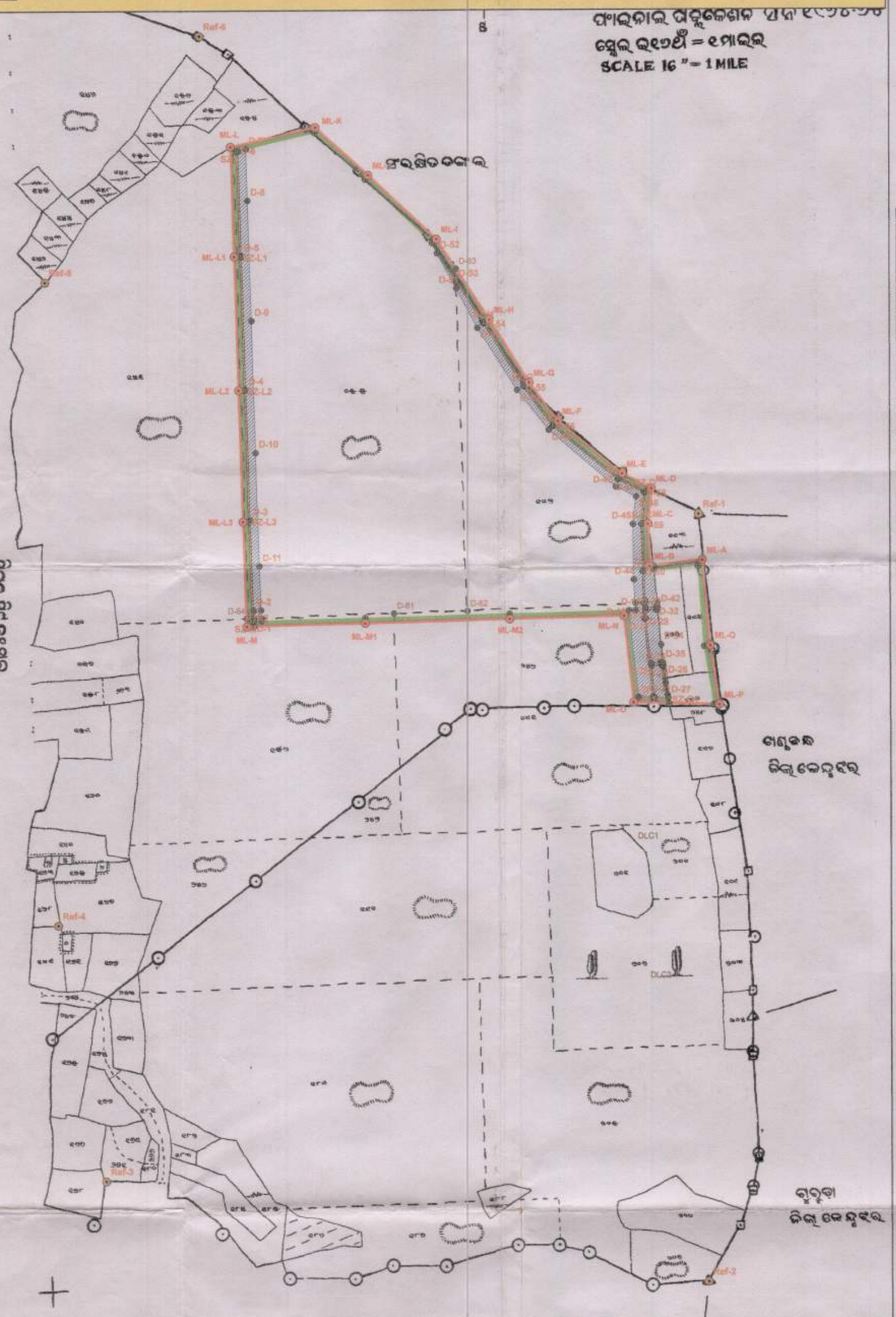
DGPS MAP SHOWING AREA PROPOSED TO BE DIVERTED OVER 1.81 HA (ALONG THE ROAD) WITHIN THE MINING LEASE OF PATABEDA IRON ORE MINES OVER 28.397 HA. IN VILLAGE PATABEDA UNDER KOIRA TAHASIL OF SUNDARGARH DISTRICT IN FAVOUR OF MGM MINERALS LTD.

SCALE - 1: 4000



0 125 250 500 750 1,000 Meters

AREA STATISTICS OF FOREST PLOTS

Sl. No.	Name of Village	Plot No.	Class	Forest Land Proposed to be Diverted (Along the Road) Area in Ha.	Forest Land Proposed to be Diverted/ Map Area (Along the Road) Area in Ha.
1	Patabeda	155	DLC Forest		0.713
2	Patabeda	156 (P)	DLC Forest		0.004
3	Patabeda	191/247 (P)	DLC Forest		0.466
4	Patabeda	192	DLC Forest		0.598
Total				1.81	1.781

DGPS/ETS SURVEYED POINTS

Sl. No.	Pillar_Id	Geodetic System (WGS-84)		Projection Sytem (UTM-45)		Remarks
		Latitude	Longitud	Easting (M.)	Northing(M.)	
1	D-1	21° 56' 05.22372" N	85° 22' 11.95920" E	331655.5499	2426503.2092	Forest Pillar
2	D-2	21° 56' 05.70439" N	85° 22' 11.93723" E	331655.0765	2426517.9990	Forest Pillar
3	D-3	21° 56' 09.84226" N	85° 22' 11.75341" E	331651.1549	2426645.3148	Forest Pillar
4	D-4	21° 56' 15.70465" N	85° 22' 11.49195" E	331645.5693	2426825.6918	Forest Pillar
5	D-5	21° 56' 21.72012" N	85° 22' 11.22384" E	331639.8436	2427010.7789	Forest Pillar
6	D-6	21° 56' 26.46301" N	85° 22' 11.01289" E	331635.3422	2427156.7105	Forest Pillar
7	D-7	21° 56' 26.54692" N	85° 22' 11.39145" E	331646.2315	2427159.1756	Forest Pillar
8	D-8	21° 56' 24.22841" N	85° 22' 11.49275" E	331648.3797	2427087.8392	Forest Pillar
9	D-9	21° 56' 18.80980" N	85° 22' 11.73091" E	331653.4414	2426921.1176	Forest Pillar
10	D-10	21° 56' 12.88170" N	85° 22' 11.99175" E	331658.9876	2426738.7197	Forest Pillar
11	D-11	21° 56' 07.74552" N	85° 22' 12.21767" E	331663.7906	2426580.6882	Forest Pillar
12	D-12	21° 56' 05.71183" N	85° 22' 12.30704" E	331665.6902	2426518.1151	Forest Pillar
13	D-13	21° 56' 05.23585" N	85° 22' 12.32779" E	331666.1301	2426503.4700	Forest Pillar
14	D-14	21° 56' 01.92046" N	85° 22' 30.66648" E	332191.2591	2426395.9211	Forest/Safety Zone Pillar
15	D-15	21° 56' 05.81245" N	85° 22' 30.17340" E	332178.3789	2426515.7686	Forest/Safety Zone Pillar
16	D-16	21° 56' 05.82237" N	85° 22' 30.49343" E	332187.5651	2426515.9763	Forest Pillar
17	D-19	21° 56' 05.44879" N	85° 22' 30.90942" E	332199.3798	2426504.3605	Forest Pillar
18	D-20	21° 56' 01.90753" N	85° 22' 31.36342" E	332211.2528	2426395.3117	Forest Pillar
19	D-21	21° 56' 01.90626" N	85° 22' 31.45179" E	332213.7882	2426395.2456	Forest Pillar
20	D-22	21° 56' 03.33214" N	85° 22' 31.26887" E	332209.0039	2426439.1540	Forest Pillar
21	D-23	21° 56' 03.35364" N	85° 22' 31.76524" E	332223.2538	2426439.6642	Forest Pillar
22	D-24	21° 56' 03.35511" N	85° 22' 31.83962" E	332225.3886	2426439.6869	Forest Pillar
23	D-25	21° 56' 03.32446" N	85° 22' 31.84280" E	332225.4700	2426438.7434	Forest Pillar
24	D-26	21° 56' 02.77820" N	85° 22' 31.93910" E	332228.0553	2426421.9140	Forest Pillar
25	D-27	21° 56' 01.89364" N	85° 22' 32.10347" E	332232.4833	2426394.6596	Forest/Safety Zone Pillar
26	D-28	21° 56' 03.45331" N	85° 22' 31.25316" E	332208.5927	2426442.8854	Forest Pillar
27	D-29	21° 56' 05.45515" N	85° 22' 30.99606" E	332201.8679	2426504.5297	Forest Pillar
28	D-30	21° 56' 05.74163" N	85° 22' 30.96913" E	332201.1884	2426513.3487	Forest Pillar
29	D-31	21° 56' 05.81965" N	85° 22' 30.96834" E	332201.1339	2426515.7488	Forest Pillar
30	D-32	21° 56' 05.84052" N	85° 22' 31.49102" E	332216.1958	2426516.2312	Forest Pillar
31	D-33	21° 56' 05.84749" N	85° 22' 31.57043" E	332218.4765	2426516.4215	Forest Pillar
32	D-34	21° 56' 04.29419" N	85° 22' 31.74661" E	332223.0258	2426468.5963	Forest Pillar
33	D-35	21° 56' 03.48003" N	85° 22' 31.82596" E	332225.0374	2426443.5329	Forest Pillar
34	D-36	21° 56' 03.47291" N	85° 22' 31.72182" E	332222.0467	2426443.3458	Forest Pillar
35	D-37	21° 56' 05.94191" N	85° 22' 30.96259" E	332201.0661	2426519.5101	Forest Pillar
36	D-38	21° 56' 06.26988" N	85° 22' 30.95190" E	332200.8663	2426529.5999	Forest Pillar
37	D-39	21° 56' 07.59082" N	85° 22' 30.90752" E	332200.0233	2426570.2390	Forest/Safety Zone Pillar
38	D-40	21° 56' 07.64825" N	85° 22' 31.38701" E	332213.8004	2426571.8593	Forest/Safety Zone Pillar
39	D-41	21° 56' 06.17426" N	85° 22' 31.54824" E	332217.9464	2426526.4781	Forest Pillar
40	D-42	21° 56' 05.96722" N	85° 22' 31.56564" E	332218.3782	2426520.1052	Forest Pillar
41	D-43	21° 56' 05.96376" N	85° 22' 31.48173" E	332215.9693	2426520.0243	Forest Pillar
42	D-44	21° 56' 07.22599" N	85° 22' 30.39965" E	332185.3315	2426559.1731	Forest Pillar
43	D-45	21° 56' 09.76829" N	85° 22' 30.33345" E	332184.2608	2426637.3812	Forest Pillar
44	D-46	21° 56' 11.01592" N	85° 22' 30.47976" E	332188.8654	2426675.7075	Forest Pillar
45	D-47	21° 56' 11.45478" N	85° 22' 29.49544" E	332160.7649	2426689.5037	Forest Pillar
46	D-48	21° 56' 14.01391" N	85° 22' 26.21951" E	332067.6012	2426769.2059	Forest Pillar
47	D-49	21° 56' 15.77927" N	85° 22' 24.66189" E	332023.4837	2426823.9736	Forest Pillar
48	D-50	21° 56' 18.56733" N	85° 22' 22.68701" E	331967.7278	2426910.3210	Forest Pillar
49	D-51	21° 56' 20.34221" N	85° 22' 21.64322" E	331938.3575	2426965.2253	Forest Pillar
50	D-52	21° 56' 21.92334" N	85° 22' 20.71030" E	331912.1055	2427014.1368	Forest Pillar
51	D-53	21° 56' 20.64503" N	85° 22' 21.62978" E	331938.0709	2426974.5425	Forest Pillar
52	D-54	21° 56' 18.77134" N	85° 22' 22.97751" E	331976.1298	2426916.5069	Forest Pillar
53	D-55	21° 56' 15.94593" N	85° 22' 24.96019" E	332032.0975	2426829.0081	Forest Pillar
54	D-56	21° 56' 14.19080" N	85° 22' 26.39606" E	332072.7247	2426774.5924	Forest Pillar
55	D-57	21° 56' 11.78597" N	85° 22' 29.59301" E	332163.6724	2426699.6598	Forest Pillar
56	D-58	21° 56' 11.19737" N	85° 22' 30.85503" E	332199.6925	2426681.1737	Forest Pillar
57	D-59	21° 56' 09.76991" N	85° 22' 30.72936" E	332195.6214	2426637.3106	Forest Pillar
58	D-60	21° 56' 07.61165" N	85° 22' 30.81965" E	332197.5087	2426570.9061	Forest Pillar
59	SZ-L	21° 56' 26.44256" N	85° 22' 10.92595" E	331632.8409	2427156.1079	Safety Zone Pillar
60	SZ-L1	21° 56' 21.69993" N	85° 22' 11.13765" E	331637.3641	2427010.1843	Safety Zone Pillar
61	SZ-L2	21° 56' 15.67787" N	85° 22' 11.40605" E	331643.096	2426824.8944	Safety Zone Pillar
62	SZ-L3	21° 56' 09.77072" N	85° 22' 11.66923" E	331648.7161	2426643.1403	Safety Zone Pillar
63	SZ-M	21° 56' 05.22118" N	85° 22' 11.87220" E	331653.0525	2426503.1578	Safety Zone Pillar
64	SZ-E	21° 56' 11.86123" N	85° 22' 29.62915" E	332164.7339	2426701.9635	Safety Zone Pillar
65	SZ-F	21° 56' 14.24143" N	85° 22' 26.46737" E	332074.7876	2426776.1279	Safety Zone Pillar
66	SZ-G	21° 56' 15.97544" N	85° 22' 25.04296" E	332034.4819	2426829.8907	Safety Zone Pillar
67	SZ-H	21° 56' 18.81646" N	85° 22' 23.05013" E	331978.2282	2426917.8725	Safety Zone Pillar
68	SZ-O1	21° 56' 01.64903" N	85° 22' 32.14994" E	332233.7371	2426387.1223	Safety Zone Pillar
69	SZ-C	21° 56' 09.78785" N	85° 22' 30.81582" E	332198.1081	2426637.8361	Safety Zone Pillar
70	SZ-D	21° 56' 11.24527" N	85° 22' 30.94668" E	332202.3377	2426682.6191	Safety Zone Pillar
71	SZ-B1	21° 56' 07.88902" N	85° 22' 31.34465" E	332212.6834	2426579.2789	Safety Zone Pillar
72	R1	21° 56' 04.97737" N	85° 22' 11.88711" E	331653.4005	2426495.6547	Road
73	R2	21° 56' 04.98019" N	85° 22' 11.97576" E	331655.9452	2426495.7144	Road
74	Ref-1	21° 56' 10.24805" N	85° 22' 33.51214" E	332275.6253	2426651.1698	Geo Ref. Pillar
75	Ref-2	21° 55' 35.53043" N	85° 22' 34.29219" E	332286.7024	2425583.1989	Geo Ref. Pillar
76	Ref-3	21° 55' 39.96214" N	85° 22' 04.97780" E	331446.9584	2425728.4227	Geo Ref. Pillar
77	Ref-4	21° 55' 51.43356" N	85° 22' 02.57921" E	331381.8853	2426081.9575	Geo Ref. Pillar
78	Ref-5	21° 56' 20.45447" N	85° 22' 01.69756" E	331366.0908	2426974.7626	Geo Ref. Pillar
79	Ref-6	21° 56' 31.61680" N	85° 22' 09.10468" E	331582.2763	2427315.7971	Geo Ref. Pillar

ORSAC SURVEYED M.L. PILLARS CO-ORDINATES

Sl. No.	Pillar_Id	Geodetic System (WGS-84)		Projection Sytem (UTM-45)	
		Latitude	Longitude	Easting (M.)	Northing(M.)
1	ML-A	21°56'08.17080"	85°22'33.70080"	332280.3142	2426587.2241
2	ML-B	21°56'07.86840"	85°22'31.15920"	332207.2987	2426578.6479
3	ML-C	21°56'09.78360"	85°22'31.07640"	332205.6180	2426637.5899
4	ML-D	21°56'11.38920"	85°22'31.22040"	332210.2842	2426686.9847
5	ML-E	21°56'12.05160"	85°22'29.79480"	332169.5402	2426707.7716
6	ML-F	21°56'14.40960"	85°22'26.65560"	332080.2608	2426781.2752
7	ML-G	21°56'16.12320"	85°22'25.25160"	332040.5077	2426834.3885
8	ML-H	21°56'18.94920"	85°22'23.26800"	331984.5214	2426921.9409
9	ML-I	21°56'22.56000"	85°22'20.67240"	331911.2503	2427033.6733
10	ML-J	21°56'25.41480"	85°22'17.33160"	331816.2856	2427122.5005
11	ML-K	21°56'27.54600"	85°22'14.76120"	331743.2234	2427188.8986
12	ML-L	21°56'26.63520"	85°22'10.65720"	331625.1774	2427162.0775
13	ML-L1	21°56'21.68880"	85°22'10.87680"	331629.8702	2427009.9641
14	ML-L2	21°56'15.66600"	85°22'11.14320"	331635.5898	2426824.6584
15	ML-L3	21°56'09.76200"	85°22'11.40960"	331641.2261	2426642.9162
16	ML-M	21°56'04.97040"	85°22'11.62200"	331645.7806	2426495.4727
17	ML-M1	21°56'05.15400"	85°22'17.36400"	331810.6008	2426499.4550
18	ML-M2	21°56'05.38080"	85°22'24.38040"	332012.0261	2426504.2677
19	ML-N	21°56'05.56080"	85°22'29.94240"	332171.6459	2426508.1018
20	ML-O	21°56'01.68000"	85°22'30.43200"	332184.5040	2426388.6196
21	ML-P	21°56'01.60440"	85°22'34.57920"	332303.4378	2426384.9985
22	ML-Q	21°56'04.27920"	85°22'34.12200"	332291.2049	2426467.4050

The Joint Surveyed ML Area = 29.212 HA.

JOINT SURVEYED PILLARS CO-ORDINATES

Sl. No.	Pillar_Id	Geodetic System (WGS-84)		Projection Sytem (UTM-45)		Remarks
		Latitude	Longitude	Easting (M.)	Northing(M.)	
1	SZ-A	21°56'07.87920"	85°22'33.48120"	332273.9319	2426578.36	Safety Zone Pillar
2	SZ-I	21°56'22.38360"	85°22'20.46360"	331905.1253	2427028.34	Safety Zone Pillar
3	SZ-J	21°56'25.22400"	85°22'17.17680"	331811.7802	2427116.687	Safety Zone Pillar
4	SZ-K	21°56'27.30120"	85°22'14.72520"	331742.1396	2427181.348	Safety Zone Pillar
5	SZ-M1	21°56'05.39880"	85°22'17.35320"	331810.4207	2426506.935	Safety Zone Pillar
6	SZ-M2	21°56'05.62560"	85°22'24.36960"	332011.8197	2426511.786	Safety Zone Pillar
7	SZ-P	21°56'01.60906"	85°22'34.30498"	332295.561	2426385.238	Safety Zone Pillar
8	SZ-Q	21°56'04.23960"	85°22'33.81960"	332282.4505	2426466.275	Safety Zone Pillar

DERIVED CO-ORDINATES OF FOREST PILLARS

Sl. No.	Pillar_Id	Geodetic System (WGS-84)		Projection Sytem (UTM-45)		Remarks
		Latitude	Longitude	Easting (M.)	Northing(M.)	
1	D-1A	21°56'05.35200"	85°22'11.96400"	331655.4310	2426507.0523	Forest Point
2	D-12A	21°56'05.35200"	85°22'12.32400"	331666.0115	2426507.4182	Forest Point
3	D-17	21°56'06.14400"	85°22'30.46800"	332187.1484	2426526.3764	Forest Point
4	D-18	21°56'06.18000"	85°22'30.86400"	332198.4974	2426526.4706	Forest Point
5	D-25A	21°56'03.08400"	85°22'31.90800"	332226.9402	2426431.1776	Forest Point
6	D-26A	21°56'02.04000"	85°22'32.08800"	332231.9567	2426398.9830	Forest Point
7	D-26B	21°56'02.29200"	85°22'32.01600"	332230.2422	2426406.7300	Forest Point
8	D-26C	21°56'02.58000"	85°22'31.98000"	332228.7817	2426415.4930	Forest Point
9	D-39A	21°56'06.18000"	85°22'30.97200"	332200.9243	2426526.5576	Forest Point
10	D-61	21°56'05.60400"	85°22'18.76800"	331850.5651	2426513.0513	Forest Point
11	D-62	21°56'05.74800"	85°22'22.29600"	331952.6733	2426515.8453	Forest Point
12	D-63	21°56'21.22800"	85°22'21.61200"	331938.1794	2426992.6080	Forest Point
13	D-64	21°56'05.35200"	85°22'11.60400"	331645.4308	2426506.8091	Forest Point

- DGPS Survey of forest areas proposed for diversion within ML area of Patabeda Iron Ore Mines of M/s. MGM Minerals in village Patabeda under Koira Tahasil, Sundargarh district has been carried out by the user agency through M/s. Thriveni Earthmovers Pvt. Ltd., Bhubaneswar.
- DGPS survey co-ordinates are verified by ORSAC. Also map showing forest areas proposed for diversion is verified with geo-referenced cadastral sheet/ surveyed points and compared with Ortho-rectified Cartosat Satellite image and found that map is correct at a confidence level of 95%.
- Total forest areas proposed for diversion comes in two patches along two roads, in one cadastral sheet of village Patabeda and works out to 1.781 Ha. from the submitted shp files against the asking area of 1.81 Ha. as mentioned in the submitted documents.

19/11/2018
(Ashok Mohapatra)
Scientist 'SC'

Revenue Supervisor
KOIRA

Tehsildar
Koira

JUNIOR MINING OFFICER
O/o. THE DIST. KOIRA
DIST-SUNDARGARH

Deputy Director of Mines
Koira, Dist. Sundargarh
4/12/2018

Range Officer
Koira Forest Range

ORISSA SPACE APPLICATIONS CENTRE
Map No. EDC-5
Date 19/11/2018
Auth. Signatory
BHUBANESWAR

Legend

- ML PILLARS
- ML Boundary
- Safety Zone
- Forest Pillar
- Geo Reference Points
- Road
- Safety Zone Pillar
- Mines Road
- Proposed Diversion Area (Along the Road)

DGPS SURVEY & MAP PREPARED BY -
THRIVENI EARTHMOVERS PRIVATE LIMITED
301-302, UTKAL SIGNATURE, 3RD FLOOR,
N.H.-5, PAHALA, BHUBANESWAR - 752101

THRIVENI

MGM_DGPS_DRW NO. - 04, DTD_15_11_18