

MCDR INSPECTION Format

General

SL. No.	Particulars	Details
1	Name of the Mine	Jilling Langalotta Iron Ore Mine
2	Total Lease Area (Ha) with breakup of Non-forest and forest land	Total Lease Area 456.01 Ha Forest Land: 392.289 Ha Non Forest Land :63.748 Ha
3	Mine Code	30ORI08125
4	IBM Registration Number under rule 45 of MCDR, 2017	IBM/4269/2011
5	Name of the lessee, Address, phone, email and fax number	M/s- Odisha Mining Corporation Ltd, OMC House, Unit-4, Post Box No- 34, Bhubaneswar-751001, Khurda, Odisha. E-mail : info@orissamining.com Phone:0674-2377400 Fax No:0674-2580145
6	Village	Jalahuri , Jurudi, Banspani, Khuntapani, Bholabeda, Jajang
7	Taluka/Mandal	Barbil
8	District	Keonjhar
9	Pincode	758034
10	State	Odisha
11	Post office	Jajang
12	Nearest police station	Bamebari
13	Nearest Railway station	Jaroli
14	Date of Grant of Mining Lease	11-01-2021
15	Date of Execution	11-01-2021
16	Date of opening of Mine	27-02-2021
17	Date of expiry	10-01-2031
18	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Shri Balwant Singh, IAS, (Managing Director & Nominated Owner), Odisha Mining Corporation Limited, OMC House, Post Box No- 34 Bhubaneswar -751001, Odisha. Email:info@orissamining.com Phone:0674-2395689 Fax:0674-2391629 Date of appointment -08-01-2021

19	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Shri Abanikanta Pradhan , (Agent cum Regional Manager), Regional office ,Odisha Mining Corporation Limited, Barbil . At/Po- Barbil, Dist- Keonjhar, Pin-758035, Odisha. Phone:9437431943, Email: apradhan@odishamining.in Date of appointment -02-06-2021
20	Name of the Mines Manager with Address, mobile no, email, fax number and date of appointment in mine	Shri Chinmay Kumar Parida(Mines Manager), At- Jilling, Post- Jajang, Via-Joda, Tahasil-Barbil,Dist- Keonjhar, Odisha . Phone:9742158721 E-mail: cparida@odishamining.in Date of appointment:13-01-2021
21	Name of the Mining Engineer , Qualification and total experience with Address, mobile no, email, fax/phone number and date of appointment in mine	Shri Tapas Kumar Mohapatra , B.tech in Mining Engineering with first class mines manager certificate holder , 14 years of experience . At- Jilling, Post- Jajang, Dist- Keonjhar, Odisha, Pin -758034 .Phone-9438368343, Email: tapas.mohapatra@odishamining.in Date Of appointment:14-04-2021
22	Name of the Geologist , Qualification and total experience with Address, mobile no, email, fax number and date of appointment in mine	Shri Tarun Kumar Kandeyang M. Sc , Mphil (Geology) 19 years of experience Phone : 8018706178 Email : tkkandeyang@odishamining.in Date of appointment : 03-05-2023
23	Date of Approval of Mining Plan/Review of Mining Plan/ their modifications with five-year period and specific condition in approval letter, if any.	Mining Plan approved on dated 19-03-2021. Modified mining plan approved on dated 18-11-2021
24	Mineral(s) granted in lease and proved for mining	Iron Ore
25	Method of Mining(Open cast, Underground)	Open cast
26	Category (Fully Mechanised, Others or Manual)	Fully Mechanized
27	Captive/Non Captive	Non Captive
28	Present EC Capacity	6280000 MT

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Exploration:---

SL.No.	Item	Proposals (FY 2022-23)	Actual work	Remarks
1a	Backlog of previous year	70 core bore holes proposed @ 60mtrs or till the end of mineralization /discontinuation of ore body, whichever is earlier.	89 bore holes drilled amounting to 3854meters at a grid interval of 100mX100m	Cumulatively 164 bores holes were drilled with a total meterage of 8366 Mts in the past as per the AR.
1b	Exploration over lease area for Geological axis 1 or 2.	G1 & G2	G1-164.91 Ha G2-291.19 Ha	Cumulative : G1 - 299.74 Ha G2 - 156.36 Ha after carrying out exploration in 2021-22 & 2022-23. Total Potential mineralized area - 156.68 Ha
1c	Exploration Agency & Expenditure in lakh Rupees during the year	Not Specified	Name of core drilling agency - Maheswari Mining Pvt. Ltd Rs. ,38,74,279.5/-	The ACC Limited, M/S. Geotech India, M/S. The Thriveni Exploration, M/s Essel Mining & Industries Ltd carried out exploration in the past.
1d	Balance area to be explored to bring Geological axis in 1 or 2	NIL	G2 - 156.36 Ha	Exploration has been proposed in plan period till the end of mineralization /discontinuation of ore body, whichever is earlier.
1e	Balance reserves as on 01.04.2023	Nil	Balance reserves as on 01.04.2023- 28088346 Metric Tons	As per the Annual Report submitted for the year 2022-23.
General remarks of inspecting officers on geology, exploration etc		The Iron ore deposit of Jilling Langalota leasehold area is a part of Singhbhum-Bonai-Keonjhar group forming a part of 'Horse-shoe Synclinerium' comes under the litho stratigraphic units. The general trend of the rock is N-S with a variation between NNW-SSE to NNE-SSW with rolling dip.		

Development:--

SL.No.	Item	Proposals (FY 2022-23)	Actual work	Remarks
2a	Location of development w.r.t. lease area	Two quarries Jajanga- Langalotta and Appahatu - Behera Quarry were proposed within the lease area. Jajanga Langalotta Coordinates N- 2427532.593 - 2428557.309 E- 337738.885 – 338373.617 Appahatu & Behera Quarry N- 2430752.578 - 2431340.184 E- 336851.171- 337247.938	Development was done in the proposed area. Jajanga Langalotta Coordinates 2427729-2428516 N 337786-338340 E 526 MRL -481 MRL Appahatu & Behera Quarry 2430803-2431239 N 336861-337189 E 614-560 MRL	JL 2428920-2429390N 338010-338440E 570 MRL to 580 MRL <u>FY 2021-22 proposal as RL 580 MRL TO 470 MRL</u> 2427532.593N to 2428557.309N 337738.885E to 338373.617E 490MRL to 500 MRL <u>FY-2022-23 proposal 540 MRL to 470 MRL – Jajang Langalotta</u> 2430752.578 N to 2431340.184 336851.171 E to 337247.938 580 MRL to 590 MRL <u>FY-2022-23 620 MRL to 560 MRL</u> 2430752.578 N to 2431340.184 336851.171 E to 337247.938 610 MRL to 620 MRL <u>FY-2022-23 620 MRL to 560 MRL</u>
2b	Separate benches in topsoil, overburden and mineral	Separate benches in overburden & mineral proposed	Separate benches maintained in overburden & mineral	No of benches: Top Soil – Nil Overburden – 2 Nos. Mineral benches Jajanga -Langalotta - 3Nos Appahatu-Behera Quarry-10 Nos.
2c	Stripping ratio or ore to OB ratio	OB:ORE – 1:0.21	OB: ORE – 1: 0.23	BD(Ore)-3.2 t/cu.m BD(OB)-2.3 t/cu.m

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2d	Quantity of topsoil generation in m3	No Proposal	Nil	No top soil generated during the reporting year.
2e	Quantity of overburden generation in m3	941484 cum	747107.89 cum	Less OB achieved vis-à-vis the production of ROM.
General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		The mine workings were confined to 2 pits viz Jajanga Langlota and Appahatu & Behera Quarry. The development were carried out within the proposed grids as per the approval on the date of inspection.		

Exploitation:--

SL.No.	Item	Proposals (FY 2022-23)	Actual work	Remarks
3a	Number of pits proposed for production	Two pits(Jajanga-Langalotta and Appahatu & – Behera) were proposed for production	Actual workings were carried out in 2 pits only as per the proposal.	Approx. dimension of the pits(mts) :Jajanga-Langalotta 1099(L) X 420(B)X50(D) Appahatu – Behera Quarry(mts)- 830 (L) X 380 (B)X 70(D). Violation of Rule 11(1) has been issued to the lessee for stacking grade-wise mineral in the proposed mining benches.
3b	Quantity of ROM mineral production proposed	10,000,000 MT	6280000 MT	EC has not been obtained for 10 MPTA. Production has been restricted to EC capacity.
3c	Recovery of salable/usable mineral from ROM production	100% including mineral reject.	100% including mineral reject.	Mineral reject generated was blended with high grade ore.
3d	Quantity of mineral reject generation	1859751.128 MT	1570000 MT mineral reject blended and used	As per AR submitted for 2022-23.
3e	Grade of mineral reject generation and threshold value declared	45 % to 55 % Fe.	45 % to 55 % Fe generated were blended and used.	Nil
3f	Quantity of sub-grade mineral generation	No proposal	Nil	Nil
3g	Grade of sub-grade mineral generation	No proposal	Not Applicable	Nil

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3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised method proposed for segregating from ROM	Mechanised method adopted for segregating from ROM	Dry crushing & screening of varying TPH.
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	No Proposal	Nosuch beneficiation study carried out.	Nil
3j	Provision of drilling & blasting in mineral benches	Drilling and Blasting proposed in mineral benches.	Drilling and blasting were carried out in mineral benches.	Drill hole diameter is 115 to 150mm with spacing of 2.5 m and burden of 2.0 m. Blasting were carried out with slurry cartridges in combination with NONEL.
3k	Provision of mining machineries in mineral benches	Use of HEMMs was proposed in Mineral Benches.	Mechanized O/ C mining was carried out engaging HEMMs in the mine.	Mining was carried out by Shovel (3.0 m ³) Dumper (30 tonne) combination.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Proposed Bench Height and width of 10 meter respectively.	The minimum bench height and width is maintained. Height and width of benches is 9-10m and 10-15 m.	Nil
3m	Total area covered under excavation/pits	114.9745 Ha of area proposed at the end of reporting year.	113.8331 Ha is used for mining	As per AR submitted for 2022-23.
3n	Ore to OB ratio for the pit/mine during the year	OB:ORE – 1:0.21	OB: ORE – 1: 0.23	No Significant change.

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3o	Total area put in use under different heads at the end of year	Area under mining- 114.974454 Ha Waste dump site -40.656 Ha Mineral storage- 29.5539 Ha Infrastructure - 33.1398 Ha Road - 15.3341Ha Railways-15.84 Ha Mineral separation plant- 12.7692 Ha Town ship area- 5.9277 Ha Others =22.548 Ha	Area exploited and abandoned by opencast mining:1.913 Ha. Covered under current workings: 119.920 Ha. Reclaimed-Rehabilitated: 1.913 Ha. Used for waste disposal:10.763 Ha Infrastructure and Roads: 21.53 Ha Others(Railway Siding, Safety Zone, Water Harvesting): 72.67 Ha Work Done under PMCP: 5.10 Ha.	As per AR of 2022-23.
3p	Production of ROM mineral during last five-years period , as applicable	2018-19-Nil 2019-20-Nil 2020-21-500000 2021-22-6280000 2022-23-10000000	2018-19-Nil 2019-20-Nil 2020-21-196350 2021-22-5653000 2022-23-6280000	All units in Metric Tonnes. Actual production is within the proposed limit.
General remarks of inspecting officers on method of mining etc.		Open-cast mining method with Shovel-Dumper combination was carried out. Deep hole drilling and blasting were carried out in OB and Mineral Benches.		

Solid Waste Management-Dumping:--

SL.No.	Item	Proposals (FY 2022-23)	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	Separate dumping of OB proposed	Separate waste dump maintained	All Mineral reject generated were blended

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4b	Location of topsoil, OB & mineral reject dumps	<p>Dump No-4 2429547.941-2430061.268 N 338001.81-338268.984 E</p> <p>Appahatu South 2430027.584-2430438.485 N 337352.029-337665.544 E</p> <p>Backfilling 2428863-2429323 N 337961-338361 E</p>	<p>Dump No-4 2429373-2429699 N 337949 -338203 E</p> <p>Appahatu South</p> <p>Nil</p> <p>Backfilling 2428863-2429083 N 338061-338261 E</p>	Due to non-availability of required tree felling permission, Appahatu south dump could not be started. Violation of Rule 11(1) has been issued to the lessee.
4c	Number of dumps within lease area and outside lease area.	Within ML area-2 OB dumps. Outside ML area: Nil	OB dumping is done in Dump No-4 which is within the lease area.	
4d	Location of dumps w.r.t. ultimate pit limit.	Location of Dump proposed outside UPL	Actual location of dumps were observed to be outside UPL.	
4e	Number of active & alive dumps	2	1	Dump No. 4.
4f	Number of dead dumps	6	6	<p>Location of Dead Dumps</p> <p><u>DUMP No-5</u> 2427542.1771 N to 2428309.5053 N 337566.1469 E to 337663.3449E(Jajang) E(Jilling)</p> <p><u>Dump No-6(OB)</u> 2427480.3098N to 2427731.1545 N 337734.218E to 338102.7817 E(Jajang)</p> <p><u>Dump No-6(Subgrade)</u> 2429659.3391N to 2430017.9400N 338269.7204E to 338480.2564E(Jilling)</p>

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				<u>Dump No-9</u> 2429108.1239N to 2429273.7400 N 338380.5796 E to 338583.3780 E(Jilling) <u>Dump No-1</u> 2430461.1134 N to 2430886.2372 N 337225.7455 E to 337406.625 E(Appahatu) <u>Dump No-3(subgrade)</u> 2430611.7293 N to 2430862.985 N 337190.7249E to 337291.190E(Appahatu)
4g	Number of dumps stabilized	5	5	Stabilized by terracing, coir matting and plantation
4h	Whether Retaining wall or garland drain all along dumps are there	Retaining wall and garland drain proposed all along the dump.	Retaining wall and garland drain were constructed all along the dump.	
4i	Length of Retaining wall or garland drain all along dump	RW-1373 meter GD- retaining wall and garland drain proposed	900 meter retaining wall and garland drain has been con	OB dumping has not started in Appahtu north dump as the forest clearance has not been transferred by Forest department in proposed dump area.so remaining retaining wall could not be completed. Violation of Rule 11(1) has been issued to the lessee.
4j	Number of settling ponds	Not proposed	Not done	
Specific comments of inspecting Officer on waste dump management.		Overburden, mineral and mineral reject management is broadly as per proposal are being carried out as per the approved proposals.		

Solid Waste Management-Backfilling:--

SL.No.	Item	Proposals (FY 2022-23)	Actual work	Remarks
5a	Status on part or full	Backfilling	Backfilling was	2428214.19

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	extraction of mineral from mined out area before starting backfilling	proposed after fully extracting the mineral.	carried out after extracting the mineral fully.	N to 2428964.938 N 338193.618 E to 338000.759E
5b	Area under backfilling of mined out area	15.9947 Ha area proposed	5.1 Ha area back filling has been carried out in the reporting year.	Backfilling is in progress. Lower generation of OB material.
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area	No Proposal.	Not Applicable.	No top soil generated.
5d	Total area fully reclaimed & rehabilitated	No Proposal.	No area has been fully reclaimed and rehabilitated.	5.1 Ha was covered under Backfilled area and is in progress.
General remarks of inspecting officer on backfilling and reclamation etc.		Backfilling was carried out in the mine and is in progress.		

Progressive Mine Closure Plan:---

SL.N.	Item	Proposals (FY 2022-23)	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 26(2). (Hard copy same provided)	Annual report on PMCP to be submitted on or before 1 st July every year.	PMCP Report Submitted.	Submitted on dated 23-06-2023
6b	Management of worked/mined out benches i) Area available for rehabilitation (ha) ii) Afforestation done (ha) iii) No. of saplings planted during the year iv) Cumulative no. of plants v) Any other specific method of rehabilitation vi) Cost incurred on watch & care during the year.	No proposal	Nil	
6c	Compliance on reclamation and rehabilitation by	(i) Jilling Gangaigora- 2399205 cum	(i) 5.1 Ha land back filled 65114.40 cum	

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	backfilling i) Voids available for backfilling (L X B X D) ii) Void filled by waste/tailings iii) Afforestation on the backfilled area iv) Rehabilitation by making water reservoir v) Any other specific means	(ii) to (v) : No proposal	(ii) to (v) : Nil	
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation.	3750 number of plants proposed for afforestation on waste dumps	3829 number of saplings planted	3520-Within ML 309-outside ML
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Environmental Monitoring proposed in Core and buffer zone proposed as per MOEFCC and SPCB guidelines.	Regular Environmental Monitoring was carried out for air, water, noise on qtrly basis.	Env. Monitoring was carried out by – Visiontech consultancy services private limited. All the parameters were observed to be within the permissible limit.
General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		PMCP activities were carried out as per the proposal.		

Mineral Conservation:---

SL.No.	Item	Proposals ((FY 2022-23)	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting proposed within lease area.	Grade wise sorting carried out within lease area.	Dry crushing and screening
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Mechanical method proposed for	Dry Crushing and screening were carried	5 Nos of crushers of varying

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		grade-wise sorting	out	capacity used
7c	Different grade of mineral sorted out at mines	CLO and Fines proposed to be sorted out from the mines.	Fines = 51% to below 55% Fe, 55% to below 58% Fe, 60% to below 62% Fe CLO-62% to below 65% Fe(5-18 mm size) and 62% to below 65% Fe (10-40mm size)	Iron Ore of different size and grade is sorted out and dispatched.
7d	Any beneficiation process at mines	No proposal	No Beneficiation process carried out at mines.	Only dry crushing and screening.
General remarks of inspecting officer on Mineral conservation and beneficiation issues.		No Beneficiation is carried out by the lessee except Grade wise sorting by screening and crushing within lease area. The fines and CLO are segregated and sold in the domestic market.		

Environment:--

SL.No.	Item	Proposals ((FY 2022-23))	Actual work	Remarks
8a	Separate removal and utilization of topsoil	No proposal for generation of top soil.	No top soil was generated during the reporting year.	Nil
8b	Concurrent use or storage of topsoil	No proposal.	Not Applicable	No Top Soil generated
8c	Separate dumps for overburden, waste rock, rejects and fines	Separate OB dumps proposed.	Waste dumping was carried out in Dump-04.	Dump-04-2429547.94 1N to 2430061.26 8N 338001.810 Eto 338268.984 E
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Backfilling proposed to restore the land	Backfilling was in progress.	5.1 ha of area has been backfilled during the reporting year.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Proposed Phased restoration, reclamation and rehabilitation of lands affected by mining operations	1.913 Ha of broken up area has been reclaimed and rehabilitated.	As per Annual Return for 2022-23
8f	Baseline information on existence of plantation & additional plantation done	Baseline information available on	Plantation in 2022-23= 3829 2021-22 =2000 2020-21=nil	
8g	Survival rate	80 %	90 %	As per Annual Return for 2022-23
8h	Water sprinkling on roads to control airborne dust	Water sprinkling proposed on haul roads to suppress the dust.	Water tankers were deployed for water sprinkling on roads to control airborne dust. Fixed water sprinkling system was also in operation.	Water tankers capacity of 10 KLD 2 Nos deployed for suppressing

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				dust.
General remarks of inspecting officer on aesthetic beauty in and around mines area	Aesthetic beauty in & around mines area was well maintained as the lessee had carried out afforestation and other environmental protective measures were in place.			

Compliance of Rule 45

SL.No.	Item	COMMENTS		Remarks.
9a	Status of submission of Monthly and Annual returns	M.R. Submitted upto Nov-2023 A.R. submitted for FY2022-23.		AR for 2022-23 submitted on 27/06/2023.
S.N.	Item	Details GIVEN in A.R.	Actual in field	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mine Manager- Chinmay Kumar Parida Mining Engineer- Tapas Kumar Mohapatra Geologist- Siddhartha Shankar Kalo	Same Mine Manager and Mining Engineer were present during the course of inspection.	Notice of appointment of Geologist-Shri Tarun Kumar Kandeyang received. For the year 2022-23 Shri Siddhartha Shankar Kalo was the appointed geologist. Subsequently Shri Tarun kumar Kandeyang appointed on 03-05-2023.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area exploited and abandoned by opencast mining: 1.913 Ha. Covered under current workings: 119.920 Ha. Reclaimed-Rehabilitated: 1.913 Ha. Used for waste disposal: 10.763 Ha Infrastructure and Roads: 21.53 Ha Others(Railway Siding, Safety Zone, Water Harvesting): 72.67 Ha Work Done under PMCP: 5.10 Ha.	Area exploited and abandoned by opencast mining: 1.913 Ha. Covered under current workings: 119.920 Ha. Reclaimed-Rehabilitated : 1.913 Ha. Used for waste disposal: 10.763 Ha Infrastructure and Roads: 21.53 Ha Others(Railway Siding, Safety Zone, Water Harvesting): 72.67 Ha Work Done	

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			under PMCP: 5.10 Ha.	
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9d	Scrutiny of Annual return on afforestation	Within ML-3520 saplings @ 90% survival rate, Outside ML-309 saplings @ 90% survival rate.	Appears to be correct.	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	1570000 (Tons)	Appears to be correct.	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM Stock; OB-1275000 Tons. Production: 6280000 Tons CB: Nil	Appears to be correct.	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Sale Value:6087.303 Rs/ton(Combined for Fines and CLO) Ex Mine Price: Fines (Wt.Avg)Rs/ton-4323.42 CLO (Wt.Avg) Rs/ton-8194.811 Cost of Production =Rs 2930.37/Ton		Violation of Rule 45(7) of MCDR 2017 for furnishing Ex-mine price without effecting any dispatches of Iron Ore (fines) for 62% Fe to below 65% Fe grade.
9i	Scrutiny of Annual return on fixed assets	Rs-503148499 including land, plant, machinery and transport equipment.	Appears to be correct.	
9k	Scrutiny of Annual return on mining machineries	Excavator-12 Nos, Dumper =40 Nos, Dozer = 02 Nos Wheel Loader = 6Nos Drill Machine =03No Road Grader =02 Nos	Excavator-15 Nos, Dumper =52 Nos, Dozer = 02 Nos Front Loader = 07 Nos Drill Machine =03 No Road Grader =01 Nos Crusher-05 Water Tanker-08	

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