

# Mining Management Plan Exploration Activities

## Northern Territory of Australia – Mining Management Act

It is recommended that the Mining Management Plan is completed in conjunction with the user guide, available on the [Northern Territory Government website](#).

### Section 1 – Project Details

|  |  |
|--|--|
| <b>Project Name</b><br>Provide new or existing project name  | Officer Hill Project   |
| <b>Authorisation Number</b><br>Insert existing authorisation number, where applicable  | 0894-01  |
| <b>Operator Name</b><br>Use ASIC-ABR registered name (if a company), or name of the applicant  | Newmont Tanami Pty Ltd   |
| <b>Location and Access Details</b><br>Include brief description of the location, access details, and distance to nearest town or community | <p>The Granites Gold Mine is located approximately 550 km north west of Alice Springs. Dead Bullock Soak (DBS) is a further 30 km to the west.</p> <p>The Officer Hill Project is accessed via the Tanami Downs Road and various access tracks. The location of the project area in relation to DBS and the Granites is shown in Appendix 1.</p> |
| <b>Target Commodity Details</b><br>Include target commodities (i.e. gold, copper etc.)   | Gold   |
| <b>Mining Activities</b><br>Summarise the mining activities (exploration) to be the subject of the proposed Authorisation or Variation     | In 2020, Newmont Tanami Operations will continue exploration at the Officer Hill Project. Depending on results, the proposed program may not be executed in entirety.  |
| <b>Proposed Schedule</b><br>Include start and finish dates of ground disturbing work   | The drilling program is scheduled to commence in March/April 2020.   |

## Mining Interest and Land Ownership

List the mining interests (titles), the title holder name/s, the title expiry date and the Property name/Land holder (e.g. pastoralist or Aboriginal land trust) for each title.

| Title Number | Title Holder          | Expiry Date | Property Name or Land Holder      |
|--------------|-----------------------|-------------|-----------------------------------|
| EL23150      | Nova Minerals Limited | 28/07/2021  | Mangkururpa Aboriginal Land Trust |

## Organisational Structure

| Position Title                              | Name               |
|---|--------------------|
| Regional Senior Vice President – Australia  | Alex Bates         |
| General Manager – Tanami Operations         | Vince De Carolis   |
| Exploration Manager (Regional)              | Philippa Sivwright |
| Principal Exploration Geologist (Regional)  | Alan Hawkins       |
| Sustainability & External Relations Manager | Javier Brodalka    |

## Section 2 – Operator Self-Assessment of the Environmental Risk

The purpose of this self-assessment is to ensure Operators complete a project risk assessment of potential environmental impacts and are aware of other legislative obligations from various Agencies. As a result of this self-assessment, further information may be required in the form of a management plan to enable full assessment of the MMP. If you have any queries please contact a Mining Officer prior to submitting the MMP. Useful resources to assist with this self-assessment are provided in the User Guide.

### Environmental considerations

| ASSESSMENT ASPECT  | YES or NO | ACTIONS REQUIRED (if answered YES)   | APPENDED INFORMATION (Evidence of consultation with DENR and/or management plan)                              |
|--|-----------|--|---|
| <b>Step 1:</b><br>Are there any threatened flora and fauna species or habitats of significance that may occur in the proposed work area? | Yes       | It is likely a threatened species will show up in most reports. Therefore, the Operator must undertake a likelihood analysis, which looks at the likelihood of the species or its habitat occurring at or near the site. If the analysis results in a high likelihood, then a "Significant Impact Assessment" should be undertaken, which may require consultation with the DENR – Flora and Fauna Division. The DENR may recommend a Biodiversity Management Plan – this must be developed and attached to the MMP. | Biodiversity and Land Management Plan   |
| <b>Step 2:</b><br>Are there any known declared weeds within the proposed work area?  | No        | Under the <i>Weeds Management Act</i> declared weeds are required to be eliminated or controlled by the owner and occupier of land. Seek advice from DENR – Weeds Management to ensure management measures are appropriate for the level of activity proposed and attach a Weed Management Plan (if required).   | N/A   |
| <b>Step 3:</b><br>Will you be using water from bores or other sources for the operation?   | Yes       | <i>Note the Government is proposing to amend the exemption of water licencing under the Water Act for mining activities, including exploration. This section will be updated in light of any changes in the future.</i>  | Licence not required under the <i>Water Act</i> for water extraction from Dakoty Bore. Flow rate is <15L/sec. |

## Environmental assessment and cultural considerations

| ASSESSMENT ASPECT   | YES or NO | MANAGEMENT REQUIREMENTS  |
|---|-----------|--|
| <b>Step 4:</b><br>Is your project likely to have a significant impact on the environment? | No        | Refer to the NTEPA Environmental Factors and Objectives Guideline.   |
| <b>Step 5:</b><br>Are there Aboriginal sacred sites in the Project area?                  | Yes       | <p>Sacred Sites are protected under the NT <i>Aboriginal Sacred Sites Act</i> and administered by the Aboriginal Areas Protection Authority (AAPA).</p> <p>The Deed of Exploration agreement with the Central Land Council (CLC) also includes conditions specific to the identification and protection of sacred sites and those of conservation significance to the traditional owners. Heritage clearances are undertaken prior to commencing any disturbance to ensure that sacred sites are identified and protected.</p> |
| <b>Step 6:</b><br>Are there archaeological and heritage sites in the Project area?        | No        | <p>Heritage and archaeology sites are protected in the NT.</p> <p>NT Heritage Branch of the Department of Natural Resources and Environment (DENR) administers the <i>Heritage Act</i>. Seek advice in relation to protection of heritage and archaeological sites.</p>  |

## Section 3 – Amendments

As per Section 41(3) of the *Mining Management Act 2001*, an MMP reviewed and amended under Section 41(1)(a) is to clearly identify amendments made.

| Section                       | Amendment   |
|-------------------------------|---|
| General                       | Moved to the new DPIR MMP template for exploration operations.<br>Updated name to Newmont Tanami Pty Ltd.   |
| Costing of Closure Activities | Updated security calculation taking into consideration rehabilitation and proposed activities/disturbances. |

## Section 4 – Activities Proposed

| Mining Interests  | EL23150   |
|---|---|
| Number and type of proposed drill holes                                 | 30 (Diamond Core/RC)  |
| Maximum depth of proposed holes (m)                                     | Primarily ~700, but potentially up to 1,500   |
| Number and size of drill pads to be cleared<br>(Length: m x Width: m)   | 30 (40m x 40m)  |
| Total area of drill pads to be cleared (ha)                             | 4.8 ha  |
| Is drilling likely to encounter groundwater?<br>(Y, N, unsure)          | Unsure  |
| Number of costeans<br>(Length: m x Width: m<br>x Depth: m)              | N/A   |
| Number of bulk sample pits  | N/A   |
| Total bulk sample (tonnes)<br>(Length: m x Width: m x Depth: m)         | N/A   |
| Bulk sample pits approved under <i>Mineral Titles Act</i> ?<br>(Y or N) | N/A   |
| Length of line/track clearing<br>(m: x Width: m)                        | 10,000 x 4 (4 ha)   |
| Camp area to be cleared (ha)  | Existing pad to be used (0.16 ha)   |
| Camp Infrastructure<br>(i.e. demountable, tents)                        | Caravans and tents/swags. Gen set.  |
| Previous disturbance yet to be remediated on title (ha) if known        | 2.72 ha   |
| Other   | Raw water for drilling purposes intended to be sourced from Dakoty Bore, 10 km south of Tanami Downs Station. The Operator is in discussions with the CLC to formalise a compensation regime for the ongoing abstraction of such water. |
| Total area disturbed proposed (ha)                                      | 8.8 ha  |

## Section 5 – Previous Disturbance

| Mining Interests  | EL23150  |
|---|--|
| Number/type of holes drilled                                    | 8 – 2019<br>4 – 2018                                   |
| Maximum depth of holes drilled (m)                              | 432.3 m  |
| Number of holes remediated (i.e. plugged/capped)                | 12 have been temporarily capped                        |
| Number and size of drill pads cleared<br>(Length: m x Width: m) | 10 (40m x 40m) – 2 of these pads not drilled           |
| Total area of drill pads cleared (ha)                           | 1.6 ha (2019)  |
| Total area of drill pads remediated (ha)                        | 0.64 ha (4 drill pads) from 2018 – collars remain      |
| Was groundwater encountered? (Y or N)                           | N  |
| Length of line/track cleared (Length: km x Width: m)            | 2019: 2,410 x 4 (0.96 ha)<br>2018: 1,595 x 4 (0.64 ha) |
| Length of line/track remediated (Length: km x Width: m)         | 0 (kept open for 2020 use)                             |
| Number of costeans excavated (L: m x W: m x D: m)               | N/A  |
| Number of costeans remediated                                   | N/A  |
| Total bulk sample pits excavated (Length: x Width: x Depth: m)  | N/A  |
| Total bulk sample pits remediated                               | N/A  |
| Camp area/s cleared (ha)  | 0.16 ha (2018 camp)                                    |
| Camp area/s remediated (ha)                                     | 0 (to be re-used in 2020)                              |
| Total area disturbed (ha)                                       | 4 ha   |
| Total area remediated (ha)                                      | 0.64 ha - 4 Pads from 2018 – collars remain            |

## Section 6 – Environmental Management

By checking these boxes, you are agreeing to implement the following minimum environmental management standards on the project area. Where boxes have been left unchecked, justification is required.

|      |   |   |
|------|---|---|
| 6.1  |   | Blade-up approach for clearing will be used (i.e. no windrows, leave root stock and topsoil)  |
| 6.2  | ✓ | Significant vegetation will be avoided during clearing (i.e. large trees, specimens providing habitat or food sources, riparian vegetation, and threatened species)   |
| 6.3  | ✓ | Vegetation clearing during, and immediately after rainfall events, will be avoided  |
| 6.4  | ✓ | Vegetation clearing will be kept to the minimum required to safely traverse vehicles and drill rigs along tracks and drill pads   |
| 6.5  | ✓ | Where blade-up techniques cannot be employed, topsoil and vegetation will be stockpiled appropriately for remediation purposes  |
| 6.6  | ✓ | All employees and contractors will be trained and inducted in relation to the management of environmental risks in the work area, including weeds, waterways, threatened species, soil erosion, sacred sites and heritage areas |
| 6.7  | ✓ | Sumps will be lined or tanks of appropriate size to contain water, sediment and drilling fluids encountered during drilling, will be used   |
| 6.8  | ✓ | Sumps, drill holes, and fuel stores will be located away from environmentally significant areas and water courses   |
| 6.9  | ✓ | Excavations (sumps, costeans and pits) will be appropriately ramped to allow fauna egress   |
| 6.10 | ✓ | Drill holes will be securely capped immediately after drilling  |
| 6.11 | ✓ | Vehicle hygiene measures will be employed to prevent the introduction and spread of invasive species and pathogens when mobilising vehicles and equipment from one location to another  |
| 6.12 | ✓ | Hydrocarbon spills will be minimised using liners and drip trays under machinery, and appropriately sized spill-kits available in the event of a spill  |
| 6.13 | ✓ | Hazardous substances (including hydrocarbons) will be stored and handled in accordance with relevant Australian Standards   |
| 6.14 | ✓ | Hydrocarbons will be stored in lined and bunded areas   |
| 6.15 | ✓ | Waste will be stored securely while on-site to minimise windblown rubbish and access by feral animals   |
| 6.16 | ✓ | Waste will be removed off-site and disposed of at an appropriate waste management facility  |
| 6.17 | ✓ | All environmental incidents will be reported to the Department in accordance with Section 29 of the <i>Mining Management Act</i> .  |

Justification and alternative management measures:

Tracks are cleared using blade-down method to reduce the number of punctures in the field. On completion of the program, tracks are rehabilitated by pushing in windrows and ripping. As evident during DPIR inspections, regeneration of vegetation is relatively fast in this region.



## Section 7 – Remediation and Closure

By checking these boxes, you are agreeing to implement the following minimum remediation standards on the project area. Where boxes have been left unchecked, justification is required.

|      |   |  |
|------|---|--|
| 7.1  |   | Drill holes plugged below ground level at a minimum depth of 0.4 metres and soil mounded to prevent subsidence, within 6 months of completion of drilling  |
| 7.2  | ✓ | Drill samples/spoil returned down drill holes, buried in sumps, or removed from site   |
| 7.3  | ✓ | All drill hole and access markers including flagging tape, wooden markers and star pickets will be removed from site   |
| 7.4  | ✓ | Re-contouring of cut and fill drill pads will be consistent with the surrounding terrain   |
| 7.5  | ✓ | Ripping/scarifying of drill pads, and compacted areas along the contour (on sloping ground) and cross-ripping (zig-zag) along tracks   |
| 7.6  | ✓ | Tracks will be remediated, including pushing in all windrows   |
| 7.7  | ✓ | Appropriate erosion and sediment controls will be installed where erosion is evident or likely to occur  |
| 7.8  | ✓ | All tracks will be remediated unless otherwise agreed in writing by the land holder or appropriate third party   |
| 7.9  | ✓ | Access through watercourses will be removed and banks restored   |
| 7.10 | ✓ | No erosion is occurring in disturbed areas, on tracks and in remediated areas  |
| 7.11 | ✓ | All excavations backfilled within 6 months of completion of drilling   |
| 7.12 | ✓ | All water bores decommissioned unless otherwise agreed in writing by the land holder or appropriate third party. The bore must comply with the Minimum Construction Requirements for Water Bores in Australia and may require permits or licenses under the <i>Water Act</i> |
| 7.13 | ✓ | All rubbish and infrastructure will be removed from site   |
| 7.14 | ✓ | Replacement of topsoil and vegetation  |
| 7.15 | ✓ | Contaminated soils (e.g. hydrocarbon or hazardous chemicals) will be remediated or removed from site   |
| 7.16 | ✓ | Monitoring will be undertaken following the wet season or a significant rainfall event   |

Justification and alternative management measures:

With regard to the cutting and plugging of drill collars (7.1), collars have not been cut, so that they are temporarily preserved for downhole wireline logging and/or if a re-entry is required to extend the hole. In the interim, a cap is securely placed over the collar.

## Section 8 – Required Attachments

|     |   |  |
|-----|---|--|
| 8.1 | ✓ | Security Calculation Spreadsheet   |
| 8.2 | ✓ | Google Earth KML/shape files/track logs of proposed tracks and camp sites  |
| 8.3 | ✓ | A map of the work area(s) showing: <ol style="list-style-type: none"> <li>1. title boundaries and title numbers</li> <li>2. current and proposed drill holes, or polygons of target areas</li> <li>3. current and proposed tracks</li> <li>4. remediated areas</li> <li>5. camp sites</li> <li>6. environmental constraints</li> </ol> |
| 8.4 | ✓ | Remediation Register   |
| 8.5 | ✓ | Biodiversity and Land Management Plan  |

Figure 1 - NTO Exploration and Operational Tenements showing EL 23150

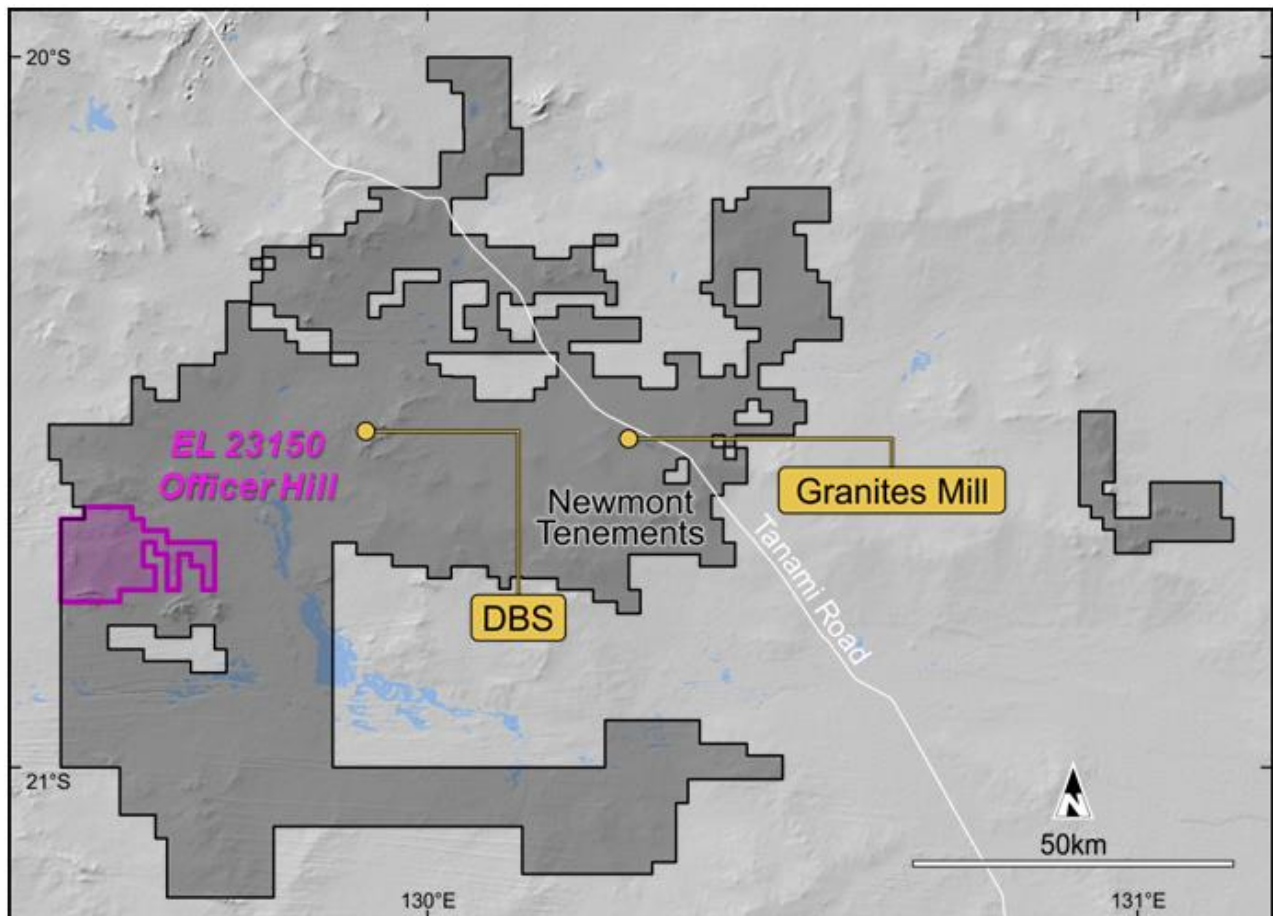


Figure 2 - Prospect map of the Officer Hill and Paris prospect areas on Officer Hill (EL23150) showing proposed work areas and Heritage sites.

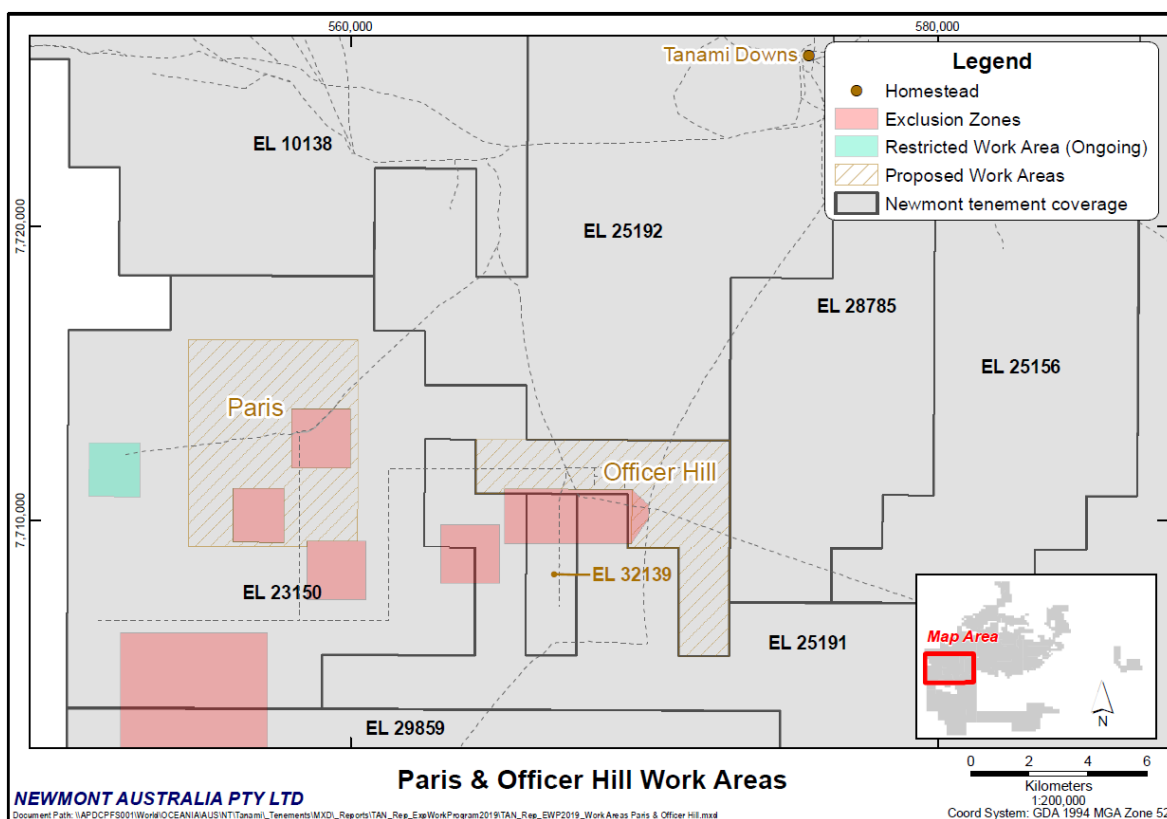
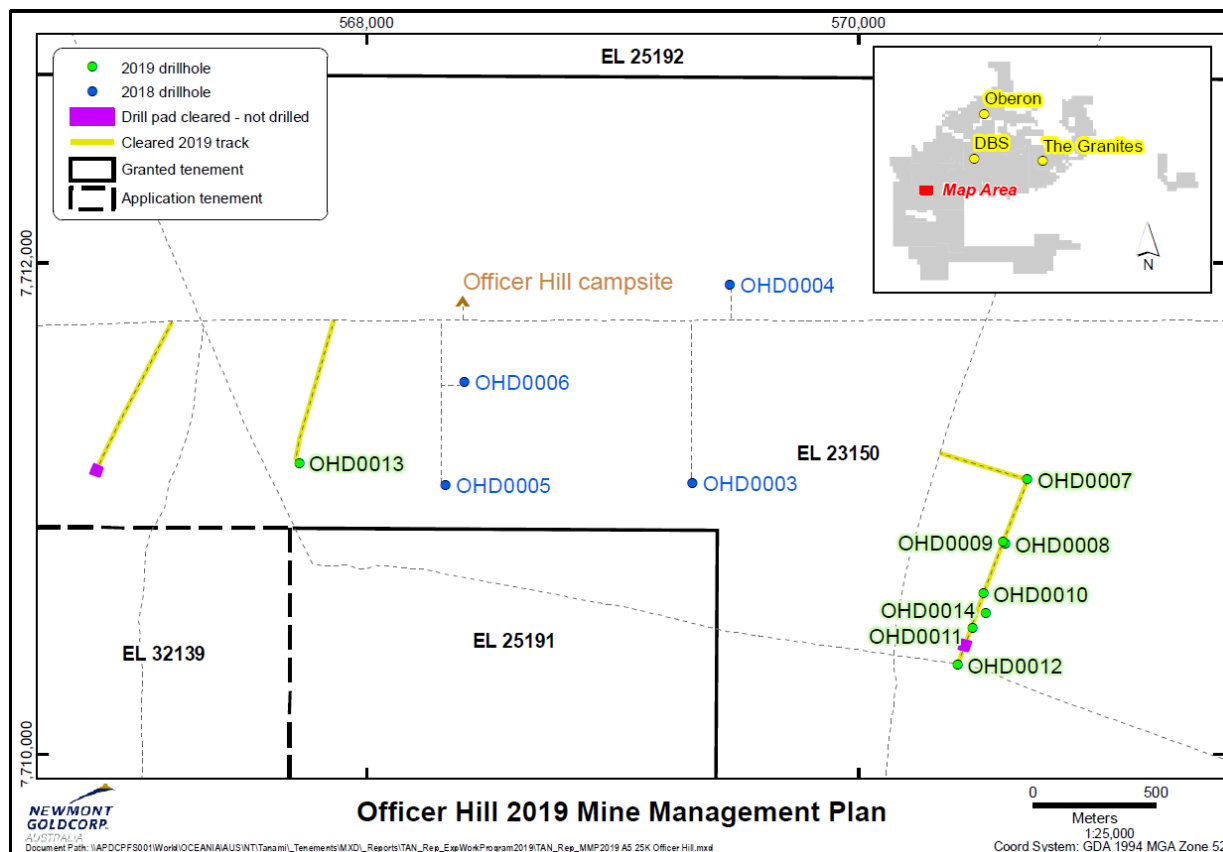


Figure 3 - Officer Hill prospect area showing 2019 drill holes, cleared tracks, camp site location and unused drill pads.



# Mining Management Plan Exploration Activities

Table 1 - Officer Hill 2018 and 2019 Diamond Drill hole Remediation Register – Current Status

| Hole ID | Date Drilled | Drill hole Coordinates (GDA94 Z52) | Rehabilitation<br>(✓ or date completed) |                          |              |                  |                             |                  |                     |                 |                     | Sign off and Comments       |
|---------|--------------|------------------------------------|---|--------------------------|--------------|------------------|-----------------------------|------------------|---------------------|-----------------|---------------------|-----------------------------|
|         |              |                                    | Drill holes capped                      | Collar Area levelled out | Core removed | Sumps backfilled | Topsoil/vegetation replaced | Drill pad ripped | Access track ripped | Rubbish removed | Date last inspected |                             |
| OHD0003 | 29/06/2018   | 7,711,100mN,<br>569,315mE          | ✓                                       | ✓                        | ✓            | ✓                | X                           | X                | X                   | ✓               | 6/11/2019           | A Hawkins<br>Collar Remains |
| OHD0004 | 24/09/2018   | 7,711,900mN,<br>569,475mE          | ✓                                       | ✓                        | ✓            | ✓                | X                           | X                | X                   | ✓               | 26/09/2019          | A Hawkins<br>Collar Remains |
| OHD0005 | 8/10/2018    | 7,711,095mN,<br>568,315mE          | ✓                                       | ✓                        | ✓            | ✓                | X                           | X                | X                   | ✓               | 26/09/2019          | A Hawkins<br>Collar Remains |
| OHD0006 | 25/10/2018   | 7,711,510mN,<br>568,395mE          | ✓                                       | ✓                        | ✓            | ✓                | X                           | X                | X                   | ✓               | 26/09/2019          | A Hawkins<br>Collar Remains |

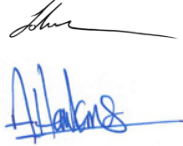


# Mining Management Plan Exploration Activities

| Hole ID | Date Drilled | Drill hole Coordinates<br>(GDA94 Z52) | Rehabilitation<br>(✓ or date completed) |                          |              |                  |                             |                  |                     |                 |                     | Sign off and Comments       |
|---------|--------------|---------------------------------------|---|--------------------------|--------------|------------------|-----------------------------|------------------|---------------------|-----------------|---------------------|-----------------------------|
|         |              |                                       | Drill holes capped                      | Collar Area levelled out | Core removed | Sumps backfilled | Topsoil/vegetation replaced | Drill pad ripped | Access track ripped | Rubbish removed | Date last inspected |                             |
| OHD0007 | 19/07/2019   | 7,711,109mN,<br>570,686mE             | ✓                                       | TBA                      | ✓            | TBA              | X                           | X                | X                   | ✓               | 6/11/2019           | A Hawkins<br>Collar Remains |
| OHD0008 | 24/07/2019   | 7,710,852mN,<br>570,590mE             | ✓                                       | TBA                      | ✓            | TBA              | X                           | X                | X                   | ✓               | 6/11/2019           | A Hawkins<br>Collar Remains |
| OHD0009 | 28/09/2019   | 7,710,852mN,<br>570,590mE             | ✓                                       | TBA                      | ✓            | TBA              | X                           | X                | X                   | ✓               | 6/11/2019           | A Hawkins<br>Collar Remains |
| OHD0010 | 2/08/2019    | 7,710,650mN,<br>570,509.4mE           | ✓                                       | TBA                      | ✓            | TBA              | X                           | X                | X                   | ✓               | 6/11/2019           | A Hawkins<br>Collar Remains |
| OHD0011 | 11/08/2019   | 7,710,511mN,<br>570,462mE             | ✓                                       | TBA                      | ✓            | TBA              | X                           | X                | X                   | ✓               | 6/11/2019           | A Hawkins<br>Collar Remains |
| OHD0012 | 19/08/2019   | 7,710,366mN,<br>570,403mE             | ✓                                       | TBA                      | ✓            | TBA              | X                           | X                | X                   | ✓               | 6/11/2019           | A Hawkins<br>Collar Remains |
| OHD0013 | 26/09/2019   | 7,711,197mN,<br>567,710mE             | ✓                                       | TBA                      | ✓            | TBA              | X                           | X                | X                   | ✓               | 9/10/2019           | A Hawkins<br>Collar Remains |
| OHD0014 | 4/10/2019    | 7,710,571mN,<br>570,521mE             | ✓                                       | TBA                      | ✓            | TBA              | X                           | X                | X                   | ✓               | 6/11/2019           | A Hawkins<br>Collar Remains |

# Mining Management Plan Exploration Activities

## Section 9 – Declaration

The Mining Management Plan must be endorsed by a senior representative of the company who has the appropriate level of authority to do so.

|           | Author  | Reviewed by  | Approved by   |
|-----------|---|--|---|
| Date      | 19/11/2019  | 22/11/2019   | 29/11/2019  |
| Name      | Kirsten Johnston<br>Alan Hawkins  | Seth McCann  | Vince De Carolis  |
| Signature |  |  |  |

I, **Vince De Carolis, General Manager – Tanami Operations** declare that I have the authority to make the commitments contained in this mining management plan on behalf of the company. To the best of my knowledge the information contained in this plan is true and correct and commit to undertake the works in accordance with the agreed minimum standards and all relevant Northern Territory and Commonwealth Government legislation.

SIGNATURE:  .....

DATE: .....29/11/2019.....



# Mining Management Plan Exploration Activities

## Appendix 1 – Location map of the Officer Hill Project

