



**NSW  
Resources  
Regulator**

COMPLIANCE AUDIT PROGRAM

# EL7390 EXPLORATION DRILLING PROGRAM

Impact Minerals Limited



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# 1. Introduction

## 1.1. Background

Exploration licence 7390 (EL7390) was granted to Golden Cross Operations Pty Ltd on 20 August 2009. The licence was transferred to Siouville Pty Ltd (Siouville) in February 2016. The exploration area is in a rangeland area about 15 kilometres east of Broken Hill in western NSW. Siouville is a wholly owned subsidiary of Impact Minerals Limited (Impact Minerals) who is the operator of the title.

There have been several exploration drilling programs undertaken on EL7390 in the last three years. In May 2020, Impact Minerals was granted funding for the drilling program under the NSW Government New Frontiers Co-operative Drilling Program. The most recent programs are summarised in Table 1.

*Table 1 Summary of recent exploration drilling programs on EL7390*

PROGRAM	ACTIVITIES
May 2020 (MAAG0007248)	<ul style="list-style-type: none"> <li>■ 13 RC/AC drill holes in the Platinum Springs prospect</li> <li>■ 10 DD and 1 RC/AC drill holes at the Red Hill prospect</li> </ul>
June 2020 (MAAG0007512)	<ul style="list-style-type: none"> <li>■ 185 AC drill holes in the Platinum Springs prospect</li> </ul>
July 2020 (MAAG0007935)	<ul style="list-style-type: none"> <li>■ additional seven AC/RC drill holes in the Platinum Springs prospect</li> <li>■ additional 31 AC drill holes in the Little Broken Hill Gabbro prospect</li> </ul>
November 2020 (MAAG0009045)	<ul style="list-style-type: none"> <li>■ consolidated the undrilled holes from the previous three approvals into one approval</li> <li>■ 94 AC/RC drill holes from previous approval (MAAG0007512)</li> <li>■ 60 additional RC drill holes in the Platinum Springs prospect</li> <li>■ 10 additional RC drill holes in the Red Hill prospect</li> </ul>

These programs were approved by the NSW Resources Regulator within the Department of Regional NSW between June 2020 and December 2020.

As part of the Regulator's compliance audit program, an audit of the exploration activities associated with the Broken Hill JV Platinum Project within EL7390 was undertaken on 10 December 2020.

## 1.2. Audit objectives

The objectives of the audit were to:

- undertake a compliance audit of the Siouville Pty Ltd (title holder) and Impact Minerals Limited (operator) exploration activities against the requirements of the *Mining Act 1992* and the conditions of the exploration licence and activity approvals issued pursuant to that Act.
- assess the operational performance of the exploration activities and the ability of the title holder to implement management systems and controls to provide for sustainable management of the operations.

## 1.3. Audit scope

The scope of the audit included:

- the exploration activities associated with the Platinum Springs, Red Hill and Little Broken Hill Gabbro exploration project including:
  - exploration activities within EL7390 including a selected sample of exploration drillholes
  - borehole sealing and rehabilitation activities for selected drilling activities undertaken since July 2017.
- a review of documents and records pertaining to the exploration activities
- the assessment of compliance for the period commencing 1 July 2019 and ending 10 December 2020.

## 1.4. Audit criteria

The audit criteria against which compliance was assessed included:

- *Mining Act 1992*, specifically sections 5, 30, 140, 163C to 163E, 163G, 378D
- Mining Regulation 2016, specifically clauses 59 to 68
- conditions attached to EL7390 (granted 20 August 2009 and renewed 30 October 2017)

- Exploration activities application (ESF4) dated 4 November 2020 and associated approval dated 10 November 2020 (MAAG0009045)
- Exploration Code of Practice: Environmental Management (Version 2, April 2017)
- Exploration Code of Practice: Rehabilitation (Version 2, April 2017)
- Exploration Code of Practice: Community Consultation (Version 1.1, May 2016)
- Exploration Code of Practice: Produced Water Management, Storage and Transfer (Version 2, April 2017)
- Exploration Reporting: A guide for reporting on exploration and prospecting in New South Wales (Version 2, March 2016)
- Exploration Guideline: Annual activity reporting for prospecting titles (Version 2a, April 2016) published by the (then) NSW Department of Industry, Skills and Regional Development, Division of Resources and Energy
- ESG4: Guideline for preparing an environmental and rehabilitation compliance report (Version 2.3, March 2019) published by NSW Resources Regulator.

## **1.5. Publishing and disclosure of information**

This audit report will be published on the Regulator's website consistent with Section 365 of the *Mining Act 1992*.

This audit report may be publicly disclosed consistent with the *Government Information (Public Access) Act 2009*.

## 2. Audit methods

The audit process involved the interview of site personnel, a review of documentation and samples of records provided by the title holder and/or operator, and a site inspection of the operations to determine the level of compliance of the operations and assess the status of the operational performance. The audit process and methodology are described in more detail in the sections below.

### 2.1. Opening meeting

An opening meeting was held onsite on 10 December 2020. The audit team was introduced, and the scope of their responsibilities was conveyed to the auditees. The objectives and scope of the audit were outlined. The methods to be used by the team to conduct the audit were explained, including the interview of personnel, review of documentation, examination of records and a site inspection to assess specific compliance requirements.

### 2.2. Site interviews and inspections

#### 2.2.1. Data collection and verification

Where possible, documents and data collected during the audit process were reviewed on site. Several documents were unable to be reviewed on site and were provided following the site visit.

All information obtained during the audit process was verified by the audit team, where possible. For example, statements made by site personnel were verified by viewing documentation and/or site inspections, where possible. Where suitable verification could not be provided, this has been identified in the audit findings as not determined.

#### 2.2.2. Site inspections

A site inspection was undertaken of the following sites:

- close spaced drilling in the Platinum Springs prospect area
- holes in the Little Broken Hill Gabbro prospect including:
  - hole PN159 – drilling completed and rehabilitated
  - hole PN158 - drilling completed and rehabilitated

- hole PN157 - drilling completed and rehabilitated
- hole PN156 - drilling completed and rehabilitated
- hole PN118 – drilling recently completed, rehabilitation not yet commenced.
- core and sample storage at the AUSSAM yard in Broken Hill.

## 2.3. Closing meeting

A closing meeting was held onsite on 10 December 2020. The objectives of this meeting were to discuss any outstanding matters, present preliminary findings and outline the process for finalising the audit report.

## 2.4. Compliance assessment definitions

The reporting of results from the compliance audit was determined based on the definitions presented in Table 2.

Table 2 Audit assessment categories

ASSESSMENT	CRITERIA
<b>Compliance</b>	Sufficient and appropriate evidence is available to demonstrate the particular requirement has been complied with.
<b>Non-compliance</b>	<p>Clear evidence has been collected to demonstrate the particular requirement has not been complied with. There are three subcategories of non-compliance reflecting the severity and level of risk associated with the non-compliance:</p> <p><b>NC1</b> – the absence of planning or implementation of a required operational element which has the potential to result in a significant risk.</p> <p><b>NC2</b> – an isolated lapse or absence of control in the implementation of an operational element which is unlikely to result in a significant risk.</p> <p><b>NC3</b> – an administrative or reporting non-compliance which does not have a direct environmental or safety significance.</p> <p>Note: The identification of a non-compliance in this audit may or may not constitute a breach of, or offence under, the <i>Mining Act 1992</i>. Non-compliances identified in this audit report may be further investigated by the Regulator and regulatory actions may be undertaken.</p>

ASSESSMENT	CRITERIA
<b>Observation of concern</b>	<p>Where an auditee may be compliant at the time of the audit but there are issues that exist that could result in the potential for future non-compliance if not addressed.</p> <p>Observation of concern was also used where an issue may not have particular compliance requirements, but which was not conducive to good management or best practice.</p>
<b>Suggestion for improvement</b>	<p>Where changes in processes or activities inspected or evaluated at the time of the audit could deliver improvement in relation to risk minimisation, sustainable outcomes and management practices.</p>
<b>Not determined</b>	<p>The necessary evidence has not been collected to enable an assessment of compliance to be made within the scope of the audit.</p> <p>Reasons why the audit team could not collect the required information include:</p> <ul style="list-style-type: none"> <li>■ insufficient information on the file relating to the period covered by the audit or insufficient evidence collected to reach a conclusion</li> <li>■ the wording on the criteria (approval condition) meant that no evidence could be gathered, or it was too difficult to gather the evidence.</li> </ul> <p>A ‘not determined’ assessment was also made where the condition was outside the scope of the audit.</p>
<b>Not applicable</b>	<p>The circumstances of the authorisation or titleholder have changed and are no longer relevant ( e.g. no longer mining, mining equipment and plant has been removed).</p> <p>An invoking element in the criteria was not activated within the scope of the audit.</p>

## 2.5. Reporting

Following completion of the site audit, the audit checklists were completed, and audit notes were reviewed to compile a list of outstanding matters to be noted in the audit report. This report was prepared to provide an overview of the operational performance of the site in relation to the exploration activities and identify any non-compliances or observations of concern noted by the auditors during the site inspections and interviews.

The draft audit findings were forwarded to Impact Minerals for comment. Consideration was given to the representations made during the finalisation of the audit report as discussed in the audit findings.

## 3. Audit findings

### 3.1. Work program

Condition 1 of EL7390 requires the licence holder to carry out the operations described in the approved work program. Work program WP-EL7390-2017-2023 was approved by the (then) Division of Resources and Geoscience (DRG) on 30 October 2017 as part of the renewal of EL7390.

Impact Minerals was in year 4 of the work program (2020-2021). Intended activities for the audit scope period (years 3 and 4 of the approved work program) are summarised in Table 3.

Table 3 Summary of approved work program

YEAR 3	YEAR 4
Follow-up drilling at the Red Hill and Platinum Springs prospects	Compilation of data
Regional drill program targeting areas identified by the airborne VTEM survey	Detailed mapping and drill planning
Downhole geophysical surveys of drill holes at both Red Hill and Platinum Springs	Drilling by RC and/or DD methods to confirm target at depth
Detailed ground IP geophysical surveys on selected areas	
Additional geophysics if warranted	
Follow-up soils and rock chip sampling and any mapping required	

A review of the 2020 annual exploration report provided details of the exploration activities completed during the reporting period. The activities included:

- reinterpretation of magnetic data
- rock chip sampling program
- seismic reprocessing
- geophysical image reprocessing and data review

- commencement of a drilling program.

Generally, evidence was available to confirm that the work program was progressing as planned. Drilling was in progress at the time of the audit site inspection.

Exploration data is maintained by the Impact Minerals geologists and submitted to the department's Mining Exploration and Geoscience (MEG) with the annual activity reports as required.

## 3.2. Access agreements

Section 140 of the *Mining Act 1992* states, 'the holder of a prospecting title must not carry out prospecting operations on any particular area of land except in accordance with an access arrangement or arrangements applying to that area of land'. The access arrangement is required to be agreed in writing between the holder of the prospecting title and each landholder of that area of land.

Exploration activities are being undertaken on two main properties – Huonville Station and K-Tank Station. Impact Minerals have negotiated land access agreements with each land owner. The agreements were current at the time of the audit, having been negotiated in March 2020 for a period of two years.

The agreements were noted to be standard land access agreements for mineral exploration but one land owner had included some additional conditions in annexure D of the agreement.

## 3.3. Native title and exempt areas

Condition 3 of EL7390 requires the licence holder to obtain the prior written consent of the Minister before carrying out any activities on land on which native title has not been extinguished. Similarly, Section 30 of the *Mining Act 1992* requires the consent of the Minister before a licence holder undertakes any activities within an exempted area.

Impact Minerals has used the NSW Government SEED portal to map any occurrences of Crown land within the exploration licence areas. Exploration activities reviewed during the audit had not been carried out on any of the mapped Crown land areas. As such, no further approvals under Section 30 of the Mining Act were required.

Searches have been undertaken with the National Native Title Tribunal to ascertain if any native title claims have been submitted or determined within the licence areas.

Generally, drilling has been undertaken on land that comprises western lands leases and over which native title would be generally extinguished. As such, further approvals under condition 2 of EL7390 were not required.

## 3.4. Community consultation

Condition 3 of EL7390 requires the licence holder to carry out community consultation in relation to the planning and conduct of exploration activities. Community consultation is required to be carried out in accordance with the requirements of *Exploration Code of Practice: Community Consultation*.

An assessment against the mandatory requirements of the code of practice was undertaken as documented in the following sections.

### 3.4.1. Risk assessment

Mandatory requirement 1 of the code of practice requires the title holder to conduct a risk assessment to identify and consider the range of opportunities and potential threats associated with community consultation and engagement.

Impact Minerals has undertaken a community consultation risk assessment using the template provided in the code of practice. For the aircore/RC drilling programs, the assessed activity impact level was low. The auditor concurs with this assessment given the nature, scale, and location of the drilling operations.

Identified opportunities associated with community consultation and engagement included:

- inform and educate stakeholders about planned activities and impacts
- identify new opportunities to improve stakeholder relationships
- understand and address concerns before they manifest into problems.

Potential threats identified included:

- fail to gain, or lose, social licence to operate
- inability to complete exploration activities due to stakeholder issues.

### 3.4.2. Community consultation strategy

Mandatory requirement 2 requires the preparation of a community consultation strategy to manage the risks identified in the risk assessment. Mandatory requirement 3 sets out the requirements for preparation of the community consultation strategy.

Impact Minerals has documented a community consultation strategy which includes:

- objectives of the strategy, which includes identifying any issues with stakeholders early and resolving these quickly

- an analysis of potential stakeholders, which included the land holders of the two properties likely to be impacted by exploration activities
- an analysis of potential impacts associated with each of the stakeholder types – for example, expected impacts on land holders included:
  - reduced grazing space available due to drilling activities
  - disturbance to grazing animals that may have used grazing areas near drilling
  - dust adjacent to access tracks and active drill sites
  - possible disturbance of day-to-day farming activities adjacent to active drill sites.
- the negotiated land access agreements as the primary controls for impacts to land holders – the standard agreement was noted to include controls for potential impacts and additional controls had been specified by one land holder to address his specific concerns.
- a process for revision of the strategy when any changes to the community stakeholders are identified.

### 3.4.3. Implementation and reporting

Mandatory requirement 4 requires the title holder to implement, monitor and report annually on the community consultation strategy.

Evidence was available to demonstrate that Impact Minerals has generally implemented the community consultation strategy. For example:

- stakeholder engagement records
- land access agreements.

Community consultation reports for the 2019 and 2020 reporting years were submitted as part of the annual activity reporting required by condition 8 of EL7390. Departmental records showed that the 2019 report was reviewed by MEG and the content was found to be inadequate. A letter outlining the inadequacies was sent to Impact Minerals. It was noted that the 2020 report had generally addressed the identified deficiencies. The 2020 report was reviewed by the auditor and found to be generally consistent with the reporting guidance provided in Appendix 2 of the code of practice.

### 3.5. Exploration activity approvals

Section 23A of the *Mining Act 1992* requires the holder of an exploration licence to obtain an activity approval prior to carrying out assessable prospecting operations.

Applications for activity approval have been made and granted for each drilling program. The audit focussed on the most recent exploration activity approval as follows:

- Exploration activities application (ESF4) dated 4 November 2020 and associated approval dated 10 November 2020 (MAAG0009045).

Generally, evidence was available to confirm that activities are being carried out in accordance with the exploration activity approvals and the codes of practice as documented in the following sections.

### 3.6. Environmental management

Condition 4 of EL7390 requires the licence holder to prevent, or minimise, so far as is reasonably practicable, any harm to the environment arising from the activities carried out under the licence. Condition 2 of the exploration activity approval requires the licence holder to carry out the activity in compliance with Part B of the *Exploration Code of Practice: Environmental Management*.

No evidence of environmental harm, beyond that approved in the exploration activity approvals was observed at the sites visited during the site inspection. A Chief Drilling rig was set up at the Platinum Springs drilling area at the time of the audit (Figure 1). The exploration drilling was observed to be generally undertaken in accordance with the *Exploration Code of Practice: Environmental Management* as documented in the following sections.

Figure 1 Chief Drilling rig set up at the Platinum Springs area



### 3.6.1. Use of chemicals, fuels and lubricants

Mandatory requirements 1.1 to 1.4 identify the requirements for the management of chemicals, fuels and lubricants used during exploration activities.

The Chief Drilling supervisor advised that only minimal amounts of chemicals and oils were kept at the drilling site. Chemicals, fuels and oils at the drill rig were observed to be stored in a box trailer (Figure 2). Although there was no specific bunding provided, it was noted that the small edges on the tray containing the chemicals, fuels and oils within the trailer may provide some secondary containment in the event of a spill. The issue of bunding is raised as observation of concern no. 1. Impact Minerals and Chief Drilling should review the storage of chemicals, fuels and oils to ensure appropriate secondary containment can be provided. A spill kit was observed to be available in the box trailer (Figure 3).

No evidence of hydrocarbon contamination was observed on any of the sites inspected.

Figure 2 Drilling chemicals, fuels and oils stored in a box trailer



Figure 3 Spill kit in the box trailer



### 3.6.2. Water

Mandatory requirements 2.1 and 2.2 require the licence holder to implement all measures to prevent, so far as reasonably practicable, causing adverse impacts on water quality and quantity, including groundwater levels and pressure.

Drilling was being undertaken using a RC drill rig. Water was not required for the drilling process. At some holes on the K-Tank station, incidental water was encountered during drilling. Impact Minerals field tested the water quality with a portable water quality meter and the water was found to be suitable for stock water. Water quality results showed electrical conductivity generally in the range 2000 to 4000  $\mu\text{S}/\text{cm}$ . Water was discharged to ground with minimal impact observed.

### 3.6.3. Noise and vibration

Mandatory requirement 3.1 requires the licence holder to implement all practicable noise management measures to ensure that noise levels meet acceptable noise criteria for sensitive receivers.

The drilling program was being undertaken in generally remote locations on large pastoral landholdings. No sensitive receptors were observed within one kilometre of any of the sites inspected and Impact Minerals staff advised that the nearest residence was approximately five kilometres from the drill site. The drilling rig was not operational during the site inspection, but it was observed that the rig runs from the Landcruiser engine. Noise impacts were low risk.

### 3.6.4. Air quality

Mandatory requirement 4.1 requires the title holder to implement all measures to prevent, so far as practicable, pollution caused by dust and other air pollutants.

RC drilling was not in progress at the time of the site inspection. Given the location of the drill site remote from any residences, poor air quality was a low risk. The Chief Drilling supervisor advised that cyclones are fitted to the drill rig to reduce air quality impacts. No air quality issues were observed at any of the sites inspected during the audit site inspection.

### 3.6.5. Waste management

Mandatory requirement 5.1 requires the title holder to manage all waste in a manner which does not, as far as practicable, cause harm to the environment.

Waste from the drilling program were observed to be generally minimal. Chief Drilling staff advised that domestic waste (i.e. lunch wrappings, drink containers) were collected and stored in green waste bags for disposal off site. There was generally no evidence of littering at the sites inspected.

Drill cuttings from the RC drilling were collected in bags for disposal on site, either backfilled down the hole or buried in a hole dug on site, at the completion of drilling.

### 3.6.6. Vegetation clearance and surface disturbance

Mandatory requirements 6.1 to 6.4 require the title holder to:

- minimise the extent of any vegetation clearing and surface disturbance to as low as practicable
- implement all measures to prevent, so far as practicable:

- ❑ adverse impacts to fauna caused by vegetation clearing or surface disturbance
- ❑ causing any land degradation or pollution of land and water
- ❑ harm to the environment when disturbing land in areas of potential or actual acid sulfate soils.

Generally, clearing of vegetation was not required for any of the drill sites inspected. Construction of specific drill pads was required at some sites on the slopes at the Red Hill prospect. The drill rig and other vehicles were driven over the groundcover vegetation to each site with no formal access track construction required. The drill holes were planned to avoid trees and other vegetation, with all holes inspected being in sparsely vegetated rangeland areas (Figure 4 and Figure 5).

Generally, most drill hole locations inspected were low risk for erosion and sedimentation due to the flat nature of the topography. No specific erosion and sediment controls were required for any of the sites inspected, and no evidence of erosion or sedimentation was observed during the site inspection.

Figure 4 Close spaced drilling in the Platinum Springs area



Figure 5 Completed drilling at hole PN118



### 3.6.7. Roads and tracks

Mandatory requirements 7.1 to 7.5 require the title holder to:

- consult with relevant landholders prior to establishing any new roads or tracks
- plan, design, construct and use roads and tracks in a manner which minimises the area and duration of disturbance

- construct any crossing of rivers, permanent and intermittent water lands and wetlands to prevent impacts on fish habitats
- refrain from using any unsealed road or track during wet conditions to prevent damage to that road or track
- repair all damage to existing roads and tracks resulting from exploration activities.

Generally, tracks used to access drill sites during the audit site inspection were existing farm tracks. There was no requirement for the construction of new formed access tracks with access to drill sites being drive-over existing vegetation. The tracks used during the audit site inspection were generally observed to be well maintained and trafficable, despite recent rain.

Impact Minerals staff advised that the drilling sites were shut down in periods of wet weather and no trucks were moved during rain events. It was noted that at least one of the land access agreements had a specific requirement that access during wet weather was not permitted. Generally, Impact Minerals staff liaise with the landholders to ascertain the condition of the property and access tracks after rainfall and confirm when access may be permitted.

### 3.6.8. Weeds, pest animals and disease

Mandatory requirement 8.1 requires the title holder to implement all practicable measures to prevent the introduction and spread of weeds, pest animals and animal and plant diseases.

Impact Minerals has implemented a vehicle hygiene procedure. The Regulator vehicle was inspected before accessing K-Tank Station and was inspected again before accessing the Huonville property to check for the presence of plant material and soil on the undercarriage.

The Impact Minerals geologist advised that, generally, light vehicles do not travel between the properties, with a dedicated vehicle for each property to reduce the spread of weeds and pathogens.

### 3.6.9. Livestock protection

Mandatory requirement 9.1 requires the title holder to implement all measures to prevent, as far as practicable, causing adverse impacts to livestock.

During the audit site inspection, no livestock was observed in the paddocks where drilling had taken place. The Impact Minerals geologist advised that, generally, the landholders will move livestock to other paddocks during drilling. Sumps were not being used for the drilling program and no specific controls were required.

### 3.6.10. Cultural heritage

Mandatory requirement 10.1 requires the title holder to implement all measures to prevent, so far as practicable, harm to Aboriginal cultural heritage and non-indigenous cultural heritage.

Impact Minerals undertook searches through the AHIMS web service as part of its application for exploration activity approval. No known aboriginal artefact sites have been recorded in or near the search areas.

Cultural heritage guidelines were noted to be included in the Impact Minerals HSE Manual and an outline of cultural heritage requirements was included in the general induction for both staff and contractors (slide 15).

### 3.6.11. Fire prevention

Mandatory requirement 11.1 requires the title holder to implement all measures to prevent, as far as practicable, the ignition and spread of fire.

Fire extinguishers and emergency response equipment were observed to be located on the drill rig or within the associated trucks. All staff were reported to be trained in the use of this equipment. Impact Minerals has a procedure in place for staff and contractors for sensible fire management. This is outlined in the general staff induction (slides 39 to 41).

### 3.6.12. Risk assessment

Mandatory requirement 12.1 requires the title holder to monitor the risks associated with activities and, if the risk associated with an activity changes, implement revised environmental management controls.

Impact Minerals prepared an environmental management risk assessment for the exploration activities. Controls were proposed for the risks identified. Generally, evidence was available to confirm that the controls were implemented. For example:

- the light vehicles used during the audit site inspection were inspected for soil and plant material prior to entering each property
- use of existing station tracks for access to each site
- adequate spill prevention and absorbent materials available on site.

The risk assessment spreadsheet was also noted to include the monitoring and review processes. For example, feedback from landholders and a review of rehabilitation activities were listed as monitoring and review activities for several of the risk controls.

## 3.7. Security deposit

Condition 5 of EL7390 requires the licence holder to provide a security deposit to secure funding for the fulfilment of obligations under the licence.

The security amount required was \$77,000. Departmental records confirm that amount is being held. The exploration activity approvals in 2020 for the AC/RC drilling programs triggered the increase in security to \$77,000.

## 3.8. Rehabilitation

Condition 6 of EL7390 requires the title holder to carry out rehabilitation of all disturbance caused by activities carried out under the licence in accordance with the requirements of the *Exploration Code of Practice: Rehabilitation*.

A site inspection conducted by the Regulator in June 2019 found that rehabilitation of the drill holes and tracks associated with drilling on the Red Hill prospect had not been completed. A direction under section 240 of the Mining Act was issued to the title holder in December 2019 (varied in May 2020) requiring the drill holes to be rehabilitated. This rehabilitation was required to be completed by December 2020. This area was not included in the scope of the audit and was not inspected during the audit. It was noted that information has been submitted to the Regulator by Impact Minerals in relation to the direction and this was under consideration by the Regulator at the time of writing this report.

Rehabilitation of the holes drilled in 2020 has commenced, with rehabilitated holes in the Little Broken Hill Gabbro prospect inspected during the audit.

An assessment against the mandatory requirements of the code of practice was undertaken for the 2020 drilling program as documented in the following sections.

### 3.8.1. Risk assessment

Mandatory requirement 1 requires the title holder to conduct a risk assessment to evaluate the range of potential threats and opportunities associated with rehabilitating disturbed areas to a condition that could support the intended final land use.

Impact Minerals has prepared a rehabilitation risk assessment for the drilling program which was noted to be documented in an excel spreadsheet. Controls were identified for each risk and the spreadsheet was noted to include processes for monitoring and review of the controls.

While evidence was generally available to confirm implementation of the identified controls, it was noted that some of the controls were not implemented for rehabilitation of drill holes at the Red Hill

site. For example, the risk assessment identifies the following controls for 'soil erosion and sediment laden run-off from disturbed areas that could lead to soil or water contamination or land degradation':

- fast tracking rehabilitation on erosion prone slopes
- undertake revegetation activities in or just prior to suitable seasonal conditions
- if works are delayed, undertake temporary stabilisation measures.

Aussam Geotechnical Services Pty Ltd prepared a rehabilitation report for the Red Hill area in October 2019. The report identified that the eight drill holes were all recontoured to original condition and sprayed with water to settle dust. The remaining three drill holes were located on the top of Red Hill which was noted to be subject to stronger winds and potential erosion, with the risk of further damage to the area from machinery required to complete the rehabilitation works. A review of the rehabilitation risk assessment was undertaken and, based on the deterioration of the tracks used to cart water for dust suppression, it was determined that carting of water to the site would be likely to cause further damage. Impact Minerals made the decision to terminate the rehabilitation of the drill holes until sufficient subsoil moisture was present. Impact Minerals expects to be able to complete the rehabilitation works in 2021.

### 3.8.2. Rehabilitation objectives and completion criteria

Mandatory requirement 2 requires the title holder, no later than 14 days prior to the commencement of surface disturbing activities, to provide to the Secretary a copy of specific, measurable, achievable, realistic and time-bound rehabilitation objectives and completion criteria. For higher risk prospecting operations, a rehabilitation management plan is required to be prepared and submitted with the rehabilitation objectives and completion criteria.

The exploration activity approval applications lodged by Impact Minerals indicated that the total surface disturbance area was less than five hectares (1.73 hectares). The drilling programs did not fall within the definition of a higher risk activity under the code of practice and a rehabilitation management plan was not required to be developed.

A review of the Regulator's records confirmed that rehabilitation objectives and completion criteria were developed and submitted for each exploration activity approval. The rehabilitation objectives and completion criteria were noted to be based on the template in appendix 2 of the Exploration Code of Practice: Rehabilitation. These were reviewed by the auditor during the audit and found to be appropriate for the drilling program in progress.

### 3.8.3. Rehabilitation program

Mandatory requirement 3 requires the title holder to develop, implement and complete a rehabilitation program (which includes a monitoring program) to rehabilitate disturbed areas to a condition that can support the intended final land use. Mandatory requirement 4 requires that the title holder commence rehabilitation of a site as soon as reasonably practicable following the completion of activities on that site.

It was observed that rehabilitation of the holes at the Little Broken Hill Gabbro prospect that were drilled in August 2020 had commenced. Rehabilitation of AC/RC drill holes generally includes:

- equipment and waste removed from site
- RC holes are capped at least 40 centimetres below ground with a concrete plug and then backfilled with topsoil material from the hole
- AC holes are typically backfilled and rehabilitated as they are drilled
- drill cuttings are either disposed of downhole or buried in a pit dug nearby.

Examples of rehabilitation of the drill holes at Little Broken Hill Gabbro prospect are shown in Figure 6 and Figure 7.

Figure 6 Rehabilitation of hole PN156



Figure 7 Rehabilitation of hole PN158



Rehabilitation monitoring is generally undertaken visually, with a series of photos taken and compared to the baseline photos. The rehabilitation photos were noted to be maintained electronically. Rehabilitation progress is reviewed at six months after completion of rehabilitation and any further works required are documented. The rehabilitation re-assessment was observed to be documented on a rehabilitation re-assessment tab in the rehabilitation risk assessment spreadsheet.

### 3.9. Annual activity reporting

Section 163C of the *Mining Act 1992*, clause 59 of the Mining Regulation and condition 8 of EL7390 require the licence holder to submit an activity report annually, within one calendar month following the grant anniversary date. Annual activity reports are required to be prepared in accordance with the *Exploration guideline: Annual activity reporting for prospecting titles*.

During the audit scope period, Impact Minerals had been submitting annual activity reports comprising:

- annual geological report
- revised work program
- environmental rehabilitation and compliance report
- community consultation report.

Reports for the 2019 and 2020 reporting years were reviewed during the audit:

- Impact Minerals Limited - EL7390 Broken Hill JV Platinum Project, Annual report, 21 August 2018 to 20 August 2019
- Impact Minerals Limited - EL7390 Broken Hill JV Platinum Project, Annual report, 21 August 2019 to 20 August 2020
- EL7390 Prospecting Title Work Program, year 2 submission 2019
- EL7390 Prospecting Title Work Program, year 3 submission 2020
- Impact Minerals Limited, Annual Community Consultation Report – EL7390, 21 August 2018 to 20 August 2019
- Impact Minerals Limited, Annual Community Consultation Report – EL7390, 21 August 2019 to 20 August 2020
- Siouville Pty Ltd EL7390 Environmental and Rehabilitation Compliance Report – submission date 16 September 2019
- Siouville Pty Ltd EL7390 Environmental and Rehabilitation Compliance Report – submission date 17 September 2020.

Generally, reports were found to be in accordance with the MEG and/or Regulator templates and guidance material.

### 3.10. Core and sample storage

Clause 65 of the Mining Regulation requires the holder of an authority to, so far as is reasonably practicable, collect, retain and preserve:

- all drill cores remaining after sampling
- characteristic samples of the rock or strata encountered in any drill holes.

All core and samples collected are required to be labelled, stored and managed in a manner that preserves the integrity of the core or samples.

Chip samples and core have been collected from the drilling programs on EL7390, with all chip samples and core stored at the AUSSAM yard in Broken Hill (Figure 8). Core was observed to be stored in modular plastic core trays (Figure 9) with the trays labelled with hole number, tray number, start and finish depths, and indicators of downhole direction. Chip samples were observed to be stored in modular plastic chip trays with each tray labelled with hole number and depth (Figure 10 and Figure 11).

Figure 8 Core storage in the AUSSAM yard in Broken Hill



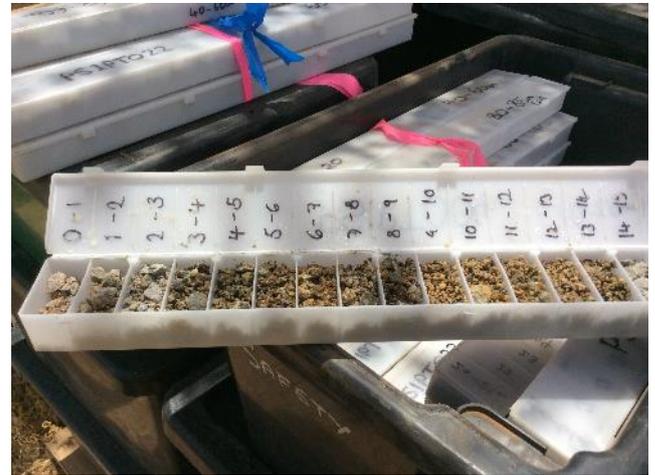
Figure 9 Example of core tray labelling



Figure 10 Example of chip tray labelling and storage



Figure 11 Chip sample storage



### 3.11. Record keeping

Sections 163D and 163E of the *Mining Act 1992* relates to the creation and maintenance of records required under the Act, the regulations, or a condition of title. Records must be kept in a legible form for production to any inspector and must be maintained for a period of four years after the expiry or cancellation of the title. Specific requirements for the types of records to be maintained for exploration activities are detailed in the mandatory requirements of the exploration codes of practice as follows:

- mandatory requirement 6 of the rehabilitation code of practice
- mandatory requirement 13.1 of the environmental management code of practice
- mandatory requirement 5 of the community consultation code of practice.

Records reviewed during the audit demonstrated that Impact Minerals has generally maintained records as required by the licence conditions and the exploration codes of practice. Examples of records reviewed included:

- environmental and rehabilitation risk assessment
- rehabilitation objectives and completion criteria
- rehabilitation report.
- photographic records of drill sites
- annual activity reports for 2019 and 2020 reporting years

- induction materials
- land access agreements
- register of vehicle access to properties
- community consultation log (excel spreadsheet)
- land tenure mapping
- drill collar records
- material safety data sheets for fuels, chemicals and oils at the drill site.

## 4. Compliance management

### 4.1. Identifying compliance obligations

Identifying compliance obligations is a critical step in the development of an effective compliance management system. Compliance obligations for an exploration project can include:

- regulatory requirements (for example, the *Mining Act 1992*)
- conditions imposed on the grant, renewal, or transfer of exploration licences
- exploration activity approvals
- exploration codes of practice
- specific commitments made by the organisation (for example, commitments made in the approved exploration activity application).

Once identified, compliance obligations should be reviewed periodically to identify any changes in those obligations (e.g. changes in legislation).

Discussions with Impact Minerals staff showed that they had a reasonable understanding of the requirements under the *Mining Act 1992*, the conditions of title, the exploration activity approvals, and the exploration codes of practice. It was noted that systems and processes have generally been developed to address the compliance requirements.

### 4.2. Subcontractor management

Contractors are often used to undertake specialist tasks (i.e. exploration drilling). While the responsibility for compliance or the implementation of environmental controls is often passed to the contractor, the licence holder will retain accountability for compliance with its licence conditions and other compliance obligations. It is important that the licence holder exercises management control of its contractors by specifying contract requirements, providing oversight of contracted works, and evaluating the performance of the contractor during the contracted works.

Impact Minerals were using a contract driller to complete the drilling program. It was noted that Impact Minerals undertook an induction with the drilling crew at the start of the drilling program to identify key issues and hazards and establish controls as required. The induction PowerPoint presentation was reviewed by the audit team and was found to be comprehensive, including a range of environmental and compliance obligations. Supervision of the drilling operations was undertaken by the Impact Minerals geologists. The geologists raise any issues of concern directly with the driller for corrective action.

The Chief Drilling supervisor had a good understanding of the environmental controls required and had implemented the water management controls and chemical management controls at the drill site.

### 4.3. Inspections, monitoring and evaluation

An effective inspection, monitoring and evaluation process is required to:

- monitor the implementation of the risk controls
- evaluate the effectiveness of those controls based on an assessment of inspection and monitoring data
- implement an adaptive management approach if monitoring shows that controls may be ineffective.

Impact Minerals has developed an inspection and monitoring program to monitor the drilling program and the rehabilitation of the sites. Generally, rehabilitation monitoring is undertaken using photographic records. As suggestion for improvement no. 1, Impact Minerals should consider the development of a rehabilitation monitoring or inspection checklist based on the rehabilitation objectives and completion criteria that have been developed and approved for the drilling programs. This would assist to provide evidence that the objectives and completion criteria have been achieved.

### 4.4. Title holder response to draft audit findings

Impact Minerals was provided with a copy of the draft audit report and invited to submit a response to the draft audit findings. Impact Minerals were satisfied with the draft audit findings and had no specific comments on the content of the draft audit report.

## 5. Audit conclusions

From the evidence gathered during the audit, and observations made on site during the audit site inspections, it was concluded that Impact Minerals has achieved a high level of compliance with the requirements of the exploration licence, exploration activity approval and the exploration codes of practice.

Both the Impact Minerals staff and the contract driller had a good knowledge of the environmental issues and controls associated with the drilling activities. Evidence was generally available to confirm implementation of the controls.

No non-compliances were identified during the audit. One observation of concern and one suggestion for improvement were identified as documented in Table 4 and Table 5.

*Table 4 Summary of observations of concern*

OBSERVATION OF CONCERN NO.	DESCRIPTION OF ISSUE	RECOMMENDATION
1	Chemicals, fuels and oils at the drill rig were observed to be stored in a box trailer. Although there was no specific bunding provided, it was noted that the small edges on the tray containing the chemicals, fuels and oils within the trailer may provide some secondary containment in the event of a spill.	Impact Minerals and Chief Drilling should review storage of chemicals, fuels and oils to ensure appropriate secondary containment can be provided.

*Table 5 Summary of suggestions for improvement*

SUGGESTIONS FOR IMPROVEMENT	DESCRIPTION OF ISSUE
1	Impact Minerals should consider the development of a rehabilitation monitoring or inspection checklist based on the rehabilitation objectives and completion criteria that have been developed and approved for the drilling programs. This would assist to provide evidence that the objectives and completion criteria have been achieved.