# **Gossan Resources Pty Ltd**

# Annual Report on Exploration for Exploration Licence EL30583

# **Burrundie Project**

# For the Period 03 June 2015 – 02 June 2016

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Target Commodity: Iron Ore

MAP SHEETS: 1:250 000 Map Sheet – Pine Creek 1:100 000 Map Sheet – Pine Creek

#### 1. SUMMARY

Exploration Licence EL30583 (Burrundie) is located 180 km south south east of Darwin, in the Northern Territory. It is 6 km north of the Emerald Springs Road House, on the northern side of the Stuart Highway.

The Burrundie licence was granted 03 June 2015, and comprises 9 blocks, for a total of 29.62 square kilometres.

Gossan Resources is exploring for iron ore within the tenement. Work conducted over the year included the review of company reports, maps and historical geochemical data collation. Field work confirmed site access routes and the location of previously mapped iron rich gossan outcrops. No new maps were generated or geochemical assays taken. The works can be generally described as preliminary engagement and mapping to confirm previous exploration.

## 2. LOCATION AND ACCESS

EL 30583 located approximately 6 km due north of the Emerald Springs Road House, on the northern side of the Stuart Highway (Figure 1). The northern end of the tenement is bounded by the Darwin to Alice Springs rail line. The Saunders Creek water course dominates the centre of the tenement.

Access to the area is by 4WD using old tracks, although the use of quad bikes proved most productive; and created less disturbance than a 4WD or the creation of additional access tracks. Access to the southern part of the tenement was via the Stuart Highway, directly opposite Emerald Springs Road House. Access to the northern part was via the Darwin to Alice Springs rail access road. Topography for the southern and central part of the tenement is rugged and hilly. The northern part is flatter and much easier to traverse. Dry creek beds with steep sides are almost impossible to traverse in a 4WD vehicle. Recent fires had burnt the grass right down making off road travel much easier and faster whilst also exposing the outcrop for detailed mapping.

Access is only possible during the dry season. It is likely that the Saunders Creek complex would make the area inaccessible and difficult, if not impossible, to recover vehicles during the wet season. This topography combined with the weather conditions in the Northern Territory mean that the exploration season is a very short five-month window between June and October.

## 3. TENEMENT STATUS AND OWNERSHIP

EL 30583 was granted on 03 June 2015 for a term of 6 years. It comprises of 9 graticular blocks, consisting of 29.62 sq km. There are no other mineral claims or mining leases within the EL.

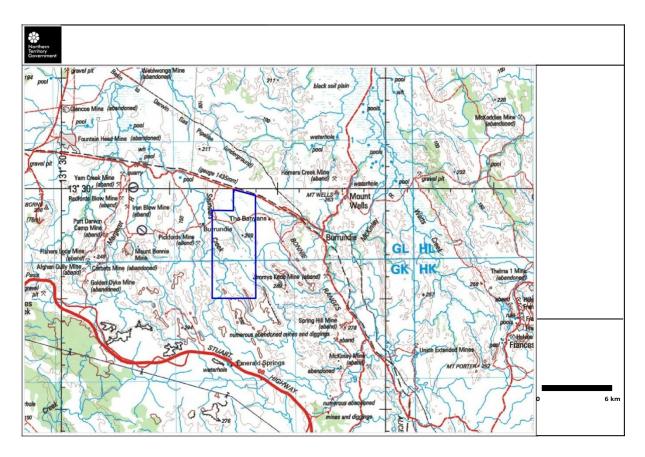


Figure 1 – Location Map of EL30583. The EL is located north of the Emerald Springs Road House and south of the Alice Springs to Darwin Railway Line.

The cadastre is all Perpetual Pastoral Lease. The Pastoral Leases being Douglas to the north, and Mary River West to the South. The Pastoral Lease boundary runs east west, cutting the EL almost equally in half

The expenditure covenant for the first year was \$30 000. Actual spend was \$50 723. The expenditure covenant set for Year 2 was \$180 000. Due to the deterioration of the iron ore sector a request for reduction in the second year was made to the Department of Mines and Energy in 2016. This request was approved by the Department.

The revised expenditure for Year 2 is \$15 000.

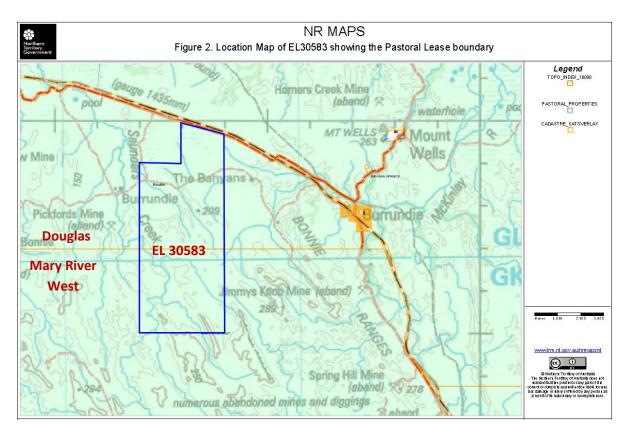


Figure 2 - Location Map of EL30583 showing the Pastoral Lease Boundary. The EL is almost split equally in half between the two pastoral leases.

## 4. REGIONAL GEOLOGY

EL 30583 is located within the Pine Creek Geosyncline. The 1:100 000 Pine Creek Geological Map (Smith, Needham, Bagas and Wallace, 1987) provides a full and detailed description of the geology and stratigraphy of the area.

The tenement is located to the western side of the Burrundie Dome and contains units of the South Alligator Group (Koolpin and Gerowie Formations); and the Zamu Dolerite (3). The Koolpin Formation and the Zamu Dolerite are the most abundant units in the tenement. Minor packets of the Gerowie Formation are located in the south east part of the tenement. Although the rocks are tightly folded, the main orientation of the units is NW-SE. Morowa (2013) reported lithologies dip

moderate to steeply to the west south west and are isoclinally folded and plunge south south east. A major fault, the Saunders Creek Fault orientated NW-SE, cuts through the south west part of the tenement.

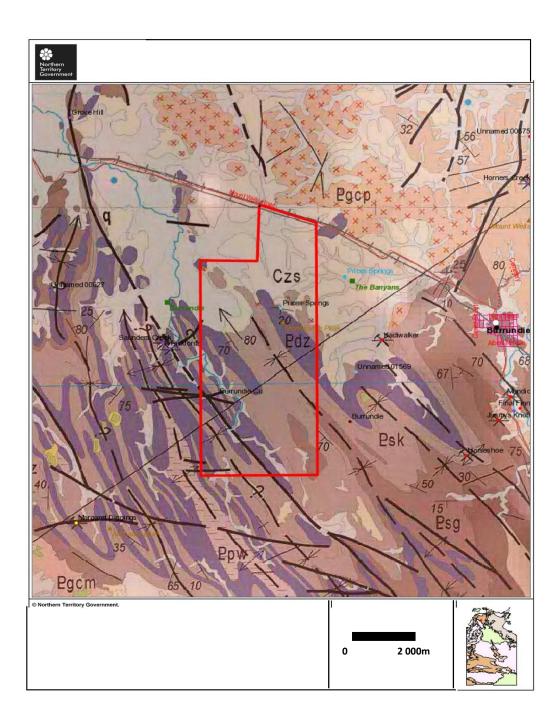


Figure 3 - Local geology of the Burrundie Project (1:250 000 scale).

Morowa (2013) reported a gossan outcrop located in the western part of EL25026, striking in a north north west direction, paralleling the strike of the lithologies. The gossan outcrops intermittently in several locations along the western base of a prominent hill along 800 m of strike (Morowa, 2013); and is located at the contact of the dolerite and the siltstone sequence (BMR mapping, 1954).

#### 5. PREVIOUS EXPLORATION

Excluding Morowa (2013), all of the exploration to date has been focused around gold and base metals. Mookhey (1971) reported a chip sample from a gossanous outcrop assayed 24.6% Cu. To date no one has been able to locate the outcrop or the copper mineralisation. During 1954-55, the BMR discovered and mapped two gossan bodies in the tenement (Morowa, 2013). Since then, there has been minimal data found covering the tenement. Morowa (2013) reported that no historical geochemistry or drilling has been found across the tenement (EL 25294).

In 2009, Great Western Exploration (GTE) formed a joint venture with Morowa to explore for uranium over EL 25294. In 2010, Great Western flew an aeromagnetic and radiometric survey over EL25294. The magnetic data suggests the gossans lie along the western contact of a magnetic unit that extends for a further 4 kilometers to the south south east. Morowa (2013), suggests major potential for the continuation of mineralisation under cover and at depth.

The joint venture ceased in 2010 (Morowa, 2013).

In 2011, Morowa rediscovered two BMR gossans. Rock chips collected returned over 60% iron, with the two massive hematite horizon extending discontinuously for over 800 m. At its widest point two massive hematite horizons parallel each other, approximately 25 m apart over a distance of 150m. Each horizon has an average width of 10 m, with the highest exposed height being 20 m on a cliff face. Other gossanous outcrops occur along strike and are inferred to be the same horizons and are in the tens of meters in dimensions. The gossan outcrops are generally massive in nature, and have completely altered to hematite. Their texture indicates a sulphide rich, sub-aqueous orgin. There are very fine grained sulphide psudomorphs, flow banding, rip-up clasts; and clast replacement is visible in many instances. In some areas matrix supported silica clasts or pebbles are observed within the gossan.

Morowa (2013), collected 17 rock chips and submitted them for assay. All but one result returned assays between 52.3 - 60.8% Fe and CaFe ranged from 55.69-63.66%. Average results for the rock chip samples are summarised below

A12O	Ca	Cr2O			K2	Mg	Mn	Na2				SiO	TiO		LO	CaF
3	0	3	Cu	Fe	0	Ō	0	0	Р	Рb	S	2	2	Zn	Ι	е
%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
			0.0	56.9					0.1	0.0	0.1			0.0	5.9	60.5
3.09	0.05	0.04	1	0	0.35	0.06	0.07	0.02	4	1	4	7.87	055	8	9	4

Elemental averages for 16 gossanous samples

Morowa (2013) believed the tenement has the potential for a rapid definition of a small 1 Mt iron ore resource within the gossan. The view is supported by good widths, and good average CaFe grades. The project was never drilled due to the down turn in the iron ore industry.

## 6. **RECENT EXPLORATION**

During 2015, a desk top study of previous reports was conducted. A field visit occurred toward the end of September 2015. Purpose of the visit was to;

- 1. determine access route into the tenement from the north and the south;
- 2. confirm the location of the two gossan outcrops identified by Morowa (2013);
- 3. confirm the location of the 24.6% Cu from the banded gossanous outcrop identified by BMR at 783729mE 8499561mN (Zone MGA 52).

Items 1-2 were achieved, although no additional mapping or sampling occurred. Attempts were made to locate the 24.6% Cu gossanous outcrop, but it was not identified.

The recent exploration activity confirmed the access routes north and south into the tenement and confirmed the expected difficulty of undertaking exploration during the wet season.

## 7. CONCLUSIONS AND RECOMMENDATION.

The location of the gossan outcrops identified by Morowa (2013), have been confirmed in the field. Preferred access routes, from the north and the south, into the project area have been proven. A detailed mapping and rock chip sampling program is recommended for Year 2 program. Areas of focus will be the detailed mapping and sampling of the identified gossan outcrops and the discovery of new gossans in the tenement.

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#### 9. **REFERENCES**

Mookhey, 1971. Completion Report, Exploration – Burrundie Copper Project, Northern Territory of Australia. IMC Development Corporation.

Morowa (2013). Annual Report, Exploration Licence 25026.

Smith PG, Needham RS, Bagas L and Wallace DA, 1987. Pine Creek 1:100 000 Geological Map Commentary, Northern Territory Geological Survey.