

## Statement of Reasons

### MT PEAKE PROJECT – TNG LIMITED

NOVEMBER 2013

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#### PROJECT

ON 4 July 2013, TNG Limited (the Proponent) (of Enigma Mining Ltd) submitted a Notice of Intent (NOI) proposing to develop and operate the Mt Peake Project, 280 km north-northwest of Alice Springs and 60km west of the Stuart Highway. The NOI proposed:

- Mining of a poly-metallic ore body;
- Beneficiation and hydrometallurgical processing of the ore at the mine-site or offsite, to produce hematite powder ( $\text{Fe}_2\text{O}_3$ ), vanadium pentoxide flake ( $\text{V}_2\text{O}_5$ ) and titanium dioxide ( $\text{TiO}_2$ );
- Transport of the products via a slurry pipeline or trucks to a new rail siding near Adnera, beside the Alice Springs to Darwin Railway, followed by rail transport to East Arm Wharf for export.

The resource is estimated to be at least 160 Million tonnes, which would provide a mine-life of approximately 20 years. Workforce would peak at around 350 workers.

New infrastructure requirements include:

#### Mount Peake Mine Area

- 150m-deep pit;
- dry stacked tailings cell, or conventional Tailings storage facility;
- waste rock dump;
- gas-fired power station;
- run of mine (ROM) pad;
- mine access road;
- gas and water pipelines;
- beneficiation plant;
- hydrometallurgical plant including acid plant and oxygen generation facility (onsite or offsite, yet to be determined);
- concentrate stockpile;
- leach and salt residue storage cells;
- product stockpiles for titanium dioxide and hematite (or magnetite);
- water treatment ponds or tanks;
- water and waste water treatment plants;
- explosives and detonator magazines;
- construction camp and accommodation village;
- administrative, control, laboratory, workshop and storage buildings;
- gatehouse and weighbridge;
- bulk fuels storage area and water storage tanks;
- workshops and offices; and
- air strip.

#### Rail Siding (near Adnera):

- product rail load-out facility at Adnera including hard stand storage shed for containerised vanadium and product stockpiles for titanium dioxide and hematite (or magnetite); and
- If transport via slurry pipeline is selected additional new facilities required include:

- filtration area with:
  - thickeners;
  - pressure filters;
  - control room; and
  - buffer tanks.
- transfer pond or tank;
- slurry pipeline from the Project Mining Area to Adnera Rail Siding; and
- return water line.

#### **Corridors**

- Infrastructure pipeline corridor (gas, +/- slurry, +/- return water, <90km / 100.8 ha); and
- Road transport corridor (90km, 310 ha);

#### **East Arm Wharf**

- Stockpiles for  $\text{Fe}_2\text{O}_3$  and  $\text{TiO}_2$ ;
- Laydown area for containerised  $\text{V}_2\text{O}_5$ ; and
- Reclaim hopper.

### **DECISION**

The Northern Territory Environment Protection Authority (NT EPA) considers that there is a risk of significant impacts to the environment from this proposal. A number of the risks have not been adequately characterised and require further studies and a more comprehensive assessment. Therefore, the proposal requires assessment under the *Environmental Assessment Act* at the level of an Environmental Impact Statement (EIS).

### **JUSTIFICATION**

A review of the NOI identified:

- Environmental risk and details of proposed risk reduction measures are yet to be defined with respect to:
  - Waste rock dump (WRD) and dry stacked tailings cell, or conventional Tailings Storage Facility (TSF);
  - Potential for Acidic and/or Metalliferous Drainage from the WRD, TSF and other mine infrastructure;
  - Handling, storage and transport of mineral products: hematite powder ( $\text{Fe}_2\text{O}_3$ ), vanadium pentoxide flake ( $\text{V}_2\text{O}_5$ ) and titanium dioxide ( $\text{TiO}_2$ );
  - Product transport alternatives to the railhead, i.e. slurry pipeline vs. road train transport.
  - Potential for product concentrate spills, such as from ruptured pipelines, traffic and rail transport accidents, and wind and water erosion of product stockpiles;
  - Alternative hydrometallurgical plant locations;
  - Handling, storage and transport of reagents and/or hazardous materials, including: hydrochloric acid, organic solvent, sulphuric acid, sulphur, sodium hydroxide, sodium chloride, calcium carbonate, oxygen, sodium hypochlorite; flocculent; and fuels;
  - Storm surge (East Arm Wharf infrastructure); and
  - Closure and Rehabilitation.
- Potential for impacts may exist to:
  - Sites of biological conservation significance, including Mud Hut Swamp and Anmatyerr North, downstream of the Project Area;
  - Sites of Aboriginal heritage significance;
  - Sites of cultural heritage (Indigenous and non-Indigenous);
  - Flora and fauna species of conservation significance for the NT and nationally;

- Local communities;
- Workers, such as from inhalation of product dust; and
- Livestock at neighbouring pastoral properties.
- The Proponent has not yet demonstrated:
  - sufficient water will be available for the Project;
  - ground and surface water resources will be protected from contamination;
  - that Sensitive receptors to mine impacts have been identified. Impacts might include:
    - groundwater drawdown (cone of depression) associated with pit dewatering, potentially affecting groundwater dependent ecosystems, livestock; nearby communities or other users of shared potable aquifers;
    - dust (including product dust) at all Project locations;
    - power station emissions;
    - erosion and sedimentation; and
    - groundwater and surface water contamination.
  - negative social and economic impacts will be avoided, and benefits optimised;
  - breeding sites for biting insects will not be created; and
  - clearing of native vegetation will be minimised where possible.

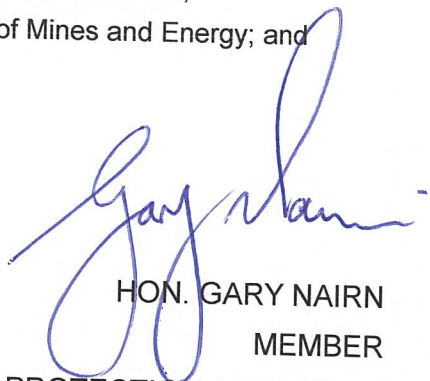
The above information gaps and risks have not been adequately characterised or addressed in the NOI and require further studies and a more comprehensive assessment, to ensure environmental impacts from the proposal will be minimised.

## CONSULTATION

On 5 July 2013, in accordance with the Environmental Assessment Administrative Procedures, the NOI was circulated to Northern Territory Government advisory agencies that have administrative responsibilities relating to this action.

Submissions were received from:

- Aboriginal Areas Protection Authority;
- Environmental Health Branch - Department of Health ;
- Department of Land Resource Management;
- Heritage Branch - Department of Lands, Planning and the Environment;
- Medical Entomology - Centre for Disease Control - Department of Health;
- Mining Environmental Compliance Division - Department of Mines and Energy; and
- Department of Primary Industry and Fisheries.



HON. GARY NAIRN  
MEMBER

NORTHERN TERRITORY ENVIRONMENT PROTECTION AUTHORITY

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