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## Mining Developments In the Northern Territory

October 2009

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 Regional Development, Primary Industry, Fisheries and Resources or visit the website at [www.orestruck.nt.gov.au](http://www.orestruck.nt.gov.au) or email to [Orestruck@nt.gov.au](mailto:Orestruck@nt.gov.au)



## MINING DEVELOPMENTS SUMMARY – October 2009 UPDATE

### 1. Recent (Past 24 months)

Company	Project	Location	Product	Development
Peko Rehab Project <sup>1</sup>	Peko Tailings	Tennant Creek	Magnetite	New mine
GBS Gold <sup>1</sup>	Toms Gully	Mt Bundy	Gold	Reopen mine
Xstrata	McArthur River	Gulf	Zn, Pb & Ag	New open cut
Compass / HNC <sup>1</sup>	Browns Oxide	Batchelor	Cu, Co & Ni	New mine
GBS Gold <sup>1</sup>	Mottrams & Chinese South	Pine Creek	Gold	New pit & pit expansion
Gemco	Gemco Refirb	Groote Eylandt	Manganese	Plant upgrade

<sup>1</sup> – mine placed on “Care and Maintenance”

Note: GBS Gold assets purchased by Crocodile Gold

### 2. Pending (Next 12 months)

Company	Project	Location	Product	Development
Crocodile Gold	Brocks Creek	Pine Creek	Gold	Reopen mine
Crocodile Gold	Toms Gully	Mt Bundy	Gold	Reopen mine
Crocodile Gold	Chinese & Mottrams	Pine Creek	Gold	Reopen mine
HAR	Browns Oxide	Batchelor	Cu, Co & Ni	New plant
Minemakers	Wonarah	Tennant	Phosphate	New mine
OM Manganese	Bootu Creek	Tennant	Manganese	Secondary Plant
Olympia Resources	Harts Range	Alice	Garnet sands	New mine
Peko Rehab Project	Peko Tailings	Tennant	Gold & Copper	New plant
Peko Rehab Project	Peko Tailings	Tennant	Cobalt	New plant
Thor Mining	Molyhil	Alice	Mo, W	Reopen mine

### 3. Potential (Next 12-36 months)

Company	Project	Location	Product	Development
Arafura Resources	Nolans	Alice Spr	REO, P	New mine
Compass Resources / HNC	Browns Sulphide	Batchelor	Cu, Co, Ni, Pb, Zn	New mine
Crocodile Gold	Cosmo Deeps	Pine Creek	Gold	Reopen mine
Crocodile Gold	Satellite mines	Pine Creek	Gold	New & reopen
Energy Metals	Bigrlyi	Ngalia Basin	U, V	New mine
ERA Ltd	Ranger 3 Deeps	Jabiru	Uranium	Underground
Excalibur	Juno	Tennant	Gold	Reopen mine
Minemakers	Wonarah	Barkley	Phosphate	New mine
NAD	Merlin	Gulf	Diamonds	Reopen mine
Newmont	Callie Deeps	Tanami	Gold	Expansion
Redbank Mines	Redbank	Gulf	Copper	New pits & plant
Toro Energy	Napperby	Arunta	Uranium	New mine
Western Desert Res	Spring Hill	Pine Creek	Gold	Reopen mine



PENDING MINE DEVELOPMENTS – NEXT 12 MONTHS

Mine Name	<b>Brocks Creek</b>
Company	Crocodile Gold Australia Pty Ltd
Contact	Grant Davey – Chief Operating Officer Phone: (08) 8943 6400 Email: gdavey@crocgold.com
Location	Approx 150 kms south-south-east of Darwin
Description	Reopen underground mining operations at the Zapopan deposit at Brocks Creek. Ore transported to Tom’s Gully or Union Reef for Processing.
Product	Gold
Resource	120,000 tonnes @ 9.8 g/t Au
Mine Life	18 months
Approvals	Environmental – NA Mining – Nov 2009
Schedule	Site preparation – Oct 2009 Production – Nov 2009
Jobs	Construction – NA Production – 50
Capex	Unknown

Mine Name	<b>Toms Gully</b>
Company	Crocodile Gold Australia Pty Ltd
Contact	Grant Davey – Chief Operating Officer Phone: (08) 8943 6400 Email: gdavey@crocgold.com
Location	Approx 90 kms south-east of Darwin
Description	Reopen underground mining operations at Tom’s Gully mine. Ore to be processed onsite through existing 250,000 tpa CIL plant.
Product	Gold
Resource	680,000 tonnes @ 11 g/t Au
Mine Life	3 years
Approvals	Environmental – NA Mining – October 2009
Schedule	Site preparation – Oct 2009 Production – late 2009
Jobs	Construction – Production –
Capex	Unknown

Mine Name	<b>Chinese South &amp; Mottrams</b>
Company	Crocodile Gold Australia Pty Ltd
Contact	Grant Davey – Chief Operating Officer Phone: (08) 8943 6400 Email: gdavey@crocgold.com
Location	Approx 150 kms south-east of Darwin
Description	Recommence open pit mining operations with ore trucked to existing Union Reefs plant for processing.
Product	Gold
Resource	13.3 Mt @ 1.4 g/t Au
Mine Life	2 years
Approvals	Environmental – NA Mining – Nov 2009
Schedule	Site Preparation – Oct 2009 Production – Nov 2009
Jobs	Construction – NA Production – 65
Capex	unknown



Mine Name	<b>Brown's Oxide Project</b>
Company	HNC (Australia) Resources Pty Ltd (HAR)
Contact	Bob Lloyd – General Manager
Location	Approx 85 kms south of Darwin
Description	Existing open cut mining operation for on-site processing of Cu-Co-Ni oxide ore. Currently on care 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	Approvals in place
Schedule	Construction – Late 2009      Production Q2 2010
Jobs	Construction – unknown      Production - 70
Capex	\$50M

Mine Name	<b>Bootu Creek</b>
Company	OM Manganese
Contact	Mark Laing – Group Mining Engineer Phone: (08) 6311 1500      Email:
Location	Approx 110 kms north of Tennant Creek
Description	Construction and installation of a secondary processing plant for treatment of manganese ore and reject material from primary processing plant. This will provide an additional 150,000 tpa to mine production.
Product	Manganese
Resource	30.6 million tonnes at 24.1% Mn
Mine Life	15 years
Approvals	All operational approvals in place.
Schedule	Construction – May 2009      Production – Dec 2009
Jobs	Construction – unknown      Production - unknown
Capex	\$13M

Mine Name	<b>WONARAH/ARRUWURRA</b>
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 – 2010      Production – mid 2010
Jobs	Construction – 50 to 100      Production – 120 (plus 140 for transport)
Capex	Estimated \$107M



Mine Name	<b>HARTS RANGE</b>
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 – 2008
Schedule	Construction – 2010 (Subject to project finance)
Jobs	Construction – unknown Production – approx 60
Capex	\$17M

Mine Name	<b>PEKO TAILINGS – STAGE 3 &amp; 4</b>
Company	Peko Rehabilitation Project Pty Ltd
Contact	John Barker – Mine Manager Phone: 8962 3255 Email: peko@switch.com.au
Location	14 kms southeast of Tennant Creek
Description	Tailings reprocessing operation. Stage 1 (complete) involved a Pilot Plant. Stage 2 (complete) install a magnetite separation plant. Stage 3 (Q2 2010) install a gold and copper plant. Stage 4 (Q4 2010) install a cobalt plant.
Product	Gold, Copper, Cobalt and Magnetite.
Resource	3.9Mt of tailings
Mine Life	6-7 years
Approvals (S3)	Environmental – NA Mining – 2007
Schedule	Construction – mid 2010 (Subject to project finance)
Jobs	Construction – approx 30 Production – 15 (stage 3) + 3 (stage 4)
Capex	Stage 1 (\$3M), Stage 2 (\$4M), Stage 3 (\$5.5M) & Stage 4 (\$1M).

Mine Name	<b>MOLYHIL</b>
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 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 – June 2008
Schedule	Construction – 2009 (Subject to project finance)
Jobs	Construction – 100 Production – 70
Capex	\$71M



POTENTIAL MINE DEVELOPMENTS – NEXT 12 - 36 MONTHS

Mine Name	<b>NOLANS</b>
Company	Arafura Resources Limited
Contact	Alistair Stephens – Managing Director Phone: (08) 9221 7666 Email: <a href="mailto:ajs@arafuraresources.com.au">ajs@arafuraresources.com.au</a>
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 (small amounts of uranium & thorium)
Resource	30.3 Mt containing 12.9% P2O5, 2.8% REO. (0.44 lb/t U <sub>3</sub> O <sub>8</sub> )
Mine Life	30 years
Approvals	Environmental – EIS in preparation Mining – subject to environmental
Schedule	Pilot plant studies in 2008. Definitive Feasibility Study in progress. EIS in preparation. Possible construction in late 2010 with production in 2011.
Jobs	Unknown
Capex	Estimated \$75M (mine) and \$600M (plant)

Mine Name	<b>BROWNS SULPHIDE PROJECT</b>
Company	Compass Resources NL & HNC
Contact	Richard Swann – Managing Director Phone: (08) 8923 1555 Email: <a href="mailto:info@compassresources.com.au">info@compassresources.com.au</a>
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.
Schedule	Development proposals yet to be submitted (EIS expected)
Jobs	Construction – unknown Production – unknown
Capex	Estimated \$750M+

Mine Name	<b>COSMO DEEPS</b>
Company	Crocodile Gold Australia Pty Ltd
Contact	Grant Davey – Chief Operating Officer Phone: (08) 8943 6400 Email: <a href="mailto:gdavey@crocgold.com">gdavey@crocgold.com</a>
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	Development proposals under assessment
Schedule	Construction – 2010 Production – Q3 2011
Jobs	Construction – unknown Production – unknown
Capex	Unknown



Mine Name	<b>SATELLITE PITS (PORTH POINT &amp; PRINCES LOUISE etc)</b>
Company	Crocodile Gold Australia Pty Ltd
Contact	Grant Davey – Chief Operating Officer Phone: (08) 8943 6400 Email: gdavey@crocgold.com
Location	Several locations from 150 to 200 kms south of Darwin
Description	Croc Gold propose to sequentially open a series of open cut mining operations, including North Point and Princes Louise. Ore will be trucked to the existing CIL plant at Union Reefs for processing.
Product	Gold
Resource	Several resources
Mine Life	various
Approvals	Some Development proposals submitted.
Schedule	Construction – unknown                      Production – unknown
Jobs	Construction – unknown                      Production – unknown
Capex	Unknown.

Mine Name	<b>BIGRLYI</b>
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. Upgraded resource from 2008 drilling program expected in Feb/Mar 2009. Updated Scoping Study and environmental studies in progress.
Product	Uranium
Resource	7.65 Mt @ 0.14% U3O8 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	<b>RANGER 3 DEEPS</b>
Company	Energy Resources of Australia Ltd (ERA)
Contact	Rob Atkinson – Chief Executive Phone: (08) 8984 4161
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 <sub>3</sub> O <sub>8</sub> )
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	<b>JUNO</b>
Company	Excalibur
Contact	Alex Bajada – Managing Director Phone: (08) 9367 8295
Location	Approx 9 kms southeast of Tennant Creek
Description	Reopen old mine. Potential for open pit and underground mining of remaining gold orebody. Ore processing may occur on site with construction of new processing plant or possibly at the Warrego mill.
Product	Gold
Resource	16Mt @ 16.178 g/t Au
Mine Life	Undefined
Approvals	Development proposals yet to be submitted.
Schedule	Construction – unknown                      Production – unknown
Jobs	Construction – unknown                      Production – unknown
Capex	Estimated \$70M

Mine Name	<b>MERLIN</b>
Company	North Australian Diamonds
Contact	Tom Reddicliffe – Chief Executive Officer Phone: (08) 9221 3355                      Email: tom.reddicliffe@nadi.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. Stage 2 (partially complete) involves the mining and processing of 502,000 t 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 to 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	<b>CALLIE DEEPS</b>
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. Decision to proceed to full Feasibility expected late 2008. Development decision yet to be made.
Schedule	Unknown
Jobs	Unknown
Capex	Estimated \$500M +



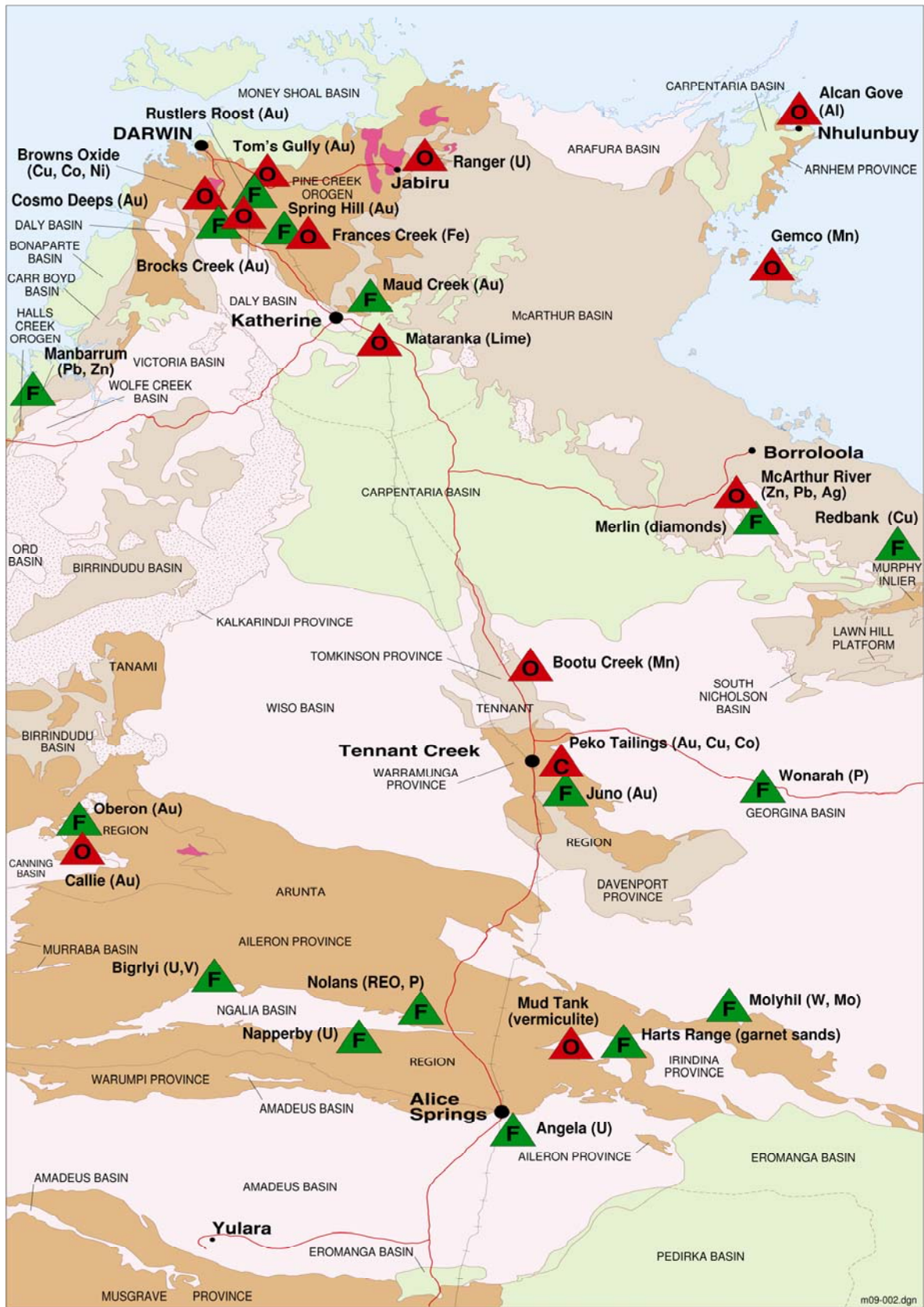
Mine Name	<b>REDBANK (OXIDE PROJECT)</b>
Company	Redbank Mines Limited
Contact	Bruce Morrin – Managing Director Phone: (08) 9322 6045 Email: bruce.morrin@redbankmines.com.au
Location	Approx 900 kms southeast of Darwin in Gulf of Carpentaria
Description	Existing mine expansion of oxide operations. Establish 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 – preparing EIS Mining – pending enviro assessment
Schedule	Construction – mid 2010 Production – late 2010
Jobs	Construction – unknown Production – unknown
Capex	Unknown

Mine Name	<b>NAPPERBY</b>
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. Scoping study commenced and due for completion end Q1 2009. Metallurgical leach tests underway. New resource calculation from 2008 drilling due Q1 2009.
Product	Uranium
Resource	4.6Mt @ 0.03% U <sub>3</sub> O <sub>8</sub> for 1420 t (3.13Mlb) 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	<b>SPRING HILL</b>
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 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



# MINERAL PROJECTS OF THE NORTHERN TERRITORY



Produced by the Northern Territory Geological Survey, October 2009.

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