



**MINDAX ENERGY**

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**PTY LIMITED**

**MORTLOCK PROJECT**

**Partial Surrender Report for Exploration License E70/2668**

**South West Mineral Field**

**FOR THE PERIOD 8th NOVEMBER 2004 TO THE 7th NOVEMBER 2007**

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Distribution: DOIR  
Mindax Energy Pty Ltd  
Quasar Resources Pty Ltd  
Sipa Exploration NL

## Summary

Exploration License E70/2668 forms part of Mindax Energy Pty Limited's Mortlock Project in conjunction with E70/2518-21, and ELA70/3266. This report details work carried out on the surrendered 35 sub-blocks over the life of the tenement. This was a compulsory surrender.

The tenement straddles the Great Eastern Highway between Grass Valley and Meckering. The license was granted on the 8<sup>th</sup> of November 2004 and originally comprised of 70 sub-blocks for an area of ~205km<sup>2</sup>. Thirty five sub-blocks were relinquished on the 7<sup>th</sup> of November 2007

Work carried out on the relinquished portions of the tenement has included:

- 3 Rockchip Samples.
- 106 Auger Samples.
- 7 Water Samples.

Work was carried out by Sipa Exploration NL and Placer Dome Australia. The sub-blocks relinquished were determined to have the least prospectivity as determined by Mindax Energy's review of the available data.

**Keywords:** Rockchip Sampling, Auger Sampling, Water Sampling

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## 1.0 Introduction

Exploration License E70/2668 forms part of Mindax Energy Pty Limited's Mortlock Project in conjunction with E70/2518-21, and ELA70/3266. This report details work carried out on the surrendered 35 sub-blocks over the life of the tenement. This was a compulsory surrender.

## 2.0 Locality and Tenure

The Project is located approximately 20km east of Northam in the wheat belt of Western Australia (Figure 1) and covers approximately 100km x 15km in a strip of land from Green Hills in the south to Konnongorring in the north. Access to the project from Perth or Kalgoorlie is by the Great Eastern Highway (Figure 2). Access within the project is good, with sealed roads providing entry to most parts of the project, and unsealed gazetted or farm tracks covering the remainder of the area. The entire project area is covered by private landholdings, with approximately 200 farms within the tenement package.

The project tenements are held in the name of Sipa Exploration NL. Mindax Energy together with Joint Venture partner Quasar Resources Pty Ltd is earning an interest in the project area. Sipa have previously had a joint venture with Placer Dome Australia over the project area.

Exploration License E70/2668 lies between Goomalling and Konnongorring. The license was granted on the 8<sup>th</sup> of November 2004 and originally comprised of 70 sub-blocks for an area of ~205km<sup>2</sup>. Thirty five sub-blocks were relinquished on the 7<sup>th</sup> of November 2007 and this report is the subject of the work carried out on those sub-blocks since granting of the tenement. The sub-blocks relinquished are shown in Table 1 and their locations in Figure 2.

PERTH BLOCKS	
2625	w, x, y, z
2626	v, w, x, y
2697	b, c, h
2698	b, c, d, e, g, h, j, k, n, o, p, s, t, u, x, y, z
2699	v
2770	e, l, q
2771	a, f, r

**Table 1:** Sub-blocks Relinquished

## 3.0 Geology and Mineralisation

### Regional Geology

The Project is located in the Western Gneiss Terrain of the Archaean Yilgarn Craton. The Western Gneiss Terrain is dominated by granite gneiss with minor remnants of granulite facies greenstones. The belts of granulite are typically narrow and discontinuous. Boddington and Griffin Find are the only known occurrences of economic gold mineralisation in the Western Gneiss Terrain. The Boddington mineralisation is hosted by the Saddleback Greenstone Belt, which exhibits a greenschist to lower amphibolite metamorphic grade. Griffin's Find is hosted by granulite facies rocks, which are more typical of the Western Gneiss Terrain in general. GSWA 250K mapping is shown in Figure 3.

### Project Geology

The oldest interpreted rocks in the area belong to the Jimperding belt and comprise sandstones, BIFs and finer grained sediments. These were subsequently intruded along strike by dolerites and ultramafic sills, and then subjected to peak upper amphibolite to granulite metamorphism. This metamorphic event transformed the sedimentary rocks and intrusions into those seen throughout the project today (sandstones to quartzite, BIF to metamorphosed, but still recognisable BIF, sediments to paragneiss and banded gneisses, and dolerites to amphibolites).

A later greenstone sequence of BIF, ultramafics, variolitic basalts and fine-grained sediments is inferred for the eastern part of the project area. This sequence, which hosts Centre Forest and Southern Brook, is inferred to correlate with the 2.8 GA Wongan Hills Formation. Subsequent felsic magmatism, along with a second period of high-grade metamorphism and migmatism accounts for the majority of granitic gneiss (equigranular and porphyritic) and further banded gneiss throughout the area. The large granite-gneiss dome in the central north of the area is interpreted to be part of this event. Later granite intrusions are much less deformed. Granitic and aplitic dykes that cut across all other felsic rocks, and may include a suite of undeformed diorite intrusions, provide evidence of a still later felsic event.

A significant number of Proterozoic dykes of varying composition (doleritic, dioritic and dacitic) and orientation are seen throughout the area. The youngest interpreted rocks in the area comprise sizable (up to 20m wide) quartz/sericite/epidote veins that cut all other rock types, including the Proterozoic dykes.

## 4.0 Work Completed

Work carried out on the relinquished portions of the tenement has included:

- 3 Rockchip Samples.
- 106 Auger Samples.
- 7 Water Samples.

The location of this work is shown in the Exploration Index Map (Figure 4).

### 4.1 Rockchip Sampling

Three Rockchip samples were collected within the relinquished portion of the tenement by Sipa.

### 4.2 Auger Sampling

Extensive auger drilling along public roads was carried out throughout the Project area. Spacing was nominally 5km traverse with samples collected at 200m along the traverse. Whilst various 'anomalous' results were obtained, questions remain as to the effectiveness of the program as significantly less carbonate material (the preferred sampling medium) was encountered than expected and the extensive depositional regolith's that occur throughout the area are not well constrained.

The location of the sampling is shown in Figure 6 and data is included in Appendix 1.

### 4.3 Water Sampling

A hydrological sampling program was conducted over the entire Project area in conjunction with the CSIRO. Seven samples were collected in the relinquished portion of E70/2668.

Approximately 1 litre water samples were collected and three different sample preparation methods were trailed:

- a) Samples were filtered on site, a 1g carbon sachet and then a complexing agent (Nitric acid) were added, the sample was bottle rolled, the carbon was then recovered, crushed, ashed and then analysed for gold by Aqua Regia analysis. Multi element analysis was conducted on the water sample.
- b) As above except samples were not filtered, and the complexing agent used was Sodium Chloride.

- c) As for b) except the complexing agent used was Potassium Cyanide.

Whilst anomalous gold results were obtained, there is little apparent correlation with pathfinder elements.

The location of the sampling is shown in Figure 7 and data is included in Appendix 1.

## 5.0 Conclusions and Recommendations

The ground subject to this report was relinquished as part of compulsory 50% reduction as required by DoIR regulations. The sub-blocks relinquished were determined to have the least prospectivity as determined by Mindax Energy's review of the available data.

## 6.0 List of Digital Files

FILE NAME	DESCRIPTION
E70-2668_2007P.pdf	2007 Partial Surrender Report – E70/2668
E70-2668_2007P_combined.pdf	2007 Partial Surrender Report – E70/2668, including Figures
VERIFICATION REPORT E70-2668_2007P.pdf	Verification Report
ML_WASG3_E70-2668_SURF2007P_Auger.txt	Auger Sampling Data
ML_WASG3_E70-2668_SURF2007P_Rock.txt	Rockchip Sampling Data
ML_WASG3_E70-2668_SURF2007P_Water.txt	Water Sampling Data
Figure 1.pdf	Project Location
Figure 2.pdf	Tenement Location
Figure 3.pdf	Project Geology
Figure 4.pdf	Exploration Index Map
Figure 5.pdf	Rockchip Sample Locations
Figure 6.pdf	Auger Sample Locations
Figure 7.pdf	Water Sample Locations
Figures.pdf	Combined Figures