

KRISHNA ENTERPRISES

C-56, TDI City, Panipat
Haryana – 132013

Dated: 30 June 2018

To,
The Director (IA Division, Non-Coal Mining),
Ministry of Environment, Forest and Climate Change (MoEF&CC)
Indira Paryavaran Bhawan,
Aliganj, Jor Bagh Road
New Delhi

Reference: **1. Proposal No. IA/HR/MIN/72516/2018,**
 2. MoEF&CC File No. IA-J-11015/32/2018-IA-II(M)

Subject: - Proposed Boulder, Gravel and Sand (Minor Mineral) Mining Project at “Kot Block/PKL B-8&9”, Village-Kot and Dabkori, mining lease area of 31.59 Hectare in Panchkula District by M/s Krishna Enterprises. **Regarding Submission of Reply for ToR against Additional Details Sought by Member Secretary**

Sir,

With reference to the above-mentioned proposal and MoEF&CC file No., application was submitted to MoEF&CC dated on 29 Jan 2018 for Environmental Clearance. Additional Essential Details Sought by Member Secretary dated on April 23-24, 2018 on 30th meeting of the Reconstituted Expert Appraisal Committee for Environmental Appraisal of Mining Projects (Non-Coal) of the Ministry of Environment, Forest and Climate Change are complied with this letter along with all necessary annexures.

Therefore, requested please receive required information and accept our proposal for grant of ToR.

Thanking you,
Yours Faithfully

Mr Parmesh Singh
(Authorized Signatory)

For M/s Krishna Enterprises


(Authority Signatory)

Submission of reply for the project “Boulder, Gravel and Sand Minor Mineral Mining project at Kot and Dabkori Village, Panchkula District, Haryana by M/s Krishna Enterprises (31.59 Ha)”

Query 1. - Plan and Sections clearly showing the area of mining/mining zone. The agricultural fields should not be included in the mining zone and only river bed area should be taken in account while determining the mining zone.

Reply – The sections of lease area have been prepared based on the DGPS survey of river bed mining lease. Plan and section showing the lease boundary, agricultural fields, restricted area for mining, river creek, working mining area/mining zone i.e. Block – PKL B-8 (1 to 8) and Block PKLB-9 (1 to 5), after excluding agricultural land and restricted area for mining, plan sections are attached as **Annexure -1 to 4** with area details of each block.

Query 2. - After determining the mining zone production quantity to be calculated and same needs to be submitted along with the sections based on which the production quantity is calculated.

Reply- Mining zone has been determined after survey of restricted area, sand availability and agricultural land within mining lease. Available area for mining was calculated including all segments **113640.408 square meter** for PKLB-8 and **34861.454 square meter** for PKLB-9. Total available area of mining is 148501.862 square meter or **14.85 hectare**. Density of mineral was considered for river bed matrix comprising of boulder, gravel and sand mineral as 2 g/cc (2ton/cum). The depth of mining has been considered 3 m from ground surface of river bed. **Annexure 1 to 4** are attached to show location of all segments within mining lease.

Calculation for reserves:

- a) Total geological reserves = Lease Area (sq. m) x depth x specific gravity of sand
= $31.59 \times 10,000 \times 3 \times 2 = 18,95,400$ MT
- b) Net Mining area = 148501.862 Square meter
- c) Mineable Reserve = Area of segment x density of mineral x depth of mining

Sr No	Block Name	Segment Name	Area of Segment (sq. meter)	Density of Mineral (g/cc)	Depth of Mining (m)	Estimated Mineral Quantity (MT)
1	PKL B-8	PKL B-8(1)	14208	2	3	85249
2	PKL B-8	PKL B-8(2)	19642	2	3	117854
3	PKL B-8	PKL B-8(3)	1394	2	3	8366
4	PKL B-8	PKL B-8(4)	502	2	3	3014
5	PKL B-8	PKL B-8(5)	1209	2	3	7257
6	PKL B-8	PKL B-8(6)	8719	2	3	52316
7	PKL B-8	PKL B-8(7)	3114	2	3	18684
8	PKL B-8	PKL B-8(8)	64850	2	3	389101
9	PKL B-9	PKL B-9(1)	4832	2	3	28993
10	PKL B-9	PKL B-9(2)	13595	2	3	81572
11	PKL B-9	PKL B-9(3)	6770	2	3	40618
12	PKL B-9	PKL B-9(4)	217	2	3	1304
13	PKL B-9	PKL B-9(5)	9447	2	3	56681
Total area of PKL B 8 (square meter)			113640	Total for PKL B-8 (TPA)		681842
Total area of PKL B 9 (square meter)			34861	Total for PKL B-9 (TPA)		209169
Total area in square meter			148502	Total both Blocks (TPA)		891011
			Say 14.85 Hectare			Say 8,91,000 TPA

Query 3. - The project is located on non-perennial river bed and prior replenishment study report is required to be submitted at the time of consideration of projects for the environmental clearance to ascertain the annual excavation quantity. Thus, the proponent should submit the methodology for conducting the replenishment study.

Reply- Methodology for conducting the replenishment study: (As Suggested by MoEF&CC)

1. Baseline levels of the mining lease area will be taken by DGPS as mean sea level and reduced levels (MSL & RL). The entire mining lease will be divided suitably into 25m × 25 m grids with by laying cross-section across the width of river and along the direction of flow of the river. Each grid will be suitably numbered for identification. The base line levels (MSL & RL) of the corner points of each grid will be recorded.
2. Grids, where mine working shall be carried out will be identified, along with delineation of such grids, which cover area under no mining zone i.e. safety barriers from the river bank, safety barriers at lease boundary, restrictions areas as per condition of Lol/ Mining Lease deed, restriction as per Mineral Concession Rule of the Concerned State, restrictions as per sustainable sand mining management guidelines 2016 etc.
3. Replenishment study will be carried out on mined out area of the lease by observing ground levels at grid points(pillars) in two stages viz., (a) before commencement of mining operation preferably during pre-monsoon preferably during first week of June; (b) after the

replenishment /deposition on river bed during monsoon preferably in during first week of October.

4. Actual replenishment will be calculated based on the level difference on each grid corresponding to levels observed during pre-monsoon and levels observed on same grid point after monsoon is over. The replenishment in any grid shall be the level difference in meter multiplied by the area of grid. Summation of replenishment for different grids shall be the total replenishment in the mined-out area for the particular period. No mining will be carried out during monsoon period.
5. Based on the replenishment after rains, the depth to which mining shall be carried out during post and pre-monsoon period shall be determined for each year of mining.

At the time of consideration of project for environmental clearance prior replenishment study report will be presented to EAC to ascertain annual excavation quantity.

Query 4. – Based on the production quantity transportation planning needs to be done and detailed transportation plan and route need to be submitted.

Reply – Based on the production quantity transportation planning has been done by estimating number of trucks required to transport mineral including transport route i.e. haul road and paved road like ODR, MDR, SH and NH nearby project area. Based on the production and 25 tons of dumper and trucks to be use 133 trucks per day will be required. If we consider mining operation 12 hours per day the traffic density will be increased by 11 trucks per hour. If we consider both incoming and outgoing trucks 22 trucks per hour will increase on present traffic condition. Calculation is presented below:

Total production = **891011.169 TPA say 8,91,000 MT per Annum**

No of working days (Excluding 52 Sundays and 45 Rainy Days) 268 days

Daily production = 3325 MT

Vehicle required per day =132.98 say 133

Working time for mining = 12 hours

Vehicle required per hour = 11

Considering to and from movement from mine to crusher, number of trucks /hr =22

Detailed transportation plan and routes superimposed on google earth image (Satellite image) and on survey of India toposheet including haul road paved road (MDR, ODR and state highway) are attached as **Annexure 5** and **Annexure 6** respectively.

Transportation planning has been done by haul road and paved road verification on site. Details of road configuration and distance from mine lease are provided in detail as below mentioned Table 1&2. Detailed map has been provided as **Annexure 5** and **Annexure 6**.

Table -1 Showing route to crusher zone from Kot and Dabkori village mine site

Sr. No.	From	Vehicle destination	Route map symbols	Distance
1.	Left Lease Kot	Rattewali crusher zone	A1ZHIR1T1G2H2W	9.263km
2.	Left Lease Kot	Manak Tabra crusher zone	A1ZHEFOP1PQR	10.440km
3.	Left Lease Kot	Raipur Rani crusher zone	A1ZHEFOP1PQS	11.130km
4.	Left Lease Kot	Handesra crusher zone	A1ZHEFGU	27.160km
5.	Left Lease Kot	Mubarakpur crusher zone	A1ZNDCT	9.270km
6.	Left Lease Kot	Burj Kotian	A1ZND CBAY	21.7km
7.	Left Lease Kot	Belwali	C1LKA3V	1.450km
8.	Right Lease Kot	Rattewali crusher zone	U1X1G2H2W	4.663km
9.	Right Lease Kot	Manak Tabra crusher zone	U1X1G2H2XI1J1OP1PQR	11.243km
10.	Right Lease Kot	Raipur Rani crusher zone	U1X1G2H2XI1J1OP1PQS	11.933km
11.	Right Lease Kot	Handesra crusher zone	D1IHEFGU	27.820km
12.	Right Lease Kot	Mubarakpur crusher zone	D1IHEDCT	12.280km
13.	Right Lease Kot	Burj Kotian	D1IHEDCBAY	24.710km

Table -2 Showing Route of Haul Road from Mine Site to Highway

Sr. no.	Road Name	Symbols	Distance in km	Haul road details
1	NH junction to Burj Kotian	YA	1.4 km	Cement concrete road 10m width, 1m/1m ES. Good condition.
2	NH5	AB	5.87 km	4 lane dual c/w with PS + 2 lane service road on both side. BC road, c/w width 7m + 1.5m PS on both sides with median + 2 lane service road on both side. Good condition.
3	NH7	BCDEFG	19.4 km	6 lane dual c/w in progress. Road being widened to BC road, c/w width 10.5m + 1.5m PS + 1m ES on both sides with median. Good condition.
4	Junction with NH7 to Mubarakpur Crusher Zone (ODR6)	CT	2.27 km	BC road, c/w width 10m, 1m/1m ES Good condition.
5	Junction with NH7 to Handesra	GU	18.5 km	BC road, c/w width 5.5m, 1m/1m ES Good condition.
6	Kot – Dabkauri – Billa Road	EHIR1T1G2X1 Z1JKD2B2MND	Km 0 to Km 0+826	BC road, c/w width 5.5m, 1m/1m ES. Good condition.
			Km 0+826 to Km 1+300	Pavement with concrete blocks (appear pavement grade). C/W width 5.5m, 1m/1m ES. Good condition.
			Km 9+000 to Km 13+400	BC road, c/w width 3.5m, 1m/1m ES. Good condition (Km0 to Km10+700). Fair to Poor condition (Km10+700 to Km 13+400)

7	Khangesra – Toka – Manak Tabra (upto junction)	FOP1PQ	7.26 km	BC road, 5.5m wide, 1m/1m ES.
8	Junction to Manak Tabra crusher zone	QR	0.030km	BC road, 5.5m wide, 1m/1m ES.
9	Junction to Raipur Rani crusher zone	QS	0.720 km	BC 6.8m wide, 1m/1m ES
10	Connecting road to a Belwali crusher	A3V	0.170 km	Earthen road, 4.5m wide
11	Marketing board road	XG1H1	3.24km	Premix Carpet road 3.5m wide, 1m/1m ES
12	PWD road	H1R	5.61km	BC road 5.5m wide, 1m/1m ES
13	Toka – Shamtoo – Rattewali road	WXJ1O	4.550 km	BC road 5.5m wide, 1m/1m ES
Kot lease left hand haul roads				
14		C1L	0.750 km	Haul Road. Earthen road, 3.5m wide
15		C2D2	0.450 km	Haul Road. Earthen road, 3.5m wide
16		A2B2	0.670 km	Haul Road. Earthen road, 6m wide
17		B1M	1.72 km	Haul Road. Earthen road, 4.5m wide
18		A1Z	0 km to 0+750 km	Haul Road. Proposed road
			0+750 km to 1+000 km	Haul Road. Earthen road, 3.5m wide
19		NZ	0km to 0+980km	Haul Road. BC road 3.5m wide, 1m/1m ES
			0+980km to 1+510km	Haul Road. Earthen road, 3.5m wide
20		ZH	0km to 0+600km	Haul Road. Earthen road, 5m wide
			0+600km to 0+845km	Haul Road. Interlocking concrete tiles footpath grade 2.5m wide, 1m/1m ES
			0+845km to 1+100km	Haul Road. Interlocking concrete tiles footpath grade 5.5m wide, 1m/1m ES
Kot lease right hand haul road				
21		Y1Z1	0+000km to 0+150km	Haul Road. Proposed road
			0+150km to 0+730km	Haul Road. Earthen road, 3m wide
22		U1X1	0km to 0+600km	Haul Road. Earthen road, 3m wide

			0+600km to 0+690km	Haul Road. Interlocking concrete tiles footpath grade 3m wide, 1m/1m ES
23		S1T1	0km to 0+027km	Haul Road. Proposed road
			0+027km to 0+344km	Haul Road. Earthen road, 3m to 6m wide
24		Q1R1	0.160km	Haul Road. Earth track, 1m wide
25		D1I	0km to 0+075km	Haul Road. Earth track, 5m wide
			0+075km to 0+220km	Haul Road. Interlocking concrete tiles footpath grade 6m wide, Rt side rectangular concrete drain

Code: ES – Earthen Shoulder, BS – Both Sides, PS – paved shoulder, c/w – carriageway, BC – bituminous concrete.

Query 5. - A plan needs to be submitted clearly showing the mining leases in the upstream and downstream with their area and quantity.

Reply – As per cluster certificate from mining officer Panchkula dated on 28/03/2018 Memo No. 4125, there is no other mining contract/lease in the radius of 500 meter of **Kot Block/PKL-8&9**. Received cluster certificate Attached as **Annexure 7**.

Query 6. – The proponent should verify the kml file.

Reply - The KML file has been verified and excluded restricted area, agricultural field and trees. Sand availability areas where replenishment is possible considered for mining zone and total 13 segments were identified for mining for both blocks PKLB – 8&9. Details of all segments with their area and mineral quantity are presented below:

Sr No	Block Name	Segment Name	Area of Segment (square meter)	Estimated Mineral Quantity (MT)
1	PKL B-8	PKL B-8(1)	14208	85249
2	PKL B-8	PKL B-8(2)	19642	117854
3	PKL B-8	PKL B-8(3)	1394	8366
4	PKL B-8	PKL B-8(4)	502	3014
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12	PKL B-9	PKL B-9(4)	217	1304
13	PKL B-9	PKL B-9(5)	9447	56681
		PKL B 8	113640	681842

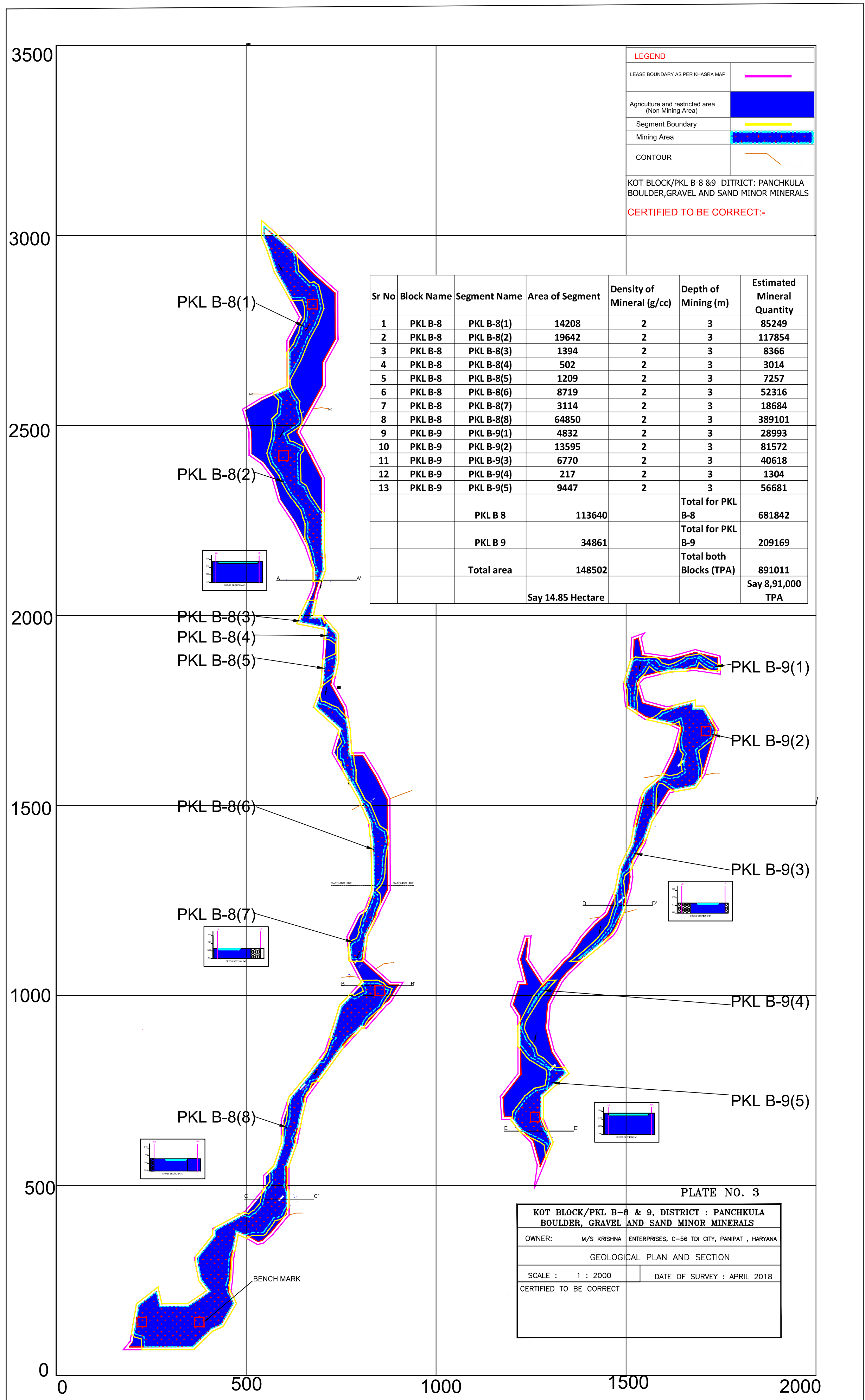
Boulder, Gravel and Sand (Minor Mineral) Mining project at Village- Kot and Dabkori, Mining lease area of 31.59 ha. in District- Panchkula, Haryana by M/s Krishna Enterprises -ToR Regarding (IA/HR/MIN/72516/2018, MoEF&CC: J-11015/32/2018-IA. II(M)

		PKL B 9	34861	209169
		Total lease	148502	891011
			Say 14.85 Hectare	Say 8,91,000 TPA

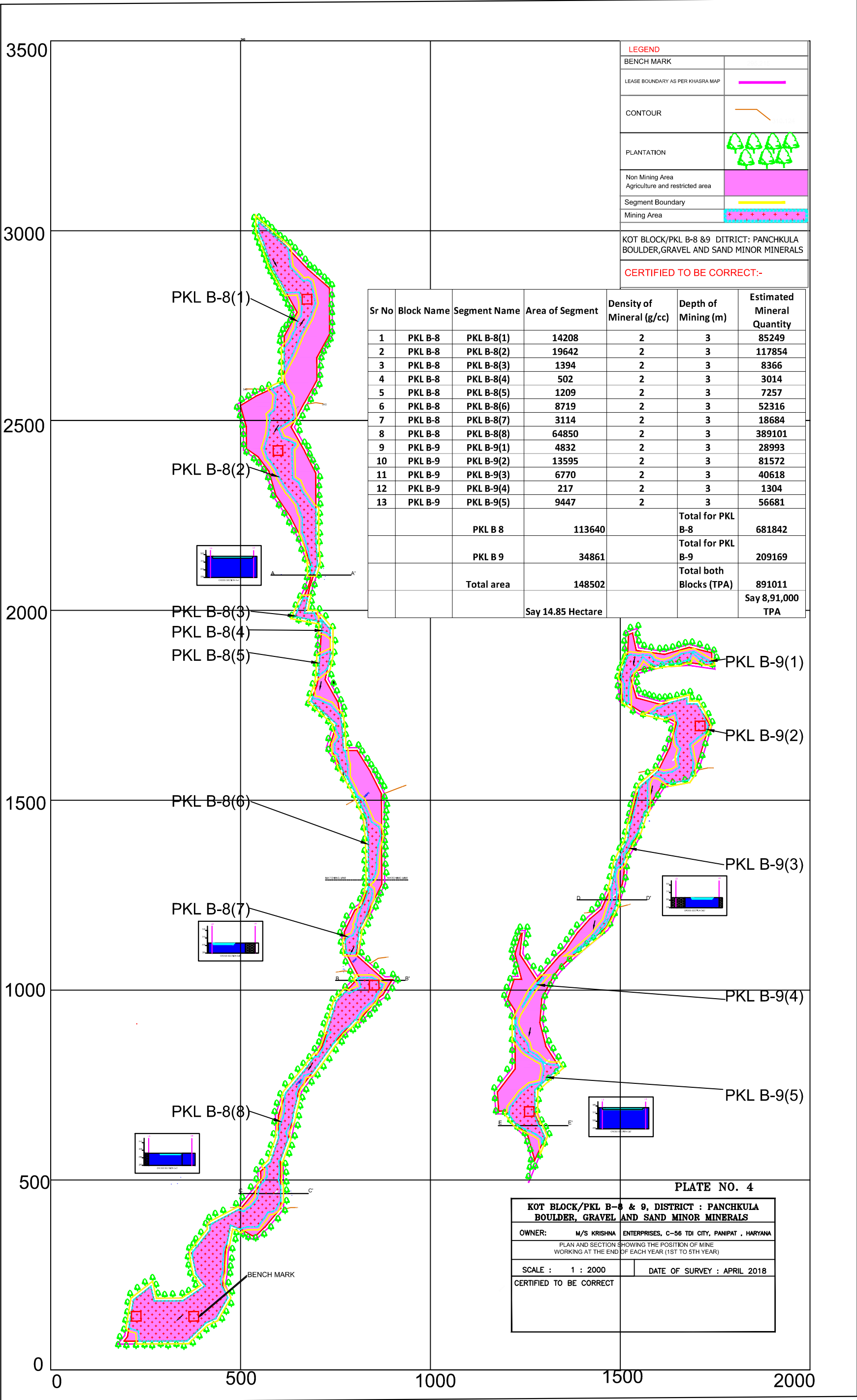
As per updated KML file total area of all the working mining pits was found 14.8 hectares, whereas block PKL B-8 having area about 113640 square meters with 8 segments and block PKL B – 9 having area about 34861.454 square meter with 5 segments. Estimation of mineral quantity was revised and found 891011.169 tonnes sand per annum can be excavated considering 3-meter depth and density factor 2 gm/cc or 2 tonnes/cubic meters. Proposed quantity of mineral excavation is 8,91,000 TPA.

ANNEXURE – 1

GEOLOGICAL PLAN AND SECTIONS



ANNEXURE – 2
PLAN AND SECTIONS
SHOWING THE POSITION OF
MINE WORKING AT THE END
OF EACH YEAR (1ST TO 5TH
YEAR)



ANNEXURE – 3
RECLAMATION PLAN AND
SECTION

3500

3000

2500

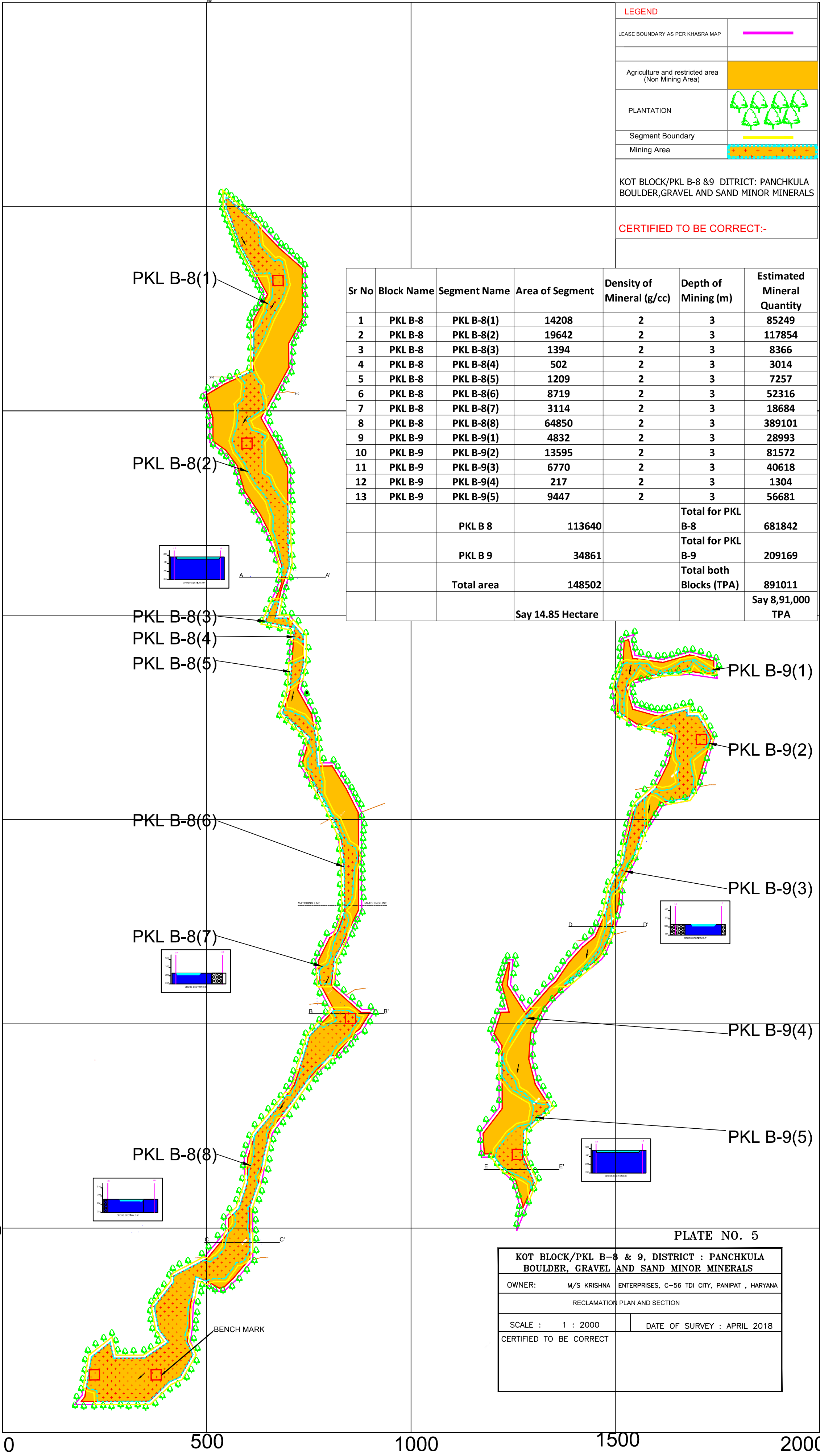
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1500

1000

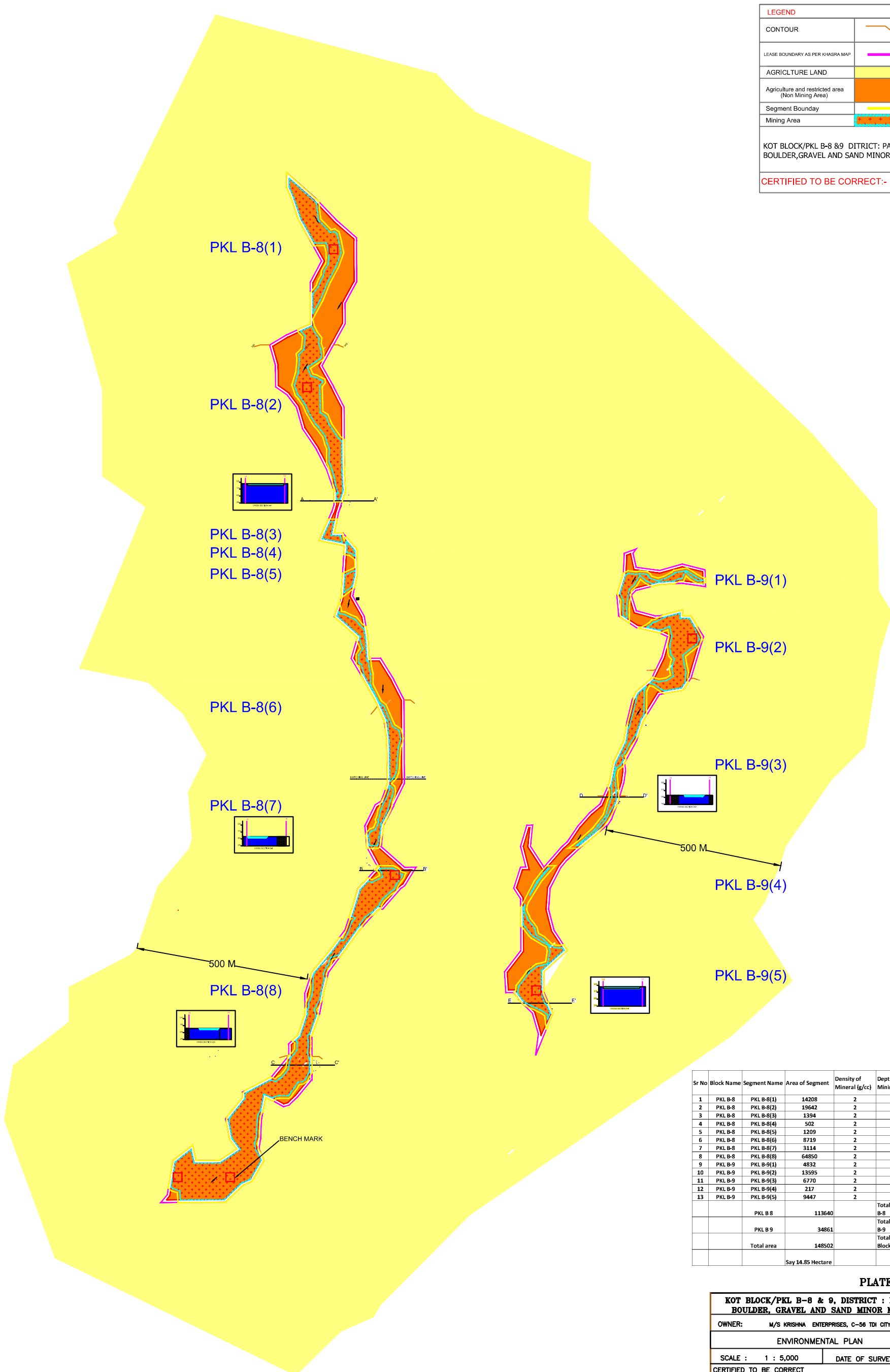
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ANNEXURE – 4

ENVIRONMENTAL PLAN



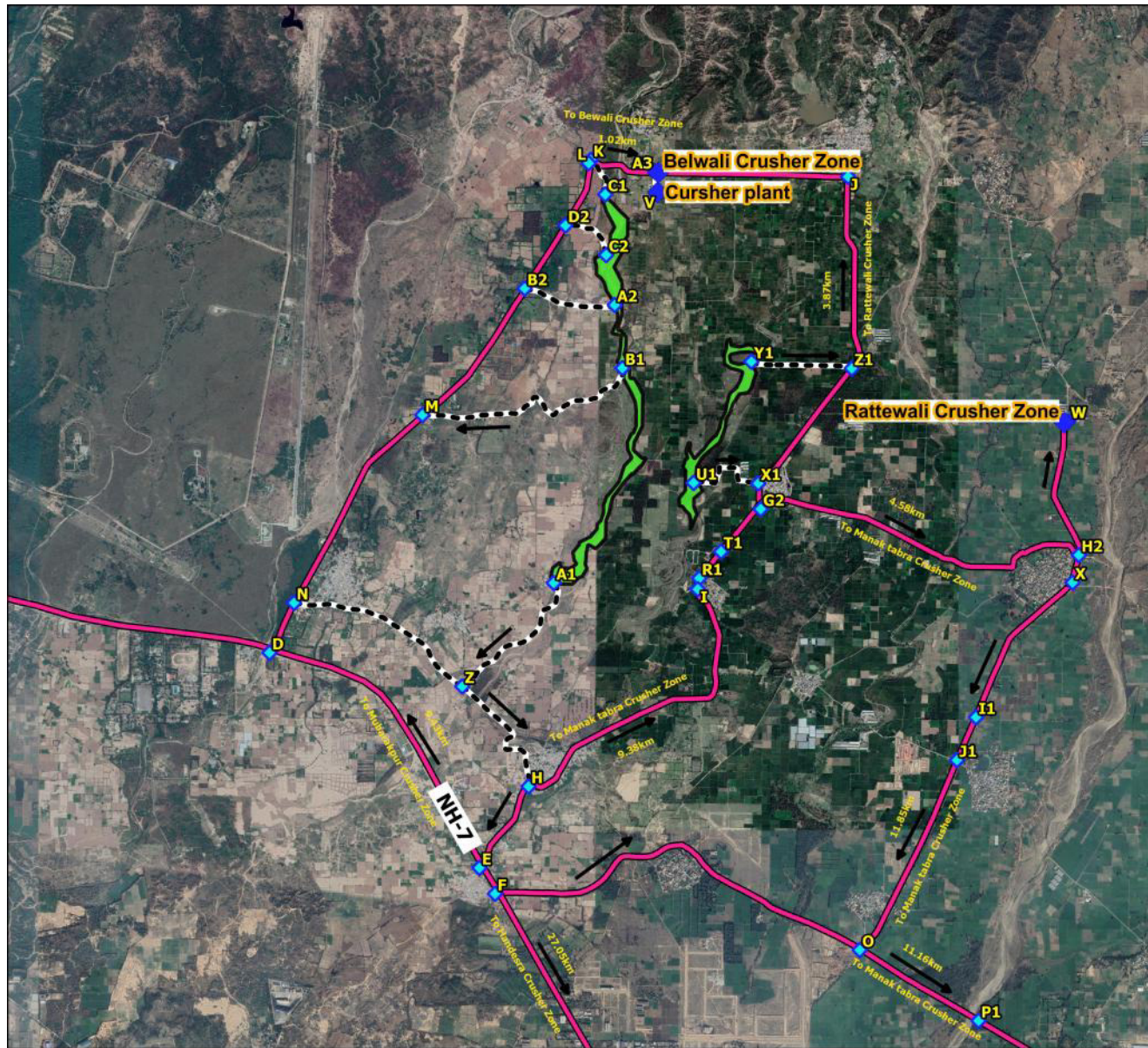
LEGEND	
CONTOUR	
LEASE BOUNDARY AS PER KHASRA MAP	
AGRICULTURE LAND	
Agriculture and restricted area (Non Mining Area)	
Segment Boundary	
Mining Area	
KOT BLOCK/PKL B-8 & 9 DITRICT: PANCHKULA BOULDER, GRAVEL AND SAND MINOR MINERALS	
CERTIFIED TO BE CORRECT:-	

Sr No	Block Name	Segment Name	Area of Segment	Density of Mineral (g/cc)	Depth of Mining (m)	Estimated Mineral Quantity
1	PKL B-8	PKL B-8(1)	14208	2	3	85249
2	PKL B-8	PKL B-8(2)	19642	2	3	117854
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12	PKL B-9	PKL B-9(4)	217	2	3	1304
13	PKL B-9	PKL B-9(5)	9447	2	3	56681
		PKL B-8	113640		Total for PKL B-8	681842
		PKL B-9	34861		Total for PKL B-9	209169
		Total area	148502		Total both Blocks (TPA)	891011
		Say 14.85 Hectare				Say 8,91,000 TPA

PLATE NO. 6

KOT BLOCK/PKL B-8 & 9, DISTRICT : PANCHKULA BOULDER, GRAVEL AND SAND MINOR MINERALS	
OWNER:	M/S KRISHNA ENTERPRISES, C-56 TDI CITY, PANIPAT , HARYANA
ENVIRONMENTAL PLAN	
SCALE : 1 : 5,000	DATE OF SURVEY : APRIL 2018
CERTIFIED TO BE CORRECT	

ANNEXURE – 5
TRANSPORT PLAN ON
SETTELITE MAP



Legend

- ◆ Crusher Zone
- ◇ Route Points
- Haul Roads
- Metalled Roads
- Mine Lease

0 0.7 1.4 2.1 km

Project Title :

Mining of Boulder, Gravel and Sand
Minor mineral at Kot and Dabkauri
Village, Block- Kot Block/ PKL 8&9
- 2 Block, By Ganesh Enterprises

Drawing Title :

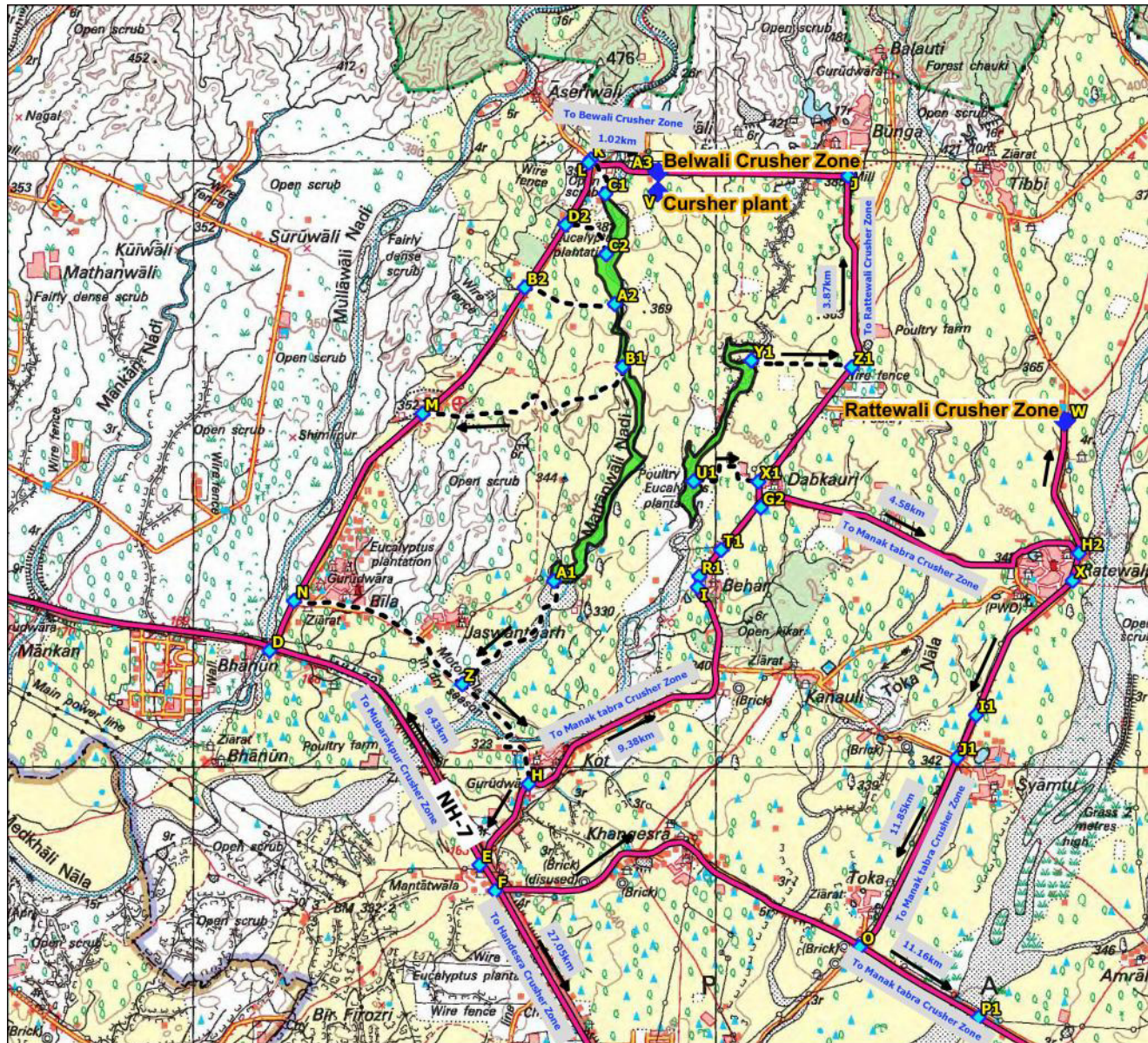
Transport Plan Map of Mining of
Boulder, Gravel and Sand Minor
mineral at Kot and Dabkauri
Village, Block- Kot Block/ PKL 8&9
- 2 Block, By Ganesh Enterprises

Technical Consultant :

Voyants Solutions Pvt Ltd., 403,
Fourth Floor, Park Centra,
Sector-30, NH-8,
Gurugram-122001

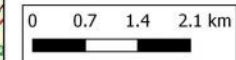


ANNEXURE – 6
TRANSPORT PLAN ON
SURVEY OF INDIA
TOPOSHEET



Legend

- ◆ Crusher Zone
- ◇ Route Points
- Haul Roads
- Metalled Roads
- Mine Lease



Project Title :

Mining of Boulder, Gravel and Sand
Minor mineral at Kot and Dabkauri
Village, Block- Kot Block/ PKL 8&9
- 2 Block, By Ganesh Enterprises

Drawing Title :

Transport Plan Map of Mining of
Boulder, Gravel and Sand Minor
mineral at Kot and Dabkauri
Village, Block- Kot Block/ PKL 8&9
- 2 Block, By Ganesh Enterprises

Technical Consultant :

Voyants Solutions Pvt Ltd., 403,
Fourth Floor, Park Centra,
Sector-30, NH-8,
Gurugram-122001



ANNEXURE – 7
CLUSTER CERTIFICATE
SHOWING NO OTHER MINE
LEASE WITHIN 500 METER
DISTANCE FROM PROJECT
BOUNDARY

From

Mining Officer,
Mines & Geology Department,
Panchkula.

To

M/s Krishna Enterprises
C-56, TDI City, Panipat
Haryana

Memo No- 4125

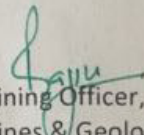
Dated- 28/3/18

Subject

Information regarding status of mining contractor of "Kot
Block/PKLB-8 & 9 with in 500 mtrs radius of another Block.

On the subject noted above.

In this connection, it is intimated that there is no other mining
contract/lease in the radius of 500 mtr of above said block. This is for your kind
information please.


Mining Officer,
Mines & Geology Department,
Panchkula.