Merlin Diamonds Limited  
ABN 86 009 153 119

**SURRENDER REPORT**  
FOR  
**EXPLORATION LICENCE 24082**  
“**AQUA PROJECT**”  

For The Period  
17th October 2005 to 16th October 2015

<table>
<thead>
<tr>
<th><strong>Title Holder:</strong></th>
<th>Merlin Diamonds Limited</th>
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</thead>
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<tr>
<td><strong>Operator:</strong></td>
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<td>Bauhinia Downs 1:250,000 (SE53-03)</td>
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<table>
<thead>
<tr>
<th><strong>Author:</strong></th>
<th>G.M.I Rockett</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Due Date:</strong></td>
<td>20th December 2015</td>
</tr>
</tbody>
</table>
| **Copies To:** | Dept. of Mines and Energy, NT  
Merlin Diamonds Ltd – Melbourne Office |

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TITLE PAGE FOR REPORT

TITLEHOLDER: Merlin Diamonds Limited
OPERATOR: Merlin Diamonds Limited
TENEMENT MANAGER: Axis Consultants Pty Ltd
TENEMENT: EL24082
PROJECT NAME: Aqua Project

REPORT TITLE: Surrender Report for EL24082 “Aqua Project” Northern Territory, for the period 17th October 2005 to 16th October 2015

REPORTING PERIOD: 17th October 2005 to 16th October 2015
AUTHOR: Georgina MI Rockett
TARGET COMMODITY: Diamonds
DATE OF REPORT: 20th December 2015
DATUM/ZONE: GDA94/Zone 53
1:250,000 SHEET: Bauhinia Downs – SE53-03
1:100,000 SHEET: Borroloola – 6165

CONTACT DETAILS: Ms Georgina MI Rockett
Postal Address: PO Box 2012, Kununurra WA 6743
Fax: 08 9169 1032
Mobile: 0400 812 951
Email for technical details: ginar@merlindiamonds.com.au
Email for expenditure: robynh@axisc.com.au
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1 ABSTRACT

This surrender report outlines exploration activities undertaken by Merlin Diamonds Limited (MDL) on Exploration Licence 24082 from the 17th October 2005 to 16th October 2015. This period represents ten years of holding the License.

Exploration Licence 24082 is part of the Aqua Project area and is situated on the Bauhinia Downs (SE53-03) 1:250,000 geological map sheet and the Borroloola (6153) 1:100,000 topographic map sheet in the Northern Territory. It is located around 20 kilometres south of Borroloola and is accessed via existing unsealed tracks leading south from Borroloola.

The commodity being explored for is diamond, specifically alluvial diamonds. Exploration activity included:

- Wide-diameter Calweld drill program;
- Sampling palaeo-gravels intersected in drill-holes;
- 348t taken for diamond processing;
- Rehabilitation of drill-holes and follow-up monitoring;
- Trialling use of ground EM to define alluvial channel and detection of gravel horizons.

No field-related exploration work was completed on EL24082 during the final reporting period (Year 10). However, the company conducted a detailed re-evaluation of the previous years of exploration work on the Aqua Project in order to reassess the mineral prospectivity of the two licences. On completion, this review recommended no further work hence the company allowed EL24082 to expire on 16th October 2015.

During the final full reporting period (Year 10), a total of $2,731.00 was expended against a covenant of $75,000. A Variations of Conditions application was submitted to the Mineral Titles Division. An additional $2,450.18 was expended between 29th August 2015 and expiry of Licence on 16th October 2015.


## 2 INTRODUCTION

This surrender report summarises exploration activities undertaken by North Australian Diamonds Limited, renamed Merlin Diamonds Limited (MDL) in 2013, on Exploration Licence 24082 between the 17th October 2005 to 16th October 2015. The licence has been held for a period of 10 years.

The commodity being explored for is diamond, specifically alluvial diamonds.

Table 1 and Map 1 (Exploration Index Map) summarise the work undertaken on the exploration lease over the period the company has held the title. Map 2 shows the tenement reductions undertaken in 2009 and 2010.

| TABLE 1: Summary of work undertaken between 17th October 2005 and 16th October 2015 |
|-----------------------------------------------|------------------------------------------------------|
| **Work**                                     | **Explanation**                                      |
| Review of Historical Exploration Data        | Compilation of all exploration data and critical assessment of the area’s potential to host an alluvial diamond resource. |
| Aerial Photography and Topographical Data Review | Mapping & interpretation of recent alluviats using aerial photos and SRTM images looking for potential trap-sites that might host an alluvial diamond resource. |
| Aboriginal Areas Protection Authority (AAPA) Certificate | After consultation with the Traditional Owners, the Authority Certificate was granted on the 18th August 2006 |
| Mining Management Plan                        | A MMP was submitted and approved to allow the Calweld Drill Program |
| Calweld Wide-diameter Drill program           | 15 holes drilled for 298.7m – 0.9m diameter; 348 alluvial gravels sampled and processed for diamond; Seven macrodiamonds recovered with three showing feature indicative of stones found in alluvial deposits |
| On-ground Reconnaissance                      | Detailed ground investigations were undertaken aimed at establishing whether the previously drilled deep gravel beds cropped out at surface within the tenement area. |
| EM34-3 Survey                                 | Nine 1-km lines of ground EM were undertaken local to Calweld drill-holes to test whether EM would define the extent of the alluvial channel and detect the presence of buried gravel sequences. |
| Additional Rehabilitation of Wide-diameter Drill-sites | Subsidence was noted on some drill-holes due to settling and compaction of fill following the high rainfall experienced in the area over the 2009-2010 wet season. Additional soil was mounded up at sites showing subsidence and the loader weight used to compact the material. |
3 LICENCE DETAILS

EL24082, comprising 80 blocks (248.4 km²), was granted to MDL on 17th October 2005 for a period of six years. At the start of Year 5 (17th October 2009), the licence was reduced to 42 blocks (127.1 km²). A second reduction was undertaken at the start of Year 6 (17th October 2010) when the licence was further reduced to 21 blocks (63.6 km²). Map 2 defines the areas relinquished.

At the end of Year 5, a renewal application was submitted and the licence renewed for two years. A second renewal application was submitted at the end of Year 8 (October 2013) and a further two-year extension was granted.

Current licence details for EL24082, as of 12th October 2015 are outlined in Table 2.

<table>
<thead>
<tr>
<th>Name</th>
<th>Status</th>
<th>Grant Date</th>
<th>Ceased Date</th>
<th>Size at Grant 2005</th>
<th>Size at Cessation 2015</th>
<th>Holder</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL24082</td>
<td>Surrendered</td>
<td>17/10/05</td>
<td>16/10/15</td>
<td>80 blocks</td>
<td>21 blocks</td>
<td>Merlin Diamonds Limited</td>
<td>100</td>
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<td></td>
<td></td>
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<td></td>
<td>248.4 km²</td>
<td>63.6 km²</td>
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</tbody>
</table>

4 LOCATION AND ACCESS

Exploration Licence 24082 is situated on the Bauhinia Downs (SE53-03) 1:250,000 geological map-sheet and the Borroloola (6165) 1:100,000 topographic map-sheet in the Batten Region of the Northern Territory.

The Licence is located around 20 kilometres south of Borroloola and is accessed via existing unsealed tracks leading south from the township.

Map 3 shows the tenement location.
5 PHYSIOGRAPHY

5.1 GEOMORPHOLOGY
The majority of the area covered by Aqua Project is located approximately twenty-five metres above sea level (25m absI), at the point where the high energy hinterland drainage, specifically McArthur River, meets the coastal plain, and represents a significant energy inflection point. The area is defined as an alluvial plain with accumulations of sand, gravel, loam, silt and clay within a broad, almost circular valley. The topography of the valley floor ranges from 39m absI in the south to 15m absI in the north over a distance of approximately 17 km. The low gradient (<1%) of the McArthur River in this area results in a decreased stream flow such that aggradation of sediment sourced from higher areas takes place.

The project area has low relief and slopes gently towards the coast, located approximately 50 km to the north-northeast. The McArthur River is the major floodway in the area. It gently meanders through the project area and mostly maintains a year round flow. Rate of flow is much stronger during the ‘wet season’, from November to April, and the river commonly breaks its banks during peak flow.

Interpretation of aerial photography, topographical and geological maps identified numerous oxbow lakes (billabongs), lagoons, swamps and second order streams that are interpreted to represent former courses of the McArthur River and indicate the river has meandered throughout much of the project area. Alluvium associated with the former river courses are likely to have been incised and re-deposited as the river course meandered over time.

5.2 GEOLOGY
The western half of the EL24082 tenement is comprised of the Abner Sandstone with the remainder of the licence mostly covered by Cainozoic soils and Quaternary alluvial deposits.

The Merlin kimberlite field is located approximately 60 kilometres to the south of the tenement. The sediments forming the bedrock to the alluvium are sediments of the Middle Proterozoic Roper Group. The Roper Group is described by the NTGS as a sequence of resistant quartzarenite and recessive mudstone and siltstone. It is not exposed in the project area however exposures to the south-west and north-east indicate the sediments to be relatively flat-lying. The local geology within the area covered by the Aqua Project comprises several units that are described below.
5.2.1 Proterozoic Shale

Highly weathered flat-lying siltstone is exposed in modern drainages. It is not known to which stratigraphic group this unit belongs however surrounding rocks mapped by the NTGS suggest it is possibly of the Roper Group. The Roper Group is described by the NTGS as a sequence of resistant quartz-arenite and recessive mudstone and siltstone.

Exposures to the south-west and north-east also indicate the sediments to be relatively flat-lying. Limited drilling to south of the project area intersected mudstones and siltstones at a consistent depth approximately 20m below the surface.

5.2.2 Cretaceous Sandstone

The sandstone is described as a bioturbated, fractured sandstone of the Walker River Formation. The sandstone crops out in modern drainages where the bank has been cut away.

6 Previous Exploration

CRA Exploration and Ashton Mining Limited have undertaken exploration for diamonds throughout the Borroloola area since the early 1980’s. Exploration has included airborne and ground geophysical surveys, stream gravel and loam sampling, and drilling of identified anomalies. However, the area covered by EL24082 has never been subject to systematic diamond exploration prior to 2005.

NTGS conducted geological mapping during the late 1980’s as part of their regional 1:250,000 geological map series. The NTGS defined the sediments as Quaternary sand, gravels and alluvium.

7 Aboriginal Clearances

An Authority Certificate was applied for from the Aboriginal Areas Protection Authority (AAPA) with consultation with the Traditional Owners. The Authority Certificate was granted on the 18th August 2006. A copy of this certificate is included in Appendix I.
8 EXPLORATION COMPLETED FROM 2005 TO 2015

8.1 SUMMARY OF EXPLORATION YEAR 1 – 2005-2006

EL24082 is located some 60km north of the Merlin kimberlite field. It is at the point where the high energy hinterland drainage, specifically McArthur River, meets the coastal plain and represents a significant energy inflection point. As there are no significant alluvial developments between Merlin and the coastal plain, it is considered that this inflection point would represent a possible alluvial trap for both gravel and any diamonds which have escaped from the Merlin hinterland. There is an elevation differential of 200m between Merlin and the coastal plain.

Acting on the above exploration rational, North Australian Diamonds undertook a limited ground based exploration program in the area, aimed at validating the theory.

Ground resistivity and EM geophysical surveys were trialled over the inferred channel. The data obtained from these surveys had not been analysed at the end of the reporting period. Note that these data sets were not located when compiling this Surrender Report.

No further work was undertaken, due to the pending AAPA Authorisation and approval of the Mining Management Plan.

8.2 SUMMARY OF EXPLORATION YEAR 2 – 2006-2007

During the reporting period, the company completed 15 large diameter drill holes that aimed to firstly identify and secondly recover a sufficient volume of palaeogravel sediments for processing through a diamond processing plant to determine the presence of commercial diamonds. Drill-hole locations are shown on Figure 1.

The program was a first pass attempt to recover diamonds and did not aim to establish a potential resource or grade of the gravels.

8.2.1 DRILLING

A Calweld Bucket Drill Rig was used to drill fifteen drill holes for a total of 298.7m. Palaeochannel sediments including gravels were intersected and approximately 348 tonnes of gravel were recovered.

Although successful in recovering gravels numerous difficulties were encountered during drilling including collapsing of the drill hole wall, sample falling out of the bucket due to inability of material to 'pack in' tight enough, and the difficulty in mobilising a 28 tonne drill rig through...
unconsolidated sands. Groundwater was intersected at approximately 18m bgl and contributed to poor recovery partly due to the groundwater flow washing sediments from the bucket.

Table 3 summarises the Calweld drill-hole collar locations and Appendix II contains the complete collar data.

**TABLE 3: Calweld Drill Collar Summary**

<table>
<thead>
<tr>
<th>Drillhole ID</th>
<th>Easting GDA94 z53</th>
<th>Northing GDA94 z53</th>
<th>Total Depth (m)</th>
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<td>637375</td>
<td>8203742</td>
<td>22.0</td>
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<td>637750</td>
<td>8203254</td>
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<td>636445</td>
<td>8204966</td>
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<td>NBOR-004</td>
<td>636617</td>
<td>8204726</td>
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<td>NBOR-005</td>
<td>636689</td>
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<td>NBOR-006</td>
<td>636725</td>
<td>8204611</td>
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<td>NBOR-007</td>
<td>636615</td>
<td>8204666</td>
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Table 4 summarises the downhole lithologies and Appendix III contains the complete lithology data.
# Table 4: Calweld Drill Log Summary

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<td>Sandy gravels</td>
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<td></td>
<td>14.0</td>
<td>20.2</td>
<td>Clayey sands</td>
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<td>Shale/siltstone</td>
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<td>0.5</td>
<td>21.8</td>
<td>Sands</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td>21.8</td>
<td>22.0</td>
<td>Shale/siltstone</td>
<td>no</td>
</tr>
<tr>
<td>NBOR-011</td>
<td>0</td>
<td>0.5</td>
<td>Soil</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>2.5</td>
<td>Sands</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>3.5</td>
<td>Pisolitic sands</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td>3.5</td>
<td>19.0</td>
<td>Sands/clayey sands</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td>19.0</td>
<td>21.8</td>
<td>Gravels</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>21.8</td>
<td>22.8</td>
<td>Shale/siltstone</td>
<td>no</td>
</tr>
</tbody>
</table>
8.2.2 **STRATIGRAPHY**

The stratigraphy intersected in most of the Calweld drill-holes across the palaeochannel is summarised in Table 5.

Samples of the palaeochannel gravels were taken from 10 of the 15 drill-holes. The palaeo-gravel unit sampled was intersected between depths of 16.0 to 24.0 m and is described as:

- Conglomerate comprising pebble to cobble and less common boulder clasts, displaying a rounded, sub-rounded to sub-angular shape with clast types of sandstone, siltstone, quartzite and chert with less common brecciated clasts. Often these gravels were loosely compacted probably due to the occurrence of a flowing water table. Matrix material comprised fine to coarse sands and less commonly clays.

Figure 2 shows a more detailed comparison of the stratigraphy intersected in each drill-hole across the alluvial channel.
<table>
<thead>
<tr>
<th>Lithology</th>
<th>Depth (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>sandy soil</td>
<td>0-0.5</td>
</tr>
<tr>
<td>sands/pisolite sands</td>
<td>0.5-13.0</td>
</tr>
<tr>
<td>pebbly matrix-supported gravels</td>
<td>13.0-14.0</td>
</tr>
<tr>
<td>clay-rich sands</td>
<td>14.0-16.0</td>
</tr>
<tr>
<td>mostly clast-supported gravels</td>
<td>16.0-22.0</td>
</tr>
<tr>
<td>shale/siltstone (Proterozoic bedrock)</td>
<td>22.0-24.0</td>
</tr>
</tbody>
</table>

### 8.2.3 Processing

Gravels from all drill holes sampled were combined and processed through a Mark III Heavy Media Separation processing plant. A total of 348 tonnes was processed. The HMS plant had a feed preparation screen size of 1.0mm (lower cut-off) and a trommel screen size of 10mm (upper cut-off). The plant operated at a density of approximately 2.7.

Concentrates were sized on-site then passed through an RE10 magnetic separator to remove the magnetic material prior to initial hand sorting of non-magnetics for diamond recovery. The non-magnetics were also sent to Perth for additional treatment and final diamond recovery.

### 8.2.4 Results

A total of seven diamonds were recovered from the processing of the gravels. Three diamonds showed features indicative of stones found in alluvial deposits. The four additional stones were likely to have been unlocked from a larger grain.

A portion of the fine rejects from the HMS plant (-1mm tailings) was sent to the Perth laboratory for diamond and kimberlite indicator mineral recovery. One additional macrodiamond, five microdiamonds and forty chromites were recovered. However, this result raises the possibility that the sample was contaminated and caution must therefore be used when interpreting the results.
A summary of results is included in Table 6 and a description of diamonds recovered is also included in Appendix IV.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Size fraction</th>
<th>Diamonds</th>
<th>Chromites</th>
</tr>
</thead>
<tbody>
<tr>
<td>24082-001</td>
<td>+1mm -10mm</td>
<td>7 macro</td>
<td>0</td>
</tr>
<tr>
<td>(348 tonnes)</td>
<td>-1mm</td>
<td>1 macro, 5 micro</td>
<td>40</td>
</tr>
</tbody>
</table>

### 8.2.5 **Rehabilitation**

Existing station tracks were used to gain access to drill-hole sites. Drill pads were constructed at each drill site and a small area cleared for stockpiling of drill spoil material. Rehabilitation of the Calweld drill-holes was completed at the conclusion of the program. All drill holes were backfilled and clearly identified with pegs and flagging tape, and the drill pads contoured with natural topography. All rubbish and equipment associated with the drilling program was removed.

A visit in October 2007 to inspect the rehabilitation confirmed that the drill holes had not subsided.

### 8.3 **Summary of Exploration Year 3 – 2007-2008**

#### 8.3.1 **Ground Reconnaissance**

Detailed ground investigations were undertaken aimed at establishing whether the previously drilled deep gravel beds cropped out at surface within the tenement area. No surface expressions were located but gravels were noted to crop out on the company’s tenement application immediately to the north.

#### 8.3.2 **Rehabilitation**

Inspection in 2008 of the Calweld Drill-hole sites confirmed that the drill holes had not subsided and natural grasses, approximately one metre tall, had grown over the disturbed areas.
8.4 **SUMMARY OF EXPLORATION YEAR 4 – 2008-2009**

During Year 4, the company decided that further ground investigations on EL24082 were contingent on results of future exploration on the adjoining tenement, ELA24512, to the north. Negotiations to gain access to ELA24512, which is subject to ALRA access conditions, were expected to be concluded within the next 6 months.

8.5 **SUMMARY OF EXPLORATION YEAR 5 – 2009-2010**

8.5.1 **GROUND EM SURVEY TRIAL**

A ground geophysical survey using an EM34-3 instrument was completed over an area of the tenement where subsurface gravels are known to exist to assist with interpreting the nature and extent of the palaeochannel stratigraphy. It was found that the technique was not able to define the gravel horizons and as such proved to be ineffective.

Survey extent is shown on Map 5 and the data is included in Appendix V.

*Instrument*: Geonics EM34-3  
*Survey Orientation*: East-West  
*Line Spacing*: 50m  
*Cable Separation*: 20m  
*Station Spacing*: 10m  
*Total Survey Line Kilometres*: 9

8.6 **SUMMARY OF EXPLORATION YEAR 6 – 2010-2011**

8.6.1 **REHABILITATION**

Inspection in 2010 of the Calweld Drill-hole sites discovered that some drill-holes had partially subsided as a result of the high rainfall experienced in the area over the proceeding wet season. On-ground activities completed during the reporting period included backhoe-assisted rehabilitation of these drill-holes in November 2010.

8.6.2 **LICENSE RENEWAL APPLICATION**

In 2010-2011, NADL was granted exploration licence EL24512, located on Aboriginal Land to the north of EL24082. The sub-surface gravels within EL24082 appear to crop out in EL24512 and this
has been a priority target for NADL since EL24512 was applied for in 2005. In October 2011, NADL proceeded to excavate five 1,000 ton bulk samples of the gravel for processing through a heavy media separation plant for recovery of diamonds.

Further exploration on EL24082 was dependent on results obtained from the bulk sampling on EL24512. In 2011, NADL still considered EL24082 to be prospective for containing a significant volume of potentially diamond-bearing alluvial gravel. For this reason an application for a 2-year extension of the licence was lodged during the reporting period.

8.7 **SUMMARY OF EXPLORATION YEAR 7 – 2011-2012**

8.7.1 **REHABILITATION**

In 2012, the Calweld drill sites were checked again. Some subsidence causing a slight depressions at the drill collar was noted that the company felt would not be satisfactory to the Department of Resources. The subsidence is due to settling and compaction of the soil over time, especially following the high rainfall experienced in the area over the 2009-2010 wet season. Subsidence was not apparent at all holes and is therefore not considered to be an issue common to all drill holes. In May 2012, additional soil was mounded up over the collars that showed some subsidence and the loader weight used to compact the material.

The drill holes are wide diameter holes of 0.9-1m diameter. Conventional collar plugs are obviously not suitable for these drill holes so the method of plugging them involved backfilling with drill spoil and surficial material using heavy machinery at the conclusion of the drilling program in 2006. The loader weight was used to compact the material. As discussed above for some holes (but not all) further backfilling and compaction was required in May 2012.

A final inspection of the site was conducted on 28th May 2012 at which time photographs were taken and are included below.

PHOTO 1: NBOR-001 location showing surrounding landscape and recent works to return site to close to original topography. The track in the background is a station access track (28th May 2012)
PHOTO 2: NBOR-002 location showing surrounding landscape and recent works to return site to close to original topography (28th May 2012)

PHOTO 3: NBOR-003 location showing surrounding landscape and recent works to return site to close to original topography (28th May 2012)

PHOTO 4: NBOR-004 location showing surrounding landscape and recent works to return site to close to original topography (28th May 2012)
**PHOTO 5:** NBOR-005 location showing surrounding landscape and recent works to return site to close to original topography (28th May 2012)

**PHOTO 6:** NBOR-006 location showing surrounding landscape and recent works to return site to close to original topography (28th May 2012)

**PHOTO 7:** NBOR-007 location showing surrounding landscape and recent works to return site to close to original topography (28th May 2012)
PHOTO 8: NBOR-008 location showing surrounding landscape and recent works to return site to close to original topography (28th May 2012)

PHOTO 9: NBOR-009 location showing current vegetation and landscape profile. No evidence of drill collar or subsidence was observed (28th May 2012)
PHOTO 10: NBOR-010 location showing current vegetation and landscape profile. No evidence of drill collar or subsidence was observed (28th May 2012)

PHOTO 11: NBOR-011 location showing surrounding landscape and recent works to return site to close to original topography (28th May 2012)
PHOTO 12: NBOR-012 location showing surrounding landscape and recent works to return site to close to original topography (28th May 2012)

PHOTO 13: NBOR-013 location showing surrounding landscape and recent works to return site to close to original topography (28th May 2012)

PHOTO 14: NBOR-014 location showing surrounding landscape and recent works to return site to close to original topography (28th May 2012)
8.7.2 **Mining Management Plan**

The 2006 drilling activities were conducted under Authorisation 0351-01. In May 2012, NADL submitted an Application for a ‘Closure Certificate’. The Department of Resources advised that the activities and rehabilitation pertaining to these activities could be included in the MMP for adjoining tenement EL24512 and, upon acceptance of this MMP (Authorisation 0649-01), the Authorisation 0351-01 would be closed. Authorisation 0649-01 was issued on 9th October 2012.

8.8 **Summary of Exploration Year 8 – 2012-2013**

During 2012, the reporting term for EL24082 was altered to fall in line with EL24512 and combined as the Aqua Project under the Group Reporting Number GR316-13. Work completed during the reporting period included:

- Land access and Work Program meetings with the Northern Land Council
- A drilling program approved by Merlin Diamonds management was proposed for EL24082 and adjoining tenement EL24512 located on Aboriginal Land. Delays in gaining access through the NLC to the adjoining tenement resulted in the proposed program being postponed.
- Renewal application submitted for further two-year extension on EL24082, and application for Group Reporting status
- Mining Management Plan submission (updated and included in 0649-01))
- Monitoring of rehabilitation sites
- Further negotiations with the NLC were postponed following the Company's decision in early 2013 to focus all resources and funding on commissioning the Merlin Diamond Mine.
- It is anticipated that following successful commissioning, which is currently underway, that resources and funding will be reallocated to the Company’s exploration programs.
8.9 SUMMARY OF EXPLORATION YEAR 9 – 2013-2014

No field exploration work was completed during the reporting period.

Inspection of rehabilitated sites was undertaken in June 2014 to monitor the progress of rehabilitated drill sites.

The previously proposed exploration program was postponed again due to insufficient funding following the Company’s suspension of mining operations at the Merlin Diamond Mine. The program was to be undertaken once funding was secured and NLC work program meetings and approvals obtained.

8.10 SUMMARY OF EXPLORATION YEAR 10 – 2014-2015

No field exploration work was completed during the reporting period.

A voluntary inspection of rehabilitated sites was scheduled for October 2014 to monitor the rehabilitation progress, but this did not occur as the Northern Land Council requested a progress meeting be held before entry permits were granted. As the company was not in a position to cover the cost of such a meeting, the application for entry permits was withdrawn and the rehabilitation monitoring did not go ahead.

The proposed exploration program for 2014-2015 was postponed due to insufficient funding. It was intended that these programs be undertaken once funding was secured and NLC work program meetings and approvals had been obtained.
9 REASON FOR SURRENDER OF LICENCE

Based on the 2006 results from the alluvial gravels sampled in the Calweld drill-holes, and combined with disappointing 2011 results from bulk sampling of near-surface gravels on EL24512 to the north, the area covered by EL24082 is now considered unlikely to hold potential for economical amounts of diamond concentrated in alluvial deposits. Hence, the licence was allowed to expire on 16th October 2015.

10 EXPENDITURE STATEMENT

An additional $2,450.18 was expended between 29th August 2015 and expiry of Licence on 16th October 2015. This expenditure covered the following items:

- 50% preparation of 2015 Annual Group Report – GR316/13
- Geological review of all exploration data to critically reassess the area’s potential to host an alluvial diamond resource.
- Decision to allow Licence to expire on 16th October 2015.
11 REFERENCES


- Pietsch, BA; Rawlings DJ; Creaser, PM; Kruse, PD; Ahmad, M; Ferenczi, PA; Findhammer, TLR. 1991. *Bauhinia Downs 1:250,000 Geological Series Explanatory Notes*. Northern Territory Geological Survey.


Exploration Activity

2006-2007

- 15 Calweld wide-diameter drill-holes for 298.7m
- NBOR-001 to NBOR-015
- 348 t gravels sampled

2009-2010

- EM34-3 ground EM survey
- 9 line kms
- 909 readings

LEGEND

  EL24082 - 80 blocks (248.4 sq km)
- Drainages
- Access tracks
Tenement Geology

Aqua Project

250k Bauhinia Downs

Quaternary alluvium
- gravel, sand and silt

Cenozoic materials
- alluvium

Cretaceous Sediments
- sandstone

Bukalara Sandstone
- sandstone

Corcoran Formation
- mudstone

Abner Sandstone
- sandstone

Crawford Formation
- sandstone

Mainoru Formation
- sandstone

Limmen Sandstone
- sandstone

Balbirini Dolomite
- dolostone

Smythe Sandstone
- conglomerate

Stretton Sandstone
- sandstone

Yalco Formation
- sandstone

Lynott Formation
- siltstone

McArthur River

McArthur River

LEGEND

Licence area at 17th October 2005
EL24082 - 80 blocks (248.4 sq km)

McArthur River

creeks

Scale - 1:200,000

UNIVERSAL TRAVERSE MERCATOR PROJECTION

Map Grid Australia Zone 53 (GDA94)
FIGURE 2: Calweld Drill-holes - Down-hole Lithology

Legend for Lithcode
- clayey sand
- sand (orange)
- clayey sand with laterite
- alluvial sandy clay
- alluvial sandy clay with matrix-supported gravels
- matrix-supported gravels
- clast-supported gravels
- Proterozoic siltstone/mudstone bedrock

Bedrock RL = 8.3m
Bedrock RL = 5.6m
Bedrock RL = 4.6m
Bedrock RL = 3.7m
Bedrock RL = 5.7m
Bedrock RL = 7.3m
APPENDIX I

Aboriginal Areas Protection Authority (AAPA) Certificate

EL24082_2015_S_App_I.pdf
ABORIGINAL AREAS PROTECTION AUTHORITY

AUTHORITY CERTIFICATE
Issued in accordance with Section 22 of the Northern Territory Aboriginal Sacred Sites Act 1989

REFERENCE: D89/199; 90/1015 (Doc.54799) C2006/086

APPLICANT: North Australian Diamonds Ltd
Level 10
256 Adelaide Tce
Perth, WA 6000

SUBJECT LAND: A part of EL24082 on Spring Creek PL687 (NT Portion 814), as shown on the attached map, which is Annexure ‘A’ hereto.

PROPOSED WORK OR USE: Exploration program involving a number of large diameter drill holes (70cm in diameter) with access tracks for the conventional truck-mounted drill rig.

CONDITIONS:

1. The applicant shall ensure that the conditions of this Certificate are included in any subsequent contract or tender documents for the works or use described herein.

2. The applicant shall ensure any agent, contractor or employee is aware of the conditions of this Certificate and the obligations of all persons (who enter on, or carry out works or use land on which there is a sacred site) under Part IV of the Northern Territory Aboriginal Sacred Sites Act 1989.

3. This Certificate shall lapse and be null and void if the works in question or the proposed use is not commenced within 24 months of this Certificate.

4. The applicant shall ensure any agent, contractor or employee is aware of the content of section 40(1) of the Northern Territory Aboriginal Sacred Sites Act 1989 which provides that this Certificate does not negate the need for consent, approval or permission for the subject works or use of the land which may be required under another statute.

5. No works of any kind allowed within recorded sacred sites 6165-50 and 6165-84 inside Restricted Works Area 1 (RWA 1), as shown on the attached map, which is Annexure ‘A’ hereto.

6. No works of any kind are allowed inside a 100-metre radius from all waterholes and billabongs within the Restricted Works Area 1 (RWA 1) between the McArthur River and Frazer Creek, as shown on the attached map, which is Annexure ‘A’ hereto. In particular there is to be no damage whatsoever to beds and banks of waterholes and billabongs and mature trees of any species in their vicinity.

7. Definition: the term ‘works’, as used herein, includes all ground and vegetation disturbing activities, like excavation, extraction, relocation and removal of material of any kind including soil, sand, gravel, rocks and boulders, logging, cutting and trimming of vegetation, including trees, drilling of holes and bores and excavations of trenches and pits, grading of tracks and roads, construction of dams, storage of material and parking of machinery and camping.

The COMMON SEAL of the
ABORIGINAL AREAS PROTECTION AUTHORITY
was hereto affixed on the 19th day of August 2006

JEFFERY STEAD
Chief Executive Officer
APPENDIX II

Calweld Drill-hole Collar Location Data

EL24082_2015_S_DrillCollars.txt
## APPENDIX II
### Calweld Drill-hole Collar Location Data

<table>
<thead>
<tr>
<th>Hole_ID</th>
<th>MGA_E metres</th>
<th>MGA_N metres</th>
<th>Collar_RL metres</th>
<th>Hole_diameter metres</th>
<th>Dip</th>
<th>Azimuth</th>
<th>Total_depth metres</th>
<th>Basal_gravel</th>
<th>Sampled</th>
<th>Depth_to_basal_gravel metres</th>
</tr>
</thead>
<tbody>
<tr>
<td>NBOR-001</td>
<td>637375</td>
<td>8203742</td>
<td>30.14</td>
<td>0.9</td>
<td>-90</td>
<td>0</td>
<td>22.0</td>
<td>yes</td>
<td>yes</td>
<td>20.2</td>
</tr>
<tr>
<td>NBOR-002</td>
<td>637750</td>
<td>8203254</td>
<td>25.75</td>
<td>0.9</td>
<td>-90</td>
<td>0</td>
<td>22.6</td>
<td>yes</td>
<td>no</td>
<td>15.2</td>
</tr>
<tr>
<td>NBOR-003</td>
<td>636445</td>
<td>8204966</td>
<td>30.38</td>
<td>0.9</td>
<td>-90</td>
<td>0</td>
<td>5.0</td>
<td>n/a</td>
<td>no</td>
<td>n/a</td>
</tr>
<tr>
<td>NBOR-004</td>
<td>636617</td>
<td>8204726</td>
<td>30.05</td>
<td>0.9</td>
<td>-90</td>
<td>0</td>
<td>21.0</td>
<td>yes</td>
<td>yes</td>
<td>17.8</td>
</tr>
<tr>
<td>NBOR-005</td>
<td>636689</td>
<td>8204641</td>
<td>29.79</td>
<td>0.9</td>
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<td>0</td>
<td>23.0</td>
<td>yes</td>
<td>yes</td>
<td>17.9</td>
</tr>
<tr>
<td>NBOR-006</td>
<td>636725</td>
<td>8204611</td>
<td>29.30</td>
<td>0.9</td>
<td>-90</td>
<td>0</td>
<td>19.5</td>
<td>yes</td>
<td>yes</td>
<td>18.8</td>
</tr>
</tbody>
</table>

Remarks: "wide-diameter drill-holes 0.9m diameter to test and sample buried alluvial gravels"
APPENDIX III

Calweld Drill-hole Down-hole Lithology Data

EL24082_2015_S_LithLogs.txt
## APPENDIX III

Calweld Drill-hole Down-hole Lithology Data

<table>
<thead>
<tr>
<th>Hole_ID</th>
<th>From_m (metres)</th>
<th>To_m (metres)</th>
<th>Lithcode</th>
<th>Description</th>
<th>Sampled</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>NBOR-001</td>
<td>0.0</td>
<td>0.5</td>
<td>OCS</td>
<td>dark brown sandy soil</td>
</tr>
<tr>
<td>D</td>
<td>NBOR-001</td>
<td>0.5</td>
<td>11.9</td>
<td>OCS + Lat</td>
<td>reddish brown-grey mottled pisolithic sand - poorly consolidated</td>
</tr>
<tr>
<td>D</td>
<td>NBOR-001</td>
<td>11.9</td>
<td>14.0</td>
<td>OCSG</td>
<td>reddish brown mottled sandy pebble gravels</td>
</tr>
<tr>
<td>D</td>
<td>NBOR-001</td>
<td>14.0</td>
<td>20.2</td>
<td>OSC</td>
<td>reddish-brown to pale grey mottled poorly lithified ferruginised sandy silt + clayey loam</td>
</tr>
<tr>
<td>D</td>
<td>NBOR-001</td>
<td>20.2</td>
<td>21.5</td>
<td>OG</td>
<td>pastel-coloured sandy gravels - pebbles and cobbles rounded. Clasts include SST, SLST, Qtzite</td>
</tr>
<tr>
<td>D</td>
<td>NBOR-001</td>
<td>21.5</td>
<td>22.0</td>
<td>SSL</td>
<td>green-grey + grey-purple laminated shales and siltstones - bedrock</td>
</tr>
<tr>
<td>D</td>
<td>NBOR-002</td>
<td>0.0</td>
<td>0.5</td>
<td>OCS</td>
<td>dark brown sandy soil</td>
</tr>
<tr>
<td>D</td>
<td>NBOR-002</td>
<td>0.5</td>
<td>9.2</td>
<td>OCS + Lat</td>
<td>mottled pisolithic sand + clayey material</td>
</tr>
<tr>
<td>D</td>
<td>NBOR-002</td>
<td>9.2</td>
<td>11.8</td>
<td>OCS + OCSG</td>
<td>orangy-brown sands with sparse fine gravels throughout</td>
</tr>
<tr>
<td>D</td>
<td>NBOR-002</td>
<td>11.8</td>
<td>15.2</td>
<td>OCSG</td>
<td>pale grey-brown medium to coarse gravelly sands with pebbles + cobbles subrounded clasts of chert</td>
</tr>
<tr>
<td>D</td>
<td>NBOR-002</td>
<td>15.2</td>
<td>22.0</td>
<td>OG</td>
<td>pale grey-green to purple laminated shales + siltstone - bedrock</td>
</tr>
<tr>
<td>D</td>
<td>NBOR-003</td>
<td>22.0</td>
<td>22.6</td>
<td>SSL</td>
<td>orangy-brown aeolian sands - poorly-consolidated - hole abandoned due to collapse</td>
</tr>
<tr>
<td>D</td>
<td>NBOR-004</td>
<td>0.0</td>
<td>0.5</td>
<td>OCS</td>
<td>dark brown sandy soil</td>
</tr>
<tr>
<td>D</td>
<td>NBOR-004</td>
<td>0.5</td>
<td>10.0</td>
<td>OCS + Lat</td>
<td>mottled orangy-brown + grey sands + poorly-consolidated ferruginised clayey sands</td>
</tr>
</tbody>
</table>
APPENDIX IV

Description of Diamonds Recovered

EL24082_2015_S_App IV.pdf
DESCRIPTION OF DIAMONDS RECOVERED FROM
SAMPLE 24082-001
EL24082 – Aqua Project, Borroloola, NT

Diamonds Recovered from +1mm size fraction

Diamond #1
Size: 1.9 x 1.7 x 1.4mm, 0.04ct
Shape: Elongated dodecahedron
Colour: Dark White
Clarity: A few inclusions
Surface: resorbed, frosted with some mechanical damaged
Origin: diamond shows surface features which are indicative for stones found in alluvial deposits especially river beds

Diamond #2
Size: 1.9 x 1.0 x 0.7mm, 0.01ct
Shape: Irregular fragment
Colour: White
Clarity: one big inclusion in centre
Surface: lightly resorbed, smooth
Origin: surface features suggest the diamond may have been unlocked from a larger grain during processing

Diamond #3
Size: 1.7 x 1.4 x 1.3mm, 0.039ct
Shape: Dodecahedron fragment
Colour: Greenish-white
Clarity: a few inclusions
Surface: resorbed, frosted with some mechanical damage
Origin: diamond shows surface features indicative of stones found in alluvial deposits, especially fluvial systems (river beds)
Diamond #4
Size: 3.4 x 1.6 x 1.2mm, 0.052ct
Shape: Elongated dodecahedron
Colour: Yellow – Light Cape
Clarity: clear
Surface: resorbed, frosted with some mechanical damage
Origin: diamond shows surface features indicative of stones found in alluvial deposits, especially fluvial systems (river beds)

Diamond #5
Size: 2.4 x 1.6 x 1.0mm, 0.033ct
Shape: Irregular fragment
Colour: White
Clarity: clear
Surface: resorbed, fragments of iron coating, sharp edges
Origin: surface features suggest the diamond may have been unlocked from a larger grain during processing

Diamond #6
Size: 2.35 x 1.4 x 1.35mm, 0.024ct
Shape: Irregular fragment
Colour: Brown
Clarity: clear with cracks
Surface: resorbed, fragments of iron coating, sharp edges
Origin: surface features suggest the diamond may have been unlocked from a larger grain during processing

Diamond #7
Size: 2.2 x 1.7 x 0.8mm, 0.027ct
Shape: Irregular fragment
Colour: White
Clarity: clear with cracks
Surface: resorbed, sharp edges, patches of frosted surface
Origin: surface features suggest the diamond may have been unlocked from a larger grain during processing
**Diamonds Recovered from portion of fine tailings -1mm size fraction**

**Macrodiamond**
- **Size:** 0.60 x 0.50 x 0.45mm
- **Shape:** Irregular fragment
- **Colour:** White

**Microdiamond #1**
- **Size:** 0.32 x 0.20 x 0.15mm,
- **Shape:** Flat fragment
- **Colour:** White, clear

**Microdiamond #2**
- **Size:** 0.22 x 0.21 x 0.20mm,
- **Shape:** Cube fragment
- **Colour:** Brown, opaque

**Microdiamond #3**
- **Size:** 0.15 x 0.12 x 0.11mm,
- **Shape:** Dodecahedron
- **Colour:** White, clear

**Microdiamond #4**
- **Size:** 0.35 x 0.25 x 0.22mm,
- **Shape:** Octahedron
- **Colour:** White, clear

**Microdiamond #5**
- **Size:** 0.32 x 0.25 x 0.05mm,
- **Shape:** Macle
- **Colour:** White, clear
APPENDIX V

EM34-3 Survey Data

EL24082_2015_S_EMSurvey.txt
APPENDIX V
EM34-3 Survey Data

H0002 Version 4
H0003 Date_generated 18-Dec-15
H0004 Reporting_period_end_date 16-Oct-15
H0005 State NT
H0100 Tenement_no/Combined_rept_no EL24082
H0101 Tenement_holder Merlin Diamonds Limited
H0102 Project_name Aqua Project
H0106 Tenement_operator Merlin Diamonds Limited
H0150 250K_map_sheet_number SE5303
H0151 100K_map_sheet_number 6165
H0200 Start_date_of_data_acquisition 17-Oct-05
H0201 End_date_of_data_acquisition 16-Oct-15
H0202 Data_format SL1
H0203 Number_of_data_records 909
H0204 Date_of_metadata_update 18-Dec-15
H0300 This_filetype EL24082_2015_S_EMSurvey.txt
H0301 Location_data_file EL24082_2015_S_EMSurvey.txt
H0307 Lithology_code_file MDL_LithCodes.pdf
H0308 File_Verification_Listing EL24082_2015_AS_FileListing.txt
H0500 Feature_type EM34-3 conductivity
H0501 Geodetic_datum GDA94
H0502 Vertical_datum AHD arbitrary RL200 nominal
H0503 Projection Universal Transverse Mercator (UTM)
H0530 Coordinate_system Projected
H0531 Projection_zone 53
H0532 Surveying_instrument hand-held GPS
H0533 Surveying_company MDL
H0900 Remarks: "Electromagnetic conductivity measured by Geonics EM34-3 unit using sensitivity 100 setting"

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