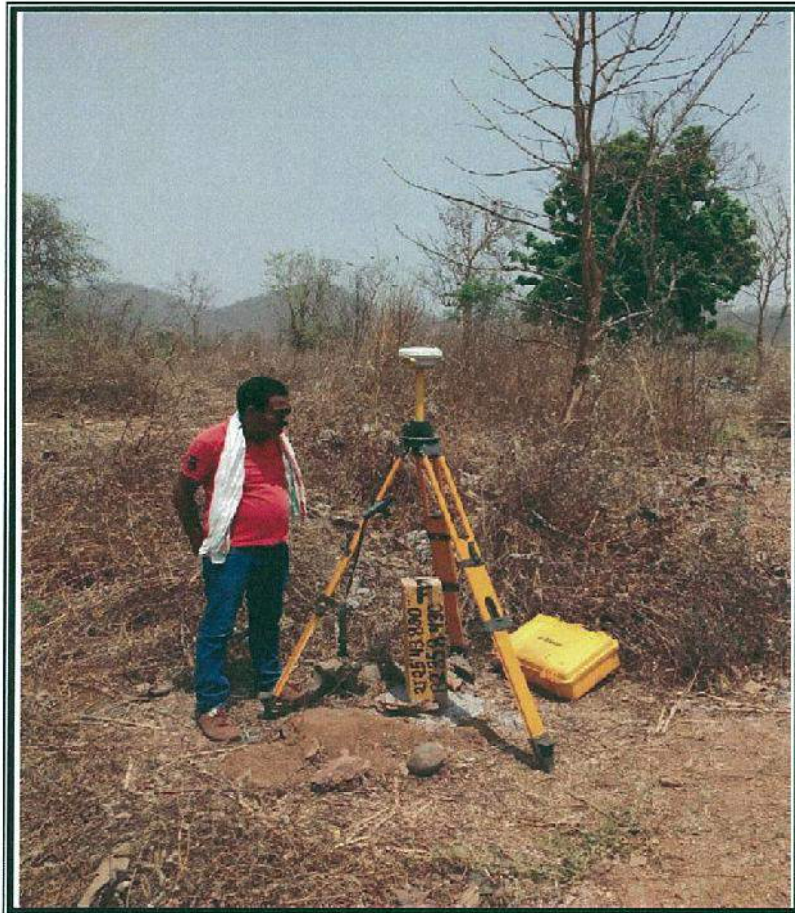


**DGPS Survey Report of
Baghmara Mineral Auction Block, Baloda Bazar District,
Chhattisgarh**



By

Vedanta Limited

Submitted to

Forest Department, Government of Chhattisgarh

For Vedanta Limited

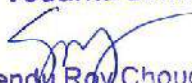
Shuvrendu Roy Choudhury
Head Mines

April, 2017

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1. Introduction:

During Non-Coal mineral auctioning by the Chhattisgarh State Govt., Vedanta Limited won the Baghmara Gold Block (608 ha) Composite License (Prospecting-cum-Mining Lease). Accordingly Sate has issued LOI (Sr. No. 3-11/16/12, dated 28th April, 2016).

However the Block area was revised by Chhattisgarh Mineral Resource Department from 608 ha to 474.3 ha vide letter no. 3-11/16/12 dated 17th March, 2017 (Letter attached with Map), based on our request to keep 1 km. away from Barnawapara Sanctuary.

The new Block has 10 corner points, named as A(1), B(20), C(29), D(39), E(46), F(53), G(64), H(97), I(104) & J(111). Accordingly, DGPS survey was carried out in consultation with DFO, Balodabazar by M/s. Vedanta BALCO during 7th April, 2017 to 9th April, 2017 & 20th April, 2017 to 24th April, 2017 in presence of Forest Officials. All 10 corner points are fixed with permanent pillars with markings. In between points were also pegged with wooden pegs for visibility of the boundary line.

Trimble Make & Model No-R-4 DGPS instrument was used by BALCO team for this survey. BALCO is authorized by CG Govt. for conducting DGPS survey.

2. Location:

Baghmara Mineral Auction Block is Located in and around Baghmara and Achanakpur villages, Kasdol Tehsil, Baloda Bazar- Bhatapara District. The area is falling under Survey of India Toposheet No. 64K/11. The Block is situated within Latitude 21°25'15.02"N to 21°27'22.67"N & Longitude 82°34'27.19"E to 82°35'43.93"E.

3. Accessibility:

Baghmara Mineral Auction Block can be approached from Raipur by Raipur-Saraipalli NH6 upto Pithora, and State Highway No-14 upto Baya followed by Sonakhan village tar road. The Block is situated at approx. 140 km. ENE of State Capital Raipur.

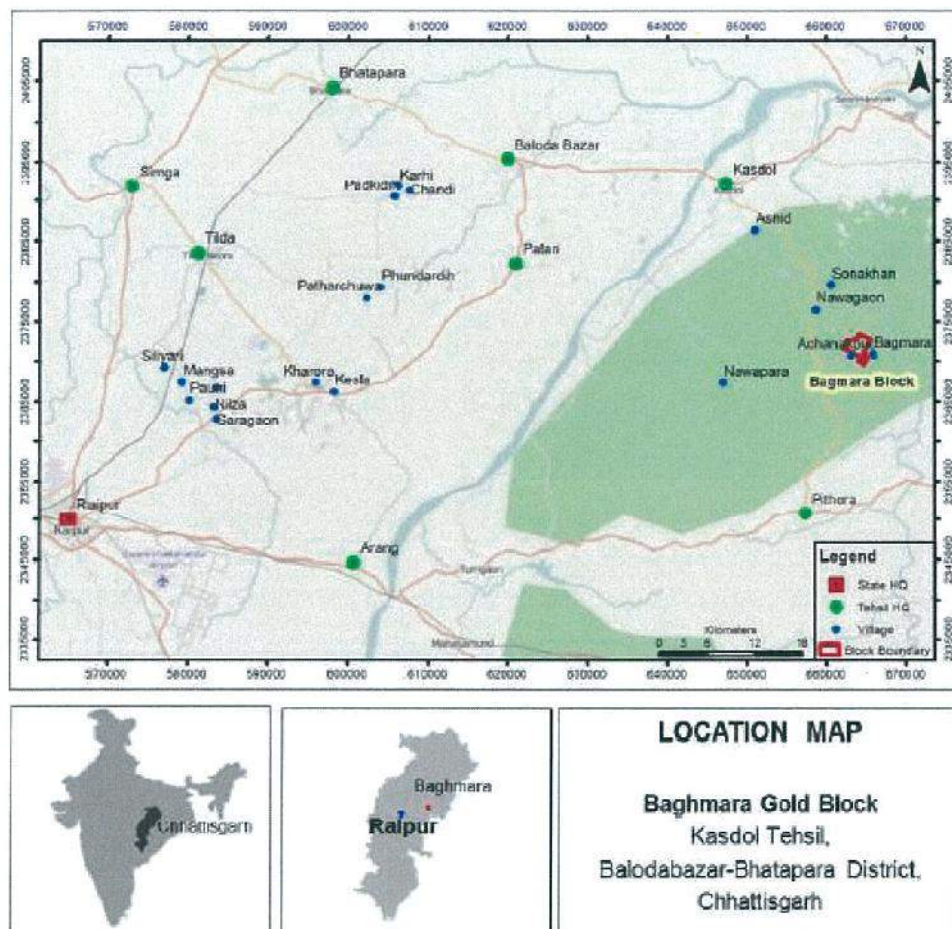
The nearest railhead is at Baghbahra which is about 60 Km. away from the Block

Raipur is the nearest airport to the Baghmara Gold Block, which is situated around 154 km from the project site.

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4. LOCATION MAP: -



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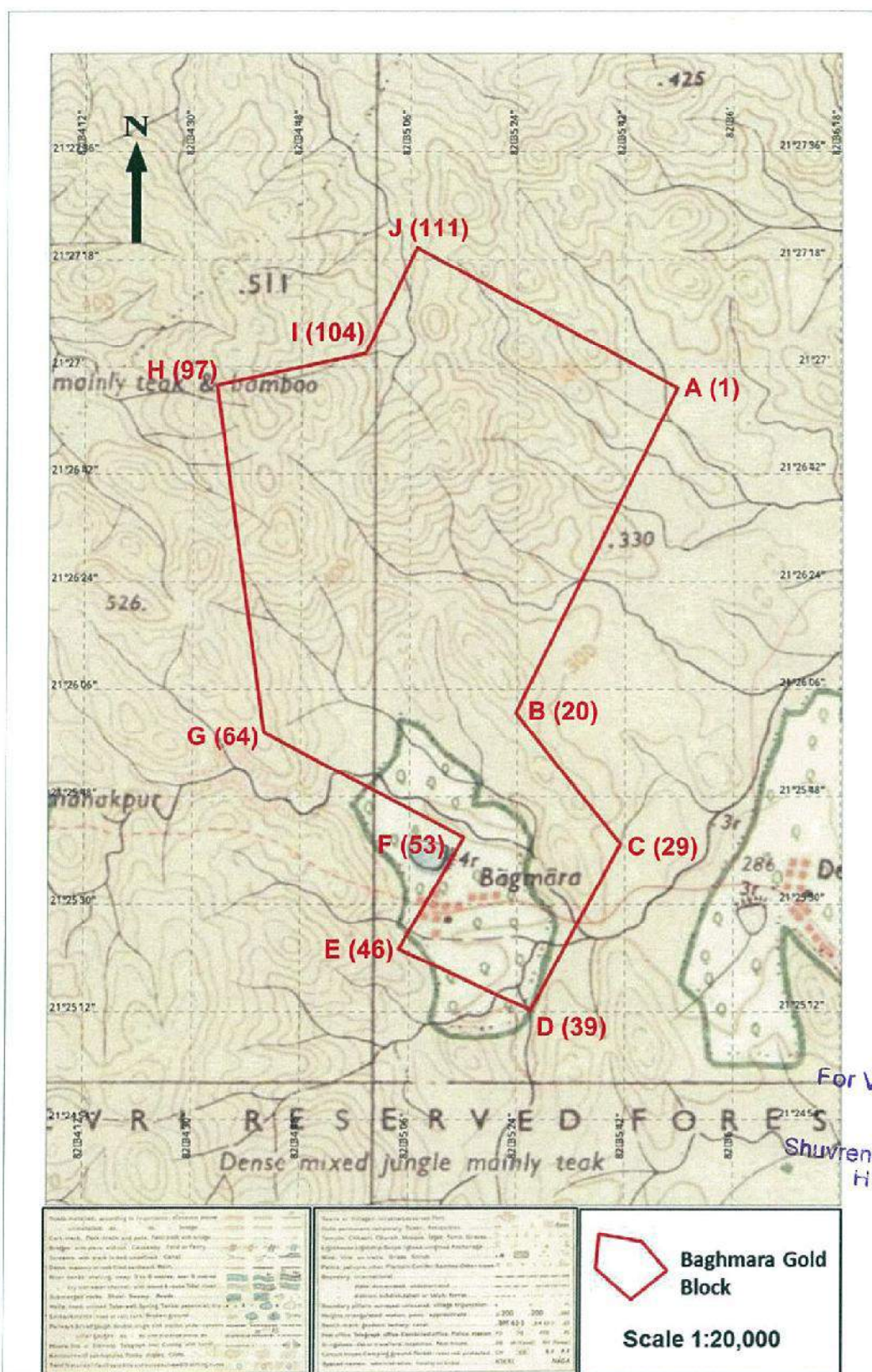
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4

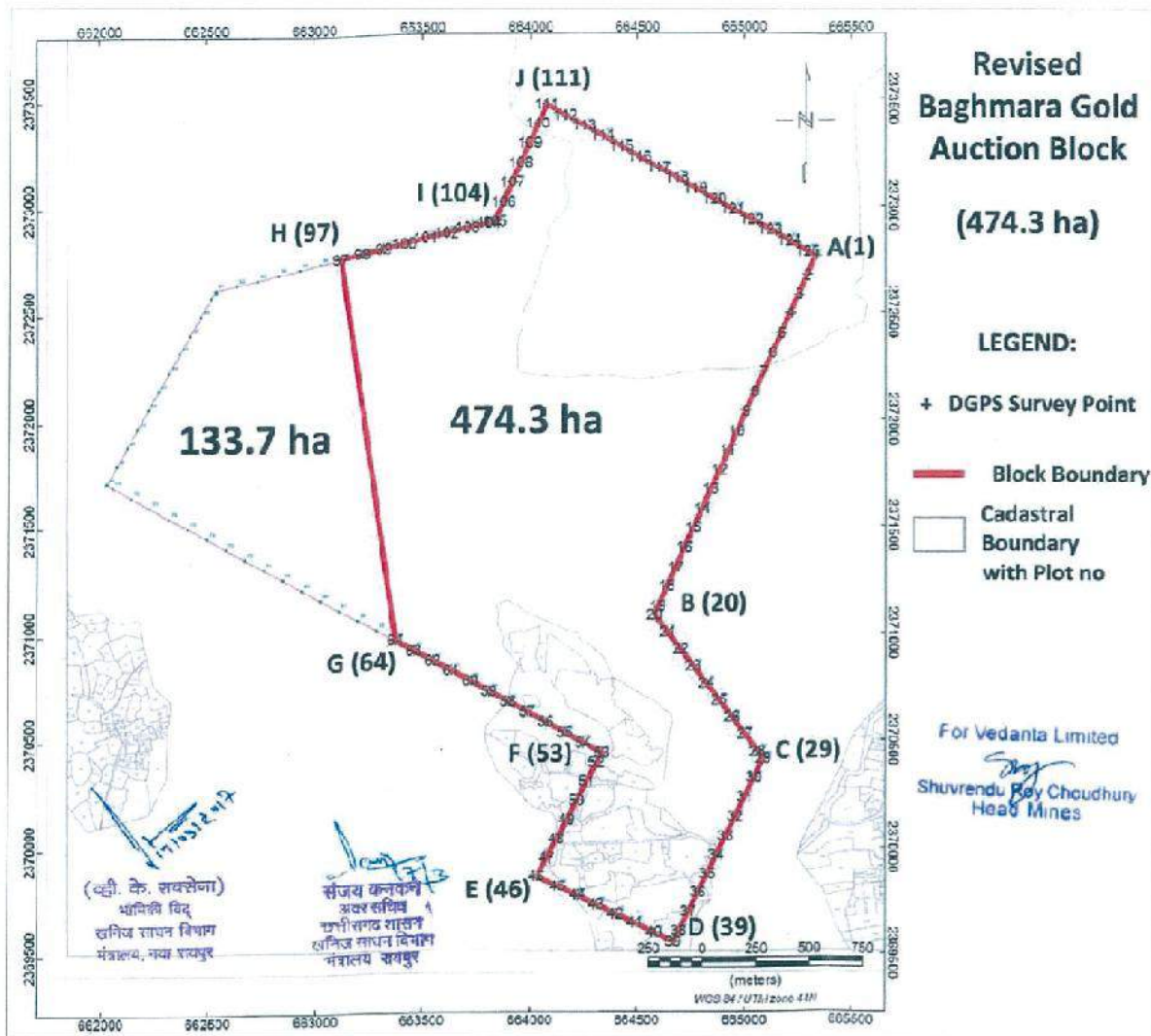
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5. LAESE AREA OF BAGHMARA GOLD BLOCK SHOWN ON TOPO SHEET NO. 64K/11

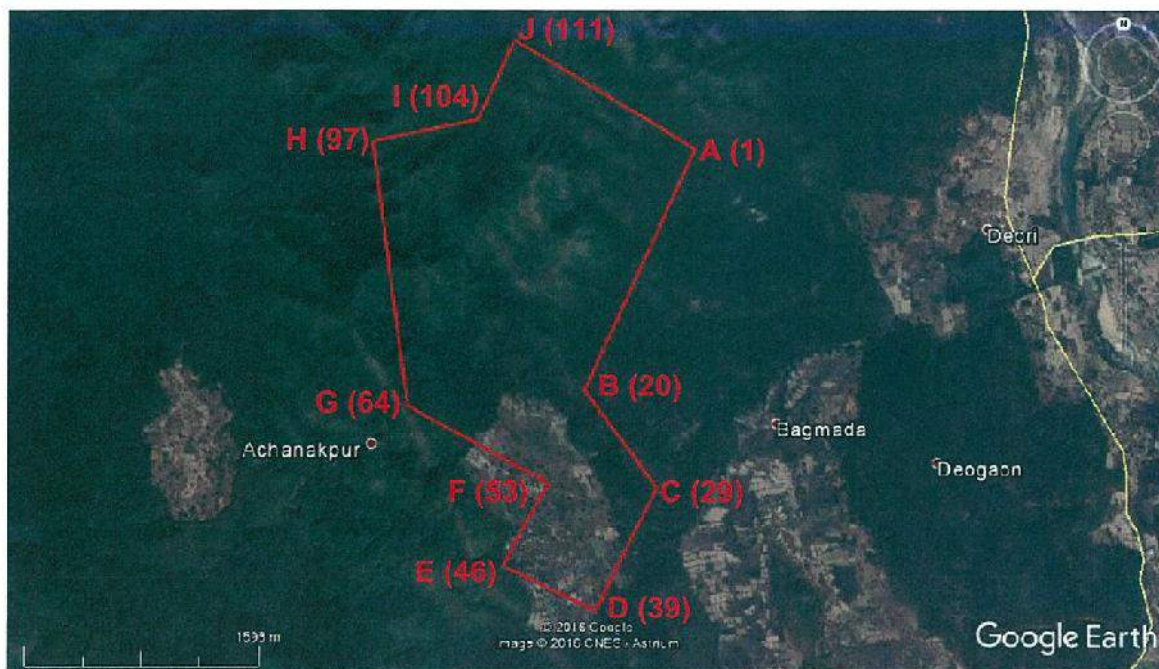


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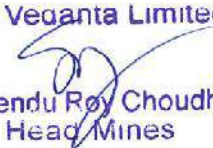
6. SURFACE MAP OF LEASE AREA



7. Google Map shown of Baghmara Gold Block



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8. Methodology

For conducting the survey of all Corner Points of the Block, firstly a base station was established at Corner Point 'F' by taking 2 Hrs time duration continuous observation By DGPS instrument (Trimble Make & Model No-R-4). The Co-ordinates of the base station are Latitude - N21°25'43.88993", Longitude E82°35'08.42997" and height 238.876 m. After that all the Corner Points were observed for minimum 15 Minutes with the reference to the base station established earlier.

The list of co-ordinates is given below:-

Point NO	EASTING	NORTHING	LATITUDE	LONGITUDE
1	665336.094	2372770.821	21° 26'59.22315"	82° 35' 43.94489" E
2	665295.1468	2372679.383	21° 26'56.297"	82° 35' 42.477" E
3	665254.227	2372588.138	21° 26'53.344"	82° 35'41.023" E
4	665213.3072	2372496.894	21° 26'50.390"	82° 35' 39.570" E
5	665172.3873	2372405.649	21° 26' 47.437"	82° 35'38.116" E
6	665131.4675	2372314.405	21° 26' 44.484"	82° 35' 36.663" E
7	665090.5476	2372223.16	21° 26'41.531"	82° 35'35.210" E
8	665049.6278	2372131.915	21° 26'38.578"	82° 35' 33.756" E
9	665008.708	2372040.671	21° 26'35.625"	82° 35' 32.303" E
10	664967.7881	2371949.426	21° 26'32.671"	82° 35' 30.850" E
11	664926.8683	2371858.182	21° 26' 29.718"	82° 35'29.396" E
12	664885.9484	2371766.937	21° 26' 26.765"	82° 35' 27.943" E
13	664845.0286	2371675.693	21° 26' 23.812"	82° 35' 26.490" E
14	664804.1088	2371584.448	21° 26' 20.858"	82° 35' 25.037" E
15	664763.1889	2371493.204	21° 26' 17.905"	82° 35'23.583" E
16	664722.2691	2371401.959	21° 26' 14.952"	82° 35'22.130" E
17	664681.3492	2371310.715	21° 26' 11.999"	82° 35' 20.677" E
18	664640.4294	2371219.47	21° 26'9.045"	82° 35' 19.224" E
19	664599.5096	2371128.226	21° 26' 6.092"	82° 35' 17.771" E
20	664581.253	2371087.279	21° 26'4.76039"	82° 35' 17.12211" E
21	664641.796	2371007.832	21° 26'2.164"	82° 35' 19.197" E
22	664702.4031	2370928.291	21° 25'59.558"	82° 35'21.273" E
23	664763.0102	2370848.75	21° 25'56.951"	82° 35'23.350" E
24	664823.6173	2370769.209	21° 25' 54.345"	82° 35' 25.427" E
25	664884.2243	2370689.668	21° 25'51.739"	82° 35' 27.503" E
26	664944.8314	2370610.127	21° 25'49.133"	82° 35' 29.580" E
27	665005.4385	2370530.586	21° 25' 46.527"	82° 35'31.657" E
28	665066.0456	2370451.045	21° 25' 43.920"	82° 35'33.733" E
29	665091.626	2370417.242	21° 25' 42.84553"	82° 35' 34.60975" E
30	665047.788	2370327.586	21° 25'39.912"	82° 35' 33.056" E
31	665003.9403	2370237.712	21° 25'37.005'	82° 35'31.501" E
32	664960.0925	2370147.838	21° 25' 34.097'	82° 35' 29.947" E
33	664916.2448	2370057.963	21° 25'31.189"	82° 35' 28.393" E

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34	664872.397	2369968.089	21° 25'28.281"	82° 35'26.838" E
35	664828.5493	2369878.215	21° 25'25.374"	82° 35' 25.284" E
36	664784.7015	2369788.341	21° 25' 22.466"	82° 35' 23.730" E
37	664740.8537	2369698.467	21° 25' 19.558"	82° 35' 22.176" E
38	664697.006	2369608.592	21° 25' 16.651"	82° 35' 20.622" E
39	664672.487	2369558.295	21° 25' 15.02064"	82° 35' 19.77087" E
40	664582.3806	2369601.706	21° 25' 16.464"	82° 35' 16.639" E
41	664492.3438	2369645.219	21° 25' 17.909"	82° 35' 13.528" E
42	664402.3069	2369688.732	21° 25' 19.353"	82° 35' 10.417" E
43	664312.27	2369732.245	21° 25'20.798"	82° 35' 7.305" E
44	664222.2331	2369775.758	21° 25'22.242"	82° 35'4.194" E
45	664132.1963	2369819.27	21° 25'23.686"	82° 35' 1.083" E
46	664032.542	2369867.18	21° 25'25.26203"	82° 34' 57.63841" E
47	664079.6374	2369955.662	21° 25'28.138"	82° 34' 59.306" E
48	664126.4233	2370044.042	21° 25'30.997"	82° 35'0.961" E
49	664173.2093	2370132.422	21° 25'33.855"	82° 35'2.617" E
50	664219.9952	2370220.803	21° 25' 36.713"	82° 35' 4.273" E
51	664266.7811	2370309.183	21° 25' 39.571"	82° 35' 5.928" E
52	664313.567	2370397.563	21° 25'42.429"	82° 35' 7.584" E
53	664337.473	2370442.722	21° 25'43.88993"	82° 35' 8.42997" E
54	664249.973	2370491.135	21° 25'45.493"	82° 35' 5.408" E
55	664162.472	2370539.545	21° 25'47.096"	82° 35' 2.387" E
56	664074.971	2370587.956	21° 25'48.698"	82° 34' 59.365" E
57	663987.47	2370636.366	21° 25' 50.301"	82° 34' 56.344" E
58	663899.969	2370684.777	21° 25'51.904"	82° 34' 53.322" E
59	663812.468	2370733.187	21° 25'53.507"	82° 34' 50.300" E
60	663724.967	2370781.598	21° 25' 55.109'	82° 34' 47.279" E
61	663637.466	2370830.008	21° 25'56.712'	82° 34' 44.257" E
62	663549.965	2370878.419	21° 25' 58.315"	82° 34'41.235" E
63	663462.464	2370926.829	21° 25' 59.917"	82° 34' 38.214" E
64	663375.007	2370975.476	21° 26' 1.51971"	82° 34'35.20371" E
GH-1	663361.165	2371074.572	21° 26'04.75418"	82° 34'34.74731" E
GH-2	663347.367	2371173.904	21° 26'07.98839"	82° 34'34.30283" E
GH-3	663333.569	2371273.236	21° 26'11.22261"	82° 34'33.85834" E
GH-4	663319.771	2371372.568	21° 26'14.45683"	82°34'33.41385" E
GH-5	663305.973	2371471.899	21° 26'17.69104"	82°34'32.96936" E
GH-6	663292.175	2371571.231	21°26'20.92526"	82°34'32.52486" E
GH-7	663278.377	2371670.563	21°26'24.15948"	82°34'32.08036" E
GH-8	663264.579	2371769.895	21°26'27.39369"	82°34'31.63586" E
GH-9	663250.781	2371869.227	21°26'30.62791"	82°34'31.19135" E
GH-10	663236.983	2371968.559	21°26'33.86212"	82°34'30.74683" E
GH-11	663223.185	2372067.891	21°26'37.09634"	82°34'30.30232" E
GH-12	663209.387	2372167.223	21°26'40.33055"	82°34'29.85779" E
GH-13	663195.589	2372266.555	21°26'43.56477"	82°34'29.41327" E
GH-14	663181.791	2372365.886	21°26'46.79898"	82°34'28.96874" E
GH-15	663167.993	2372465.218	21°26'50.03319"	82°34'28.52420" E
GH-16	663154.195	2372564.55	21°26'53.26740"	82°34'28.07967" E

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GH-17	663140.397	2372663.882	21°26'56.50162"	82°34'27.63512" E
97	663126.572	2372763.291	21° 26' 59.73502"	82° 34' 27.18469" E
98	663223.9314	2372786.159	21° 27' 0.450"	82° 34' 30.579" E
99	663321.2634	2372809.104	21° 27' 1.164"	82° 34' 33.968" E
100	663418.5954	2372832.049	21° 27' 1.878"	82° 34' 37.356" E
101	663515.9274	2372854.995	21° 27' 2.593"	82° 34' 40.744" E
102	663613.2594	2372877.94	21° 27' 3.307"	82° 34' 44.133" E
103	663710.5914	2372900.885	21° 27' 4.021"	82° 34' 47.521" E
104	663807.943	2372923.543	21° 27' 4.71477"	82° 34' 50.91243" E
105	663837.2225	2372930.737	21° 27' 4.950"	82° 34' 51.930" E
106	663877.3441	2373022.336	21° 27' 7.915"	82° 34' 53.356" E
107	663917.4656	2373113.934	21° 27' 10.880"	82° 34' 54.781" E
108	663957.5871	2373205.533	21° 27' 13.845"	82° 34' 56.207" E
109	663997.7087	2373297.131	21° 27' 16.810"	82° 34' 57.632" E
110	664037.8302	2373388.729	21° 27' 19.775"	82° 34' 59.058" E
111	664076.978	2373478.098	21° 27' 22.66047"	82° 35' 0.43335" E
112	664164.1778	2373429.165	21° 27' 21.048"	82° 35' 3.461" E
113	664251.356	2373380.175	21° 27' 19.427"	82° 35' 6.471" E
114	664338.5342	2373331.186	21° 27' 17.805"	82° 35' 9.482" E
115	664425.7124	2373282.196	21° 27' 16.184"	82° 35' 12.493" E
116	664512.8906	2373233.207	21° 27' 14.562"	82° 35' 15.503" E
117	664600.0689	2373184.218	21° 27' 12.941"	82° 35' 18.514" E
118	664687.2471	2373135.228	21° 27' 11.319"	82° 35' 21.524" E
119	664774.4253	2373086.239	21° 27' 9.697"	82° 35' 24.535" E
120	664861.6035	2373037.25	21° 27' 8.076"	82° 35' 27.546" E
121	664948.7817	2372988.26	21° 27' 6.454"	82° 35' 30.556" E
122	665035.9599	2372939.271	21° 27' 4.833"	82° 35' 33.567" E
123	665123.1381	2372890.281	21° 27' 3.211"	82° 35' 36.577" E
124	665210.3164	2372841.292	21° 27' 1.589"	82° 35' 39.588" E
125	665297.4946	2372792.303	21° 26' 59.968"	82° 35' 42.598" E

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9. Base Line Processing Reports

Project file data		Coordinate System	
Name:		Name:	UTM
Size:		Datum:	WGS 1984
Modified:	3/28/2016 6:15:09 PM (UTC:5)	Zone:	44 North (81E)
Time zone:	India Standard Time	Geoid:	EGM96 (Global)
Reference number:		Vertical datum:	
Description:			
Comment 1:			
Comment 2:			
Comment 3:			

Baseline Processing Report

Processing Summary

Observation	From	To	Solution Type	H. Prec. (Meter)	V. Prec. (Meter)	Geodetic Az.	Ellipsoid Dist. (Meter)	ΔHeight (Meter)
A (B9)	F	A	Fixed	0.030	0.076	23°50'37"	2533.210	-15.249
B (B13)	F	B	Fixed	0.015	0.025	21°18'10"	688.975	18.094
C (B12)	F	C	Fixed	0.012	0.034	92°26'22"	754.242	-6.632
D (B8)	F	D	Fixed	0.006	0.011	159°44'24"	943.186	-0.225
E (B7)	F	E	Fixed	0.020	0.038	208°24'01"	653.407	19.806
New G (B3)	F	New G	Fixed	0.021	0.036	299°23'44"	1097.080	125.382
New H (B1)	F	New H	Fixed	0.377	0.564	76°27'49"	1593.167	178.347
I (B11)	F	I	Fixed	0.021	0.047	349°20'47"	2541.377	95.279
J (B10)	F	J	Fixed	0.038	0.058	355°49'31"	3044.053	88.240

Acceptance Summary

Processed	Passed	Flag	Fail
9	9	0	0

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Processing style

Elevation mask: 10.0 deg
Auto start processing: Yes
Start automatic ID numbering: AUTO0001
Continuous vectors: No
Generate residuals: Yes
Antenna model: Automatic
Ephemeris type: Automatic
Frequency: Multiple Frequencies
Processing Interval: Use all data
Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.050 m + 1.000 ppm	0.100 m + 1.000 ppm
Vertical Precision >	0.100 m + 1.000 ppm	0.200 m + 1.000 ppm

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F (10:09:09 AM-12:45:07 PM) (S6)

Baseline observation: A (B9)

Processed: 4/24/2017
11:43:01
AM

Solution type: Fixed

Frequency used: Dual
Frequency
(L1, L2)

Horizontal precision: 0.030 m

Vertical precision: 0.076 m

RMS: 0.016 m

Maximum PDOP: 2.604

Ephemeris used: Broadcast

Antenna model: NGS
Absolute

Processing start time: 4/20/2017
10:22:28
AM
(Local:
UTC+5hr)

Processing stop time: 4/20/2017
10:52:37
AM
(Local:
UTC+5hr)

Processing duration: 00:30:09

Processing interval: 1 second

Vector Components (Mark to Mark)

From:	F				
	Grid		Local		Global
Easting	664337.473 m		Latitude	N21°25'43.88993"	Latitude N21°25'43.88993"

Northing	2370442.722 m	Longitude	E82°35'08.42997"	Longitude	E82°35'08.42997"
Elevation	302.394 m	Height	238.876 m	Height	238.876 m

To:	A				
	Grid		Local		Global
Easting	665336.094 m	Latitude	N21°26'59.22315"	Latitude	N21°26'59.22315"
Northing	2372770.821 m	Longitude	E82°35'43.94489"	Longitude	E82°35'43.94489"
Elevation	287.095 m	Height	223.627 m	Height	223.627 m

Vector					
Δ Easting	1000.470 m	NS Fwd Azimuth	23°50'37"	Δ X	-1126.636 m
Δ Northing	2327.099 m	Ellipsoid Dist.	2533.210 m	Δ Y	-721.853 m
Δ Elevation	-15.299 m	Δ Height	-15.249 m	Δ Z	2151.156 m

Standard Errors

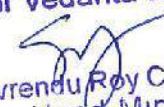
Vector errors:					
σ Δ Easting	0.011 m	σ NS fwd Azimuth	0°00'01"	σ Δ X	0.011 m
σ Δ Northing	0.010 m	σ Ellipsoid Dist.	0.009 m	σ Δ Y	0.038 m
σ Δ Elevation	0.039 m	σ Δ Height	0.039 m	σ Δ Z	0.012 m

Aposteriori Covariance Matrix (Meter²)

	X	Y	Z
X	0.0001238318		
Y	0.0000556178	0.0014587771	
Z	0.0000316488	0.0003188634	0.0001344042

Occupations

	From	To
Point ID:	F	A
Data file:	C:\Users\Manoj\Documents\Trimble Business	C:\Users\Manoj\Documents\Trimble Business

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	Center\Unnamed\04981100.T02	Center\Unnamed\04901101.T02
Receiver type:	R4-3	R4-3
Receiver serial number:	5424468001	5424468249
Antenna type:	R4-3 Internal	R4-3 Internal
Antenna serial number:	-----	-----
Antenna height (measured):	1.615 m	2.000 m
Antenna method:	Center of bumper	Center of bumper

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Head Mines

Tracking Summary

SV	4/20/2017 10:22:28 AM	Duration: 00:30:09 Major interval: 00:01:00	4/20/2017 10:52:37 AM
G 3			
G 7			
G 8			
G 9			
G 14			
G 16			
G 22			
G 23			
G 26			
G 27			
R 1			
R 2			
R 3			
R 8			
R 11			
R 12			
R 13			
R 22			

For Vedanta Limited


Shuvrendu Roy Choudhury
Head Mines

F (7:45:17 AM-8:56:02 AM) (S7)

Baseline observation:	B (B13)
Processed:	4/24/2017 11:42:22 AM
Solution type:	Fixed
Frequency used:	Dual Frequency (L1, L2)
Horizontal precision:	0.015 m
Vertical precision:	0.025 m
RMS:	0.013 m
Maximum PDOP:	2.331
Ephemeris used:	Broadcast
Antenna model:	NGS Absolute
Processing start time:	4/20/2017 8:39:45 AM (Local: UTC+5hr)
Processing stop time:	4/20/2017 8:55:51 AM (Local: UTC+5hr)
Processing duration:	00:16:06
Processing interval:	1 second

Vector Components (Mark to Mark)

From: F					
Grid		Local		Global	
Easting	664337.473 m	Latitude	N21°25'43.88993"	Latitude	N21°25'43.88993"
Northing	2370442.722 m	Longitude	E82°35'08.42997"	Longitude	E82°35'08.42997"

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Elevation	302.394 m	Height	238.876 m	Height	238.876 m
-----------	-----------	--------	-----------	--------	-----------

To:	B				
	Grid		Local		Global
Easting	664581.253 m	Latitude	N21°26'04.76039"	Latitude	N21°26'04.76039"
Northing	2371087.279 m	Longitude	E82°35'17.12211"	Longitude	E82°35'17.12211"
Elevation	320.475 m	Height	256.970 m	Height	256.970 m

Vector					
ΔEasting	243.780 m	NS Fwd Azimuth	21°18'10"	ΔX	-276.313 m
ΔNorthing	644.357 m	Ellipsoid Dist.	688.975 m	ΔY	-183.595 m
ΔElevation	18.081 m	ΔHeight	18.094 m	ΔZ	604.148 m

Standard Errors

Vector errors:					
σ ΔEasting	0.004 m	σ NS fwd Azimuth	0°00'01"	σ ΔX	0.004 m
σ ΔNorthing	0.006 m	σ Ellipsoid Dist.	0.006 m	σ ΔY	0.011 m
σ ΔElevation	0.013 m	σ ΔHeight	0.013 m	σ ΔZ	0.009 m

Aposteriori Covariance Matrix (Meter²)

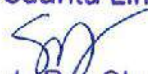
	X	Y	Z
X	0.0000145328		
Y	-0.0000084732	0.0001242766	
Z	-0.0000050203	0.0000769137	0.0000806797

Occupations

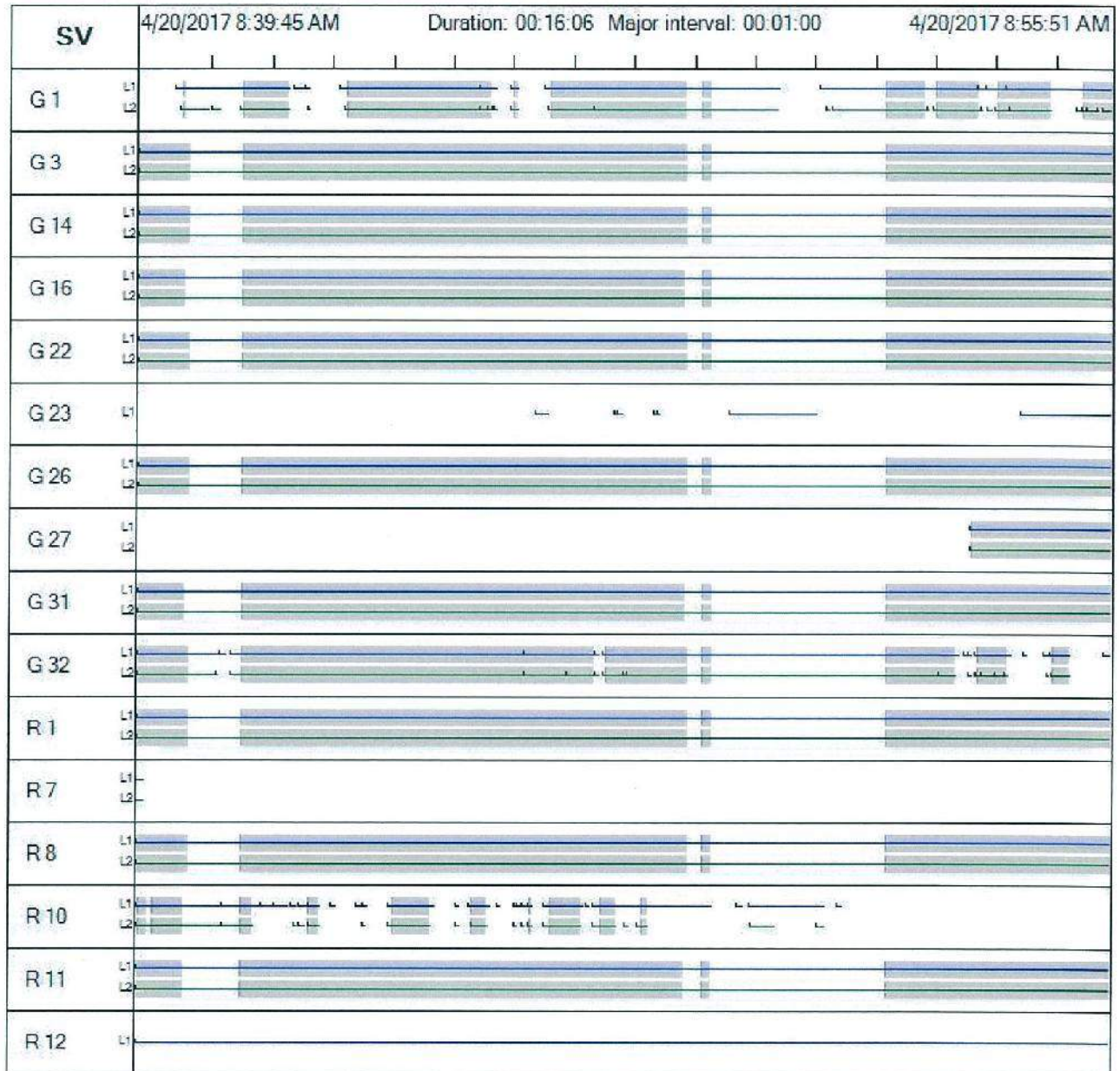
	From	To
Point ID:	F	B
Data file:	C:\Users\Manoj\Documents\Trimble Business Center\Unnamed\04981100.T02	C:\Users\Manoj\Documents\Trimble Business Center\Unnamed\04901100.T02
Receiver type:	R4-3	R4-3

Receiver serial number:	5424468001	5424468249
Antenna type:	R4-3 Internal	R4-3 Internal
Antenna serial number:	-----	-----
Antenna height (measured):	1.615 m	2.000 m
Antenna method:	Center of bumper	Center of bumper

For Vedanta Limited


Shuvrendu Roy Choudhury
Head Mines

Tracking Summary



For Vedanta Limited

 Shuvrendu Roy Choudhury
 Head Mines

Processing style

Elevation mask: 10.0 deg
Auto start processing: Yes
Start automatic ID numbering: AUTO0001
Continuous vectors: No
Generate residuals: Yes
Antenna model: Automatic
Ephemeris type: Automatic
Frequency: Multiple Frequencies
Processing Interval: Use all data
Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.050 m + 1.000 ppm	0.100 m + 1.000 ppm
Vertical Precision >	0.100 m + 1.000 ppm	0.200 m + 1.000 ppm

For veganta Limited


Shuvrendu Roy Choudhury
Head Mines

F (7:45:17 AM-8:56:02 AM) (S7)

Baseline observation: C (B12)

Processed: 4/24/2017
11:42:22
AM

Solution type: Fixed

Frequency used: Dual
Frequency
(L1, L2)

Horizontal precision: 0.012 m

Vertical precision: 0.034 m

RMS: 0.013 m

Maximum PDOP: 1.730

Ephemeris used: Broadcast

Antenna model: NGS
Absolute

Processing start time: 4/20/2017
7:54:32
AM
(Local:
UTC+5hr)

Processing stop time: 4/20/2017
8:14:54
AM
(Local:
UTC+5hr)

Processing duration: 00:20:22

Processing interval: 1 second

Vector Components (Mark to Mark)

From: F					
Grid		Local		Global	
Easting	664337.473 m	Latitude	N21°25'43.88993"	Latitude	N21°25'43.88993"
Northing	2370442.722 m	Longitude	E82°35'08.42997"	Longitude	E82°35'08.42997"

Elevation	302.394 m	Height	238.876 m	Height	238.876 m
-----------	-----------	--------	-----------	--------	-----------

To:	C				
	Grid		Local		Global
Easting	665091.626 m	Latitude	N21°25'42.84553"	Latitude	N21°25'42.84553"
Northing	2370417.242 m	Longitude	E82°35'34.60975"	Longitude	E82°35'34.60975"
Elevation	295.757 m	Height	232.244 m	Height	232.244 m

Vector					
ΔEasting	753.796 m	NS Fwd Azimuth	92°26'22"	ΔX	-746.574 m
ΔNorthing	-24.480 m	Ellipsoid Dist.	754.242 m	ΔY	102.714 m
ΔElevation	-6.637 m	ΔHeight	-6.632 m	ΔZ	-32.325 m

Standard Errors

Vector errors:					
σ ΔEasting	0.005 m	σ NS fwd Azimuth	0°00'01"	σ ΔX	0.006 m
σ ΔNorthing	0.004 m	σ Ellipsoid Dist.	0.005 m	σ ΔY	0.016 m
σ ΔElevation	0.017 m	σ ΔHeight	0.017 m	σ ΔZ	0.008 m

Aposteriori Covariance Matrix (Meter²)

	X	Y	Z
X	0.0000344685		
Y	0.0000569847	0.0002451949	
Z	0.0000214161	0.0001045631	0.0000628437

Occupations

	From	To
Point ID:	F	C
Data file:	C:\Users\Manoj\Documents\Trimble Business Center\Unnamed\04981100.T02	C:\Users\Manoj\Documents\Trimble Business Center\Unnamed\04901100.T02

Receiver type:	R4-3	R4-3
Receiver serial number:	5424468001	5424468249
Antenna type:	R4-3 Internal	R4-3 Internal
Antenna serial number:	-----	-----
Antenna height (measured):	1.615 m	2.000 m
Antenna method:	Center of bumper	Center of bumper

For Veganta Limited

 Shuvrendu Roy Choudhury
 Head Mines

Tracking Summary

SV	4/20/2017 7:54:32 AM	Duration: 00:20:22 Major interval: 00:01:00	4/20/2017 8:14:54 AM
G 1	L1 L2		
G 3	L1 L2		
G 10	L1 L2		
G 14	L1 L2		
G 16	L1 L2		
G 22	L1 L2		
G 23	L1 L2		
G 26	L1 L2		
G 31	L1 L2		
G 32	L1 L2		
R 1	L1 L2		
R 7	L1 L2		
R 8	L1 L2		
R 10	L1 L2		
R 11	L1 L2		
R 12	L1		

For Vedanta Limited


Shuvrendu Roy Choudhury
Head Mines

F (3:18:13 PM-4:30:18 PM) (S5)

Baseline observation:	D (B8)
Processed:	4/24/2017 11:42:05 AM
Solution type:	Fixed
Frequency used:	Dual Frequency (L1, L2)
Horizontal precision:	0.006 m
Vertical precision:	0.011 m
RMS:	0.011 m
Maximum PDOP:	1.682
Ephemeris used:	Broadcast
Antenna model:	NGS Absolute
Processing start time:	4/19/2017 4:13:44 PM (Local: UTC+5hr)
Processing stop time:	4/19/2017 4:29:58 PM (Local: UTC+5hr)
Processing duration:	00:16:14
Processing interval:	1 second

Vector Components (Mark to Mark)

From:		F			
Grid		Local		Global	
Easting	664337.473 m	Latitude	N21°25'43.88993"	Latitude	N21°25'43.88993"
Northing	2370442.722 m	Longitude	E82°35'08.42997"	Longitude	E82°35'08.42997"

Elevation	302.394 m	Height	238.876 m	Height	238.876 m
-----------	-----------	--------	-----------	--------	-----------

To:	D				
	Grid		Local		Global
Easting	664672.487 m	Latitude	N21°25'15.02064"	Latitude	N21°25'15.02064"
Northing	2369558.295 m	Longitude	E82°35'19.77087"	Longitude	E82°35'19.77087"
Elevation	302.182 m	Height	238.651 m	Height	238.651 m

Vector					
ΔEasting	335.514 m	NS Fwd Azimuth	159°44'24"	ΔX	-282.205 m
ΔNorthing	-881.427 m	Ellipsoid Dist.	943.186 m	ΔY	362.455 m
ΔElevation	-0.212 m	ΔHeight	-0.225 m	ΔZ	-823.805 m

Standard Errors

Vector errors:					
σ ΔEasting	0.002 m	σ NS fwd Azimuth	0°00'01"	σ ΔX	0.002 m
σ ΔNorthing	0.002 m	σ Ellipsoid Dist.	0.002 m	σ ΔY	0.005 m
σ ΔElevation	0.005 m	σ ΔHeight	0.005 m	σ ΔZ	0.003 m

Aposteriori Covariance Matrix (Meter²)

	X	Y	Z
X	0.0000057500		
Y	0.0000024162	0.0000264636	
Z	0.0000010234	0.0000082457	0.0000079496

Occupations

	From	To
Point ID:	F	D
Data file:	C:\Users\Manoj\Documents\Trimble Business Center\Unnamed\04981090.T02	C:\Users\Manoj\Documents\Trimble Business Center\Unnamed\04901090.T02

For Vedanta Limited

 Shuvrendu Roy Choudhury
 Head Mines

Receiver type:	R4-3	R4-3
Receiver serial number:	5424468001	5424468249
Antenna type:	R4-3 Internal	R4-3 Internal
Antenna serial number:	-----	-----
Antenna height (measured):	1.685 m	2.000 m
Antenna method:	Center of bumper	Center of bumper

For Veganta Limited


Shuvrendu Roy Choudhury
Head Mines

Tracking Summary

SV	4/19/2017 4:13:44 PM	Duration: 00:16:14	Major interval: 00:01:00	4/19/2017 4:29:58 PM
G 1	L1 L2			
G 6	L1 L2			
G 7	L1 L2			
G 11	L1 L2			
G 13	L1 L2			
G 17	L1 L2			
G 19	L1 L2			
G 28	L1 L2			
G 30	L1 L2			
R 12	L1 L2			
R 13	L1 L2			
R 14	L1 L2			
R 17	L1 L2			
R 23	L1 L2			
R 24	L1 L2			

For Veganta Limited


Shuvrendu Roy Choudhury
Head Mines

Processing style

Elevation mask: 10.0 deg
Auto start processing: Yes
Start automatic ID numbering: AUTO0001
Continuous vectors: No
Generate residuals: Yes
Antenna model: Automatic
Ephemeris type: Automatic
Frequency: Multiple Frequencies
Processing Interval: Use all data
Force float: No

Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.050 m + 1.000 ppm	0.100 m + 1.000 ppm
Vertical Precision >	0.100 m + 1.000 ppm	0.200 m + 1.000 ppm

For Vedanta Limited

Shuvrendu Roy Choudhury
Head Mines

F (3:18:13 PM-4:30:18 PM) (S5)

Baseline observation:	E (B7)
Processed:	4/24/2017 11:42:05 AM
Solution type:	Fixed
Frequency used:	Dual Frequency (L1, L2)
Horizontal precision:	0.020 m
Vertical precision:	0.038 m
RMS:	0.011 m
Maximum PDOP:	3.413
Ephemeris used:	Broadcast
Antenna model:	NGS Absolute
Processing start time:	4/19/2017 3:30:54 PM (Local: UTC+5hr)
Processing stop time:	4/19/2017 3:46:42 PM (Local: UTC+5hr)
Processing duration:	00:15:48
Processing interval:	1 second

Vector Components (Mark to Mark)

From: F					
Grid		Local		Global	
Easting	664337.473 m	Latitude	N21°25'43.88993"	Latitude	N21°25'43.88993"
Northing	2370442.722 m	Longitude	E82°35'08.42997"	Longitude	E82°35'08.42997"

Elevation	302.394 m	Height	238.876 m	Height	238.876 m
-----------	-----------	--------	-----------	--------	-----------

To:	E				
	Grid		Local		Global
Easting	664032.542 m	Latitude	N21°25'25.26203"	Latitude	N21°25'25.26203"
Northing	2369867.180 m	Longitude	E82°34'57.63841"	Longitude	E82°34'57.63841"
Elevation	322.212 m	Height	258.682 m	Height	258.682 m

Vector					
Δ Easting	-304.931 m	NS Fwd Azimuth	208°24'01"	Δ X	337.667 m
Δ Northing	-577.842 m	Ellipsoid Dist.	653.407 m	Δ Y	186.387 m
Δ Elevation	19.818 m	Δ Height	19.806 m	Δ Z	-527.833 m

Standard Errors

Vector errors:					
σ Δ Easting	0.006 m	σ NS fwd Azimuth	0°00'02"	σ Δ X	0.007 m
σ Δ Northing	0.008 m	σ Ellipsoid Dist.	0.008 m	σ Δ Y	0.018 m
σ Δ Elevation	0.020 m	σ Δ Height	0.020 m	σ Δ Z	0.010 m

Aposteriori Covariance Matrix (Meter²)

	X	Y	Z
X	0.0000465423		
Y	0.0000431393	0.0003404891	
Z	0.0000117219	0.0001046425	0.0001027231

Occupations

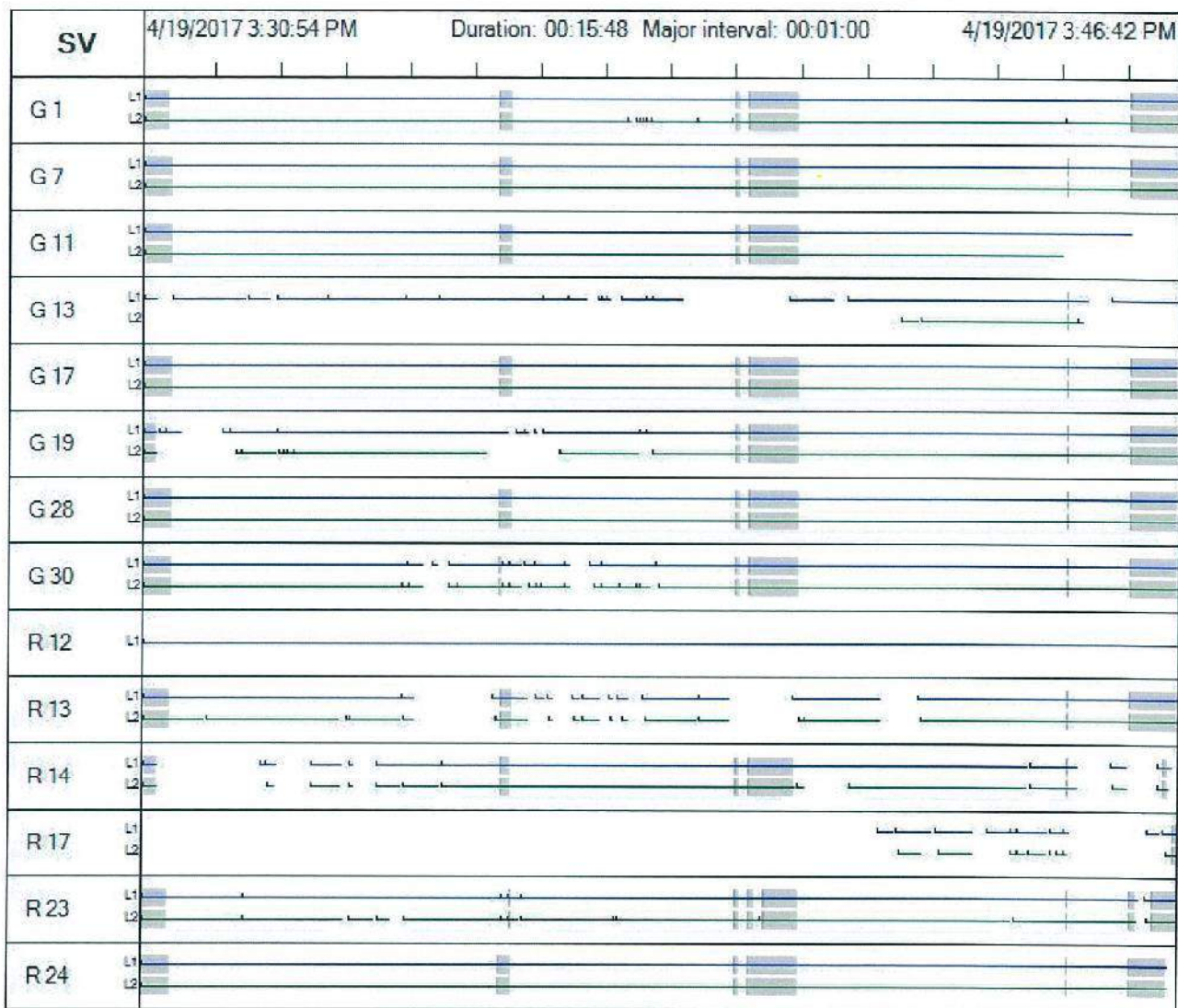
	From	To
Point ID:	F	E
Data file:	C:\Users\Manoj\Documents\Trimble Business Center\Unnamed\04981090.T02	C:\Users\Manoj\Documents\Trimble Business Center\Unnamed\04901090.T02

Receiver type:	R4-3	R4-3
Receiver serial number:	5424468001	5424468249
Antenna type:	R4-3 Internal	R4-3 Internal
Antenna serial number:	-----	-----
Antenna height (measured):	1.685 m	2.000 m
Antenna method:	Center of bumper	Center of bumper

For Vedanta Limited


Shuvrendu Roy Choudhury
Head Mines

Tracking Summary



For Vedanta Limited


Shuvrendu Roy Choudhury
Head Mines

F (11:04:30 AM-12:43:29 PM) (S2)

Baseline observation: New G
(B3)

Processed: 4/24/2017
11:41:20
AM

Solution type: Fixed

Frequency used: Dual
Frequency
(L1, L2)

Horizontal precision: 0.021 m

Vertical precision: 0.036 m

RMS: 0.017 m

Maximum PDOP: 3.089

Ephemeris used: Broadcast

Antenna model: NGS
Absolute

Processing start time: 4/8/2017
12:05:36
PM
(Local:
UTC+5hr)

Processing stop time: 4/8/2017
12:43:15
PM
(Local:
UTC+5hr)

Processing duration: 00:37:39

Processing interval: 1 second

Vector Components (Mark to Mark)

From:	F				
	Grid		Local		Global
Easting	664337.473 m	Latitude	N21°25'43.88993"	Latitude	N21°25'43.88993"

Northing	2370442.722 m	Longitude	E82°35'08.42997"	Longitude	E82°35'08.42997"
Elevation	302.394 m	Height	238.876 m	Height	238.876 m

To:	New G				
	Grid		Local		Global
Easting	663375.007 m	Latitude	N21°26'01.51971"	Latitude	N21°26'01.51971"
Northing	2370975.476 m	Longitude	E82°34'35.20371"	Longitude	E82°34'35.20371"
Elevation	427.773 m	Height	364.258 m	Height	364.258 m

Vector					
Δ Easting	-961.166 m	NS Fwd Azimuth	299°23'44"	ΔX	937.558 m
Δ Northing	528.754 m	Ellipsoid Dist.	1097.080 m	ΔY	-202.799 m
Δ Elevation	125.379 m	Δ Height	125.382 m	ΔZ	547.063 m

Standard Errors

Vector errors:					
σ Δ Easting	0.008 m	σ NS fwd Azimuth	0°00'02"	σ ΔX	0.007 m
σ Δ Northing	0.008 m	σ Ellipsoid Dist.	0.007 m	σ ΔY	0.017 m
σ Δ Elevation	0.018 m	σ Δ Height	0.018 m	σ ΔZ	0.011 m

Aposteriori Covariance Matrix (Meter²)

	X	Y	Z
X	0.0000551615		
Y	-0.0000009302	0.0002730182	
Z	-0.0000146497	0.0001241201	0.0001201574

Occupations

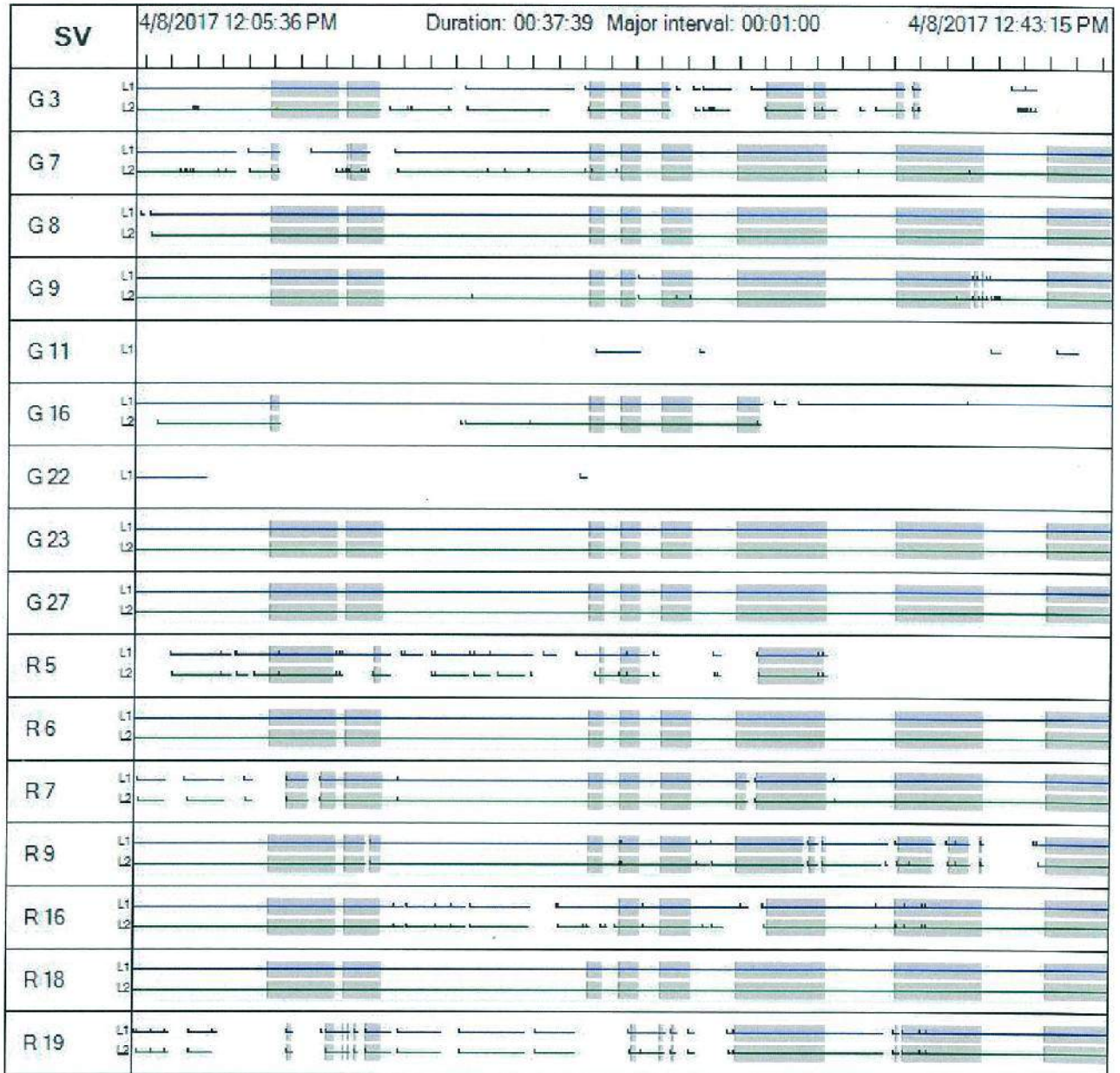
	From	To
Point ID:	F	New G
Data file:	C:\Users\Manoj\Documents\Trimble Business	C:\Users\Manoj\Documents\Trimble Business

	Center\Unnamed\04980980.T02	Center\Unnamed\04900980.T02
Receiver type:	R4-3	R4-3
Receiver serial number:	5424468001	5424468249
Antenna type:	R4-3 Internal	R4-3 Internal
Antenna serial number:	-----	-----
Antenna height (measured):	1.680 m	2.000 m
Antenna method:	Center of bumper	Center of bumper

For Vedanta Limited

 Shuvrendu Roy Choudhury
 Head Mines

Tracking Summary



For Vedanta Limited
 Shuvrendra Choudhury
 Head of IT

F (15:04:30 AM-16:43:29 PM) (B1)

Baseline observation:	New H (B1)
Processed:	Invalid leap seconds
Solution type:	Float
Frequency used:	Dual Frequency (L1, L2)
Horizontal precision:	0.377 m
Vertical precision:	0.564 m
RMS:	0.011 m
Maximum PDOP:	3.164
Ephemeris used:	Broadcast
Antenna model:	NGS Absolute
Processing start time:	Invalid leap seconds (Local: UTC+5hr)
Processing stop time:	Invalid leap seconds (Local: UTC+5hr)
Processing duration:	00:15:34
Processing interval:	1 second

Vector Components (Mark to Mark)

From:	F				
	Grid		Local		Global
Easting	664337.473 m		Latitude	N21°25'43.88993"	Latitude N21°25'43.88993"

Northing	2370442.722 m	Longitude	E82°35'08.42997"	Longitude	E82°35'08.42997"
Elevation	302.394 m	Height	238.876 m	Height	238.876 m

To:	New H				
	Grid		Local		Global
Easting	663126.5729 m	Latitude	N21°26'59.73502"	Latitude	N21°26'59.73502"
Northing	2372763.2910 m	Longitude	E82°34'27.18469"	Longitude	E82°34'27.18469"
Elevation	478.678 m	Height	415.195 m	Height	415.195 m

Vector					
Δ Easting	575.229 m	NS Fwd Azimuth	76°27'49"	Δ X	-569.022 m
Δ Northing	144.597 m	Ellipsoid Dist.	593.167 m	Δ Y	96.530 m
Δ Elevation	78.341 m	Δ Height	78.347 m	Δ Z	157.871 m

Standard Errors

Vector errors:					
σ Δ Easting	0.154 m	σ NS fwd Azimuth	0°00'39"	σ Δ X	0.160 m
σ Δ Northing	0.111 m	σ Ellipsoid Dist.	0.154 m	σ Δ Y	0.282 m
σ Δ Elevation	0.288 m	σ Δ Height	0.288 m	σ Δ Z	0.117 m

Aposteriori Covariance Matrix (Meter²)

	X	Y	Z
X	0.0255751107		
Y	0.0110166473	0.0797584206	
Z	0.0021046582	0.0150683215	0.0136584835

Occupations

	From	To
Point ID:	F	New H

Data file:	C:\Users\Manoj\Documents\Trimble Business Center\Unnamed\04980970.T02	C:\Users\Manoj\Documents\Trimble Business Center\Unnamed\04900970.T02
Receiver type:	R4-3	R4-3
Receiver serial number:	5424468001	5424468249
Antenna type:	R4-3 Internal	R4-3 Internal
Antenna serial number:	-----	-----
Antenna height (measured):	1.590 m	2.000 m
Antenna method:	Center of bumper	Center of bumper

For Vedanta Limited


Shuvrendu Roy Choudhury
Head Mines

Tracking Summary

SV	Invalid leap seconds										Duration: 00:15:34 Major interval: 00:01:00 Invalid leap seconds									
G 1	L1											L2								
G 7	L1											L2								
G 8	L1											L2								
G 9	L1											L2								
G 11	L1											L2								
G 17	L1											L2								
G 23	L1											L2								
G 28	L1											L2								
G 30	L1											L2								
R 5	L1											L2								
R 6	L1											L2								
R 7	L1											L2								
R 9	L1											L2								
R 16	L1											L2								
R 18	L1											L2								
R 19	L1											L2								

For Vedanta Limited

Shuvrendu Roy Choudhury
Head Mines

F (10:09:09 AM-12:45:07 PM) (S6)

Baseline observation:	I (B11)
Processed:	4/24/2017 11:43:01 AM
Solution type:	Fixed
Frequency used:	Dual Frequency (L1, L2)
Horizontal precision:	0.021 m
Vertical precision:	0.047 m
RMS:	0.016 m
Maximum PDOP:	2.302
Ephemeris used:	Broadcast
Antenna model:	NGS Absolute
Processing start time:	4/20/2017 12:14:47 PM (Local: UTC+5hr)
Processing stop time:	4/20/2017 12:45:00 PM (Local: UTC+5hr)
Processing duration:	00:30:13
Processing interval:	1 second

Vector Components (Mark to Mark)

From:		F			
Grid		Local		Global	
Easting	664337.473 m	Latitude	N21°25'43.88993"	Latitude	N21°25'43.88993"
Northing	2370442.722 m	Longitude	E82°35'08.42997"	Longitude	E82°35'08.42997"

Elevation	302.394 m	Height	238.876 m	Height	238.876 m
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To:	I				
Grid		Local		Global	
Easting	663807.943 m	Latitude	N21°27'04.71477"	Latitude	N21°27'04.71477"
Northing	2372923.543 m	Longitude	E82°34'50.91243"	Longitude	E82°34'50.91243"
Elevation	397.630 m	Height	334.156 m	Height	334.156 m

Vector					
ΔEasting	-495.043 m	NS Fwd Azimuth	349°20'47"	ΔX	359.555 m
ΔNorthing	2492.521 m	Ellipsoid Dist.	2541.377 m	ΔY	-878.045 m
ΔElevation	95.236 m	ΔHeight	95.279 m	ΔZ	2359.664 m

Standard Errors

Vector errors:					
σ ΔEasting	0.008 m	σ NS fwd Azimuth	0°00'01"	σ ΔX	0.008 m
σ ΔNorthing	0.008 m	σ Ellipsoid Dist.	0.008 m	σ ΔY	0.021 m
σ ΔElevation	0.024 m	σ ΔHeight	0.024 m	σ ΔZ	0.013 m

Aposteriori Covariance Matrix (Meter²)

	X	Y	Z
X	0.0000571169		
Y	0.0000284215	0.0004535301	
Z	0.0000071620	0.0002218266	0.0001778751

Occupations

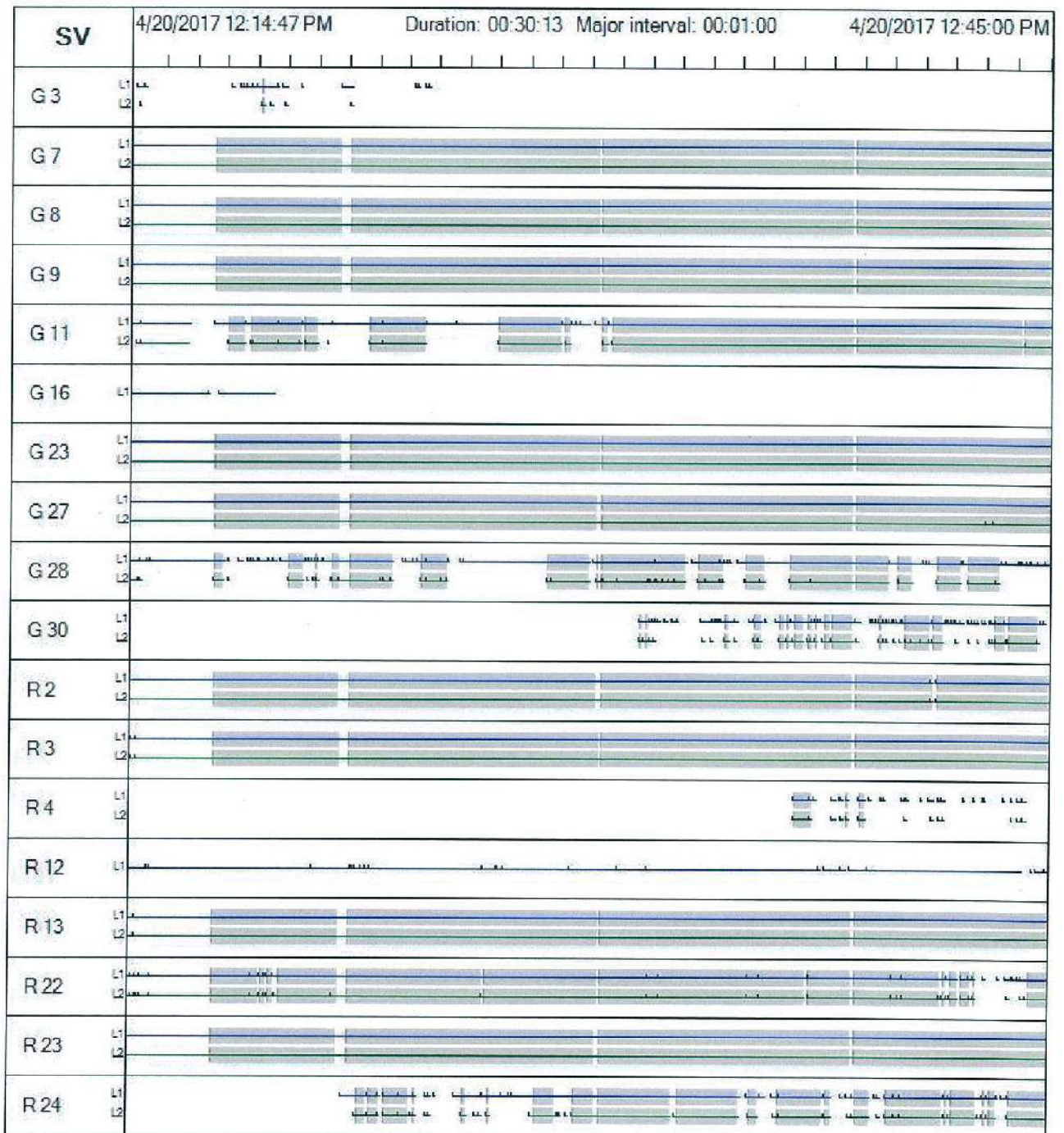
	From	To
Point ID:	F	I
Data file:	C:\Users\Manoj\Documents\Trimble Business Center\Unnamed\04981100.T02	C:\Users\Manoj\Documents\Trimble Business Center\Unnamed\04901101.T02

Receiver type:	R4-3	R4-3
Receiver serial number:	5424468001	5424468249
Antenna type:	R4-3 Internal	R4-3 Internal
Antenna serial number:	-----	-----
Antenna height (measured):	1.615 m	2.000 m
Antenna method:	Center of bumper	Center of bumper

For Vedanta Limited

 Shuvrendu Roy Choudhury
 Head Mines

Tracking Summary



For Vedanta Limited

 Shuvrendu Roy Choudhury
 Head Mines

F (10:09:09 AM-12:45:07 PM) (S6)

Baseline observation:	J (B10)
Processed:	4/24/2017 11:43:01 AM
Solution type:	Fixed
Frequency used:	Dual Frequency (L1, L2)
Horizontal precision:	0.038 m
Vertical precision:	0.058 m
RMS:	0.016 m
Maximum PDOP:	3.510
Ephemeris used:	Broadcast
Antenna model:	NGS Absolute
Processing start time:	4/20/2017 11:30:45 AM (Local: UTC+5hr)
Processing stop time:	4/20/2017 12:01:05 PM (Local: UTC+5hr)
Processing duration:	00:30:20
Processing interval:	1 second

Vector Components (Mark to Mark)

From:		F			
		Grid		Local	
				Global	
Easting	664337.473 m	Latitude	N21°25'43.88993"	Latitude	N21°25'43.88993"
Northing	2370442.722 m	Longitude	E82°35'08.42997"	Longitude	E82°35'08.42997"

Elevation	302.394 m	Height	238.876 m	Height	238.876 m
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To: J					
Grid		Local		Global	
Easting	664076.978 m	Latitude	N21°27'22.66047"	Latitude	N21°27'22.66047"
Northing	2373478.098 m	Longitude	E82°35'00.43335"	Longitude	E82°35'00.43335"
Elevation	390.579 m	Height	327.116 m	Height	327.116 m

Vector					
ΔEasting	-252.295 m	NS Fwd Azimuth	355°49'31"	ΔX	87.131 m
ΔNorthing	3033.376 m	Ellipsoid Dist.	3044.053 m	ΔY	-1047.783 m
ΔElevation	88.185 m	ΔHeight	88.240 m	ΔZ	2858.222 m

Standard Errors

Vector errors:					
σ ΔEasting	0.012 m	σ NS fwd Azimuth	0°00'01"	σ ΔX	0.011 m
σ ΔNorthing	0.013 m	σ Ellipsoid Dist.	0.013 m	σ ΔY	0.026 m
σ ΔElevation	0.030 m	σ ΔHeight	0.030 m	σ ΔZ	0.020 m

Aposteriori Covariance Matrix (Meter²)

	X	Y	Z
X	0.0001319254		
Y	0.0000229341	0.0006565851	
Z	-0.0000549611	0.0003816466	0.0003966410

Occupations

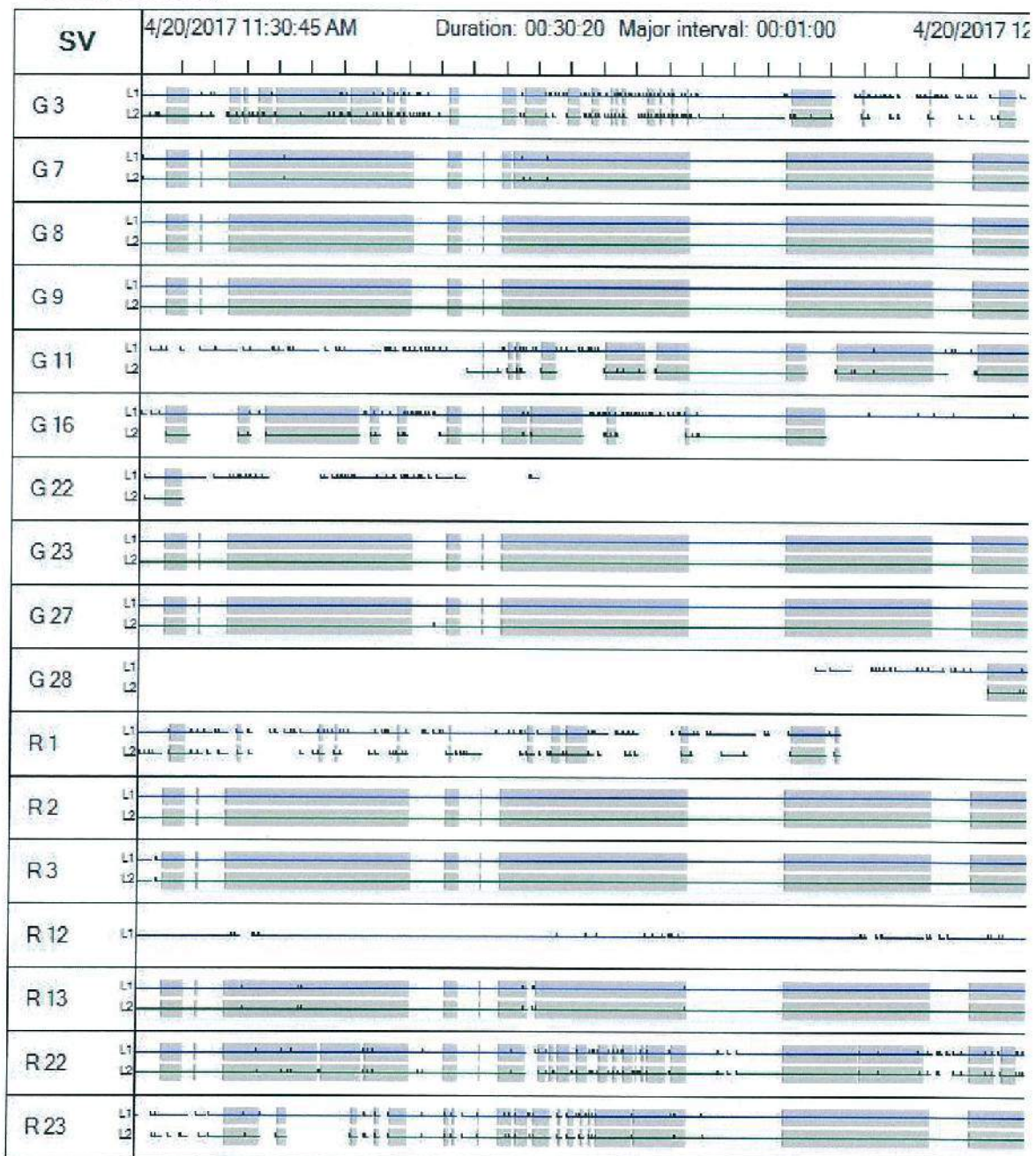
	From	To
Point ID:	F	J
Data file:	C:\Users\Manoj\Documents\Trimble Business Center\Unnamed\04981100.T02	C:\Users\Manoj\Documents\Trimble Business Center\Unnamed\04901101.T02
Receiver type:	R4-3	R4-3

Receiver serial number:	5424468001	5424468249
Antenna type:	R4-3 Internal	R4-3 Internal
Antenna serial number:	-----	-----
Antenna height (measured):	1.615 m	2.000 m
Antenna method:	Center of bumper	Center of bumper

For Vedanta Limited


Shuvendu Roy Choudhury
Head Mines

Tracking Summary



For Vedanta Limited

Shuvrendu Roy Choudhury
Head Mines

10. CERIFICATE OF AUTHORIZATION FOR CONDUCTING DGPS SURVEY

क्रमांक- डी/ख.से./प.वि./2014/आर.1666
दिनांक, 29.11.2014

By Speed post

छत्तीसगढ़ शासन
खनिज साधन विभाग
मंत्रालय

महानदी भवन, नया रायपुर-492002

22 NOV 2014

// अधिसूचना //

रायपुर, दिनांक नवम्बर, 2014

क्रमांक एफ 7-14/2013/12: राज्य शासन एतद्वारा चीफ कन्ट्रोलर ऑफ माइन्स, भारतीय खान ब्यूरो नागपुर के परिपत्र क्रमांक 2/2010, दिनांक 06.4.2010 के पैरा-2 के क्रमांक-2 द्वारा प्रदत्त शक्तियों को प्रयोग में लाते हुए इस विभाग की समसंख्यक अधिसूचना दिनांक 10.11.2014 में निम्नानुसार संशोधन करता है :-

// संशोधन //

उक्त अधिसूचना के पैरा-01 के सरल क्रमांक-10 में शब्द M/S BHARAT ALUMINIUM COMPANY LIMITED (BALCO) P.O. Balco Nagar Korba(C.G.), India, Pin 495684 के परचात शब्द (राज्य में स्थित स्वयं के खनिज रियासतों से संबंधित डीजीपीएस कार्य हेतु) अन्तः स्थापित किया जाय।

छत्तीसगढ़ के राज्यपाल के नाम से
तथा आदेशानुसार,

(सुबोध कुमार सिंह)

सचिव

छत्तीसगढ़ शासन
खनिज साधन विभाग

पृ. क्रमांक एफ 7-14/2013/12
प्रतिलिपि:-

रायपुर, दिनांक नवम्बर, 2014

22 NOV 2014

1. सचिव, भारत सरकार, खान मंत्रालय, शास्त्री भवन, नई दिल्ली,
2. कन्ट्रोलर जनरल, भारतीय खान ब्यूरो, सेकण्ड फ्लोर, ए-ब्लॉक, इन्दरा भवन, सिविल लाईन, नागपुर (महाराष्ट्र)
3. चीफ कन्ट्रोलर ऑफ माइन्स, भारतीय खान ब्यूरो, सेकण्ड फ्लोर, ए-ब्लॉक, इन्दरा भवन, सिविल लाईन, नागपुर (महाराष्ट्र)
4. क्षेत्रीय खान नियंत्रक, भारतीय खान ब्यूरो, छत्तीसगढ़ तल, बी एवं सी -ब्लॉक, इन्दरा भवन, सिविल लाईन, नागपुर (महाराष्ट्र)
5. संचालक, भूमिकी तथा खनिकर्म, छत्तीसगढ़ द्वितीय तल, इन्द्रायती भवन, नया रायपुर,
6. समस्त कलेक्टर जिला ----- छत्तीसगढ़
7. मेसर्स भारत एल्युमिनियम कंपनी लिमिटेड, बाल्को नगर, कोरबा की ओर सूचनार्थ एवं आवश्यक कार्यवाही हेतु
8. संचालक, शासकीय मुद्रणालय, गान्धिवारा, भनपुरी, रायपुर(छत्तीसगढ़) की ओर राजपत्र में प्रकाशनार्थ।
9. श्री श्रीकांत राय, सहायक भूमिकी विद, संचालनालय भूमिकी तथा खनिकर्म, द्वितीय मंजूर, इन्द्रायती भवन, नया रायपुर। कृपया उक्त आदेश/अधिसूचना को संचालनालय की वेबसाईट में अपलोड करने का कष्ट करें।
10. गार्ड फाईल रजिस्टर

सचिव

छत्तीसगढ़ शासन
खनिज साधन विभाग

for veqanta Limited

Shuvrendu Roy Choudhury
Head Mines

By Speed post

छत्तीसगढ़ शासन
खनिज साधन विभाग
मंत्रालय
महानदी भवन, नया रायपुर-492002

// अधिसूचना //

10 NOV 2014

रायपुर, दिनांक नवम्बर, 2014

क्रमांक एफ 7-14/2013/12: राज्य शासन एतद् द्वारा चीफ कन्ट्रोलर ऑफ माइन्स, भारतीय खान ब्यूरो नागपुर के परिपत्र क्रमांक 2/2010, दिनांक 06.4.2010 के पैरा-2 के बिन्दु-2 के तारतम्य में समस्त खनिजों के खनिज रियायतों के सीमा स्तम्भ का Differential Global Positioning System (डीजीपीएस) का उपयोग करते हुए सर्वेक्षण करने के लिए तालिका में दर्शित संस्थानों को अधिमाम्यता प्रदान करता है:-

क्र.	एजेंसी का नाम एवं पता
1	2
1	M/S SHREERAM GEMICON (PVT.) LIMITED GEOLOGICAL AND MINING CONSULTANTS L-09, Songanga Colony Seepat Road, Bilaspur (Chhattisgarh)
2	M/S SINHA MINING CONSULTANCY, GOA Office No. 9, D.Costa Commercial Apartment, Near Old Railway Station Gate, Malbhat, Margo - 403601, Goa-India
3	M/S SPATIAL PLANNING AND ANALYSIS RESEARCH CENTRE PVT. LTD. E/11, Infocity, Chandaka Industrial Estate, Bhubaneswar, Orissa, India, Pin - 751024
4	M/S SIDDHARTH GEO CONSULTANTS, 21/3, First Floor Ramkund, Samta Colony, Behind Lifeworth Hospital, Raipur (Chhattisgarh) 492001
5	M/S SOHAM FERRO MANGANESE PVT. LTD. Block No. 16,17 Ground Floor N.K.Y. Tower, Anjani Sq. Wardha Road, Nagpur (Maharashtra)
6	M/S SAN SURVEY ENGINEERING, HOOGHLY(WB) Regd. Off. - 465, Jiban Pal Bagan, Karbala (West), P.O. & Dist. - Hooghly, West Bengal, Pin - 712103 Contact Office - Anjali Complex, Bankim Kanan, Chinsurah Station Road, Chinsurah, Hooghly, West Bengal -712102
7	M/S GEOTRAX INTERNATIONAL SERVICES, HYDERABAD (TELANGANA) Plate No 156 & 157, Lokayuta Colony, Badangpet Nadergul, Hyderabad 500058, Telangana
8	M/S RAFT CONTRACTORS AND DESIGNERS, Plot No. D-36, Ground Floor, Koelnagar, Raurkela, Dist. Sundargarh, Orissa, Pin No. - 769014
9	M/S MICRONET SOLUTION, Bisesar House, Opp. HSSC Board Office, (P.B. 85 G.P.O.) Civil Line, Nagpur, Maharashtra - 440001
10	M/S BHARAT ALUMINIUM COMPANY LIMITED (BALCO) P.O. Balco Nagar Korba(C.G.), India, Pin 495684

2/ अधिमाम्यता प्राप्त संस्थानों के लिए शर्त:-

- 2.1. The Survey Agency Shall Be responsible for the accuracy of the data collected and Survey.
- 2.2. Coordinates of boundry pillars shall be established in the World Geodetic System 1984 (WGS-84) Datum.
- 2.3. Each boundry pillar shall be surved using DGPS, at least 2 Hours observation for its ground position.

For Vedaanta Limited

Shuvrendu Roy Choudhury
Head Mines

1/211

- 2.4 The maximum distance between any two successive pillars should not be more than 100 meter.
- 2.5 All corner pillar should be of pyramid shaped whith base of 1 meter and height of 2 meter and should be placed 1 meter above the ground and 1 meter below the ground.
- 2.6 Distance and bearing to the forward and backward pillars and latitudes and longitudes should be market on all the corner pillars.
- 2.7 डीजीपीएस सर्वे कार्य हेतु पारिश्रमिक का निर्धारण अधिमान्य प्राप्त संस्थान एवं खनिज रियायतधारी के मध्य आपसी समन्वय से किया जाएगा। किसी भी प्रकार का आपसी विवाद होने पर राज्य शासन उत्तरदायी नहीं होगा।
- 2.8 डीजीपीएस सर्वे कार्य के गुणवत्ता में कमी पाये जाने पर या किसी भी प्रकार की कार्य संबंधी शिकायत पाये जाने पर जांच उपरांत राज्य शासन को यह अधिकार होगा कि उक्त अधिकृत एंजेसी की मान्यता किसी भी समय समाप्त की जा सकती है।
- 2.9 डीजीपीएस सर्वे के संबंध में भारतीय खान ब्यूरो/राज्य शासन द्वारा समय-समय पर जारी निर्देशों का पालन अधिमान्यता प्राप्त संस्थान को करना होगा।
- 2.10 राज्य शासन द्वारा जारी यह अधिमान्यता 03 वर्ष के लिए होगी। समयावधि समाप्ति से 03 माह पूर्व अधिकृत एंजेसी नवीनीकरण हेतु आवेदन कर सकेगा।
- 2.11 भारत सरकार एवं राज्य शासन द्वारा डीजीपीएस सर्वे के संबंध में समय-समय पर जारी निर्देशों का पालन किया जाना होगा।
- 3/ यह अधिमान्यता अधिसूचना के जारी होने की तिथि से 03 वर्ष के लिए होगी।

छत्तीसगढ़ के राज्यपाल के नाम से
तथा आदेशानुसार,

(सुबोध कुमार सिंह)

सचिव

छत्तीसगढ़ शासन
खनिज साधन विभाग

पृ. क्रमांक एफ 7-14/2013/12

प्रतिलिपि:-

रायपुर, दिनांक नवम्बर, 2014
10 NOV 2014

1. सचिव, भारत सरकार, खान मंत्रालय, शास्त्री भवन, नई दिल्ली,
2. कंट्रोलर जनरल, भारतीय खान ब्यूरो, सेकण्ड फ्लोर, ए-ब्लॉक, इन्दरा भवन, सिविल लाईन, नागपुर (महाराष्ट्र)
3. चीफ कंट्रोलर ऑफ माईन्स, भारतीय खान ब्यूरो, सेकण्ड फ्लोर, ए-ब्लॉक, इन्दरा भवन, सिविल लाईन, नागपुर (महाराष्ट्र)
4. क्षेत्रीय खान नियंत्रक, भारतीय खान ब्यूरो, छठवां तल, बी एवं सी -ब्लॉक, इन्दरा भवन, सिविल लाईन, नागपुर (महाराष्ट्र)
5. संचालक, भौमिकी तथा खनिकर्म, छत्तीसगढ़ ब्लॉक-4, द्वितीय तल, इन्द्रावती भवन, नया रायपुर,
6. समस्त कलेक्टर, जिला ————— छत्तीसगढ़

.....3

For Vedanta Limited

Shuvrendu Roy Choudhury
Head Mines

//3//

7. समस्त संबंधित प्रदेशीय मंत्रालय, नवी दिल्ली, भारत (बीपीए-डी)
8. की ओर सूचनार्थ एवं आवश्यक कार्यवाही हेतु
संचालक, शासकीय मुद्रणालय, गोंदवारा, भनपुरी, रायपुर (छत्तीसगढ़) की ओर
राजपत्र में प्रकाशनार्थ।
9. श्री श्रीकांत राव, सहायक भौमिकी विद, संचालनालय भौमिकी तथा खनिकर्म,
द्वितीय फ्लोर, इन्द्रावती भवन, नया रायपुर। कृपया उक्त आदेश/अधिसूचना को
संचालनालय की वेबसाइट में अपलोड करने का कष्ट करें।
10. गार्ड फाईल रजिस्टर

सचिव

छत्तीसगढ़ शासन
खनिज साधन विभाग

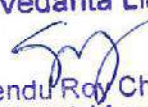
For Venuanta Limited


Shuvrendu Roy Choudhury
Head Mines

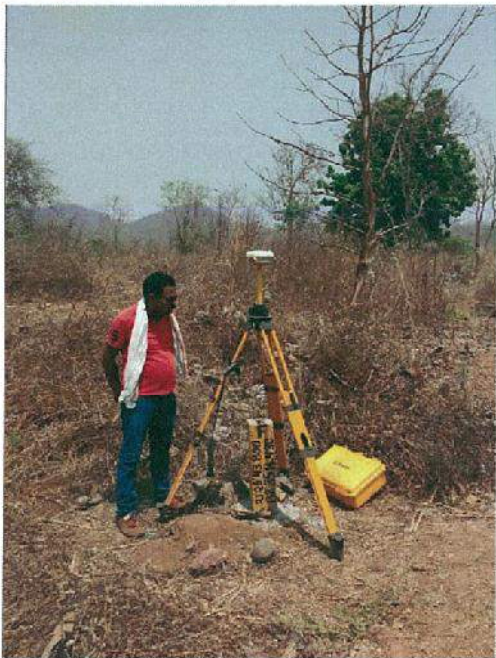
11. Equipment List

Product	Description	Qty
	BASE SETUP R4 Multi Frequency GNSS Receiver (Base) R4 Base Kit with accessories Trimble Maxwell chip with 220 Channels GPS, Glonass	1
	ROVER SETUP R4 Multi Frequency GNSS (Rover) Trimble Maxwell chip with 220 channels GPS, Glonass	1
	CU - Trimble Slate Controller with Windows 6.5 with inbuilt camera, GPS, Compass, Accelerometer 1 Ghz processor Trimble Slate Bracket	2
	ACCESSORIES FOR BASE AND ROVER SET UP Carbon Fibre telescopic range pole with Bipod for range pole	1
	Adapter - Tribrach to 5/8, Fixed Head wooden tripod	1
	GPS POST PROCESSING SOFTWARE Trimble Business Centre Complete	1

For Vedanta Limited


Shuvrendu Roy Choudhury
Head Mines

12. Field Snaps



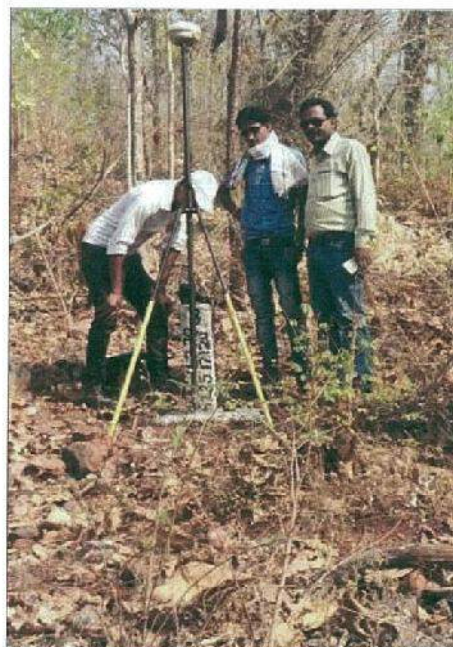
Setting Base Station



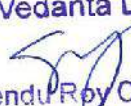
Measuring Point with help of Rover and Pillaring



Pillaring after DGPS Survey by Rover



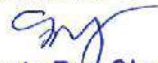
Measuring Point with help of Rover

For Vedanta Limited

Shuvrendu Roy Choudhury
Head Mines

13. ANNEXURES:-

- 1. Copy of LOI dated 28th April, 2016**
- 2. Copy of Revised LOI dated, 17th March, 2017**
- 3. Revised LOI map issued by State Government, Chhattisgarh**
- 4. CD containing**
 - a. KML file of Baghmara Block Boundary**
 - b. Shape file of Baghmara Block**
 - c. Soft Copy of DGPS Survey Report**
 - d. List of Co-ordinates of Baghmara Block boundary**

For Vedanta Limited



Shuvrendu Roy Choudhury
Head Mines

Summary of old DGPS survey carried out by DGM, Chhattisgarh

Baghmara is located in and around Baghmara and Achanakpur villages, Kasdol Tehsil, Balodabazar-Bhatapara District, Chhattisgarh and falls within the Survey of India Toposheet No. 64 K/11. The Location Map of Baghmara Gold Block is presented in Figure 1-1. As recommended in the Mineral Auction Rule 2015, the DGM engaged the Chhattisgarh Council of Science and Technology (CCOST) to demarcate the boundary of the Project, using Differential Geographic Positioning System (DGPS). In June 2015, CCOST demarcated the boundary of Baghmara Gold Block, which involved:

- Establishment of Base Station;
- Survey of the Block Boundary using DGPS;
- Geo-referencing of Cadastral Maps;
- Analysis of the survey data in GIS platform; and
- Reporting of the corner coordinates of the Block and generation of different types of maps, as required for Mineral Block auctioning.

The pillar coordinates of the Baghmara block boundary, as reported by CCOST, are reproduced in Appendix 1. Table 1-1 presents a summary of the cadastral features of Baghmara Gold Block. Detailed cadastral map of Baghmara is presented in Figure 1-2.

Table 1-1: Summary of Cadastral Features of Baghmara Gold Block

Forest Land (Reserve Forest)	548.0551 ha
Government Land	Nil
Private Land	59.885 ha
Total Concession Area	607.9401 ha
Block boundary is demarcated using Differential Geographic Positioning System (DGPS) by Chhattisgarh Council of Science and Technology (CCOST).	

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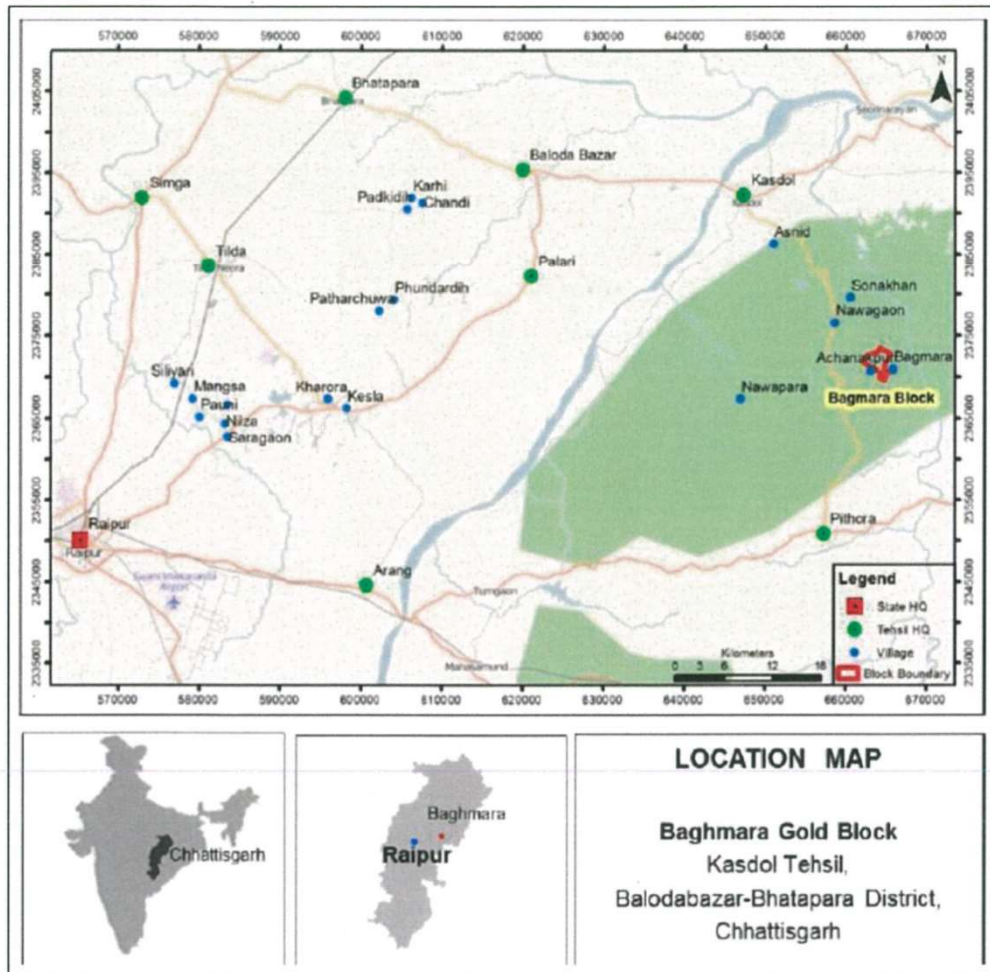
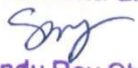


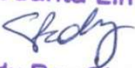
Figure 1-1: Location Map of Baghmara Gold Project

For Vedanta Limited

 Shuvrendu Roy Choudhury
 Head Mines

Appendix 1: Block Boundary Corner Points

WGS 84 spheroid and datum

Pillar Number	Geographic Coordinate		UTM Coordinate	
	Latitude	Longitude	Easting	Northing
1	21°26' 59.250" N	82°35' 43.930" E	665336.067	2372770.627
2	21°26' 56.297" N	82°35' 42.477" E	665295.147	2372679.383
3	21°26' 53.344" N	82°35' 41.023" E	665254.227	2372588.138
4	21°26' 50.390" N	82°35' 39.570" E	665213.307	2372496.894
5	21°26' 47.437" N	82°35' 38.116" E	665172.387	2372405.649
6	21°26' 44.484" N	82°35' 36.663" E	665131.467	2372314.405
7	21°26' 41.531" N	82°35' 35.210" E	665090.548	2372223.160
8	21°26' 38.578" N	82°35' 33.756" E	665049.628	2372131.915
9	21°26' 35.625" N	82°35' 32.303" E	665008.708	2372040.671
10	21°26' 32.671" N	82°35' 30.850" E	664967.788	2371949.426
11	21°26' 29.718" N	82°35' 29.396" E	664926.868	2371858.182
12	21°26' 26.765" N	82°35' 27.943" E	664885.948	2371766.937
13	21°26' 23.812" N	82°35' 26.490" E	664845.029	2371675.693
14	21°26' 20.858" N	82°35' 25.037" E	664804.109	2371584.448
15	21°26' 17.905" N	82°35' 23.583" E	664763.189	2371493.204
16	21°26' 14.952" N	82°35' 22.130" E	664722.269	2371401.959
17	21°26' 11.999" N	82°35' 20.677" E	664681.349	2371310.715
18	21°26' 9.045" N	82°35' 19.224" E	664640.429	2371219.470
19	21°26' 6.092" N	82°35' 17.771" E	664599.510	2371128.226
20	21°26' 4.770" N	82°35' 17.120" E	664581.189	2371087.374
21	21°26' 2.164" N	82°35' 19.197" E	664641.796	2371007.832
22	21°25' 59.558" N	82°35' 21.273" E	664702.403	2370928.291
23	21°25' 56.951" N	82°35' 23.350" E	664763.010	2370848.750
24	21°25' 54.345" N	82°35' 25.427" E	664823.617	2370769.209
25	21°25' 51.739" N	82°35' 27.503" E	664884.224	2370689.668
26	21°25' 49.133" N	82°35' 29.580" E	664944.831	2370610.127
27	21°25' 46.527" N	82°35' 31.657" E	665005.439	2370530.586
28	21°25' 43.920" N	82°35' 33.733" E	665066.046	2370451.045
29	21°25' 42.820" N	82°35' 34.610" E	665091.636	2370417.460
30	21°25' 39.912" N	82°35' 33.056" E	665047.788	2370327.586
31	21°25' 37.005" N	82°35' 31.501" E	665003.940	2370237.712
32	21°25' 34.097" N	82°35' 29.947" E	664960.093	2370147.838
33	21°25' 31.189" N	82°35' 28.393" E	664916.245	2370057.963
34	21°25' 28.281" N	82°35' 26.838" E	664872.397	2369968.089
35	21°25' 25.374" N	82°35' 25.284" E	664828.549	2369878.215
36	21°25' 22.466" N	82°35' 23.730" E	664784.701	2369788.341
37	21°25' 19.558" N	82°35' 22.176" E	664740.854	2369698.467
38	21°25' 16.651" N	82°35' 20.622" E	664697.006	2369608.592
39	21°25' 15.020" N	82°35' 19.750" E	664672.417	2369558.194
40	21°25' 16.464" N	82°35' 16.639" E	664582.381	2369601.706
41	21°25' 17.909" N	82°35' 13.528" E	664492.344	2369645.219

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 Shuvrendu Roy Choudhury
 Head Mines

Pillar Number	Geographic Coordinate		UTM Coordinate	
	Latitude	Longitude	Easting	Northing
42	21°25' 19.353" N	82°35' 10.417" E	664402.307	2369688.732
43	21°25' 20.798" N	82°35' 7.305" E	664312.270	2369732.245
44	21°25' 22.242" N	82°35' 4.194" E	664222.233	2369775.758
45	21°25' 23.686" N	82°35' 1.083" E	664132.196	2369819.270
46	21°25' 25.280" N	82°34' 57.650" E	664032.852	2369867.281
47	21°25' 28.138" N	82°34' 59.306" E	664079.637	2369955.662
48	21°25' 30.997" N	82°35' 0.961" E	664126.423	2370044.042
49	21°25' 33.855" N	82°35' 2.617" E	664173.209	2370132.422
50	21°25' 36.713" N	82°35' 4.273" E	664219.995	2370220.803
51	21°25' 39.571" N	82°35' 5.928" E	664266.781	2370309.183
52	21°25' 42.429" N	82°35' 7.584" E	664313.567	2370397.563
53	21°25' 43.890" N	82°35' 8.430" E	664337.474	2370442.724
54	21°25' 45.493" N	82°35' 5.408" E	664249.973	2370491.135
55	21°25' 47.096" N	82°35' 2.387" E	664162.472	2370539.545
56	21°25' 48.698" N	82°34' 59.365" E	664074.971	2370587.956
57	21°25' 50.301" N	82°34' 56.344" E	663987.470	2370636.366
58	21°25' 51.904" N	82°34' 53.322" E	663899.969	2370684.777
59	21°25' 53.507" N	82°34' 50.300" E	663812.468	2370733.187
60	21°25' 55.109" N	82°34' 47.279" E	663724.967	2370781.598
61	21°25' 56.712" N	82°34' 44.257" E	663637.466	2370830.008
62	21°25' 58.315" N	82°34' 41.235" E	663549.965	2370878.419
63	21°25' 59.917" N	82°34' 38.214" E	663462.464	2370926.829
64	21°26' 1.520" N	82°34' 35.192" E	663374.963	2370975.240
65	21°26' 3.123" N	82°34' 32.170" E	663287.462	2371023.650
66	21°26' 4.725" N	82°34' 29.148" E	663199.961	2371072.061
67	21°26' 6.328" N	82°34' 26.126" E	663112.460	2371120.471
68	21°26' 7.930" N	82°34' 23.105" E	663024.959	2371168.882
69	21°26' 9.533" N	82°34' 20.083" E	662937.458	2371217.292
70	21°26' 11.136" N	82°34' 17.061" E	662849.957	2371265.703
71	21°26' 12.738" N	82°34' 14.039" E	662762.456	2371314.113
72	21°26' 14.341" N	82°34' 11.017" E	662674.955	2371362.524
73	21°26' 15.943" N	82°34' 7.995" E	662587.454	2371410.934
74	21°26' 17.546" N	82°34' 4.973" E	662499.953	2371459.345
75	21°26' 19.148" N	82°34' 1.951" E	662412.452	2371507.755
76	21°26' 20.751" N	82°33' 58.929" E	662324.951	2371556.166
77	21°26' 22.353" N	82°33' 55.907" E	662237.450	2371604.576
78	21°26' 23.956" N	82°33' 52.885" E	662149.949	2371652.987
79	21°26' 25.558" N	82°33' 49.863" E	662062.448	2371701.397
80	21°26' 26.090" N	82°33' 48.860" E	662033.400	2371717.468
81	21°26' 28.910" N	82°33' 50.589" E	662082.311	2371804.690
82	21°26' 31.730" N	82°33' 52.318" E	662131.221	2371891.913
83	21°26' 34.550" N	82°33' 54.047" E	662180.132	2371979.135
84	21°26' 37.370" N	82°33' 55.776" E	662229.042	2372066.358
85	21°26' 40.191" N	82°33' 57.504" E	662277.953	2372153.580

For Vedanta Limited

Shuvendu Roy Choudhury
Shuvendu Roy Choudhury
Head Mines

Pillar Number	Geographic Coordinate		UTM Coordinate	
	Latitude	Longitude	Easting	Northing
86	21°26' 43.011" N	82°33' 59.233" E	662326.863	2372240.803
87	21°26' 45.831" N	82°34' 0.962" E	662375.774	2372328.025
88	21°26' 48.651" N	82°34' 2.691" E	662424.684	2372415.248
89	21°26' 51.471" N	82°34' 4.420" E	662473.595	2372502.470
90	21°26' 54.291" N	82°34' 6.149" E	662522.505	2372589.693
91	21°26' 55.450" N	82°34' 6.860" E	662542.608	2372625.542
92	21°26' 56.164" N	82°34' 10.248" E	662639.940	2372648.487
93	21°26' 56.879" N	82°34' 13.637" E	662737.272	2372671.432
94	21°26' 57.593" N	82°34' 17.025" E	662834.604	2372694.378
95	21°26' 58.307" N	82°34' 20.414" E	662931.935	2372717.323
96	21°26' 59.022" N	82°34' 23.802" E	663029.267	2372740.268
97	21°26' 59.736" N	82°34' 27.191" E	663126.599	2372763.214
98	21°27' 0.450" N	82°34' 30.579" E	663223.931	2372786.159
99	21°27' 1.164" N	82°34' 33.968" E	663321.263	2372809.104
100	21°27' 1.878" N	82°34' 37.356" E	663418.595	2372832.049
101	21°27' 2.593" N	82°34' 40.744" E	663515.927	2372854.995
102	21°27' 3.307" N	82°34' 44.133" E	663613.259	2372877.940
103	21°27' 4.021" N	82°34' 47.521" E	663710.591	2372900.885
104	21°27' 4.735" N	82°34' 50.910" E	663807.923	2372923.830
105	21°27' 4.950" N	82°34' 51.930" E	663837.223	2372930.737
106	21°27' 7.915" N	82°34' 53.356" E	663877.344	2373022.336
107	21°27' 10.880" N	82°34' 54.781" E	663917.466	2373113.934
108	21°27' 13.845" N	82°34' 56.207" E	663957.587	2373205.533
109	21°27' 16.810" N	82°34' 57.632" E	663997.709	2373297.131
110	21°27' 19.775" N	82°34' 59.058" E	664037.830	2373388.729
111	21°27' 22.670" N	82°35' 0.450" E	664077.000	2373478.154
112	21°27' 21.048" N	82°35' 3.461" E	664164.178	2373429.165
113	21°27' 19.427" N	82°35' 6.471" E	664251.356	2373380.175
114	21°27' 17.805" N	82°35' 9.482" E	664338.534	2373331.186
115	21°27' 16.184" N	82°35' 12.493" E	664425.712	2373282.196
116	21°27' 14.562" N	82°35' 15.503" E	664512.891	2373233.207
117	21°27' 12.941" N	82°35' 18.514" E	664600.069	2373184.218
118	21°27' 11.319" N	82°35' 21.524" E	664687.247	2373135.228
119	21°27' 9.697" N	82°35' 24.535" E	664774.425	2373086.239
120	21°27' 8.076" N	82°35' 27.546" E	664861.603	2373037.250
121	21°27' 6.454" N	82°35' 30.556" E	664948.782	2372988.260
122	21°27' 4.833" N	82°35' 33.567" E	665035.960	2372939.271
123	21°27' 3.211" N	82°35' 36.577" E	665123.138	2372890.281
124	21°27' 1.589" N	82°35' 39.588" E	665210.316	2372841.292
125	21°26' 59.968" N	82°35' 42.598" E	665297.495	2372792.303

For Vedanta Limited

 Shuvrendu Roy Choudhury
 Head Mines

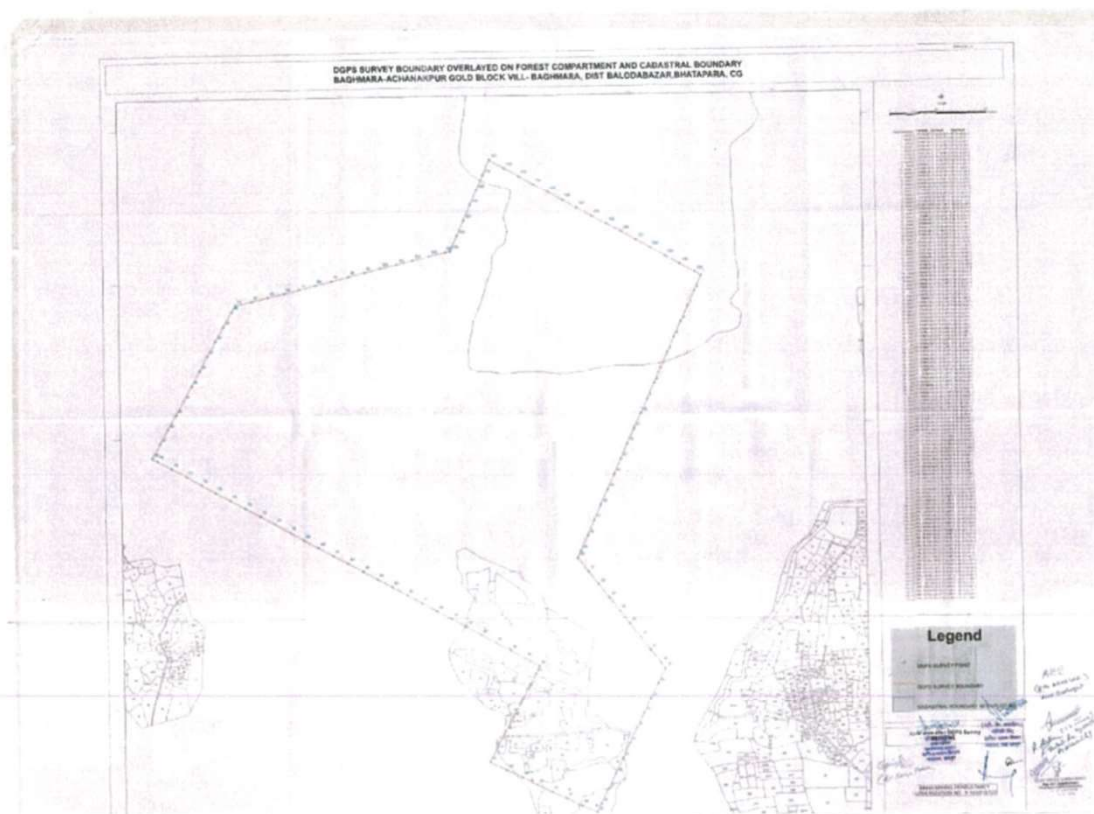
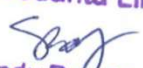


figure 1-2: Cadastral Map of Baghmara Gold Project

For Vedanta Limited

 Shuvrendu Roy Choudhury
 Head Mines

Summary of the Mineral Block

PART A – GENERAL INFORMATION ABOUT MINERAL BLOCK

	Features	Details
1.	Location	
	Mineral Block	Baghmara
	Corner Points (Latitude, Longitude)	See Annexure I
	Villages	Bagmara and Achanakpur
	Tehsil/ Taluka	Kasdol
	District	Balodabazar-Bhatapara
	State	Chhattisgarh
2.	Area (hectares/square kilometres)	
	Mineralised Area	0.1 ha (based on available G3 level exploration data)
	Non-mineralised Area	607.8401 ha (based on available G3 level exploration data)
3.	Exploration	
	Status (G2/G3/G4 etc.)	G3
	Exploration Agency	DGM and GSI
	Total Number of Boreholes with meterage	20 Boreholes with 2834.46 m
	Borehole Spacing (Density)	Approximately 200m
4.	Quantity of Minerals (Grade-wise)	
	Gold	2700 Kg (Avg. grade 3g/t Au) by DGM 1196 Kg (Avg. grade 0.7g/t Au) by GSI
	Total Geological Resources (Reserves)	0.9 Mt (avg grade 3g/t) by DGM 1.8 Mt (avg grade 0.7 g/t) by GSI
5.	Mineralised Zones	
	Number of Mineral Zones	One
	Trend (Dip and Strike)	NNW-SSE (Strike length 630m)
	Total Thickness	Average Thickness 1.65m (width)
6.	Accessibility	
	Nearest Rail Head	Bagbahra Railway Station (60 km)
	Road	140 km from Raipur
	Airport	154 km from Raipur Airport
7.	Hydrography	
	Local Surface Drainage Pattern (Channels)	Open Dendritic and Parallel
	Rivers/Streams	Jonk River
8.	Climate	
	Mean Annual Rainfall	1200 mm
	Temperatures (December)	10° C
	Temperatures (June)	45° C
9.	Topography	
	Topo Sheet Number	64 K/11
	Morphology of the Area	Undulating topography

PART B – PARTICULARS OF LAND

	Area	Details
1.	Total Concession Area	607.9401 ha
2.	Forest Land with Status	548.0551 ha
3.	Government Land with Status	Nil
4.	Private Land with Status	59.885 ha
5.	Revenue survey details of the area	Block boundary is demarcated using Differential Geographic Positioning System (DGPS) by Chhattisgarh Council of Science and Technology (CCOST).

Appendix 1: Block Boundary Corner Points

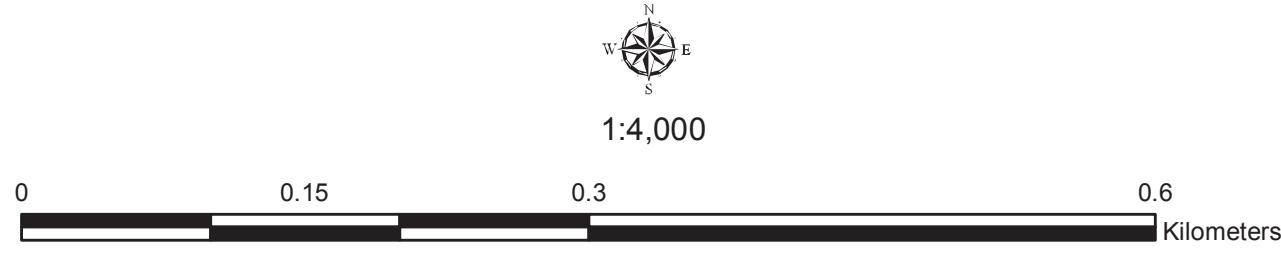
WGS 84 spheroid and datum

Pillar Number	Geographic Coordinate		UTM Coordinate	
	Latitude	Longitude	Easting	Northing
1	21°26' 59.250" N	82°35' 43.930" E	665336.067	2372770.627
2	21°26' 56.297" N	82°35' 42.477" E	665295.147	2372679.383
3	21°26' 53.344" N	82°35' 41.023" E	665254.227	2372588.138
4	21°26' 50.390" N	82°35' 39.570" E	665213.307	2372496.894
5	21°26' 47.437" N	82°35' 38.116" E	665172.387	2372405.649
6	21°26' 44.484" N	82°35' 36.663" E	665131.467	2372314.405
7	21°26' 41.531" N	82°35' 35.210" E	665090.548	2372223.160
8	21°26' 38.578" N	82°35' 33.756" E	665049.628	2372131.915
9	21°26' 35.625" N	82°35' 32.303" E	665008.708	2372040.671
10	21°26' 32.671" N	82°35' 30.850" E	664967.788	2371949.426
11	21°26' 29.718" N	82°35' 29.396" E	664926.868	2371858.182
12	21°26' 26.765" N	82°35' 27.943" E	664885.948	2371766.937
13	21°26' 23.812" N	82°35' 26.490" E	664845.029	2371675.693
14	21°26' 20.858" N	82°35' 25.037" E	664804.109	2371584.448
15	21°26' 17.905" N	82°35' 23.583" E	664763.189	2371493.204
16	21°26' 14.952" N	82°35' 22.130" E	664722.269	2371401.959
17	21°26' 11.999" N	82°35' 20.677" E	664681.349	2371310.715
18	21°26' 9.045" N	82°35' 19.224" E	664640.429	2371219.470
19	21°26' 6.092" N	82°35' 17.771" E	664599.510	2371128.226
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24	21°25' 54.345" N	82°35' 25.427" E	664823.617	2370769.209
25	21°25' 51.739" N	82°35' 27.503" E	664884.224	2370689.668
26	21°25' 49.133" N	82°35' 29.580" E	664944.831	2370610.127
27	21°25' 46.527" N	82°35' 31.657" E	665005.439	2370530.586
28	21°25' 43.920" N	82°35' 33.733" E	665066.046	2370451.045
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33	21°25' 31.189" N	82°35' 28.393" E	664916.245	2370057.963
34	21°25' 28.281" N	82°35' 26.838" E	664872.397	2369968.089
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37	21°25' 19.558" N	82°35' 22.176" E	664740.854	2369698.467
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39	21°25' 15.020" N	82°35' 19.750" E	664672.417	2369558.194
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49	21°25' 33.855" N	82°35' 2.617" E	664173.209	2370132.422
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54	21°25' 45.493" N	82°35' 5.408" E	664249.973	2370491.135
55	21°25' 47.096" N	82°35' 2.387" E	664162.472	2370539.545
56	21°25' 48.698" N	82°34' 59.365" E	664074.971	2370587.956
57	21°25' 50.301" N	82°34' 56.344" E	663987.470	2370636.366
58	21°25' 51.904" N	82°34' 53.322" E	663899.969	2370684.777
59	21°25' 53.507" N	82°34' 50.300" E	663812.468	2370733.187
60	21°25' 55.109" N	82°34' 47.279" E	663724.967	2370781.598
61	21°25' 56.712" N	82°34' 44.257" E	663637.466	2370830.008
62	21°25' 58.315" N	82°34' 41.235" E	663549.965	2370878.419
63	21°25' 59.917" N	82°34' 38.214" E	663462.464	2370926.829
64	21°26' 1.520" N	82°34' 35.192" E	663374.963	2370975.240
65	21°26' 3.123" N	82°34' 32.170" E	663287.462	2371023.650
66	21°26' 4.725" N	82°34' 29.148" E	663199.961	2371072.061
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68	21°26' 7.930" N	82°34' 23.105" E	663024.959	2371168.882
69	21°26' 9.533" N	82°34' 20.083" E	662937.458	2371217.292
70	21°26' 11.136" N	82°34' 17.061" E	662849.957	2371265.703
71	21°26' 12.738" N	82°34' 14.039" E	662762.456	2371314.113
72	21°26' 14.341" N	82°34' 11.017" E	662674.955	2371362.524
73	21°26' 15.943" N	82°34' 7.995" E	662587.454	2371410.934
74	21°26' 17.546" N	82°34' 4.973" E	662499.953	2371459.345
75	21°26' 19.148" N	82°34' 1.951" E	662412.452	2371507.755
76	21°26' 20.751" N	82°33' 58.929" E	662324.951	2371556.166
77	21°26' 22.353" N	82°33' 55.907" E	662237.450	2371604.576
78	21°26' 23.956" N	82°33' 52.885" E	662149.949	2371652.987
79	21°26' 25.558" N	82°33' 49.863" E	662062.448	2371701.397
80	21°26' 26.090" N	82°33' 48.860" E	662033.400	2371717.468
81	21°26' 28.910" N	82°33' 50.589" E	662082.311	2371804.690
82	21°26' 31.730" N	82°33' 52.318" E	662131.221	2371891.913
83	21°26' 34.550" N	82°33' 54.047" E	662180.132	2371979.135
84	21°26' 37.370" N	82°33' 55.776" E	662229.042	2372066.358
85	21°26' 40.191" N	82°33' 57.504" E	662277.953	2372153.580
86	21°26' 43.011" N	82°33' 59.233" E	662326.863	2372240.803
87	21°26' 45.831" N	82°34' 0.962" E	662375.774	2372328.025
88	21°26' 48.651" N	82°34' 2.691" E	662424.684	2372415.248
89	21°26' 51.471" N	82°34' 4.420" E	662473.595	2372502.470
90	21°26' 54.291" N	82°34' 6.149" E	662522.505	2372589.693
91	21°26' 55.450" N	82°34' 6.860" E	662542.608	2372625.542
92	21°26' 56.164" N	82°34' 10.248" E	662639.940	2372648.487
93	21°26' 56.879" N	82°34' 13.637" E	662737.272	2372671.432
94	21°26' 57.593" N	82°34' 17.025" E	662834.604	2372694.378
95	21°26' 58.307" N	82°34' 20.414" E	662931.935	2372717.323
96	21°26' 59.022" N	82°34' 23.802" E	663029.267	2372740.268
97	21°26' 59.736" N	82°34' 27.191" E	663126.599	2372763.214
98	21°27' 0.450" N	82°34' 30.579" E	663223.931	2372786.159
99	21°27' 1.164" N	82°34' 33.968" E	663321.263	2372809.104
100	21°27' 1.878" N	82°34' 37.356" E	663418.595	2372832.049
101	21°27' 2.593" N	82°34' 40.744" E	663515.927	2372854.995
102	21°27' 3.307" N	82°34' 44.133" E	663613.259	2372877.940
103	21°27' 4.021" N	82°34' 47.521" E	663710.591	2372900.885

Pillar Number	Geographic Coordinate		UTM Coordinate	
	Latitude	Longitude	Easting	Northing
104	21°27' 4.735" N	82°34' 50.910" E	663807.923	2372923.830
105	21°27' 4.950" N	82°34' 51.930" E	663837.223	2372930.737
106	21°27' 7.915" N	82°34' 53.356" E	663877.344	2373022.336
107	21°27' 10.880" N	82°34' 54.781" E	663917.466	2373113.934
108	21°27' 13.845" N	82°34' 56.207" E	663957.587	2373205.533
109	21°27' 16.810" N	82°34' 57.632" E	663997.709	2373297.131
110	21°27' 19.775" N	82°34' 59.058" E	664037.830	2373388.729
111	21°27' 22.670" N	82°35' 0.450" E	664077.000	2373478.154
112	21°27' 21.048" N	82°35' 3.461" E	664164.178	2373429.165
113	21°27' 19.427" N	82°35' 6.471" E	664251.356	2373380.175
114	21°27' 17.805" N	82°35' 9.482" E	664338.534	2373331.186
115	21°27' 16.184" N	82°35' 12.493" E	664425.712	2373282.196
116	21°27' 14.562" N	82°35' 15.503" E	664512.891	2373233.207
117	21°27' 12.941" N	82°35' 18.514" E	664600.069	2373184.218
118	21°27' 11.319" N	82°35' 21.524" E	664687.247	2373135.228
119	21°27' 9.697" N	82°35' 24.535" E	664774.425	2373086.239
120	21°27' 8.076" N	82°35' 27.546" E	664861.603	2373037.250
121	21°27' 6.454" N	82°35' 30.556" E	664948.782	2372988.260
122	21°27' 4.833" N	82°35' 33.567" E	665035.960	2372939.271
123	21°27' 3.211" N	82°35' 36.577" E	665123.138	2372890.281
124	21°27' 1.589" N	82°35' 39.588" E	665210.316	2372841.292
125	21°26' 59.968" N	82°35' 42.598" E	665297.495	2372792.303

DGPS SURVEY BOUNDARY OVERLAYED ON FOREST COMPARTMENT AND CADASTRAL BOUNDARY
BAGHMARA-ACHANAKPUR GOLD BLOCK VILL- BAGHMARA, DIST BALODABAZAR,BHATAPARA, CG



PILLER #	EASTING	NORTHING	LATITUDE	LONGITUDE
1	668186.8667	2372770.6271	26° 59.260' N	82° 35' 49.982' E
2	665295.1468	2372679.3831	26° 56.297' N	82° 35' 42.477' E
3	665254.227	2372588.1381	26° 53.344' N	82° 35' 41.023' E
4	665213.3072	2372496.8941	26° 50.380' N	82° 35' 39.570' E
5	665172.3873	2372405.6491	26° 47.437' N	82° 35' 38.116' E
6	665131.4675	2372314.4051	26° 44.484' N	82° 35' 36.663' E
7	665090.5476	2372223.1611	26° 41.531' N	82° 35' 35.210' E
8	665049.6278	2372131.9151	26° 38.578' N	82° 35' 33.756' E
9	665008.708	2372040.6711	26° 35.625' N	82° 35' 32.303' E
10	664967.7881	2371949.4261	26° 32.671' N	82° 35' 30.850' E
11	664926.8683	2371858.1821	26° 29.718' N	82° 35' 29.396' E
12	664885.9484	2371766.9371	26° 26.765' N	82° 35' 27.943' E
13	664845.0286	2371675.6931	26° 23.812' N	82° 35' 26.490' E
14	664804.1088	2371584.4481	26° 20.859' N	82° 35' 25.037' E
15	664763.1889	2371493.2041	26° 17.905' N	82° 35' 23.584' E
16	664722.2691	2371401.9591	26° 14.952' N	82° 35' 22.131' E
17	664681.3492	2371310.7151	26° 11.999' N	82° 35' 20.677' E
18	664640.4294	2371219.4711	26° 9.045' N	82° 35' 19.224' E
19	664599.5096	2371128.2261	26° 6.092' N	82° 35' 17.771' E
20	664558.5898	2371037.1941	26° 3.138' N	82° 35' 16.318' E
21	664517.6699	2370946.1611	26° 0.185' N	82° 35' 14.865' E
22	664476.7501	2370855.1281	25° 57.232' N	82° 35' 13.412' E
23	664435.8302	2370764.1211	25° 54.279' N	82° 35' 11.959' E
24	664394.9104	2370673.1141	25° 51.326' N	82° 35' 10.506' E
25	664353.9905	2370582.1071	25° 48.373' N	82° 35' 9.053' E
26	664313.0706	2370491.0991	25° 45.420' N	82° 35' 7.600' E
27	664272.1507	2370400.0921	25° 42.467' N	82° 35' 6.147' E
28	664231.2308	2370309.0841	25° 39.514' N	82° 35' 4.694' E
29	664190.3109	2370218.0771	25° 36.561' N	82° 35' 3.241' E
30	664149.3910	2370127.0691	25° 33.608' N	82° 35' 1.788' E
31	664108.4711	2370036.0621	25° 30.655' N	82° 35' 0.335' E
32	664067.5512	2369945.0541	25° 27.702' N	82° 34' 58.882' E
33	664026.6313	2369854.0471	25° 24.749' N	82° 34' 57.429' E
34	663985.7114	2369763.0391	25° 21.796' N	82° 34' 55.976' E
35	663944.7915	2369672.0321	25° 18.843' N	82° 34' 54.523' E
36	663903.8716	2369581.0241	25° 15.890' N	82° 34' 53.070' E
37	663862.9517	2369490.0171	25° 12.937' N	82° 34' 51.617' E
38	663822.0318	2369399.0091	25° 10.000' N	82° 34' 50.164' E
39	663781.1119	2369308.0021	25° 7.057' N	82° 34' 48.711' E
40	663740.1920	2369217.0001	25° 4.114' N	82° 34' 47.258' E
41	663699.2721	2369126.0001	25° 1.171' N	82° 34' 45.805' E
42	663658.3522	2369035.0001	25° 0.000' N	82° 34' 44.352' E
43	663617.4323	2368944.0001	24° 56.847' N	82° 34' 42.899' E
44	663576.5124	2368853.0001	24° 53.894' N	82° 34' 41.446' E
45	663535.5925	2368762.0001	24° 50.941' N	82° 34' 40.000' E
46	663494.6726	2368671.0001	24° 47.988' N	82° 34' 38.553' E
47	663453.7527	2368580.0001	24° 45.035' N	82° 34' 37.106' E
48	663412.8328	2368489.0001	24° 42.082' N	82° 34' 35.659' E
49	663371.9129	2368398.0001	24° 39.129' N	82° 34' 34.212' E
50	663330.9930	2368307.0001	24° 36.176' N	82° 34' 32.765' E
51	663289.0731	2368216.0001	24° 33.223' N	82° 34' 31.318' E
52	663248.1532	2368125.0001	24° 30.270' N	82° 34' 29.871' E
53	663207.2333	2368034.0001	24° 27.317' N	82° 34' 28.424' E
54	663166.3134	2367943.0001	24° 24.364' N	82° 34' 26.977' E
55	663125.3935	2367852.0001	24° 21.411' N	82° 34' 25.530' E
56	663084.4736	2367761.0001	24° 18.458' N	82° 34' 24.083' E
57	663043.5537	2367670.0001	24° 15.505' N	82° 34' 22.636' E
58	663002.6338	2367579.0001	24° 12.552' N	82° 34' 21.189' E
59	662961.7139	2367488.0001	24° 9.599' N	82° 34' 19.742' E
60	662920.7940	2367397.0001	24° 6.646' N	82° 34' 18.295' E
61	662879.8741	2367306.0001	24° 3.693' N	82° 34' 16.848' E
62	662838.9542	2367215.0001	24° 0.740' N	82° 34' 15.401' E
63	662798.0343	2367124.0001	23° 57.787' N	82° 34' 13.954' E
64	662757.1144	2367033.0001	23° 54.834' N	82° 34' 12.507' E
65	662716.1945	2366942.0001	23° 51.881' N	82° 34' 11.060' E
66	662675.2746	2366851.0001	23° 48.928' N	82° 34' 9.613' E
67	662634.3547	2366760.0001	23° 45.975' N	82° 34' 8.166' E
68	662593.4348	2366669.0001	23° 43.022' N	82° 34' 6.719' E
69	662552.5149	2366578.0001	23° 40.069' N	82° 34' 5.272' E
70	662511.5950	2366487.0001	23° 37.116' N	82° 34' 3.825' E
71	662470.6751	2366396.0001	23° 34.163' N	82° 34' 2.378' E
72	662429.7552	2366305.0001	23° 31.210' N	82° 34' 0.931' E
73	662388.8353	2366214.0001	23° 28.257' N	82° 33' 59.484' E
74	662347.9154	2366123.0001	23° 25.304' N	82° 33' 58.037' E
75	662306.9955	2366032.0001	23° 22.351' N	82° 33' 56.590' E
76	662266.0756	2365941.0001	23° 19.398' N	82° 33' 55.143' E
77	662225.1557	2365850.0001	23° 16.445' N	82° 33' 53.696' E
78	662184.2358	2365759.0001	23° 13.492' N	82° 33' 52.249' E
79	662143.3159	2365668.0001	23° 10.539' N	82° 33' 50.802' E
80	662102.3960	2365577.0001	23° 7.586' N	82° 33' 49.355' E
81	662061.4761	2365486.0001	23° 4.633' N	82° 33' 47.908' E
82	662020.5562	2365395.0001	23° 1.680' N	82° 33' 46.461' E
83	661979.6363	2365304.0001	23° 0.000' N	82° 33' 45.014' E
84	661938.7164	2365213.0001	22° 56.847' N	82° 33' 43.567' E
85	661897.7965	2365122.0001	22° 53.894' N	82° 33' 42.120' E
86	661856.8766	2365031.0001	22° 50.941' N	82° 33' 40.673' E
87	661815.9567	2364940.0001	22° 47.988' N	82° 33' 39.226' E
88	661775.0368	2364849.0001	22° 45.035' N	82° 33' 37.779' E
89	661734.1169	2364758.0001	22° 42.082' N	82° 33' 36.332' E
90	661693.1970	2364667.0001	22° 39.129' N	82° 33' 34.885' E
91	661652.2771	2364576.0001	22° 36.176' N	82° 33' 33.438' E
92	661611.3572	2364485.0001	22° 33.223' N	82° 33' 31.991' E
93	661570.4373	2364394.0001	22° 30.270' N	82° 33' 30.544' E
94	661529.5174	2364303.0001	22° 27.317' N	82° 33' 29.097' E
95	661488.5975	2364212.0001	22° 24.364' N	82° 33' 27.650' E
96	661447.6776	2364121.0001	22° 21.411' N	82° 33' 26.203' E
97	661406.7577	2364030.0001	22° 18.458' N	82° 33' 24.756' E
98	661365.8378	2363939.0001	22° 15.505' N	82° 33' 23.309' E
99	661324.9179	2363848.0001	22° 12.552' N	82° 33' 21.862' E
100	661283.9980	2363757.0001	22° 9.599' N	82° 33' 20.415' E
101	661243.0781	2363666.0001	22° 6.646' N	82° 33' 18.968' E
102	661202.1582	2363575.0001	22° 3.693' N	82° 33' 17.521' E
103	661161.2383	2363484.0001	22° 0.740' N	82° 33' 16.074' E
104	661120.3184	2363393.0001	21° 57.787' N	82° 33' 14.627' E
105	661079.3985	2363302.0001	21° 54.834' N	82° 33' 13.180' E
106	661038.4786	2363211.0001	21° 51.881' N	82° 33' 11.733' E
107	661000.0000	2363120.0001	21° 48.928' N	82° 33' 10.286' E
108	660961.5201	2363029.0001	21° 45.975' N	82° 33' 8.839' E
109	660923.0402	2362938.0001	21° 43.022' N	82° 33' 7.392' E
110	660884.5603	2362847.0001	21° 40.069' N	82° 33' 6.000' E
111	660846.0804	2362756.0001	21° 37.116' N	82° 33' 4.553' E
112	660807.6005	2362665.0001	21° 34.163' N	82° 33' 3.106' E
113	660769.1206	2362574.0001	21° 31.210' N	82° 33' 1.659' E
114	660730.6407	2362483.0001	21° 28.257' N	82° 33' 0.212' E
115	660692.1608	2362392.0001	21° 25.304' N	82° 32' 58.765' E
116	660653.6809	2362301.0001	21° 22.351' N	82° 32' 57.318' E
117	660615.2010	2362210.0001	21° 19.398' N	82° 32' 55.871' E
118	660576.7211	2362119.0001	21° 16.445' N	82° 32' 54.424' E
119	660538.2412	2362028.0001	21° 13.492' N	82° 32' 52.977' E
120	660499.7613	2361937.0001	21° 10.539' N	82° 32' 51.530' E
121	660461.2814	2361846.0001	21° 7.586' N	82° 32' 50.083' E
122	660422.8015	2361755.0001	21° 4.633' N	82° 32' 48.636' E
123	660384.3216	2361664.0001	21° 1.680' N	82° 32' 47.189' E
124	660345.8417	2361573.0001	21° 0.000' N	82° 32' 45.742' E
125	660307.3618	2361482.0001	20° 56.847' N	82° 32' 44.295' E

DGPS SURVEY POINT

DGPS SURVEY BOUNDARY

CADASTRAL BOUNDARY WITH PLOT NO

Actual area after DGPS Survey
608.00 Ha

SINHA MINING CONSULTANCY
AUTHORIZATION NO : F-14/2013/123