filed trip for geological surveying

Works done during Year 10 included:

- g) All data reviews and analyses including geological and geophysical and drilling cores.
- h) Short filed trip for geological surveying.

Works will be done during Year 11 included:

- a) All data reviews and analyses including geological and geophysical and drilling cores.
- b) some geological sections surveying

# 2. LOCATION AND ACCESS

EL 25294 is situated approximately 18km northeast of Hayes Creek. Hayes Creek is 170km southeast of Darwin along the Stuart Highway (Fig 1). Saunders Creek and Margaret River dominate the eastern and western part of the tenement respectively. Access to the area is by 4WD using old tracks during the dry season only.

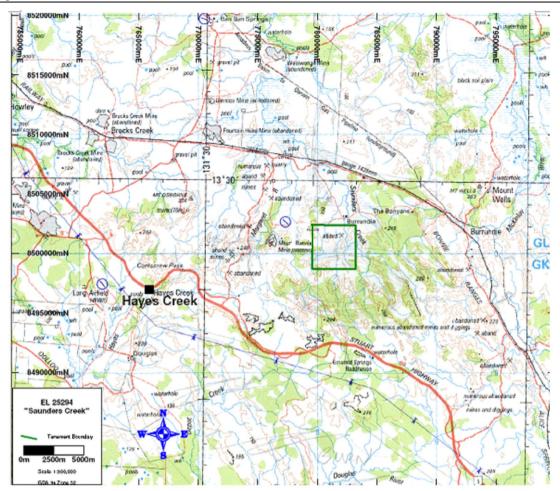


Figure 1 Location Map of EL25294

Topography for most of the tenement is rugged and hilly. The maximum elevation within the tenement is approximately 285m and the minimum is 110m. The north eastern parts of the area have minor floodplain. Saunders Creek with its tributaries and Margaret River dominates the eastern and western part of the License area respectively.

# 3. TENEMENT STATUS AND OWNERSHIP

EL 25294 was granted on 5th February 2007 for a term of six (6) years. It comprises 5 graticular blocks (16.47 sqkm) (Figure 1). There are no other mining leases or mineral claims within the License area.

Tenement reduction for the end of year 2 was undertaken with 1 of 5 blocks dropped (area dropped in red, figure below). Since year four we are keeping the all four blocks (Figure 2) and at the end of sixth year, we renewal the tenement and keep the all four blocks. At the end of sixth year, we renewed the tenement from the DEM of NT for two years.

Underlying cadaster is all held Perpetual/Pastoral Lease. There are two land owners that are within the tenement area: Tovehead Pty. Limited & Branir Pty Ltd and Equest Pty Ltd.

Access to the area is granted by both land owners, though was not possible to access the License area due to wet ground and overgrown grass.

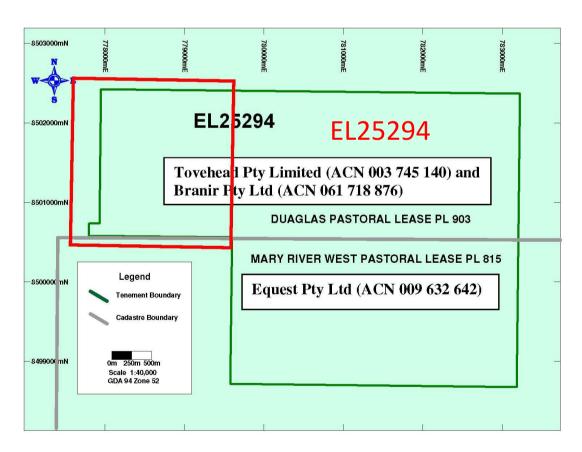


Figure 2 Landholders and Lease Numbers displayed inside EL 25294, dropped ground red polygon

#### 4. GEOLOGY

EL 25294 is situated within the Pine Creek Geosyncline, a tightly folded sequence of Lower Proterozoic rocks. The 1:100,000 Pine Creek Geological map covers the tenement area (Smith, Needham, Bagas and Wallace, 1987). A full description of the geology and stratigraphy of the Pine Creek region can be found in the text accompanying the map (Smith, Needham, Bagas and Wallace, 1987).

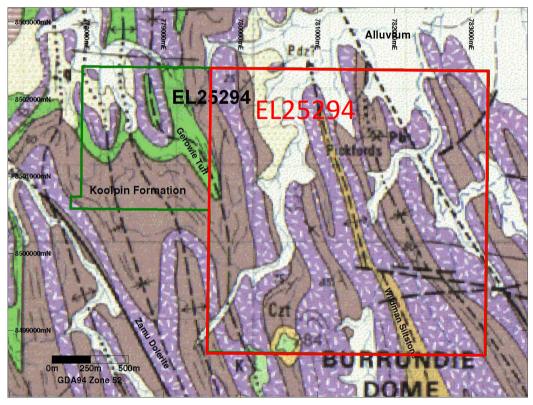


Figure 3 Geological Map of EL 25294 from 1:100000 geologic map of Smith et al (1987).

The tenement area is covered by the Mount Partridge Group (Wildman Siltstone), South Alligator Group (Koolpin and Gerowie Formations) and the Zamu dolerite. The Wildman Siltstone occurs as thin layer at the centre of the tenement and occupies the core of a syncline. The Koolpin Formation and the Zamu Dolerite covers most of the License area. Gerowie Formation covers on the northwestern

corner of the tenement. Although the rocks are folded, the regional trend of the rocks is NW-SE. The structure consists of the continuation of the major regional anticline, the Burrundie dome, and other syncline and anticlines. A major NW -SE trending fault, Saunders Creek Fault, crosses the tenement on the NE part. Minor faults trending ENE – WSW also occurs within the area.

#### 5. PREVIOUS EXPLORATION

The previous tenure and exploration done is summarized below.

Company reports obtained from the DPIFM shows Pickford's area was first mined at the beginning of the century, 1915 (9 tons of Pb) and 1955 (20 tons of Cu ore), when several pits were excavated on the main quartz vein.

Exploration has been carried out in the area since 1968 by numerous companies. The work can grouped in to those done on the mine claims (MCN148) and on exploration lease area.

Knave Pty Ltd -Northern Gold (JV in 1989) worked on Pickford's prospect (MCN148) from 1982 – 1991. Rock chip and soil sampling were carried out in 1989 and six RC holes were drilled in August 1990 with a total of 360m. Results from the drilling includes; Cu 2m @ 0.94% and 5m @ 0.21% from hole P04 and 5m @ 0.33% from hole P05; Pb 3m @ 17.17% from hole P02; and Zn 10m @ 1.36% from hole P01. Rock chip results up to 20.5% Pb are also reported. The location of the MCN148 seems in doubt and needs ground checking. Historical drilling in the tenement was limited to the MCN148 (Pickford's) gold and base metal prospect.

There has been a considerable amount of systematic exploration for gold and base metal mineralization by many companies within EL 25294.

Central Pacific Minerals held **AP1959** and explored large area in the Pine Creek region for base metals including EL 25294. Rock chips and Auger drill was used to explore the area.

Geopeko explored the area for polymetallic sulphide type deposits. Two magnetic anomalies were diamond drilled in an area referred to as the Saunders Creek Anomaly. No significant base metal or gold mineralization was reported in these holes.

**EL 3138** was explored by Geopeko-Anacoda-CSR between 1982 and 1987. Stream sediment, soil and rock chip sampling program and geological mapping of the Koolpin Formation was conducted by Geopeko in 1982 and 1983. The exploration work was targeted at gold and base metal mineralization. CSR conducted further stream sediment sampling programs from 1985 to 1987 searching primarily for disseminated gold mineralization within Zamu Dolerite. Several areas of anomalous geochemistry were defined mainly out of EL 25294.

EL 4734 and EL 4817 (1985 -1989) were granted to CSR in 1986. Cyprus minerals farmed in 1987 and then subsequently acquired a 100% interest in the area from CSR. CSR initially carried out exploration targeting the dolerites for gold mineralization. The work includes BLEG stream sediment and rock chip sampling, geological mapping and low level airborne geophysics (Magnetics and Radiometric) and ground Magnetics. Cyprus latter carried out Landsat Thematic Mapper interpretation, composite Rock chip sampling and geological mapping and interpretation of Aeromagnetic data. In contrast to CSR, Cyprus was looking for gold and/or base metals within sulphide units of the Koolpin Formation. Anomalous areas defined with in EL 4734 were either covered by existing Mining Leases or were outside the EL boundaries. The results of the work done on EL4817 showed two anticlinal axial zones which traverse the southern part of the tenement area.

**SEL 8421** was explored by Aztec between 1990 and 1994. The SEL 8421 includes six Licenses (**EL 7021, 7127, 7391, 7661, 7980, and 7981**) which were amalgamated in 1993. Aztec was targeting base metals mineralization which may occur as strati form or structurally controlled polymetallic sulphide. Work done by Aztec include: rock chip sampling and geological mapping, soil sampling and ground magnetic survey. Detail prospecting and diamond drilling was done on a galena mineralization identified at Emerald Springs anomaly which is south of the current lease area.

Northern Gold explored **EL 6729** from 1990 to 1993 for gold and base metals. Soil sampling, rock chip sampling and detail geological mapping were done on the area. The rock chip sampling program produced disappointing results, with all samples close to or below the Au detection level. The program was successful in defining continuations of the Pickford's Pb/Zn anomaly to the east of MCN 148 and the Au/Cu anomaly to the south. Northern Gold applied for a 40 ha mineral claim over the main anomalous area surrounding the old Pickford workings.

**EL 9485** was granted to Northern Gold and Camelot Northern Territory in 1996 for six years period. Northern Gold acquired and processed Land Sat and Spot imagery, AGSO mapping and multiclient aerial geophysical data. They have also done digital terrain modelling on the area. The results of the processed digital data were used to assess the regional structures and determine the best method of exploration. Northern Gold surrendered the area in 1998.

In 2007-2008 Territory Uranium exploration consisted of historic data compilation including tenure, datasets, open file reports and geo-referencing of relevant maps. This enabled an informed review of the tenements prospectively in regards to gold and base metals.

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	TENNUM	GRANT_DATE	CEASED_DATE	ID
	AP1959	11//06/1968	10/06/2001	5438
	EL615	2/02/1973	1/05/1975	709
	EL3138	26/11/1981	25/11/1987	1721
	EL4817	5/02/1986	10/05/1990	2328
	EL4734	28/06/1985	17/05/1990	2278
	EL6078	30/08/1988	24/09/1990	2948
	EL6741	20/03/1990	21/08/1991	3298
	EL6786	21/05/1990	29/01/1992	3330
	EL7114	26/11/1990	29/06/1992	3519
	EL7025	2/11/1990	29/06/1992	3457
	EL6729	5/04/1990	4/04/1993	3294
	EL7981	28/04/1993	18/11/1993	4146
	EL7127	20/11/1990	18/11/1993	3530
	EL7113	3/12/1990	2/12/1994	3518
	SEL 8421	18/11/1993	23/02/1995	466
	EL 8182	23/08/1990	22/08/1995	4301
	EL 7913	5/03/1993	30/05/1996	4097
	EL 7623	23/12/1991	31/10/1996	3890
	EL 8579	27/05/1994	31/10/1996	4564
	EL 9056	5/06/1995	29/05/1998	4836
	EL 9485	5/06/1996	29/05/1998	5121
	EL 7754	2/07/1992	1/07/1999	3994
	EL 9201	6/07/1995	2/08/2000	4936
	EL 9591	31/10/1996	30/10/2000	5194
	EL 9955	7/06/2002	9/08/2003	101
	EL 22147	8/07/2003	2/03/2006	421
	EL 10172	8/07/2003	2/03/2006	420
	EL 10339	2/12/2002	20/04/2006	437

Table 1 Previous Exploration tenure intersecting EL 25294

# **6. EXPLORATION DURING YEAR 1**

During Year one, all available historical data was compiled into one database

(displayed in Figure 4). Two attempts to visit the tenement area were unsuccessful because of wet ground and overgrown grass.

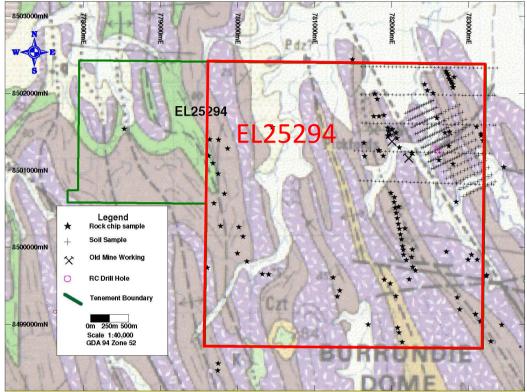
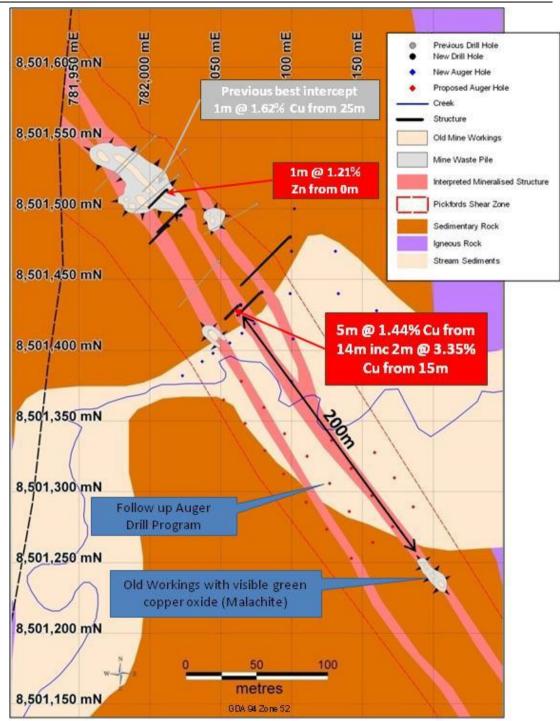


Figure 4 Compilation of historical data on EL 25294

#### 7. EXPLORATION YEAR 2

7 RC holes for 330m -303 samples assayed 24 Auger holes for 34m - 33 samples assayed.

A small program of seven RC holes for 330m was drilled as an initial test of the Saunders & Pickford's prospect (historically worked on a small scale for lead, silver, zinc and copper) after database compilation and field mapping indicated a structurally controlled zone of mineralization. All holes intersected structure and veining with zones of Cu, Pb and Zn enrichment. A best oxide intersect of 5m @ 1.44% Cu from 14m including 2m @ 3.35% Cu from 15m was returned from the southernmost line of holes leaving mineralization open to the south, where copper oxide has been mapped in old pits 200m along strike (Figure below).



**Figure 5**-Saunders and Pickfords interpreted geology and drill plan showing historical (grey) and recent (black) holes and recent significant drill intersects (red boxes). Follow up auger drilling shown as blue/red dots.

Table 2 Significant Intersections for EL25294

Hole ID	From (m)	To (m)	Width (m)	Cu (%)	Pb (ppm)	Zn (ppm)	Ag (g/t)
TURC0047	14	19	5	1.44	3	19	0.6
including	15	17	2	3.35	8	18	2. 3
TURC0052	0	1	1	0.02	2750	(1. 21%)	1.0

24 auger holes were drilled for 32m (blue dots in figure 4) targeting mineralization beneath the alluvial cover immediately south of the current drilling. Unfortunately cover was too deep for the auger to penetrate. Also attempts to cross the creek to the southernmost area failed. Figure 5 above shows the hole locations in blue.

#### 8. EXPLORATION FOR YEAR 3

Because the EL transfers between TUC and AMG from the early of year of 2009 until 18<sup>th</sup> September of 2009, TUC or AMG have not done the exploration according to the plan during the year 3. But we did some work, such as ground survey by helicopter, review the assayed results of all taken by TUC and previous, and review a lot of data and references concerning this areas and regional geological and geophysical data.

After detailed review the data, we plan to take high precision geomagnetism survey, some IP sections, and then drilling in next year.

#### 9. EXPLORATION FOR YEAR 4

Work done during Year 4 of tenure consisted of field reconnaissance and a geophysical program which focused on all blocks. The primary data was obtained and the detailed treating and discussing had been taking.

In total the following geophysical work was completed

Table 3 Geophysical survey for EL25294

Area	Туре	Squares(Km)	Point
All blocks	HPGM	13.4	
Northeast area	IP depth sound	6.99	
Northeast area IP depth section			18

# 10. EXPLORATION FOR YEAR 5

Exploration was on target Cu Pb and Zn mineralization (Structural and Breccia's Quartz Vein-hosted) along the structure belt according to the works done last year. And a drilling program was taken.

Work carried out during Year 5 included:

- a) IP section depth for three sections (39 survey points)
- b) geological mapping along the belt for 5.00 Km<sup>2</sup>
- c) three geological sections surveying for 4.14km
- d) Diamond drilling for 679.3m with three holes
- e) 20 drilling cores samples analysis

Table 4 work done for EL25294 during year 5

Area	Area Type		Point
Northeast area	Northeast area Geological section		
Northeast area	Geological mapping	5.00	
Northeast area	IP depth section		39
Diamond Drilling	Holes/meters	679.3m	3holes
Analysis	Drilling cores samples	Pb Zn Cu Au	20

#### 11. EXPLORATION FOR YEAR 6

Work done for Year 6 included:

- a) some geological mapping along the belt
- b) some geological sections surveying

#### 12. EXPLORATION FOR YEAR 7

Work done for Year 7 included:

- a) All data reviews and analyses including geological and geophysical and drilling cores.
- b) Short filed trip for geological surveying

#### 13. EXPLORATION FOR YEAR 8

Work done for Year 8 included:

- a) All data reviews and analyses including geological and geophysical and drilling cores.
- b) Short filed trip for geological surveying

#### 14. EXPLORATION FOR YEAR 9

Work done for Year 9 included:

- a) All data reviews and analyses including geological and geophysical and drilling cores.
- b) Short filed trip for geological surveying

# 15. EXPLORATION FOR YEAR 10

Work done for Year 10 included:

- a) All data reviews and analyses including geological and geophysical and drilling cores.
- b) Short filed trip for geological surveying

#### 16. EXPLORATION FOR YEAR 11

Work done for Year 11 included:

- a) All data reviews and analyses including geological and geophysical and drilling cores.
- b) Short filed trip for geological surveying

#### 17. EXPLORATION FOR YEAR 12

Work done for Year 12 included:

All data reviews and analyses including geological and geophysical and drilling cores.

#### 18. EXPLORATION FOR YEAR 13

Work done for Year 13 included:

All data reviews and analyses including geological and geophysical and drilling cores.

# 19. PLANNED EXPLORATION FOR YEAR 14

All data reviews and analyses including geological and geophysical and drilling cores.

Expenditure is expected to be at least \$4,000.

### 20. EXPENDITURE

Expenditure (as supplied by Australia Mining and Gemstone) consisted of:

Table 5 Expenditure on EL25294

TOTAL	\$6,000.00
Office study	\$2,000.00
Geophysical data reviews	\$2,000.00
Geological data reviews	\$2,000.00

# 21. CONCLUSION AND RECOMMENDATIONS

The exploration target is Cu, Pb and Zn or Base metal. Throughout analysis history exploration date, and all DD samples taken, we found there is a layer which rich bearing Iron Pyrites but less Copper or Zinc or Lead about 200m under the surface. We try to do more surveys in the areas and hope to find more Copper, Zinc and Lead mineralization belt in the shallow level, and if the result is good we shall take some shallow drilling.

# 22. REFERENCES

Ahmad, M., 998. Geology and mineral deposits of the Pine Creek Inlier and McArthur Basin, Northern Territory. AGSO Journal of Australian Geology and Geophysics, 17(3), pp1-17.

Smith, P.G., Needham, R.S., Bagas, L., and Wallace, D.A., 1987. Pine Creek 1:100,000 Geological Map Commentary. Northern Territory Geological Survey.

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