

Annexure-B

PRESENT LANDS USE AREA STATISTICS INSIDE ML	
Patabeda Iron Ore Mines	
SUB-CATEGORY	AREA (Ha)
Anfo Shed	0.003
Charging Pit	0.070
Crusher	0.124
Disel Jenerator	0.010
Dump Yard	2.199
Magazine Area	0.230
Mineral Stack	0.198
Pucca House	0.019
Quarry Pit	9.311
Road	1.696
Safety Zone	3.243
Stack Yard	0.558
Temporary House	0.035
Temporary Stack	0.368
Vacant Land	11.345
Water Tank	0.007
Weigh Bridge	0.007
TOTAL AREA	29.423

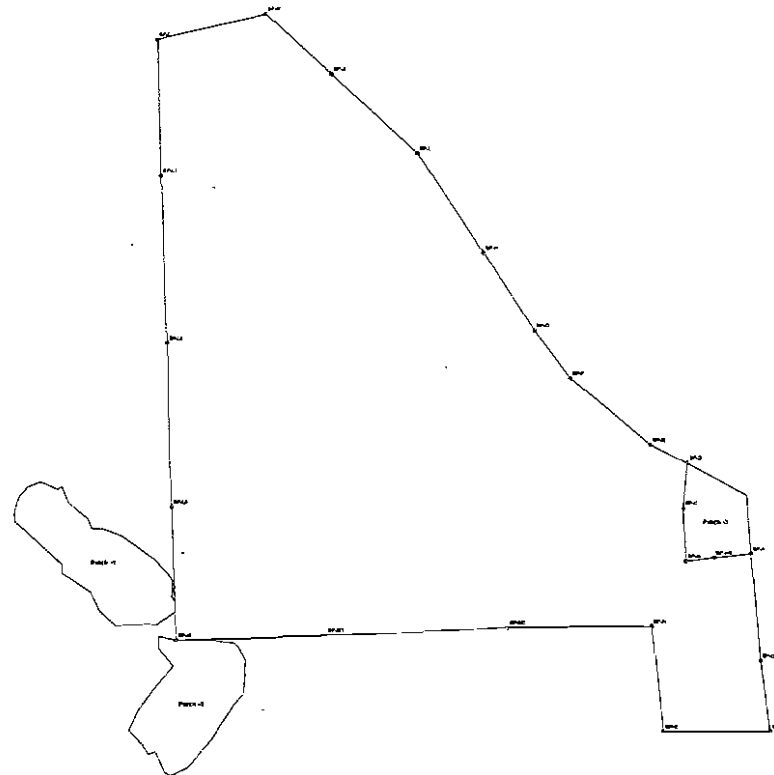
Area outside lease boundary

CATEGORY	AREA-HA
Quarry Pit	2.558
Vacant Land	0.610
TOTAL AREA	3.168

MAP SHOWING TS SURVEY MINING LEASE AREA AND ADJACENT AREA WITH SOME MINING ACTIVITY
OF
(M G M (Mohanty) Minerals Patabeda)



0 50 100 200 300 400 Meters
Scale = 1:10000



Legend

- ⊙ Ts Surveyed ML Pillars
- ▭ Ts Surveyed Lease Boundary
- ▭ Adjacent Patches

JOINT SURVEY REPORT

MINING LEASE: Koida Iron Ore Mines

**LESSEE/MINE OWNER: M/s Essel Mining and
Industries**

1. Name of the Mining lease: *Koida Iron Ore Mines*

2. Name of the Lessee: M/s Essel Mining and Industries Pvt Ltd

3. TS surveyed map (Present Enjoyment)

TS survey of present lease boundary pillar positions, land use within lease area, areas shown as encroachment in Shah Commission's communication and areas adjacent to the lease boundary with some mining related activity was undertaken. A composite map has been prepared showing present enjoyment lease boundary, inside land use and outside land use of area adjacent to lease boundary with some mining activity. The observation of the field team in regard to land use of the adjacent area has been recorded in form of minutes attached as Annexure-A.

Maps enclosed:

- i. Vector map of TS surveyed Map showing present enjoyment and adjacent area with mining activity.
- ii. PDF version of above map.

4. Surveyed Land use map (Present Enjoyment)

All the land use area like broken up area, S/R, DLC, Forest/Non-forest, Reserve forest pillars, Safety zone pillars as per field position were TS surveyed. The broken up area comprising quarry, dump, stack-yard, road, office and other mining related activities have been captured within the leasehold area. The area statistics is in Annexure-B.

Map enclosed:

- i. TS surveyed Land use map (Present Enjoyment) in vector format

5. Land use map (Approved):

The approved Land use map is not available.

6. Geo-referenced Lease deed map.

This is prepared by geo-referencing the original lease map with geo-referenced cadastral map coming within the lease area. The cadastral sheets are geo-referenced based on the GCP surveyed in the field (Village Tri-junction, Bi-junction, Mustakil Chand and any other identifiable feature as shown by Revenue officials on the field in connection with geo-referencing of village cadastral sheets) and using Ortho-image of the area.

Map enclosed:

- i. Geo-referenced Lease Deed map in vector format.

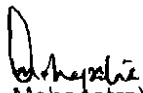
7. Comparison of lease map:

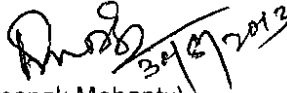
TS surveyed present enjoyment area map was compared with the geo-referenced lease deed map by superimposing both the maps. It is observed that while the shape of polygon in both cases remains same there have occurred deviations along the entire length of lease boundary. Lease area computed in three different ways is tabulated below.


As per Lease Deed (Land schedule)	As per geo-referenced Lease Map	As per TS survey
90.143 hectares	87.952 hectares	90.837 hectares

Map enclosed:

- i. PDF version of vector map of TS survey super-imposed on geo-referenced lease deed vector map.


(A.K. Mohapatra) 20.8.13
CE, ORSAC


(Deepak Mohanty)
Director, Mines


(D. Biswal)
Additional Secretary
F & E Department

**PROCEEDING OF THE JOINT SURVEY AND DEMARCATION OF MINING LEASE
AREA BY TEAM-1, KOIRA CIRCLE IN PURSUANCE TO THE DECISION OF THE
HON'BLE JUSTICE SHAH COMMISSION OF ENQUIRY**

Koira Iron Mines

Date: 14.08.13

M/s ESSEL Mining & Industries (P) Ltd

1. The T. S. Data taken in the field in presence of Lessee / Representative has been checked and validated in the laboratory in the presence of team members as well as the Lessee / Representative and found correct.
2. The area adjacent to the lease boundary with some mining related activity were captured through T.S.Survey. The same was also validated by the team members in the presence of Lessee/Representative. The details of such patches are given below.

Patch No.	Area marked as working encroachment in Shah Commission communication.	Description
Patch-1	*	Security barrack near lease pillar BP-5 which comes under company's patta land.
Patch-2	'A'	Crusher plant of Sri S.N.Mohanty Industries (P) Ltd. (SMIPL), surrounding lease pillar BP-6.
Patch-3	'A'	Open ground extending from SMIPL boundary to lease pillar BP-10.
Patch-4	'A'	Revenue road coming out of lease area near lease pillar BP-7 and continuing up to BP-10.
Patch-5	'A'	Open ground near BP-7 .
Patch-6	'A'	A ditch/water body about 111m from pillar BP-9.
Patch-7	'A'	Gramadevi Pujasthali at about 29m from lease pillar BP-9.

Patch-8	*	A stabilized dump located near lease pillar BP-11 and extending towards BP-10.
Patch-9	'B'	Open ground near pillar BP-11.
Patch-10	'B'	Dump near pillar BP-12 for filling up of ditch and to maintain road gradient.
Patch-11	'B'	Barren land about 76m from lease pillar BP-12.
Patch-12	'B'	Village road connecting lease area near pillar BP-12.
Patch-13	'B'	Dump at about 8.5m from lease boundary for filling ditch and to maintain the road gradient between pillars BP-12 & 13.
Patch-14	'B'	Barren land between pillars BP-12 & 13.
Patch-15	'B'	Temporary hutment area about 22m from lease boundary between pillars 12 & 13.

* These patches were not shown as working encroachment in Shah Commission communication.

SIGNATURE

(Lessee/Representative)

Khageswar Mahanta 14/8/13
Sr. General Manager
(CP&E)

Malay Ranjan Das 14/8/13
Sr. Manager (Survey)

SIGNATURE

(Team Members)

1. Dr. Sri Kantadas
Scientist, ORSAT

2. Ganesh Mishra
Range Officer, Barhekar

3. Jitendra Mahanta
Revenue Supervisor Lakhimpur

4. Bhaktabandhu Patra
Sr. Inspector of Mines, Bolangir

5. Akshaya K. Mahasana
Asstt. Tahasil Officer-Koisa

6. Haldhar Das
Sr. Surveyor, Koisa

7. Chandra Sekhar Goswami
Sr. Dergah

14/8/13
14/8/13

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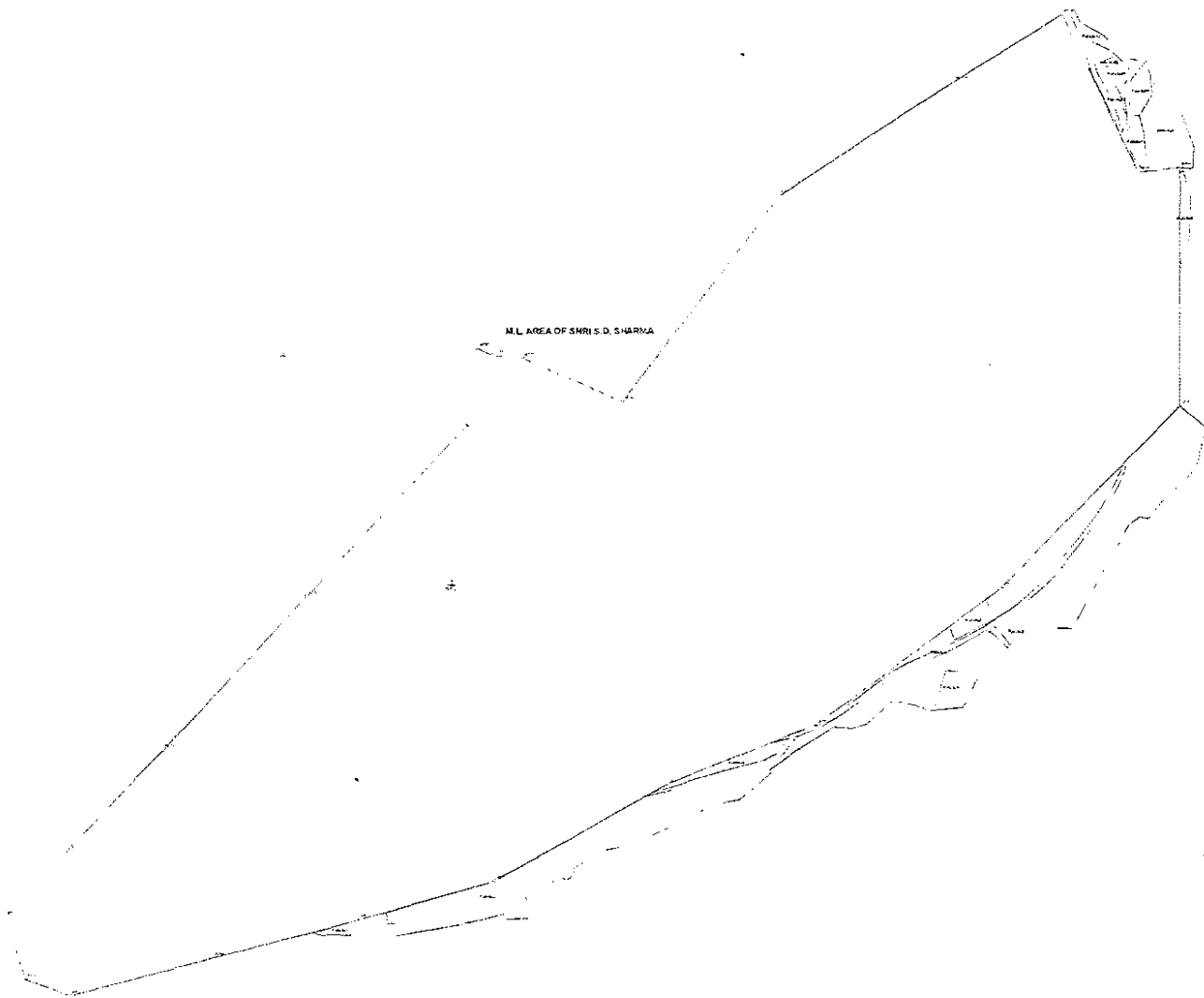
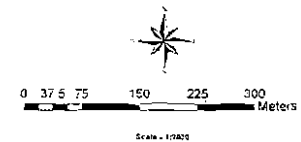
Annexure-B

LAND USE AREA STATISTICS INSIDE ML	
Koida Iron Ore Mines	
Sub-Catago	Area (Ha)
Broken Land	0.017
Crusher Plant	1.207
DG Shed	0.007
Diesel Pump	0.318
Dump Yard	2.179
Electrical Substation	0.204
Fines Stack	0.477
Garland Drain	0.223
Gram Devi Maa Mandal Paj	0.146
Magazine	0.133
Office Area	0.430
Plantation	2.387
Quarry Pit	17.391
Rest Selter	0.003
Rest Shed	0.003
Road	4.297
ROM Stack	0.132
Safety Zone	2.905
Screening & Crushing Yard	2.587
Security Barrack	0.390
Siltation Pond	0.009
SMIPL Crusher	0.547
Stack Yard	1.180
Subgrade Dump	2.719
Subgrade Stack	2.288
Temporary Hut	0.029
Vacant Land	48.618
Water Pump	0.004
Weigh Bridge	0.017
Total Area	90.847

AREA STATISTICS OUTSIDE ML

Sub_Catago	Area-Ha
Barren Land	0.365
Ditch	0.128
Dump Yard	0.228
Gram Devi Maa Mandal Paj	0.150
Open Ground	6.267
Road	0.856
Security Barrack	0.057
SMIPL Crusher	1.402
Speal Over Dump	0.154
Temporary Hutment Area	0.015
Total Area =	9.622

TS SURVEY OF MINING LEASE AREA AND ADJACENT AREA WITH SOME MINING ACTIVITY
KOIRA IRON MINES OF M/S ESSEL MINING & INDUSTRIES (P) LTD.



Legend

- Ts Surveyed ML Pillars
- Ts Surveyed Lease Boundary
- Adjacent Patches

JOINT SURVEY REPORT

MINING LEASE: Jurudi-135 Iron Ore Mines

**LESSEE/MINE OWNER: M/s Kalinga Mining
Corporation**

1. Name of the Mining lease: *Jurudi135 Iron Ore Mines*

2. Name of the Lessee: M/s Kalinga Mining Corporation

3. TS surveyed map (Present Enjoyment)

TS survey of present lease boundary pillar positions, land use within lease area, areas shown as encroachment in Shah Commission's communication and areas adjacent to the lease boundary with some mining related activity was undertaken. A composite map has been prepared showing present enjoyment lease boundary, inside land use and outside land use of area adjacent to lease boundary with some mining activity. The observation of the field team in regard to land use of the adjacent area has been recorded in form of minutes attached as Annexure-A.

Maps enclosed:

- i. Vector map of TS surveyed Map showing present enjoyment and adjacent area with mining activity.
- ii. PDF version of above map.

4. Surveyed Land use map (Present Enjoyment)

All the land use area like broken up area, S/R, DLC, Forest/Non-forest, Reserve forest pillars, Safety zone pillars as per field position were TS surveyed. The broken up area comprising quarry, dump, stack-yard, road, office and other mining related activities have been captured within the leasehold area. The area statistics is in Annexure-B.

Map enclosed:

- i. TS surveyed Land use map (Present Enjoyment) in vector format

5. Land use map (Approved):

The approved Land use map is not available.

6. Geo-referenced Lease deed map.

Lease deed map is not available.

7. Comparison of lease map:

In this case no comparison could be done as lease deed map was not available. However, lease area computed in two different ways is tabulated below.

Patch-10	*	Vacant land inside to outside in between ML Pillar E to E2
Patch-11	*	Vacant land inside to outside in between ML Pillar E to E2
Patch-12	'A'	Railway acquired area
Patch-13	'A'	Building in between railway acquired area
Patch-14	'A'	Embankment inside to outside lease near ML Pillar R
Patch-15	'A'	Building near ML Pillar R
Patch-16	*	Road inside to outside lease in between ML Pillar A to R
Patch-17	*	Morrum quarry inside to outside lease near ML Pillar A

Area marked 'A' by Shah Commission Communication are inside the ML boundary of 135 ha., which is railway acquired area.

*These patches are not shown as working encroachment in Shah Commission communication.

SIGNATURE
(Lessee/Representative)

Proceeding and validation
is done in presence of the
representative & lease of
all survey ten member.
However, lease representative
declined to sign

SIGNATURE
(Team Members)

1. ANIL KUMAR KANUNGGO *Beaman*
14.08.20
2. Benunda Kh. Sehwal *Shah*
14.8.13
3. Pramod K. Behera *Shah*
14/8/13
4. Shree Ramapad Aratinda Mishra
Range Officer Champua *Shah*
14/08/20
5. Panchanan Naik
Forester, Joda Section *Shah*
14/8/13

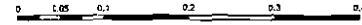
PRESENT LAND USE AREA STATISTICS INSIDE ML	
Jurudi135 Iron Ore Mines	
SUB-CATEGORY	AREA (Ha)
Administrative Area	0.065
Balgopal Crusher	2.026
Benificiation Plant	1.088
Cistern	0.002
Crusher Plant	0.787
Embankment	1.591
Fines Stack	0.047
Morrum Quarry Pit	0.754
Non forest Area	1.283
Old Quarry Pit	4.908
Over Burden	2.684
Plantated Sub Grade Dump	0.985
Quarry Pit	17.448
Railway Area	4.089
Residential Area	3.201
Retaininig Wall	0.001
Road	5.424
Safety Zone	3.682
Semi Pucca House	0.002
Shed	0.037
Stack Yard	6.265
Sub Grade Dump	14.962
Vacant Area	26.681
Vacant Land	37.573
Weigh Bridge	0.006
Workshop Area	0.329
TOTAL AREA	135.920

Area outside mining lease

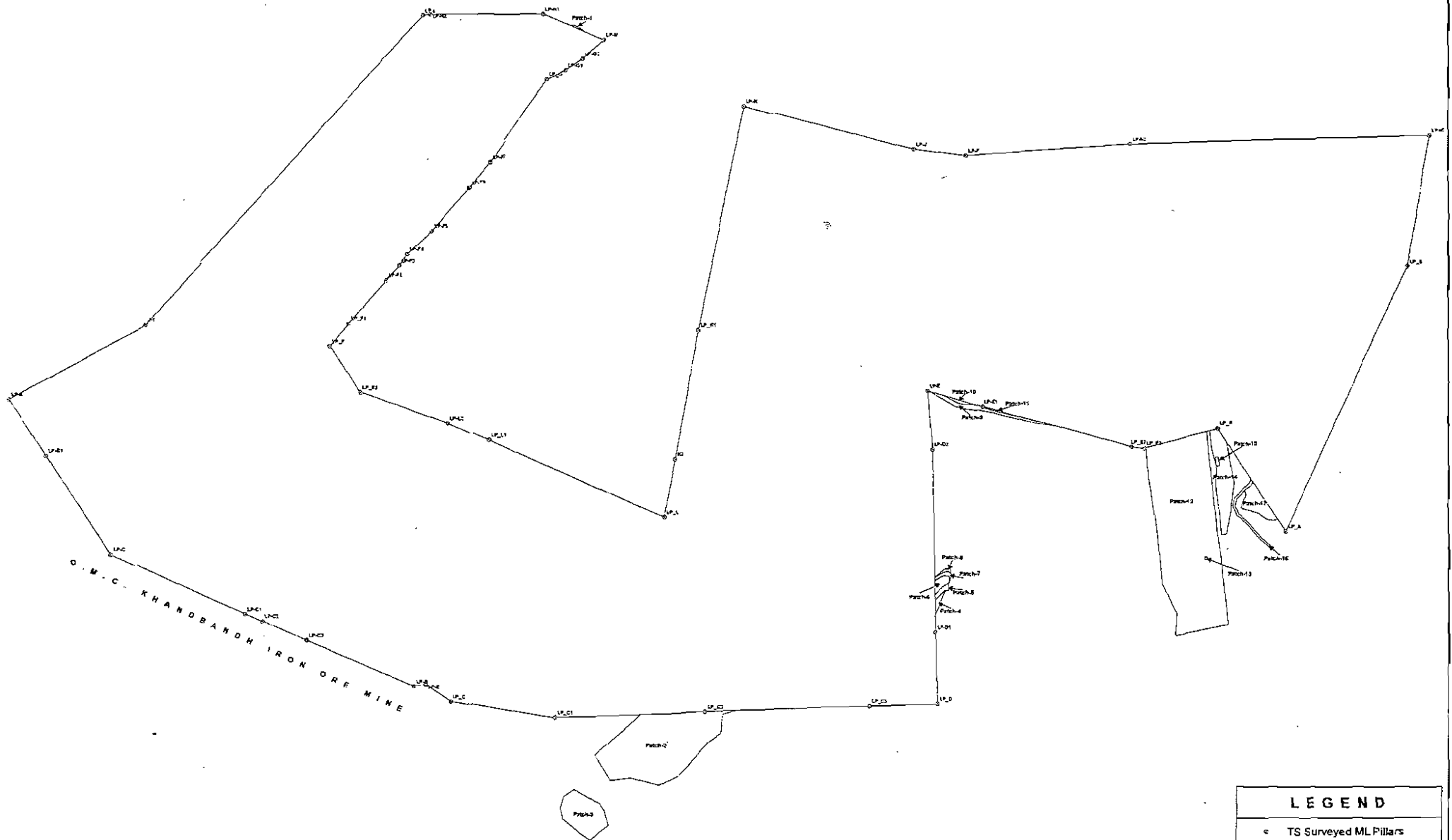
CATEGORY	AREA-HA
Building	0.009
Embankment	0.376
Morrum Quarry Pit	0.166
Quarry Pit	1.795
Railway Area	3.126
Road	0.188
Sub Grade Dump	0.408
Vacant Land	0.024
TOTALAREA	6.092

TS SURVEY OF MINING LEASE AREA AND ADJACENT AREA WITH SOME MINING ACTIVITY
IRON ORE MINE OF M/S. KALINGA MINING CORPORATION, JALHARI (135 Ha.)

SCALE-1:3000



MALARAI-JALAHARI IRON & MN. ONE MINES



O.M.C. Kharbandh Iron Ore Mine

LEGEND	
•	TS Surveyed ML Pillars
□	TS Surveyed Lease Boundary
○	Adjacent Patches

JOINT SURVEY REPORT

MINING LEASE: Nuagaon Iron Ore Mines

LESSEE/MINE OWNER: M/s KJS Ahluwalia

1. Name of the Mining lease: Nuagaon Iron Ore Mines

2. Name of the Lessee: M/s KJS Ahluwalia

3. TS surveyed map (Present Enjoyment)

TS survey of present lease boundary pillar positions, land use within lease area, areas shown as encroachment in Shah Commission's communication and areas adjacent to the lease boundary with some mining related activity was undertaken. A composite map has been prepared showing present enjoyment lease boundary, inside land use and outside land use of area adjacent to lease boundary with some mining activity. The observation of the field team in regard to land use of the adjacent area has been recorded in form of minutes attached as Annexure-A.

Maps enclosed:

- i. Vector map of TS surveyed Map showing present enjoyment and adjacent area with mining activity.
- ii. PDF version of above map.

4. Surveyed Land use map (Present Enjoyment)

All the land use area like broken up area, S/R, DLC, Forest/Non-forest, Reserve forest pillars, Safety zone pillars as per field position were TS surveyed. The broken up area comprising quarry, dump, stack-yard, road, office and other mining related activities have been captured within the leasehold area. The area statistics is in Annexure-B.

Map enclosed:

- i. TS surveyed Land use map (Present Enjoyment) in vector format

5. Land use map (Approved):

The approved Land use map was referenced with geo-referenced lease deed map and then vectorised for computing the land use area statistics. The area statistics is in Annexure-C.

Map enclosed:

- i. Proposed Land use Map in vector format

6. Geo-referenced Lease deed map.

This is prepared by geo-referencing the original lease map with geo-referenced cadastral map coming within the lease area. The cadastral sheets are geo-

referenced based on the GCP surveyed in the field (Village Tri-junction, Bi-junction, Mustakil Chand and any other identifiable feature as shown by Revenue officials on the field in connection with geo-referencing of village cadastral sheets) and using Ortho-image of the area.

Map enclosed:

- i. Geo-referenced Lease Deed map in vector format.


7. Comparison of lease map:


TS surveyed present enjoyment area map was compared with the geo-referenced lease deed map by superimposing both the maps. It is observed that while the shape of polygon in both cases remains almost same and deviations have occurred almost along the entire boundary. Lease area computed in three different ways is tabulated below.


As per Lease Deed (Land schedule)	As per geo-referenced Lease Map	As per TS survey
767.285 hectares	774.126 hectares	776.969 hectares

Map enclosed:

- i. PDF version of vector map of TS survey super-imposed on geo-referenced lease deed vector map.


(A.K. Mohapatra)
CE, ORSAC 20.8.13


(Deepak Mohanty)
Director, Mines

 20/8/13
(D. Biswal)
Additional Secretary
F & E Department

**PROCEEDING OF THE JOINT SURVEY AND DEMARCATION OF MINING LEASE
AREA BY TEAM-2, JODA CIRCLE IN PURSUANCE TO THE DECISION OF THE
HON'BLE JUSTICE SHAH COMMISSION OF ENQUIRY**

**Nuagaon Iron Ore Mines
KJS Ahluwalia**

Date: 13.08.2013

1. The T.S. data taken in the field in presence of Lessee/Representative has been checked and validated in the laboratory in presence of the team members as well as the Lessee/Representative and found correct.
2. The areas adjacent to the lease boundary with some mining related activity were captured through T.S. Survey. The same was also validated by the team members in presence of Lessee/Representative. The details of such patches are given below.

Patch No.	Area marked as working encroachment in Shah Commission communication	Description
Patch-1	G	Dump Yard in between Boundary Pillar No.143 & 145
Patch-2	G	Dump Yard in between Boundary Pillar No.147 & 150
Patch-3	C	Dump Yard near Boundary Pillar No.3
Patch-4	C	Dump Yard in between Boundary Pillar No.6 & 9
Patch-5	E	Barren land near Boundary Pillar No.13
Patch-6	E	Private building in between Boundary Pillar No.13 & 14
Patch-7	E	Shiv Mandir in between Boundary Pillar No.13 & 14
Patch-8	E	Residential area near Boundary Pillar No.14
Patch-9	E	Vacant land in between Boundary Pillar No.13 & 16
Patch-10	E	Barren land in between Boundary Pillar No.14 & 16
*Patch-11		Village road connecting to the lease near Boundary Pillar No.21
*Patch-12		Village road connecting to the lease near Boundary Pillar No.22 & 23
Patch-13	F	Subgrade Stack Yard in between Boundary Pillar No.29 & 30
*Patch-14		Road Connecting to the lease near Boundary Pillar No.40

Patch No.	Area marked as working encroachment in Shah Commission communication	Description
Patch-15	B	A cluster of crusher units by the third party in between Boundary Pillar No.59 to 63, pertaining to the Keonjhar-Sundargarh district boundary
Patch-16	A	Village road connecting to the lease near Boundary Pillar No.95 & 99
Patch-17	A	Vacant land near Boundary Pillar No.95
Patch-18	A	Dump Yard in between Boundary Pillar No.95 & 98
Patch-19	A	Dump Yard in between Boundary Pillar No.97 & 98
Patch-20	A	Dump Yard near Boundary Pillar No.98
Patch-21	A	Dump Yard in between Boundary Pillar No.98 & 99
*Patch-22		Garage area in between Boundary Pillar No.105 & 106
Patch-23	D	Village road connecting to the lease near Boundary Pillar No.106
Patch-24	D	Dump Yard in between Boundary Pillar No.106 & 110

* These Patches are not shown as working encroachments in Hon'ble Shah Commission communication.

SIGNATURE

(Lessee/Representative)

SIGNATURE

(Team Members)

Proceedings and validation is done in presence of Lessee/Representative and all the survey team members. However, Lessee/Representative declined to put his signature.

P. K. Pagoda
13.8.13

1. P. K. Pagoda
Scientist, ORSAT

P. K. Pagoda
13.8.13

2. S. Mahanta,
S.I.M., O/o DDM, Joda

S. Mahanta
13/8/13

3. C. Parida,
R.I., Keonjhar Tahasil
(Revenue Deptt.)

C. Parida
13/8/13

4. P. C. Dash
Range Officer
Forest Deptt.
Keonjhar Div.

P. C. Dash
13/8/13

5. B. Tudu, S.S.
D.M.(O), BBSR

B. Tudu
13/8/13

6. P. Tripathy
Forester
(Forest Deptt.)

P. Tripathy
13/8/13

Annexure-B

LAND USE AREA STATISTICS OF ML	
Nuagaon Iron Ore Mines	
SUB-CATEGORY	AREA (Ha)
Benefication Plant	2.946
Crusher Area	1.421
DLC Forest	3.439
Dump Yard	45.322
Garage Area	1.153
Guali New Quarry	4.433
Guali Old Quarry	1.984
Guali Village Area	6.237
KJSA Dispensary	0.114
Magazine Centre	0.069
Office Canteen & Staff Quarters	0.684
Old Quarry Pit	0.319
Old Screen Plant Area	0.160
Play Ground	0.644
Pucca Building	0.004
Quarry Pit	85.827
Regining Yard	1.553
Residential Area	0.198
Road	14.750
Safety Zone	14.527
Security Traing Centre	1.133
Semipucca House	0.005
Stack Yard	35.820
Sub Grade Dump	4.729
Sub Grade Stack	0.875
Sub grade Stack Yard	0.996
Sub Grade Stack Yard	4.480
Subgrade Dump	6.500
Temporary Stack	2.645
Vacant Land	533.940
Weigh Bridge	0.105
Weigh Bridge Office	0.007
TOTAL AREA	777.019

Annexure-C

APPROVED LAND USE AREA STATISTICS OF ML	
Nuagaon Iron Ore Mines	
CATEGORY	AREA (Ha)
Not Specified	322.102
Area Proposed For Plantation	9.101
Areas for Other Safety Zone	29.484
Broken Up Area	111.248
Camp Area For Inhabitant Site	1.778
Camp Area Inhabitant Site	4.072
Dumping Overburden Disturbed	1.761
Dumping Overburden Undisturbed	132.403
Magazine	0.089
Magazine safety zone	0.617
Mines Road	14.211
Mining Area Disturbed	19.237
Mining Area Undisturbed	49.735
Planted Out Area	2.396
Safety Zone Area	22.378
Stacking and Dressing Ore	27.017
Stacking of Subgrade Ore	21.626
TOTAL AREA	769.255

Area outside lease boundary

SUB-CATEGORY	AREA_Ha
Barren Land	2.705
Building	0.027
Crusher Area	10.059
Dump Yard	15.539
Garage Area	0.048
Residential Area	0.316
Road	1.535
Shiv Mondir	0.155
Sub grade Stack Yard	0.916
Vacant Land	1.170
TOTAL AREA	32.470

TS SURVEY OF MINING LEASE AREA AND ADJACENT AREA WITH SOME MINING ACTIVITY
NUAGAON IRON ORE MINES OF SRI KAMALJEET SINGH AHLUWALIA

PANDULIPOR/IRON AND MANGANESE MINES

ML AREA OF GUALI IRON ORE MINES



JOINT SURVEY REPORT

MINING LEASE: Jurudi Iron & Manganese Mines

LESSEE/MINE OWNER: M/s Tarini Mineral Pvt.Ltd.

1. Name of the Mining lease: *Jurudi Iron & Manganese Mines*

2. Name of the Lessee: M/s Tarini Mineral Pvt Ltd

3. TS surveyed map (Present Enjoyment)

TS survey of present lease boundary pillar positions, land use within lease area, areas shown as encroachment in Shah Commission's communication and areas adjacent to the lease boundary with some mining related activity was undertaken. A composite map has been prepared showing present enjoyment lease boundary, inside land use and outside land use of area adjacent to lease boundary with some mining activity. The observation of the field team in regard to land use of the adjacent area has been recorded in form of minutes attached as Annexure-A.

Maps enclosed:

- i. Vector map of TS surveyed Map showing present enjoyment and adjacent area with mining activity.
- ii. PDF version of above map.

4. Surveyed Land use map (Present Enjoyment)

All the land use area like broken up area, S/R, DLC, Forest/Non-forest, Reserve forest pillars, Safety zone pillars as per field position were TS surveyed. The broken up area comprising quarry, dump, stack-yard, road, office and other mining related activities have been captured within the leasehold area. The area statistics is in Annexure-B.

Map enclosed:

- i. TS surveyed Land use map (Present Enjoyment) in vector format

5. Land use map (Approved):

The approved Land use map was referenced with geo-referenced lease deed map and then vectorised for computing the land use area statistics. The area statistics is in Annexure-C.

Map enclosed:

- i. Proposed Land use Map in vector format

6. Geo-referenced Lease deed map.

This is prepared by geo-referencing the original lease map with geo-referenced cadastral map coming within the lease area. The cadastral sheets are geo-

referenced based on the GCP surveyed in the field (Village Tri-junction, Bi-junction, Mustakil Chand and any other identifiable feature as shown by Revenue officials on the field in connection with geo-referencing of village cadastral sheets) and using Ortho-image of the area.

Map enclosed:

- i. Geo-referenced Lease Deed map in vector format.


7. Comparison of lease map:

TS surveyed present enjoyment area map was compared with the geo-referenced lease deed map by superimposing both the maps. It is observed that the shape of polygon in both cases is almost same and there is a shift towards north-western side. Lease area computed in three different ways is tabulated below.


As per Lease Deed (Land schedule)	As per geo-referenced Lease Map	As per TS survey
66.368 hectares	63.575 hectares	65.837 hectares

Map enclosed:

- i. PDF version of vector map of TS survey super-imposed on geo-referenced lease deed vector map.


(A.K. Mohapatra) 20.8.12
CE, ORSAC


(Deepak Mohanty) 30/8/2013
Director, Mines


(D. Biswal) 30/8/13
Additional Secretary
F & E Department

**PROCEEDING OF THE JOINT SURVEY AND DEMARCATION OF MINING LEASE
AREA BY TEAM-1, JODA CIRCLE IN PURSUANCE TO THE DECISION OF THE
HON'BLE JUSTICE SHAH COMMISSION OF ENQUIRY**

Date: 13.08.2013

M/s Tarini Mineral Pvt.Ltd.,
Jurudi, Keonjhar

1. The T.S. Data taken in the field in presence of lessee/ representative has been checked and validated in the laboratory in presence of team members as well as lessee/representative & found correct.
2. The areas adjacent to the lease boundary with some mining related activity were captured through T.S. survey. The same was also validated by the team members in presence of lessee/representative. The details of such patches are given below.

Patch No.	Area marked as working encroachment in Shah Commission communication	Description
Patch-1	*	Barren land near L.P. Pillar No.1 to H2.
Patch-2	*	Road inside to outside lease near M.L. Pillar LP – L4
Patch-3	*	Road inside to outside lease near M.L. Pillar LPA
Patch-4	*	Vacant area near ML Pillar LPA
Patch-5	*	Vacant area near M.L. Pillar LP E to F
Patch-6	*	Residential area near M.L. Pillar LP E to F
Patch-7	*	Residential area near M.L. Pillar LP E to F to G
Patch-8	*	Railway acquired area near M.L. Pillar LP G to H

Patch-9	*	Road near M.L. Pillar LP G to H
Patch-10	*	Road inside to outside lease near M.L. Pillar LP G to H
Patch-11	*	Railway acquired area inside to outside near M.L. Pillar LP G to H
Patch-12	*	Railway acquired area inside to outside near M.L. Pillar LP G to H
Patch-13	*	Road inside to outside lease near M.L. Pillar LP G to H
Patch-14	*	Road inside to outside lease near M.L. Pillar LP G to H
Patch-15	*	Hutment area inside to outside lease near M.L. Pillar H1 to H2

*These patches are not shown as working encroachment in Shah Commission communication.

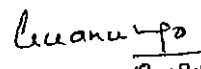
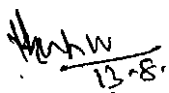
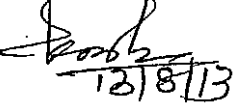
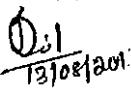

Area marked 'A' in the Shah Commission Communication was observed in the field of following land use.

Quarry – Inside the DGPS line (near ML Pillar No. H3 to H4)

SIGNATURE
(Lessee/Representative)

Proceeding and validation
is done in presence of
representative of
lessee and all survey
team members. However
lessee's representative
refused to sign

SIGNATURE
(Team Members)

1. ANIL KUMAR KANUNGO 
13.08.2013
2. Benanta Kh. Sehwal 
13.8.13
3. Pramod K. Behera 
13/8/13
4. Shree Ramapada Anandabinda Mishra
Range Officer Champu 
13/08/2013
5. Panchanan Naik
Forester, Joda 
13/8/13

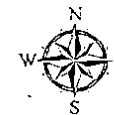
Annexure-B

LAND USE AREA STATISTICS OF ML	
Jurudi Iron & Managnese Mines	
SUB-CATEGORY	AREA-HA
Labour Rest Shed	0.0140
Crusher Plant Area	0.0350
Fines Stack	0.3400
Hutment Area	0.3820
Old Quarry Pit	0.4420
Quarry Pit	7.8610
Rail aquare Area	4.1250
Railway Trak	0.4200
Residentrial Area	0.5800
Road	1.0230
Safety Zone	1.9460
Semipucca House	0.0500
Stack Yard	1.7890
Subgrade Dump	10.6780
Vacant Land	36.1480
Weigh Bridge	0.0070
TOTAL-AREA	65.8400

Annexure-C

APPROVED LAND USE AREA STATISTICS	
Jurudi Iron and Mananese Mines	
CATEGORY	AREA-HA
Afforestation	30.139
Creach	0.014
Magazine	0.237
MN-Quarry	0.700
Office	0.010
Proposed stacking yard	0.232
Quarry	1.422
Rest Shed	0.044
Roads	1.465
Waste dump	2.892
OTHERS	26.346
TOTAL AREA	63.501

1000 2000 3000 4000 5000 6000 7000 8000 9000 10000



TS Surveyed ML Pillars

TS Surveyed Lease Boundary

Adjacent Patches

JOINT SURVEY REPORT

MINING LEASE: Joda East Iron Ore Mines

LESSEE/MINE OWNER: M/s TISCO

1. Name of the Mining lease: *Joda East Iron Ore Mines*

2. Name of the Lessee: M/s TISCO

3. TS surveyed map (Present Enjoyment)

TS survey of present lease boundary pillar positions, land use within lease area, areas shown as encroachment in Shah Commission's communication and areas adjacent to the lease boundary with some mining related activity was undertaken. A composite map has been prepared showing present enjoyment lease boundary, inside land use and outside land use of area adjacent to lease boundary with some mining activity. The observation of the field team in regard to land use of the adjacent area has been recorded in form of minutes attached as Annexure-A.

Maps enclosed:

- i. Vector map of TS surveyed Map showing present enjoyment and adjacent area with mining activity.
- ii. PDF version of above map.

4. Surveyed Land use map (Present Enjoyment)

All the land use area like broken up area, S/R, DLC, Forest/Non-forest, Reserve forest pillars, Safety zone pillars as per field position were TS surveyed. The broken up area comprising quarry, dump, stack-yard, road, office and other mining related activities have been captured within the leasehold area. The area statistics is in Annexure-B.

Map enclosed:

- i. TS surveyed Land use map (Present Enjoyment) in vector format

5. Land use map (Approved):

The approved Land use map was referenced with geo-referenced lease deed map and then vectorised for computing the land use area statistics. The area statistics is in Annexure-C.

Map enclosed:

- i. Proposed Land use Map in vector format

6. Geo-referenced Lease deed map.

This is prepared by geo-referencing the original lease map with geo-referenced cadastral map coming within the lease area. The cadastral sheets are geo-

referenced based on the GCP surveyed in the field (Village Tri-junction, Bi-junction, Mustakil Chand and any other identifiable feature as shown by Revenue officials on the field in connection with geo-referencing of village cadastral sheets) and using Ortho-image of the area.

Map enclosed:

- i. Geo-referenced Lease Deed map in vector format.

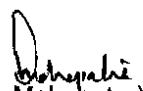
7. Comparison of lease map:

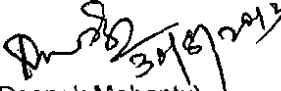
TS surveyed present enjoyment area map was compared with the geo-referenced lease deed map by superimposing both the maps. It is observed that the shape of polygon in both cases is almost same but the enjoyment position has shifted towards eastern side. Lease area computed in three different ways is tabulated below.

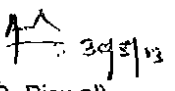
As per Lease Deed (Land schedule)	As per geo-referenced Lease Map	As per TS survey
671.093 hectares	650.384 hectares	674.116 hectares

Map enclosed:

- i. PDF version of vector map of TS survey super-imposed on geo-referenced lease deed vector map.


(A.K. Mohapatra) 30.8.13
CE, ORSAC


(Deepak Mohanty)
Director, Mines


(D. Biswal)
Additional Secretary
F & E Department

Annexure-A

**PROCEEDING OF THE JOINT SURVEY AND DEMARCATION OF MINING LEASE AREA
BY TEAM-2, JODA CIRCLE IN PURSUANCE TO THE DECISION OF THE HON'BLE
JUSTICE SHAH COMMISSION OF ENQUIRY**

Joda East Iron Mine,**Date: 14.08.13****M/s Tata Steel Limited**

1. The T. S. Data taken in the field in presence of Lessee / Representative has been checked and validated in the laboratory in the presence of team members as well as the Lessee / Representative and found correct.
2. The area adjacent to the lease boundary with some mining related activities were captured through T.S. Survey. The same was also validated by the team members in the presence of Lessee/Representative. The details of such patches are given below.

Patch No.	Area marked as working encroachment in Shah Commission communication.	Description
Patch-1	*	A corner of boundary wall of magazine extended about 10 m from lease boundary between pillars BP-51 and BP-52 which is within the land lease of TATA Steel Ltd.
Patch-2	A	A morrum road under construction connecting to sub-grade dump lying inside the lease near lease pillar BP-52.
Patch-3	A	A morrum quarry found outside the leasehold area and close to the lease boundary near lease pillar BP- 52.
Patch-4	A	Private pucca road parallel to the lease boundary between lease pillars BP- 52 to BP- 53.
Patch-5	A	Railway tracks of S.E. Railway parallel to the lease boundary between lease pillars BP-52 and BP-53.
Patch-6	*	Pucca road within the area of S.E. Railway near lease pillar BP-53.

Patch-7	*	A quarry which trespasses into the boundary line from lease pillars BP-26 and BP-27. It is revealed from the record that there is a mining lease of Dr. S. Pradhan forming common boundary with the lease line from pillars BP-26 to BP-28.
Patch-8	*	Mines road of Dr. S. Pradhan about 106m from lease pillar BP-27 connecting to the above quarry.
Patch-9	*	The quarry at other side of the mines road of Dr. S. Pradhan.

* These patches were not shown as working encroachment in Shah Commission communication.

3. A part of the area marked as working encroachment 'A' in Shah Commission communication is found well inside the present surveyed boundary.

SIGNATURE

(Lessee/Representative)

Manager
Joda East Iron Mine
Tata Steel Limited.

SIGNATURE

(Team Members)

1. Dr. S. Das, Scientist,
ORSAC
2. S. Mohanta, SIM
O/o DDM, Joda
3. P. C. Dash, R.O.
BJP, Range, Keonjhar
4. B. Tudu, S.S.
DM (O), Bhubaneswar
5. C. D. Parida, R.I.
Keonjhar Tahsil
6. P. K. Tripathy,
Forester, Patna
Keonjhar

Annexure-B

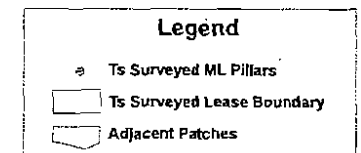
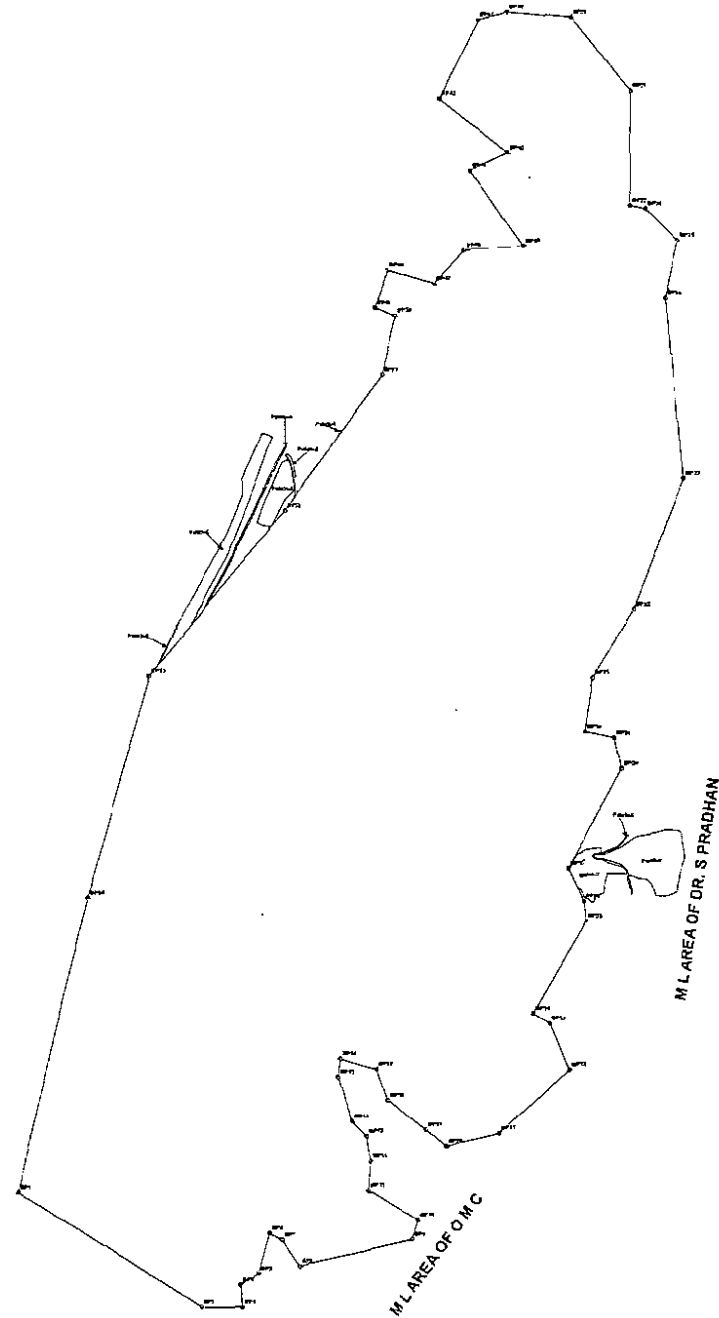
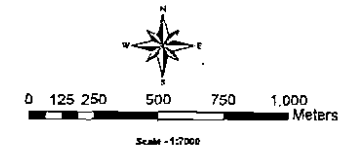
LAND USE AREA STATISTICS INSIDE ML	
Joda East Iron Ore Mines	
Sub-Category	Area (Ha)
Building	0.018
DLC Forest	33.190
Dump Yard	42.251
Embankment	2.867
Equipment Management Centre	0.814
Equipment Parking Area	0.402
Infrastructure Area	2.917
Iron Quarry	0.025
Magazine	0.237
Mineral Separation Plant Area	30.083
New Slime Dam	23.022
Office Area	0.917
Old Age Home	0.055
Old Quarry & New Slime Dam	8.591
Old Slime Dam	8.039
Power Room	0.010
Power Transformer	0.010
Pucca House	0.003
Pump House	0.014
Quarry Pit	125.007
Rail collony	0.366
Railway Area	8.523
Railway Cabin	0.013
Residential Area	0.956
Road	11.363
Safety Zone	7.918
Scrap Store Area	0.845
Semipucca House	0.006
Stack	0.728
Stack Yard	3.480
Sub Grade Stack	2.172
Subgrade Dump	3.648
Temple	0.038
Temporary Stack	0.495
Un-utilised Area	346.974
Village & Station Area	8.111
Weigh Bridge	0.012
Total area	674.120

Annexure-C

AREA STATISTICS OF PROPOSED LAND USE	
Category	Area (Ha)
Not Specified	37.266
Building	0.704
DLC forest	32.309
Greenary	0.597
Khesra forest	0.042
Magazine	7.439
Mineral storage	0.574
Mineral storage in forest	25.215
Mineral storage in non-forest	17.217
Mining	372.311
OB Dump forest	5.824
OB Dump in forest	70.842
OB Dump in non-forest	4.504
Office-power station-workshop	10.903
Power station-workshop	0.679
Power station/workshop	5.362
Road	19.524
Safety zone	7.373
Storing tools & machinery	32.875
Total area	651.560

AREA STATISTICS OUTSIDE ML	
SUB-CATEGORY	AREA-Ha
Iron Quarry	6.974
Magazine	0.016
Morrum Quarry	1.690
Railway Area	3.720
Road	0.855
TOTAL AREA	13.255

**TS SURVEY OF MINING LEASE AREA AND ADJACENT AREA WITH SOME MINING ACTIVITY
(JODA EAST IRON MINE OF M/S TATA STEEL Ltd.)**



JOINT SURVEY REPORT

MINING LEASE: Deojhar Iron Ores Mines

**LESSEE/MINE OWNER: M/s Tarini Minerals Pvt.
Ltd.**

1. Name of the Mining lease: Deojhar Iron Ores Mines

2. Name of the Lessee: M/s Tarini Minerals Pvt Ltd

3. TS surveyed map (Present Enjoyment)

TS survey of present lease boundary pillar positions, land use within lease area, areas shown as encroachment in Shah Commission's communication and areas adjacent to the lease boundary with some mining related activity was undertaken. A composite map has been prepared showing present enjoyment lease boundary, inside land use and outside land use of area adjacent to lease boundary with some mining activity. The observation of the field team in regard to land use of the adjacent area has been recorded in form of minutes attached as Annexure-A.

Maps enclosed:

- i. Vector map of TS surveyed Map showing present enjoyment and adjacent area with mining activity.
- ii. PDF version of above map.

4. Surveyed Land use map (Present Enjoyment)

All the land use area like broken up area, S/R, DLC, Forest/Non-forest, Reserve forest pillars, Safety zone pillars as per field position were TS surveyed. The broken up area comprising quarry, dump, stack-yard, road, office and other mining related activities have been captured within the leasehold area. The area statistics is in Annexure-B.

Map enclosed:

- i. TS surveyed Land use map (Present Enjoyment) in vector format

5. Land use map (Approved):

The approved Land use map is not available.

6. Geo-referenced Lease deed map.

This is prepared by geo-referencing the original lease map with geo-referenced cadastral map coming within the lease area. The cadastral sheets are geo-referenced based on the GCP surveyed in the field (Village Tri-junction, Bi-junction, Mustakil Chand and any other identifiable feature as shown by Revenue officials on the field in connection with geo-referencing of village cadastral sheets) and using Ortho-image of the area.

Map enclosed:

- i. Geo-referenced Lease Deed map in vector format.

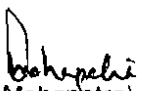
7. Comparison of lease map:

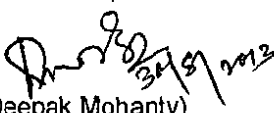
TS surveyed present enjoyment area map was compared with the geo-referenced lease deed map by superimposing both the maps. It is observed that the shape of polygon in both cases is almost same and there is deviation in western and south-western sides. Lease area computed in three different ways is tabulated below.


As per Lease Deed (Land schedule)	As per geo-referenced Lease Map	As per TS survey
34.365 hectares	32.921 hectares	35.71 hectares

Map enclosed:

- i. PDF version of vector map of TS survey super-imposed on geo-referenced lease deed vector map.


(A.K. Mohapatra) 20.8.13
CE, ORSAC


(Deepak Mohanty)
Director, Mines


(D. Biswal)
Additional Secretary
F & E Department

Annxure - A

**PROCEEDING OF THE JOINT SURVEY AND DEMARCATION OF MINING LEASE
AREA BY TEAM-1, JODA CIRCLE IN PURSUANCE TO THE DECISION OF THE
HON'BLE JUSTICE SHAH COMMISSION OF ENQUIRY**

Date: 13.08.2013

M/s Tarini Mineral Pvt. Ltd.
Deojhar, Keonjhar

1. The T.S. Data taken in the field in presence of lessee/ representative has been checked and validated in the laboratory in presence of team members as well as lessee/representative & found correct.
2. The areas adjacent to the lease boundary with some mining related activity were captured through T.S. survey. The same was also validated by the team members in presence of lessee/representative. The details of such patches are given below.

Patch No.	Area marked as working encroachment in Shah Commission communication	Description
1	*	Quarry inside to outside lease near M.L.Pillar No. 1
2	'A'	Dump near M.L.Pillar No.31
3	*	Road inside to outside lease near M.L.Pillar No. 1 to 2.

*These patches are not shown as working encroachment in Shah Commission communication.

SIGNATURE
(Lessee/Representative)

Proceeding of validation
of data in presence of
the representative of lessee
and all survey team members
Honor, lessee representative
Deojhar to A. N.

SIGNATURE
(Team Members)

1. ANIL KUMAR KANUNGO *Kanungo*
13.08.2013

2. Binanta Kh. Schw *Bhushan*
13.8.13

3. Pramod K. Behera *Behera*
13/8/13

4. Shree Ramapada Arabinda Mishra
Range officer Champura *0.1*
13/08/2013

5. Panchanan Naik
Forester, Joda Section *Naik*
13/8/13

Annexure-B

LAND USE AREA STATISTICS OF ML	
Deojhar Iron Ores Mines	
SUB-CATEGORY	AREA-HA
Crushed Fines	0.324
Magazine	0.015
Office Area	0.204
Quarry Pit	5.052
Road	0.593
Safety Zone	2.164
Scrap Yard	0.033
Screen Fines	0.351
Service Center	0.008
Stack Yard	0.580
Sub Grade Dump	4.359
Vacant Land	21.810
Weigh Bridge	0.006
Weigh Bridge Tower	0.000
Work shop Area	0.209
TOTAL AREA	35.708

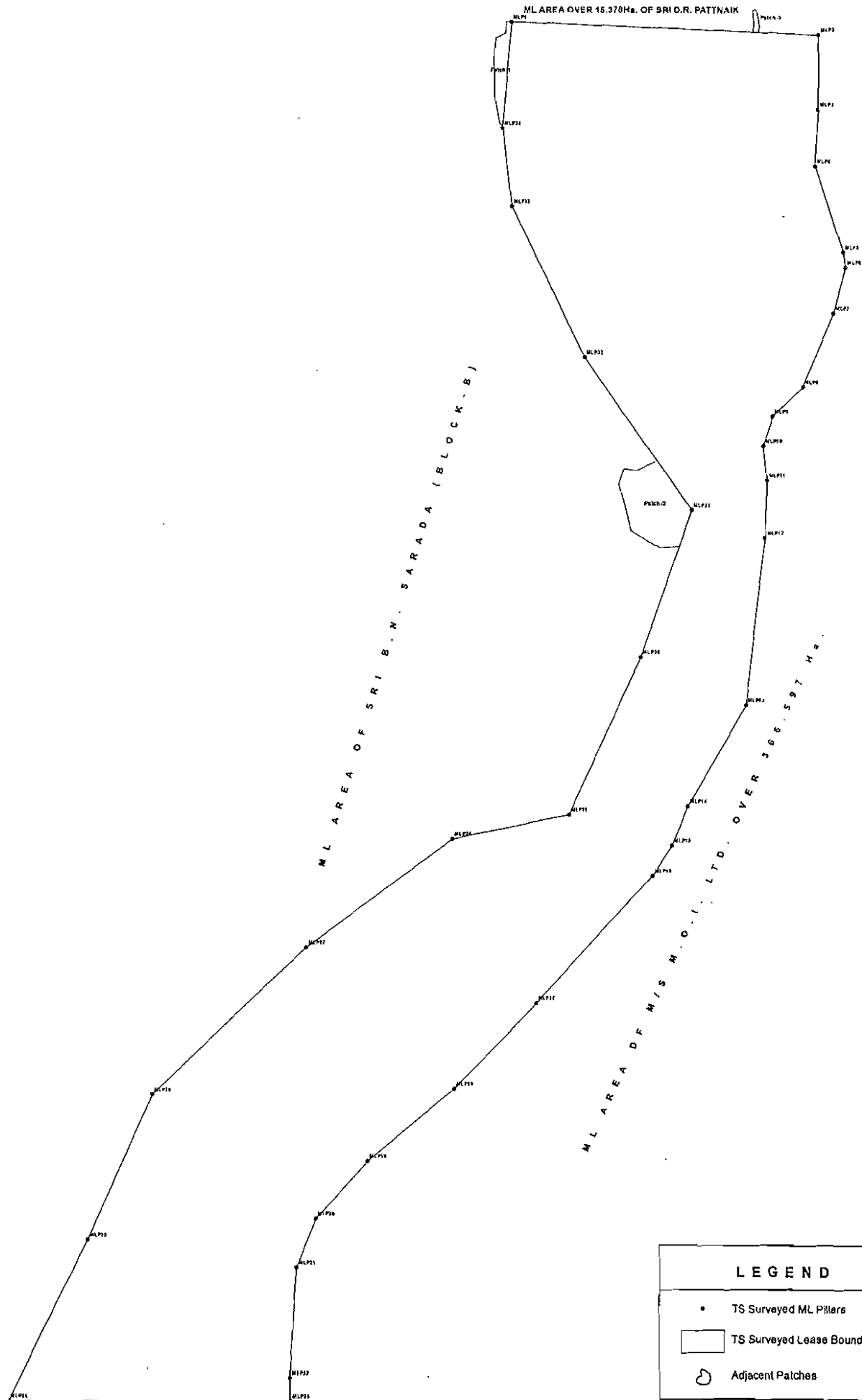
Area outside lease boundary

SUB-CATEGORY	AREA-HA
Quarry Pit	0.127
Road	0.013
Road	0.004
Dump Yard	0.489
TOTAL-AREA	0.633

TS SURVEY OF MINING LEASE AREA AND ADJACENT AREA WITH SOME MINING ACTIVITY
IRON ORE MINE OF M/S TARINI MINERAL PVT. LTD. DEOJHAR

SCALE-1:2000

0 0.05 0.1 0.2 0.3 0.4 Km



JOINT SURVEY REPORT

MINING LEASE: Jurudi-39 Manganese Mines

**LESSEE/MINE OWNER: M/s Kalinga Mining
Corporation**

1. Name of the Mining lease: *Jurudi39 Manganese Mines*

2. Name of the Lessee: M/s Kalinga Mining Corporation

3. TS surveyed map (Present Enjoyment)

TS survey of present lease boundary pillar positions, land use within lease area, areas shown as encroachment in Shah Commission's communication and areas adjacent to the lease boundary with some mining related activity was undertaken. A composite map has been prepared showing present enjoyment lease boundary, inside land use and outside land use of area adjacent to lease boundary with some mining activity. The observation of the field team in regard to land use of the adjacent area has been recorded in form of minutes attached as Annexure-A.

Maps enclosed:

- i. Vector map of TS surveyed Map showing present enjoyment and adjacent area with mining activity.
- ii. PDF version of above map.

4. Surveyed Land use map (Present Enjoyment)

All the land use area like broken up area, S/R, DLC, Forest/Non-forest, Reserve forest pillars, Safety zone pillars as per field position were TS surveyed. The broken up area comprising quarry, dump, stack-yard, road, office and other mining related activities have been captured within the leasehold area. The area statistics is in Annexure-B.

Map enclosed:

- i. TS surveyed Land use map (Present Enjoyment) in vector format

5. Land use map (Approved):

The approved Land use map is not available.


6. Geo-referenced Lease deed map.

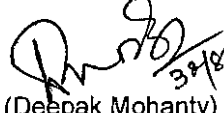
Lease deed map is not available.

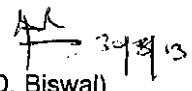
7. Comparison of lease map:

In this case no comparison could be done as geo-referencing of lease map was not possible. However, lease area computed in two different ways is tabulated below.

As per Lease Deed (Land schedule)	As per geo-referenced Lease Map	As per TS survey
39.456 hectares	Geo-referencing could not be done as lease deed map is not available	14.05 hectares


 (A.K. Mohapatra) 30.8.13
 CE, ORSAC


 (Deepak Mohanty)
 Director, Mines


 (D. Biswal)
 Additional Secretary
 F & E Department

Patch-8	*	Road outside to inside lease in between ML Pillar B to C
Patch-9	*	Vacant land in between ML Pillar B to C
Patch-10	*	Semi Pucca House outside lease area in between ML Pillar B to C
Patch-11	*	Ganesh Mandir extended inside to outside lease in between ML Pillar B to C
Patch-12	*	Residential area extended inside to outside lease in between ML Pillar B to C

*These patches are not shown as working encroachment in Shah Commission communication.

SIGNATURE
(Lessee/Representative)

SIGNATURE
(Team Members)

1. ANIL KUMAR KANUNGGO kanungo
14.08.20

2. Benanta Kumar Shaw Shaw
14.8.13

3. Pramod Kumar Behera Behera
14/8/13

4. Shree Ranepal Arambinda Mishra Mishra
Range Officer Champura.
14/08/20

5. Panchanan Naik Naik
Forester, Jeda Section.
14/8/13

Proceeding and
validation is done
in presence of the
representative of lease
and all survey team
members. However, lease
representative deputed to
sign.

Annexure-B

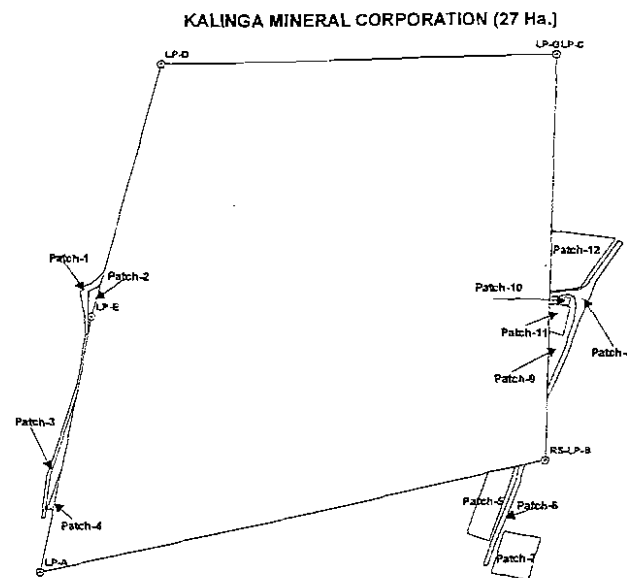
PRESENT LAND USE AREA STATISTICS INSIDE ML	
Jurudi39 Manganese Mines	
SUB-CATEGORY	AREA (Ha)
Broken Area	0.547
Ganesh Mondir	0.021
ICDS	0.020
ICDS Central & Primary School	0.138
Jalohori Grampanchayat	0.197
Kalyan-Mandir	0.025
KMC-Gesthouse	0.128
KMC&Dispensary	0.581
Private School	0.009
Puja Bedi	0.002
Residential Area	1.652
Road	0.282
Tenthouse	0.009
Vacant Land	10.441
Water Tank	0.023
TOTAL AREA	14.073

SUB-CATEGORY	AREA-HA
Ganesh Mondir	0.035
Residential Area	0.418
Road	0.176
Semipucca House	0.003
Vacant Land	0.065
TOTAL AREA	0.697

**TS SURVEY OF MINING LEASE AREA AND ADJACENT AREA WITH SOME MINING ACTIVITY
IRON ORE MINE OF M/S. KALINGA MINING CORPORATION, JALHARI (39 Ha.)**

SCALE-1:3000

0 0.05 0.1 0.2 0.3 0.4 Km.



LEGEND

- ◉ TS Surveyed ML Pillars
- TS Surveyed Lease Boundary
- ◌ Adjacent Patches

JOINT SURVEY REPORT

MINING LEASE: Panduliposi Iron & Manganese Mines

LESSEE/MINE OWNER: M/s KJS Ahluwalia

1. Name of the Mining lease: *Panduliposi Iron & Manganese Mines*

2. Name of the Lessee: M/s KJS Ahluwalia

3. TS surveyed map (Present Enjoyment)

TS survey of present lease boundary pillar positions, land use within lease area, areas shown as encroachment in Shah Commission's communication and areas adjacent to the lease boundary with some mining related activity was undertaken. A composite map has been prepared showing present enjoyment lease boundary, inside land use and outside land use of area adjacent to lease boundary with some mining activity. The observation of the field team in regard to land use of the adjacent area has been recorded in form of minutes attached as Annexure-A.

Maps enclosed:

- i. Vector map of TS surveyed Map showing present enjoyment and adjacent area with mining activity.
- ii. PDF version of above map.

4. Surveyed Land use map (Present Enjoyment)

All the land use area like broken up area, S/R, DLC, Forest/Non-forest, Reserve forest pillars, Safety zone pillars as per field position were TS surveyed. The broken up area comprising quarry, dump, stack-yard, road, office and other mining related activities have been captured within the leasehold area. The area statistics is in Annexure-B.

Map enclosed:

- i. TS surveyed Land use map (Present Enjoyment) in vector format

5. Land use map (Approved):

The approved Land use map was referenced with geo-referenced lease deed map and then vectorised for computing the land use area statistics. The area statistics is in Annexure-C.

Map enclosed:

- i. Proposed Land use Map in vector format

6. Geo-referenced Lease deed map.

This is prepared by geo-referencing the original lease map with geo-referenced cadastral map coming within the lease area. The cadastral sheets are geo-

referenced based on the GCP surveyed in the field (Village Tri-junction, Bi-junction, Mustakil Chand and any other identifiable feature as shown by Revenue officials on the field in connection with geo-referencing of village cadastral sheets) and using Ortho-image of the area.

Map enclosed:

- i. Geo-referenced Lease Deed map in vector format.

7. Comparison of lease map:

TS surveyed present enjoyment area map was compared with the geo-referenced lease deed map by superimposing both the maps. It is observed that while the shape of polygon in both cases remains almost same and deviations have occurred almost along the entire boundary. Lease area computed in three different ways is tabulated below.

As per Lease Deed (Land schedule)	As per geo-referenced Lease Map	As per TS survey
40.47 hectares	42.897 hectares	43.028 hectares

Map enclosed:

- i. PDF version of vector map of TS survey super-imposed on geo-referenced lease deed vector map.

(A.K. Mohapatra)
CE, ORSAC

(Deepak Mohanty)
Director, Mines

(D. Biswal)
Additional Secretary
F & E Department

**PROCEEDING OF THE JOINT SURVEY AND DEMARCATION OF MINING LEASE
AREA BY TEAM-2, JODA CIRCLE IN PURSUANCE TO THE DECISION OF THE
HON'BLE JUSTICE SHAH COMMISSION OF ENQUIRY**

**Panduliposi Iron & Manganese Mines
KJS Ahluwalia**

Date: 13.08.2013

1. The T.S data taken in the field in presence of Lessee/Representative has been checked and validated in the laboratory in presence of the team members as well as the Lessee/Representative and found correct.
2. The areas adjacent to the lease boundary with some mining related activity were captured through T.S. Survey. The same was also validated by the team members in presence of Lessee/Representative. The details of such patches are given below.

Patch No.	Area marked as working encroachment in Shah Commission communication	Description
Patch-1	A	An old quarry pit 10m. North of the Boundary Pillar No.18 and extending between Boundary Pillar No.17 & 19. It is not connected with existing mines road.
Patch-2	A	Dump Yard in between Boundary Pillar No.16 & 17. It is also not connected with existing mines road.

3. The area marked as working encroachment 'B' in Shah Commission communication is found well inside the present surveyed boundary.

SIGNATURE

(Lessee/Representative)

Proceeding and validation is done in presence of Lessee/Representative and all the survey team members. However, Lessee/Representative declined to put signature.

[Signature]
13.8.13

SIGNATURE

(Team Members)

1. P.K. Pagoda, Scientist, ORSAC *[Signature]* 13.8.13
2. S. Mahanta, S.I.M., O/o DDM Joda *[Signature]* 13/8/13
3. P.C. Das, R.O. (Forest Deptt.) *[Signature]* 13/8/13
4. B. Tudu, S.S. D.M.O., BBSR *[Signature]* 13/8/13
5. C. Parida, R.I. Keonjhar Tahasil *[Signature]* 13/8/13
6. P. Tripathy, Forester (Forest Deptt.) *[Signature]* 13/8/13

Annexure-B

LAND USE AREA STATISTICS OF ML	
Panduliposi Iron & Manganese Mines	
SUB-CATEGORY	AREA (Ha)
Non Forest Area	1.736
D-Block	0.130
Dump Yard	0.340
Non Forest Area	0.376
Quarry Pit	2.685
Raod	0.051
Road	0.659
Safety Zone	3.847
Safety Zone Non Forest Area	0.003
Safety Zone Non Forest Area	0.049
Saftety Zone	0.005
Stack Yard	0.071
Stak Yard	0.001
Vacant Land	33.085
TOTAL AREA	43.038

Annexure-C

APPROVED LAND USE AREA STATISTICS OF ML	
Panduliposi Iron & Manganese Mines	
CATEGORY	AREA (Ha)
OTHERS	30.356
Dumps	2.139
Float Mining	2.357
Karo River	4.288
Mines Road	0.702
Quarry & Pits	3.636
Village Road	0.262
TOTAL AREA	43.740

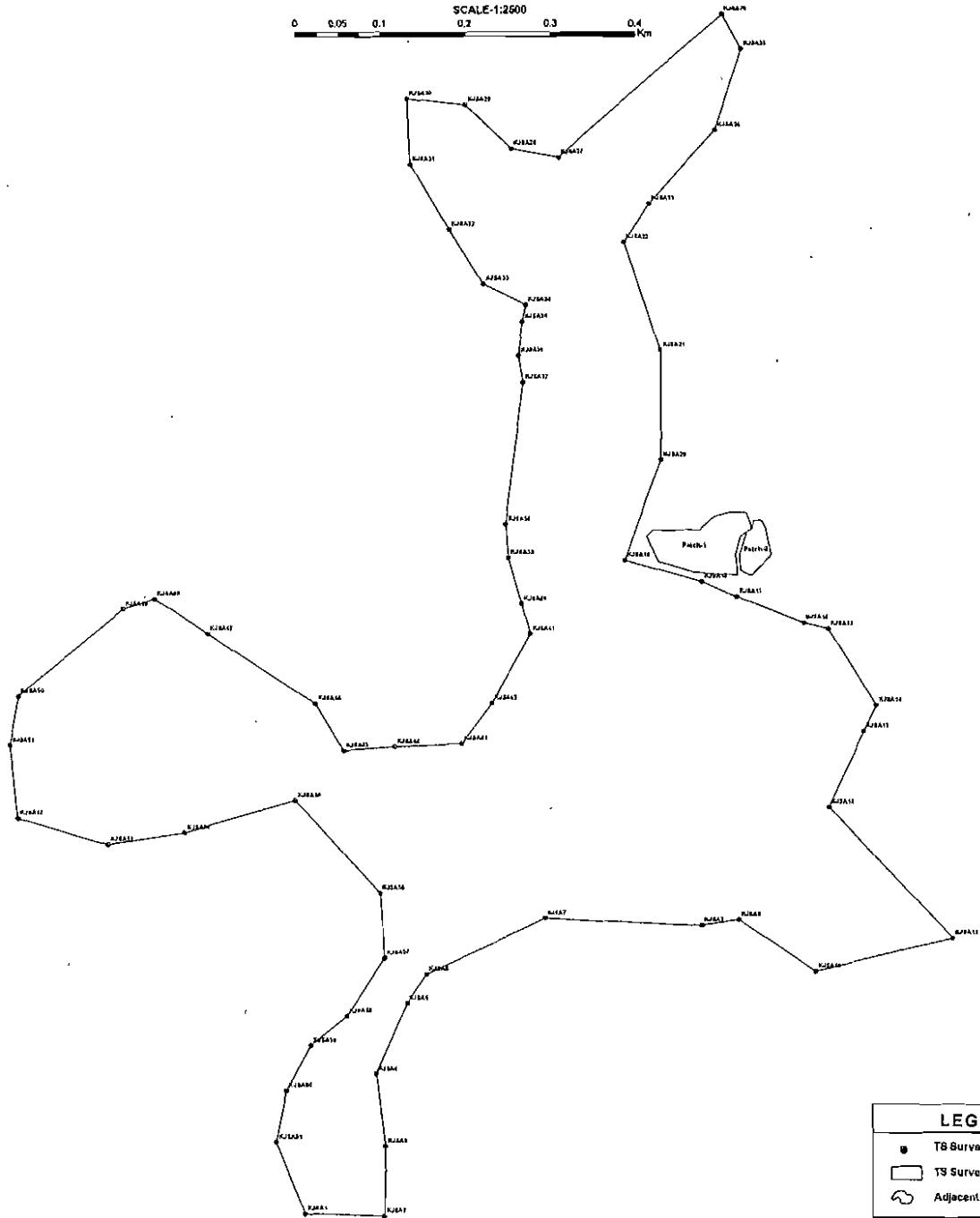
Area outside lease boundary

CATEGORY	AREA_Ha
Quarry Pit	0.553
Dump Yard	0.154
	0.707

TS SURVEY OF MINING LEASE AREA AND ADJACENT AREA WITH SOME MINING ACTIVITY
PANDULIPOSI IRON & MANGANESE MINES OF SRI KJS AHLUWALIA

SCALE: 1:2500

0 0.05 0.1 0.2 0.3 0.4 Km



LEGEND

- TS Surveyed ML Pillars
- TS Surveyed Lease Boundary
- - - Adjacent Patches

JOINT SURVEY REPORT

MINING LEASE: Chamakpur Iron Ore Mines

LESSEE/MINE OWNER: M/s K.C.Pradhan

1. Name of the Mining lease: *Chamakpur Iron Ore Mines*

2. Name of the Lessee: M/s K.C. Pradhan

3. TS surveyed map (Present Enjoyment)

TS survey of present lease boundary pillar positions, land use within lease area, areas shown as encroachment in Shah Commission's communication and areas adjacent to the lease boundary with some mining related activity was undertaken. A composite map has been prepared showing present enjoyment lease boundary, inside land use and outside land use of area adjacent to lease boundary with some mining activity. The observation of the field team in regard to land use of the adjacent area has been recorded in form of minutes attached as Annexure-A.

Maps enclosed:

- i. Vector map of TS surveyed Map showing present enjoyment and adjacent area with mining activity.
- ii. PDF version of above map.

4. Surveyed Land use map (Present Enjoyment)

All the land use area like broken up area, S/R, DLC, Forest/Non-forest, Reserve forest pillars, Safety zone pillars as per field position were TS surveyed. The broken up area comprising quarry, dump, stack-yard, road, office and other mining related activities have been captured within the leasehold area. The area statistics is in Annexure-B.

Map enclosed:

- i. TS surveyed Land use map (Present Enjoyment) in vector format

5. Land use map (Approved):

The approved Land use area statistics is given in Annexure-C.

Map enclosed:

- i. Proposed Land use Map in vector format

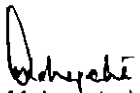
6. Geo-referenced Lease deed map.

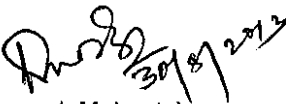
Geo-referencing of cadastral sheet could not be done as no GCP could be established in the field.


7. Comparison of lease map:

In this case no comparison could be done as geo-referencing of lease map was not possible. However, lease area computed in two different ways is tabulated below.

As per Lease Deed (Land schedule)	As per geo-referenced Lease Map	As per TS survey
31.693 hectares	Geo-referencing could not be done as no GCP could be established	31.931 hectares


(A.K. Mohapatra)
CE, ORSAC


(Deepak Mohanty)
Director, Mines


(D. Biswal)
Additional Secretary,
F & E Department

Annxure A

PROCEEDING OF THE JOINT SURVEY AND DEMARCATION OF MINING LEASE
AREA BY TEAM-1, JODA CIRCLE IN PURSUANCE TO THE DECISION OF THE
HON'BLE JUSTICE SHAH COMMISSION OF ENQUIRY

Date: 13.08.2013

K.C. Pradhan
Chamakpur Iron Ore Mines, Keonjhar

1. The T.S. Data taken in the field in presence of lessee/ representative has been checked and validated in the laboratory in presence of team members as well as lessee/representative & found correct.
2. The areas adjacent to the lease boundary with some mining related activity were captured through T.S. survey. The same was also validated by the team members in presence of lessee/representative. The details of such patches are given below.

Patch No.	Area marked as working encroachment in Shah Commission communication	Description
Patch-1	'A'	Barren/Vacant land covering boulders and bushes near M.L.Pillar No.11 to 12.
Patch-2	'A'	Road near M.L.Pillar No.11 to 12.
Patch-3	'A'	Barren/Vacant land covering boulders and bushes near M.L.Pillar No.11 to 12

SIGNATURE
(Lessee/Representative)

The Lessee denies the opening sentence of Para-2 since there is no mining activity at all in the area adjacent to the lease boundary which is an admitted fact in appended table.

The finding of the Joint Survey confirms the following :-

1. That no such "working encroachment" marked as red "A" exists in the field. This area is unbroken vacant land without any quarry, dump, excavation or any mining related operation.

P.T.O

SIGNATURE
(Team Members)

1. ANIL KUMAR KANUNGO - *Anil Kanungo*
13.08.2013

2. Binota Kh. Sahu - *Binota Kh. Sahu*
13.8.13

3. Pooasad Ku Behara - *Pooasad Ku Behara*
13/8/13

4. Shree Ranepad Arabin. Mishra - *Shree Ranepad Arabin. Mishra*
Rajendra Chandra
13/08/2013

5. Pancharan Naik - *Pancharan Naik*
Forester Joda
13/8/13

Annexure-B

PRESENT LAND USE AREA STATISTICS INSIDE ML	
Chamakpur Iron Ore Mines	
SUB-CATEGORY	AREA (Ha)
Check-Post	0.001
Crusher	0.007
Disel Generator	0.002
Existing Dump Yard	0.357
Fines Stack Yard	1.833
Mobil Crusher	0.007
Non Forest Area	0.280
Office	0.010
Quary	4.617
Restsalter	0.002
Road	0.605
Safety Zone	1.757
Stack Yard	0.183
Sub Grade Dump Yard	0.902
Vacant Land	21.362
Weigh Bridge	0.006
TOTAL AREA	31.931

Annexure-C

APPROVED LAND USE AREA STATISTICS OF ML	
Chamakpur Iron Ore Mines	
CATEGORY	AREA (Ha)
Float Ore Mining	8.686
Infrastructurel	1.709
Officel	0.174
Over Burden Dump	4.914
Quarry/Mining	9.255
Road	0.255
Safety Zone	3.493
Storeing Of Mineral	4.586
TOTAL AREA	33.072

Area outside mining lease

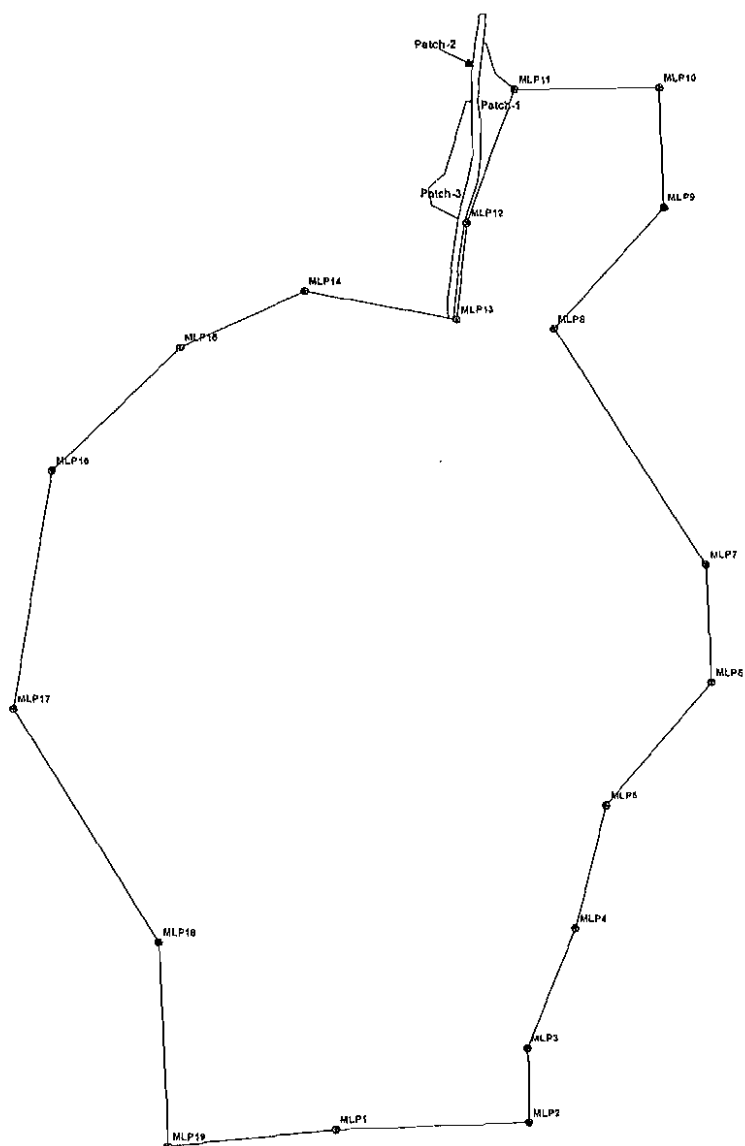
SUB-CATEGORY	AREA_HA
Road	0.167
Barren Land	0.361
TOTAL AREA	0.528

TS SURVEY OF MINING LEASE AREA AND ADJACENT AREA WITH SOME MINING ACTIVITY
CHAMAKPUR IRON ORE MINE OF SRI K.C. PRADHAN



SCALE-1:3000

0 0.075 0.15 0.3 0.45 0.6 Km.



LEGEND

• TS Surveyed ML Pillars

□ TS Surveyed Lease Boundary

◊ Adjacent Patches

JOINT SURVEY REPORT

MINING LEASE: Guali Iron Ore Mines

LESSEE/MINE OWNER: M/s R.P.Sao

1. Name of the Mining lease: *Gual Iron Ore Mines*

2. Name of the Lessee: M/s R.P. Sao

3. TS surveyed map (Present Enjoyment)

TS survey of present lease boundary pillar positions, land use within lease area, areas shown as encroachment in Shah Commission's communication and areas adjacent to the lease boundary with some mining related activity was undertaken. A composite map has been prepared showing present enjoyment lease boundary, inside land use and outside land use of area adjacent to lease boundary with some mining activity. The observation of the field team in regard to land use of the adjacent area has been recorded in form of minutes attached as Annexure-A.

Maps enclosed:

- i. Vector map of TS surveyed Map showing present enjoyment and adjacent area with mining activity.
- ii. PDF version of above map.

4. Surveyed Land use map (Present Enjoyment)

All the land use area like broken up area, S/R, DLC, Forest/Non-forest, Reserve forest pillars, Safety zone pillars as per field position were TS surveyed. The broken up area comprising quarry, dump, stack-yard, road, office and other mining related activities have been captured within the leasehold area. The area statistics is in Annexure-B.

Map enclosed:

- i. TS surveyed Land use map (Present Enjoyment) in vector format

5. Land use map (Approved):

The approved Land use map was referenced with geo-referenced lease deed map and then vectorised for computing the land use area statistics. The area statistics is in Annexure-C.

Map enclosed:

- i. Proposed Land use Map in vector format

6. Geo-referenced Lease deed map.

This is prepared by geo-referencing the original lease map with geo-referenced cadastral map coming within the lease area. The cadastral sheets are geo-

referenced based on the GCP surveyed in the field (Village Tri-junction, Bi-junction, Mustakil Chand and any other identifiable feature as shown by Revenue officials on the field in connection with geo-referencing of village cadastral sheets) and using Ortho-image of the area.

Map enclosed:

- i. Geo-referenced Lease Deed map in vector format.

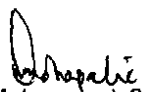
7. Comparison of lease map:

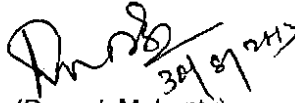
TS surveyed present enjoyment area map was compared with the geo-referenced lease deed map by superimposing both the maps. It is observed that while the shape of polygon in both cases remains same and a shift has occurred towards southern side and also eastern side. Lease area computed in three different ways is tabulated below.

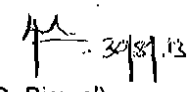
As per Lease Deed (Land schedule)	As per geo-referenced Lease Map	As per TS survey
365.026 hectares	353.837 hectares	358.279 hectares

Map enclosed:

- i. PDF version of vector map of TS survey super-imposed on geo-referenced lease deed vector map.


(A.K. Mohapatra) 30.8.13
CE, ORSAC


(Deepak Mohanty)
Director, Mines


(D. Biswal)
Additional Secretary
F & E Department

**PROCEEDING OF THE JOINT SURVEY AND DEMARCATION OF MINING LEASE
AREA BY TEAM-2, JODA CIRCLE IN PURSUANCE TO THE DECISION OF THE
HON'BLE JUSTICE SHAH COMMISSION OF ENQUIRY**

Guali Iron Ore Mines
R.P.Sao

Date: 13.08.2013

1. The T.S data taken in the field in presence of Lessee/Representative has been checked and validated in the laboratory in presence of the team members as well as the Lessee/Representative and found correct.
2. The areas adjacent to the lease boundary with some mining related activity were captured through T.S. Survey. The same was also validated by the team members in presence of Lessee/Representative. The details of such patches are given below.

Patch No.	Area marked as working encroachment in Shah Commission communication	Description
Patch-1		Residential area near Boundary Pillar No.2
Patch-2	A	A crusher unit in between Boundary Pillars No.21 & 22. It is now owned by M/S Procter & Marketing (P) Ltd.
Patch-3	A	A waste dump of M/S Virangana Steel (P) Ltd. found 9m. East from Boundary Pillar No.24. It extends from near Boundary Pillar No.23 and beyond.

3. The area marked as working encroachment 'B' in Shah Commission communication is found well inside the present surveyed boundary.
4. During field verification it was found that the southern boundary of the mining lease i.e. Lease Pillar No. 1 to 12 is maintained common boundary with the adjacent Lessee KJS Ahluwalia, Nuagaon Iron Ore Mines.

SIGNATURE

(Lessee/Representative)

Proceeding and validation is done in presence of Lessee/Representative and all the survey team members. However, Lessee/Representative declined to put his signature.

6. P. Tripathy
Forester
(Forest Deptt.)

13/8/13

SIGNATURE

(Team Members)

1. P.K. Pagoda,
Scientist, ORSAC
2. S. Mahanta
S.I.M.,
O/o DDM, Joda
3. P.C. Das, R.O.
Forest Deptt.
4. B. Tudu, S.S.
DM(O), BBSA
5. C. Pagoda,
R.I., Keonjhar Tahasil
(Revenue Deptt.)

13/8/13

13/8/13

13/8/13

13/8/13

Annexure-B

LAND USE AREA STATISTICS OF ML	
Guali Iron Ore Mines	
SUB-CATEGORY	AREA_Ha
Boundary Wall	0.022
Bridge	0.000
Broken Area	0.046
Broken Area Block-C	0.726
Check Dam	0.007
Check Room	0.008
Crusher	0.175
Deepak Steel & Power Plant	25.419
Fines Stack	2.699
Guard Wall	0.002
Hopper	0.006
ICDS	0.055
Office Area	0.525
Open Land	0.447
Over Burden Dump	0.732
Parking Zone	1.271
Petrol Pump	0.093
Plantation	0.335
Pucca House	0.004
Quarry Pit-1	13.816
Quarry Pit-2	24.198
Quarry Pit-3	1.440
Residential Area	5.445
Road	4.626
Safety Zone	5.964
School	0.278
Semipucca House	0.027
Shed	0.005
Stack Yard	0.682
Sub Grade Dump	4.665
Sub Grade Dump-1	3.094
Sub Grade Dump-2	3.011
Sub Grade Dump-4	2.981
Sub Grade Dump-5	5.656
Subgrade Dump	5.290
Temporary House	0.009
Temporary Stack	0.040
Temporary Stock	0.062
Triveni Canteen Area	0.433
Vacant Land	243.962
Water Tank	0.027
Weigh Bridge	0.018
TOTAL AREA	358.301

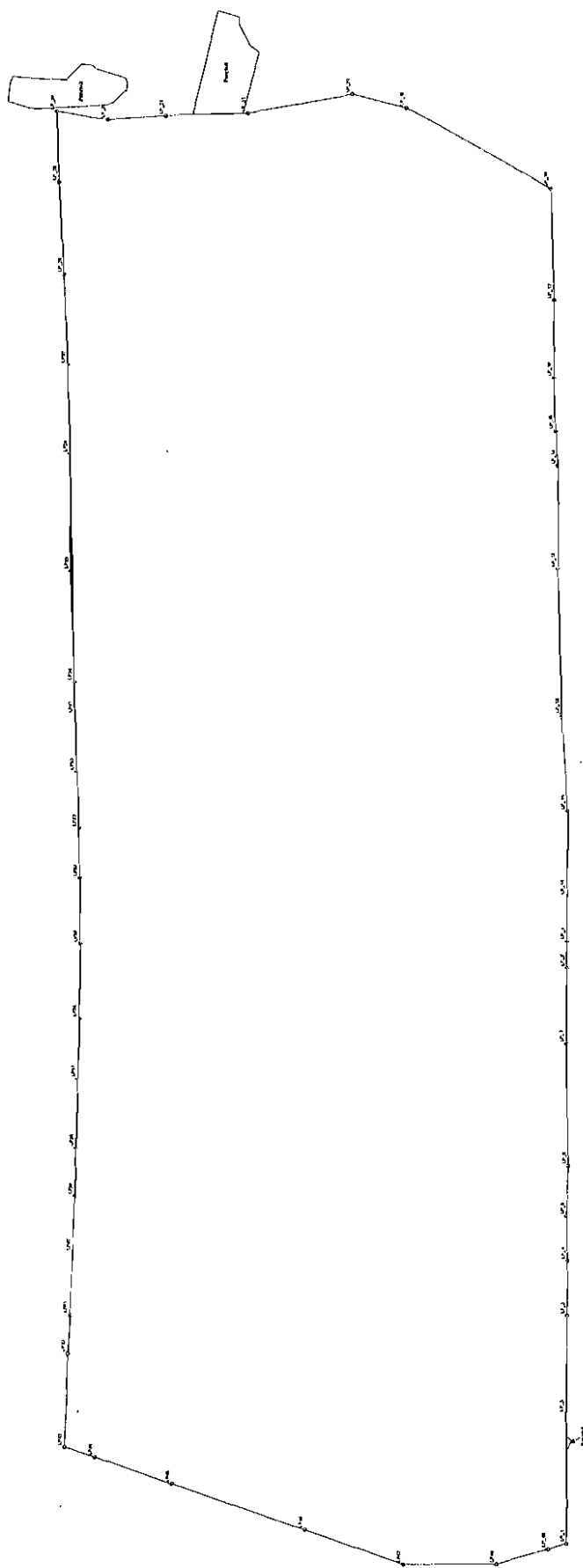
Annexure-C

APPROVED LAND USE AREA STATISTICS OF ML	
Guali Iron Ore Mines	
CATEGORY	AREA_Ha
Quarry	19.066
R. F(Proposed Quarry).	25.651
Sub grade Stack	1.758
Waste Dump	3.420
Abandoned Magazine	0.045
Building/Hutting	1.320
Crusher	0.008
DG Room	0.011
Dump	8.684
Existing Quarry	20.090
Hutting	0.294
infrastructure	0.361
Magazine	0.009
Nala	5.128
Office complex	0.255
Proposed Crusher Site	0.668
Proposed Quarry	166.081
Proposed Sub grade Stack	4.341
Road	2.819
Safety Zone	6.396
Settling tank	0.010
Settling Tank	0.019
Workshop	0.014
Others	90.634
TOTAL AREA	357.082

Area outside mining Lease

SUB-CATEGORY	AREA_Ha
Crusher	2.286
Residential Area	0.020
Waste Dump	1.856
TOTAL AREA	4.162

TS SURVEY OF MINING LEASE AREA AND ADJACENT AREA WITH SOME MINING ACTIVITY
GUALI IRON ORE MINES OF SRI R.P. SAO



ML AREA OF NUAGAON IRON ORE MINES OF KJS ANLUWALIA

LEGEND	
⊙	TS Surveyed ML Pillars
□	TS Surveyed Lease Boundary
○	Adjacent Patches

JOINT SURVEY REPORT

**MINING LEASE: Siljora-Kalimati Iron Manganese
Mines**

LESSEE/MINE OWNER: M/s M. L. Rungta

1. Name of the Mining lease: *Silijora-Kalimati Iron and Manganese Mines*

2. Name of the Lessee: M/s M.L. Rungta

3. TS surveyed map (Present Enjoyment)

TS survey of present lease boundary pillar positions, land use within lease area, areas shown as encroachment in Shah Commission's communication and areas adjacent to the lease boundary with some mining related activity was undertaken. A composite map has been prepared showing present enjoyment lease boundary, inside land use and outside land use of area adjacent to lease boundary with some mining activity. The observation of the field team in regard to land use of the adjacent area has been recorded in form of minutes attached as Annexure-A.

Maps enclosed:

- i. Vector map of TS surveyed Map showing present enjoyment and adjacent area with mining activity.
- ii. PDF version of above map.

4. Surveyed Land use map (Present Enjoyment)

All the land use area like broken up area, S/R, DLC, Forest/Non-forest, Reserve forest pillars, Safety zone pillars as per field position were TS surveyed. The broken up area comprising quarry, dump, stack-yard, road, office and other mining related activities have been captured within the leasehold area. The area statistics is in Annexure-B.

Map enclosed:

- i. TS surveyed Land use map (Present Enjoyment) in vector format

5. Land use map (Approved):

The approved Land use map was referenced with geo-referenced lease deed map and then vectorised for computing the land use area statistics. The area statistics is in Annexure-C.

Map enclosed:

- i. Proposed Land use Map in vector format

6. Geo-referenced Lease deed map.

This is prepared by geo-referencing the original lease map with geo-referenced cadastral map coming within the lease area. The cadastral sheets are geo-referenced based on the GCP surveyed in the field (Village Tri-junction, Bi-junction, Mustakil Chand and any other identifiable feature as shown by Revenue officials on the field in connection with geo-referencing of village cadastral sheets) and using Ortho-image of the area.

Map enclosed:

- i. Geo-referenced Lease Deed map in vector format.


7. Comparison of lease map:


TS surveyed present enjoyment area map was compared with the geo-referenced lease deed map by superimposing both the maps. It is observed that the shape of polygon in both cases is almost same and shift is towards north-east side. Lease area computed in three different ways is tabulated below.


As per Lease Deed (Land schedule)	As per geo-referenced Lease Map	As per TS survey
715.609 hectares	706.808 hectares	713.51 hectares

Map enclosed:

- i. PDF version of vector map of TS survey super-imposed on geo-referenced lease deed vector map.


(A.K. Mohapatra) 23.6.13
CE, ORSAC


(Deepak Mohanty)
Director, Mines


(D. Biswal)
Additional Secretary
F & E Department

**PROCEEDING OF THE JOINT SURVEY AND DEMARCATION OF MINING LEASE
AREA BY TEAM - 3, JODA CIRCLE IN PURSUANCE TO THE DECISION OF THE
HON'BLE JUSTICE SHAH COMMISSION OF ENQUIRY**

Date: 14.08.2013

Name of the Mining Lease - Silijora-Kalimati Iron and Manganese Mines

Name of the Lessee - M/s M.L. Rungta

1. The TS data taken in the field in presence of lessee/ representative has been checked and validated in the laboratory in presence of the team members as well as lessee/ representative and found correct.
2. Areas adjacent to the lease boundary with some mining related activity were captured through TS survey. The same also validated by the team members in presence of lessee/ representative. The details of such patches are given below.

Patch No.	Area marked as working encroachment in Shah Commission Communication	Description
*Patch No.1	-	Road near pillar No.77
*Patch No.2	-	Residential area near pillar No.78
Patch No.3	(A)	Dump yard about 115 m away from the pillar No.83 & 84. As per the lessee's statement it is an activity of M/s OMC Ltd. Letter of clarification of M/s OMC SGBK Ltd. is at Annexure-1.
Patch No.4	(A)	Security room, near OMC check gate
Patch No.5	(A)	Old stack about 220 m away from the boundary line between pillar No.83 & 84. As per the lessee's statement it is an activity of M/s OMC Ltd. Letter of clarification of M/s OMC SGBK Ltd. is at Annexure-1.
Patch No.6	(A)	Old dump about 250 m away from the boundary line between pillar No.83 & 84. As per the lessee's statement it is an activity of M/s OMC Ltd. Letter of clarification of M/s OMC SGBK Ltd. is at Annexure-1.

Patch No.7	(A)	Road, it is an approach road from Silijora-Kalimati mines road to OMC lease hold area. However there is a check gate near OMC boundary line.
Patch No.8	(A)	Manganese quarry about 220 m away from the boundary line between pillar No.84 & 85. As per the lessee's statement it is an activity of M/s OMC Ltd. Letter of clarification of M/s OMC SGBK Ltd. is at Annexure-1.
Patch No.9	(A)	Manganese quarry about 6-20 m away from the boundary line between pillar No.83 & 84. As per the lessee's statement it is an activity of M/s OMC Ltd. Letter of clarification of M/s OMC SGBK Ltd. is at Annexure-1.
Patch No.10	(B)	Residential area.
Patch No.11	(B)	Barren land
Patch No.12	(B)	Village area
Patch No.13	(B)	School area

* These patches are not shown as working encroachment in Shah Commission communication.

3. Area marked as working encroachment 'C' & 'D' in Hon'ble Shah Commission communication is found well inside the present surveyed boundary.

SIGNATURE

(Lessee/Representative)

(Ranjit Kumar Sahoo)

Asst. Manager

Encl:- one copy of objection is attached.

SIGNATURE

(Team Members)

1. Praveen Kumar Sarangi - Insi
Scientist, ORSAT
14/8/13.
2. Sunil Kumar Samal, Revenue
Inspector, Baispa Tahasil.
14/8/13
3. Shourabandha Glade, Tahasil
Tahasil Tahasil
14.8.13
4. Ramesh Chandra Jena
Forest Officer
Bailu Range.
14/08/2013
Bailu Range
5. Abhiram Mahapatra
Forester, Guadi
14/08/2013
6. Surendra K. Samal
S.M., Joda.
14/8/13
7. Rajkishore Sethi
Sr. Surveyor
Mining Office
Bupada
14.8.13

ANX-1

THE ODISHA MINING CORPORATION LIMITED
 (A GOLD CATEGORY STATE P.S.U.)
 (A GOVT. OF ODISHA UNDERTAKING)
S.G.B.K. MINES, GURUDA.
 AT/PO- GURUDA VIA JODA DIST- KENDRAPARA PIN- 751004

L.No. 610/OMC/SGBK/13

To,

The DDM, Joda.

Sub: - Verification of working pit adjacent to the lease boundary of M/s. Serajuddin & Co. of Guruda and M.L. Rungta Mines of Sijora - Kalimati area.

Ref. No:-270/Nims Dt: - 08-08-13.

Sir,

With reference to the letter and subject cited above, we would like to inform that we inspected and verified the status of Mining pits adjacent to M/s. Serajuddin & Co. Guruda and M/s. M.L. Rungta (Sijora, Kalimati area), which are shown as encroachment by the Hon'ble Justice Saha Commission of enquiry. In actual these mining pits are coming under lease hold area of SGBK mines, which is adjacent to M.L. Rungta, Sijora and M/s Serajuddin & Co. Guruda. Said mining activities had been done many years ago by Ex-lease M/s Serajuddin & Co. and OMC Ltd. within lease area of 1011.47 Hect. No encroachment mining pits are being found by the adjacent lessee within SGBK lease hold area.

This is for your kind information and necessary action.

Yours Faithfully,

[Signature]
 Manager (Mining)
 SGBK Mines.

10571
 14.08.13

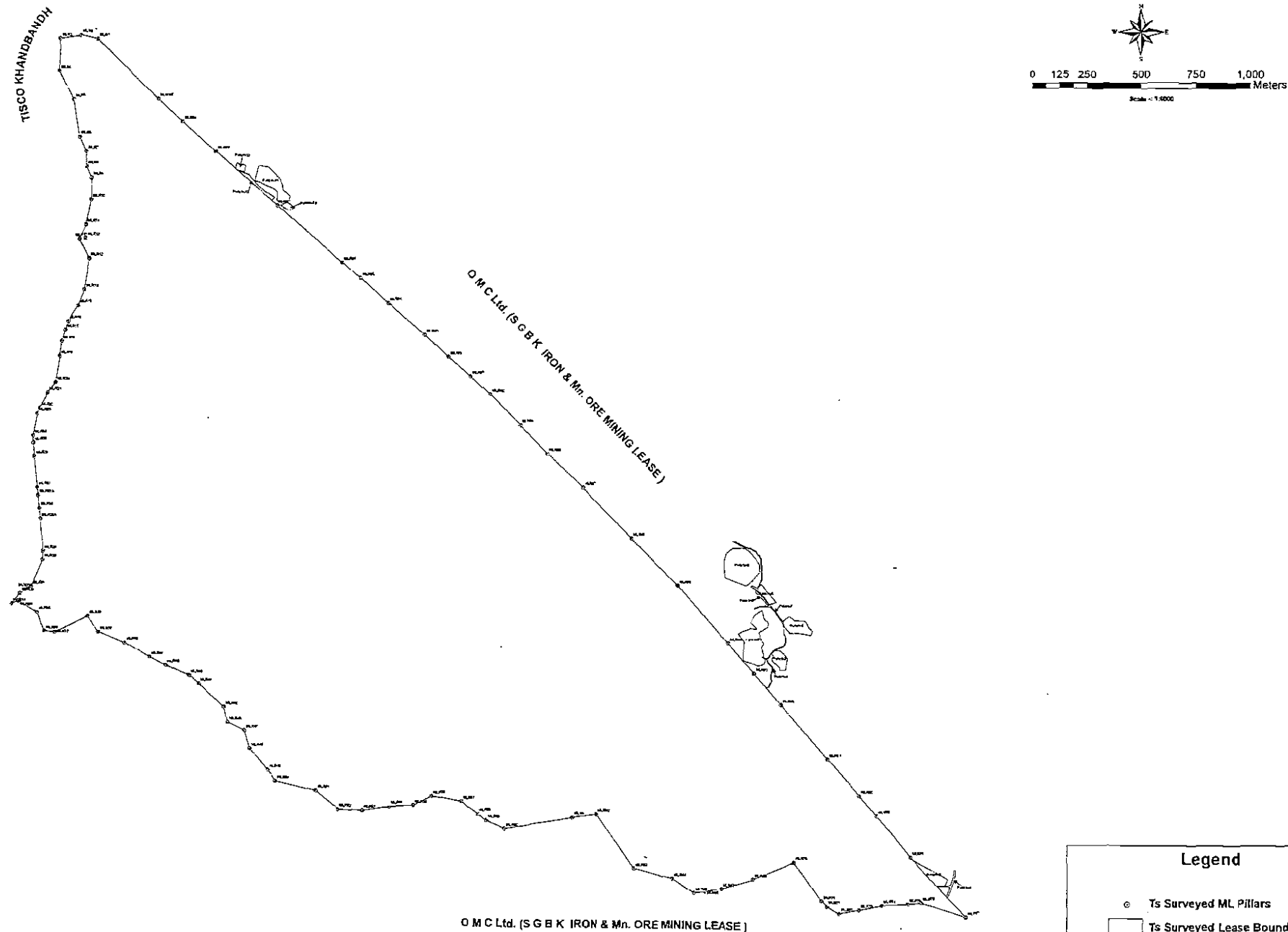
AREA STATISTICS OF PROPOSED LANDUSE (Silijora-Kalimati Iron & Manganese Mines)	
Category	Area (Ha)
Camp / Housing Colony	23.080
Crushing & Screening Unit	1.512
Dumping of Overburden	79.137
Existing Green Patches	6.669
Existing Plantation	7.728
Land for public purpose	36.671
Magazine	0.180
Mines Road	24.429
Mining	464.557
Perennial waterbody	0.180
Perennial Waterbody	0.719
Proposed Plantation	6.532
Rest shelter	0.030
Rest Shelter	0.372
Safety zone	24.449
Storing of minerals & ore	0.738
Storing of Minerals/Ore	19.679
Village road	1.447
Village Road	3.864
Water bodies	0.579
Water Reservoir	1.351
Weigh Bridge	0.063
Total Area	703.966

AREA STATISTICS OUTSIDE ML	
Sub-Ccategory	Area-Ha.
Barren Land	1.093
Dump Yard	0.459
Old Dump	0.339
Old Quarry Pit	3.993
Old Stack	0.715
Residential Area	0.635
Road	0.497
School Area	0.125
Security Room	0.001
Village	0.240
Total Area =	8.097

MAP SHOWING TS SURVEY MINING LEASE AREA AND ADJACENT AREA WITH SOME MINING ACTIVITY

OF

M L Rungata Pvt. Ltd. (Siljora Kalimati) Iron and Manganese



JOINT SURVEY REPORT

MINING LEASE: Suleipat Iron Ore Mines

LESSEE/MINE OWNER: M/s B.C.Dogara

1. Name of the Mining lease: *Suleipat Iron Ore Mines*

2. Name of the Lessee: M/s B.C. Dogra

3. TS surveyed map (Present Enjoyment)

TS survey of present lease boundary pillar positions, land use within lease area, areas shown as encroachment in Shah Commission's communication and areas adjacent to the lease boundary with some mining related activity was undertaken. A composite map has been prepared showing present enjoyment lease boundary, inside land use and outside land use of area adjacent to lease boundary with some mining activity. The observation of the field team in regard to land use of the adjacent area has been recorded in form of minutes attached as Annexure-A.

Maps enclosed:

- i. Vector map of TS surveyed Map showing present enjoyment and adjacent area with mining activity.
- ii. PDF version of above map.

4. Surveyed Land use map (Present Enjoyment)

All the land use area like broken up area, S/R, DLC, Forest/Non-forest, Reserve forest pillars, Safety zone pillars as per field position were TS surveyed. The broken up area comprising quarry, dump, stack-yard, road, office and other mining related activities have been captured within the leasehold area. The area statistics is in Annexure-B.

Map enclosed:

- i. TS surveyed Land use map (Present Enjoyment) in vector format

5. Land use map (Approved):

The approved Land use map was referenced with geo-referenced lease deed map and then vectorised for computing the land use area statistics. The area statistics is in Annexure-C.

Map enclosed:

- i. Proposed Land use Map in vector format

6. Geo-referenced Lease deed map.

This is prepared by geo-referencing the original lease map with geo-referenced cadastral map coming within the lease area. The cadastral sheets are geo-

referenced based on the GCP surveyed in the field (Village Tri-junction, Bi-junction, Mustakil Chand and any other identifiable feature as shown by Revenue officials on the field in connection with geo-referencing of village cadastral sheets) and using Ortho-image of the area.

Map enclosed:

- i. Geo-referenced Lease Deed map in vector format.

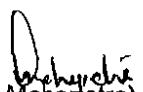
7. Comparison of lease map:

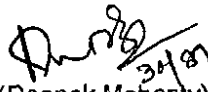
TS surveyed present enjoyment area map was compared with the geo-referenced lease deed map by superimposing both the maps. It is observed that while the shape of polygon in both cases remains almost same and deviation has occurred on a small portion of the lease boundary towards eastern side. Lease area computed in three different ways is tabulated below.


As per Lease Deed (Land schedule)	As per geo-referenced Lease Map	As per TS survey
618.00 hectares	608.427 hectares	601.372 hectares

Map enclosed:

- i. PDF version of vector map of TS survey super-imposed on geo-referenced lease deed vector map.


(A.K. Mohapatra) 30.8.13
CE, ORSAC


(Deepak Mohanty)
Director, Mines


(D. Biswal)
Additional Secretary
F & E Department

**PROCEEDING OF THE JOINT SURVEY AND DEMARCATION OF MINING LEASE
AREA BY TEAM, BARIPADA CIRCLE IN PURSUANCE TO THE DECISION OF THE
HON'BLE JUSTICE SHAH COMMISSION OF ENQUIRY**

**Suleipat Iron Ore Mines
Shri B.C.Dogara**

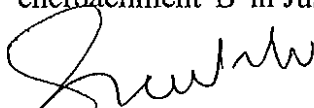
Date: 14.08.2013

1. The T.S. data taken in the field in presence of Lessee/Representative has been checked and validated in the laboratory in presence of the team members as well as the Lessee/Representative and found correct.
2. The areas adjacent to the lease boundary with some mining related activity were captured through T.S. Survey. The same was also validated by the team members in presence of Lessee/Representative. The details of such patches are given below.

Patch No.	Area marked as working encroachment in Shah Commission communication	Description
*Patch-1		Village road connecting to the lease near Boundary Pillar No.13.
*Patch-2		Vacant area in between Boundary Pillar No.13 & 14
*Patch-3		A morrum quarry in between Boundary Pillar No.13 &14. It is being used for road purpose by local contractors.
Patch-4	A	An abandoned road near Boundary Pillar No.16
Patch-5	A	An old quarry near Boundary Pillar No.16

* These areas are not shown as working encroachments in Hon'ble Shah Commission communication.

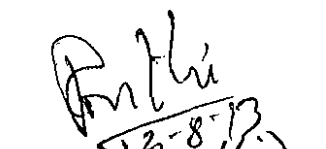
3. Neither mining nor any ancillary activities are noticed in the area marked as working encroachment 'B' in Justice Shah Commission communication.

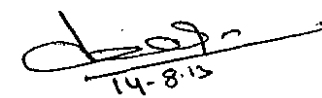

SIGNATURE


(Lessee/Representative)
(SANJAY PRATAP)


SIGNATURE

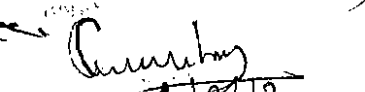
(Team Members)


14-8-13
CR. K. Sethi
Sr. Surveyor
Mining Dept.
Baripada


14-8-13
(B.K. Mohanty)
Range Officer
Barampukur Range


14/8/2013
(S.K. Bera)
Sr. Asst.
Mining Dept.
Barampukur


14/8/13
(P.K. Prasad)
Scientist, ORSA


14/8/13
Renu Sahay
Sr. Asst.
Khem Takail


Armin Rajasingpur
Takail

Annexure-B

LAND USE AREA STATISTICS OF ML	
Suleipat Iron Ore Mines	
SUB-CATEGORY	AREA (Ha)
Building	0.010
Canal	4.399
Crasher Area	0.242
Dump Yard	9.752
Guest House	0.516
Hospital	0.212
Hostel	0.035
Kharkhai River	11.779
Magazine Area	0.020
Manual Pit	2.359
New A.N.M Sub-center	0.010
Panchayat Office	0.121
Park	1.068
Parking Area	1.325
Plantation	2.755
Play Ground	0.912
Primary School	0.207
Protected Forest	28.445
Quarry Pit	24.188
Reserve Forest	1.805
Residential Area	9.713
Revenue Office	0.158
River Edge	1.547
Road	7.936
Safety Zone	6.660
Scering Plant	0.598
Secondary School	0.236
Semipucca House	0.103
Shiv Mandir	0.009
Site Office Area	1.021
ST. Girls School	1.032
Stack	5.365
Stack Yard	1.897
Sulaipat Baba Mandir	0.002
Vacant Land	474.226
Village Forest	0.826
TOTAL AREA	601.489

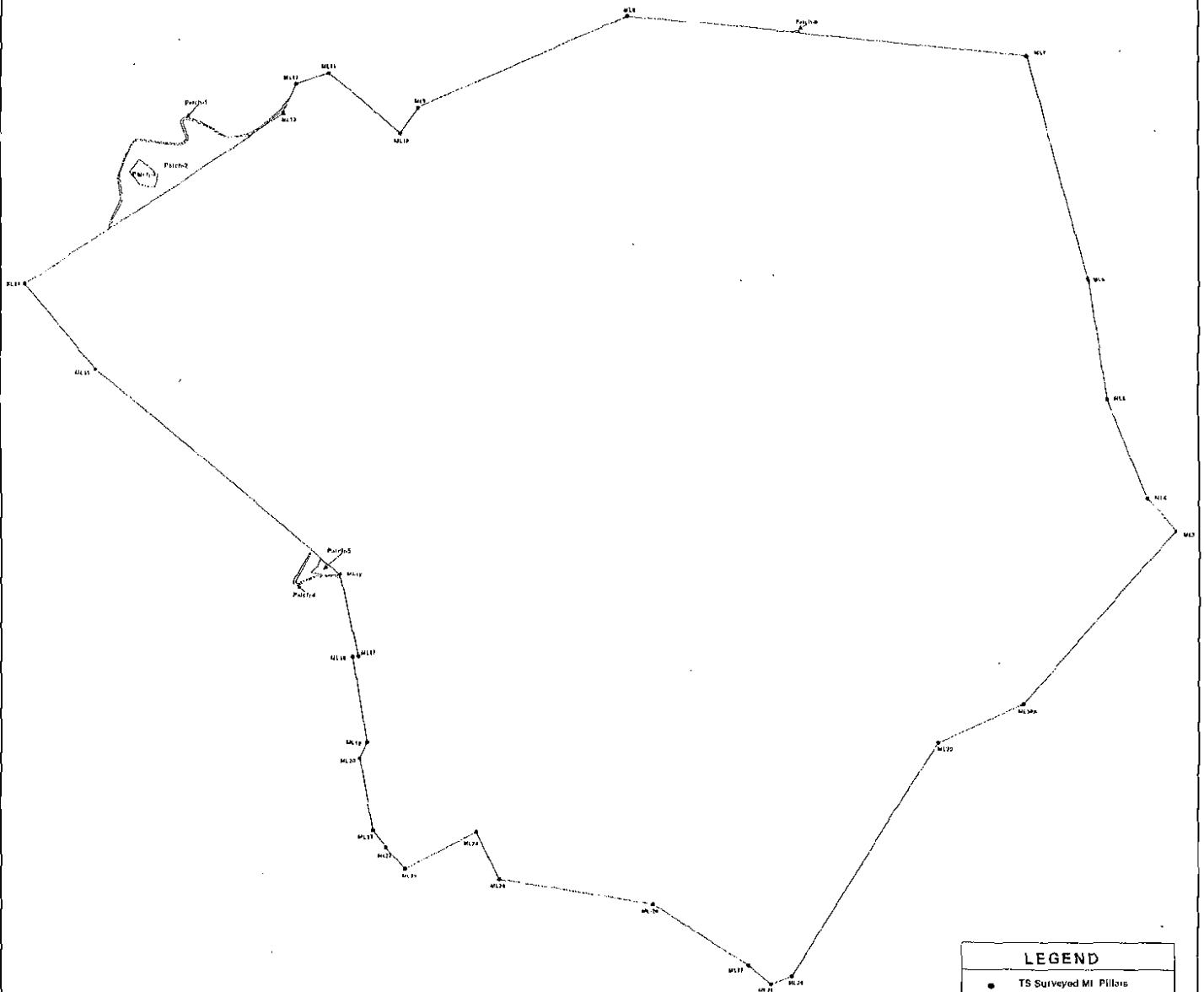
SUB-CATEGORY	AREA_Ha
Moorum Quarry	0.395
Quarry Pit	0.198
Residential Area	0.007
Road	0.516
Vacant Land	4.372
TOTAL AREA	5.488

Anexure-C

APPROVED LAND USE AREA STATISTICS	
Suleipat Iron Ore Mines	
SUB-CATEGORY	AREA (Ha)
Colony	0.241
Crusher	0.024
Existing Dump	7.899
Existing Quarry	46.142
Govt. Ministry School	0.267
High School	0.196
Hospital	0.234
Hostel	0.173
House	0.102
Magazine	0.079
Market Area	3.643
Mines Road	7.211
Office	0.279
Ore Stack	11.939
Plantation	23.471
Site Services	1.040
Village Road	8.549
Others	497.310
TOTAL AREA	608.799

TS SURVEY OF MINING LEASE AREA AND ADJACENT AREA WITH SOME MINING ACTIVITY
SULEIPAT IRON ORE MINES OF SHRI B.C. DOGARA

SCALE-1:8000
0 0.125 0.25 0.5 0.75 1 Km



LEGEND

- TS Surveyed Mt Pillars
- TS Surveyed Lease Boundary
- ⬭ Adjacent Patches

JOINT SURVEY REPORT

MINING LEASE: Balda Blocks Iron Mines

LESSEE/MINE OWNER: M/s Serajuddin & co.

1. Name of the Mining lease: *Balda Blocks Iron Mines*

2. Name of the Lessee: M/s Serajudin & Co.

3. TS surveyed map (Present Enjoyment)

TS survey of present lease boundary pillar positions, land use within lease area, areas shown as encroachment in Shah Commission's communication and areas adjacent to the lease boundary with some mining related activity was undertaken. A composite map has been prepared showing present enjoyment lease boundary, inside land use and outside land use of area adjacent to lease boundary with some mining activity. The observation of the field team in regard to land use of the adjacent area has been recorded in form of minutes attached as Annexure-A.

Maps enclosed:

iii. Vector map of TS surveyed Map showing present enjoyment and adjacent area with mining activity.

iv. PDF version of above map.

4. Surveyed Land use map (Present Enjoyment)

All the land use area like broken up area, S/R, DLC, Forest/Non-forest, Reserve forest pillars, Safety zone pillars as per field position were TS surveyed. The broken up area comprising quarry, dump, stack-yard, road, office and other mining related activities have been captured within the leasehold area. The area statistics is in Annexure-B.

Map enclosed:

ii. TS surveyed Land use map (Present Enjoyment) in vector format

5. Land use map (Approved):

The approved Land use map was referenced with geo-referenced lease deed map and then vectorised for computing the land use area statistics. The area statistics is in Annexure-C.

Map enclosed:

ii. Proposed Land use Map in vector format

6. Geo-referenced Lease deed map.

This is prepared by geo-referencing the original lease map with geo-referenced cadastral map coming within the lease area. The cadastral sheets are geo-referenced based on the GCP surveyed in the field (Village Tri-junction, Bi-junction, Mustakil Chand and any other identifiable feature as shown by Revenue officials on the field in connection with geo-referencing of village cadastral sheets) and using Ortho-image of the area.

Map enclosed:

- ii. Geo-referenced Lease Deed map in vector format.

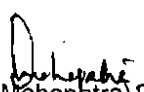
7. Comparison of lease map:

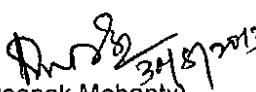
TS surveyed present enjoyment area map was compared with the geo-referenced lease deed map by superimposing both the maps. It is observed that the shape of polygon in both cases is almost same, but the south-west side lease boundary line has shifted in the same direction. Lease area computed in three different ways is tabulated below.

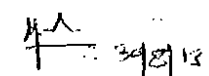
As per Lease Deed (Land schedule)	As per geo-referenced Lease Map	As per TS survey
335.594 hectares	324.782 hectares	343.981 hectares

Map enclosed:

- i. PDF version of vector map of TS survey super-imposed on geo-referenced lease deed vector map.


(A.K. Mohapatra) 30. 5. 13
CE, ORSAC


(Deepak Mohanty)
Director, Mines


(D. Biswal)
Additional Secretary
F & E Department

**PROCEEDING OF THE JOINT SURVEY AND DEMARCATION OF MINING LEASE
AREA BY TEAM - 3, JODA CIRCLE IN PURSUANCE TO THE DECISION OF THE
HON'BLE JUSTICE SHAH COMMISSION OF ENQUIRY**

Date: 13.08.2013

Name of the Mining Lease - Balada Blocks Iron Mines

Name of the Lessee - M/s Serajuddin & Co.

1. The TS data taken in the field in presence of lessee/ representative has been checked and validated in the laboratory in presence of the team members as well as lessee/ representative and found correct.
2. Areas adjacent to the lease boundary with some mining related activity were captured through TS survey. The same also validated by the team members in presence of lessee/ representative. The details of such patches are given below.

Patch No.	Area marked as working encroachment in Shah Commission Communication	Description
*Patch No.1	-	Old quarry continuing from inside lease hold area to outside near boundary pillar No.46. As per the lessee's statement it is done prior to the grant of lease.
*Patch No.2	-	Old dump nearly 69 m away from the boundary pillar No.47. As per the lessee's statement it is an activity of M/s OMC Ltd.
*Patch No.3	-	Old quarry nearly 130 m away from boundary pillar No.47 As per the lessee's statement it is an activity of M/s OMC Ltd.
*Patch No.4	-	Old quarry nearly 132 m away from boundary pillar No.47 As per the lessee's statement it is an activity of M/s OMC Ltd.
*Patch No.5	-	Road connected to old mines and dump within OMC SGBK lease hold area.
*Patch No.6	-	Old dump about 5-10 m away from boundary line between pillar No.48&49 As per the lessee's statement it is an activity of M/s OMC Ltd.
*Patch No.7	-	Old quarry about 20 m away from

		the boundary line between pillar No.48&49 As per the lessee's statement it is an activity of M/s OMC Ltd.
*Patch No.8	-	Old dump about 26 m away from boundary line between pillar No.48&49 As per the lessee's statement it is an activity of M/s OMC Ltd.
*Patch No.9	-	Road adjacent to lease hold area near pillar No.64&65
*Patch No.10	-	Road adjacent to lease hold area near pillar No.22
*Patch No.11	-	Road adjacent to lease hold area near pillar No.21
*Patch No.12	-	Temporary hut adjacent to boundary line between pillar No.34&35
*Patch No.13	-	Road adjacent to boundary line and connected to village road.
*Patch No.14	-	Road within OMC SGBK area near pillar No.45

* These patches are not shown as working encroachment in Shah Commission communication.

3. Area marked as working encroachment 'A' & 'B' in Hon'ble Shah Commission communication is found well inside the present surveyed boundary.

SIGNATURE
(Lessee/Representative)

SIGNATURE
(Team Members)

1. Prasantha Kumar Sarangi - *[Signature]*
Scientist, ORSAT 13/8/13.

2. Sanjay Kumar Samal, Revenue Inspector, Boudhal Tahasil, *[Signature]* 13/8/13

3. Dhruvaswaraj Ghadei Amia Telkai Tahasil *[Signature]* 13-8-13

4. Ranee Chandra Jena, Forest Range Officer, Boudhal Tahasil, *[Signature]* 13/08/13

5. Abhiram Mohapatra, Forest Guard, *[Signature]* 13/08/2013.

6. Surendra Kumar Samal *[Signature]* 13/8/13

Proceedings and Validation is done in presence of Lessee Representative and all the survey team members. However Lessee Representative decline to sign. *[Signature]* 13/8/13

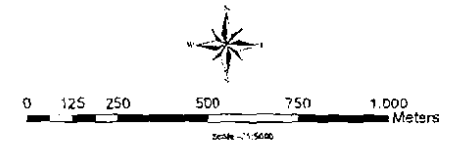
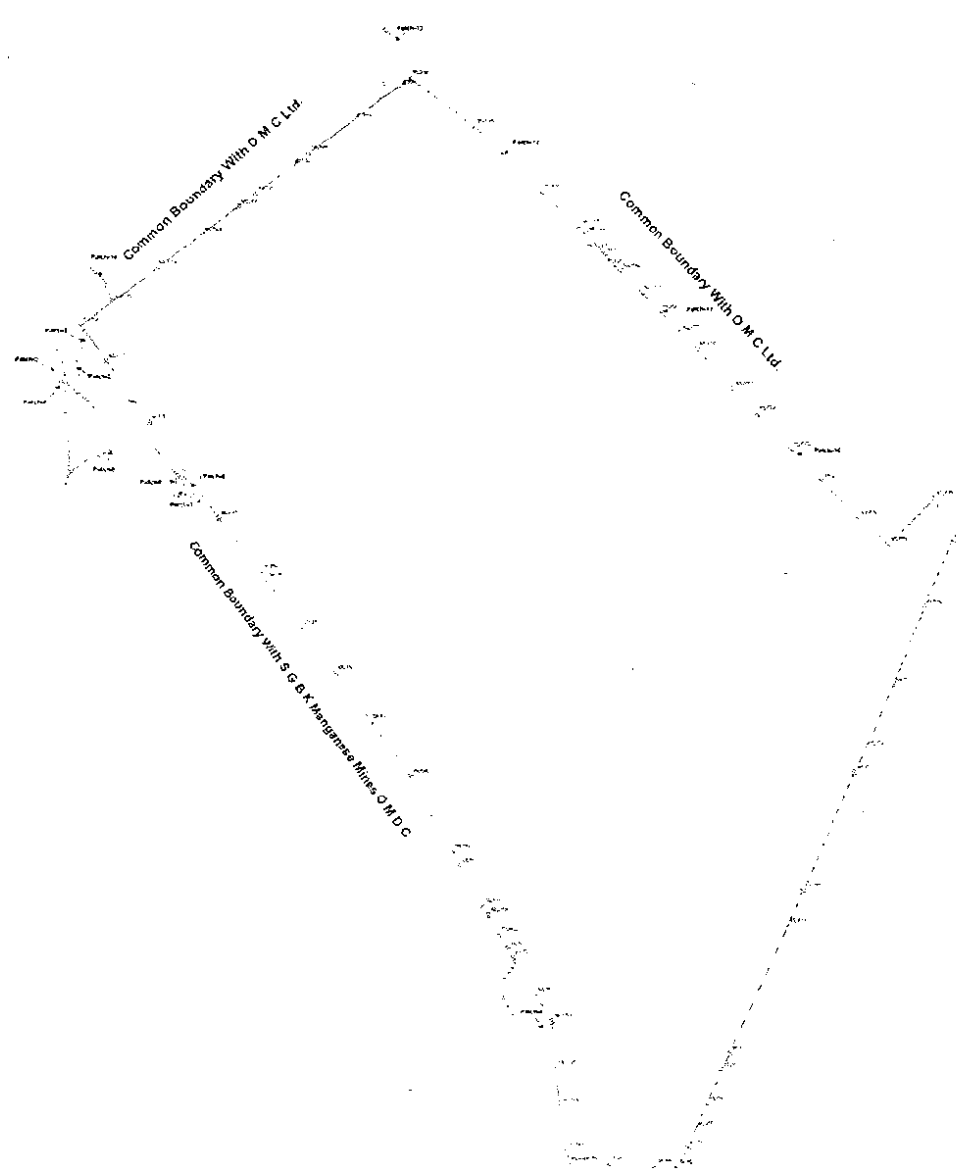
AREA STATISTICS INSIDE ML		Annexure-B
Sub-Category	Area-Ha.	
Broken Area	1.965	
Canteen	0.005	
CESS Staff Colony	0.327	
Crusher Plant	4.123	
Dump Yard	0.000	
Dump Yard	8.557	
Fines Stack	7.839	
Garden	0.098	
Labour Shelter	0.004	
Labouratory	0.078	
Latrine	0.008	
Magazine	0.199	
Material Stock	0.897	
Old Dump Plantation	6.544	
Parking Zone	1.006	
Plantation	18.442	
Quarry pit	0.008	
Quarry Pit	58.426	
Residential Area	0.257	
Retaining Wall	0.106	
Road	8.212	
Safety Zone	5.736	
Security Room	0.007	
Semi Pucca House	0.022	
Shed	0.006	
Siltation Pond	0.076	
Stack Yard	2.637	
Staff Colony	0.128	
Store Room	0.347	
Subgrade Dump	14.742	
Subgrade stack	0.194	
Temporary House	0.000	
Temporary Hut	0.022	
Temporary Office Area	0.158	
Temporary Stack	0.821	
Vacant Land	201.430	
Water Tank	0.027	
Weigh bridge	0.004	
Weigh Bridge	0.053	
Work shop	0.475	
Total Area =	343.986	

Annexure - C

AREA STATISTICS OF PROPOSED LAND USE	
Category	Area-Ha
Disturbed	88.077
Dump	27.119
Plantation	7.265
Proposed Plantation	2.011
Safety zone	27.648
Stack yard	6.613
Subgrade stack	4.562
Dump	7.304
Magazine	0.781
Nala	0.886
No proposal	21.220
Plantation	14.303
PlantationI	0.569
Proposed disturbed	108.414
Disturbed	14.131
Safety zone	5.342
Village road	1.139
Village Road	3.058
Total Area =	340.442

AREA STATISTICS OUTSIDE ML	
Sub_Category	Area-Ha
Old Dump	0.156
Old Quarry	0.705
Road	0.949
Temporary Hut	0.004
Total Area =	1.814

MAP SHOWING TS SURVEY MINING LEASE AREA AND ADJACENT AREA WITH SOME MINING ACTIVITY
OF
M/S Serajudin and Co. (Balda)



Legend

- Ts Surveyed ML Pillars
- Ts Surveyed Lease Boundary
- Adjacent Patches

JOINT SURVEY REPORT

MINING LEASE: Ganua Iron & Manganese Mines

LESSEE/MINE OWNER: M/s P K Ahluwalia

1. Name of the Mining lease: *Ganua Iron & Manganese Mines*

2. Name of the Lessee: M/s PK Ahluwalia

3. TS surveyed map (Present Enjoyment)

TS survey of present lease boundary pillar positions, land use within lease area, areas shown as encroachment in Shah Commission's communication and areas adjacent to the lease boundary with some mining related activity was undertaken. A composite map has been prepared showing present enjoyment lease boundary, inside land use and outside land use of area adjacent to lease boundary with some mining activity. The observation of the field team in regard to land use of the adjacent area has been recorded in form of minutes attached as Annexure-A.

Maps enclosed:

- i. Vector map of TS surveyed Map showing present enjoyment and adjacent area with mining activity.
- ii. PDF version of above map.

4. Surveyed Land use map (Present Enjoyment)

All the land use area like broken up area, S/R, DLC, Forest/Non-forest, Reserve forest pillars, Safety zone pillars as per field position were TS surveyed. The broken up area comprising quarry, dump, stack-yard, road, office and other mining related activities have been captured within the leasehold area. The area statistics is in Annexure-B.

Map enclosed:

- i. TS surveyed Land use map (Present Enjoyment) in vector format

5. Land use map (Approved):

The approved Land use map was referenced with geo-referenced lease deed map and then vectorised for computing the land use area statistics. The area statistics is in Annexure-C.

Map enclosed:

- i. Proposed Land use Map in vector format

6. Geo-referenced Lease deed map.

This is prepared by geo-referencing the original lease map with geo-referenced cadastral map coming within the lease area. The cadastral sheets are geo-

referenced based on the GCP surveyed in the field (Village Tri-junction, Bi-junction, Mustakil Chand and any other identifiable feature as shown by Revenue officials on the field in connection with geo-referencing of village cadastral sheets) and using Ortho-image of the area.

Map enclosed:

- i. Geo-referenced Lease Deed map in vector format.

7. Comparison of lease map:

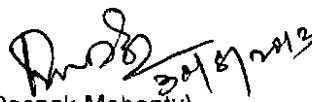
TS surveyed present enjoyment area map was compared with the geo-referenced lease deed map by superimposing both the maps. It is observed that while the shape of polygon in both cases remains same deviations have occurred along almost the entire length of the boundary. Lease area computed in three different ways is tabulated below.

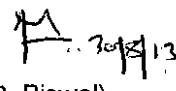
As per Lease Deed (Land schedule)	As per geo-referenced Lease Map	As per TS survey
86.886 hectares	86.815 hectares	88.516 hectares

Map enclosed:

- i. PDF version of vector map of TS survey super-imposed on geo-referenced lease deed vector map.


(A.K. Mohapatra) 20.6.13
CE, ORSAC


(Deepak Mohanty)
Director, Mines


(D. Biswal)
Additional Secretary
F & E Department

**PROCEEDING OF THE JOINT SURVEY AND DEMARCATION OF MINING LEASE
AREA BY TEAM-1, KOIRA CIRCLE IN PURSUANCE TO THE DECISION OF THE
HON'BLE JUSTICE SHAH COMMISSION OF ENQUIRY**

Gonua Iron & Mn. Mines

Date: 13.08.13

Sri P.K.Ahluwalia

1. The T. S. Data taken in the field in presence of Lessee / Representative has been checked and validated in the laboratory in the presence of team members as well as the Lessee / Representative and found correct.
2. The area adjacent to the lease boundary with some mining related activity were captured through T.S. Survey. The same was also validated by the team members in the presence of Lessee/Representative. The details of such patches are given below.

Patch No.	Area marked as working encroachment in Shah Commission communication.	Description
Patch-1	*	Village road coming from lease area about 21m from lease pillar PKA-8.
Patch-2	*	Village road coming from lease area about 22m from lease pillar PKA-10.
Patch-3	*	Residential area between pillars PKA-14 and PKA-15.
Patch-4	*	Village road running parallel to lease boundary between lease pillars PKA-30 and PKA-1.

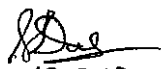

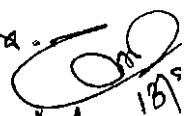
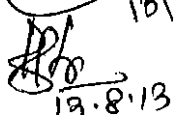

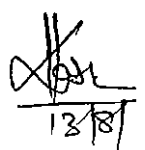

* These patches were not shown as working encroachment in Shah Commission communication.

3. Area marked as working encroachment 'A' and 'B' in Shah Commission communication is found well inside the present surveyed boundary.

SIGNATURE
(Lessee/Representative)

Proceeding & Validation
is done in presence of
the representative of
lessee and all survey
team members. However,
lessee's representative
declined to sign.

SIGNATURE
(Team Members)

1. Dr. Srikanta Das
Scientist, ORSTC 
13.8.13
2. Ganesh Majhi
Range Officer, Barsoan 
13.8.13
3. Jitendra Mahanta
Revenue Supervisor Lalupara. 
13.8.13
4. Bhaktabandhu Patra
Sr. Inspector of Mines, Balangir 
13.8.13
5. Akshaya K. Mahapatra
Amin, Tahasil Office, Keora 
13.8.13
6. Haladhar Dash
Sr. Surveyor, Keora 
13.8.13
7. Chandra Sekhar Ganyag
Po Dengah. 
13.8.13

Annexure-B

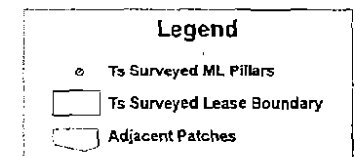
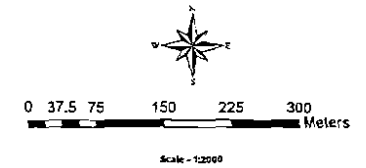
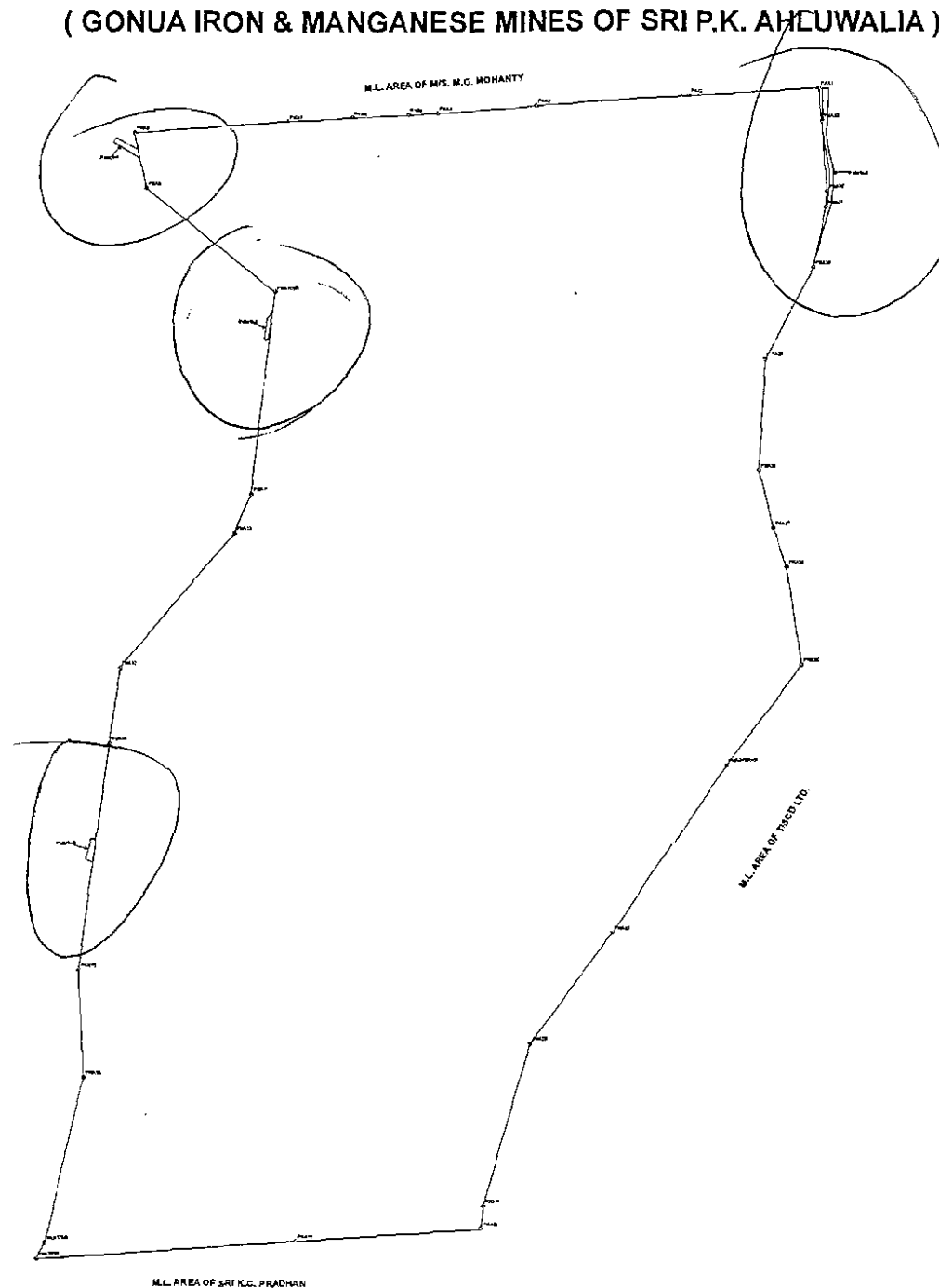
LAND USE AREA STATISTICS INSIDE ML	
Ganua Iron & Manganese Mines	
Sub-Category	Area (Ha)
Dump Yard	5.086
Garland Drain	0.445
Magazine	0.184
Office Area	0.292
Quarry Pit	16.396
Residential area	0.100
Residential Area	0.145
Road	3.387
Safety Zone	3.392
Security Room	0.001
Semi pucca House	0.017
Silting Pond	0.021
Stack Yard	6.605
Temporary House	0.007
Temporary Stack	0.719
Vacant Land	51.706
Weigh Bridge	0.008
Total Area =	88.511

Annexure-C

AREA STATISTICS OF PROPOSED LAND USE	
Ganua Iron & Manganese Mines	
Category	Area (Ha)
ANFO MIXING SHED	0.102
BLOCK-B	0.263
BLOCK-C(MN-QUARRY)	0.875
ELECTRIC LINE WITH RIGHT OF WAY	0.339
KHESHRA FOREST	0.019
LAND USE FOR PUBLIC PURPOSE	2.634
MAGAZINE	0.823
MINES ROAD	1.298
NON FOREST	3.006
OFFICE	0.096
PROPOSED DUMP(EXISTING)	1.150
PROPOSED DUMP(FRESH)	5.035
PROPOSED MINING(EXISTING)	40.490
PROPOSED MINING(EXSISTING)	5.791
PROPOSED MINING(FRESH)	13.773
PROPOSED SITE FOR PLANTATION	0.477
PROPOSED SITE FOR STORING OF MATERIAL	2.006
PROPOSED SITE FOR SUB-GRADE STACKING	2.602
PROPOSED SITE FOR WORKSHOP	0.456
SAFETY ZONE	4.544
VILLAGE ROAD	0.807
Total area	86.586

AREA STATISTICS OUTSIDE ML	
Sub-Category	Area-Ha.
Residential area	0.020
Road	0.125
Total Area =	0.145

**TS SURVEY OF MINING LEASE AREA AND ADJACENT AREA WITH SOME MINING ACTIVITY
(GONUA IRON & MANGANESE MINES OF SRI P.K. AHLUWALIA)**



JOINT SURVEY REPORT

MINING LEASE :Khajurdihi Iron & Manganese Mines

LESSEE / MINE OWNER :M/s. Matadin Sharda

1. Name of the Mining lease: *Khajurdihi Iron & Manganese Mines*

2. Name of the Lessee: M/s Matadin Sharda

3. TS surveyed map (Present Enjoyment)

TS survey of present lease boundary pillar positions, land use within lease area, areas shown as encroachment in Shah Commission's communication and areas adjacent to the lease boundary with some mining related activity was undertaken. A composite map has been prepared showing present enjoyment lease boundary, inside land use and outside land use of area adjacent to lease boundary with some mining activity. The observation of the field team in regard to land use of the adjacent area has been recorded in form of minutes attached as Annexure-A.

Maps enclosed:

- i. Vector map of TS surveyed Map showing present enjoyment and adjacent area with mining activity.
- ii. PDF version of above map.

4. Surveyed Land use map (Present Enjoyment)

All the land use area like broken up area, S/R, DLC, Forest/Non-forest, Reserve forest pillars, Safety zone pillars as per field position were TS surveyed. The broken up area comprising quarry, dump, stack-yard, road, office and other mining related activities have been captured within the leasehold area. The area statistics is in Annexure-B.

Map enclosed:

- i. TS surveyed Land use map (Present Enjoyment) in vector format

5. Land use map (Approved):

The approved Land use map is not available.

6. Geo-referenced Lease deed map.

This is prepared by geo-referencing the original lease map with geo-referenced cadastral map coming within the lease area. The cadastral sheets are geo-referenced based on the GCP surveyed in the field (Village Tri-junction, Bi-junction, Mustakil Chand and any other identifiable feature as shown by Revenue officials on the field in connection with geo-referencing of village cadastral sheets) and using Ortho-image of the area.

Map enclosed:

- i. Geo-referenced Lease Deed map in vector format.

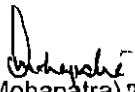
7. Comparison of lease map:

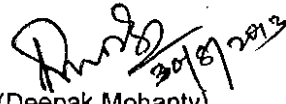
TS surveyed present enjoyment area map was compared with the geo-referenced lease deed map by superimposing both the maps. It is observed that while the shape of polygon in both cases remains almost same, a shift in enjoyment position has occurred towards north-eastern side. Lease area computed in three different ways is tabulated below.


As per Lease Deed (Land schedule)	As per geo-referenced Lease Map	As per TS survey
31.565 hectares	32.596 hectares	31.582 hectares

Map enclosed:

- i. PDF version of vector map of TS survey super-imposed on geo-referenced lease deed vector map.


(A.K. Mohapatra) 30.8.13
CE, ORSAC


(Deepak Mohanty)
Director, Mines


(D. Biswal) 30/8/13
Additional Secretary
F & E Department

PROCEEDING OF THE JOINT SURVEY AND DEMARCATION OF MINING LEASE AREA BY TEAM 2 KOIRA CIRCLE IN PURSUANCE TO THE DECISION OF THE HON'BLE JUSTICE SHAH COMMISSION OF ENQUIRY

Name of the Mining Lease : Khajoridihi, Baldihi Iron & Mn.Mines


Date : 13-8-2013

Name of the Lessee: Matadin Sharda.

1. The T.S. data taken in the field in presence of Lessee/Representative has been checked & validated the laboratory in presence of the team members as well as lessee/representative and found correct.
2. The areas adjacent to the lease boundary with some mining related activity were captured through TS survey. The same also validated by the team members in presence of lessee/representative. The details of such patches are give below.
3. Area shown as non working encroachment 'A' in Hon'ble Shah Commission Communication is found well inside the present surveyed lease boundary.


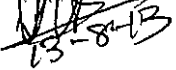

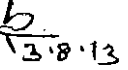

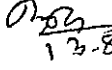
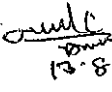
SIGNATURE

(Lessee/Representative)


13/8/13
(K.C. Phule)
Khajoridihi mining Iron mines
One copy of our written
submission is enclosed here
with)

SIGNATURE


(Team Members)

1. Sri A.K.Mohanty, TA'B' ORSAC. 
2. Sri S.C.Barik
Sr. Inspector of Mines
DDM, Koira 
3. Sri Suresh Behera
Surveyor, The Director of Mines 
4. Sri Ashok Kumar Biswal
Range Officer, Koira
Banai Forest Division 
5. Sri Narayan Chandra Behera
Forester, Ranisal,
Bonai Forest Division 
6. Sri Biranchi Bag,
R.I. Sadar Tahasil, Sundargarh 
7. Sri Dandadhar Nayak
Amin, L.A. Section Collectorate
Sundargarh. 

Our submission regarding joint DGPS Survey Conducted by ORSAC in pursuance of directive of Hon'ble Shah Commission

The matter mentioned in point no. 2 of this proceeding is not applicable, since Hon'ble Justice Shah Commission has not mentioned any working encroachment in our case.

As the matter being a critical issue in regard to our Khajurdih Mn. & Iron Mines, we have to verify thoroughly in presence of our field technical teams regarding the survey conducted as well as the map prepared by the joint team. For this purpose we require the soft copy of the map prepared for our corresponding lease along with the Geo-referencing/digitized cadastral maps, the documents, data & any other information relied upon for survey & preparation of map. Accordingly, only after receipt of aforesaid maps, documents, data & information, a considerable/reasonable time be given to us to make necessary comments and only after incorporating our comments it should be treated as final from our end. Therefore, we are signing this proceeding as our attendance and without admitting and accepting the contentions made therein in this proceeding.


13/8/13
(K. C. Singh)

Representative

Khajurdih Mn. & Iron Mines.

Annexure-B

PRESENT LAND USE AREA STATISTICS INSIDE ML	
Khajurdihi Iron & Manganese Mines	
SUB-CATEGORY	AREA(Ha)
Abandon House	0.005
Dump Yard	1.523
Quarry Pit	2.825
Road	0.335
Safety Zone	1.680
Stack Yard	0.144
Temporary Stack	0.261
Top Pit	0.027
Vacant Land	24.780
TOTAL AREA	31.580

JOINT SURVEY REPORT

**MINING LEASE: Kasia Iron, Dolomite and
Limestone Mines**

**LESSEE/MINE OWNER: M/s Essel Mining &
Industries Ltd.**

1. Name of the Mining lease: *Kasia Iron, Dolomite and Limestone Mines*

2. Name of the Lessee: M/s Essel Mining and Industries Ltd

3. TS surveyed map (Present Enjoyment)

TS survey of present lease boundary pillar positions, land use within lease area, areas shown as encroachment in Shah Commission's communication and areas adjacent to the lease boundary with some mining related activity was undertaken. A composite map has been prepared showing present enjoyment lease boundary, inside land use and outside land use of area adjacent to lease boundary with some mining activity. The observation of the field team in regard to land use of the adjacent area has been recorded in form of minutes attached as Annexure-A.

Maps enclosed:

- i. Vector map of TS surveyed Map showing present enjoyment and adjacent area with mining activity.
- ii. PDF version of above map.

4. Surveyed Land use map (Present Enjoyment)

All the land use area like broken up area, S/R, DLC, Forest/Non-forest, Reserve forest pillars, Safety zone pillars as per field position were TS surveyed. The broken up area comprising quarry, dump, stack-yard, road, office and other mining related activities have been captured within the leasehold area. The area statistics is in Annexure-B.

Map enclosed:

- i. TS surveyed Land use map (Present Enjoyment) in vector format

5. Land use map (Approved):

The approved Land use map was referenced with geo-referenced lease deed map and then vectorised for computing the land use area statistics. The area statistics is in Annexure-C.

Map enclosed:

- i. Proposed Land use Map in vector format

6. Geo-referenced Lease deed map.

This is prepared by geo-referencing the original lease map with geo-referenced cadastral map coming within the lease area. The cadastral sheets are geo-

referenced based on the GCP surveyed in the field (Village Tri-junction, Bi-junction, Mustakil Chand and any other identifiable feature as shown by Revenue officials on the field in connection with geo-referencing of village cadastral sheets) and using Ortho-image of the area.

Map enclosed:

- i. Geo-referenced Lease Deed map in vector format.

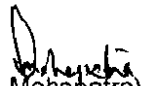
7. Comparison of lease map:

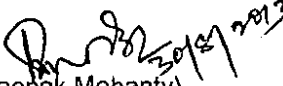
TS surveyed present enjoyment area map was compared with the geo-referenced lease deed map by superimposing both the maps. It is observed that while the shape of polygon in both cases remains almost same deviations have occurred mostly in upper portion of the map. Lease area computed in three different ways is tabulated below.


As per Lease Deed (Land schedule)	As per geo-referenced Lease Map	As per TS survey
194.196 hectares	195.884 hectares	194.096 hectares

Map enclosed:

- i. PDF version of vector map of TS survey super-imposed on geo-referenced lease deed vector map.


(A.K. Mohapatra) 30.8.13
CE, ORSAC


(Deepak Mohanty)
Director, Mines


(D. Biswal)
Additional Secretary
F & E Department

PROCEEDING OF THE JOINT SURVEY AND DEMARCATION OF MINING LEASE
AREA BY TEAM-1, JODA CIRCLE IN PURSUANCE TO THE DECISION OF THE
HON'BLE JUSTICE SHAH COMMISSION OF ENQUIRY

Date:14.08.2013

M/s ESSEL Mining & Industries Limited,
Kasia Iron & Dolomite Mines, Keonjhar

- 1 The T.S. Data taken in the field in presence of lessee/ representative has been checked and validated in the laboratory in presence of team members as well as lessee/representative & found correct.
- 2 The areas adjacent to the lease boundary with some mining related activity were captured through T.S. survey. The same was also validated by the team members in presence of lessee/representative. The details of such patches are given below.

Patch No.	Area marked as working encroachment in Shah Commission communication	Description
Patch-1	*	Old dump extended inside to outside lease in between ML Pillar 5 to 6
Patch-2	*	Old quarry extended inside to outside lease in between ML Pillar 5 to 6
Patch-3	*	Old disturbed area with plantation found adjacent to lease boundary in between ML Pillar 5N to 5O
Patch-4	*	Old disturbed area adjacent to lease boundary in between ML Pillar 5M to 5N
Patch-5	'D'	Plantation area adjacent to ML Pillar 5B to 5E
Patch-6	*	Old quarry inside to outside lease in between ML Pillar 5 to 5A
Patch-7	*	Sub grade dump near ML Pillar 5 to 5A
Patch-8	*	Old quarry inside to outside lease near ML Pillar 5
Patch-9	*	Sub grade dump outside the ML Pillar 5
Patch-10	*	A old quarry inside to outside lease near ML Pillar 5
Patch-11	*	Sub grade dump outside the lease area near ML Pillar 5, 29 meter from ML Pillar 5

Patch-12	*	Old quarry reclaimed inside to outside lease in between ML Pillar 4 to 5
Patch-13	*	Road inside to outside lease near ML Pillar 4 to 5
Patch-14	*	OB outside lease in between ML Pillar 4 to 5, about 5 meter from ML Pillar 4
Patch-15	'A'	Road cutting in between ML Pillar 2 to 3
Patch-16	'A'	Road inside to outside lease in between ML Pillar 2 to 3
Patch-17	'A'	MESCO fine stock yard in between ML Pillar 2 to 3, about 105 meter from ML Pillar 2
Patch-18	'A'	Shyam crusher, about 10 meter from ML Pillar 2
Patch-19	'A'	MESCO fine stock near ML Pillar 2, about 20 meter from ML Pillar 2
Patch-20	*	Residential area extended inside to outside lease near intermediate pillar 1E
Patch-21	*	Road extended inside to outside lease in between ML Pillar 1 to 8
Patch-22	*	Balaji crusher inside to outside lease in between ML Pillar 1 to 8
Patch-23	*	Utkal crusher inside to outside lease near ML Pillar 8
Patch-24	*	Mangalam crusher inside to outside lease in between ML Pillar 7 to 8
Patch-25	*	Susila crusher inside to outside lease in between ML Pillar 7 to 8
Patch-26	'B'	Barren land outside the lease in between ML Pillar 7C to 7D
Patch-27	'B'	Find stock yard outside the lease near ML Pillar 7D
Patch-28	'B'	Road inside to outside lease in between ML Pillar 7 to 7E
Patch-29	'B'	Vacant land inside to outside lease in between ML Pillar 7 to 7A
Patch-30	'B'	Surface mining inside to outside lease near ML Pillar 7D
Patch-31	'B'	Sub grade dump extended inside to outside lease near ML Pillar 7D
Patch-32	'B'	Sub grade dump extended inside to outside lease near ML Pillar 7C
Patch-33	'B'	JMVD crusher inside to outside lease near ML Pillar 7B
Patch-34	'B'	JMVD crusher building found near ML Pillar 7B

Patch-35	'B'	Old disturbed area extended inside to outside lease in between ML Pillar 7 to 7A
Patch-36	'B'	Old Quarry adjacent to lease boundary near ML Pillar 7
Patch-37	*	Road inside to outside lease in between ML Pillar 6 to 7

These patches are not shown as working encroachment in Shah Commission communication.

The area marked 'C' in Shah Commission Communication was observed in the field and it is a vacant land within the lease in between ML Pillar 6 to 7

SIGNATURE

(Lessee/Representative)

Presented as valid data
in 2006 in presence
of 15 representatives of
lease as all survey team
members. Now even, 15 m/s
representative declared valid

SIGNATURE

(Team Members)

- 1 ANIL KUMAR KANUNGO Ananugo
14/08/2013
- 2 Bencate Kumar Sahu Bencate
14/8/13
- 3 Pramod Kumar Behera Pramod
14/8/13
- 4 Shree Ramopad Aratinda Mishra Dil
Rajendra Champu
14/08/2013
- 5- Panchanan Naik Naik
Forester, Joda Section
14/8/13

Annexure-B

LAND USE AREA STATISTICS OF ML			
Kasia Iron, Dolomite & Limestone Mines			
SUB-CATEGORY	AREA-HA	SUB-CATEGORY	AREA-HA
Road Cutting	0.007	Sub-Total (B/F)	65.135
11kv Substation	0.031	Road Cutting	0.509
Abandon House	0.004	Safety Zone	2.266
Back Filling Area	0.682	Screen Plant Area	2.756
Balaji Crusher	0.540	Security Barrack	0.166
Barren Land	1.483	Security House	0.003
Broken Area	3.458	Security Room	0.013
Calibrated Lompon	0.581	Semipucca House	0.013
Canteen Area	0.522	Servent Plant -2	0.006
Cistern	0.001	Silent View Point	0.002
Control Room	0.029	South Block Office Area	0.012
Diesel Reserver	0.065	South Block Quarry	10.098
Dolomite Quarry Area	2.091	Store Yard	0.170
Essel Guest House	1.389	Subgrade Dump	23.289
Excavation Area	0.632	Surface Mining	0.018
Fines Stack	2.908	Surface Mining & Road Cutt	0.314
Forest Vergin Disturb Area	0.272	Sushila Crusher	0.484
Garage Area	0.242	Utkal Crusher	3.303
Health & Dispensary	0.087	Vacant Land	85.601
JMVD Crusher	0.600	Water Chamber	0.002
Magazine	0.114	Water Tank	0.001
Mangalam Crusher	0.634	Weigh Bridg	0.006
North Block Quarry	24.900	Weigh Bridge	0.044
Office Area	0.309	TOTAL AREA	194.211
Old Disturb Area	0.665		
Old Dump	0.091		
Old Dump Area	0.683		
Old Quarry	0.229		
Old Quarry Area	0.134		
Old Quarry Pit	0.172		
Old Quarry Reclaimed	1.331		
Over Burden Dump	0.689		
Parking Area	1.914		
Parking Zone	0.220		
Plantation	6.309		
Plantation Area	0.070		
Pucca House	0.015		
Quarry Pit	0.417		
Rain water Check Dump	0.360		
Residential Area	1.315		
Rest Shelter	0.003		
Road	8.937		
Sub-Total	65.135		

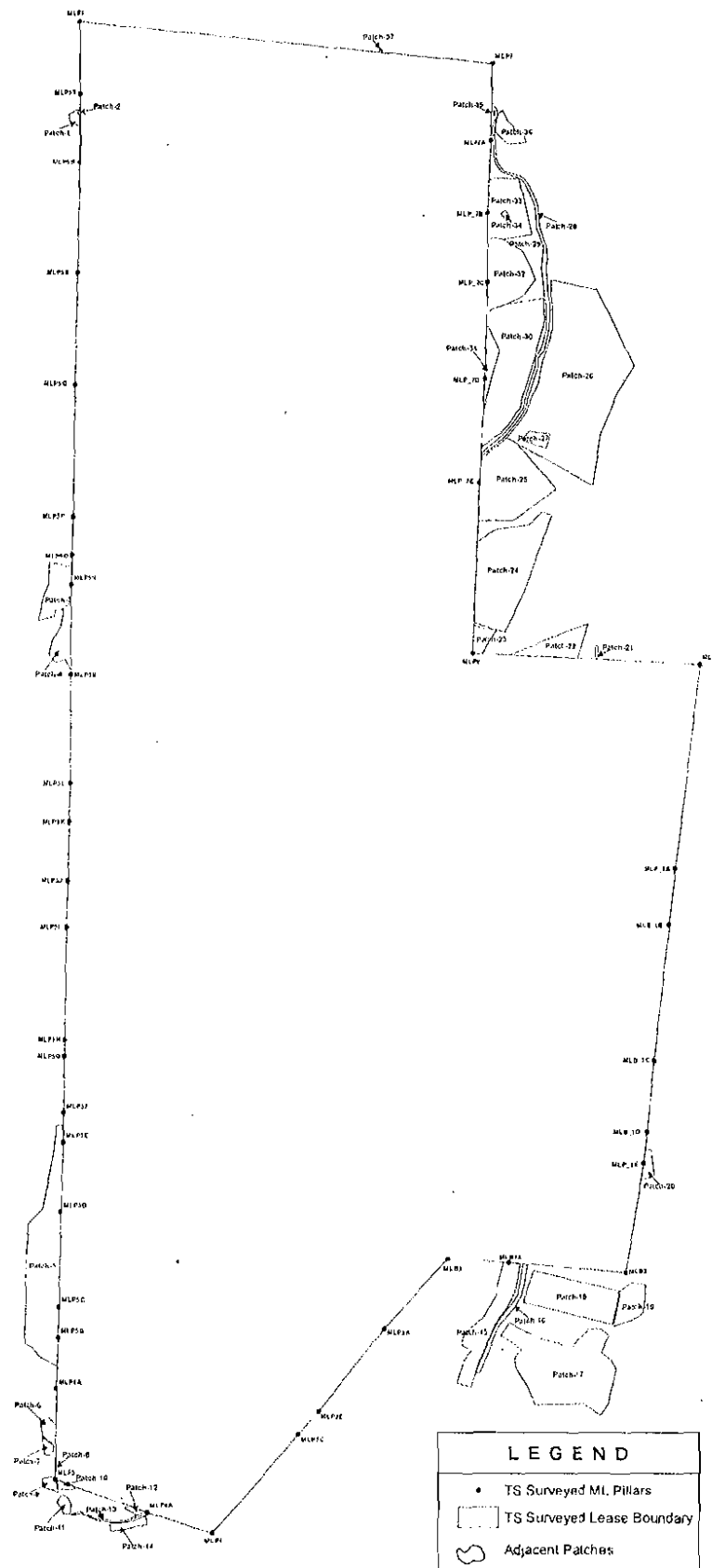
Annexure-C

APPROVED LAND USE AREA STATISTICS OF ML	
Kasia Iron, Dolomite & Limestone Mines	
Catagory	AREA-HA
Magazine	0.087
Proposed Mining	28.106
Reserved Forest	68.599
Road	4.404
Safety zone	32.133
Storing of meterials	3.749
OTHERS	52.041
TOTAL AREA	189.119

SUB-CATEGORY	AREA-HA
Road Cutting	0.634
Balaji Crusher	0.345
Barren Land	3.797
JMVD Crusher	0.615
Mangalam Crusher	1.558
Mesco Fines Stack	2.032
Office	0.009
Old Disturb Area	0.003
Old Dump	0.037
Old Dustrub Area	0.230
Old Quarry	0.003
Old Quarry Pit	0.260
Old Quarry Reclaimed	0.025
Over Burden Dump	0.074
Plantation	2.008
Residential Area	0.079
Road	0.510
Sri Shyam Crusher	0.861
Subgrade Dump	0.984
Surface Mining	1.518
Sushila Crusher	1.207
Utkal Crusher	0.126
Vacant Land	0.693
TOTAL-AREA	17.608

TS SURVEY OF MINING LEASE AREA AND ADJACENT AREA WITH SOME MINING ACTIVITY
IRON ORE AND DOLMITE MINE OF M/S. ESSEL MINING & INDUSTRIES LIMITED

SCALE-1:4000
0 0.05 0.1 0.2 0.3 0.4



JOINT SURVEY REPORT

MINING LEASE: Bhulbeda Iron Ore Mines

**LESSEE/MINE OWNER: M/s Mineral Trading
Syndicate**

1. Name of the Mining lease: *Bhulbeda Iron Ore Mines*

2. Name of the Lessee: M/s Mineral Trading Syndicate

3. TS surveyed map (Present Enjoyment)

TS survey of present lease boundary pillar positions, land use within lease area, areas shown as encroachment in Shah Commission's communication and areas adjacent to the lease boundary with some mining related activity was undertaken. A composite map has been prepared showing present enjoyment lease boundary, inside land use and outside land use of area adjacent to lease boundary with some mining activity. The observation of the field team in regard to land use of the adjacent area has been recorded in form of minutes attached as Annexure-A.

Maps enclosed:

- i. Vector map of TS surveyed Map showing present enjoyment and adjacent area with mining activity.
- ii. PDF version of above map.

4. Surveyed Land use map (Present Enjoyment)

All the land use area like broken up area, S/R, DLC, Forest/Non-forest, Reserve forest pillars, Safety zone pillars as per field position were TS surveyed. The broken up area comprising quarry, dump, stack-yard, road, office and other mining related activities have been captured within the leasehold area. The area statistics is in Annexure-B.

Map enclosed:

- i. TS surveyed Land use map (Present Enjoyment) in vector format

5. Land use map (Approved):

The approved Land use area statistics is given in Annexure-C.

Map enclosed:

- i. Proposed Land use Map in vector format

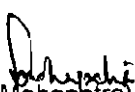
6. Geo-referenced Lease deed map.

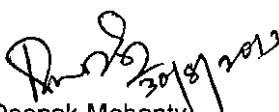
Geo-referencing of cadastral sheet could not be done as no GCP could be established in the field.


7. Comparison of lease map:

In this case no comparison could be done as geo-referencing of lease map was not possible. However, lease area computed in two different ways is tabulated below.

As per Lease Deed (Land schedule)	As per geo-referenced Lease Map	As per TS survey
62.322 hectares	Geo-referencing could not be done as no GCP could be established	62.388 hectares


(A.K. Mohapatra) 30.8.13
CE, ORSAC


(Deepak Mohanty)
Director, Mines


(D. Biswal) 30/8/13
Additional Secretary
F & E Department

**PROCEEDING OF THE JOINT SURVEY AND DEMARCATION OF MINING LEASE
AREA BY TEAM-1, JODA CIRCLE IN PURSUANCE TO THE DECISION OF THE
HON'BLE JUSTICE SHAH COMMISSION OF ENQUIRY**

Date: 13.08.2013

Bhulbeda Iron Mines
M/s Mineral Trading Syndicate

1. The T.S. Data taken in the field in presence of lessee/ representative has been checked and validated in the laboratory in presence of team members as well as lessee/representative & found correct.
2. The areas adjacent to the lease boundary with some mining related activity were captured through T.S. survey. The same was also validated by the team members in presence of lessee/representative. The details of such patches are given below.

Patch No.	Area marked as working encroachment in Shah Commission communication	Description
Patch-1	*	Fine stack adjacent to boundary near ML Pillar 3
Patch-2	*	Vacant land adjacent to boundary near ML Pillar 3
Patch-3	*	Ram Pit adjacent to boundary near ML Pillar 3
Patch-4	*	Crusher continuing inside to outside lease near ML Pillar 3
Patch-5	*	Fine stack, 24 meter from boundary line ML Pillar 3 to 4
Patch-6	*	Sub grade dump 41 meter from boundary line ML Pillar 3 to 4
Patch-7	*	Road inside to outside lease in between ML Pillar 3 to 4
Patch-8	*	Road inside to outside lease in between ML Pillar 5 to 6
Patch-9	'B'	Quarry about 436 meter from ML Pillar 11
Patch-10	'B'	Quarry about 436 meter from ML Pillar 11
Patch-11	'B'	Dump about 340 meter from ML Pillar 13
Patch-12	'A'	Barren land about 4.69 meter from ML Pillar 23

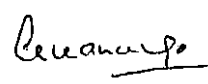
Patch-13	'A'	Road is connected from outside to inside lease
Patch-14	'A'	OB 22 meter from ML Pillar 23
Patch-15	'A'	Old Morrum quarry about 76 meter from ML Pillar 23
Patch-16	*	Road inside to outside the lease area
Patch-17	*	Sub grade dump 11 meter from boundary line
Patch-18	*	Crusher area adjacent to boundary line near ML Pillar 3

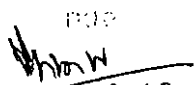
*These patches are not shown as working encroachment in Shah Commission communication.


SIGNATURE
(Lessee/Representative)





SIGNATURE
(Team Members)

1 ANIL KUMAR KANUNGO 
13.08.2013

2 Bhumika K. Sehni 
13.8.13

3 Poojashree K. Behera 
13/8/13

4. Shree Ranajit Arakinda Mishra
Rajya Shree Champu. 
12/08/2013

5- Panchanan Naik
Forester, Joda. 
13/8/13

Annexure-B

PRESENT LAND USE AREA STATISTICS INSIDE ML	
Bhulbeda Iron Ore Mines	
SUB-CATEGORY	AREA (Ha)
Broken Area	4.412
Crasar Area	0.070
Old Quarry Pit	1.024
Road	0.270
Safety Zone	2.313
Sub Grade Dump	0.485
Surface Mining	0.134
Vacant Land	53.682
TOTAL AREA	62.390

Annexure-C

APPROVED LAND USE AREA STATISTICS OF ML	
Bhulbeda Iron Ore Mines	
CATEGORY	AREA (Ha)
DLC FOREST LAND	48.125
DUMP	0.954
DUMPING WASTE/REJECT	0.327
MINING QUARRY	6.119
ORE STOCK	0.110
PRIVATE LAND	3.092
ROAD	0.636
SAFETY ZONE	2.705
SCREEN PLANT	0.096
SHED/INFASTRUCTURE	0.025
TOTAL AREA	62.189

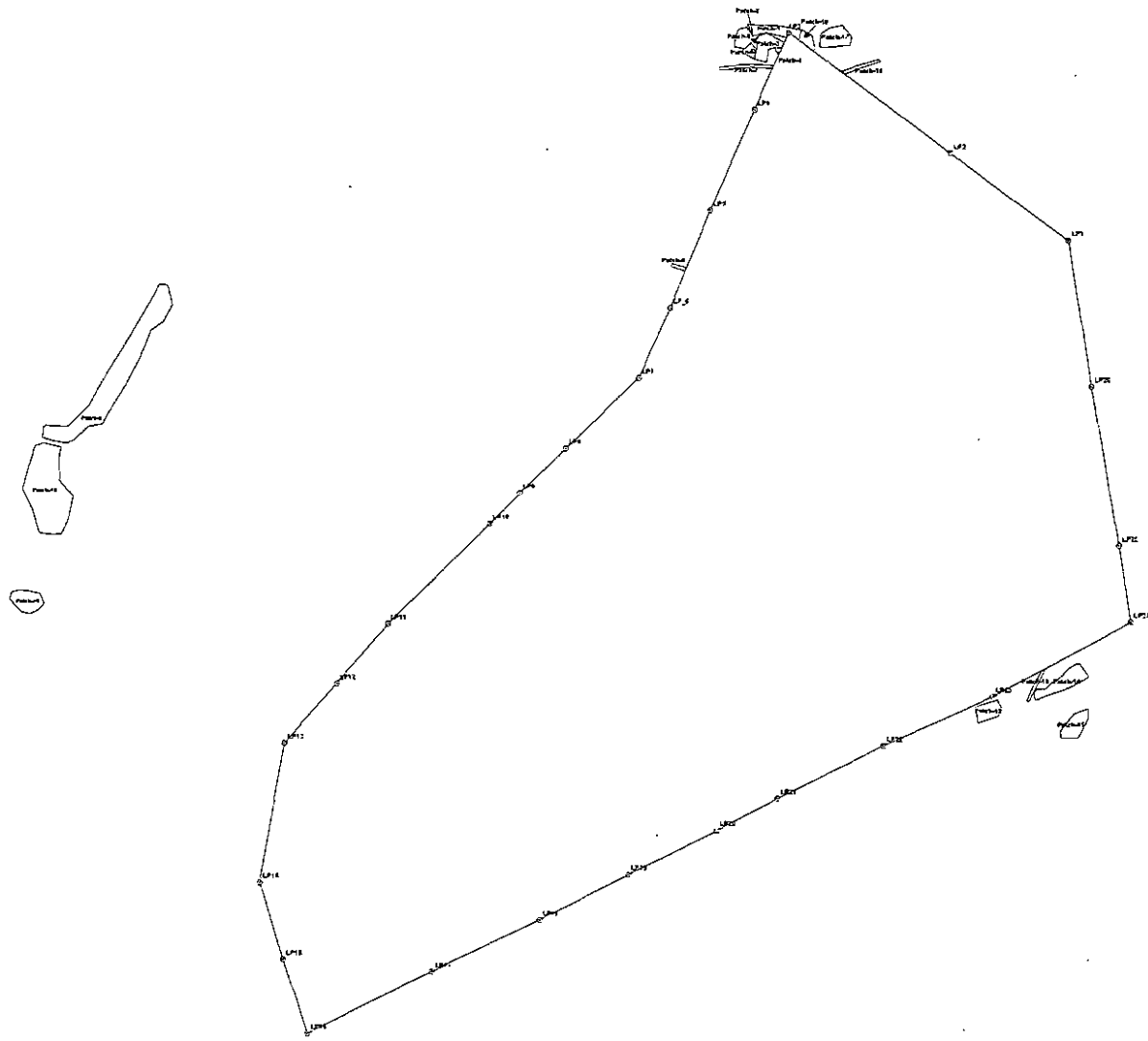
Area outside lease boundary

SUB-CATEGORY	AREA-HA
Barren Land	0.057
Crasar Area	0.033
Fines Stock	0.091
Morrumbidgee Quarry	0.073
Old Quarry Pit	1.016
Over Burden	0.190
Ramp Pit	0.067
Road	0.066
Sub Grade Dump	0.122
Vacant Land	0.022
TOTAL AREA	1.737

TS SURVEY OF MINING LEASE AREA AND ADJACENT AREA WITH SOME MINING ACTIVITY
BHULBEDA IRON ORE MINE OF M/S. MINERAL TRADING SYNDICATE



SCALE-1:3000
0 0.075 0.15 0.3 0.45 0.6
Kms.



LEGEND	
•	TS Surveyed ML Pillars
	TS Surveyed Lease Boundary
	Adjacent Patches

JOINT SURVEY REPORT

**MINING LEASE: Khandabandh Iron &
Manganese Mines**

LESSEE/MINE OWNER: M/s TISCO

1. Name of the Mining lease: *Khandabandha Iron & Manganese Mines*

2. Name of the Lessee: M/s TISCO

3. TS surveyed map (Present Enjoyment)

TS survey of present lease boundary pillar positions, land use within lease area, areas shown as encroachment in Shah Commission's communication and areas adjacent to the lease boundary with some mining related activity was undertaken. A composite map has been prepared showing present enjoyment lease boundary, inside land use and outside land use of area adjacent to lease boundary with some mining activity. The observation of the field team in regard to land use of the adjacent area has been recorded in form of minutes attached as Annexure-A.

Maps enclosed:

- i. Vector map of TS surveyed Map showing present enjoyment and adjacent area with mining activity.
- ii. PDF version of above map.

4. Surveyed Land use map (Present Enjoyment)

All the land use area like broken up area, S/R, DLC, Forest/Non-forest, Reserve forest pillars, Safety zone pillars as per field position were TS surveyed. The broken up area comprising quarry, dump, stack-yard, road, office and other mining related activities have been captured within the leasehold area. The area statistics is in Annexure-B.

Map enclosed:

- i. TS surveyed Land use map (Present Enjoyment) in vector format

5. Land use map (Approved):

The approved Land use map was referenced with geo-referenced lease deed map and then vectorised for computing the land use area statistics. The area statistics is in Annexure-C.

Map enclosed:

- i. Proposed Land use Map in vector format

6. Geo-referenced Lease deed map.

This is prepared by geo-referencing the original lease map with geo-referenced cadastral map coming within the lease area. The cadastral sheets are geo-

referenced based on the GCP surveyed in the field (Village Tri-junction, Bi-junction, Mustakil Chand and any other identifiable feature as shown by Revenue officials on the field in connection with geo-referencing of village cadastral sheets) and using Ortho-image of the area.

Map enclosed:

- i. Geo-referenced Lease Deed map in vector format.

7. Comparison of lease map:

TS surveyed present enjoyment area map was compared with the geo-referenced lease deed map by superimposing both the maps. It is observed that map showing lease area without surrendered area matches with TS surveyed map excepting at the south eastern corner. Lease area computed in three different ways is tabulated below.

As per Lease Deed (Land schedule)	As per geo-referenced Lease Map	As per TS survey
1293.433 hectares	1280.54 hectares	934.599 hectares

The TS survey has been carried out as per current position on ground. The differential area has been reported to have been surrendered.

Map enclosed:

- i. PDF version of vector map of TS survey super-imposed on geo-referenced lease deed vector map.

(A.K. Mohapatra)
CE, ORSAC

(Deepak Mohanty)
Director, Mines

(D. Biswal)
Additional Secretary
F & E Department

PROCEEDING OF THE JOINT SURVEY AND DEMARCATION OF MINING LEASE
AREA BY TEAM-2, JODA CIRCLE IN PURSUANCE TO THE DECISION OF THE
HON'BLE JUSTICE SHAH COMMISSION OF ENQUIRY

Date: 14/08/2013

~~TISCO~~ Tata Steel Limited
~~Khondbond~~ Iron & Manganese Mines

1. The T.S data taken in the field in presence of lessee / representative has been checked in the computer and found correct and all the land use units have been incorporated.
2. Working encroachment 'A' indicated by the Hon'ble Justice Shah Commission was verified in the field and found well inside the mining lease area. It is worthy to report that the ML boundary runs common with eastern bank of Sona river from pillar no.48 to 51.



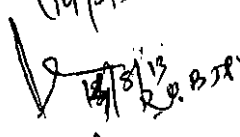

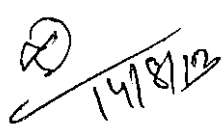


SIGNATURE

(Lessee/Representative)

SIGNATURE

(Team Members)

AWNISH KUMAR
Tata steel Ltd.

1. P. K. Pagoda, Scientist
ORSAC.  14/8/13
2. S. Mohanta, S.I.M
O/o DDM, Joda.  14/8/13
3. P.C. Dash, R.O
BJP, Range.  14/8/13
4. B. Tudy, S.S.
DM(O) P.BSR  14/8/13
5. C.D. Pagoda, R.I
Keonjhar Tsh.  14/8/13
6. P.K. Tripathy
Forester.  14/8/13

Annexure-B

LAND USE AREA STATISTICS OF ML	
Khandanadha Iron & Manganese Mines	
SUB-CATEGORY	AREA (Ha)
Agriculture Land	76.336
Boundary Wall	0.063
Building	0.003
Disel Pump	0.090
DLC Forest	0.757
Fine Stack	7.230
Forest	254.305
Garden	1.128
Infrastructure	0.566
Mix Jungle Mainly Sal	324.878
Mobile Tower	0.022
Office & Infrastructure	1.105
Parking Area	0.582
Plant Area	2.007
Pond	0.080
Quarry Pit	39.931
Retaining Wall	0.028
River	1.867
Road	11.661
Safety Zone	11.817
Security Barrack	0.164
Security Room	0.014
Stack Yard	3.246
Subgrade Dump	26.113
Temporary Stack	0.487
Tree Felling Area	29.518
Unused Land	140.333
Weigh Bridge	0.014
TOTAL AREA	934.345

Annexure-C

APPROVED LAND USE AREA STATISTICS OF ML	
Khandabandh Iron & Manganese Mines	
CATEGORY	AREA (Ha)
<i>Not Specified</i>	469.043
Effluent Treatment Plant	0.136
Area Relinquished	355.477
Beneficiation Plant	16.932
Green Belt	14.990
Infrastructure	7.452
Infrastructure Additional	26.994
Mineral Separation Plant	1.343
Mineral Storage Additional	16.182
Mineral Storage	5.677
Mining	111.883
Mining Additional	107.353
Overburden	66.387
Overburden Additional	79.157
Proposed Magazine	1.080
Pump House	0.023
Storage for Top Soil	1.015
Township Additional	0.118
Trailing Pond	20.155
Water Treatment Plant	0.153
Workshop	4.057
TOTAL AREA	1305.607

JOINT SURVEY REPORT

MINING LEASE: Jurudi-54 Manganese Mines

**LESSEE/MINE OWNER: M/s Kalinga Mining
Corporation**

1. Name of the Mining lease: *Jurudi54 Manganese Mines*

2. Name of the Lessee: M/s Kalinga Mining Corporation

3. TS surveyed map (Present Enjoyment)

TS survey of present lease boundary pillar positions, land use within lease area, areas shown as encroachment in Shah Commission's communication and areas adjacent to the lease boundary with some mining related activity was undertaken. A composite map has been prepared showing present enjoyment lease boundary, inside land use and outside land use of area adjacent to lease boundary with some mining activity. The observation of the field team in regard to land use of the adjacent area has been recorded in form of minutes attached as Annexure-A.

Maps enclosed:

- i. Vector map of TS surveyed Map showing present enjoyment and adjacent area with mining activity.
- ii. PDF version of above map.

4. Surveyed Land use map (Present Enjoyment)

All the land use area like broken up area, S/R, DLC, Forest/Non-forest, Reserve forest pillars, Safety zone pillars as per field position were TS surveyed. The broken up area comprising quarry, dump, stack-yard, road, office and other mining related activities have been captured within the leasehold area. The area statistics is in Annexure-B.

Map enclosed:

- i. TS surveyed Land use map (Present Enjoyment) in vector format

5. Land use map (Approved):

The approved Land use map was referenced with geo-referenced lease deed map and then vectorised for computing the land use area statistics. The area statistics is in Annexure-C.

Map enclosed:

- i. Proposed Land use Map in vector format

6. Geo-referenced Lease deed map.

This is prepared by geo-referencing the original lease map with geo-referenced cadastral map coming within the lease area. The cadastral sheets are geo-

referenced based on the GCP surveyed in the field (Village Tri-junction, Bi-junction, Mustakil Chand and any other identifiable feature as shown by Revenue officials on the field in connection with geo-referencing of village cadastral sheets) and using Ortho-image of the area.

Map enclosed:

- i. Geo-referenced Lease Deed map in vector format.

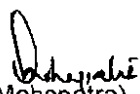
7. Comparison of lease map:

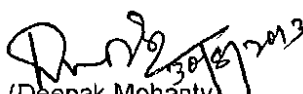
TS surveyed present enjoyment area map was compared with the geo-referenced lease deed map by superimposing both the maps. It is observed that while the shape of polygon in both cases remains same there is deviation in all sides. Lease area computed in three different ways is tabulated below.


As per Lease Deed (Land schedule)	As per geo-referenced Lease Map	As per TS survey
54.754 hectares	53.491 hectares	54.515 hectares

Map enclosed:

- i. PDF version of vector map of TS survey super-imposed on geo-referenced lease deed vector map.


(A.K. Mohapatra) 30.8.13
CE, ORSAC


(Deepak Mohanty)
Director, Mines


(D. Biswal)
Additional Secretary
F & E Department

**PROCEEDING OF THE JOINT SURVEY AND DEMARCATION OF MINING LEASE
AREA BY TEAM-1, JODA CIRCLE IN PURSUANCE TO THE DECISION OF THE
HON'BLE JUSTICE SHAH COMMISSION OF ENQUIRY**

Date:14.08.2013

M/s Kalinga Mining Corporation(Block 54.754 ha.),
Jurudi, Keonjhar

- 1 The T.S. Data taken in the field in presence of lessee/ representative has been checked and validated in the laboratory in presence of team members as well as lessee/representative & found correct.
- 2 The areas adjacent to the lease boundary with some mining related activity were captured through T.S. survey. The same was also validated by the team members in presence of lessee/representative. The details of such patches are given below.

Patch No.	Area marked as working encroachment in Shah Commission communication	Description
Patch-1	*	Vacant area in between ML Pillar LP I to LP I 2
Patch-2	*	Road inside to outside lease near ML Pillar C
Patch-3	'A'	Vacant land in between ML Pillar E2 to E3
Patch-4	'A'	Old quarry pit inside to outside lease in between ML Pillar E3 to E4
Patch-5	*	Road inside to outside lease in between ML Pillar F1 to F2
Patch-6	*	Sub grade dump inside to outside lease in between ML Pillar F7 to G
Patch-7	*	Sub grade dump inside to outside lease in between ML Pillar H to H1
Patch-8	*	Old quarry inside to outside lease in between ML Pillar H1 to H2

*These patches are not shown as working encroachment in Shah Commission communication.

Area marked 'A' by Shah Commission Communication is safety zone of KMC 54 Ha.

SIGNATURE
(Lessee/Representative)

Proceeding and
validation is done in
presence of lessee and
all survey team members
However, lessee's representative
declined to sign

SIGNATURE
(Team Members)

1. AND KUMAR KANUNGO Chanderpo
14/08/2013
2. Binod K. Sahu Binod
14/8/13
3. Pramod K. Bhatia Pramod
14/8/13
4. Shree Ramprasad Anand Kumar Shree
Range Officer Champu 14/08/2013
5. Parichanan Naik Parichanan
Forester Joda Section 14/8/13

Annexure-B

LAND USE AREA STATISTICS OF ML	
Jurudi-54 Manganese Mines	
SUB-CATEGORY	AREA-HA
Fines Stack Yard	0.274
Non forest Area	1.283
Old Quarry	2.459
Old Quarry Pit	4.221
Road	1.526
Safety Zone	2.164
Shed	0.003
Stack Yard	0.256
Subgrade Dump	4.558
Vacant Area	37.521
Vacant Land	0.254
Weigh Bridge	0.004
TOTAL-AREA	54.523

Annexure-C

APPROVED LAND USE AREA STATISTICS OF ML	
Jurudi-54 Manganese Mines	
CATEGORY	AREA-HA
BROKEN UP AREA	4.498
DUMPING YARD	6.012
MINES ROAD	0.141
MINING	27.629
PROPOSED PLANTATION	8.893
SAFETY ZONE	4.458
STOCK YARD	0.497
VILLAGE ROAD	0.654
OTHERS	1.403
TOTAL AREA	54.185

SUB-CATEGORY	AREA-HA
Old Quarry Pit	0.001
Road	0.033
Subgrade Dump	0.058
TOTAL AREA	0.092

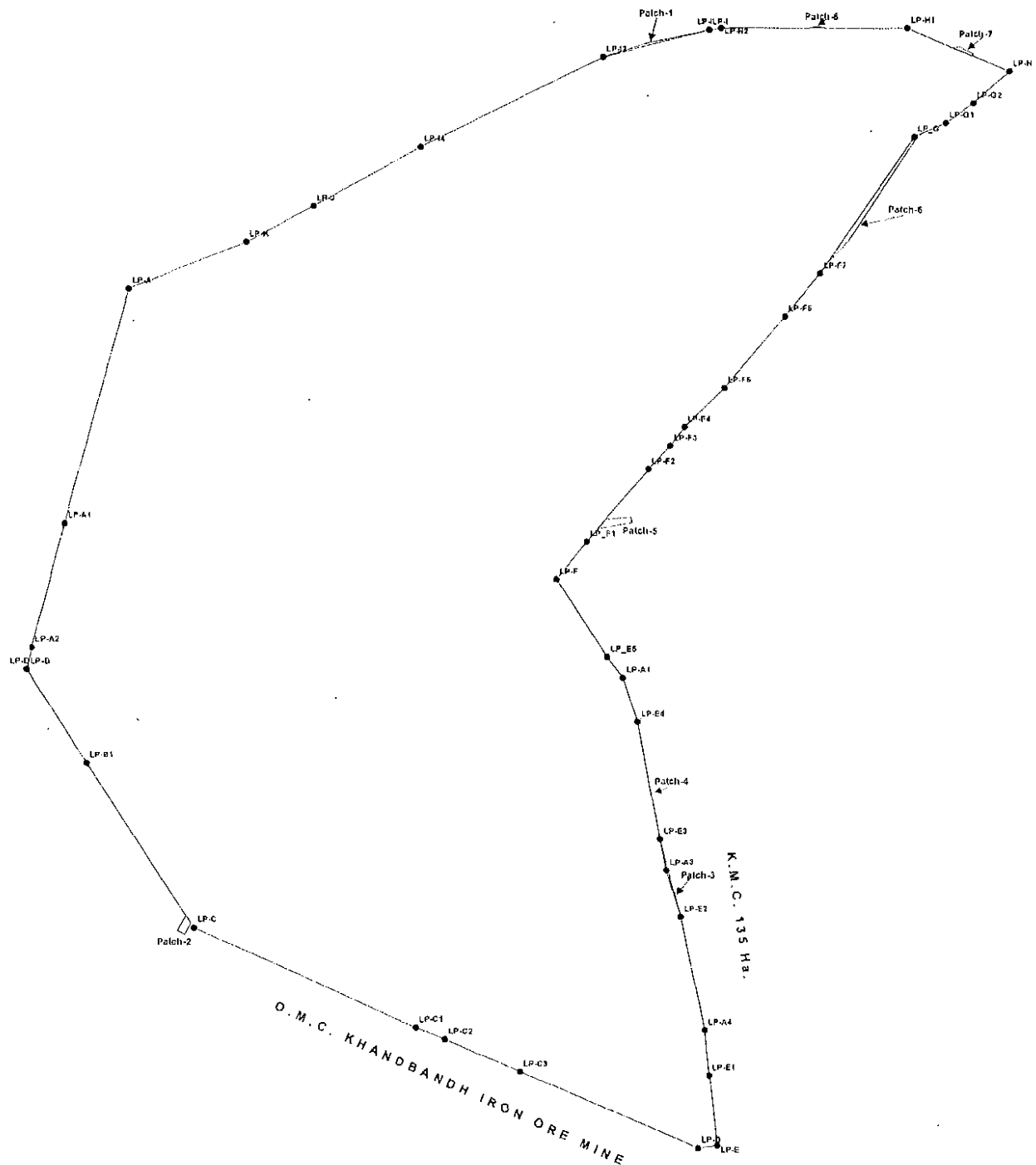
TS SURVEY OF MINING LEASE AREA AND ADJACENT AREA WITH SOME MINING ACTIVITY IRON ORE MINE OF M/S. KALINGA MINING CORPORATION, JALHARI (54 Ha.)

SCALE-1:3000

0 0.05 0.1 0.2 0.3 0.4 Km



MALARAI-JALAHARI IRON & MN. ORE MINES



LEGEND

- TS Surveyed ML Pillars
- TS Surveyed Lease Boundary
- ◊ Adjacent Patches

JOINT SURVEY REPORT

MINING LEASE: Jurudi-27 Iron Ore Mines

**LESSEE/MINE OWNER: M/s Kalinga Mining
Corporation**

1. Name of the Mining lease: *Jurudi27 Iron Ore Mines*

2. Name of the Lessee: M/s Kalinga Mining Corporation

3. TS surveyed map (Present Enjoyment)

TS survey of present lease boundary pillar positions, land use within lease area, areas shown as encroachment in Shah Commission's communication and areas adjacent to the lease boundary with some mining related activity was undertaken. A composite map has been prepared showing present enjoyment lease boundary, inside land use and outside land use of area adjacent to lease boundary with some mining activity. The observation of the field team in regard to land use of the adjacent area has been recorded in form of minutes attached as Annexure-A.

Maps enclosed:

- i. Vector map of TS surveyed Map showing present enjoyment and adjacent area with mining activity.
- ii. PDF version of above map.

4. Surveyed Land use map (Present Enjoyment)

All the land use area like broken up area, S/R, DLC, Forest/Non-forest, Reserve forest pillars, Safety zone pillars as per field position were TS surveyed. The broken up area comprising quarry, dump, stack-yard, road, office and other mining related activities have been captured within the leasehold area. The area statistics is in Annexure-B.

Map enclosed:

- i. TS surveyed Land use map (Present Enjoyment) in vector format

5. Land use map (Approved):

The approved Land use map is available, but could not be registered with lease deed map as the latter is not available. However, approved land use area statistics was computed and provided in the Annexure-C.

6. Geo-referenced Lease deed map.


Lease deed map is not available.


7. Comparison of lease map:

In this case no comparison could be done as geo-referencing of lease map was not possible. However, lease area computed in two different ways is tabulated below.

As per Lease Deed (Land schedule)	As per geo-referenced Lease Map	As per TS survey
27.17 hectares	Geo-referencing could not be done as lease deed map is not available	27.089 hectares


(A.K. Mohapatra) 30.8.13
CE, ORSAC


(Deepak Mohanty)
Director, Mines


(D. Biswal)
Additional Secretary
F & E Department

Annxure

**PROCEEDING OF THE JOINT SURVEY AND DEMARCATION OF MINING LEASE
AREA BY TEAM-1, JODA CIRCLE IN PURSUANCE TO THE DECISION OF THE
HON'BLE JUSTICE SHAH COMMISSION OF ENQUIRY**

Date:14.08.2013

M/s Kalinga Mining Corporation(Block 27.1705 ha.),
Jurudi, Keonjhar

- 1 The T.S. Data taken in the field in presence of lessee/ representative has been checked and validated in the laboratory in presence of team members as well as lessee/representative & found correct.
- 2 The areas adjacent to the lease boundary with some mining related activity were captured through T.S. survey. The same was also validated by the team members in presence of lessee/representative. The details of such patches are given below.

Patch No.	Area marked as working encroachment in Shah Commission communication	Description
Patch-1	*	Railway acquired area from inside to outside lease in between ML Pillar F to G
Patch-2	*	Railway acquired area from inside to outside lease in between ML Pillar F to G
Patch-3	*	Railway acquired area from inside to outside lease in between ML Pillar F to G
Patch-4	*	Road inside to outside lease
Patch-5	*	Semi pucca house inside to outside lease in between ML Pillar G to H
Patch-6	*	Road inside to outside lease in between ML Pillar G to H
Patch-7	*	Semi pucca house near inside to outside lease near ML Pillar H
Patch-8	*	Private land inside to outside lease near ML Pillar H to H6

Patch-9	*	Road inside to outside lease in between H to H6
---------	---	---

*These patches are not shown as working encroachment in Shah Commission communication.

SIGNATURE
(Lessee/Representative)

Proceder to validate
at 20m in proceder ch
in representative in
team @ all survey
team member. However
termi representative
decline to sign

SIGNATURE
(Team Members)

1. AND KUMAR KANUNGO Kanungo
14.08.2013
2. Bencate Kh. Sehw Sehw
14/8/13
3. Poomad Ky Belosa. Belosa
14/8/13
4. Shree Ramapad Aralinda Alzhore
Rajy Jhore Champu Alzhore
14/08/2013
5. Parichanan Naik
Forester, Joda Seeban Naik
14/8/13

Annexure-B

PRESENT LAND USE AREA STATISTICS INSIDE ML	
Jurudi27 Iron Ore Mines	
SUB-CATEGORY	AREA (Ha)
Play Ground	0.328
Private Land	0.473
Quarry Pit	3.371
Rail Line	0.124
Residential Area	1.022
Road	0.565
Safety Zone	0.826
Safety Zone	0.369
Semipucca House	0.033
Stack Yard	0.164
Sub Grade Dump	5.204
Tarini Club	0.003
Vacant Land	14.608
Water Tank	0.001
TOTAL AREA	27.091

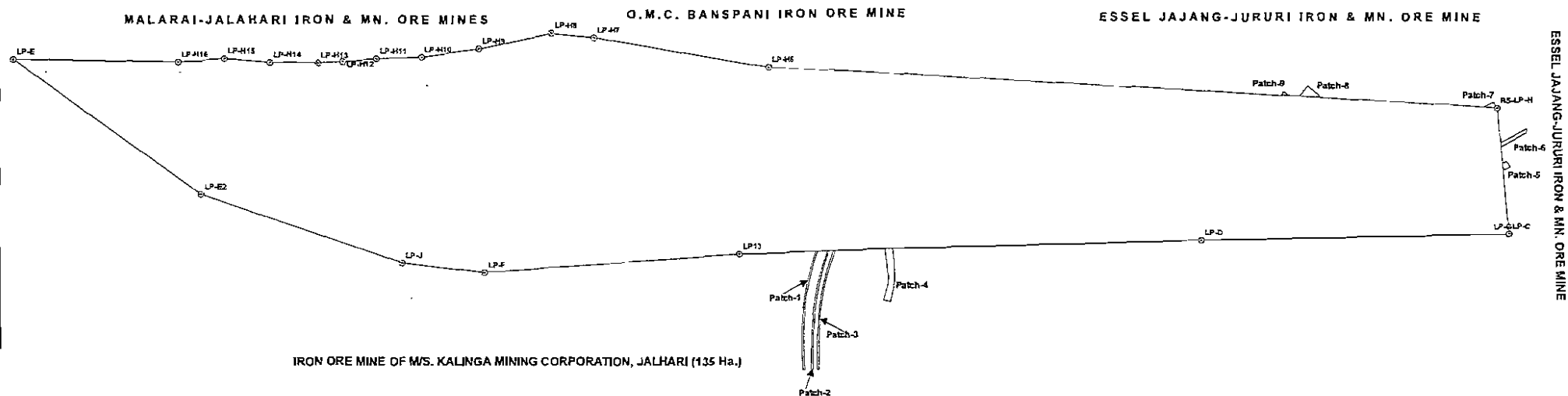
Annexure-C

APPROVED LAND USE AREA STATISTICS OF ML	
Jurudi27 Iron Ore Mines	
CATEGORY	AREA (Ha)
Aquired By S.E. Rly	1.195
Infrastructure	0.782
Magazine	0.020
Mining With Haul Road	11.630
Non Forest Land	0.829
Plantation	1.787
Road	0.141
Safety Zone	2.315
Waste Dump	0.396
OTHERS	6.391
TOTAL AREA	25.486

**TS SURVEY OF MINING LEASE AREA AND ADJACENT AREA WITH SOME MINING ACTIVITY
IRON ORE MINE OF M/S. KALINGA MINING CORPORATION, JALHARI (27 Ha.)**



SCALE-1:3000
0 0.05 0.1 0.2 0.3 0.4 Km.



LEGEND

- TS Surveyed ML Pillars
- TS Surveyed Lease Boundary
- ◡ Adjacent Patches

JOINT SURVEY REPORT

MINING LEASE: Jurudi-12 Iron Ore Mines

**LESSEE/MINE OWNER: M/s Kalinga Mining
Corporation**

1. Name of the Mining lease: *Jurudi12 Iron Ore Mines*

2. Name of the Lessee: M/s Kalinga Mining Corporation

3. TS surveyed map (Present Enjoyment)

TS survey of present lease boundary pillar positions, land use within lease area, areas shown as encroachment in Shah Commission's communication and areas adjacent to the lease boundary with some mining related activity was undertaken. A composite map has been prepared showing present enjoyment, lease boundary, inside land use and outside land use of area adjacent to lease boundary with some mining activity. The observation of the field team in regard to land use of the adjacent area has been recorded in form of minutes attached as Annexure-A.

Maps enclosed:

- i. Vector map of TS surveyed Map showing present enjoyment and adjacent area with mining activity.
- ii. PDF version of above map.

4. Surveyed Land use map (Present Enjoyment)

All the land use area like broken up area, S/R, DLC, Forest/Non-forest, Reserve forest pillars, Safety zone pillars as per field position were TS surveyed. The broken up area comprising quarry, dump, stack-yard, road, office and other mining related activities have been captured within the leasehold area. The area statistics is in Annexure-B.

Map enclosed:

- i. TS surveyed Land use map (Present Enjoyment) in vector format

5. Land use map (Approved):

The approved Land use map is not available.


6. Geo-referenced Lease deed map.

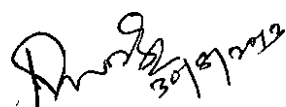
Lease deed map is not available.

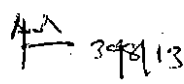
7. Comparison of lease map:

In this case no comparison could be done as geo-referencing of lease map was not possible. However, lease area computed in two different ways is tabulated below.

As per Lease Deed (Land schedule)	As per geo-referenced Lease Map	As per TS survey
12.691 hectares	Geo-referencing could not be done as lease deed map is not available	12.89 hectares


(A.K. Mohapatra) 24.8.13
CE, ORSAC


(Deepak Mohanty)
Director, Mines


(D. Biswal)
Additional Secretary
F & E Department

PROCEEDING OF THE JOINT SURVEY AND DEMARCATION OF MINING LEASE
AREA BY TEAM-1, JODA CIRCLE IN PURSUANCE TO THE DECISION OF THE
HON'BLE JUSTICE SHAH COMMISSION OF ENQUIRY

Date: 14.08.2013

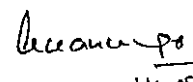
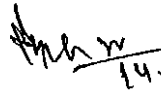


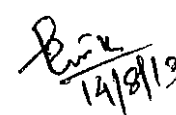
M/s Kalinga Mining Corporation (Block 12 ha.),
Jurudi, Keonjhar

- 1 The T.S. Data taken in the field in presence of lessee/ representative has been checked and validated in the laboratory in presence of team members as well as lessee/representative & found correct.
- 2 The areas adjacent to the lease boundary with some mining related activity were captured through T.S. survey. The same was also validated by the team members in presence of lessee/representative.

SIGNATURE
(Lessee/Representative)

SIGNATURE
(Team Members)

Process of validation
is done in presence
of the representative
of lease & all
survey team members.
However, team's representative
declines to sign

- 1 ANIL KUMAR KANUNGO 
14.08.2013
- 2 Binoy K. S. Choudhary 
14.8.13
- 3 Pramod K. Bhatia 
14/8/13
4. Shree Ramapat Arora 
Range Officer, Chanderpur
14/08/2013
5. Panchanan Naik 
Forester, Joda Section.
14/8/13

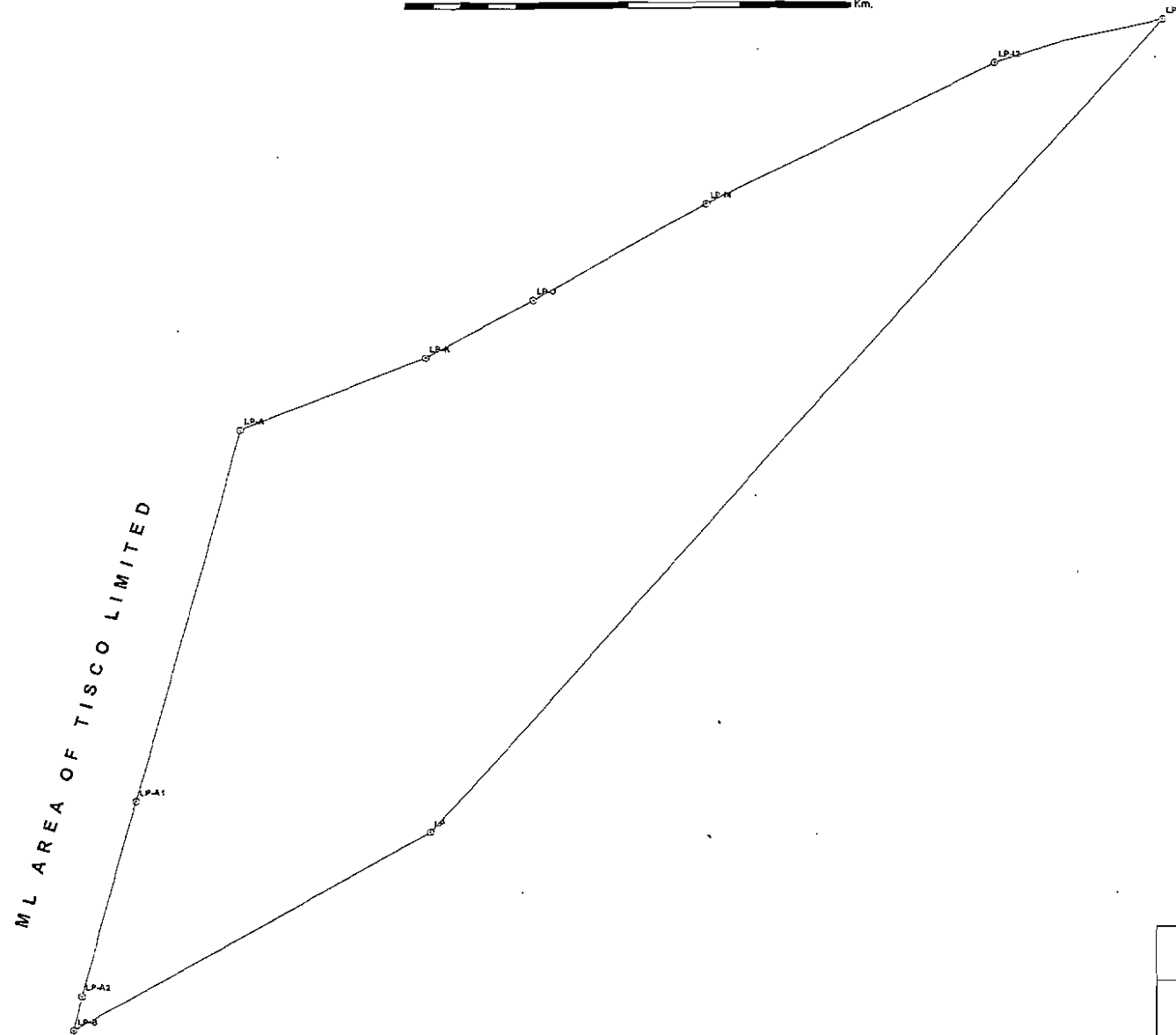
Annexure-B

PRESENT LAND USE AREA STATISTICS INSIDE ML	
Jurudi12 Iron Ore Mines	
SUB-CATEGORY	AREA (Ha)
Fines Stack Yard	0.332
Old Quarry	1.771
Road	0.200
Safety Zone	0.725
Vacant Land	9.853
TOTAL AREA	12.881

TS SURVEY OF MINING LEASE AREA
IRON ORE MINE OF M/S. KALINGA MINING CORPORATION, JALHARI (12 Ha.)

SCALE-1:2000

0 0.035 0.07 0.14 0.21 0.28 Km.



LEGEND

- TS Surveyed ML Pillars
- TS Surveyed Lease Boundary