

Compliance audit program

EL8965 Duck Creek Exploration Project

EL8911 Nyngan Exploration Project

Australian Consolidated Gold Holdings Pty Ltd

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1. Introduction

1.1. Background

Exploration licence 8965 (1992) was granted to Australian Consolidated Gold Holdings Pty Ltd (ACGH) in April 2020. The exploration area was about 31 kilometres north-east of Nyngan in central NSW.

Exploration licence 8911 (1992) (EL8911) was granted to ACGH on 8 November 2019. The exploration area was about 6 kilometres north east of Nyngan in central NSW.

As part of the compliance audit program, an audit of the exploration activities associated with the exploration projects within EL8965 and EL8911 was undertaken on 21 and 22 May 2024 by the Resources Regulator within the Department of Primary Industries and Regional Development.

1.2. Audit objectives

The objectives of the audit were to:

- undertake a compliance audit of the ACGH's exploration activities against the requirements of the *Mining Act 1992* and the conditions of the exploration licences and activity approvals issued pursuant to that Act.
- assess the operational performance of the exploration activities and the ability of the licence holder and/or its operator 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 Duck Creek and Nyngan exploration projects including:
 - exploration activities within EL8965 and EL8911 including a selected sample of exploration drillholes
 - borehole sealing and rehabilitation activities for selected drilling activities undertaken since January 2020
- a review of documents and records pertaining to the exploration operations for the period commencing 20 May 2022 and ending 22 May 2024.

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 EL8965 (granted 6 April 2020 and renewed 5 May 2023)
- Assessable prospecting operations application dated 8 February 2021 for up to 10 mud-rotary precollared diamond holes using 2 in-ground sumps per drill site, as part of the Duck Creek project, and associated approval dated 17 March 2021 (MAAG0009892)
- Assessable prospecting operations application dated 4 July 2022 for up to 20 mud-rotary precollared diamond holes to an average depth of approximately 350m as part of the Duck Creek project, and associated approval dated 21 July 2022 (APO0001250)
- Assessable prospecting operations application dated 14 March 2024 for up to 3 rotary mud drillholes with diamond tails to approximately 500m depth as part of the Duck Creek project, and associated approval dated 22 April 2024 (APO0001731)
- Conditions attached to EL8911 (granted 8 November 2019)
- Assessable prospecting operations application dated 28 August 2023 for one rotary mud drill hole with diamond tail to an approximate depth of 250m as part of the Nyngan project, and associated approval dated 12 September 2023 (APO0001525)
- Assessable prospecting operations application dated 27 March 2024 for up to 3 rotary mud drillholes with diamond tails to approximately 250m depth as part of the Nyngan project, and associated approval dated 24 April 2024 (APO0001742)
- Exploration code of practice: Environmental management (Version 4, June 2021 and Version 5, March 2022)
- Exploration code of practice: Rehabilitation (Version 4, June 2021 and Version 5, March 2022)
- Exploration code of practice: Community consultation (Version 2.0, October 2022 and Version 2.1, May 2023)
- Exploration code of practice: Produced water management, storage and transfer (Version 3, September 2017, Version 4, June 2021 and Version 5, March 2022)
- Exploration Reporting: A guide for reporting on exploration and prospecting in New South Wales (Version 3, October 2021 and Version 4, January 2022)
- Exploration Guideline: Annual activity reporting for prospecting titles (Version 3.0, December 2020 and Version 4, October 2022) published by Department of Regional NSW

1.5. Publishing and disclosure of information

This audit report was published on the Regulator's website consistent with:

- Section 365 of the *Mining Act 1992*
- Resources Regulator's [Public comment policy](#)
- *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 licence holder and/or operator 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 21 May 2024. 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 provided during the audit process were reviewed electronically on the day. Several documents were unable to be reviewed on the day and were provided following the remote audit.

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 records, including site photographs, 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 exploration operations in EL8965 and EL8911:

EL8911

- Hole NYNDH001 drilled 2023 and rehabilitated

EL9865

- Holes DCKDH001, DCKDH002, DCKDH005 drilled 2023 and rehabilitated
- Hole DCKDH003 drilled 2023 and rehabilitated
- Hole DCKDH006 drilled 2023 and rehabilitated
- Hole DCKDH017 drilled 2023 and rehabilitated
- Hole DCKDH008 drilled 2023 and rehabilitated
- Hole DCKDH018 drilling in progress
- Core and sample storage at the ACGH depot in Trangie.

2.3. Closing meeting

A closing meeting was held on site on 22 May 2024. 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 below in Table 1.

Table 1 Compliance assessment definitions

Assessment	Criteria
Compliance	Sufficient and appropriate evidence is available to demonstrate the particular requirement has been complied with.
Non-compliance	<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>NC1 – the absence of planning or implementation of a required operational element which has the potential to result in a significant risk.</p> <p>NC2 – 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>NC3 – 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>
Observation of concern	<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>
Suggestion for improvement	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.
Not determined	<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: insufficient information on the file relating to the period covered by the audit or insufficient evidence collected to reach a conclusion</p> <p>the wording on the criteria (approval condition) meant that no evidence could be</p>

Assessment	Criteria
	<p>gathered, or it was too difficult to gather the evidence.</p> <p>A 'not determined' assessment was also made where the condition was outside the scope of the audit.</p>
Not applicable	<p>The circumstances of the authorisation or licence holder 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 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 documentation review and interviews.

The draft audit findings were forwarded to ACGH 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 EL8965 and EL8911 required the licence holder to carry out the operations described in the approved work programs. Work programs, WP-EL8911-2019-2025, WP-EL8965-2020-2023, and WP-EL8965-2023-2029 were in force during the audit period.

Evidence was available to confirm that exploration activities were progressing. Annual reports for the 2022, 2023 and 2024 reporting periods were reviewed for EL8965 and EL8911. Exploration completed included:

EL8911

- desktop studies to assess prospectivity and enable targeted drilling
- drilling of one mud rotary/diamond tail hole.

EL8965

- reinterpretation of existing geophysics
- drilling of 17 mud rotary/diamond tail holes
- dating and petrology of drill samples
- green rock (chlorite/epidote) analysis of nine drill samples
- geophysical analysis including:
 - ambient noise tomography survey
 - induced polarisation/magnetotellurics survey
 - ground gravity survey
- geochemical analysis.

ACGH used the annual reporting process to review and monitor the work programs on each tenement. Weekly and quarterly meetings with the ACGH technical team and joint venture partners were also used to discuss progress on the work programs and issues encountered in completing approved programs.

Exploration data was noted to be maintained by the ACGH geologists and submitted to NSW Resources with the annual activity reports as required.

3.2. Access arrangements

Section 140 of the *Mining Act 1992* stated, '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 was required to be agreed in writing between the holder of the prospecting title and each landholder of that area of land.

Evidence was provided to confirm that written land access agreements were in place for the exploration activities undertaken on EL8965 and EL8911 (for example, land access agreement for a property within EL8965 where drilling was in progress). The land access agreements reviewed during the audit were generally noted to be prepared using the standard Association of Mining and Exploration Companies' template. Some agreements noted additional conditions negotiated by the landholder.

ACGH mapped where land access agreements were in place or were in negotiation. Drill programs were restricted to those properties where access agreements were in place. Any specific landholder requirements were included in the drill hole plans given to the drillers (e.g. hole plan for NYNDH001).

3.3. Native title and exempted areas

Condition 2 of EL8965 and EL8911 required the licence holder to obtain the prior written consent of the Minister before carrying out any activities on land on which native title had not been extinguished. Similarly, Section 30 of the *Mining Act 1992* required the consent of the Minister before a licence holder undertook any activities within a State Conservation Area.

ACGH exploration staff advised that exploration activities were generally being conducted in areas of freehold land within EL8965 and EL8911. A review of mapping data showed that no recent holes had been drilled in any exempted areas within EL8965 or EL8911. No further approvals under section 30 of the *Mining Act 1992* were required. It was noted that ACGH was maintaining a Crown Lands layer in its geographic information system (GIS) to identify where further approvals may be required.

ACGH staff advised that a large portion of the licence area was under freehold title where native title had generally been extinguished. ACGH commenced the right to negotiate process for EL8965 for areas where native title may still apply and were aware of a native title claim over the area. This claim area was mapped as part of the ACGH GIS. Drilling was confined to those areas where native title was extinguished until the right to negotiate process was completed and approval obtained under Condition 2.

3.4. Community consultation

Condition 3 of EL8965 and EL8911 required the licence holder to carry out community consultation in relation to the planning and conduct of exploration activities. Community consultation was 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 required the licence holder to conduct a risk assessment to identify and consider the range of opportunities and potential threats associated with community consultation and engagement.

ACGH prepared a comprehensive risk assessment for its exploration operations that included risks associated with consultation and engagement. Risks and controls identified included:

- Ineffective or unproductive consultation with stakeholders – undertake consultation in accordance with the ACGH community consultation strategy
- Poor engagement with landholders – clear communication of when work will start and stop, consult with landholders on appropriate roads and drill sites to use
- Planning of exploration programs without regard to seasonal farming practices – flexible exploration programs to accommodate farming practices

Although ACGH's risk assessment did address some risks associated with community consultation and engagement, there is scope for the range of risks to be expanded to provide a more robust community consultation risk assessment. As suggestion for improvement number 1, ACGH should consider reviewing the community consultation risks with reference to the objectives for consultation (i.e. the risk assessment should focus on what risks need to be managed in order for effective and inclusive consultation to take place to achieve the objectives for consultation).

3.4.2. Community consultation strategy

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

ACGH prepared a combined community consultation strategy for its tenements in the Macquarie Arc project which included both EL8911 and EL8965. A review of the strategy confirmed it addressed the mandatory requirements of the code of practice. For example:

- Objectives for the strategy were documented in section 4.1. A key objective of the strategy was to support effective, accessible, and timely communication with the project stakeholders.
- A description and analysis of stakeholders was documented in section 3.
- Consultation activities were described in section 4.2 and Table 3.
- Processes for feedback and response were described in section 4.3.
- Mechanisms for review and amendment of the strategy were included in sections 6.1 and 6.2.

3.4.3. Implementation and reporting

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

Records were available to confirm implementation of the consultation strategy. Typically, ACGH held a 6 monthly internal meeting to review consultation results and determine if any amendments to the strategy were required. It was noted the drill site checklist included a check to ensure community consultation requirements were met. Records of consultation activities were observed to be maintained in an electronic consultation log.

Up until the change to the code of practice in October 2022, annual community consultation reports were prepared and submitted by ACGH, generally in accordance with the reporting guidance in Appendix 2 of the code of practice. Since October 2022, annual community consultation reports

were prepared and were available, however, ACGH had not received any requests for community consultation reports to be provided.

3.5. Exploration activity approvals

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

Evidence was available to confirm that exploration activity approvals were sought and granted for exploration activities. Exploration activity approvals granted included:

EL8965

- Assessable prospecting operations application dated 8 February 2021 for up to 10 mud-rotary precollared diamond holes using 2 in-ground sumps per drill site, as part of the Duck Creek project, and associated approval dated 17 March 2021 (MAAG0009892).
- Assessable prospecting operations application dated 4 July 2022 for up to 20 mud-rotary precollared diamond holes to an average depth of approximately 350m as part of the Duck Creek project, and associated approval dated 21 July 2022 (APO0001250).
- Assessable prospecting operations application dated 14 March 2024 for up to 3 rotary mud drillholes with diamond tails to approximately 500m depth as part of the Duck Creek project, and associated approval dated 22 April 2024 (APO0001731).

EL8911

- Assessable prospecting operations application dated 28 August 2023 for one rotary mud drill hole with diamond tail to an approximate depth of 250m as part of the Nyngan project, and associated approval dated 12 September 2023 (APO0001525).
- Assessable prospecting operations application dated 27 March 2024 for up to 3 rotary mud drillholes with diamond tails to approximately 250m depth as part of the Nyngan project, and associated approval dated 24 April 2024 (APO0001742).

Generally, evidence was provided to indicate that the exploration activities were carried out in accordance with the description provided in the applications and in accordance with the approvals given. It was noted that ACGH staff could access APOs online in the field. APO polygons were included in a GIS mapping layer that could be used in the field to determine boundaries of the polygon should drill sites need to be moved.

3.6. Environmental management

Condition 4 of EL8965 and EL8911 required 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 required the licence holder to carry out the activity in compliance with Part B of the Exploration code of practice: Environmental management.

An assessment against the Exploration code of practice: Environmental management was completed for the exploration activities in progress on EL8965 as documented in the following sections. A mud rotary drilling program was in progress at hole DCKDH018 (Figure 1).

Drilling on EL8911 was completed and the site rehabilitated. An assessment against the code of practice was not undertaken for EL8911. However, similar systems and processes were implemented on the EL8911 drilling to those implemented on EL8965. No issues of concern were observed on site at the hole drilled on EL8911.

Figure 1 Drill rig set up at DCKDH018



3.6.1. Use of chemicals, fuels and lubricants

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

It was observed that diesel fuel, oil and greases were stored on a bunded spill pallet (Figure 2). A rig nappy was in place under the drill rig, with spill protection also observed under the lighting plant (Figure 3). Safety data sheets were available in hard copy and electronically and drilling staff were familiar with their locations.

A fully stocked spill kit was located next to the drill rig (Figure 4). The driller said all drilling staff were trained in the use of the spill kits. No spills were observed at the drill site and appropriate controls were in place to manage chemicals, fuels and lubricants associated with the drilling program.

Figure 2 Spill pallet with drilling fluids, fuels and lubricants at DCKDH018



Figure 3 Spill protection under the lighting plant at DCKDH018



Figure 4 Spill kit adjacent to drill rig at DCKDH018



3.6.2. Water management

Mandatory requirements 2.1 and 2.2 required 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.

Mud rotary drilling requires the use of water and drilling muds as part of the drilling process. These fluids need to be managed as part of the drilling process to minimise the risk of environmental impacts.

ACGH assessed the risks to surface and groundwater for the drilling program as medium risk. Controls identified included:

- contain all drill cuttings, fluids and groundwater returned to the surface as part of the drilling process in above-ground tanks pending re-circulation or disposal
- management of water from drillhole is done using drilling fluids and casing
- drill collar is cemented at end of drilling to final depth.

ACGH was using contract drillers for the drilling program. The drillers established a fluid management system involving the use of 5,000 litre polyethylene tanks as aboveground sumps to capture and recirculate the fluids (Figure 5). The tanks were pumped out at regular intervals using a contract liquid waste vacuum truck for disposal by the liquid waste contractor at a licensed disposal facility. Records and receipts from the liquid waste disposal contractor were available to confirm disposal.

Figure 5 Fluid management system at DCKDH018 using poly tanks to re-circulate drilling fluids



3.6.3. Noise and vibration

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

It was noted that the drilling was being conducted in broadscale agricultural areas. Noise was assessed by ACGH as part of the environmental risk assessment and the risk of adverse impacts was assessed as low with controls in place. Controls included:

- drilling day shift only
- using low noise producing mud rotary drilling
- drill sites selected to be remote from sensitive receptors.

Implementation of controls was confirmed by the audit team during the site inspection.

3.6.4. Air quality

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

It was noted that the drilling was being conducted in broadscale agricultural areas. Air quality impacts were assessed by ACGH as part of the environmental risk assessment and the risk of adverse impacts was assessed as medium with controls in place. Controls identified included:

- site traffic management - establish and enforce speed limits
- use of water trucks to dampen dust if required
- pollution control equipment (e.g. fitting bag filters or a cyclone to dust-generating equipment)
- revegetating disturbed areas as soon as practicable
- maintenance of machinery and equipment to minimise diesel particulate emissions.
- sample bags secured and removed from site promptly.

Observations made by the audit team on site confirmed that minimal dust was generated from the mud rotary drilling process and no further controls were required.

3.6.5. Waste management

Mandatory requirement 5.1 required the licence holder to manage all waste in a manner which did not, as far as practicable, cause harm to the environment.

The key waste streams from the ACGH exploration operations included:

- drilling fluids from the mud rotary drilling process
- drill cuttings
- domestic waste from the drilling crew.

ACGH developed a waste management procedure to address the risks associated with wastes from the exploration programs. Drilling fluids were managed using the aboveground sump system with pump out of the tanks on a regular basis by a licensed liquid waste management contractor. Drill cuttings were collected on a plastic sheet at each drill site (Figure 6) that was collected and sent for disposal at the local waste management facility at the end of each hole. Domestic waste was collected in appropriate receptacles at the drill site and removed to the local waste management facility at regular intervals.

Figure 6 Temporary chip sample storage on black plastic sheeting at DCKDH018



Records were reviewed to confirm the waste management practices, for example, the daily drillers plods, invoices from the liquid waste management contractor, and receipts from the local waste management facility. No wastes were observed at any of the completed drill sites inspected by the audit team.

3.6.6. Vegetation clearance and surface disturbance

Mandatory requirements 6.1 to 6.4 required the licence 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.

The ACGH environmental risk assessment identified the key control for vegetation clearance and ground disturbance to be drill site planning to minimise disturbance. Various environmental layers were observed in the ACGH GIS to demonstrate the drill planning approach. Details of the approved disturbance areas were included in the drill hole plan provided to the drillers, and ACGH exploration staff supervised any surface disturbance.

Due to the flat nature of the terrain, formed drill pads were not required, with drive up access for the drill rig across the paddock. No significant vegetation clearance other than some minor ground cover disturbance (mostly grass) was observed at any of the holes inspected during the site inspection.

The terrain in which drilling was conducted was reasonably flat. The ACGH environmental risk assessment concluded that erosion was low risk and specific controls for erosion and sedimentation were not required. No evidence of erosion or sedimentation from drilling activities was observed at any of the drill sites inspected by the audit team.

3.6.7. Roads and tracks

Mandatory requirements 7.1 to 7.5 required the licence 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.

Risks associated with ground disturbance from vehicular movements were included in the ACGH environmental risk assessment and were assessed as low risk with suitable controls in place.

Controls included:

- access via existing tracks/edges of paddocks only
- drilling planned to minimise disturbance (narrow diameter drilling, easy access for vehicles, no excavations)
- monitor local conditions and cease operations as required
- where tracks have been degraded during the drilling program, rehabilitation will be conducted to ensure tracks are restored to the standard existing prior to works.

ACGH exploration staff said station tracks proposed to be used to access drill sites were included in the land access agreements with landholders. Liaison was maintained with the landholder during the drilling program.

Tracks used to access the drill sites inspected during the audit were existing property roads and tracks. Several drill sites which were drilled close to boundary fences were viewed by the audit team from the public road to avoid driving over recently ploughed and sown paddocks.

At site DCKDH018, the audit team noted the drill rig had driven the short distance across the paddock from the existing station track to the drill site – no formed track or vegetation clearance was required.

ACGH exploration staff said there had been a need to repair an existing track at the completion of drilling because of vehicular access during wet weather. Changes to the drill program were implemented as a result to change the order of drilling to allow time for the wetter areas to dry.

3.6.8. Weeds, pest animals and disease

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

Vehicle hygiene procedures were the primary control identified in the ACGH environmental risk assessment to avoid the introduction of weeds and diseases into the site. ACGH procedure *PR26 – Vehicle weed and seed* was observed to be implemented for the drill program. Records of vehicle washdown and weed and seed inspections were noted to be captured electronically by ACGH staff using the Gocanvas app (for example, records for light vehicle inspection and washdown on 5 October 2023).

3.6.9. Livestock protection

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

It was observed there were no livestock in the paddock during the site inspection at DCKDH018 where drilling was in progress. ACGH exploration staff said landholders were typically requested to move livestock from the paddocks required for drilling. Where livestock were left in the paddocks, an electric fence was used around the drill site to deter livestock from entering.

3.6.10. Cultural heritage

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

Searches of the aboriginal heritage information system (AHIMS) were conducted as part of the preparation of applications for exploration activity approvals. No items of cultural heritage were identified within the areas proposed for drilling. No specific controls were identified by ACGH as being required for the drilling programs.

It was noted the ACGH risk assessment identified exploration staff were trained in cultural heritage management. ACGH developed procedure SWPF14 – Fieldwork Aboriginal heritage, which identified the requirements should items of potential cultural heritage be found during drilling (unexpected finds procedure).

Observations made during the site inspection confirmed drilling was conducted in open and cleared paddocks, highly modified by agricultural practices. The potential for artefacts was likely to be very low.

3.6.11. Fire prevention

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

ACGH exploration staff advised that fire weather was monitored during the bushfire danger period. Harvest safety alert notifications issued by the Rural Fire Brigade were used as a guide to stop drilling during periods of high bushfire risk weather. Fire extinguishers were maintained on the drill rig and in all light vehicles. Fire control measures were noted to be included in the ACGH site induction so that all personnel on site were familiar with the requirements, controls, and what actions needed to be taken.

3.6.12. Risk assessment

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

ACGH prepared a comprehensive environmental risk assessment for its exploration programs. Where required, environmental controls were identified to mitigate any high and medium risks. The environmental risk assessment was noted to address the mandatory requirements of the code of practice.

Evidence was available to demonstrate implementation of the required controls.

3.7. Security deposit

Condition 5 of EL8965 and EL8911 required the licence holder to provide a security deposit to secure funding for the fulfilment of obligations under the licence.

The security amount required for EL8911 was \$10,000, which department records confirmed was held. The drilling program in 2023 did not trigger an increase in security.

The security amount required for EL8965 was \$18,000 which department records confirmed was held. Prior to March 2024, the security required was \$43,000 but following confirmation from the Regulator of successful rehabilitation completion of the earlier Duck Creek drill holes, the security was reduced to \$18,000.

Observations made on site during the site inspection confirmed that the security held was adequate for the drilling programs in progress.

3.8. Rehabilitation

Condition 6 of EL8965 and EL8911 required the licence 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.

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

3.8.1. Risk assessment

Mandatory requirement 1 required the licence 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.

ACGH identified and assessed a range of risks to successful rehabilitation as part of its comprehensive risk assessment for exploration operations. Risks identified and assessed included:

- residual soil contamination on site that is incompatible with the intended land use, or poses a threat of environmental harm
- instability of the final landform following rehabilitation posing risk of environmental harm and/or a safety risk to the public/fauna
- unsuccessful agricultural or native revegetation practices associated with:
 - poor rehabilitation planning and processes
 - adoption of inappropriate or inadequate rehabilitation techniques
 - insufficient skills and experience of rehabilitation personnel
 - lack of rehabilitation care and maintenance.

Risk controls and associated monitoring and acceptance criteria were documented for each risk assessed. Controls included:

- before commencing rehabilitation:
 - scalp any weed growth from the top of soil stockpiles to minimise the transport of weeds into rehabilitated areas.
- during rehabilitation:
 - undertake revegetation activities in or just prior to suitable seasonal conditions.

- implement revegetation techniques to establish grazing and cropping areas consistent with local agricultural practices (e.g. sowing with grasses and legumes appropriate to the district/same paddock and recognised as suitable for grazing).
- restore soil structure by scarifying or ripping (if soil compaction or erosion has occurred) in parallel with the contour.
- for native ecosystems, use local provenance seed for direct seeding or for the propagation of tube stock.
- use structures such as tree hollows, logs and other woody debris, to augment the habitat value of native rehabilitation (if appropriate, including with regard to bushfire risks).
- where adverse seasonal conditions (i.e., drought) or other factors may affect the availability of local provenance seed, supplement with non-local provenance seed as required.

Evidence was available to confirm implementation of required risk controls. Drill holes inspected were located in agricultural areas. Given the reasonably small disturbance footprint, rehabilitation typically involved scarifying or ripping of the area with natural regeneration of vegetation.

3.8.2. Rehabilitation objectives and completion criteria

Mandatory requirement 2 required the licence holder, not later than 14 days before the commencement of surface disturbing activities, to provide to the Secretary a copy of clear, specific, achievable and measurable rehabilitation objectives and completion criteria (ROCC). For higher risk prospecting operations, a rehabilitation management plan was required to be prepared and submitted with the rehabilitation objectives and completion criteria.

The exploration activity approval applications lodged by ACGH indicated that the total surface disturbance area was less than five hectares for each application. The cumulative surface disturbance from the combined applications for each licence area was also less than 5 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.

Evidence was available in department records to confirm that ROCCs were submitted for each drilling program as part of the application for assessable prospecting operations. It was noted that the ROCCs submitted were generally based on the template provided in Appendix 2 of the code of practice.

3.8.3. Rehabilitation program

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

ACGH aimed to commence rehabilitation of drill holes within 4 weeks of the completion of drilling. Drilling records reviewed during the audit demonstrated that, typically, holes were rehabilitated within 4 to 6 weeks of the completion of drilling.

Rehabilitation monitoring was generally done using a photographic record with details recorded on the rehabilitation and site monitoring sheet. Photographs before, during, and after drilling were noted to be maintained electronically for each site. As suggestion for improvement number 2, ACGH should consider the development of a rehabilitation performance assessment which assessed rehabilitation performance against the nominated rehabilitation objectives and completion criteria.

Examples of drill sites where rehabilitation was completed were inspected during the audit site inspection. Figure 7, Figure 8, Figure 9, and Figure 10 show the rehabilitated sites. It was noted that rehabilitation was not final and no application for rehabilitation sign-off was submitted to the Regulator for the sites inspected.

Figure 7 Rehabilitation of drill hole NYNDH001 on EL8911



Figure 8 Rehabilitation of drill hole DCKDH005 on EL8965



Figure 9 Rehabilitation of drill hole DCKDH005 on EL8965



Figure 10 Rehabilitation of drill hole DCKDH017 on EL8965



3.9. Annual activity reporting

Section 163C of the *Mining Act 1992*, clause 59 of the Mining Regulation 2016 and condition 8 of EL8965 and EL8911 required the licence holder to submit an activity report annually within one calendar month following grant anniversary date. Annual activity reports were required to be prepared in accordance with the Exploration guideline: Annual activity reporting for prospecting titles.

During the audit scope period, ACGH submitted annual activity reports comprising:

- annual geological report
- environmental rehabilitation and compliance report
- community consultation report (up to October 2022).

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

3.10. Core and sample storage

Clause 65 of the Mining Regulation 2016 required 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 were required to be labelled, stored and managed in a manner that preserved the integrity of the core or samples.

ACGH staff advised that core and sample storage was maintained in a large industrial shed at the company's base in Trangie which was inspected as part of the audit (Figure 11).

Core was stored in plastic core trays, labelled, numbered and palletised by hole (Figure 12 and Figure 13). Chip samples from the mud rotary drilling were stored in labelled plastic chip trays, stacked by hole number on shelving within the shed (Figure 14).

Figure 11 Storage of core and chip samples in a large shed



Figure 12 Core tray storage, stacked by hole number



Figure 13 Details of core tray labelling



Figure 14 Chip sample storage by hole number, stacked on shelving



3.11. Record keeping

Sections 163D and 163E of the *Mining Act 1992* related 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 were 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 ACGH had generally maintained records as required by the licence conditions and the exploration codes of practice. It was noted that relevant documents and records were readily retrievable upon request.

Examples of records reviewed included:

- land access agreements
- GIS system
- drill hole plans
- drilling records, including a spreadsheet which related drilled holes to relevant activity approval and rehabilitation signoff
- drillers plods
- environmental risk assessment
- pre, during and post drilling photos
- waste management records

- GoCanvas weed and seed records
- drill hole checklists
- weekly drill rig audits
- rehabilitation objectives and completion criteria
- rehabilitation risk assessment
- community consultation risk assessment
- community consultation strategy
- community consultation records
- community consultation reports
- annual activity reporting.

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 (for example, changes in legislation).

The ACGH exploration staff generally had a good understanding of the compliance requirements for exploration. Comprehensive and robust systems and processes for managing compliance requirements had been developed and implemented. ACGH prepared procedures for exploration operations to document the processes and controls to be used to minimise impacts. Procedures included:

- PR15 - Training and Induction
- PR24 Drill rig setup procedure
- PR25 Drill hole management process
- PR23 Drill hole completion and site cleaned.
- SWPF16 - Fieldwork -hydrocarbon management

It was noted that records were generally maintained to demonstrate compliance.

4.2. Contractor management

Contractors are often used to undertake specialist tasks, for example, exploration drilling. Whilst 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.

ACGH was using contract drillers to complete the exploration drilling programs. ACGH exploration staff reviewed the environmental and safety management systems of the drilling contractor before starting the drilling program. Any specific requirements (e.g. landholder requirements or specific controls required for the APO) for each drill hole were included on a drill hole plan which was

provided to the drillers for each hole. Weekly inspections of the drill rig were completed and ACGH exploration staff were on site during drilling to supervise the program.

It was noted that the driller had a reasonable understanding of the environmental management controls required for drilling operations and had implemented relevant environmental controls associated with the drill rig; for example, bunding and spill control around plant and equipment, water management controls, and waste management measures. The driller had a copy of the ACGH drill hole plan for hole DCKDH018 readily available in the drillers caravan and was familiar with the requirements.

ACGH undertook a review of the drilling contractor performance during and after the contracts and, as a result, had established an informal preferred supplier list.

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.

ACGH exploration staff established an inspection and monitoring process that was suitable for the nature of the exploration activities being conducted. These processes were noted to include monitoring of contract drilling works, inspection of drill sites and rehabilitation to confirm works are completed in accordance with the controls identified in the risk assessments.

The environmental and rehabilitation risk assessments prepared by ACGH were noted to include risks related to exploration activities and environmental management controls were in place. However, as suggestion for improvement 3, ACGH should consider expanding its risk assessment process to include a post drilling review to assess the performance of the control measures and make any recommendations for future drilling programs, where those controls were shown to be not effective in addressing the risk.

5. Audit conclusions

From the evidence reviewed during the audit, it was concluded that the exploration operations undertaken by ACGH were well managed. Evidence was available to demonstrate that comprehensive and robust systems and processes had been developed to identify and manage compliance requirements. It was observed that records were being maintained as required to demonstrate compliance.

ACGH were compliant with the requirements of the exploration licence, exploration activity approvals and the environmental management and rehabilitation exploration codes of practice, for the elements reviewed during the audit. No non-compliances were identified during the audit.

Three suggestions for improvement were identified as summarised in Table 2.

Table 2 Summary of suggestions for improvement

Suggestion for Improvement No.	Description of Issue
1	ACGH should consider reviewing the community consultation risks with reference to the objectives for consultation (i.e. the risk assessment should focus on what risks need to be managed for effective and inclusive consultation to take place to achieve the objectives for consultation).
2	ACGH should consider the development of a rehabilitation performance assessment which assessed rehabilitation performance against the nominated rehabilitation objectives and completion criteria.
3	ACGH should consider expanding its risk assessment process to include a post drilling review to assess the performance of the control measures and make any recommendations for future drilling programs, where those controls were shown to be not effective in addressing the risk.