# SUMMARY REPORT

# GANHDHAMARDAN BAUXITE DEPOSIT

## Sambalpur and Balangir Districts

## State of Orissa, India

Map: NTS 65L/13
Latitude 20˚52' North Longitude 82˚ 50' East

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## 3 SUMMARY

A large residual deposit of metallurgical grade bauxite occurs at the top of Gandhamardan hill in the State of Orissa, in the eastern part of India. The bauxite was formed by in situ, subaerial weathering of aluminium-rich rocks under tropical conditions.

The deposit was explored intensively in the 1980's, jointly by the Geological Survey of India (GSI), the Orissa Directorate of Mines (ODM), and Mineral Exploration Corp. Ltd. (MECL). ODM and MECL are crown corporations, ODM of the State of Orissa, and MECL of the Government of India.

The exploration work consisted of linecutting, topographic surveying, geological mapping, pitting, drilling, sampling, assaying, mineralogical studies, and metallurgical tests.

The project has been reported to contain a historical resource estimate of "…207.37 million tones averaging 46.10% $A1_20_3$…" (Mohanty, 1981). This resource was calculated prior to, **the Canadian Institute of Mining and Metallurgy (CIM) Best Practises Guidelines for Estimation of Mineral Resources and Mineral Reserves and National Instrument 43-101 (NI 43-101). The company has obtained the original data but has not done the work necessary to verify the classification of the resource or reserve and the company is not treating it as a NI 43-101 defined resource or reserve. It is a historical resource estimate that should not be relied upon.**

Mineralogical studies and metallurgical tests indicate that the bauxite is amenable to the production of alumina using the Bayer Process. The chief use of alumina is in the production of aluminium metal.

A feasibility study was commissioned in 1985 by Bharat Aluminium Co. (Balco), who were interested in the deposit as a source of feed for their aluminium plant in Korba. The town of Korba is situated 350 kms. by rail from Gandhamardan. Balco proceeded to develop the deposit, but was thwarted by local villagers who were concerned that the environment would be adversely affected. Balco abandoned the project, and the deposit has since been idle. **The Balco feasibility study was based on historical reserve estimates that are today considered too speculative by current NI 43-101 standards to have economic considerations applied to them, and there is no guarantee that further work will establish economic viability.**

Gandhamardan hill, on top of which the bauxite deposit is situated, is a designated Forest Reserve. Indian government regulations permit mining in a designated Forest Reserve provided that another area of equal or greater areal extent is secured and substituted in its stead, and the designation transferred to it. A permit must be granted by the Dept. of Forests to effect such a transfer. The Directorate of Mines has identified 3 potential substitute sites, and has made application to the Dept. of Forests for the necessary permit. Granting of the permit is pending.

The project is being developed by the Company's wholly owned subsidiary, Continental Resources (USA) Ltd. (CRL). The Government of Orissa is anxious to have the deposit developed, and has encouraged ODM to do so. ODM enjoys state-wide ownership of all mineral rights, and develops them through a wholly-owned subsidiary, Orissa Mining Corp. (OMC). OMC and Continental Resources (USA) Ltd.(CRL) have entered into a Joint Venture Agreement, with Continental as operator, to develop the Gandhamardan bauxite deposit. This agreement is being revised by CRL and OMC and awaiting approval by the Government of the State of Orissa, India. The pending agreement provides that CRL may form a consortium or joint venture in order to develop the project. The ultimate goal of the Agreement is to eventually establish a plant to produce aluminium metal.

## 4 INTRODUCTION AND TERMS OF REFERENCE

This Summary Report was written at the request of Mr. Bruce Whipple of Continental Resources (USA) Ltd., a subsidiary of Balaton Power Inc. It was written on April 8, 2003, and revised on January 15, 2007 and further revised on February 9, 2007.

The Gandhamardan Bauxite deposit was the focus of an extensive exploration-evaluation programme conducted in stages over a number of years by ODM and MECL. A need was recognized to examine and assimilate the technical results of all this work, to draw whatever conclusions might emerge, and to make recommendations regarding any further work that might be warranted. This Report addresses that need.

The prime sources of data utilized in preparing this Report are technical reports written by geologists and engineers employed on the project by ODM and MECL. Information was also obtained from other technical reports, and from discussions held with officials of OMC, MECL, GSI, National Aluminium Company of India, and SNC-Lavalin Inc. As well, the author drew upon observations made during 5 visits to the area, including 3 to the property. These 3 visits lasted a total of 59 days.

All of the technical reports utilized are listed in the References.

## 5 DISCLAIMER

The author has relied heavily on technical reports written by ODM and MECL personnel. These persons are competent, qualified professionals. Nevertheless, occasional minor discrepancies were found in their reports, such as conflicting numbers, typographical errors, and illegible words. Most of the discrepancies involve drill hole sites and pit sites, and they could not be resolved. One of the more bothersome was in the ODM resource calculations. One calculation appears to include Block 10, the other does not, although it is not clear that this is the case. At any rate, Block 10 is one of the smallest blocks, and accounts for only about 3% of the total calculated tonnage. Its inclusion or omission does not change the weighted average grade calculations. The other discrepancies appear to have similar minimal effects on the size, shape, and grade of the bauxite zone, due to the thorough extent of work performed, and to the straight-forward nature of the deposit.

## 6 PROPERTY DESCRIPTION AND LOCATION

The Gandhamardan bauxite deposit occurs at the top of Gandhamardan hill. This hill, which has a plateau top, is linear, aligned in a NE-SW direction. The hill staddles the boundary between Balangir District to the SE, and Sambalpur District to the NW, in the west central part of the State of Orissa, in eastern India.

Figure I shows the general location of Orissa in India.

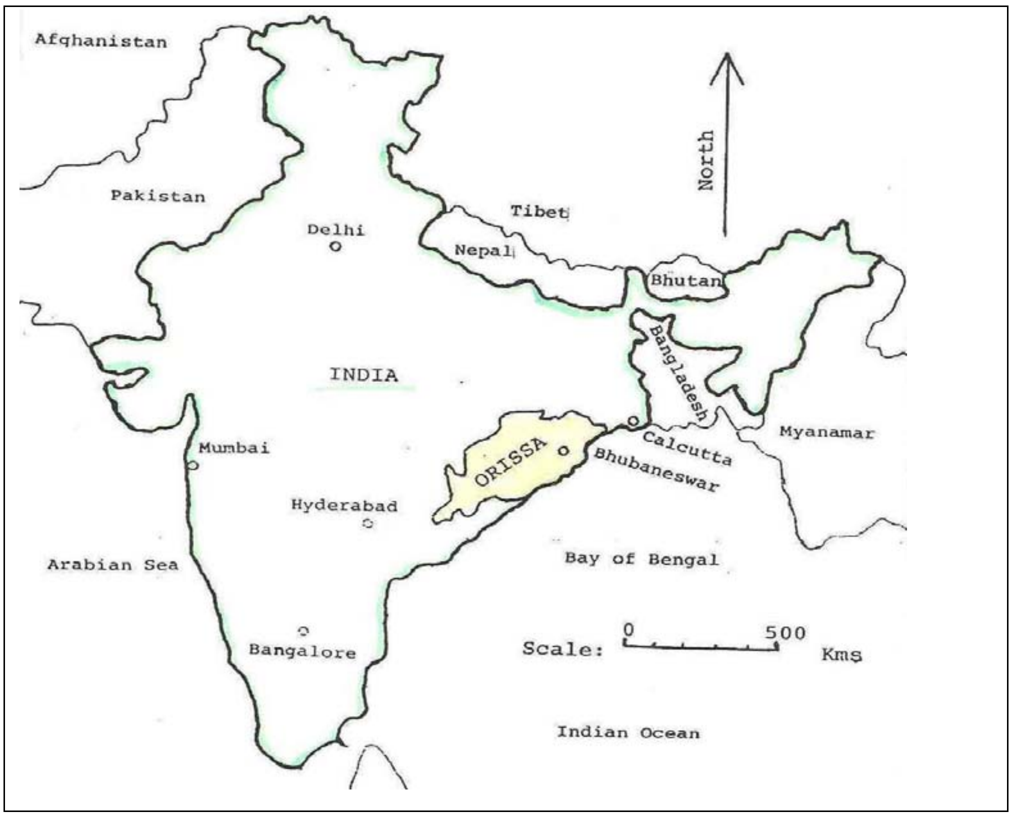


FIGURE I- GENERAL LOCATION SKETCH

Figure II shows the location of Gandhamardan in Orissa.

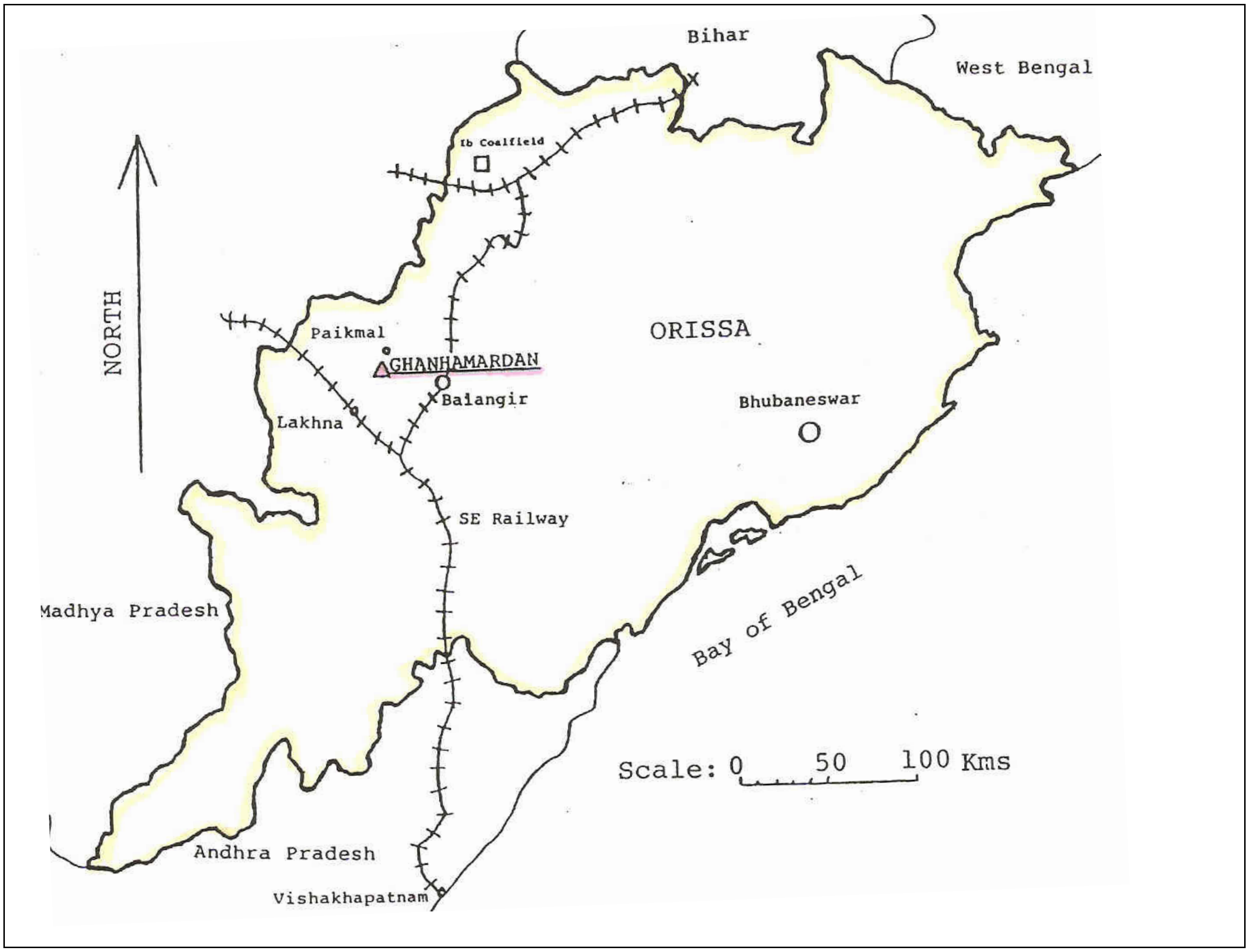


FIGURE II – LOCATION OF GANDHAMARDAN IN ORISSA

Gandhamardan is bounded by Latitudes $20^0$ 50' and $20^0$ 55' North, and Longitudes $82^0$45' and $82^0$54' East. It plots on Survey of India topographic sheet NTS 65L/13.

Gandhamardan hill extends in the NE-SW direction for a length of 9.8 kms. Width ranges from 0.4 to 2.6 kms., and averages 0.75 km. The top of the hill is a plateau, with an areal extent of 7.4 $kms^2$. The bauxite zone covers an area of 735 hectares. Because of its large size and lineal alignment, the deposit has been divided into 10 1-km wide blocks, numbered 1 to 10.

Figure III shows the extent of the deposit and the 10 blocks.

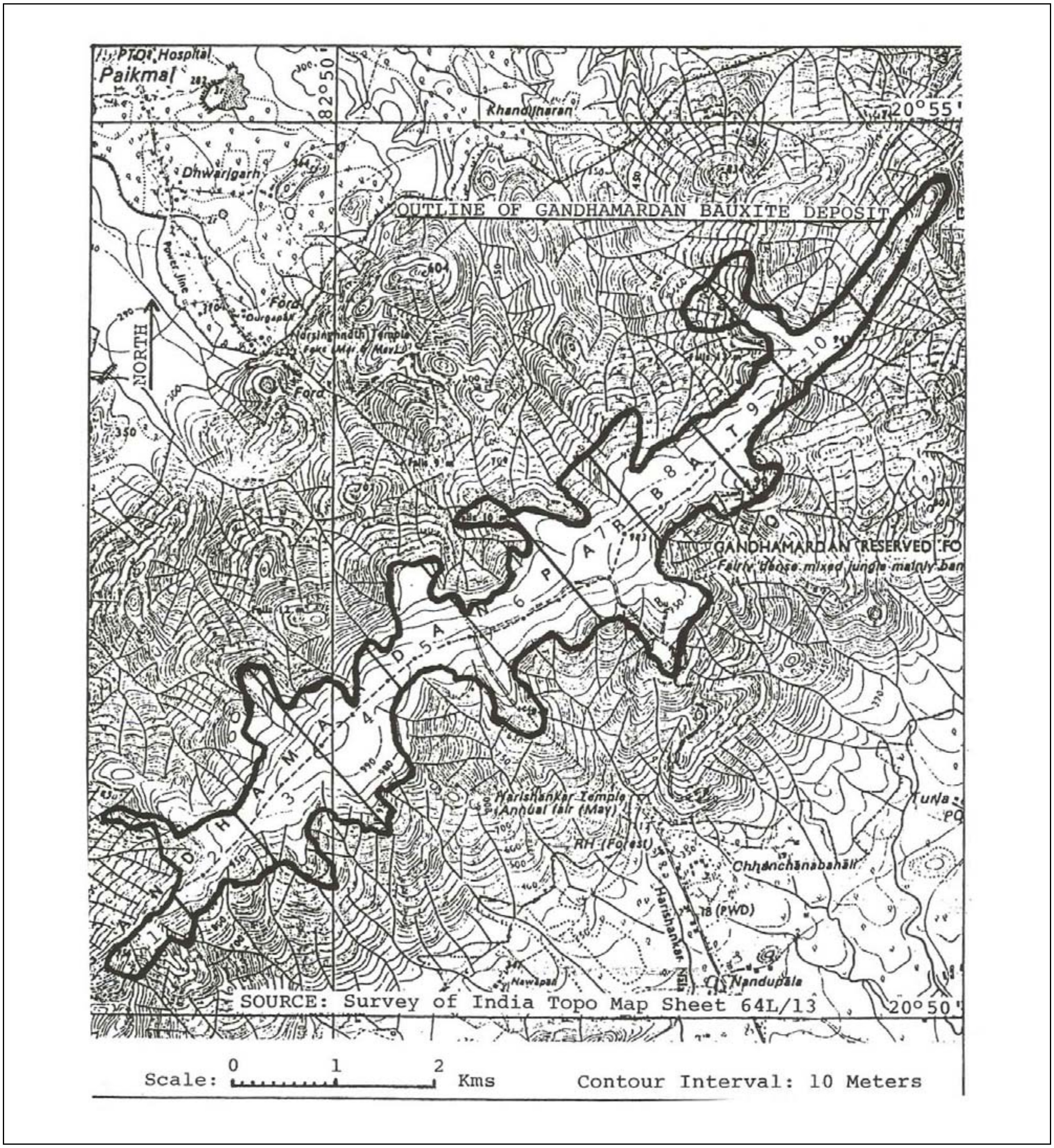


FIGURE III – GANDHAMARDAN BAUXITE DEPOSIT SHOWING BLOCK DIVISIONS

OMC currently holds a Mining Lease on Block 7, which contains about 20% of the deposit, or approximately 40 million tonnes. The Lease covers an area of 285 hectares, as shown in Figure IV.

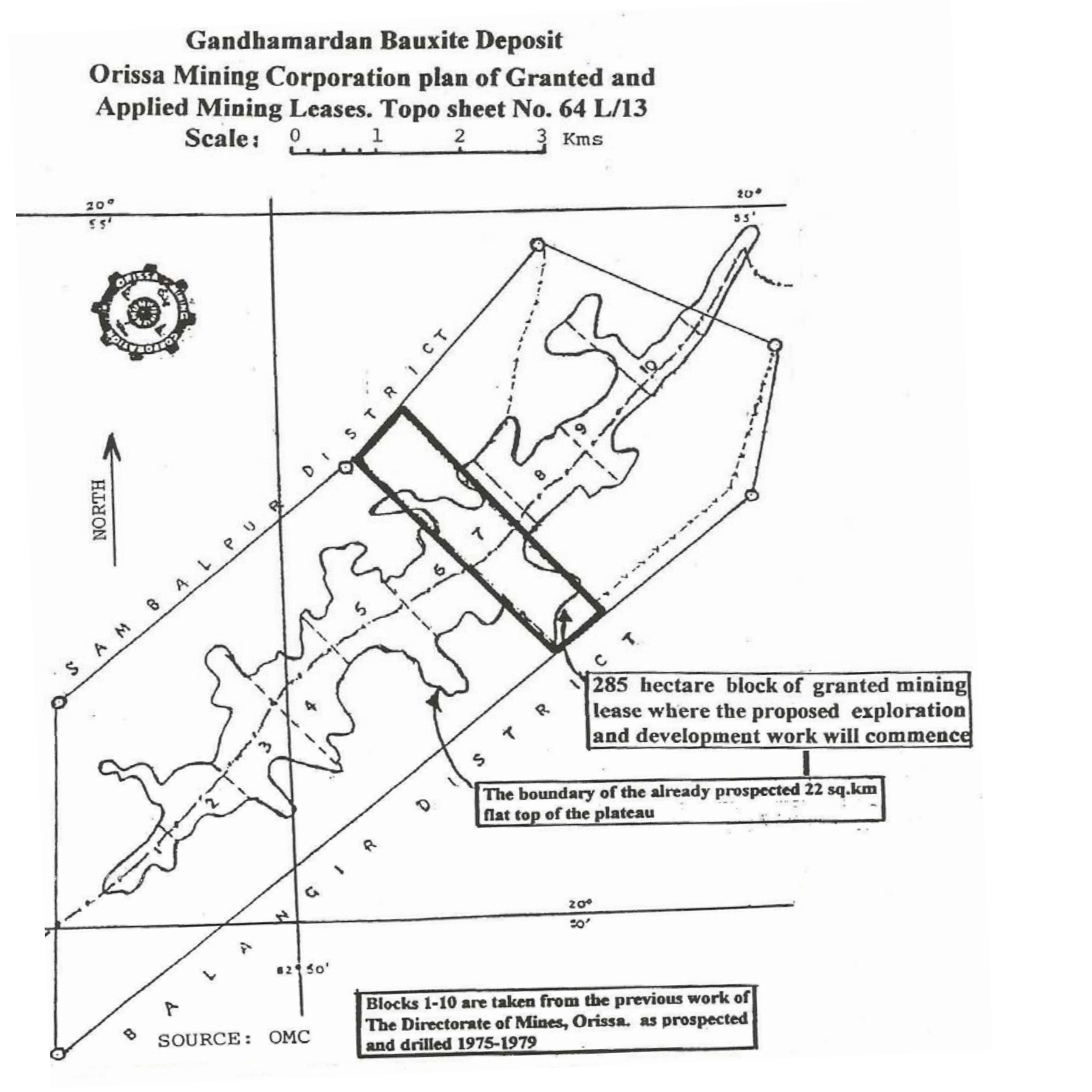


FIGURE IV – GRANTED AND APPLIED MINING LEASES

OMC has applied for a Mining Lease covering the rest of the deposit. A perimeter land survey must be performed before this second Lease is granted.

Gandhamardan hill stands approximately 1,200 meters above sea level, and 700 meters above a plain at the base of the hill, The plateau top has a gentle relief of about 50 meters.

Vegetation on the plateau consists primarily of tiger-grass, dwarf palm, chachar, chhena, bantulsi, etc., with small, isolated clumps of stunted hardwood trees such as char and kendu. The stunted trees rarely exceed 4 meters in height.

Vegetation on the hill flanks contrast greatly with that on the plateau. The flanks are densely forested by mature hardwood trees such as char, kendu, tenk, and sal. Underbrush consists mainly of bamboo clumps, leafy vines, shrubs, and medicinal herbs.

Gandhamardan hill is a designated Forest Reserve. Indian government regulations permit mining in a designated Forest Reserve provided that another area of equal or greater areal extent is secured and substituted in its stead, and the designation transferred to it. A permit must be granted by the Dept. of Forests to effect such a transfer. The Directorate of Mines has identified 3 potential substitute sites, and has made application to the Dept. of Forests for the necessary permit. Granting of the permit is pending.

## 7 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The property is easily accessed by 4-wheel drive vehicle along a poorly-maintained road up the NW flank of the hill. This road departs the village of Duragali, at the base of the hill, and winds 4 kms. to the top. Duragali is connected by the paved road to Paikmal, a town with all modern facilities, including power, water, transportation, communication, food, shelter, supplies, services, and labour.  Paikmal is connected by a paved road to the State Capital, Bhubaneswar, about 300 kms. to the E, and to port cities along the Bay of Bengal, equidistant to the SE.

At the time that the exploration work was performed, the hill top could also be accessed up the SE side.  This road currently has 3 wash-outs. After repairs, this road would be navigable by 4-wheel drive vehicles.  The SE road is preferable, as it provides a slightly shorter route to the hill top, and access by paved roads southerly to the towns of Lakhna and Nawaspara, 32 and 39 kms. distant, respectively.  Both these towns lie along the South Eastern Railway line.  This rail line was recently constructed by the Indian Government to facilitate the development of Orissa bauxite deposits by linking them to the port of Vishakhapnam on the Bay of Bengal.

The climate in the Gandhamardan area is sub-tropical, with summer temperatures averaging 33°C, and winter temperatures averaging 18°C.  Annual rainfall averages 150 cms., most of it during the monsoon season, between July and August.  The months of January and February experience little or no rain. Previously, the monsoon rains came in 3-year cycles, however, they have failed to come for the past several years, resulting in impoverished drought conditions.

Should a mining operation be established, no tailings or wastes would be created, since the bauxite is direct-shipping. The cover of soil and laterite would be moved and stockpiled, then replaced after removal of the bauxite.

## 8 HISTORY

The potential for bauxite at Gandhamardan was first recognized by the GSI in the 1940's, and they recommended that the area be thoroughly prospected.

In 1948, ODM sank several pits which intersected only laterite.

In 1959, ODM identified bauxite at Gandhamardan, and they immediately undertook a programme of exploration and evaluation.  GSI and MECL participated, as did Aluminium Corp. of India, an aluminium producer.

ODM drilled 75 holes in 1959, and reported a resource of 6 million tonnes grading +50% $Al_2O_3$ to a depth of 17 meters. **This figure does not conform to current NI 43-101 standards, and is classified as a historical estimate.**

Subsequent phases of drilling were conducted between1961-65. In the late 1960's, Aluminium Corp. of India undertook detailed exploration with MECL, after which MECL reported a resource of 26 million tones of metallurgical grade bauxite, using a cut-off of +46% $Al_2O_3$. **This figure does not conform to current NI 43-101 standards, and is classified as a historical estimate.**

The deposit attracted no further attention until 1975, when the economic potential of the large, low-silica bauxite deposits in Orissa became recognized. Balco expressed interest in Gandhamardan as a source of feed for their aluminium plant at Korba, situated 350 kms. by rail to the N, in the adjoining State of Madhya Pradesh. At Balco's request, an integrated exploration programme was undertaken jointly by MECL, GSI, and ODM. The programme included linecutting, topographic surveying, geological mapping, pitting, drilling, sampling, mineralogical studies, and metallurgical tests.

Balco commissioned a feasibility study on a portion of the deposit in 1980, and upon its conclusion, prepared to bring the deposit into production. Local villagers opposed the project, and Balco finally gave it up.

The property remained idle until 1997, when Continental Resources Ltd. and OMC agreed to jointly develop it. Continental commissioned SNC-Lavalin to undertake a feasibility study on the deposit, however numerous delays ensued, and the study was never completed. The author visited the property at this time, and during one of the visits, collected 6 samples, 2 from Pit GP-2, and 2 from each of 2 scarp sites. The samples were collected in the author's presence, and he personally transported them to a Canadian commercial laboratory. Analyses were performed for 12 radicals, including $Al_2O_3$, $SiO_2$, $Fe_2O_3$, $TiO_2$, and LOI, by x-ray fluorescence, fused-disc method. Appendix I of this Report is the Certificate of Analyses for these samples. In 2002, OMC transferred the Agreement from Continental Resources Ltd. to Continental Resources (USA) Ltd. There is no connection between the 2 companies.

## 9 **GEOLOGICAL SETTING**

The general geology of the Orissa region consists primarily of Precambrian rocks of the Indian Shield. These rocks have been divided into 4 distinct sectors, based on their lithologies and structure. The sectors are named after the geographic region in which they occur – West, South, Coastal, and North Sectors.

The West Sector is where Gandhamardan is located. This sector is underlain primarily by Archean granitic gneisses, khondalites, charnockites, and migmatites. These rocks trend in a general NE-SW direction, gently curving eastward at their northern end. Khondalites are rocks formed by high-grade metamorphism of argillaceous, arenaceous, and calcareous sediments. They are unique to this part of the world, and they host major deposits of bauxite. The West Sector is separated from the South and North Sectors by the Eastern Ghat Boundary Fault and the North Orissa Boundary Fault, respectively.

The South Sector is also underlain predominantly by Archean rocks. They are comprised of marbles, calc-granulites, carbonatites, gneisses, khondalites, and charnockites. This sector is composed of 4 fault blocks, each with distinct trends. The rocks in 2 of the blocks trend E-W. Trends in the other 2 blocks are NE-SW, and NW-SE, respectively. The North Orissa Boundary Fault separates the South Sector from the North Sector.

The Coastal Sector is underlain primarily by Quaternary laterite and alluvium. They appear to overlie the eastward extension of the South Sector rocks.

The North Sector is composed mainly of Archean granites and greenstones. The granites occur as large batholiths, and the greenstones as broad, intervening belts. The greenstones are comprised of mafic volcanics and banded iron formation. This assemblage of granites and greenstones is very similar to that which occurs in the Superior Province in NW Ontario. Ultramafic bodies intrude the granites and the volcanics. The western third of the North Sector is underlain by Grenville-type metasediments consisting of marble, quartzite, phyllite, and slate.

Figure V shows the general geology of the State of Orissa.

The local geology at Gandhamardan and the geology of the property are the same. Both consists exclusively of khondalites, represented by garnetiferous quartz-feldspar-sillimanite gneisses and schists with or without ilmenite and graphite. Subordinate garnetiferous quartzites are also present. The rocks have a pronounced NE-SW strike, conformable to the regional trend, and curve slightly to the east at their northern extremity. The rocks have been tightly folded, and now dip steeply to the SE at 45 to 70°.

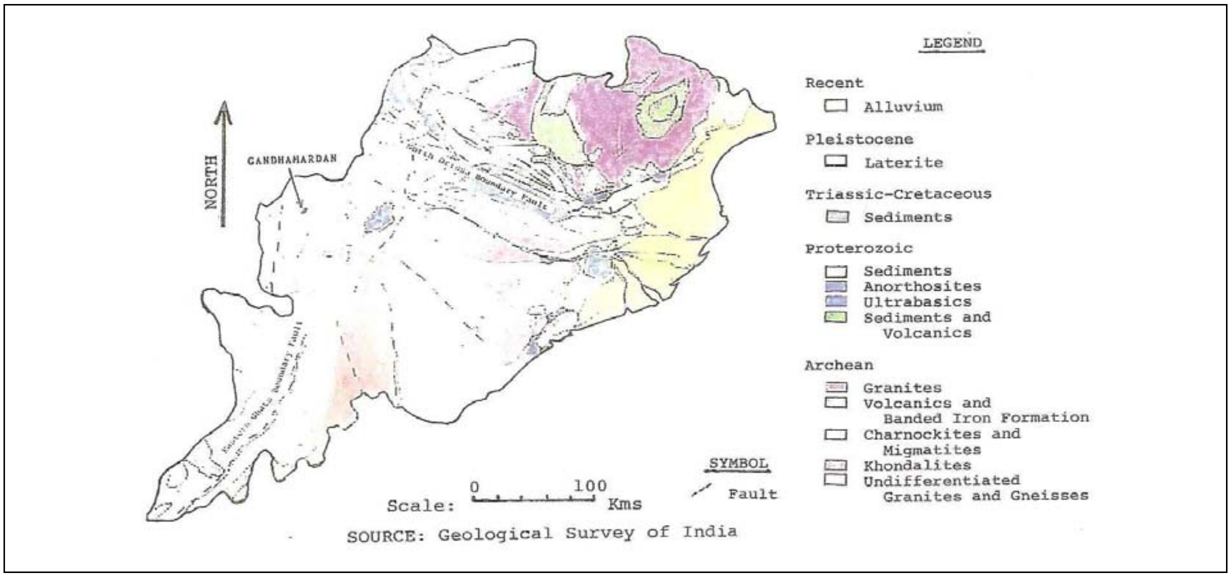


FIGURE V – GENERAL GEOLOGY OF ORISSA

Prolonged exposure to the elements has altered the khondalite at the top of Gandhamardan hill, resulting in the formation of bauxite as an extensive layer blanketing the parent rock throughout the plateau.

## 10 DEPOSIT TYPE

The bauxite occurs as a large residual deposit, formed by in situ, subaerial weathering of aluminium-rich rocks (khondalites) under tropical conditions. The deposit blankets the plateau top of a high ridge known as Gandhamardan hill. The bauxite mineralization is continuous and homogeneous, and is analogous to a horizontally-bedded stratigraphic unit.

Figure VI is a schematic longitudinal section through Gandhamardan hill depicting the bauxite layer.

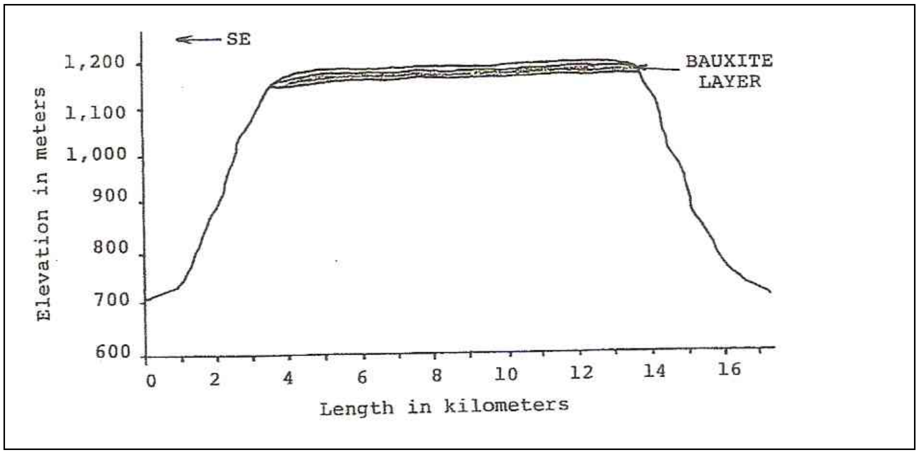


FIGURE VI – SCHEMATIC LONGITUDINAL SECTION THROUGH GANDHAMARDAN

The bauxite is overlain by laterite, and the laterite by a thin, discontinuous layer of lateritic soil. This soil is rusty-red in colour, granular, and high in silca and iron content. It reaches a thickness of up to several centimeters.

The laterite is also rusty-red in colour, and high in silica and iron. The weathered surface is irregular, porous, and craggy. The upper portion of the laterited is hard, reflecting a relatively higher silica content than the lower portion. Iron content also decreases with depth, while aluminous content increases. The laterite varies in thickness from 0.3 to 12.0 meters, and averages 5.0 meters. The laterite grades downwards into bauxite.

The bauxite layer ranges from 4.3 to 35.0 meters in thickness, and averages 16.6 meters. It varies in colour from pinkish-red to yellowish-brown, buff, or brown. It is medium to fine grained, massive and compact. Vesicular and pisolitic textures may be displayed. Hardness varies from 2.5 to 3.5. Banding and foliation are sometimes evident.

## 11 MINERALIZATION

The bauxite is composed mainly of the minerals gibbsite and hematite, which together comprise about 95%. The remaining 5% is a mixture of several oxide minerals in minor and trace amounts.

Table I shows the mineralogical composition of bauxite.

| CATEGORY | MINERAL | COMPOSITION |
|---|---|---|
| Major | Gibbsite | $(Al_2O_3.3H_2O)AlO(OH)$ |
| | Hematite | $Fe_2O_3$ |
| Minor | Goethite | $HFeO_2$ |
| | Boehmite | $AlO(OH)$ |
| | Anatase | $TiO_2$ |
| | Quartz | $SiO_2$ |
| Trace | Zircon | $ZrSiO_4$ |
| | Ilmenite | $FeTiO_3$ |
| | Kaolinite | $Al_4(SiO_{10})(OH)_8$ |
| | Lepidocrocite | $FeO(OH)$ |
| | Garnet | $A_3B_2(SiO_4)_3$ A = Ca,Fe,Mg, or Mn; B = Al,Fe,Ti, orCr |

SOURCE: MECL Exploration Report, Vol.I, 1980

TABLE I – MINERALOGICAL COMPOSITON OF THE BAUXITE

The basement khondalite rock is composed of a heterogeneous mix of minerals, including quartz, orthoclase, sillimanite, garnet, ilmenite, and graphite. Quartz predominates, forming up to 60% of the rock locally. The khondalite is gneissic, and the quartz is closely associated with orthoclase and sillimanite in gneissic bands of leucocratic minerals. Orthoclase locally forms up to 35% of the rock, sillimanite up to 20%, garnet up to 20 %, and ilmenite and graphite together up to 3%. The contact between the khondalite and the bauxite is fairly sharp, although the knondalite immediately beneath the bauxite is partly altered. Orthoclase in altered khondalite displays varying stages of bauxitization, while sillimanite displays varying stages of gibbsitization.

**12 EXPLORATION / PREVIOUS WORK**

Linecutting- Using theodolite and steel tape, ODM established a grid with base line oriented at Azimuth 50°, parallel to the longitudinal axis of Gandhamardan hill. Cross lines were run at right angles to the base line, spaced at 100-meter intervals. Stations were established on all lines at 25-

meter intervals, and marked by stone monuments. A total of 85 kms. of lines were established. Accuracy of the grid was maintained by triangulation.

Topographic Survey – Survey of India performed a topographic survey using a standard bubble level. All stations were read. An area of 5.8 $kms^2$. was covered.

Geological Mapping – ODM geologists mapped Gandhamardan plateau using the grid for their traverses. Scarp faces were also examined, at the ends of cross lines, wherever accessible.

Pitting – According to ODM reports, 26 pits were sunk into the bauxite zone, however data exists for only 24. It appears that 26 may have been planned, but only 24 actually dug. The pits are spaced at 400-meter intervals, and their sites were selected to coincide with previously-drilled holes. They were dug by hand in such a way that half the drill hole was retained in one wall of the pit. Each pit is 2.5 $m^2$ in cross section. Depth ranged from 17.9 to 41.2 meters, and averaged 31 meters. A total of 744 meters of pits were excavated, producing 4,650 $m^3$ of material, equal to more than 2,300 tonnes. Pit data indicate that the soil-laterite overburden ranges between 0.8 to 4.5 meters in thickness and averages 2.7 meters.

## 13 DRILLING

Drilling – Both ODM and MECL undertook extensive drill programmes. ODM concentrated on the SW portion of the deposit, on Blocks 1 to 8, and MECL on Blocks 7 to 10 at the NE end. Drilling was performed dry. NX size casing bits of tungsten carbide were used at the start of a hole, to penetrate the hard laterite capping. Bit size was reduced to BX in the softer bauxite zone. Short sections of thin-walled casing shoes were used, and drill runs were restricted to less than 1 meter in length. This technique allowed the drill cuttings to be collected in the casing, thus eliminating the need for a core barrel. The entire deposit was drilled at a hole spacing of 200 meters. Spacing was reduced to 100 meters in Blocks 5 to 8, where the plateau is widest, and therefore the bulk concentration the greatest. Selected portions of Blocks 6, 7 and 8 were detail-drilled at 50-, 25-, and 15-meter spacing. Two small areas, termed Clusters I and II, were detailed-drilled at a 5-meter spacing. Cluster I sits in Block 7, at Station N2 on Line E19, and covers an area of 0.24 hectare. Cluster II is in Block 8, at Station SO.5 on Line E24 and covers 0.16 hectare. Together ODM and MECL drilled a total of 462 holes, for a cumulative length of

15.1 kms. Except for 36 holes drilled at $45^0$, all the holes were drilled vertically into the flat-lying bauxite zone. The cuttings from each hole were collected, geologically mapped, sampled and analysed. Figure VIII shows the locations of the dill holes, the pits, and the scarp sampling sites.

## 14, SAMPLING PROCEDURES AND ANALYSES

Samples of the bauxite zone were taken from selected scarp sites, from each pit, and from each drill hole. All samples were collected under direct supervision of ODM or MECL geologists.

Scarp samples of bauxite were taken by ODM wherever accessible at the ends of cross lines. Channel samples were cut vertically along 1-meter intervals, forming channels 15 cms. wide, 5 cms deep, and 1 meter long. A total of 130 samples were cut from 17 scarp sites, across a cumulative length of 121 meters. The bauxite zone in the scarp faces is not fully exposed, the lower half being buried by talus. Recognizing this limitation, ODM nevertheless calculated average grades from the assay results. They are given in MECL's Exploration Report, Volume I, 1980, as 47.03% $Al_2O_3$, 2.97% $SiO_2$, 22.00% $Fe_2O_3$, 2.09% $TiO_2$, and 22.27% LOI, across an average thickness of +7.6 meters.

ODM also sampled the pits. Channel samples were cut in the same manner employed in scarp sampling. All 4 walls of each pit were sampled. As a check, and for comparison, the walls of 1 pit were sampled at 25-cm. intervals. Surplus materials from the channel samples was combined to form composite samples, which were also analysed. A total of 1,772 pit samples were collected and analysed. The bauxite zone exposed in the pits ranged from 2.0 to 30.0 meters in thickness, and averaged 18.7 meters. ODM calculated average grades from the pit sample results. MECL's same report shows them as 46.31% $Al_2O_3$, 4.37% $SiO_2$, 20.34% $Fe_2O_3$, 1.78% $TiO_2$, and 23.71% LOI.

Both ODM and MECL sampled the drill holes in their respective programmes, employing the same technique. Casing shoes were used in place of core barrels. The drill cuttings were carefully removed from the shoe, put into paper sleeves in the order drilled, identified by hole number and footage, and boxed. Cuttings were collected continuously across 1-meter intervals.

If the upper or lower contact of the bauxite zone did not coincide exactly with a whole-integer meter mark then that particular sample was taken as a fraction of a meter. Within the bauxite zone, if "non-ore" material was recognized or suspected, then 2 sub-samples were taken from that 1-meter interval, separated by their geological contact.

All collected samples were geologically classified before being prepared for analyses. Samples of the drill cuttings were crushed to -60 mesh, and quartered using a Jones Sample Splitter. Three-quarters of the sample was shipped to Balco for storage, and the remaining quarter was further crushed to -120 mesh. This -120 mesh fraction was further reduced by coning and quartering, and a 50-gram portion was weighed out, bagged, and shipped to the laboratory for analyses. Pit and scarp samples were prepared in a similar manner, except for their primary crushing, which was to -10 mesh rather than -60.

Samples were shipped for analyses to ODM's own laboratory in Bhubaneswar, or to MECL's own lab in Nagpur. Minor and trace element analyses were conducted at a commercial laboratory in Bangalore operated by Esson and Co. All samples were analysed for $Al_2O_3$, $SiO_2$, $Fe_2O_3$, $TiO_2$, and LOI. Composite samples were anaylsed as well for V, Zn, S, $P_2O_5$, $K_2O$, $Na_2O$, CaO, adherent moisture, and organic carbon.

Analyses for all these radicals were determined by chemical method, employing the EDTA technique (ethylene-diamene-tetra-acetic acid), the industry standard at that time. LOI was determined thermally, by calculating the percentage loss on ignition of the resultant ash compared to the weight of the pre-heated sample.

## 15 SAMPLE PREPARATION, ANALYSES AND SECURITY

Samples collected personally by the author were transported to a Canadian commercial laboratory for analyses. Determinations were performed of the major oxides by the x-ray fluorescence – fused disc method, currently recognized as a standard analytical technique. The results obtained for these samples are in general agreement with the results reported by ODM and MECL, and are shown in Appendix I.

## 16 DATA VERIFICATION

In examining the technical reports authored by ODM and MECL, it became apparent to the author that the exploration-evaluation programmes were conducted in a thorough, competent manner by knowledgeable, capable persons. The programmes followed a logical sequence of steps, justified by positive results, to determine the nature and extent of the bauxite deposit, and its suitability for the production of alumina by the Bayer Process.

Discussion with OMC technical staff verified the integrity of the data.

Three site visits verified the presence of bauxite, the extent of the deposit, the grid that was established, the holes that were drilled, and the pits that were sunk. Six bauxite samples were personally collected by the author, and transported to a Canadian commercial laboratory for analyses.

## 17 ADJACENT PROPERTIES

By State Government decree, OMC is the exclusive owner of all mineral rights in the State of Orissa, and Balaton's agreement with OMC gives Balaton the right to develop the entire Gandhamardan bauxite deposit.

Several other residual bauxite deposits are known to occur in the State of Orissa, distributed across a broad geographic area of about 200 kms by 200 kms. All are remarkably similar in their mode of occurrence, and they range in size to over 400 million tones. The largest, operated by Balco, has been in production for over a decade. Another is currently under development by Alcan, in partnership with the Indian Aluminum Co.

## 18 MINERALOGICAL STUDIES AND METALLURGICAL TESTS

Mineralogical Studies – MECL conducted a number of studies of the bauxite to determine its mineral constituents, and to identify any deleterious chemical constituents that might be present. A total of 182 studies were undertaken, including petrological studies, heavy mineral determinations, acid-alkali treatments, derivatography, and x-ray diffraction. The studies indicate that gibbsite and hematite are the main minerals present. According to Indian Bauxite Standards, metallurgical grade bauxite must contain at least 44.0% $A1_20_3$. As well, the maximum and/or minimum contents of certain deleterious constituents are listed. A comparison of these Standards with the chemical composition of Gandhamardan bauxite is shown in Table II.

| ALLOWABLE CONSTITUENT | INDIAN STANDARD (%) | GANDHAMARDAN BAUXITE (%) |
|---|---|---|
| Min. Total $Al_2O_3$ | 44.0 | 46.6 |
| Max. Total $SiO_2$ | 5.0 | 2.4 |
| Max. $P_2O_5$ | 0.2 | Tr - 0.19 |
| Max. $V_2O_5$ | 0.2 | Tr - 0.14 |
| Max. $Fe_2O_3$ + $TiO_2$ | 30.0 | 25.6 |
| Min. LOI | 20.0 | 24.1 |
| Max. $MnO_2$ + $Cr_2O_3$ | 2.0 | 0.06 - 0.64 |
| Max. Total Alkalies | 1.0 | Tr - 0.55 |

SOURCE: MECL Exploration Report, Vol.I, 1980

TABLE II – INDIAN STANDARDS COMPARED TO GANDHAMARDAN BAUXITE

Metallurgical Tests – Five autoclave testes were performed by MECL Separate tests were undertaken on bauxite from the upper part of the zone, where the $Si0_2$ content is higher, and on bauxite from the lower part of the some where the $A1_20_3$ content is higher. Results indicate that the Bayer Process would extract 93.5% of the $A1_20_3$ from the upper part of the zone, and 97 to 99% from the lower part.

Balco, in cooperation with MECL, collected 12 composite drill hole samples, and submitted them to Aluterv-FKI, an integrated aluminium producer in Budapest, Hungary. MECL's Exploration Report, Volume I, 1980, states "….industrial tests…" were undertaken, however it does not describe the nature of these tests. The MECL report does provide the results of additional autoclave tests and chemical analyses performed by Aluterv, and it states "…The Hungarian tests indicate that for the Korba plant the Gandhamardan bauxite can be processed advantageously…", and also that "…the deposit has a potential for low temperature technology…" The conclusions in the report state "…The immediate objective of establishing reserves of suitable categories for developing a mine to feed the Korba plant has been achieved…" MECL also states in this report that the Gandhamardan bauxite is suitable "…for use in Bayer's process is general…"

Feasibility Study – In 1980 Balco commissioned Metallurgical and Engineering Consultants (India) Ltd. to conduct a feasibility study. Their report is titled "Feasibility Report for Development of Gandhamardan Bauxite Deposit" and is dated Feb., 1981. In this report, they state "…a mining operation could be established…with annual production of 500,000 tpy on dry basis.." Capital costs were estimated to be "…about 50 crore Rupees…" (approx. US$10.5 million), including equipment, service buildings, townsite, class I access road, ore tram line to base of hill, loading complex, and a 25-km spur rail line. This report also states "…Operating cost for mine, crushing plant, ropeway and wagon loading complex…(estimated)…as 35.28 Rupees per tonne…" (approx. US$0.75/tonne).

**The Balco feasibility study is not current. It was based upon historical estimates that are too speculative to have economic considerations applied to them, and therefore it does not conform to current NI 43-101 standards. It cannot be relied upon. The economic viability of this project has not yet been determined. Any future development of this project will be contingent to the completion of a positive feasibility or other study demonstrating its technical and economic viability.**

## 19 HISTORICAL RESOURCE CALCULATIONS

**There are no current mineral resources or mineral reserves on the property. The author has not done sufficient work to reclassify the historical estimates as current mineral resources or mineral reserves, and the public should not rely on the historical estimates.**

The resource estimates referred to in this Report were performed by competent geologists employed by Indian federal and/or state government agencies. As such they are considered by the author to be accurate and reliable. However, these resource estimates were not performed in accordance with NI 43-101 standards, and therefore are classified as historical estimates.

ODM and MECL independently calculated resource estimates, based exclusively on data obtained from the holes drilled at 200-meter intervals. Data obtained from the closer-spaced drill holes were also utilized, but only as a check on the validity of the calculations. Data from the inclined drill holes, and from the pits were similarly utilized for checking purposes.

The resource estimates are in-situ geological resources. No mining constraints were considered. The cut-off grades of +40 % $Al_2O_3$ and -5% $SiO_2$ used in the calculations were specified by Balco, and were determined in anticipation of the bauxite being processed at their plant in Korba. Korba produces alumina by the Bayer Process.

A tonnage factor of 2.0 tonnes per cubic meter of bauxite was used in the calculations. This figure was based on bulk density tests performed on pit samples, and on specific gravity and porosity tests performed on pit and drill hole samples.

Three conventional techniques were followed in preparing the resource estimates – average factor and area of influence method, cross section method, and isocline (isochore) method. The first two methods are similar in that they calculate area and multiply it by thickness to determine volume. Both methods are well-suited to estimating a resource such as Gandhamardan, which is uniform, homogeneous, horizontally-lying body.

The average factor and area of influence method is based on the assumptions that all unit blocks are uniform in shape and in grade. An area of influence is established for each vertical drill hole, as one-half the horizontal distance to an adjacent hole. In the case of peripheral holes, it is the horizontal distance to the physical limit of the bauxite zone. This area is multiplied by the thickness of the bauxite intersected in that hole to give the volume, which is then converted to tonnage. Average grades are calculated by weighing grades against tonnages.

The cross section method utilizes cross sections, in this case prepared on a scale of 1:1,000. A cross-sectional area of bauxite is determined for each hole by by taking one-half the distance to adjacent holes, and multiplying this area by the linear strike influence of the hole. The volume so obtained is then converted to tonnage.

The isocline method is based on the assumptions that unit values gradually change from one point to another. Isograde maps and isochore maps are prepared, in this case 1% $Al_2O_3$ and 5 meters, respectively. The area encompassed between the respective isoclines and the two corresponding mid-points of assay value and thickness is used to estimate the resource.

Four categories of resources were established, based on the Russian system, and termed A, B, C1, and C2. The Russian system of mineral resource – mineral reserve classification does not conform to that established by the CIM. MECL's 1980 Exploration Report, Volume I states that the Russian A Category reserves are considered to be 90% accurate, and therefore "…are suitable for mine planning". **Under the CIM's Standards on Definition for Mineral Resources and Mineral Reserves, the Russian A Category would qualify as a measured mineral resource, however the calculation was not performed to NI 43-101 Standards, therefore they are a historic estimate, not as a resource, and there is no guarantee that it will be converted to a corresponding CIM category.**

MECL's Report describes the Russian B Category resources as being "…sufficiently detailed to allow…broad outlining of the future mining activities and development of the deposit". B Category resources were calculated in areas where technical data were less detailed than in A Category areas, and were deemed to be 70% accurate. **Under the CIM standards, the Russian B Category would be termed an indicated mineral resource, however the calculation was not performed to NI 43-101 Standards, therefore they are a historic estimate, not as a resource, and there is no guarantee that it will be converted to a corresponding CIM category.**

Russian C1 Category resources were estimated for areas where the bauxite was sufficiently explored to provide a "…rough estimation of the nature of mineralization, shape and structure of the ore body…" (ibid). Accuracy of the C1 resources is considered to be 50%. Russian C2 Category resources are estimated for irregular parts of the bauxite zone, where "…insufficient exploration data…do not permit proper evaluation of shape, quality, etc." (ibid).

The resources of Block 10 fall into this category. Here the plateau is irregular in shape, and the bauxite varies in thickness. **Under the CIM Standards, both the CI and C2 Categories, being 50% or less in accuracy, would be classified as an inferred mineral resource, however the calculations were not performed to Ni 43-101 Standards, therefore they are historic estimates, not resources, and there is no guarantee that they will be converted to corresponding CIM categories.**

B.K.Monhanty, in ODM's Resources Evaluation Report, 1981, states the total calculated tonnage as 207.37 million tonnes with a weighted average grade of 45.75% $Al_2O_3$, 2.23% $SiO_2$, 23.23% $Fe_2O_3$, 2.58% $TiO_2$, 22.95% LOI. In the same report, S.M. Patnaik tabulates resource estimates for each of the 10 Blocks. His figures are shown in Table III. His calculated total tonnage is 213.43 million tonnes, with a weighted average grade of 46.50% $Al_2O_3$ and 2.49% $SiO_2$. The 3 other radicals were not calculated. **The data acquisition and calculations were performed prior to NI 43-101 and not according to NI 43-101 Standards, therefore they are historic estimates, not resources and there is no guarantee that they will be converted to corresponding CIM categories.**

| BLOCK NUMBER | LENGTH (kms) | AVERAGE WIDTH (kms) | AREA (kms$^2$) | AV. COVER THICKNESS (meters) | AV. BAUXITE THICKNESS (meters) | RESOURCES (million tonnes) | AVERAGE GRADE $Al_2O_3$ (%) | $SiO_2$ (%) |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.65 | 0.25 | 0.07 | 4.00 | 11.10 | 1.00 | 44.28 | 2.90 |
| 2 | 1.00 | 0.48 | 0.48 | 3.70 | 18.78 | 15.46 | 45.46 | 2.40 |
| 3 | 1.00 | 0.98 | 0.98 | 5.10 | 16.20 | 27.23 | 45.85 | 2.12 |
| 4 | 1.00 | 1.05 | 1.05 | 5.85 | 15.54 | 24.36 | 46.28 | 2.17 |
| 5 | 1.00 | 1.12 | 1.12 | 5.32 | 17.71 | 28.35 | 46.20 | 2.67 |
| 6 | 1.00 | 0.67 | 0.67 | 4.03 | 11.72 | 28.08 | 46.43 | 2.71 |
| 7 | 1.00 | 2.20 | 1.28 | 7.23 | 16.33 | 44.75 | 47.16 | 2.58 |
| 8 | 1.00 | 0.90 | 0.82 | 5.91 | 30.43 | 27.65 | 47.00 | 2.62 |
| 9 | 1.00 | 0.78 | 0.36 | 5.17 | 18.75 | 8.40 | 47.05 | 2.65 |
| 10 | 1.20 | 0.65 | 0.33 | 7.63 | 9.81 | 7.70 | 47.30 | 2.81 |
| | | | | | Total | 213.48 | 46.50 | 2.49 |

TABLE III – ODM BLOCK-WISE HISTORICAL ESTIMATE

MECL calculated resources independently, and categorized them according to the Russian system. MECL's 1980 Exploration Report, Volume I gives their total calculated resources as "….201.3 million tonnes averaging 46.40% $Al_2O_3$, 2.44% $SiO_2$….", and estimates the $Fe_2O_3$, $TiO_2$, and LOI contents to be 2341%, 2.47%, and 24.59%, respectively. MECL's resources estimates by category are shown in TABLE IV. **The data acquisition and calculations were**

**performed prior to NI 43-101 and not according to NI 43-101 Standards, therefore they are historic estimates, not resources.**

| CATEGORY | TONNAGE (million tonnes) | AVERAGE GRADE (%) | | | | |
|---|---|---|---|---|---|---|
| | | $Al_2O_3$ | $SiO_2$ | $Fe_2O_3$ | $TiO_2$ | LOI |
| A | 27.9 | 46.67 | 2.45 | 23.71 | 2.27 | 24.73 |
| B | 45.8 | 46.85 | 2.61 | 22.96 | 2.50 | 24.51 |
| C1 + C2 | 127.5 | 46.18 | 2.38 | 23.51e | 2.51e | 24.59e |
| Total | 201.3 | 46.40 | 2.44 | 23.41e | 2.47e | 24.59e |

Note: e - estimated figure

TABLE IV – MECL HISTORICAL ESTIMATE BY CATEGORY

The 3 resources calculations are in fairly close agreement. The total tonnage figures differ by a maximum of only 6%, and the calculated weighted average grades by1.4% for $Al_2O_3$, 9.0% for $SiO_2$, 0.8% for $Fe_2O_3$, 1.2% for $TiO_2$, and 6.7% for LOI.

MECL's historical estimates were calculated in 1980-81, and they followed the Russian system of classification. **The Russian system of resource-reserve classification does not comply with the standards established by the CIM and incorporated in NI 43-101, therefore the Russian categories are only roughly equivalent to the CIM categories, and there is no guarantee that the Russian categories will be converted to corresponding CIM categories.**

## 21 INTERPRETATION AND CONCLUSIONS

The Gandhamardan bauxite deposit is a residual deposit that was formed by chemical leaching and in situ transformation of aluminous-rich rocks under subaerial, tropical weathering conditions. As such, it extends over a very large area, 9.8 kms. in length, and 0.75 km. in average width. The bauxite occurs as a continuous, homogeneous, flat-lying layer which averages 16.6 meters in thickness. The bauxite layer overlies an aluminous-rich rock called Khondalite, from which it was derived, and is in turn overlain by a thin layer of laterite.

The deposit was explored extensively in the late 1970's and early 1980's by 2 Indian crown corporations, ODM and MECL. The exploration work was undertaken in stages over a 6-year period and it included linecutting, topographic surveying, geological mapping, pitting, drilling, sampling, mineralogical studies, and metallurgical tests. The work was performed in a logical, systematic, professional manner, and the results are considered to be reliable.

Based primarily on technical data obtained from drill holes, resources estimates were calculated by ODM and MECL using three different techniques. All 3 techniques are widely used and accepted by the mining industry. The resources were categorized according to the reliability of their calculations as determined by the extent of technical data available, and this too is standard industry practice. A total resource of over 200 million tonnes averaging approximately 46% $Al_2O_3$ was calculated. **The data acquisition and calculations were performed prior to NI 43-101 and not according to NI 43-101 Standards, therefore they are historic estimates, not resources. As such, it is too speculative to have economic considerations applied to it to allow classification as a current mineral reserve.**

Some deleterious substances are present, however they occur in small quantities within acceptable limits for the production of alumina by the Bayer Process.

Balco, an integrated, Indian, aluminum-producing corporation, commissioned a feasibility study on a portion of the deposit. The study was performed by a commercial engineering firm, and it concluded that a bauxite mine with annual capacity of 500,000 tonnes could be established at low capitol costs, and with low operating costs.

**The Balco feasibility study is not current, and does not conform to current NI 43-101 standards. Therefore it cannot be relied upon. The economic viability of this project has not yet been determined. Any future development of the project will be contingent to the completion of a feasibility or other study demonstrating its technical and economic viability.**

Balco attempted to bring the deposit into production, but were thwarted by local villagers concerned that irreparable damage to the environment would result, and Balco abandoned the project.

The Government of Orissa was, and remains, keenly interested in having the Gandhamardan bauxite deposit developed. In 1986, they appointed a committee to resolve the situation with the villagers. After due consideration, the committee concluded "…that the project can go ahead with strict enforcement and continued monitoring of the updated Environmental Management Plan…", and that "… There should not be cause for undue apprehension about any irreversible adverse impact of the project on the environment and ecology of the Gandhamardan area…" (Report on High Level Committee, 1987). The committee recommended that the "…Bauxite mine…be opened with as little delay as possible…" (Ibid). OMC is the Orissa Government's crown corporation that operates and develops mines. OMC and Continental Resources (USA) Ltd. have entered into a 50-50 Joint Venture Agreement, with Continental as operator, to develop the Gandhamardan bauxite deposit.

Approximately 85% of world bauxite production is used in the manufacture of alumina via the wet chemical caustic leach method known as the Bayer Process. Virtually all of the alumina produced is in "developed" countries of the western world, where coincidentally, virtually no bauxite naturally occurs. Consequently, bauxite is a widely-traded international commodity. Metallurgical grade bauxite is generally sold under long-term contracts, and the prices are rarely disclosed. Trade journals such as "Industrial Minerals" periodically list spot prices. Currently, the price is shown as US$20.-25./tonne, at port of shipment. Because sales contracts are generally long-term, a new producer may experience difficulties in penetrating the market. However, all indications so far from the work already performed at Gandhamardan suggest that it has an excellent chance of competing. The deposit is very large, is of simple configuration, and is consistent. It occurs close to surface, and is covered only by a thin layer of laterite. $Al_2O_3$ content is consistent, and deleterious constituents occur only in low, manageable quantities. In short, the deposit appears to lend itself readily to low-cost, mechanized, computerized open cast extraction. The project should therefore be actively pursued, initially by confirming earlier results, then by resolving the outstanding environmental issues with the villagers.

## 22 RECOMMENDATIONS

The exploration-evaluation work performed by ODM and MECL on the Gandhamardan bauxite deposit was conducted in a logical, competent manner, and the results generated are considered to be quite reliable. Nevertheless, the work was done some 20 years ago, and changes have transpired in the mining industry since that time. Geological concepts, exploration techniques, equipment, analytical procedures and instruments have all been refined and improved. Data verification and reporting has new standards. National Instrument 43-101 in conjunction with 'Estimation of Mineral Resources and Mineral Reserves Best Practices Guidelines, CIMM 2003. Ongoing exploration / evaluation programs should be designed to incorporate these standards. Where possible old data should be verified and brought up to current NI 43-101 standards. It is therefore recommended that a small programme of drilling and sampling be undertaken, to confirm earlier results, and to obtain bauxite samples for testing. The drilling should consist of 10 holes, dry-drilled, employing a vacuum system to collect the drill cuttings. Locations of the 10 holes should be selected to coincide with previously-drilled holes, for comparison purposes. Drill hole sites should be determined by anticipated grades, so that samples can be composited to match calculated average grade, for confirmatory metallurgical tests.

In conjunction with the drilling, 4 pits should be channel-sampled to confirm earlier results, and to provide additional bauxite samples for testing. Pit sites should also be selected so as to yield material that is representative of the entire deposit.

It is further recommended that a public relations programme be initiated to inform and educate the local villagers regarding the proposed exploration-confirmation programme. More importantly, the villagers must be convinced that the bauxite can be extracted without causing permanent damage to the environment, and that they will benefit from a mining operation, should one become established.

Table V provides particulars regarding the anticipated cost of the proposed programme.

GANDHAMARDAN BAUXITE DEPOSIT

EXPLORATION-CONFIRMATION PROGRAMME

| | | |
|---|---|---|
| Drilling - NQ, dry, vacuum | | |
| 10 holes, av. 25 meters/hole = 250 meters | | |
| 250 meters @ $50. (all inclusive) ...................... | US$ | 12,500. |
| Pit Sampling - manual | | |
| 4 pits, av. 20 meters/pit, 4 walls = 320 samples | | |
| 8 men X 15 mandays/pit = 480 mandays @ $4.50 .......... | | 2,160. |
| Transportation | | |
| 1 return airline ticket ............................... | | 3,000. |
| vehicle rental - 3 weeks @ $500. ...................... | | 1,500. |
| Accomodation | | |
| room,meals for 1 man for 20 days @ $60. ............... | | 1,200. |
| Assaying | | |
| 750 samples @ $70. .................................... | | 52,500. |
| Metallurgical Tests | | |
| 10 samples @ $200. .................................... | | 2,000. |
| Public Relations - contract to Indian firm | | |
| 1 month @ $15,000. .................................... | | 15,000. |
| Supervision | | |
| 1 man for 30 days @ $300. ............................. | | 9,000. |
| Total (approx.) - | US$ | 100,000. |

Note: Programme can be undertaken at any convenient time, however, if undertaken during monsoon season, precaution is necessary to assure no foreign moisture is inadvertently added to samples.

Anticipated duration of Programme - 1 month.

TABLE V – RECOMMENDED WORK PROGRAMME

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## 24 DATE AND SIGNATURE PAGE

This summary report was written on April 8, 2003, by Ernest A. Gallo, P.Geo., and revised by him on January 15, 2007 and February 9, 2007.


Ernest A. Gallo, P.Geo.

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**CERTIFICATE OF QUALIFIED PERSON**

I, Ernest A. Gallo, P. Geo., of 148 Allanhurst Drive, Toronto, Ontario do hereby certify that:

1. I graduated with a degree in Bachelor of Science from McGill University in 1963.

2. I am a Practising Member of the Association of Professional Geoscientists of Ontario.

3. I have worked continuously as a Geologist for a total of 44 years since my graduation from university. During this period, I have worked on a number of projects, including bauxite, phosphate, potash, barite, dimension stone, vermiculite, barite, flake graphite and nepheline syenite. My work experience included performing and supervising resource calculations on a variety of geologically simple and complex mineralized bodies.

4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101), and I certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and my past relevant work experience, I fulfill the requirements to be a "qualified person" for the purpose of NI 43-101.

5. I am responsible for the preparation of the technical report titled *Summary Report Gandhamardan Bauxite, Deposit, Sambalpur and Balangir Districts, State of Orissa India*, dated April 8, 2003, and revised on January 15,2007 and February 9, 2007 (the "Technical Report") relating to the Gandhamardan property. I visited the Gandhamardan Bauxite property in 2002, on 3 separate occasions totalling 59 days. On 2 other occasions in 2002, I attended meetings with federal and state government geologists in the city of Bhubaneswar to discuss technical aspects of the property.

6. I was previously involved with the property that is the subject of the Technical Report when a company named Continental Resources Ltd. Held the rights to bring the property to production. The nature of my involvement was to provide technical assistance and advice. I am not involved with Balaton Power Inc., nor am I involved with Continental Resources (USA) Ltd., Balaton's subsidiary company that presently holds the rights to develop the property.

7. I am not aware of any material fact or any material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

8. I am independent of Balaton Power Inc. applying all of the tests in section 1.4 of National Instrument 43-101.

9. I have read National Instrument 43-101, Companion Policy 43-101CP, and Form 43-101F1, and the Technical Report has been prepared in compliance with that Instrument, Policy, and Form.

…….cont’d



CERTIFICATE OF QUALIFIED PERSON (Cont’d)

10. To the best of my knowledge, information, and belief, as of February 9, 2007, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority, and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 8th day of April, 2003
Revised this 15th day of January, 2007
Revised thei 9th day of February, 2007


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## CONSENT OF QUALIFIED PERSON

TO: British Columbia Securities Commission

I, Ernest A. Gallo, P. Geo., of Toronto, Ontario, do hereby consent to the filing of the technical report titled Summary Report, Gandhamardan Bauxite Deposit, Sambalpur and Balangir Districts, State of Orissa, India, dated April 8, 2003, revised January 15, 2007 and revised February 9, 2007 (the "Technical Report"),and any extracts from, or a summary of, the Technical Report in the Corporate Update of Balaton Power Inc.

I certify that I have read the Corporate Update released by Balaton Power Inc. on Feruary 16, 2007, pursuant to Balaton's reactivation application, and I confirm that it fairly and accurately represents the information in the Technical Report that supports this disclosure. I do not have any reason to believe that there are any misrepresentations in the information derived from the Technical Report, or that the written disclosure contains any misrepresentations of the information contained in the Technical Report.

Dated this 8th day of April, 2003
Revised this 15th day of January, 2007
Revised this 9th day of Febraury, 2007


Ernest A. Gallo,P.Geo.

APPENDIX I

Concord Analytical Services Ltd.

Certificate of Analyses CASL WO# EAG 7337

CONCORD ANALYTICAL
SERVICES LIMITED

8540 Keele Street, Unit 38, Concord, Ont. L4K 2N2 CANADA
phone: (905) 660-5171, fax: (905) 660-9474
email: chemtest@pathcom.com, web: www.pathcom.com/~chemtest

Ernest A. Gallo
Gallo Exploration Services Inc.
148 Allanhurst Drive
Islington, Ont. M9A 4K7

September 29, 1999

CASL WO# EAG7337

| SAMPLE ID | SiO2 % | Al2O3 % | Fe2O3 % | MgO % | CaO % | Na2O % | K2O % | TiO2 % | P2O5 % | MnO % | Cr2O3 % | LOI % | TOTAL % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P-1 | 15.9 | 43.9 | 15.6 | 0.03 | 0.02 | <0.05 | 0.08 | 2.23 | 0.06 | <0.01 | 0.02 | 21.71 | 99.44 |
| P-1A | 9.50 | 45.7 | 18.5 | <0.01 | <0.01 | <0.05 | 0.04 | 2.46 | 0.06 | <0.01 | 0.03 | 22.98 | 99.28 |
| S-1 | 10.3 | 46.1 | 16.7 | 0.02 | 0.02 | <0.05 | 0.05 | 2.66 | 0.06 | 0.02 | 0.02 | 23.25 | 99.14 |
| S-1A | 3.90 | 50.8 | 15.6 | <0.01 | <0.01 | <0.05 | 0.01 | 2.78 | 0.05 | 0.01 | 0.02 | 26.22 | 99.39 |
| S-2 | 6.48 | 49.1 | 14.7 | 0.06 | 0.02 | <0.05 | 0.23 | 2.44 | 0.04 | 0.04 | 0.01 | 26.18 | 99.27 |
| S-2A | 5.96 | 48.8 | 15.4 | 0.04 | 0.01 | <0.05 | 0.21 | 2.68 | 0.04 | 0.04 | 0.01 | 26.10 | 99.26 |

Laboratory Manager:
for M. L. G. (Gary) Gerritse

BLOCK 1
BLOCK 2
BLOCK 3
BLOCK 4
BLOCK 5
BLOCK 6
BLOCK 7
BLOCK 8
BLOCK 9
BLOCK 10
BASE LINE
SEE CLUSTER I DETAIL
SEE LINE E20 DETAIL
SEE LINE E22 DETAIL
SEE CLUSTER II DETAIL
LINE E20 DETAIL
LINE E22 DETAIL
CLUSTER II DETAIL
CLUSTER I DETAIL
SCALE: 0 1 2 3 4 5 10 Meters
NOTES REGARDING HOLE NUMBER PREFIXES
A DENOTES GA SERIES
B " GB "
C " GC "
D " GD "
G " GI "
M " GDM "
N " GDN "
X " GX "
Y " GY "
Z " GZ "
HOLE NUMBERS WITHOUT A PREFIX ARE REFERRED TO ALSO AS MG SERIES IN THE REPORTS.
LEGEND
DRILL HOLE, VERTICAL
DRILL HOLE, 45° DIP
PIT
SCARP SAMPLE SITE
EOH END OF 45° HOLE
CONTINENTAL RESOURCES (USA)
GANDHAMARDAN BAUXITE PROJECT
DRILL HOLE PLAN
WITH
PITS
AND
SCARP SAMPLE SITES
SCALE: 0 50 100 Meters
DATE: APRIL 2, 2003
DRAWN BY: EAG