CHG-7

RIO TINTO

ACC - Rio Tinto Exploration Limited

A member of the Rio Tinto Group

Final Relinquishment Report for the Kanker Reconnaissance Permit Raipur and Mahasamund District, Chhattisgarh, India.

Chhattisgarh
7

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Geological Survey of India, Calcutta.

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1 EXECUTIVE SUMMARY

This is a report on the exploration for diamond and other mineral commodities carried out on the Kanker Reconnaissance Permit between Feb 2003 and December 2005.

The Kanker RP area totaling 1360 km^2 was granted to ACC Rio Tinto on the 28th December 2002 and subsequently executed on 24th February 2003. This RP was completely relinquished on 6th December, 2005, two months before the scheduled date of final relinquishment as the exploration failed to discover any significant mineralization of interest to ARTE.

Exploration completed includes 144 heavy mineral gravel samples and 142 stream sediment geochemical samples (–80#) collected at a nominal spacing of one sample per 9 square kilometers providing for complete coverage of the permit area. A single 0.8x 0.95mm brown irregular diamond recovered from one sample was not repeated in follow up sampling and was not associated with kimberlitic indicator minerals suggesting that it to be from a distal and unrecognized source. No other diamonds were identified. 5611 heavy mineral grains recovered from the gravel samples were subsequently analyzed by manual and automated scanning electron microprobe. 8 samples in 7 discrete prospect areas are evaluated as having heavy minerals potentially sourced from undiscovered kimberlite bodies.

No airborne magnetic surveys have been carried out in this area due to the discrete nature and limited distribution of the defined anomalies.

Regional exploration completed by ACC Rio Tinto Exploration within the Kanker Reconnaissance Permit in the Raipur and Dhamtari districts of Chhattisgarh has not discovered any kimberlites or other precious or base metal mineralization.

2 INTRODUCTION

The Kanker RP area totaling 1360 km^2 was granted to ACC Rio Tinto on 28th December 2002 and subsequently executed on 24th February 2003. The entire RP was finally relinquished well before the completion of the three year schedule on the 6th December, 2005. In compliance with the requirements of the MMDR limiting the term of reconnaissance permits to a maximum of three years, this final relinquishment report details all exploration completed within the RP.

Complimentary periodic data and maps are further reported in the previous biannual and relinquishment reports including:

- ACC Rio Tinto Exploration Limited (November 2003); 1st Bi-annual Progress Report for Exploration of the Kanker Reconnaissance Permits For the period 24/02/2003 to 24/08/2003
- ACC Rio Tinto Exploration Limited (May 2004); 2nd Bi-annual Progress Report for Exploration of the Kanker Reconnaissance Permits For the period 24/08/2003 to 24/02/2004
- ACC Rio Tinto Exploration Limited (October 2004); 3rd Bi-annual Progress Report for Exploration of the Kanker Reconnaissance Permits For the period 24/02/2004 to 24/08/2004.
- ACC Rio Tinto Exploration Limited (May, 2005); 4th Bi-Annual Progress Report for Exploration of the Kanker Reconnaissance Permits for the Period 24/08/2004 to 24/02/2005

- ACC Rio Tinto Exploration Limited (November, 2005); 5th Bi-Annual Progress Report for Exploration of the Kanker Reconnaissance Permits for the Period 24/02/2005 to 24/08/2005.

All the above reports have been submitted with the relevant government institutions and are further archived with ACC Rio Tinto in Bangalore.

ARTE maintained a strong focus on health, safety, environment and community relations in its Chhattisgarh diamond exploration projects. No lost time injuries and relatively few high-risk health and safety incidents were reported during the exploration period.

Name (District)	Granted RP Area km^2	Date of RP Execution	Indicator Mineral samples	Geochemical samples	Geophysics
Kanker RP (Raipur and Dhamtari districts)	1360	24.02.2003	144	142 (stream)	291 line km ground magnetics

Table 1: Summary of Exploration work completed by ARTE Ltd within the Kanker RP's

3 *REGIONAL GEOLOGY*

The region is part of Bastar Craton of the Peninsular Indian Shield. The Kanker RP area is entirely underlain by Neoproterozoic platformal sediments of Chhattisgarh Supergroup. The lithostratigraphy of Chhattisgarh Supergroup of rocks given in the table 2 was established by the Geological Survey of India and given by Murthy (1987). Chhattisgarh sediments are underlain by Achaean granite gneiss - greenstone rocks which have been classified as part of Sonakhan Group and Baya Gneisses. Achaean Bundeli Granitoid plutons have intruded the Sonakhan and Baya Gneisses. Meso- and Neoproterozoic dolerite dykes are also present. Nearest known kimberlitic rocks are at Kalmidadar (50 km SE) in Orissa and Mainpur Kimberlite Field (105 km SSE). These kimberlites are undated, but assumed to be post Neoproterozoic sediments in age.

Table 2: Generalized Lithostratigraphic Succession of Chhattisgarh Basin

(After Murthy, K.S., 1987)

<table>
<tr><th>Supergroup</th><th>Group</th><th>Formation</th><th>Lithology</th></tr>
<tr><td rowspan="9">CHHATTISGARH SUPERGROUP

(UPPER PROTEROZOIC)</td><td rowspan="4">RAIPUR</td><td>Tarenga</td><td>Pink and purple shale (+180m)</td></tr>
<tr><td>Chandi</td><td>Purple and grey stromatolitic limestone (670m)</td></tr>
<tr><td>Gunderdehi</td><td>Pink and purple shale / grey shale (430m)</td></tr>
<tr><td>Charmuria</td><td>Grey limestone, white to buff clays</td></tr>
<tr><td></td><td colspan="2">UNCONFORMITY</td></tr>
<tr><td rowspan="4">CHANDERPUR</td><td>Kansapather</td><td></td></tr>
<tr><td>Kondkera</td><td>White sandstone (+125m)</td></tr>
<tr><td>Charpodih</td><td>Reddish brown and olive green sandstone (15 m)</td></tr>
<tr><td>Lohardih</td><td>White pebbly sandstone (240 m)</td></tr>
<tr><td colspan="4">NONCONFORMITY</td></tr>
<tr><td>ARCHEAN TO LOWER PROTEROZOIC</td><td colspan="2">CHILPI AND SONAKHAN GROUP OF ROCKS</td><td>Granite – greenstone complexes</td></tr>
</table>

The main lithologies mapped in the Kanker RP area are predominately undifferentiated shales, **limestone and dolomite that broadly correlate with the Gunderdehi, Chandi and Tarenga** Formations of the Raipur Group. Outside and to the east of the permit, the Raipur Group is underlain by the clastic sediments of the Chandrapur Group, that in turn unconformably overlie

the Achaean gneissic and granitoid basement. A system of moderately strong NE-SW lineaments and faults are evident from interpreted Landsat imagery of this area.

The Mahanadi River forms part of the eastern boundary of the Kanker RP. Pairi is the main tributary to the Mahanadi River, which flows NW in the southeastern part of the RP area. The area is mostly flat having low energy dendritic drainage. Irrigation channels divert the drainage throughout the permit and in particular in the vicinity of the Mahanadi River. Intense agricultural activities throughout have frequently diverted or converted to paddy fields most first order and often second order streams, such that these streams are no longer mappable on the ground. In general, the topography within the area varies from low, rugged hills fringed by colluvium, grading from scree to coalesced alluvial fans and open, gently sloping sheet wash plains to broadly undulating areas of gently rolling peneplains.

4 RESULTS OF EXPLORATION

4.1 Indicator Mineral Sampling

Gravel sampling for kimberlitic indicator minerals was initiated in the area from 29th Feb 2003, and till date total of 144 samples sieved to –1mm and weighing an approximate 30-kg have been collected from carefully selected trap sites on the 1st to 3rd order streams. The Location of indicator mineral sampling is shown in Plan NDbg0425.

Stream Sediment Geochemistry

Approximately 142 stream sediment samples sieved at -80# have been collected at each of the indicator mineral sample sites. Elements and detection limits for each are as follows: Au (1 ppb); Pt (5 ppb); Pd (1 ppb); Ag (0.1 ppm); Al (10 ppm); As (0.5 ppm); Ba (10 ppm); Ca (10 ppm); Cd (0.1 ppm); Co (2 ppm); Cr (2 ppm); Cu (2 ppm); Bi (0.1 ppm); Fe (100 ppm); K (10 ppm); 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); Th (20 ppm); Ti (10 ppm); U (0.02 ppm); V (2 ppm); W (0.1 ppm); Zn (2 ppm); Zr (10 ppm).

4.2 Geology

Red shale of Gunderdehi Formation (Raipur Group – Chhattisgarh Super group) underlies 1-10 m thick alluvium of Mahanadi River or its tributaries. Away from alluvial topsoil adjacent to Mahanadi River and its tributaries, a 1 to 2 m thick laterite or leached topsoil is observed over the iron rich shale unit. In the 4th biannual report, a remote sensed geological interpretation map integrated with geological traversing and published GSI geological maps at 1:250,000 scale was appended. Analysis of remote sensed data including clay differentiation from Landsat TM imagery was not able to identify any kimberlite or features that could be attributed to kimberlite intrusion in the RP area.

4.3 Reconnaissance Heavy Mineral (Gravel) Sampling

A total of 144 gravel samples were collected from second and third order streams at a nominal spacing of 1 sample per 10 to 12 square kilometers effectively sampling all active drainage areas over the entire RP. This method is considered more effective than airborne geophysical

techniques especially in areas of active drainage with minimal laterite development or cover such as mapped in the Kanker RP.

Each gravel sample comprised approximately 30kg of –1mm sand collected by hand from heavy mineral concentration zones within the active stream sediment bed load. All samples are processed at the company's specialist processing facilities by dense media separation, magnetic and heavy liquid techniques with mineral concentrates manually observed for any potential kimberlitic indicators.

Analysis of observation and major oxide SEM mineral chemistries (table 3 and table 4) identified only 2410 potentially kimberlitic indicator mineral grains from 27,520 selected and probed heavy mineral grains. Notably gravel samples from the Kanker contain only minor pyrope garnet with 32 samples (6%) returning a maximum of 13 grains. Ranking of samples based on presence of kimberlitic indicators identifies a total of 43 (8%) samples with definitive kimberlite sourced indicator minerals.

	Pyrope	Kimberlitic Chromite	Picro Ilmenite	Chrome Diopside
No of grains	26	47	0	0
Maximum grain count	11	29	0	0
No of positive samples	08	05	0	0
% of positive samples	38%	23.8%	0%	0%

Table 3 Summary of kimberlitic indicator minerals and positive samples base on major element oxide SEM data.

	(Definite kimberlitic indicator minerals present)	(Not Definitive – minor grains with kimberlitic chemistries)	Not Definitive – dominant crustal overlapping into kimberlite chemistries)	(Negative sample or Non kimberlitic chemistry of all probed heavy mineral grains)
Grand Total	8	16	11	76
% of Total	7%	14%	10%	69%

Table 4: Summary sample rankings based on observation and probe results.

Details of gravel samples and SEM major oxide results for all heavy mineral indicators are listed in Appendix 1 and Appendix 2 respectively. Note that for clarity and data management issues, all listed probe data has been screened and only includes chemistry of the potentially kimberlitic minerals. Gravel sample locations are given in plan NDbg0425.

4.3.1 Heavy Mineral Sample Diamond Results

One 0.8 x 0.95 mm irregular in shape, translucent, brownish colored diamond was identified from the observation of heavy mineral concentrates. Follow up surveys in this catchment however did not identify any further diamonds. Further no kimberlitic indicators were observed

in either this sample or repeat or upstream sampling suggesting a distal provenance for this stone. Notably this stone is smaller than commercial size diamond size and has no significant value.

4.3.2 Gravel Sample Garnet Results

Probing returned 39 kimberlitic pyropes in 22 samples tested over 1581 garnet grains from 65 samples. Kimberlitic pyropes are dominantly G9 lhzerolitic (28 grains in 15 samples) and G1, G3 and G4 eclogitic (11 grains in 9 samples) with minor wherlite and megacryst pyrope. Pyrope mineral chemistries are shown in figure 1. The remaining garnets are dominated by almandine, spessartine, grossular and minor uvarovite garnet compositions.

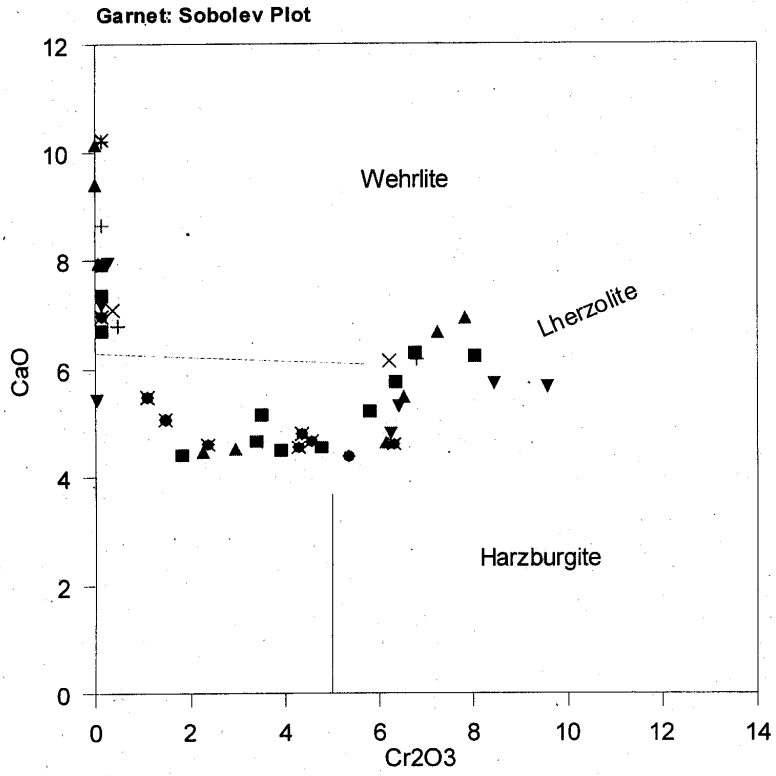

Figure 1 Garnet Sobolev plot (Cr2O3 vs. CaO) for gravel samples from the Kanker reconnaissance permit.

4.3.3 Gravel Sample Chromite Results

Chromite populations are dominated by non-kimberlitic sourced species with 42-60% Cr2O3 and 0-17% % MgO almost completely overlapping the mineral chemistry fields of kimberlitic

Chromite species (see figure 2). An estimated 152 Chromite grains in 42 samples are considered to be potentially sourced from kimberlite.

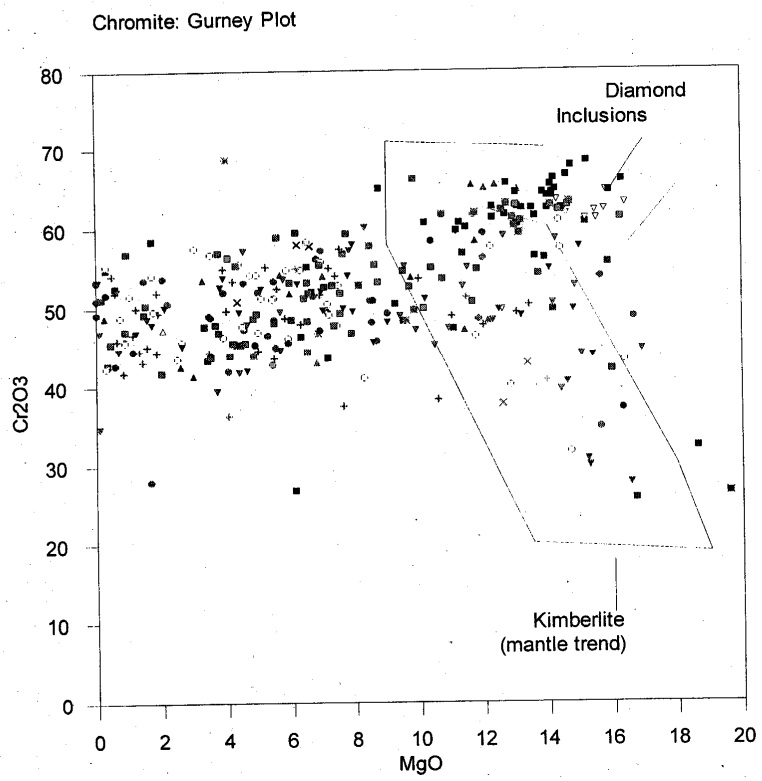

Figure 2: Gurney plot (MgO vs. Cr_2O_3) of all Chromite grains recovered from gravel samples in the Kanker RP.

4.3.4 Gravel Sample ilmenite Results

Ilmenite populations are dominated by non kimberlitic sourced species with <8% MgO and typically <1% Cr2O3. Only 25 grains in 10 samples are considered to be potentially kimberlitic.

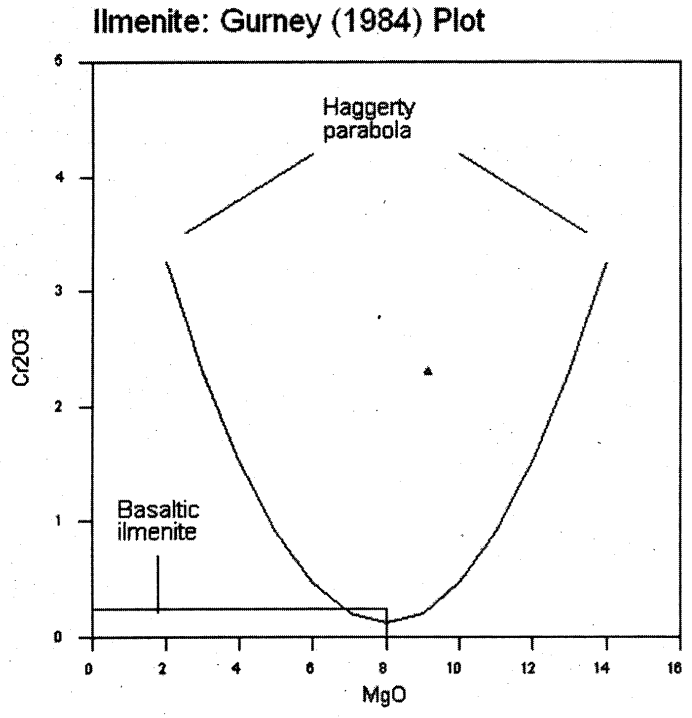

Figure 3: Gurney Cr2O3 vs. MgO plot for Ilmenite recovered from gravel samples in the Kanker reconnaissance permit area.

4.4 Geochemical Exploration:

A total of 142 stream sediment samples, have been collected and assayed from within the permit area. Summary statistics of geochemical samples collected are given in table 5 - 7. Full data including sample locations and assay results for all samples collected are listed in Appendix 3.

Stream sediment samples were collected at the same sample site as the reconnaissance indicator minerals. Each sample consists of approximately 100-150gm of –80# (-180mm) silt collected from the active streambed in the centre or lowest part of the stream. No soil samples were collected in RP.

Standard sample analysis is for a suite of 37 elements by mixed acid digest with ICP–MS or ICP–OES detection. Elements analyzed with individual detection limits in brackets include: Ag (0.1ppm); Al (10ppm); As (0.5ppm); Ba (10ppm); Bi (0.1ppm) Ca (10ppm); Cd (0.1ppm); Ce (2ppm); Co (2ppm); Cr (2ppm); Cs (0.1ppm); Cu (2ppm); Fe (100ppm); K (10ppm); La (1ppm); Mg (10ppm); Mn (5ppm); Mo (0.1ppm); Na (10ppm); Nb (0.2ppm); Ni (2ppm); P (5ppm); Pb (0.5ppm); Rb (2ppm); Sb (0.5ppm); Se (0.5ppm); Sr (2ppm); Ta (1ppm); Te (0.5ppm); Th (20ppm); Ti (10ppm); V (2ppm); W (0.1ppm); Y (1ppm); Zn (2ppm) and Zr (10ppm). For stream sediment samples, further analysis by 10-gram fire assay with ICP-OES finish was conducted for Au (1ppb), Pt (5ppb) and Pd (1ppb).

4.4.1 Stream Sediment Geochemical Results

142-stream sediment samples sieved to –80# were collected from 2nd and 3rd order streams providing complete coverage of all active drainages within the RP area. Each sample consisted of approximately 100gm of –80# (-0.180mm) silt collected at each gravel sample site from the active streambed in the centre or lowest part of the stream. Stream sediment geochemistry indicates no potential for precious and base metal mineralization. Stream sediment sample locations with results of Au, Cu, Pb and Zn are given in Plan NDbg0426–429. Summary statistics of stream sediment results are given in table 5. Complete data including sample locations and assay results are listed in Appendix 3.

	Ag ppm	*Al %*	*As ppm*	*Au ppb*	*Ba ppm*	*Bi ppm*	*Ca %*	*Cd ppm*	*Ce ppm*	*Co ppm*	*Cr ppm*	*Cs ppm*	*Cu ppm*
Mean	0.4	3.65	9.0	1.8	499	0.3	1.15	0.2	111	29	146	3.3	37
Median	0.3	3.61	9.4	1.0	465	0.1	1.06	0.1	111	27	137	3.4	38
Mode	0.1	2.33	0.5	1.0	495	0.1	0.81	0.1	120	23	137	2.4	38
Standard Dev	0.3	1.24	5.1	1.7	201	0.6	0.71	0.4	55	10	55	1.2	12
Minimum	0.1	1.10	0.5	1.0	136	0.1	0.10	0.1	25	7	45	0.5	8
Maximum	1.9	6.33	24.8	11.0	1478	3.7	5.21	3.0	528	59	454	5.6	68

Table 5: Stream Sediment Statistical Analysis

	Fe %	Ga ppm	In ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Pd ppb
Mean	4.10	19	0.1	1.05	42	0.39	1625	0.9	0.16	13	50	276	19	1.0
Median	3.99	18	0.1	0.83	40	0.38	1486	0.8	0.15	10	47	273	16	1.0
Mode	3.96	10	0.1	0.94	43	0.25	2272	0.9	0.18	7	47	329	21	1.0
Standard Dev	1.69	8	0.2	0.76	22	0.18	713	0.6	0.10	13	33	88	13	0.0
Minimum	1.40	1	0.1	0.24	8	0.05	339	0.1	0.04	1	5	44	1	1.0
Maximum	15.57	49	1.9	4.70	218	0.78	4572	5.1	0.80	83	325	516	95	1.0

Table 6: Stream Sediment Statistical Analysis

	Pt ppb	Rb ppm	Sb ppm	Se ppm	Sr ppm	Ta ppm	Te ppm	Ti %	Tl ppm	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm
Mean	1.0	75	0.7	0.5	58	1.4	0.2	0.47	0.4	85	1.3	24	46	112
Median	1.0	74	0.5	0.5	54	1.1	0.2	0.37	0.3	87	1.2	22	43	69
Mode	1.0	101	0.5	0.5	44	0.5	0.2	0.39	0.1	97	1.0	22	50	66
Standard Dev	0.2	31	1.2	0.0	22	1.4	0.0	0.56	0.3	31	0.5	12	16	134
Minimum	1.0	8	0.5	0.5	18	0.5	0.2	0.12	0.1	11	0.3	3	4	26
Maximum	2.0	161	11.9	0.5	154	8.0	0.2	5.37	1.5	211	3.2	89	88	980

Table 7: Stream Sediment statistical Analysis

4.4.2 Soil and Rock Geochemical Results

No soil samples collected within the RP.

4.5 Geophysical Survey

4.5.1 Ground Geophysical Survey

Within the RP, a total of 2 ground magnetic grids, totaling 291 line kilometers (75 km^2), at a nominal line spacing of 75 - 100meters were surveyed covering the anomalous catchments defined on the basis of highest priority anomalous indicator mineral results. An index map showing the all the ground geophysics grids is attached as NDbg0433. Ground geophysical survey were done in preference to airborne geophysics due to the limited anomalous area defined by indicator mineral and geochemical surveys and the higher sensitivity of ground based surveys in detecting subtle changes in the magnetic and electromagnetic intensity.

Surveys were completed using Scintrex Envimag magnetometers operating in "walkmag" mode. With a sampling rate of 2 seconds, sample interval is approximately 2-3 meters along the line. 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 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.

The following grids are covered by ground geophysics.

Grid 1041

The 1041 grid is characterized by a highly variable magnetic background typical of ferruginous sandstones that outcrop in the area, (refer to plan: NDbg0433 Ground Magnetic Grid 1041). Geological traversing over a number of features in the area did not identify any kimberlite.

Grid 1069

The 1069 grid is dominated by a high amplitude curvilinear magnetic feature on the southern end of the grid and a zone of high amplitude surficial noise proximal to Tamaseoni town in northwest of the grid, (refer to plan: NDbg0432 Ground Magnetic Grid 1069). No targets have been identified or followed up on this grid.

Permit Name	HEM / Mag Line km	Helimagnetics Line km	Total Line km
Kanker RP	291 line km ground magnetics	Nil	291 line km ground magnetics

Table 8: Summary of ground geophysical surveys by Reconnaissance Permit

4.5.2 Anomaly Selection and Follow-up Process

Anomaly selection was based on the integration of all data sources including gravel indicator mineral distribution; geology and structure, Landsat TM and IRS remote sensed data and ground magnetic data. No targets have been identified or followed up on this area.

5 HEALTH, SAFETY, ENVIRONMENT AND COMMUNITY

Rio Tinto recognizes that excellence in managing health, safety, 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 minimize 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 Kanker 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 4.

5.1 Health and Safety

Rio Tinto Group policies on Health and Safety are designed to minimize 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 Chhattisgarh project the major hazardous activities were assessed to incorporate 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 Australian based driver training companies.
- Annual first aid, accident management and emergency response training to all senior staff. Professional paramedical instructors sourced from various accredited international companies have undertaken for our programs.
- 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 requires 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 2004 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.

5.2 Environment

Rio Tinto Environmental Policy aims to prevent or otherwise minimize, mitigate and rehabilitate any harmful effects that the group's operations have on the environment. Although exploration activities including those completed in ARTE Kanker 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 Kanker 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 Kanker 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. 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.

- Regular internal audits are conducted to ensure compliance to internal standards.

Most of the forest in the area of operations is dry (arid) deciduous thorny type with dominantly Sal 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 is revised once in six months and up dated with latest results of our activities.

- Employment: Employment to a number of local people to work in various roles in the organisation including geologists, field supervisors, 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 Mahasamund, Saraipali, Sitapur and Pathalgaon.

- 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 40000.

- 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.

- Developed internal systems to record, report and monitor community activities and devised strategies to address impacts. All front-end field personnel were oriented and inducted prior to interaction with the community. Two community relation specialists were employed and were available during negotiations and consultations with the local community.

- 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.

Village	Initiative	Stakeholders	Participatory Contributors	Total cost (Rs)
Mahasamund Camp	Cleaning of the Trimurthy Colony in Mahasamund	Residents of colony	ARTE	5000
Mahasamund Camp	Construction of 10 environment awareness boards	Community in the District	Forest Department, Mahasamund Circle	35000

Table 9: List of community initiatives undertaken by ARTE on the Kanker reconnaissance permit.

(The exploration in Kanker RP was carried out from Mahasamund base camp)

7 *REFERENCES*

K.S Murthy (1987) Memoir Geological Soc. India

Keywords

India, Bastar Diamond Exploration, Kimberlitic Indicators, Geochemical Stream sediment Sampling, Geophysics, Magnetics.

Locality

Kanker 64 G, 64 H 1:250 000 sheets

Descriptor

Final report of all exploration for diamond and other mineral commodities completed in the Kanker districts of Chhattisgarh by ARTE during the term of RP Feb 2003 to Dec 2005.