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Final Relinquishment Report on Exploration Activities Within The Damoh East (MINING/RP-36/2002) Reconnaissance Permit, Madhya Pradesh, India

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Author: A.V.Sthapak

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Copies to: Secretary, Department of Commerce & Industries,
Government of Madhya Pradesh, Bhopal.
Directorate of Geology and Mining, Government of
Madhya Pradesh, Bhopal.
Indian Bureau of Mines, Nagpur.
Geological Survey of India, Calcutta.
ACC Rio Tinto Exploration Limited- Bangalore.
Rio Tinto Exploration – Belmont
Forest Department, Chhattarpur
Forest Department, Bhopal

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1 SUMMARY

This report summarizes all regional exploration work completed by ACC Rio Tinto Exploration within the Damoh East Reconnaissance Permit (Mining/ RP-36/2002). During three years tenure from the date of execution on the January 06 2003 ARTE has discovered one lamproite covered under Neo Proterozoic sediments within RP limits.

The Damoh East RP area, covering Chhattarpur, Damoh and Tikamgarh districts, totalling 2,600 km² was granted to ARTE on November 11 2002 and subsequently executed on January 06 2003. In January 2005, 1600 km² of the original Reconnaissance Permit ("RP") was relinquished as per the provisions of the MMDR. On January 06 2006 all exploration work on the Damoh East RP has ceased.

Exploration completed included collection of 494 heavy mineral gravel samples and ~80# stream sediment geochemical samples at a nominal spacing of one sample per 5.5 square kilometres providing for complete coverage of the permit area. A total of 25,352 heavy mineral grains recovered from the gravel samples were subsequently analysed by manual and automated scanning electron microprobe. The prospective anomalous catchments were further evaluated by 1091 line km of ground magnetic surveys and follow up gravel sampling resulting in 12 targets. Each target was tested by combination of mapping, loam sampling, soil/rock sampling, and ground electromagnetic surveys. Only one anomalous target B108-A (10.5 Ha) could be tested by drilling three-diamond core holes which confirmed the presence of lamproite at this location. Caustic fusion of 120 kg of kimberlitic drill core from the target (B108-1) returned zero diamond.

Further exploration on the defined lamproite and on other prospective targets in the area is pending approval of prospecting license applications submitted over the most prospective areas. (Plan 1).

2 INTRODUCTION

This report pertains to all exploration work completed by ARTE in the exploration for primary diamond deposits and other mineral commodities within the Damoh East RP (Mining/ RP-36/2002). Complimentary periodic reporting has been completed and submitted as per the terms of the RP grant and includes:

- ACC Rio Tinto Exploration Limited (Aug 2003); 1st Bi-annual Progress Report for Exploration of the Damoh East (RP 36/2002) Reconnaissance Permits for the period 07/01/2003 to 06/07/2003
- ACC Rio Tinto Exploration Limited (April 2004); 2nd Bi-annual Progress Report for Exploration of the Damoh East (RP 36/2002) Reconnaissance Permits for the period 07/07/2003 to 6/01/2004
- ACC Rio Tinto Exploration Limited (Sept 2004); 3rd Bi-annual Progress Report for Exploration of the Damoh East (RP 36/2002) Reconnaissance Permits for the period 07/01/2004 to 6/07/2004.
- ACC Rio Tinto Exploration Limited (April 2005); 4th Bi-annual Progress and Partial Relinquishment Report on Exploration Activities Within the Damoh East (Mining/RP-36/2002) Reconnaissance Permit for the period 07/07/2004 to 6/01/2005.
- ACC Rio Tinto Exploration Limited (Sept 2005); 5th Bi-annual Progress Report for Exploration of the Damoh East (RP 36/2002) Reconnaissance Permits for the period 07/01/2005 to 6/07/2005.

All the above reports have been submitted with the relevant government institutions.

There are more than 450 villages within the RP areas. Agriculture is the main occupation for over 90% of the population. Bigger market places are around Kishangarh and Bijawar. Industries are mainly agrarian. Agriculture in the region is mostly single crops restricted to the monsoon season. Less than 20% of the land is irrigated. About 40-50% of the area is covered by forest. Most of the larger forest tracts occur in the southern part of the Damoh East RP and scattered all through the central part of tenement. Most the forest is semi arid and includes mixed teak, khair, and mahua.

The Damoh East RP area, covering Chhattarpur, Damoh and Tikamgarh districts, totalling 2,600 km² was granted to ARTE on November 11 2002 and subsequently executed on January 06 2003.

Reconnaissance operations commenced during January 2003 after execution of the RP with proper notifications and permissions from various government officials, including the District Collectors and the State forest department. All terms and conditions associated with this permission were strictly followed and there were no incidents of non-compliance. To facilitate this reconnaissance work, a base camp was established in the town of Chhattarpur.

Between January and October 2003, several first pass reconnaissance gravel and stream sediment samples were collected from dry streambeds within the RP area. .

Once KIM positive results were received for the first-pass reconnaissance samples, several more follow-up gravel samples were collected at closer spacings in order to delineate areas with anomalous concentrations of KIMs. At the end of this process (around mid-2004) anomalous areas had been delineated over approximately 1,000 km² of the original RP area. The most interesting indicator mineral anomalies were at the Mahan prospect.

Sixteen anomalous catchments were further evaluated with follow-up ground geophysics and soil sampling. Targets were selected and prioritised based on their profile, size and proximity to anomalous drainage samples yielding KIMs. One lamproite has been found to date. Lamproite intruded the mid-Proterozoic sedimentary sequence underlying most of the property.

In January 2005, 1,600 km², or approx 60% of the original RP was relinquished as per the provisions of the MMDR Act. The retained area totalling 1,000 km² covered portions of the Chhattarpur and Damoh districts.

During drilling at Mahan, a 50-person tent camp was set up near the village of Maharkhua, approx. 10 km from Kishangarh, also a transit house was established at Kishangarh. All subsequent field operations were supported from this camp.

In November 2005, drilling commenced at Mahan, following permission from the State Forest Department. Drilling focused on testing of the Mahan geophysical anomaly. Work was completed by January 06, 2006 and PL applications were submitted.

Name (District)	Granted RP Area km ²	Date of Execution	Heavy Mineral Samples	Heavy Mineral Chemistry	Geochemical Samples	Geophysics	Drilling	Expeniturn (Commitm nt) Rs Crores
Damoh East RP 36/2002 (Chhattarpu r and Damoh)	2,600 granted 1,000 retained	6.01.2003	481 gravel	25352 grains	304 stream 768 soil 21 Rock 13 Loam	1091 line-km ground magnetics, 15.3 line-km Max min	1277m	5.40 (2.20)

Table 1: Summary of exploration conducted from January 2003 to January 2006 by ARTE on the Damoh East RP.

3 REGIONAL GEOLOGY

Based on a compilation from published 50,000 scale GSI geological maps, the geology of the area is defined by lithologies of the Bundelkhand Craton and overlying Proterozoic sedimentary basins. The oldest rock types include differentiated granitoid gneiss intruded by dolerite, gabbro, amphibolite and quartz reefs – all of which have been grouped as the 2500Ma Bundelkhand Craton. Meta volcano-sedimentary rocks of Paleo Proterozoic Bijawar Basin occur to the south of the Damoh East and partly Panna West RP areas. The Bijawar group of rocks are overlain by meso to neo Proterozoic platformal sediments of Vindhyan. These rocks are exposed in the southern most part of the RP areas. The Mahan Prospect is located within the Neo-Proterozoic group platformal sediments. The geology of the Damoh East RP is shown in (Plan2).

The permit area is dominated by moderate to rugged topography and high-energy dendritic drainage with numerous hillocks composed of the Vindhyan within the permit. Over 50% of the permit including the higher topographic hills are variously designated as reserved, protected forest and sanctuary area.

4 RESULTS OF EXPLORATION

4.1 Geologic Interpretation

The interpretation was done on overlays on TM false colour imagery at 1:250K scale. The basic line work was digitised and subsequently a geological/structural compilation overlay was also completed. Published 1:250000 scale geological maps were then used to support the geological compilation. Interpretation of the RP area was supported by 1:100,000 scale plots of the IRS panchromatic imagery, and merged TM-IRS imagery. The data was interpreted in terms of regolith cover and structural features. Analysis of remote sensed data including LANDSAT TM imagery and the high-resolution IRS panchromatic imagery has not identified any feature that is attributable to lamproite intrusion.

The IRS imagery could be used to provide a detailed interpretation at 1:50,000 scale or larger, but this would be extremely time consuming because of the fine detail of the Vindhyan stratigraphy that is visible.

4.2 KIM Gravel Sampling

Gravel sampling began in January 2003. Samples were initially collected at a spacing of approximately 1 sample per 10 sq. km. Positive results were further evaluated by additional follow-up gravel samples at closer sample spacings. A total of 481 heavy mineral gravel samples sieved to -1mm were collected by hand evacuation of gravel from trap sites within streambeds. All samples were processed by magnetic and heavy liquid techniques to recover kimberlitic indicator minerals (KIMs). The +0.3-0.85mm paramagnetic heavy mineral concentrates are observed in full with individual KIM grains, namely pyrope, chromite, picro ilmenite, chrome diopside, and diamond being manually sorted, counted and described. Frequently less than fifty KIMs would be recovered from a 30kg sample that typically may contain several tens of millions of other non-KIM grains. Suspected KIMs were subsequently probed by scanning electron microscope and/or Mass Analysing SEM, with the data plotted on standard mineral chemistry plots to establish any lamproite/ diamond association. The +0.3-0.85mm non-magnetic fraction of samples returning positive indicator minerals were further processed and observed for diamonds. All samples were dispatched to the Rio Tinto Laboratory in Bangalore and/or Belmont, Australia for processing, observation, and analysis.

Locations of all indicator mineral samples within the RP area are given in (Plan 3). Field observation results from each sample site are recorded in (Appendix 1).

4.3 KIM Loam Sampling

A total of 13 heavy mineral loam samples sieved to -1mm were collected by hand evacuation of soil at select sample sites. All samples were processed by the same techniques in the laboratory at in Bangalore and/or Belmont, Australia as used for gravel samples. Locations of all loam samples within the RP area are given in Plan3. Field observations from each sample site are recorded in Appendix 2.

4.3.1 Heavy Mineral Sample Diamond Results

Three diamonds including a 0.425 x 0.35mm brown diamond from gravel sample 6470973 shows distorted octahedral with step layering and sharp edges, and a another two brown irregular were recovered from 6663769 gravel sample. (Plan 4)

Neither of these diamonds is of commercial value. Minimum commercial square mesh sieve is typically +0.80-1.0mm.

4.3.2 Heavy Mineral Sample Garnet Results

Kimberlitic pyrope garnet is very rare in the Damoh East permit gravel samples with only 13 grains in 148 samples from a total of 1957 probed garnets, being confirmed as kimberlitic pyrope. The pyrope mineral chemistries are largely G3 eclogitic compositions with only four samples returning five G9 lherzolite pyrope. The remaining garnets are dominated by almandine, spessartine, grossular and minor uvarovite garnet. Most lamproites yield lherzolitic type pyrope garnets, whereas many diamondiferous lamproites yield harzburgitic type pyrope garnets. Pyrope garnet from diamondiferous harzburgite typically is chromium-rich, depleted in calcium and plots within the harzburgite (H) field of (Figure 1). These are also similar in composition to pyropes found as inclusions in diamonds, which equilibrated at the same temperatures and pressures as the diamond during its formation and growth. Hence harzburgitic composition pyropes recovered from lamproite concentrate indicate a potential for diamonds from a peridotitic source. The greater the number of pyrope grains with harzburgitic compositions, the greater the peridotitic diamond potential, particularly if the harzburgitic pyrope population has very subcalcic pyropes (<2.5% CaO) Appendix 3 and 4.

Garnet: Sobolev Plot

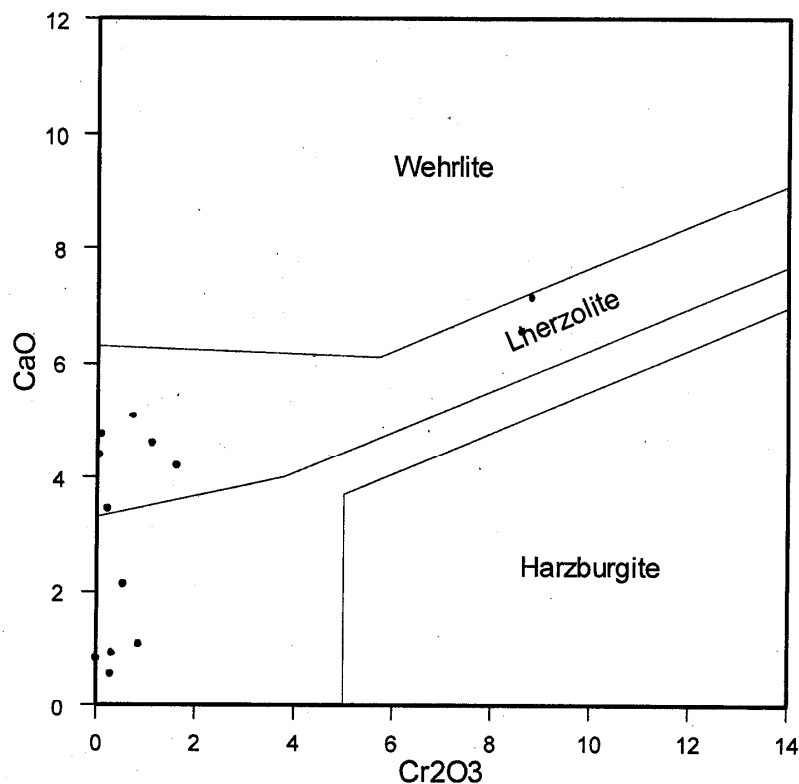


Figure 1 Garnet: Sobolev plot

4.3.3 Heavy Mineral Sample Chromite Results

Chromites are almost ubiquitous in the Damoh East permit with over 90% of the gravel samples returning a total of 16146 probed grains from 270 samples. Further approximately chromites in 68 samples returned potentially kimberlitic chromite compositions of >9% MgO and 20 - 75% Cr₂O₃. Notably there is a large overlap between these kimberlitic chromites and non-kimberlitic sourced species with 35-65% Cr₂O₃ and 0-20% MgO making differentiation of kimberlitic species from a sample containing mixed populations difficult (figure 2).

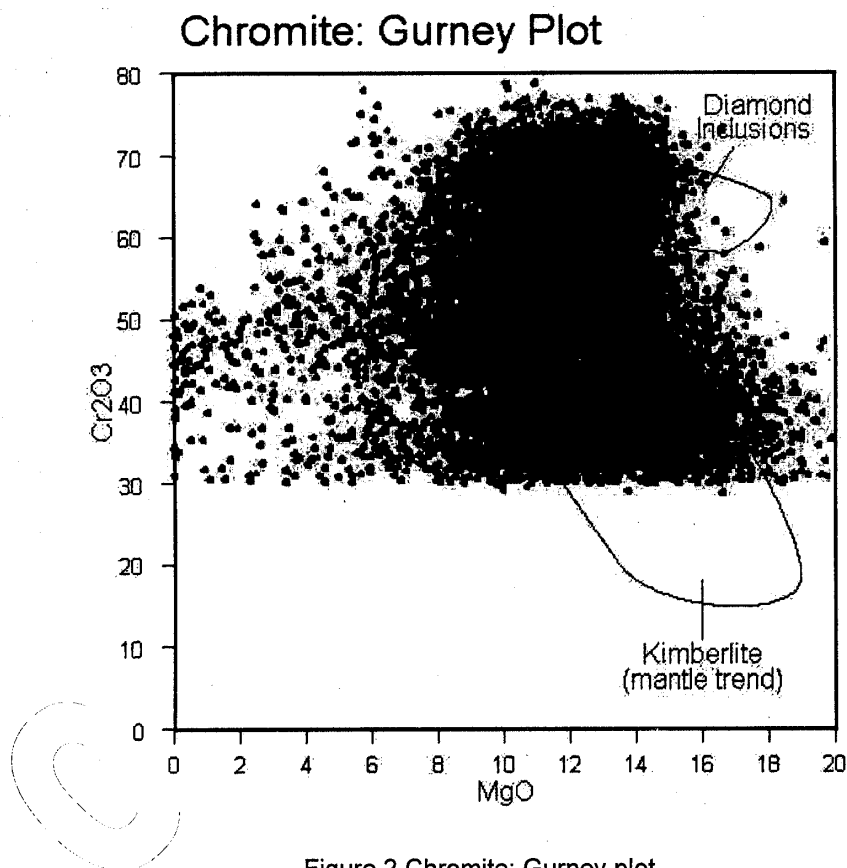


Figure 2 Chromite: Gurney plot

4.3.4 Heavy Mineral Sample Ilmenite Results

Similar to chromite, ilmenite of crustal composition is almost ubiquitous to the Damoh East permit gravel samples 4011 ilmenite grains recovered from 203 samples. Kimberlitic micro ilmenite grains are however rare with only 167 grains in 37 samples returning kimberlitic chemistries.

4.3.5 Heavy Mineral Sample Chrome Diopside Results

Chrome diopside is always rarest among chromite, pyrope and ilmenite. Out of total 19 grains from 5 samples 7 grains from 3 samples shows inclination towards lamproite chemistry.

4.4 Stream Sediment Geochemistry

A total of 304 stream sediment samples have been collected at some of the gravel sample sites. Each sample consists of approximately 100gm of -80# (-180mm) silt collected from the active streambed in the centre or lowest part of the stream. All samples have been analysed at the Shiva Laboratory in Bangalore to analyse for a suite of 32 lithophile, chalcophile and precious metals by Multi-acid digest including both ICP-MS & ICP-ES finish to fully optimize detection limits. Elements and detection limits for each are as follows: Ag (0.1 ppm); Al (10 ppm); As (0.5 ppm); Ba (10 ppm); Bi (0.1 ppm); Ca (10 ppm); Cd (0.1 ppm); Ce (0.5ppm); Co (2 ppm); Cr (2 ppm); Cu (2 ppm); Fe (100 ppm); K (10 ppm); La (0.5ppm); Mg (10 ppm); Mn (5 ppm); Mo (0.1 ppm); Na (10 ppm); Nb (0.2 ppm); Ni (2 ppm); P (5 ppm); Pb (0.5 ppm); Sb (0.5 ppm); Sr (2 ppm); Ta (1ppm); Te (0.2 ppm); Ti (10 ppm); V (2 ppm); Y (0.05ppm); W (0.1 ppm); Zn (2 ppm); Zr (10 ppm).

Locations of these samples are presented in Plan 5, and geochemical assays and descriptions are listed in Appendix 5.

The lamproites are associated with only background stream sediment geochemistry. Minor potential for base and precious metal mineralisation is indicated within the RP area with several point sources returning anomalous results, however, the lack of continuity and lack of multi element signatures suggest associated mineralisation to be minor or the anomalies themselves to be non-mineralisation associated.

	Ag ppm	Al ppm	As ppm	Au ppm	Ba ppm	Bi ppm	Ca ppm	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Fe ppm
Mean	0.54	48731	3.13	0.0001	396	0.11	5862	0.04	96	15	193	4	26	31670
Median	0.40	46686	0.25	0.0000	283	0.05	3901	0.01	67	13	135	3	23	28686
Mode	0.01	-	0.05	0.0000	810	0.01	6877	0.01	122	12	48	3	18	32838
Standard Deviation	0.77	22787	9.50	0.0003	274	0.29	6762	0.04	86	12	190	3	16	14535
Minimum	0.01	10993	0.05	0.0000	69	0.01	543	0.01	24	1	18	1	4	6349
Maximum	10.25	96032	140.25	0.0020	1267	2.30	60322	0.22	990	150	1290	40	160	116680

	Ga ppm	In ppm	K ppm	La ppm	Mg ppm	Mn ppm	Mo ppm	Na ppm	Nb ppm	Ni ppm	P ppm	Pb ppm	Pd ppm	Pt ppm
Mean	14	0.38	17369	46	3924	645	1.62	5083	10	35	451	24	0.0001	0.0001
Median	12	0.03	13922	33	3450	501	1.20	1638	9	28	363	19	0.0000	0.0000
Mode	16	0.03	30677	112	2246	640	0.05	836	10	22	353	0	0.0000	0.0000
Standard Deviation	12	0.97	10333	51	2591	596	1.68	5769	6	28	370	27	0.0005	0.0006
Minimum	3	0.03	1671	13	626	63	0.01	172	3	5	70	0	0.0000	0.0000
Maximum	120	7.65	42698	630	21610	6590	13.08	21862	50	330	3247	280	0.0030	0.0030

	Rb ppm	Sb ppm	Se ppm	Sr ppm	Ta ppm	Te ppm	Ti ppm	Tl ppm	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm
Mean	94	0.23	0.12	91	1.52	0.05	2603	0.40	76	1.22	31	47	162
Median	82	0.05	0.05	57	0.88	0.02	2270	0.34	62	1.02	22	42	107
Mode	132	0.05	0.05	67	0.05	0.02	2168	0.01	43	0.01	20	40	64
Standard Deviation	51	0.34	0.10	73	3.02	0.07	2204	0.41	61	1.51	35	22	147
Minimum	23	0.05	0.05	12	0.05	0.02	757	0.01	13	0.01	9	5	46
Maximum	253	2.64	0.25	391	30.25	0.61	31821	4.74	630	11.85	420	162	1420

Table 2 Basic statistics of stream sediment geochemistry.

4.5 Soil Sample Geochemistry

Soil samples were collected within anomalous catchments, and over geophysical targets identified during the course of the ground geophysics program in this area. Soil samples consist of approximately 100 grams of -80# (-180µm) C – horizon soil typically collected from a shallow 10 - 20 cm deep pit or at the bottom of an auger hole. Soil samples have been variably sampled either in a nominal 150 metre line spacing and 50m sample spacing grid or as crosshair or single line traverses with sample spacings varying from 25 – 100metres. A total of 768 soil samples sieved at -80# were collected. Samples were analysed by ICP-OES and ICP-MS (=ICP-MS) techniques at Shiva Laboratories in Bangalore. Elements and detection limits for each are as follows: Ag* (0.1 ppm), Al (10 ppm), As* (0.5 ppm), Ba (10 ppm), Ca (10 ppm), Cd* (0.1 ppm), Ce (0.5 ppm), Co (2 ppm), Cr (2 ppm), Cs (0.1 ppm), Cu (2 ppm), Bi* (0.1 ppm), Fe (100 ppm), Ga (0.1 ppm), K (10 ppm), In (0.05 ppm), La (0.5 ppm), Mg (10 ppm), Mn (5 ppm), Mo* (0.1 ppm), Na (10 ppm), Nb* (0.1 ppm), Ni (2 ppm), P

(5 ppm), Pb* (0.5 ppm), Rb (0.1 ppm), Sb* (0.5 ppm), Se (0.5 ppm), Sr (2 ppm), Te (0.2 ppm), Th (0.2 ppm), Ti (10 ppm), Tl (0.1 ppm), U* (0.02 ppm), V (2 ppm), W* (0.1 ppm), Y (0.05 ppm), Zn (2 ppm), Zr (10 ppm). Locations and results of these samples can be found in Appendix 6. Plan 6 details the locations and Nb results for soils collected within the Bunder Prospect Area.

The results highlighted discrete soil geochemical targets enriched in key pathfinder trace elements for lamproite (eg: Nb, Zr, La, Ce). These elements are relatively immobile, and indicate a close proximity to source in this residually weathered environment. Further ground follow-up of these positive results identified lamproite outcrop and float in several areas.

	Ag ppm	Al ppm	As ppm	Ba ppm	Bi ppm	Ca ppm	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Fe ppm
Mean	0.51	65432	9.91	350	0.17	3676	0.05	84	20	114	8	34	39250
Median	0.37	67012	9.41	356	0.05	3045	0.05	83	19	103	8	34	40113
Mode	0.05	70870	0.25	406	0.05	2469	0.05	81	17	115	8	35	28649
Standard Deviation	0.40	11946	4.79	69	0.18	2304	0.00	15	5	63	2	8	7103
Minimum	0.03	21904	0.25	103	0.05	813	0.05	39	7	51	2	10	11648
Maximum	3.60	101480	63.14	819	1.63	21721	0.05	158	80	760	20	115	70127

	Ga ppm	In ppm	K ppm	La ppm	Mg ppm	Mn ppm	Mo ppm	Na ppm	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm
Mean	16	0.03	14252	43	4675	647	1.06	1856	14	56	444	27	104
Median	16	0.03	13025	44	4349	574	0.99	1689	14	56	474	26	102
Mode	19	0.03	14243	33	4441	403	0.05	1626	16	54	273	27	102
Standard Deviation	4	0.00	4834	8	1337	402	1.09	651	4	13	174	7	29
Minimum	5	0.03	4458	21	1973	92	0.05	849	5	22	134	0	28
Maximum	32	0.03	41011	82	10112	6775	19.73	4774	88	234	936	75	246

	Sb ppm	Se ppm	Sr ppm	Ta ppm	Te ppm	Ti ppm	Tl ppm	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm
Mean	0.25	0.25	54	1.84	0.10	4850	0.67	95	2.25	24	49	103
Median	0.25	0.25	51	1.53	0.10	4818	0.70	97	2.27	25	48	98
Mode	0.25	0.25	50	1.57	0.10	4392	0.05	98	0.05	25	54	50
Standard Deviation	0.00	0.00	13	1.83	0.00	874	0.29	16	1.06	5	15	39
Minimum	0.25	0.25	26	0.25	0.10	1909	0.05	34	0.05	10	20	40
Maximum	0.25	0.25	107	30.98	0.10	10824	1.68	139	9.32	37	248	250

Table 3 Basic statistics of soil geochemistry.

4.6 Rock Sample Geochemistry

Rock samples were collected during the course of the exploration program within the RP area. A total of 21 samples were collected. Rock samples wherever possible are composited

either as rock chips for any outcrop or as composites of similar lithology for float samples. Samples were analysed by ICP-OES and ICP-MS (=ICP-MS) techniques at Shiva Laboratories in Bangalore. Elements and detection limits for each are as follows: Ag* (0.1 ppm), Al (10 ppm), As* (0.5 ppm), Ba (10 ppm), Ca (10 ppm), Cd* (0.1 ppm), Ce (0.5 ppm), Co (2 ppm), Cr (2 ppm), Cs (0.1 ppm), Cu (2 ppm), Bi* (0.1 ppm), Fe (100 ppm), Ga (0.1 ppm), K (10 ppm), In (0.05 ppm), La (0.5 ppm), Mg (10 ppm), Mn (5 ppm), Mo* (0.1 ppm), Na (10 ppm), Nb* (0.1 ppm), Ni (2 ppm), P (5 ppm), Pb* (0.5 ppm), Rb (0.1 ppm), Sb* (0.5 ppm), Se (0.5 ppm), Sr (2 ppm), Te (0.2 ppm), Th (0.2 ppm), Ti (10 ppm), Tl (0.1 ppm), U* (0.02 ppm), V (2 ppm), W* (0.1 ppm), Y (0.05 ppm), Zn (2 ppm), Zr (10 ppm). Locations and results of these samples can be found in Appendix 7.

Plan 5 details the locations of these samples. Similar to soils, lamproites produce distinctly elevated compatible and incompatible elemental signatures.

	Ag ppm	Al ppm	As ppm	Ba ppm	Bi ppm	Ca ppm	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Dy ppm	Er ppm	Eu ppm	Fe ppm
Mean	0.61	74557	12.67	214	0.08	75275	0.27	65	52	354	1.86	75	0.44	0.20	0.15	99851
Median	0.57	64519	0.50	139	0.10	23063	0.25	43	53	95	1.38	66	0.00	0.00	0.00	90217
Mode	0.21	-	0.50	66	0.10	-	0.10	-	52	28	0.00	109	0.00	0.00	0.00	-
Standard Deviation	0.36	60405	21.38	188	0.04	105987	0.17	73	25	480	2.01	55	1.08	0.50	0.40	79643
Minimum	0.10	11792	0.50	43	0.00	606	0.10	6	8	28	0.00	8	0.00	0.00	0.00	11907
Maximum	1.55	224980	66.93	622	0.10	308270	0.61	293	103	1574	7.22	184	4.43	2.07	1.74	315780

	Ga ppm	Gd ppm	Ho ppm	In ppm	K ppm	La ppm	Lu ppm	Mg ppm	Mn ppm	Mo ppm	Na ppm	Nb ppm	Ni ppm	P ppm	Pb ppm	Pr ppm
Mean	32	0.61	0.08	0.64	6375	38	0.05	32436	1251	0.91	5458	11	237	576	23.72	1.00
Median	38	0.00	0.00	0.05	2720	20	0.00	26873	1069	0.73	2305	6	79	559	9.79	0.00
Mode	0	0.00	0.00	0.05	-	-	0.00	-	-	0.10	-	-	-	-	-	0.00
Standard Deviation	22	1.60	0.19	0.75	9993	33	0.13	37887	1194	0.86	5357	13	408	403	38.96	3.06
Minimum	0	0.00	0.00	0.00	248	4	0.00	436	161	0.10	472	2	13	92	0.50	0.00
Maximum	72	6.82	0.78	1.86	42722	114	0.52	164240	5976	3.79	15400	55	1648	1443	171.20	13.68

	Rb ppm	Sb ppm	Se ppm	Sm ppm	Sr ppm	Ta ppm	Tb ppm	Te ppm	Ti ppm	Tl ppm	Tm ppm	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm
Mean	31	3.05	0.33	0.78	96	1.33	0.09	0.16	14073	0.22	0.05	367	0.78	20	77	184
Median	27	1.12	0.50	0.00	74	0.87	0.00	0.20	7123	0.10	0.00	241	0.20	17	63	106
Mode	0	0.50	0.50	0.00	12	0.50	0.00	0.20	1184	0.10	0.00	-	0.12	0	2	63
Standard Deviation	32	3.01	0.22	2.16	82	0.90	0.21	0.08	18803	0.47	0.11	494	0.81	17	60	198
Minimum	0	0.50	0.00	0.00	12	0.50	0.00	0.00	653	0.00	0.00	33	0.10	0	2	28
Maximum	119	8.06	0.50	9.43	287	3.45	0.85	0.20	61856	2.21	0.43	1895	2.31	53	219	708

Table 4 Basic statistics of rock geochemistry.

4.7 Geophysics

Ground magnetics surveys were employed to cover catchments yielding anomalous kimberlitic indicator minerals. A total of 1091 line km of ground magnetics were completed during the period of the tenure. Ground magnetics grids were established over 2 catchments and the Rewa group sediments, where sampling was deemed ineffective due to the thick Rewa cover.

Surveys were completed using Scintrex Envimag magnetometers operating in "walkmag" mode. Survey line spacing was 100 m, with a reading taken every two seconds, equating to a station spacing of 2-3m. Navigation was by hand-held GPS, providing a positional accuracy of +/- 10 meters. A magnetic base station, positioned central to the individual grids, measured diurnal variations at 20 second intervals.

Raw field data were corrected for diurnal variations and manually filtered to remove "movement noise" inherent to the Envimag "walkmag" system. The filtered data were then reduced to magnetic pole to remove the effects of geomagnetic inclination and declination on the anomaly geometry.

Anomalies were selected and prioritised based on their profile form, size and proximity to anomalous samples. A summary of the ground magnetic grids follows

Damoh East

Ground magnetics on the Damoh East grid covers Rewa group sediments, where gravel sampling is largely ineffective. The dominant feature on the grid is a broad wavelength, elongate, TMI high in the SW of the grid, interpreted as a basement feature. No targets, consistent with a buried magnetic lamproite source were identified within the grid.

Mahan

The Mahan ground magnetic grid is characterised by a relatively quiet magnetic background, consistent with the expected signature of the Rewa formation. The dominant feature of the Mahan grid is target B108, a high amplitude RTP dipole, sourced by lamproite at a depth of 165m. Detailed ground magnetics further defined the target geometry prior to drilling. The top of the lamproite is at the unconformity between the Kaimur group (meso-proterozoic) and Rewa group (neo-proterozoic) platformal sediments, suggesting a similar age to the nearby Majhgawan lamproite.

A second target to the north of B108 has been identified as a satellite body to the B108 lamproite.

Bhalu

The Bhalu ground magnetics grid covers predominantly Kaimur sediments and the lower Rewa group (shales). Background magnetic signature is generally quiet, although areas of moderate amplitude surficial noise are evident in areas of laterite cover.

Horizontal loop electromagnetics (Max-Min) surveys were completed over the priority magnetic targets within the grid, with several of the targets exhibiting a coincident conductive and magnetic signature, although none have proven to be sourced by lamproite/kimberlite.

Prospect	Ground_Mag	Max-Min
Damoh East	421.0	
Bhalu	364.0	15.3
Mahan	279.0	
Mahan B108	27.0	
Total	1091.0	15.3

Table 5: Geophysical Survey Coverage

4.8 Lamproite Descriptions

To date, a total of one lamproite have been found within the Damoh East RP through a combination of gravel sampling, ground geophysics (both magnetics and EM) and drilling. This lamproite was a sub cropping, picked mainly by near surface ground magnetics, further the target was tested by way of drilling. Mahan Lamproite was found to be intrusive into the host sequence of mid-Proterozoic sediments on the margin of the Bundelkhand craton. The location of these lamproites is shown in Plan 14.

Initial interpretation of the B108 target optimistically suggested a potentially large (40Ha) non-to-weakly magnetic body, rimmed by a more magnetic phase. The postulated target was characterised by a broad wavelength RTP magnetic low, flanked to the north and south by RTP magnetic highs. Drill hole B108-1 and B108-3, drilling inclined, intersected weakly magnetic, olivine-rich vent facies lamproite from 189m beneath almost flat lying, hard Neoproterozoic sandstone and shale cover rock. As such lamproite at the initial depth is enriched with primary and secondary carbonate and serpentinised matrix giving more appearance of tuff. The olivine in the matrix is almost altering to clay (montmorionite) resulting breaking of rock as contact to water. Lamproite fragments are in the form of Lapilli autolith and a few pelletal lapilli. Lapilli's are ranging from .1 to .5cm size and autolith from .5 to 2cm l size, maxi of 12cm autolith. The altered olivine Macrocryst mainly of two generation one as matrix and other in the form of macrocryst that are observed mainly in between autolith and lapilli. Country rock clasts is mainly of shale but rare in entire log.

4.9 Diamond Drilling

Optimistic approach to test the target was drilling as it was modelled at interpreted to be a deep sited magnetic body. A total of 1,277m of HQ drilling was completed by three drill holes. Drilling was focused on to find out the ore body beneath. The diamond-drilling program at Mahan (target B-108) commenced in November 2005 and was completed in mid December 2005. Mitchell drilling company of Australia, were contracted to complete the drilling

operations using UDR-200 drill rig. The locations of the drill holes, in addition to drilling logs can be found in Plan 13 and 10 and Appendix 8 and 9.

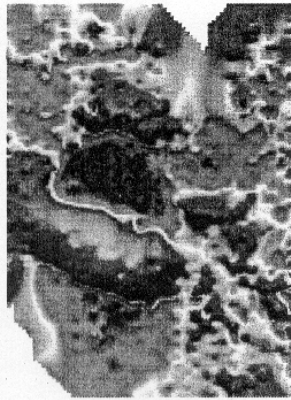
Prior to drilling, permission was obtained from the State forest department to complete this work. ARTE complied with all terms and conditions of this work.

All drill hole locations were surveyed using handheld gps measurements. The drilling contractor was instructed to ensure maximum recovery of drill core. Typically, 95-100% was obtained. Drilling progress was remarkable due to modern machine. Drilling was carried out in both day and night shift and was under continuous supervision of Rio Tinto staff.

Hole No.	Hole Id	Prospect Name	Total Depth	Lamproite Depth from	Lamproite Depth to	Azimuth	Inclination
1	B-108-1	Mahan	488.35	189.15	444.30	200	60
2	B-108-2	Mahan	239.75	----	----	0	90
3	B-108-3	Mahan	548.55	179.72	526.42	10	60

Table 6: Drilling details of Mahan prospect.

Drill hole B108-1, drilling south towards the southern boundary of the B108 target, intersected olivine-rich macrocrystic Lamproite at 189m depth. The Lamproite intersection continued until 444m, when Mesoproterozoic sandstone was intersected. The hole was terminated at a total depth of 488m without intersecting a modelled magnetic rich zone.



MAHAN PROSPECT

B-108-1

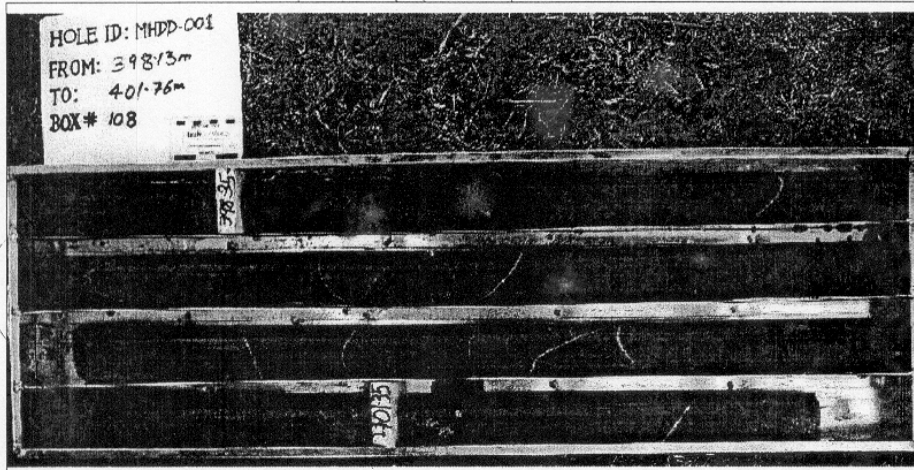
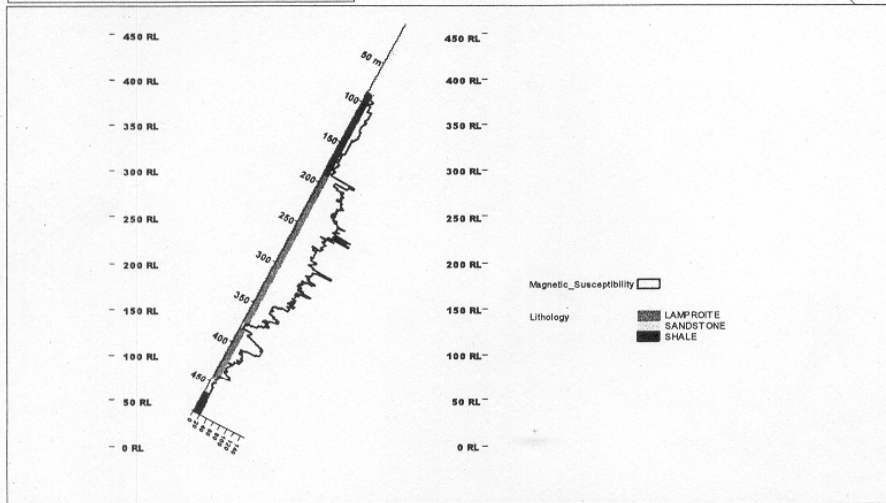


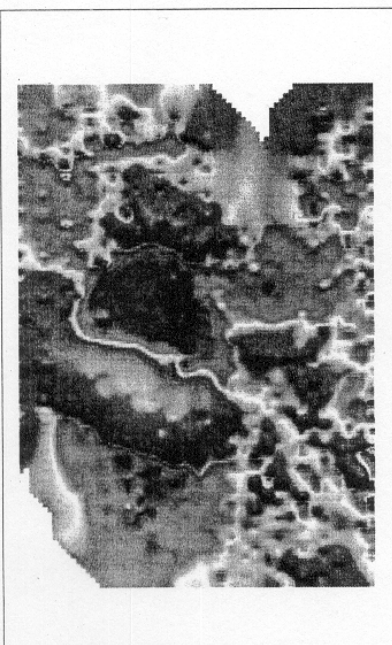
Figure 3 B-108-1: Slide with Mag image, detailed drill log and a core box.

Vertical drill hole B108-2, collared approx. 125m north of B108-1 and testing the central non-magnetic portion of B108 failed to intersect Lamproite to a depth of 239m, reducing the size of the single B108 body from approx. 40 Ha, to two separate Lamproite, one southern body of approx. 10.5Ha (B108A), and a smaller northern body of approx. 3 Ha (B108B).

Drill hole B108-3, drilling north towards the northern contact of B108A, intersected Lamproite from 180m and exited the Lamproite at a depth of 527m, with the hole terminated at a depth of 549m within Mesoproterozoic sandstone as expected.

B108A is manifested by a WNW-trending elongate RTP magnetic dipole and was drill tested by two holes, intersecting the top of the Lamproite at approximately 160m vertical depth. The maximum width of the body at this depth is interpreted to be 200m, equating to a surface area of approx. 10.5Ha. Both drill holes exited the Lamproite at depth, suggesting a width of approximately 100m at 400m vertical depth.

Magnetic susceptibility measurements on the drill core showed the Lamproite had a magnetic susceptibility averaging $150 \times 10^{-5} \text{SI}$, with the host sandstones and shales having a susceptibility averaging $40 \times 10^{-5} \text{SI}$. The measured magnetic susceptibility is too low to cause the magnetic response due to an induced magnetic component only, which suggests a significant remnant magnetic component. Petrophysical measurements, including remnant magnetization measurements, are planned for drill-core samples prior to the end of the quarter.



**MAHAN PROSPECT
B-108-2**

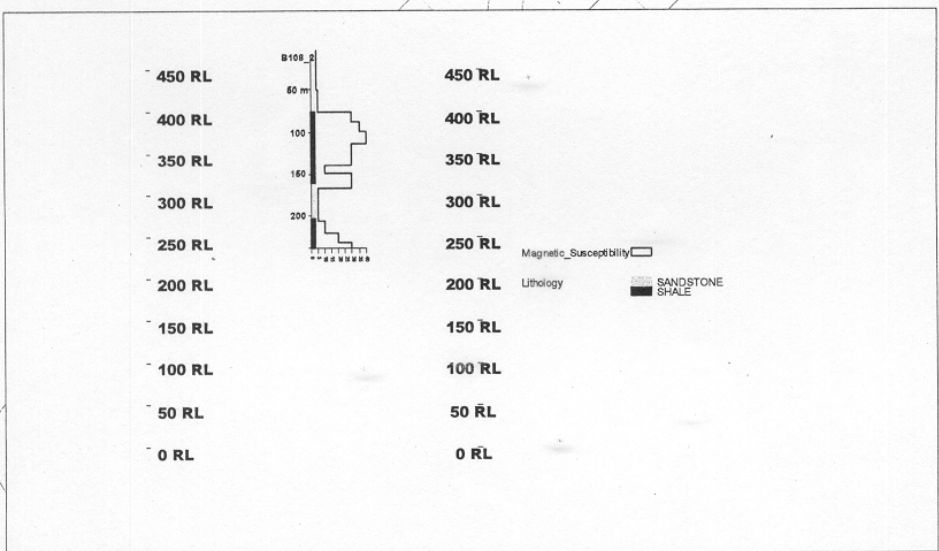


Figure 4 B-108-2: Slide with Mag image and detailed drill log.

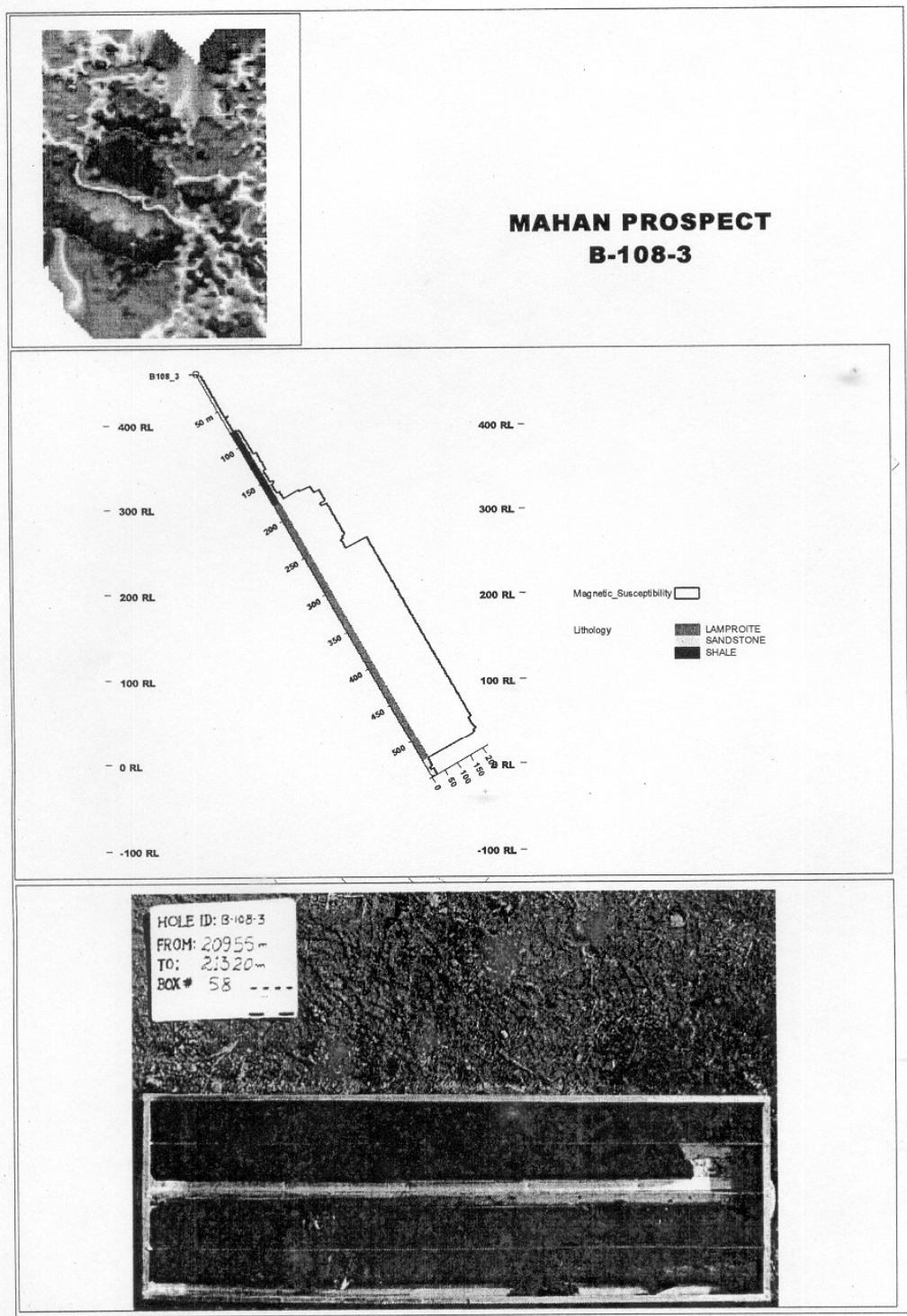


Figure 5 B-108-3: Slide with Mag image, detailed drill log and a core box.

4.10 Caustic Fusion Diamond Results

Approx. 120kg from B108-1 sent for caustic fusion returned zero diamonds. Appendix 10.

5 HEALTH, SAFETY, COMMUNITY RELATIONS AND ENVIRONMENT

Rio Tinto recognises that excellence in managing health, safety, and environment and community responsibilities is essential to long-term success. Through effective management practices the Group aims to ensure the health and safety of its employees, to minimise any adverse impacts its activities may have on the environment and to make a positive contribution to local community life.

The policies apply to all Rio Tinto subsidiaries and managed by the concerned company including ARTE and the Damoh East reconnaissance project. A summary of Rio Tinto's HSEC and other policies are summarized in "The Way We Work", a copy of which is provided in appendix 11.

5.1 Health and Safety

Rio Tinto Group policies on Health and Safety are designed to minimise the risk of injury or occupation illnesses. A minimum management requirement at all of the company-managed operations is to ensure full compliance with the Rio Tinto Standards. The goal is for zero work related injuries or occupation illnesses.

Minimum prerequisites require that all work activities be based on risk assessments ensuring that effective controls and safe work procedures exist for all hazardous activities. Further the standards require a system for ensuring that employees are trained, equipped and where applicable, certified to carry out their work according to the applicable safe work procedures, and that their competence has been tested. On the entire Bundelkhand project the major hazardous activities were assessed to incorporate forest fire, vehicles and driving, manual handling and electrical work. Risk assessments and selective standard operating procedures have been developed for specific tasks associated with each of these and for many other potentially hazardous activities. Safety training and other initiatives have focused mainly on these higher risk areas including but not restricted to the following:

- Employment of dedicated drivers for all company vehicles.
- Training of a staff supervisor as an accredited defensive and 4 – wheel driver instructor.

- Annual competency based defensive and 4 wheel driving training for all drivers including for all licensed technical and support staff. All three training programs to date have been undertaken by accredited and experienced Indian field supervisor.
- Annual first aid, accident management and emergency response training to all senior staff. Professional paramedical instructors sourced from various accredited international companies have undertaken four programs.
- Provision, installation and enforced use of drill rig safety accessories including specialised high-pressure air hoses, high-pressure hose whip arrestors and fall from height protective equipment.
- Selected personnel have been trained in managing “work at height”, “confined spaces” and in “manual handling” issues by accredited International companies. Knowledge gained from this training has been utilised by the individuals in minimising exposure to such risks and by coaching other personnel to be able to recognise the risk and where appropriate, designed and implemented safe operating procedures.
- Hire of designated field accommodation and office facilities each upgraded to meet company standards including electrical which required significant rewiring and installation of specialised equipment. Local private electrical contractors were identified and trained to maintain the electrical system to international standards.

The corporate systems have a requirement for all employees, including staff and contractors, to report hazards and incidents and for management to have a system for review and analysis of higher risk incidents and for the implementation of appropriate mitigating measures. The objective of having incident reporting system is to avoid the repetitions of any incident through out-group operations and improve up on the safety culture.

Numerous frontline management and three annual Rio Tinto corporate safety audits have been conducted on the exploration groups operations in India. Audits in all cases have found the Indian operations to be of a high standard and compliant with only minor exceptions that have subsequently been rectified. In 2005 the Rio Tinto Exploration –Australasia region, including the Indian operations that contributed significantly, was awarded a Rio Tinto Group Chief Executive Safety award. Over 85 Rio Tinto managed companies from all over the world were reviewed with only three receiving the award in recognition of the excellent safety performance over the proceeding three years. A commendation for the same was received in 2003, 2004 and 2005.

5.2 Environmental

Rio Tinto Environmental Policy aims to prevent or otherwise minimise, mitigate and rehabilitate any harmful effects that the group's operations have on the environment. Although exploration activities including those completed in ARTE Damoh east reconnaissance permits is essentially non-invasive to the environment, the same rigor and level compliance to the standards, systems and procedures is applicable.

For the Damoh east reconnaissance permits an Environmental Management Plan was devised prior to the initiation of field activities and subsequently updated as the program developed. The plan evaluated potential environmental impacts associated with the activities and provided procedures to prevent or minimize impacts. In case where an impact was unavoidable or accidental, appropriate rehabilitation procedures were in place. Relevant exploration personnel including those of contractors were inducted and trained in these procedures. Otherwise a competent person supervised the work to ensure minimal environmental impact. Control systems included incident reporting and annual environmental reporting to first-line management and corporate audits.

Identified areas for potential environmental impact on the Damoh east permits for which procedures were designed and implemented include the following:

- **Ground disturbance due to access tracks:** No access tracks were constructed for exploration in the permit areas. Access in all cases was achieved by using the existing infrastructure or during the dry season and when no crops were present, by driving cross-country. In the latter case, care was taken to ensure minimal compaction of ground and minimal potential for soil erosion.
- **Sampling:** Sampling operations had minimal to zero environmental impact. Gravel and stream sediment samples were in all cases taken from the active streambed load and care was taken to avoid any damage to the stream banks. For soil sampling and auger sampling excess soil was filled back into the excavated hole. In all cases sample sites were accurately located by GPS thus eliminating the need for flagging tape or other tags to mark the sample sites. All sample site photos are incorporated in to the database and a few representative photos are published in annual environmental report.
- **Ground Geophysical Surveys:** All geophysical surveys were carried out without cutting any trees or bushes with the help of the state of the art GPS facility. Access along prognostic grid lines was by foot and wherever possible trees and other obstacles were avoided by diverting the line.

Most of the forest in the area of operations is dry (arid) deciduous thorny type with dominantly Sal and Teak flora. Limited surface sampling was conducted within the forest areas with the permission and cooperation of the relevant forest authorities. No significant environmental incidents were experienced during the period of this survey.

5.3 Community Relations

There are more than 300 villages within the RP areas with a total population estimated to be over 75000. Agriculture is the main occupation for over 80% of the population. Industrial activity is mainly agrarian. Agriculture is mostly single crops restricted to the monsoon season with less than 5% under irrigation.

During the term of the exploration specific community relations policy applications included:

- Brief sheet: About 2500 community brief sheets were distributed among the local community to share with them the exploration process and the results so far. The brief sheet would be revised once in six months and up dated with latest results of our activities.
- Employment to a number of local people to work in various roles in the organisation including camp assistants, community relations staff, drivers technical assistants, cooks and housekeeping staff and others. In total up to 30 employees, the majority sourced locally were employed in the field based out of our operational bases at Chhattarpur, Kishangarh, and Maharkua.

Established preferred supplier/service relationships with several local businesses for the purchase and supply of most of the required field consumables, notably for food, water and fuel and for service and repair of field equipment.

Undertook various community initiatives including erection of environmental awareness boards along NH Roads with the support of the State Forest Department. The initiatives were participatory with the community providing labour and the company the equipment, finance and supervision Total direct costs for these programs to date amount to INR 35000.

Conducted over 1000 consultations with stakeholders including village elders, village leaders teachers, individual landowners and others. The main focus of these consultations was to request access and to keep the community informed of our presence and activities.

Briefing sheets in vernacular summarising the exploration activities were distributed to the community in the RP area. The purpose of these sheets was to keep the community informed of the exploration activities and to minimize rumours and misinformation.

6 CONCLUSIONS AND RECOMMENDATIONS

ARTE has explored its Damoh East RP with maximum speed, safety and efficiency in a technically competent manner. As a result of these diligent efforts it has been able to delineate a relatively small area that is prospective for economically viable diamondiferous lamproites. Three separate PL applications have been filed over this area of the known lamproites discovered to date.

The discovery of one lamproite within the Damoh East RP and still to be tested targets validates the exploration process used by Rio Tinto in the search for diamondiferous lamproites. The combination of gravel sampling, ground geophysics (especially ground magnetics) and soil sampling has proved to be an invaluable cost effective exploration technique.

On grant of pending Prospecting Licenses the Mahan lamproite will be further evaluated for their diamond potential making an affirmative approach that diamonds are present in

scattered for within Lamproite and remaining core may contain diamond, regardless of the caustic fusion result with no diamond.

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