# LEGISLATIVE ASSEMBLY OF THE NORTHERN TERRITORY WRITTEN QUESTION

### **Mining Operations Commencements and Mining Royalties**

Mr Westra van Holthe to Treasurer

- 1. Please provide details of all the mines included in the forward estimates and expected to be in operation within the next five years and the modelling conducted to forecast mining royalties, taking into account production, commodity prices, levels of profit and payments.
- 2. Please provide details of all mines currently in operation and the modelling conducted to forecast mining royalties, taking into account production, commodity prices, levels of profit and payments.

The attached documents 'Mineral Projects of the Northern Territory' and 'Operating Mines and Undeveloped Mineral Resources' detail operating mines and producing gas/oil fields in the Territory (including construction) as well as undeveloped deposits and projects under feasibility study. Both documents have been prepared by the Department of Resources.

The attached document 'Mining Developments in the Northern Territory', published by the Department of Resources in March 2010, details recent (past 24 months); pending (next 12 months); and potential (next 12-36 months) mining developments in the Northern Territory, including new mines, expansions and reopened mines.

The Territory's mining royalty revenues are largely based on a profits-based regime provided within its *Mineral Royalty Act*. The Territory's profits-based regime uses the net value of a mine's production to calculate royalty. This is the operating revenue derived from mining activities in excess of \$50 000 after deducting allowable project costs, prior year carried forward losses, the cost of capital employed in the mine and the cost of capital and exploration expenditure on the mine site.

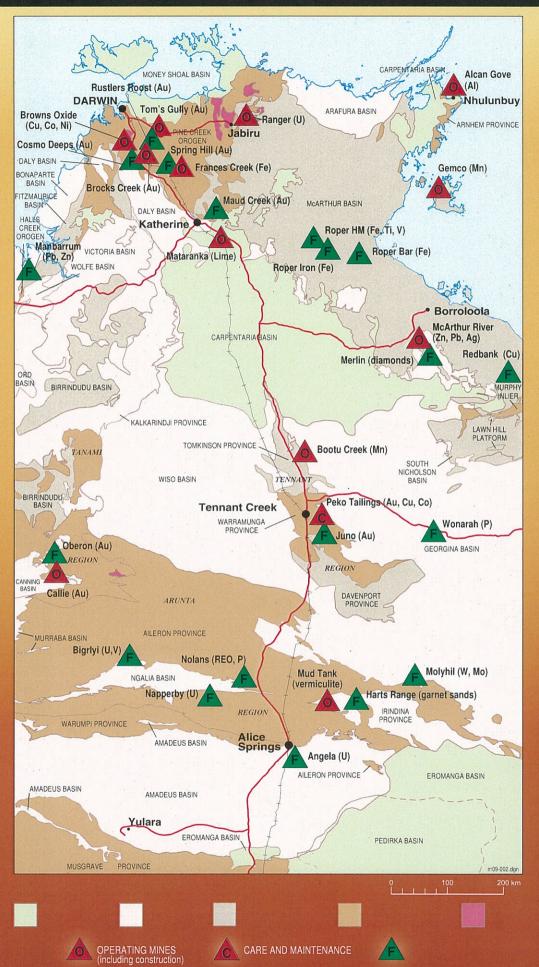
Like the states, the Territory's petroleum royalty revenues are based on an ad valorem rate of 10 per cent after allowing post wellhead costs up to the point of sale.

Given the Territory's profits-based regime, mining revenue forecasts are reliant on advice from mining companies of their estimated liability for the financial year and their estimates of commodity price movements, production levels and the value of the Australian dollar.

A key feature of the Territory's scheme is that both prices and mining costs, including mine set-up costs carried forward to profitable years, are taken into account in royalty calculations. This means that mineral royalty forecasts in the forward estimates are largely based on the advice of operating mines that are, or are likely to be, in a royalty-paying position over the forward estimates period rather than mines expecting to commence operations in that period.

Information about the affairs of individual miners, such as the amount of mineral royalty paid, cannot be disclosed because of the operation of the secrecy provisions in the *Mineral Royalty Act*. In addition, the *Information Act* would also support the non-disclosure of information that relates to the commercial affairs of an entity.

# Mineral Projects of the Northern Territory

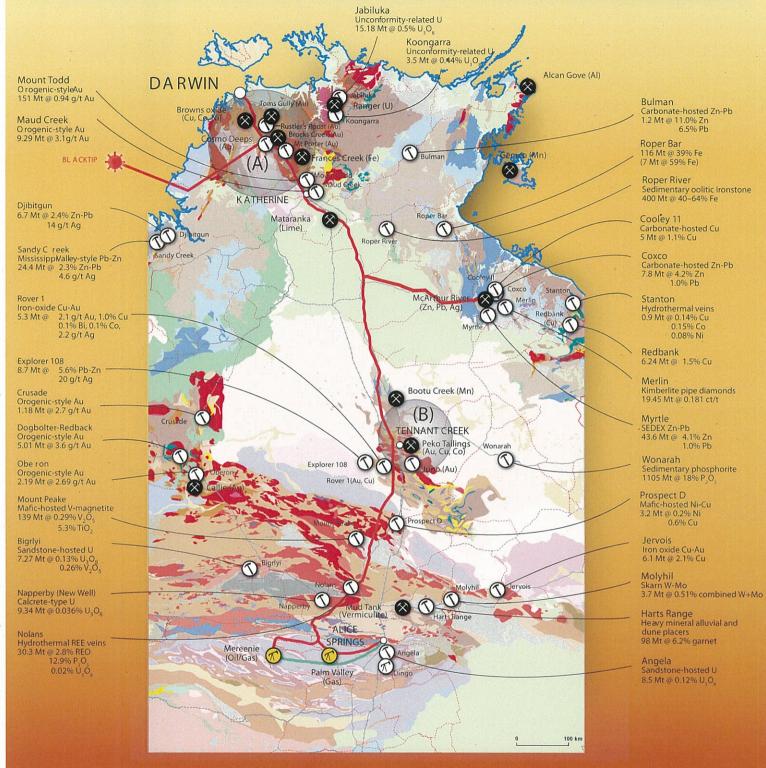


SRE-STRUCK

BRINGING FORWARD DISCOVERY
IN AUSTRALIA'S NORTHERN TERRITORY



# Operating Mines and Undeveloped Mineral Deposits



Cosmo Deeps Homestake-style Au 8.74 Mt @ 4.55 g/t Au	Brocks Creek Orogenic-style Au 21.88 Mt @ 2.4 g/t Au	Frances Creek HydrothermalFe enrichment 9.92 Mt @ 59.3% Fe
Kazí Orogenic-styleAu 0.7 Mt @ 2.9 g/t Au	Browns Sulphide Shale-hosted Pb-Gu-Go 45.1 Mt @ 0.35% Cu 3.74% Pb 0.73% Zn	Mount Wells Polymetallic sheeted veins 0.7 Mt @ 1.4% Sn 1.5% Cu
Spring Hill O rogenic-styleAu 3.6 Mt @ 2,3 g/t Au	0,09% Co 0,07% Ni Iron Blow	Winchester
Howley Orogenic-style Au 16.72 Mt @ 1.54 g/t Au	Intrusive-related Zn-Pb-Ag 3.14 Mt @ 3.395 Zn 0.895 Pb 0.295 Cu 101 g/t Ag 2.1 g/t Au	Stratabound replacement-type magnesite 16.6 Mt @ 43% MgO
Daly River VHMS 0.5 Mt @ 2.2% Cu 6.6% Zn	Bynoe Pegmatites Pegmatite-hosted Ta-5n 3,53 Mt @ 69 g/t Ta-0,	

Gecko Iron oxide Cu-Au 1.2 Mt @ 3,3% Cu	Orlando Iron oxide Cu-Au 0.6 Mt @ 2.7 g/t Au 2.0% Cu
Juno Iron oxide Cu-Au 1.3 Mt @ 4.4 g/t Au	Warrego Tailings Mine tailings 11 Mt @ 70% magnetite
Northern Star	

Operating mine

Undeveloped deposit





Producing gas/oil field Undeveloped gas/oil field

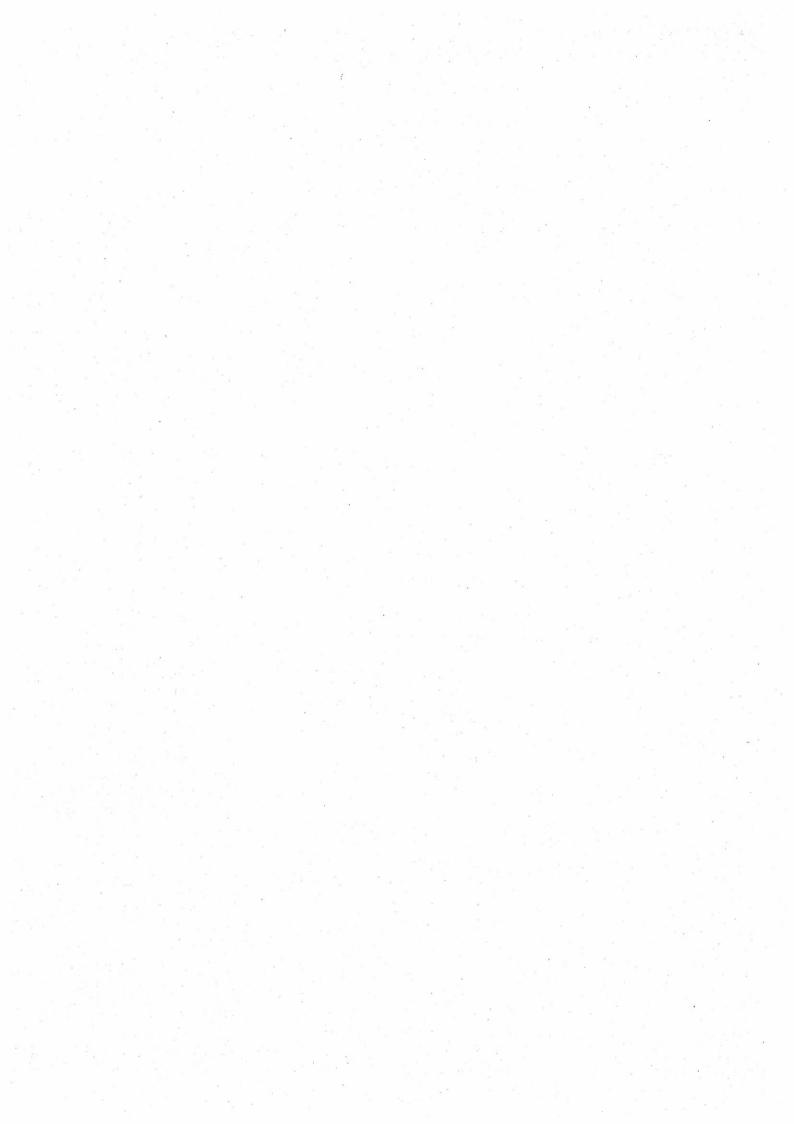




Gas field







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# Mining Developments In the Northern Territory

March 2010

This document contains a summary of likely new mining developments in the Northern Territory over the next 1-3 years. It is not intended to be comprehensive and does not contain a number of projects that are at various stages of feasibility study. For further information on mining developments, contact the Resource Development Division of Department of Resources or visit the website at www.orestruck.nt.gov.au or email to Orestruck@nt.gov.au

### MINING DEVELOPMENTS SUMMARY - March 2010 UPDATE

## 1. Recent (Past 24 months)

Company	Project	Location	Product	Development
Peko Rehab Project <sup>1</sup>	Peko Tailings	Tennant Creek	Magnetite	New mine
Xstrata	McArthur River	Gulf	Zn, Pb & Ag	New open cut
Compass / HNC 1	Browns Oxide	Batchelor	Cu, Co & Ni	New mine
Gemco	Gemco Refirb	Groote Eylandt	Manganese	Plant upgrade
Crocodile Gold	Brocks Creek	Pine Creek	Gold	Reopen mine
Crocodile Gold	Toms Gully	Mt Bundy	Gold	Reopen mine
Crocodile Gold	Howley &	Pine Creek	Gold	Reopen mine
	Mottrams			
Crocodile Gold	Union Reefs	Pine Creek	Gold	Reopen plant
OM Manganese	Bootu Creek	Tennant	Manganese	Secondary Plant

<sup>1 -</sup> mine placed on "Care and Maintenance"

## 2. Pending (Next 12 months)

Company	Project	Location	Product	Development
Crocodile Gold	North Point	Pine Creek	Gold	New mine
Crocodile Gold	Cosmo Deeps	Pine Creek	Gold	Underground
Excalibur	Juno	Tennant	Gold	Reopen mine
HAR (HNC)	Browns Oxide	Batchelor	Cu, Co & Ni	New plant
HAR (HNC)	Area 55	Batchelor	Cu, Co & Ni	Satellite pit
Minemakers	Wonarah	Tennant	Phosphate	New mine
Olympia Resources	Harts Range	Alice	Garnet sands	New mine
Redbank Mines	Redbank	Gulf	Copper	New pits & plant
Thor Mining	Molyhil	Alice	Mo, W	Reopen mine

# 3. Potential (Next 12-36 months)

Company	Project	Location	Product	Development
Arafura Resources	Nolans	Arunta	REO, P, U	New mine
Aust Ilmenite Res	Roper	Roper River	Fe, Ti, V	New mine
Compass Resources	Browns	Batchelor	Cu, Co, Ni, Pb,	New mine
/ HNC	Sulphide		Zn	
Energy Metals	Bigrlyi	Ngalia Basin	U, V	New mine
ERA Ltd	Ranger 3 Deeps	Jabiru	Uranium	Underground
ERA Ltd	Ranger heap leach	Jabiru	Uranium	Expansion
NAD	Merlin	Gulf	Diamonds	Reopen mine
Newmont	Callie Deeps	Tanami	Gold	Expansion
NAIO	Roper Iron	Roper River	Iron ore	New mine
Toro Energy	Napperby	Arunta	Uranium	New mine
Western Desert Res	Spring Hill	Pine Creek	Gold	Reopen mine
Western Desert Res	Roper Bar	Roper River	Iron Ore	New mine



#### PENDING MINE DEVELOPMENTS - NEXT 12 MONTHS

Mine Name	NORTH POINT		
Company	Crocodile Gold Australia Pty Ltd		
Contact	Grant Davey – Chief Operating Officer		
	Phone: (08) 8943 6400 Email: gdavey@crocgold.com		
Location	Approx 170 kms south-south-east of Darwin		
Description	New open cut mine with associated site infrastructure. Ore transported to		
	Union Reef for Processing.		
Product	Gold		
Resource	436,000 tonnes		
Mine Life	1 year		
Approvals	Environmental – April 2008 Mining – 2009		
Schedule	Site preparation – Apr 2010 Production – Q3 2010		
Jobs	Construction – NA Production – 40		
Capex	Unknown		

Mine Name	COSMO DEEPS	
Company	Crocodile Gold Australia Pty Ltd	
Contact	Grant Davey – Chief Operating Officer	
	Phone: (08) 8943 6400 Email: gdavey@crocgold.com	
Location	140 kms SSE of Darwin and 50 kms NW of Pine Creek	
Description	Reopen the Cosmo Howley mine. Proposed underground mining. Ore could	
	be transported to Union Reef plant for processing or new processing plant	
	established onsite.	
Product	Gold	
Resource	8.74Mt @ 4.55 g/t Au	
Mine Life	Approx 10 years	
Approvals	Pending	
Schedule	Construction – Q3 2010 Production – Q3 2011	
Jobs	Construction – unknown Production – unknown	
Capex	Unknown	

Mine Name	JUNO	
Company	Excalibur	
Contact	Tim Langdon – Managing Director	
	Phone: (08) 9322 3100 Email: tim.langdon@excaliburmining.com.au	
Location	Approx 9 kms southeast of Tennant Creek	
Description	Reopen old mine. Open cut pit, waste rock stockpiles and associated	
	infrastructure. Ore processing may occur on site with construction of new	
	processing plant or possibly at the existing Warrego mill.	
Product	Gold	
Resource	16Mt @ 16.178 g/t Au	
Mine Life	6-7 years (stages 1&2)	
Approvals	Notice of Intent submitted to NT Government in March 2010.	
Schedule	Construction – 2011 Production – 2011	
Jobs	Construction – unknown Production – unknown	
Capex	Estimated \$70M	



Mine Name	BROWNS OXIDE PROJECT		
Company	HNC (Australia) Resources Pty Ltd (HAR)		
Contact	Bob Lloyd – General Manager		
	Phone: (08) 8939 7501 Fax: (08) 8939 7515		
Location	Approx 85 kms south of Darwin		
Description	Existing open cut mining operation for on-site processing of Cu-Co-Ni oxide		
	ore. Commenced operations Q3 2008 and closed Q1 2009. Currently on care		
The second second	and maintenance. Replacing cobalt and nickel processing plants		
Product	Copper, cobalt & Nickel		
Resource	9.4Mt @0.82% Cu, 0.14% Co & 0.14% Ni		
Mine Life	5 years		
Approvals	Mine placed on Care and Maintenance until new Mining Management Plan is approved.		
Schedule	Construction – Early 2010 Production - late 2010		
Jobs	Construction – unknown Production – up to 100		
Capex	Up to \$50M		

Mine Name	AREA 55		
Company	HNC (Australia) Resources Pty Ltd (HAR)		
Contact	Steven Ludwig – Projects Manager		
	Phone: (08) 8981 1716 Fax: (08) 8981 1725		
Location	Approx 85 kms south of Darwin		
Description	Proposed new open cut pit and associated site infrastructure. Ore to be mined and trucked to Brown's Oxide Project for processing.		
Product	Copper, Cobalt & Nickel		
Resource	4.7 Mt		
Mine Life	4 years		
Approvals	Environmental – NOI submitted Mining – subject to enviro approvals		
Schedule	Construction – 2011 Production - 2012		
Jobs	Construction – unknown Production – Sourced from Brown's project		
Capex	Unknown		

Mine Name	WONARAH/ARRUWURRA		
Company	Minemakers Limited		
Contact	Neville Bergin – General Manager Projects Development		
	Phone: (08) 9264 7000 Email: nevilleb@minemakers.com.au		
Location	250 kms east of Tennant Creek		
Description	Proposed open cut mining with onsite beneficiation for direct shipping of ore.		
	Ore transported to Tennant Creek and then railed to Darwin for export.		
Product	Phosphate		
Resource	Wonarah – 330 Mt @ 18.9% P <sub>2</sub> O <sub>5</sub>		
	Arruwurra – 131 Mt @ 18.6% P <sub>2</sub> O <sub>5</sub>		
Mine Life	>30 years		
Approvals	Scoping study complete. Feasibility Studies in progress. Development		
	proposals yet to be submitted. Production proposed for mid 2010.		
Schedule	Construction – Q2 2010 Production – Q3 2010		
Jobs	Construction – 50 to 100 Production – 120 (plus 140 for transport)		
Capex	Estimated \$107M		

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#### **AUSTRALIA'S NORTHERN TERRITORY**

Mine Name	HARTS RANGE	
Company	Olympia Resources Limited	
Contact	John Baxter – Technical Director	
	Phone: (08) 9244 1411 Email: john.baxter@olympiaresources.com	
Location	170 kms northeast of Alice Springs	
Description	New mine. Open pit mining of alluvial and dune sands to a depth of approx	
	7m. On-site processing via screening and wet separation plant to produce a	
	concentrate. Garnet and AMH extracted by dry magnetic separation plant.	
	Garnet sands trucked to Alice and railed to Darwin for export.	
Product	Garnet sand and alumino-magnesio-hornblend (AMH)	
Resource	98Mt sand containing 2.7Mt garnet and 6.2Mt AMH	
Mine Life	20 years plus	
Approvals	Environmental – Jan 2006 Mining – pending	
Schedule	Construction – 2010 (Subject to project finance)	
Jobs	Construction – unknown Production – approx 60	
Capex	\$17M	

Mine Name	REDBANK (OXIDE PROJECT)
Company	Redbank Mines Limited
Contact	Bruce Morrin – Managing Director
	Phone: (08) 9322 6045 Email: bruce.morrin@redbankmines.com.au
Location	Approx 900 kms southeast of Darwin in Gulf of Carpentaria
Description	Existing mine expansion of oxide operations. Establish 3 new open cut pits.
	Transport oxide ore to existing Sandy Flat mine site for processing. Ore
	treated by Heap Leach method and copper extracted through expansion of
	existing ion exchange/cementation circuit.
Product	Copper
Resource	5.2Mt @1.44% Cu
Mine Life	5 years +
Approvals	Environmental – EIS being assessed Mining – pending enviro assessment
Schedule	Construction – mid 2010 Production – late 2010
Jobs	Construction – unknown Production – unknown
Capex	Unknown

Mine Name	MOLYHIL .
Company	Thor Mining PLC
Contact	Ian Sheffield-Parker – Chief Operating Officer
	Phone: (08) 7123 4050 Email: isheffieldparker@thormining.com
Location	220 kms northeast of Alice Springs
Description	Proposed open pit and underground mining operation with on site processing
Service defect of	by magnetic separation and flotation to produce W and Mo concentrate.
Product	Tungsten and Molybdenum concentrates
Resource	3.73Mt at 0.51% combined WO <sub>3</sub> and MoS <sub>2</sub>
Mine Life	Initially 5 year
Approvals	Environmental – July 2007 Mining – pending
Schedule	Construction – 2010 (Subject to project finance)
Jobs	Construction – 100 Production – 70
Capex	\$71M



#### POTENTIAL MINE DEVELOPMENTS - NEXT 12 - 36 MONTHS

Mine Name	NOLANS
Company	Arafura Resources Limited
Contact	Steve Ward – Managing Director & CEO
	Phone: (08) 6210 7666 Email: arafura@arafuraresources.com.au
Location	135 kms northwest of Alice Springs
Description	New mine. Open cut mining with road and rail transport to substantial
	chemical processing plant (likely to be located off site).
Product	Rare earths & phosphate (minor uranium)
Resource	30.3 Mt containing 2.8% REO 12.9% P205 (0.44 lb/t U <sub>3</sub> O <sub>8</sub> )
Mine Life	20 years +
Approvals	Environmental – EIS in preparation. Mining – subject to environmental
Schedule	Full feasibility in progress. EIS in preparation. Possible construction in 2012
	with production in 2013.
Jobs	Unknown
Capex	Estimated \$70M (mine) and \$530M (chemical plant)

Mine Name	ROPER HEAVY MINERALS
Company	Australian Ilmenite Resources Pty Ltd
Contact	Ian Johnstone – Director
	Phone: (08) 8941 3213 Email: <u>ianjohnstone@ilmenite.com.au</u>
Location	Approx 460 kms southeast of Darwin
Description	Development proposal yet to be submitted.
Product	Magnetite, Ti, V
Resource	12 Mt
Mine Life	Undefined
Approvals	Feasibility studies in progress. Mineral Lease application lodged.
1.77	Development plans yet to be submitted.
Schedule	unknown
Jobs	unknown
Capex	unknown

Mine Name	BROWNS SULPHIDE PROJECT
Company	Compass Resources NL & HNC
Contact	Richard Swann – Managing Director
	Phone: (08) 8923 1555 Email: info@compassresources.com.au
Location	65 kms south of Darwin and 7 kms northwest of Batchelor
Description	Expansion of existing mine. Open cut pit and underground to access sulphide
	deposit with associated waste rock dump, processing plants, tailings dam and
	mine office infrastructure.
Product	Copper, Cobalt, Nickel, Lead and Zinc
Resource	45.1Mt at 0.35% Cu, 3.74% Pb, 0.73% Zn, 0.09% Co & 0.07% Ni
Mine Life	Approx 20 years
Approvals	Feasibility Studies in progress.
	Development proposals yet to be submitted (EIS expected)
Schedule	Construction – unknown Production – unknown
Jobs	Construction – unknown Production – unknown
Capex	Unknown

Mine Name	BIGRLYI
Company	Energy Metals Limited
Contact	Lindsay Dudfield – Director
	Phone: (08) 9322 6904 Email: lindsay@energymetals.net
Location	Approx 340 kms NW of Alice Springs
Description	Potential open cut mine with on-site processing plant. Updated Scoping Study
	and environmental studies in progress. Recent bid by China Uranium
Line State of the	Development Company to acquire up to 70% of shares in Energy Metals.
Product	Uranium
Resource	7.65 Mt @ 0.14% U308
	Total 23.4 M lbs U <sub>3</sub> O <sub>8</sub> & 43.7 M lbs V <sub>2</sub> O <sub>5</sub>
Mine Life	Initial Scoping Study based on 12 years
Approvals	Updated Scoping Study and environmental studies in progress.
	Development proposals yet to be submitted.
Schedule	Construction – unknown Production – unknown
Jobs	Construction – unknown Production – unknown
Capex	Unknown.

Mine Name	RANGER 3 DEEPS
Company	Energy Resources of Australia Ltd (ERA)
Contact	Rob Atkinson – Chief Executive
	Phone: (08) 89243500 Email: newprojects@era.riotinto.com
Location	Approx 250 kms east of Darwin
Description	Possible underground mining operation below Ranger 3 pit. Further drilling of
	mineralisation to define JORC Mineral Resource.
Product	Uranium $(U_3O_8)$
Resource	15-20Mt containing 30-40,000 t uranium oxide (non JORC)
Mine Life	Undefined
Approvals	Development proposals yet to be submitted.
Schedule	Construction – unknown Production – unknown
Jobs	Construction – unknown Production – unknown
Capex	Unknown

Mine Name	RANGER HEAP LEACH
Company	Energy Resources of Australia Ltd (ERA)
Contact	Rob Atkinson – Chief Executive
	Phone: (08) 89243500 Email: newprojects@era.riotinto.com
Location	Approx 250 kms east of Darwin
Description	Construct a 10Mtpa dynamic heap leach facility for recovery of uranium
	oxide contained in low grade mineralised material both in situ and on existing
	stockpiles.
Product	Uranium $(U_3O_8)$
Resource	TBA
Mine Life	Approx 10 yrs
Approvals	Environmental Impact Statement (EIS) in preparation.
Schedule	Construction – 2011 Production – 2012
Jobs	Construction – unknown Production – unknown
Capex	Unknown

Mine Name	MERLIN
Company	North Australian Diamonds
Contact	Tom Reddicliffe – Chief Executive Officer
	Phone: (08) 9221 3355 Email: tom.reddicliffe@nadl.com.au
Location	720 kms southeast of Darwin and 80 kms south of Borroloola.
Description	Stage 1 of the project (complete) involved retreating of sorthouse tailings.
in partition of	Stage 2 (partially complete) involves the mining and processing of 502,000 t
And the second	of remnant ore. Stage 3 is the cutback of the Pal Sac pipe to produce 1.7Mt of
	ore for on-site processing. Stage 4 is underground mining.
Product .	Diamonds
Resource	19.4Mt for 3.51M carots
Mine Life	12 years plus (Stage 3 is 2 years & Stage 4 is approx 10 years)
Approvals	Scoping study complete. Feasibility Studies commenced.
	Development proposals yet to be submitted.
Schedule	Construction – unknown Production – unknown
Jobs	Construction – unknown Production – unknown
Capex	Unknown – Further drilling & feasibility studies in progress.

Mine Name	CALLIE DEEPS
Company	Newmont Australia
Contact	Greg Allan – A/General Manager Operations
	Phone: (08) 8957 8200 Email: greg.allan@newmont.com.au
Location	540 kms NW of Alice Springs
Description	Expansion of existing mine. Possible expansion of existing underground
	operations to depth with installation of new processing plant and mine camp
	and infrastructure at Callie (40 kms west of the Granites).
Product	Gold
Resource	12.77Mt @ 6.02 g/t Au
Mine Life	Up to 15 years
Approvals	Initial studies and Prefeasibility studies undertaken. Feasibility studies in
	progress. Development decision yet to be made.
Schedule	Unknown
Jobs	Unknown
Capex	Estimated \$500M +

Mine Name	ROPER IRON ORE
Company	North Australian Iron Ore Pty Ltd
Contact	Ian Johnstone – Director
	Phone: (08) 8941 3213 Email: <u>ianjohnstone@ilmenite.com.au</u>
Location	Approx 500 kms southeast of Darwin and approx 100 kms west of the Gulf of
	Carpentaria.
Description	Development proposal yet to be submitted.
Product	Iron ore (Hematite)
Resource	Approx 400 Mt at 40-64% Fe
Mine Life	Undetermined
Approvals	Feasibility studies in progress. Mineral Lease application lodged.
	Development plans yet to be submitted.
Schedule	unknown
Jobs	unknown
Northern Territory Der	partment of Decourage

Capex unknown

Mine Name	NAPPERBY
Company	Toro Energy Limited
Contact	Dayle Kenny – General Manager Project Development
	Phone: (08) 9321 1411 Email: dayle.kenny@toroenergy.com.au
Location	Approx 160 kms SSE of Darwin
Description	Potential open cut mine with onsite processing plant.
	Initial Scoping study undertaken. Revised scoping studies and feasibility work
	underway. Metallurgical leach tests underway.
Product	Uranium
Resource	9.34 Mt @ 0.036% U <sub>3</sub> O <sub>8</sub>
Mine Life	Unknown
Approvals	Development proposals yet to be submitted
Schedule	Unknown
Jobs	Unknown
Capex	Unknown

Mine Name	SPRING HILL
Company	Western Desert Resources
Contact	Norm Gardner – Managing Director
	Phone: (08) 8388 3012 Email: norm@westerndesertresources.com.au
Location	Approx 160 kms SSE of Darwin
Description	Reopen old mine. Proposed open pit mining (up to 3 pits) of remnant gold resource. Possible toll treated at Union Reef mill or possible heap leach
71.0	onsite.
Product	Gold
Resource	Approx 300,000 tonnes at 2.3 g/t Au
Mine Life	1-2 years
Approvals	Development proposals yet to be submitted
Schedule	Unknown
Jobs	Unknown
Capex	Unknown

Mine Name	ROPER BAR
Company	Western Desert Resources
Contact	Norm Gardner – Managing Director
	Phone: (08) 8388 3012 Email: norm@westerndesertresources.com.au
Location	Approx 540 kms SE of Darwin, 350 kms ESE of Katherine and 40 kms from
	the Gulf of Carpentaria.
Description	Development proposals yet to be submitted.
Product	Iron Ore (Hematite)
Resource	Over 100 Mt identified (40-60% Fe). Further resource drilling to be
	undertaken. Refer to website for details.
Mine Life	Undetermined
Approvals	Feasibility studies in progress. Development proposals yet to be submitted
Schedule	Unknown
Jobs	Unknown
Capex	Unknown

### MINERAL PROJECTS OF THE NORTHERN TERRITORY

