4. DESCRIPTION OF THE PROPOSED DEVELOPMENT

4.1 OVERALL PROJECT DESCRIPTION

The proposed mine will require

- Cutbacks of three existing open pits and development of two new open mining pits within the Frances Creek mineral lease tenements.
- Construction of waste rock stockpiles next to the pits.
- Installation of a small crushing and screening plant, workshops and offices.
- Upgrading of existing roads and tracks for ore haulage.
- Construction of a new rail siding and stockpile area next to the Alice Springs to Darwin Railway.
- Ore will be extracted by drilling and blasting, then transported by haul truck or road train to the plant area where it will be crushed, screened and stockpiled. Dewatering of one pit will be required.
- Transport of product by road train from the product stockpiles to a stockpile area adjacent to railway line, then loading onto rail carriages and transport by rail to Darwin Port for export.

A more detailed explanation of the sequential mining process is described below:

1. **Remove Vegetation:** Vegetation cleared for mining at the site will, where practicable, be stockpiled for use in later rehabilitation.
2. **Remove and Stockpile Topsoil:** The top 100 millimetres of topsoil will be removed using scrapers or other efficient earth moving machinery and placed in low stockpiles for later re-use **(Commitment 2.2a)**.
3. **Remove and Place Overburden:** Typically the overburden depth varies between one and 40 metres at a stripping ratio of about four cubic metres of overburden for every cubic metre of ore removed. Overburden will be stockpiled adjacent to the pits.
4. **Dewatering:** The Helene 6/7 Pit will be dewatered by pumping to allow mining below the water table. Water removed will be used for dust suppression. During the wet season, excess water may overflow after dilution and settling to Frances Creek.
5. **Mining and Haulage:** A hydraulic excavator and a fleet of dump trucks will be used for extraction. Blasting will fracture the ore and waste rock sufficiently to allow excavation. Ore bearing material will be loaded onto haulage trucks and taken to a run of mine (ROM) stockpile close to the processing plant. Several orebodies will be mined simultaneously to facilitate blending of the material. The mine is expected to produce up to 1,500,000 tonnes of product a year.
6. **Processing:** The iron ore will be transported to a small plant next to the Helene 6/7 Pit where it will be crushed and screened. No chemicals will be used in the process.
7. **Transport:** Road trains will transport the ore from the plant product stockpiles to a rail loading stockpile area at Roney Siding. Front-end loaders will load the ore onto trains for rail transport to Darwin Port.

8. **Disposal of Waste:** Waste rock will be deposited in purpose-built stockpiles next to each pit. Waste rock stockpiles will be shaped to blend with the topography and will be topsoiled and revegetated. Waste rock stockpiles will be low in height with gentle slopes to facilitate controlled water shedding. Where practicable, stockpiles locations will be selected so that they do not cross drainage lines. Opportunities to backfill pits with waste rock rather than increasing size of out of pit stockpiles will be explored and will occur where practicable.

9. **Rehabilitation:** Progressive rehabilitation will be undertaken. Overburden and topsoil will be progressively replaced over completed waste rock stockpiles and seeded or planted with local native species. Areas such as the plant and stockpile area, which cannot be rehabilitated during operations, will be rehabilitated at closure.

4.2 PROJECT RESOURCES

The initial mineral leases are estimated to contain approximately 3.5 million tonnes of ore at a grade of 61.1% iron. This should support production of an average 1,000,000 tonnes of ore per year for three years. Production is anticipated to increase to a maximum rate of 1,500,000 tonnes a year. Table 1 details ore composition for each of the proposed pits.

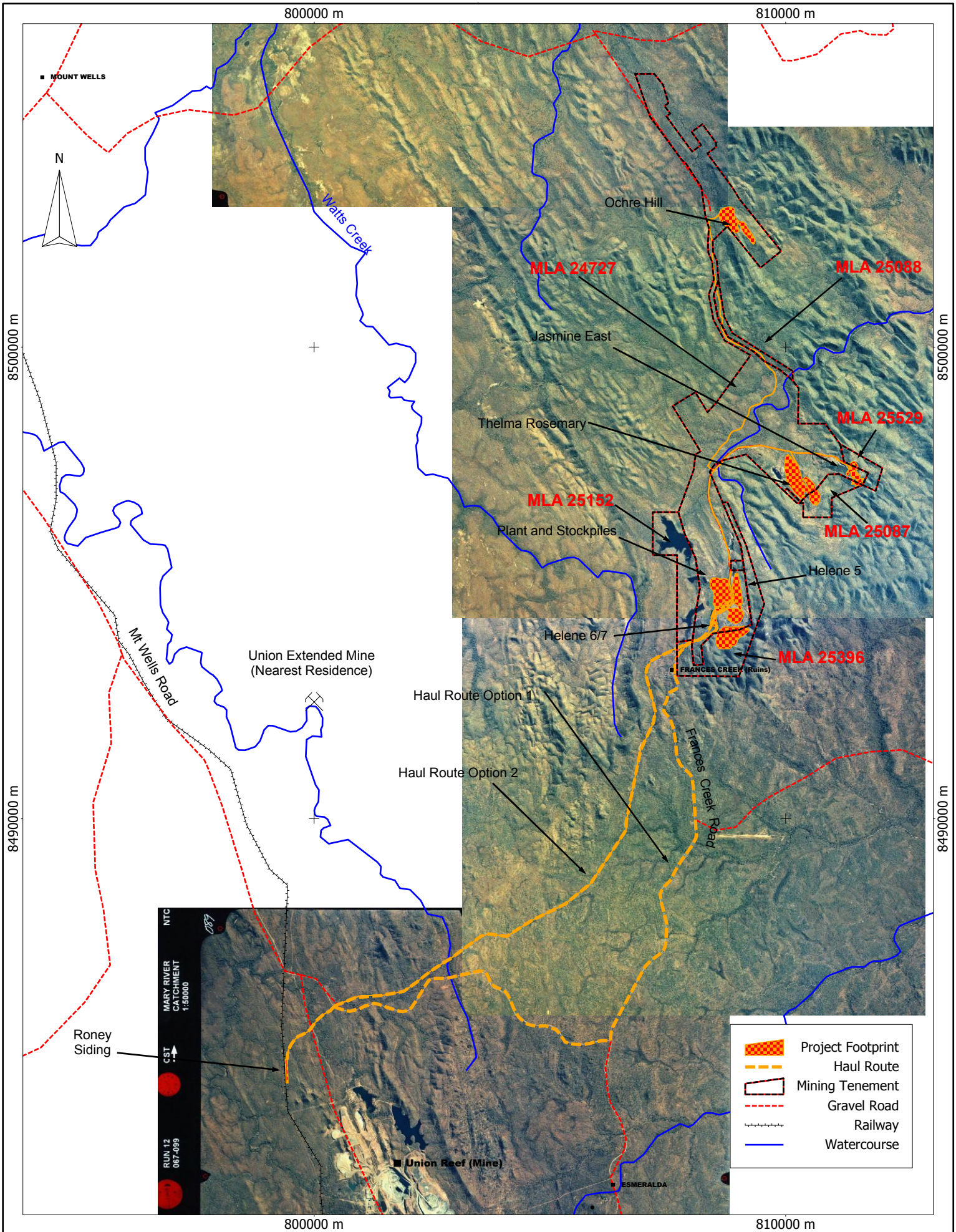
Table 1: Indicative Ore Composition by Pit

Pit	Category	Fe (%)	SiO_2 (%)	P (%)	Al_2O_3 (%)
Helene 5	Probable	59.3	8.84	0.09	3.50
Helene 6/7	Probable	63.7	5.19	0.03	2.10
Jasmine East	Probable	59.3	7.87	0.07	3.99
Ochre Hill	Probable	59.5	9.30	0.09	2.81
Thelma Rosemary	Probable	62.6	4.44	0.20	2.95
Total	Probable	61.1	7.09	0.10	2.90

4.3 EXISTING SITE LAYOUT

The project area is located along the Frances Creek valley. Infrastructure present and the condition of the site is shown in 1999 aerial photographs (Figures 3 and 4). The full extent of former mining operations is shown in Figure 5, a photograph dating from 1975, immediately after the previous mine closed.

Two large water storage dams, a tailings storage facility, the plant site and remnant stockpiles from previous iron ore mining at Frances Creek are at the south western end of the project area.



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Scale: 1:100000
Original Size: A4
Air Photo: DPIFM 1999
Datum:Australian Geocentric 1994 (GDA94)

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Territory Iron Limited
Frances Creek Mine

Aerial Photo Showing Proposed Mine and Haul Route

Figure 3

W:\Territory Iron\Frances Ck\PER\dwg\F3 AirPhoto-Frances Ck PER.map 10/08/2006 Figure 3 A4