Khewra Salt Mines Project

by Seerat Ghafoor, Muhammad Haroon Rasheed

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"KHEWRA SALT MINES PROJECT"

NAME: Ms. Seerat Ghafoor ENROLLMENT: 03-298182-027

NAME: MR. Muhammad Haroon Rasheed ENROLLMENT: 03-298182-074

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MANAGEMENT)



BAHRIA UNIVERSITY LAHORE CAMPUS

SUBMITTED TO: Mr. Shehzad Ahmad

SUBMITION DATE:

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CHAPTER 1

1. Introduction to Salt Range

Salt mines of Khewra which are world 2nd biggest rock salt mines are situated in Pind Dadan Khan Tehsil, which is a part of Jehlum District. It is located at a distance of 180 KM from Islamabad and approximately 245 KM from city of Lahore. The salt range of Khewra is vast, it starts from a place near Jehlum river called as Baganwala and it stretches through district of Khushab and also have a touch points with Kalabagh, Mari Indus and a place called Katcha Bangi Khel in district of Mianwali.

Khewra gorge is renowned as "Museum of Geology", it is a stretch where we can easily see exposed rocks from Pre Cambrian time to recent age time, it is a very rare phenomena where we can easily excess a place where these two types of rocks are properly exposed. Variety of different types of rocks with beautiful color spectrum are visible in this area and add an exceptional beauty to the region. Medium heighted hills full of salt run east to west on the southern side end of Potohar Plateau. Inside these hills are hidden mountain of Khewra Salt mine also called as "The Salt Kingdom".

The road from the M2 (Lahore to Islamabad motorway) runs east to a place called Pind Dadan Khan which is located at the lower part or called as feet of the mountains. Lilla interchange exit is used from M2 to take the east bound road to Khewra. If you are approaching Khewra from Kalar Kahar side or Kalar Kahar interchange at M2, a road to Choa Saidan Shah lead to the top site of the valley. The tree line along the road presents a spectacular view. The place is full of salt deposits and bunch of archeological sites, thus gives a unique felling when visited. On the same road Katas Raj a vey historic site of Hindu pilgrimage is also located, the historic temples, water pond rests there since hundreds of years. If we are driving down the road we can see on the left side of the road an old building which is the office of PMDC (Pakistan Mineral Development Corporation) ,the organization which is the owner and operator of salt mines in Khewra.

The salt deposits that are present in the salt range are enormous and can last upto 800 years keeping in mind the use and production capacity of our country, this amount of deposits are very rare naturally and thus add a big role in the country's economic as well as in natural resources pool.

The salt range is about 300 kilometers in length with a width range of 8 to 30 kilometers, the height of mountains in average is around 2200 feets. The salt deposits are almost 640 feet thick in this range range that are very feasible for a salt mines just like Kewra salt mines.

The map of the Khewra salt mines is attached in Appendix A

2. Nature of Rock Salt Deposit

The salt range of Khewra are sometimes claimed to be the biggest salt range of the world and they must be, a question of how they were formed is always present. In 1914 series of tests were conducted to develop a theory of origin for these rock salt deposits. It was proved by Dr. A. A. Christie that the rock salt deposit in the Khewra salt range are of Tethys Sea a sea that is expected to have covered the all of Punjab region. This dead sea has deposited this enormous amount of salt and is a gift of nature, Common salt along with Gypsum are found in these deposits, the seam of salt contains about 7 different types of salt

Below is the list of some common rock salt that are found in these deposits

Some Different Types of Salt from Khewra		
Sr. No	Type of Salt	
1	North	
2	Buggy	
3	Sujjowal	
4	North Parwala Middle	
5	South Parwala	

The seam thickness of these different types of salt ranges from 25 to 150 feet in the total thickness. It is established that the layout of these salty hills is academic in nature and a lot of world known geologists are attracted by this area. Once it was also known as the "Geological Museum of India".

3. Uses of Salt

There are about 1400 different uses of salt, 5% or less is used for edible purposes, like seasoning of food and cooking. In manufacturing industry different use of salt are present even in air plane parts and glass production. Washing, soap making and a lot of other uses are also liked with salt.

Salt is a good antiseptic and is also used in pesticides and weed killing medicines, dying colors fixing, now keeping in view its use the mineral is not given that much importance.

Below are different uses of salt

Sr. No.	Used of Salt
1	Food and Cooking
2	Paper industry
3	Water treatment
4	Petroleum Industry
5	Pharmaceuticals/Medicines
6	Pesticides
7	Icing Industry
8	Textile and Dying Industry

4. History of Khewra Salt Deposit

4.1 Time / Remarks	History
4.2 Alexander the Great 327 BC	In 327 BC armies of Alexander (the great) during his campaign he conquered as far as the banks of Jehlum River. Salcus who was the general of the Alexander (the great) also mentioned the salt mountains which are situated near the bank of a river, this is mentioned in his biography. It is said that Alexandar (the great) traveled a great deal and he was anxious to have the taste of this delicious salt. Raja Porus was in possession of the salt range at that time, The armies of Alexander reached the bank of Jehlum which is only 32 Km from the current salt mines. The attacks were made from the far side to the ruler of this area Raja Porus but he sustained all of them. But in the end the armies invaded and Raja surrendered. It is said that the Alexander returned the ruler his kingdom and the war turned to a friendship afterwards, from this originates the friendship meaning of the salt. At that time the people of the area collected salt from the surface and used it, the extent of mining was only that far.
4.3 Mughals and Sikhs Era (16 to 18 Century)	Then comes the time of 16 th Century AD the time of Akbar, Mughals, the hard work of mining was initially started at that time. Then comes the 18 th Century AD the salt mining activites have gained pace, that time the rules were the Sikhs and were in control of all the

mining activities. The tax was collected in the name	
of Maharaja Rangit Singh's name.	
In 1849 the control of the mining works was taken over by the Britsh rule, the management authority of the mines also called as Mayo mines was moved to Delhi.	
In 1872 Dr H Warth was appointed as Chief Mining Engineer, he was the first to be appointed. He put together plans and a team of geologists including Dr Christy and Dr Gee. That was the first time when the development of proper scientific and modern mining was introduced in the region.	
I de t	

5. Khewra Salt Mines

The current Khewra salt mines are now operated and are under control of Pakistan Mineral Development Corporation. All the mining work is being executed by the PMDC supervision and is under the Ministry of Energy directly under the Government of Pakistan.

The Khewra salt mines is associated with local industry and is a part of our industrial heritage, It has been a hub of a economic center for our country, In this part of many salt industry is present like a modern plant of salt production by ICI Pakistan

Mining of salt is being done in Khewra salt mines, different levels also called as floors are generated inside the mine, A total of 17 floors have been established inside the mine, the tourist resort is at floor 5, so a total of 5 floors are above it and a total of 11 floors are under the tourist resort, the access to these upper and lower

floors is limited to mining work only and not to public due to ongoing mining activities inside them, The mine is designed in a spiral shape with specified floors on its main shaft. Chambers are then made for salt mining.



CRYSTAL PALACE (Khewra Salt Mines)



Khewra Salt Mines

6. Pakistan Mineral Development Corporation

PMDC is an independent organization working under the control of Ministry of Energy, directly under Government of Pakistan, It is the prime regulator, operator and authority to deal with all the matters of the salt, Khewra salt mines, and selling and marking of salt in Pakistan.

PMDC is dealing with 4 coal as well as 4 salt mines with names below:

Sr. no	Salt mines Names
	1
1	Kalabagh Salt <mark>Mines</mark>
2	Warcha Salt Mines
3	Jatta Salt Mines
4	Khewra Salt Mines

PMDC has an annual budget of 1 Billion rupees only for the uplift and development of the resorts and tourist attraction development. PMDC have many offices below is the list

Sr. No	Office Location	Type of Office
1	Islamabad	Head Office
2	Quetta	Branch Office
3	Lahore	Branch Office
4	Multan	Branch Office

Branch office like Lahore and others are dealing with the marketing and selling of product which is salt to different vendors across the Pakistan.

6.1 Export of Salt

The salt is exported to other countries like India and all around the world from Pakistan. The PMDC sells its salt to different qualified vendors on a govt. regulated rate or on quotation-based system. The salt is then exported to foreign countries by

these vendors/buyers. PMDC also sells its salt directly to international buyers but the export is on the buyer's end.

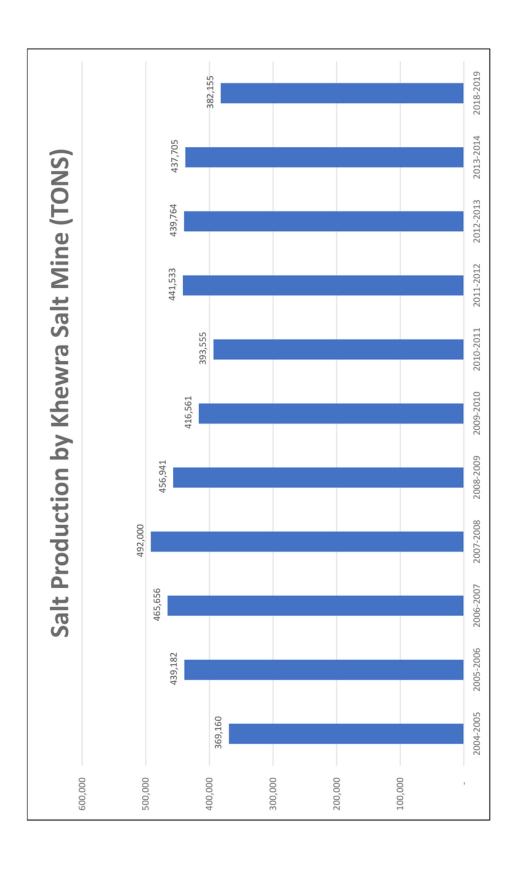
Government of Pakistan provides duty free export to vendors who tends to export salt to other countries as they add value to the economy.

7. Production of Salt

Details of Production of Salt by Khewra Salt mine is as follow:

Years	Production (Tons)
2004-2005	369,160
2005-2006	439,182
2006-2007	465,656
2007-2008	492,000
2008-2009	456,941
2009-2010	416,561
2010-2011	393,555
2011-2012	441,533
2012-2013	439,764
2013-2014	437,705
2018-2019	382,155

The below histogram shows the above data comparison.



8. Mining Activities in Khewra Salt Mine (Systematic Mining)

Pillar and Room technology is being used in Khewra salt mines, this include the method is make rooms one above and another by supporting by pillars, in this method only 50% of the salt is usually extracted rest is left as pillars to support the mine roof.

Below show the mining activities that are performed inside to make a new chamber



Some details of mining at Khewra salt mines are as follow:

Details	Remarks
Area Leased (government)	3398.93 acres
History	Pre Cambrian
Salt Purity Percentage	98% Average
Salt Colors	Red, Black, Pink
Mining Technology	Room and Pillar Technology for Mining

8.1 Dimensions of Chamber

A chamber has following dimensions

Width Across Seam	35 to 50 Ft
Breath Across Strike	More than 100 Ft

The extracted salt is then hauled to the ground level via main shaft via tractors and previously via rail locomotives. The salt is then dispatched to the inventory controlled by PMDC.

From that inventory salt is then sold to respective buyers. The main chunk is sold to commercial industry

Waste salt is sold to Soda ash factory.

9. Auxiliary Facilities at Khewra Salt Mine

Sr. No.	Facility Name
1	Health Care Center
2	Power System/ Small grid (1800 KV)
3	Two 500 HP Generators
4	Arc Wall Chain Cutter
5	Long Wall Chain Cutter
6	Locomotive Train

10. Establishment of Khewra Tourist Resort

In 2001 - 2002 initiative of managing director of PMDC the ground floor area of the Khewra salt mine was turned into a tourist resort area. The tourist resort is a spectacular spot and is mostly crowded in summer season when the temperature of the mine drops inside.

The details regarding resort are below

Annual Tourists	More than 150,000
Highest Chamber	200 ft high
Attractive Spots	Salt Mosque, Sheesh Mahal, Cystal Valley.

10.1 Tourists Facility List

Sr. No.	Facility
1	Reception Hall
2	Refreshment Area
3	Walkway
4	Electric Train
5	Souvenir Shop
6	Pony Track

11. Asthma Resort

In 2007 Asthma center was also opened by PMDC for the treatment of outside patients suffering from allergic asthma.

CHAPTER 2

12. BULC Industrial Visit to Khewra Salt Mines

Master's program of BULC visited Khewra salt mines on 07th of December, 2019. One day visit was executed to visit the salt mines along with Katas Raj Temple and Kalar Kahar Resort.

The industrial tour was executed under the supervision of respectable Mr. Shehzad Ahmad, Senior Assistant Professor and Cluster Head of master's weekend program.

The details of BULC industrial visit are as under

Date	07 th December 2019
Total Number of Students	Around 190 Students and Faculty members
Total number of buses	10 Buses
Total Expense per head	Rs 3000
Facilities included	Travel
	Khewra Salt mines Tickets
	Refreshments
	Boating
	Bonfire
	Food

12.1 Stops and Places Visited

Following is the detail of the industrial tour by BULC on 7th of December, 2019.

Sr. No.	Travel Details
1	Departure from BULC Lahore
2	Stop at Behra Rest Area (M2)
3	Breakfast at Behra
4	Departure from Behra to Khewra Salt
	Mines
5	Visit to Mine Resort
6	Departure to Katas Raj
7	Visit to Katas Raj
8	Departure to Kalar Kahar Resort
9	Stay at Kalar Kahar Resort
10	Food and Bonfire
11	Departure to Lahore
12	Arrival at BULC

Khewra salt mine industrial tour was a tremendous opportunity for the students of MSPM (Primavera Lab) to study the salt mine project and implement it on EPPM P6, the project is then made on P6 to apply the use of tool in a complete and professional manner.

CHAPTER 3

13. Primavera Project: "Khewra Salt Mines Project"

Primavera P6 is a tool for Enterprise Project Portfolio Management also called as EPPM. EPPM deals in planning, prioritizing, managing, executing and controlling projects under subject globally.

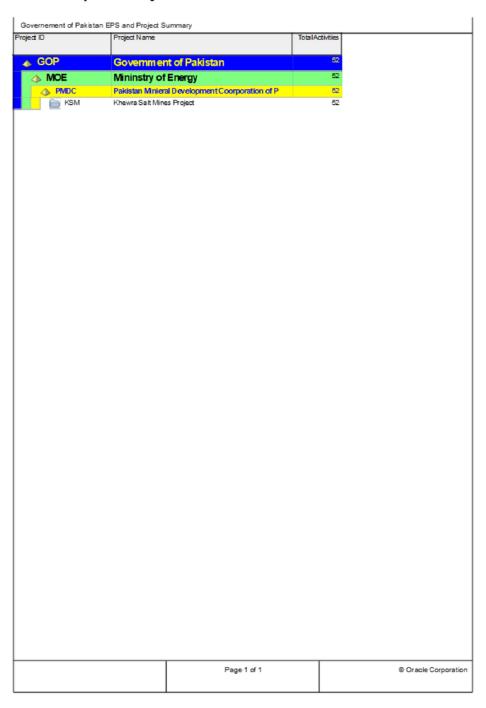
This report summarized the project "Khewra Salt Mines Project" by using Primavera P6 tool, Mining activity going on inside the salt mines is translated into a project and all parameters regarding a project are taken into account. The data related to the costing is assumed and is close to logical values. The activities are generated by doing a research on mining activities going on inside the Khewra salt mines. 52 activities are generated and the project is designed on them.

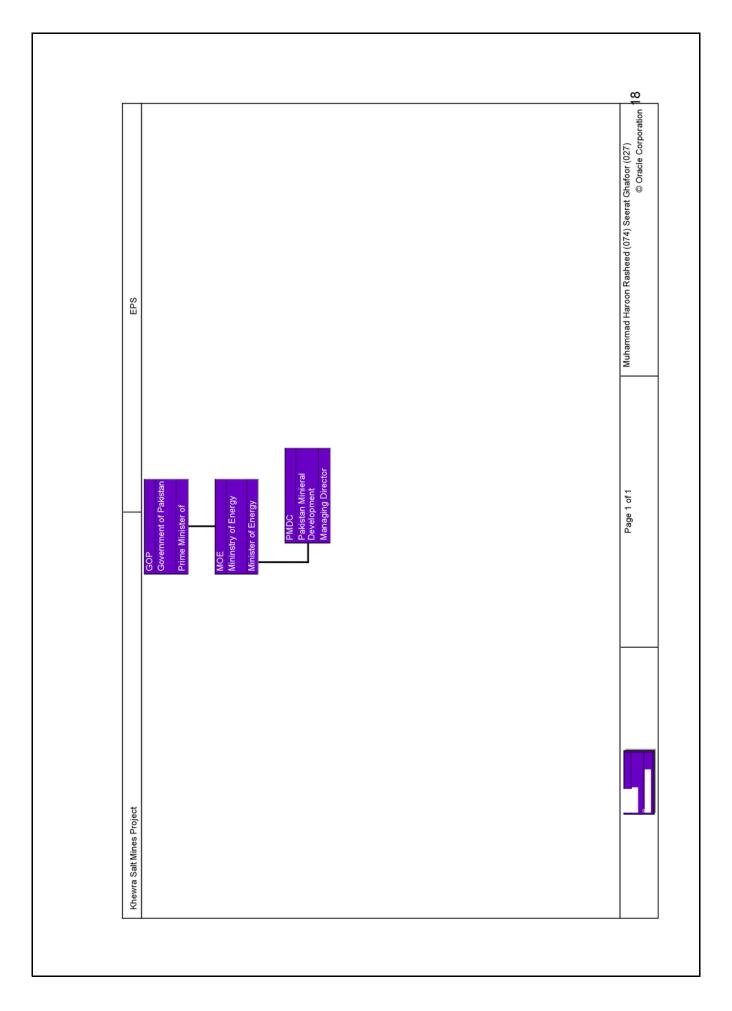
All the activities are assigned with logical resources and budgedt units of resources are also assigned to all activities this leads to the calculation of total budget cost of the project. This value shows the planned cost of the project. S Curve (Time vs Cost) is also shown for Budget costs spread over time.

Below given are some general details of the project under subject:

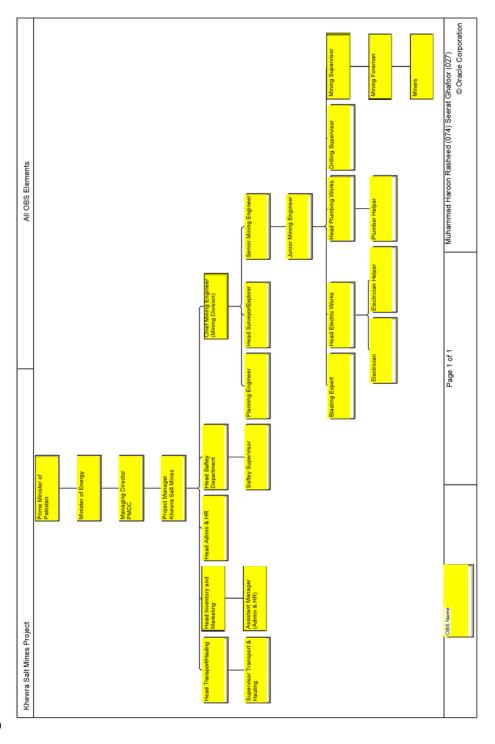
Name of the Project	"Khewra Salt Mines Project"
Planned Start Date	02 September 2019 (8:00 AM)
Planned Finish Date	23 January 2020 (1:48 PM)
Total Activities	52
Total Budgeted Cost	5,224,160 PKR
Total Duration	100 Days 5 Hours

13.1 Enterprise Project Structure

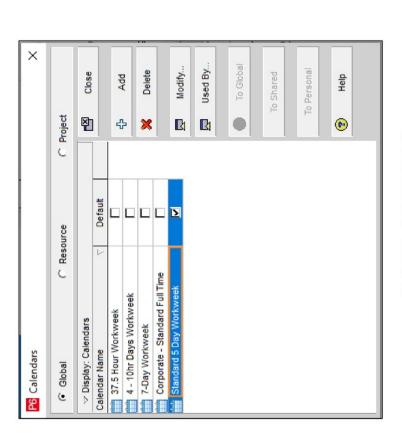




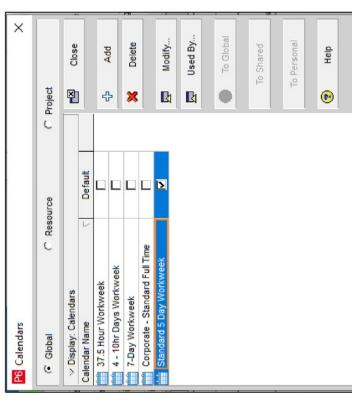
13.2 Organizational Breakdown Structure



13.3 Calendars



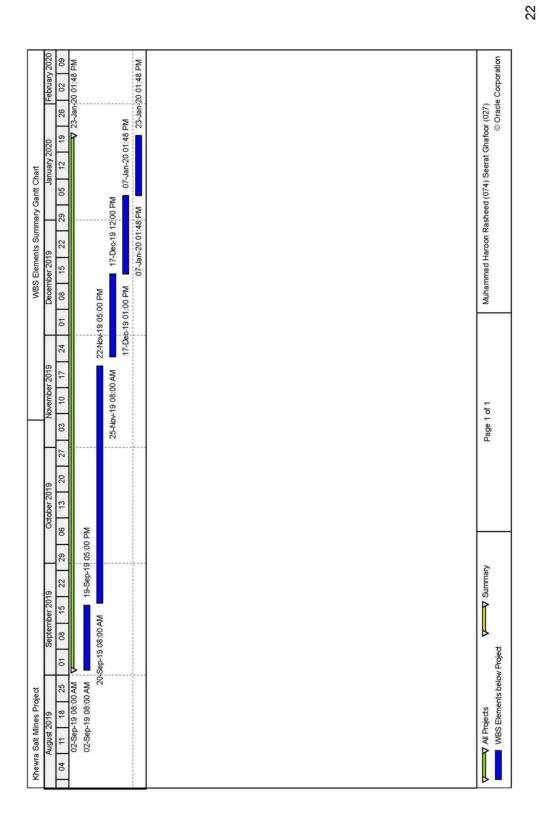
GLOBAL CALENDERS



PROJECT CALENDERS

13.4 Work Break Down Structure (WBS)

Khewra Salt Mines Project				WBS Elements	
WBS Code	WBS Name		Total Activities		
E KSM	Khewra Salt Mines Project		52		
VCM Evaleration	Salt Exploration		8		
- KOME	Mining of "Development and Cros	s Tunne	20		
	Salt Mining/Extraction	3 Turne	9		
	Transportation and Inventory		8		
KSM. Transport and Store KSM. Selling of Salt	Marketing and Selling of Salt		7		
Now.Sciiing of Sait	Walketing and Sching of Sale		,		
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13.5 Activity Tables and Schedulling

Knewra bait Mines Project	ACTIVITY TABLE With Start and Finish Date and Time	nish Date and Time
Activity Name	Original Duration Start	Finish
Khewra Salt Mines Project	100d 5h 02-Sep-19 08:00 AM	23-Jan-20 01:48 PM
Salt Exploration	12d 02-Sep-19 08:00 AM	19-Sep-19 05:00 PM
A100 Start	0d 02-Sep-19 08:00 AM	
A101 Reconnaissance Survey inside Main Shaft	1d 02-Sep-19 08:00 AM	02-Sep-19 05:00 PM
A102 Mine Survey	1d 03-Sep-19 08:00 AM	03-Sep-19 05:00 PM
A103 Salt Ore Sampling 1 via drilling	1d 04-Sep-19 08:00 AM	04-Sep-19 05:00 PM
A104 Salt Ore Sampling 2 via drilling	1d 04-Sep-19 08:00 AM	04-Sep-19 05:00 PM
A105 Testing of salt samples in laboratory	3d 05-Sep-19 08:00 AM	11-Sep-19 05:00 PM
A106 Ore sample Reporting and veting	2d 12-Sep-19 08:00 AM	13-Sep-19 05:00 PM
A107 Planning Report Generation (chamber addition)	4d 16-Sep-19 08:00 AM	19-Sep-19 05:00 PM
Mining of "Development and Cross Tunnels"	46d 20-Sep-19 08:00 AM	22-Nov-19 05:00 PM
A108 Mining Work for Development Tunnel 1 (100 ft)	25d 20-Sep-19 08:00 AM	24-Oct-19 05:00 PM
A109 Roofing Work of Development Tunnel 1	20d 27-Sep-19 08:00 AM	24-Oct-19 05:00 PM
A110 Installation of Electric Pipes and Lights Dev Tunnel 1	5d 18-Oct-19 08:00 AM	24-Oct-19 05:00 PM
A111 Installation of Water Pipeline in Dev Tunnel 1	5d 18-Oct-19 08:00 AM	24-Oct-19 05:00 PM
A112 Inspection of Dev Tunnel 1	1d 25-Oct-19 08:00 AM	25-Oct-19 05:00 PM
A113 Mining Work for Development Tunnel 2 (100 ft)	25d 20-Sep-19 08:00 AM	24-Oct-19 05:00 PM
A114 Roofing Work of Development Tunnel 2	20d 27-Sep-19 08:00 AM	24-Oct-19 05:00 PM
A115 Installation of Electric Pipes and Lights in Dev Tunnel	5d 18-Oct-19 08:00 AM	24-Oct-19 05:00 PM
A116 Installation of Water Pipeline in Dev Tunnel 2	5d 18-Oct-19 08:00 AM	24-Oct-19 05:00 PM
A117 Inspection of Dev Tunnel 2	1d 25-Oct-19 08:00 AM	25-Oct-19 05:00 PM
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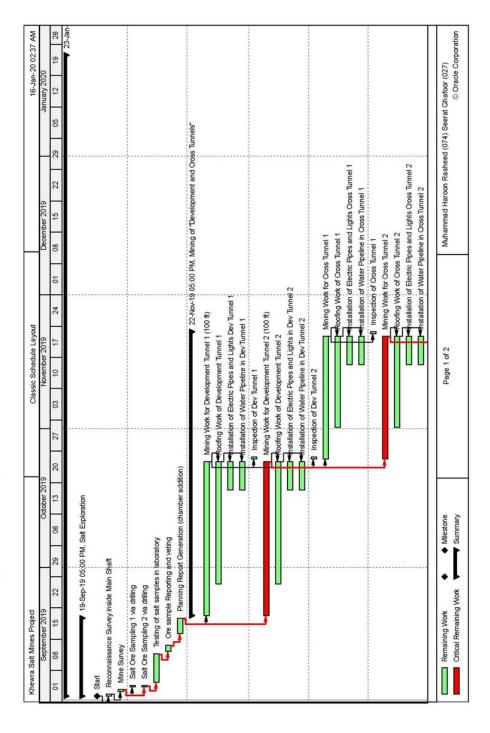
Activity Tables

knewra sait Mines Project	ect	ACTIVITY TABLE With Start and Finish Date and Time	I FILISH Date and Time
Acti	Activity Name	Original Duration Start	Finish
A118 Mir	Mining Work for Cross Tunnel 1	20d 25-Oct-19 08:00 AM	1 21-Nov-19 05:00 PM
A119 Ro	Roofing Work of Cross Tunnel 1	15d 01-Nov-19 08:00 AM	A 21-Nov-19 05:00 PM
A120 Ins	Installation of Electric Pipes and Lights Cross Tunnel	5d 15-Nov-19 08:00 AM	A 21-Nov-19 05:00 PM
A121 Ins	Installation of Water Pipeline in Cross Tunnel 1	5d 15-Nov-19 08:00 AM	A 21-Nov-19 05:00 PM
A122 Ins	Inspection of Cross Tunnel 1	1d 22-Nov-19 08:00 AM	A 22-Nov-19 05:00 PM
A123 Mir	Mining Work for Cross Tunnel 2	20d 25-Oct-19 08:00 AM	1 21-Nov-19 05:00 PM
A124 Ro	Roofing Work of Cross Tunnel 2	15d 01-Nov-19 08:00 AM	A 21-Nov-19 05:00 PM
A125 Ins	Installation of Electric Pipes and Lights Cross Tunnel	5d 15-Nov-19 08:00 AM	A 21-Nov-19 05:00 PM
A126 Ins	Installation of Water Pipeline in Cross Tunnel 2	5d 15-Nov-19 08:00 AM	A 21-Nov-19 05:00 PM
A127 Ins	A127 Inspection of Cross Tunnel 2	1d 22-Nov-19 08:00 AM	A 22-Nov-19 05:00 PM
Salt Mining/Extraction	Extraction	16d 4h 25-Nov-19 08:00 AM	A 17-Dec-19 12:00 PM
A128 Ins	A128 Inspection of Site for Blasting	1d 25-Nov-19 08:00 AM	A 25-Nov-19 05:00 PM
A129 Ca	Cavity Drilling	2d 26-Nov-19 08:00 AM	A 27-Nov-19 05:00 PM
A130 Ins	Installation of Blasting Powder Units	1d 28-Nov-19 08:00 AM	A 28-Nov-19 05:00 PM
A131 Ins	Installation of Electric System for Blasting	1d 28-Nov-19 08:00 AM	A 28-Nov-19 05:00 PM
A132 Pre	Pre Blasting Inspection	2d 29-Nov-19 08:00 AM	A 02-Dec-19 05:00 PM
A133 Bla	Blasting	0d 4h 03-Dec-19 08:00 AM	A 03-Dec-19 12:00 PM
A134 Ce	Cesmic Inspection/Test	2d 03-Dec-19 01:00 PM	M 05-Dec-19 12:00 PM
A135 Re	Reporting and Clearence	3d 05-Dec-19 01:00 PM	M 10-Dec-19 12:00 PM
A136 Bre	Breaking of Salt (transportable size 75 - 150 KG)	5d 10-Dec-19 01:00 PM	M 17-Dec-19 12:00 PM
Transportation an	on and Inventory	14d 1h 17-Dec-19 01:00 PM	M 07-Jan-20 01:48 PM
		Page 2 of 3	Muhammad Haroon Rasheed (074), Seerat Ghafoor (027)

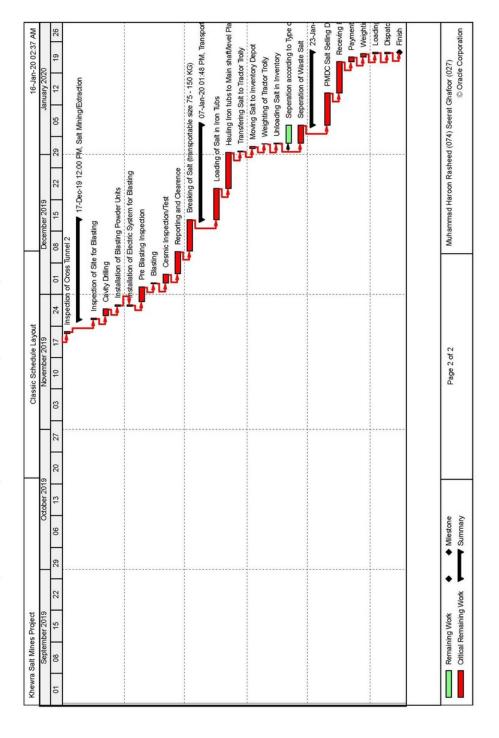
Activity Tables

Activity ID Act	Andri alta Manana	Original Duration Chart	Finish
	בוואול ואמווה	Organia Datation Otali	
A137 Lo	Loading of Salt in Iron Tubs	5d 17-Dec-19 01:00 PM	24-Dec-19 12:00 PM
A138 H	Hauling Iron tubs to Main shaft/level Platform	5d 24-Dec-19 01:00 PM	01-Jan-20 12:00 PM
A139 Tr	Transfering Salt to Tractor Trolly	0d 4h 01-Jan-20 01:00 PM	01-Jan-20 05:00 PM
A140 M	Moving Salt to Inventory Depot	1d 02-Jan-20 08:00 AM	02-Jan-20 05:00 PM
A141 W	Weighting of Tractor Trolly	0d 1h 03-Jan-20 08:00 AM	03-Jan-20 08:48 AM
A142 Ur	Unloading Salt in Inventory	0d 4h 03-Jan-20 08:48 AM	03-Jan-20 01:48 PM
A143 Se	Seperation according to Type of Edible Salt	2d 03-Jan-20 01:48 PM	07-Jan-20 01:48 PM
A144 Se	Seperation of Waste Salt	2d 03-Jan-20 01:48 PM	07-Jan-20 01:48 PM
Marketing a	Marketing and Selling of Salt	12d 07-Jan-20 01:48 PM	23-Jan-20 01:48 PM
A145 PN	PMDC Salt Selling Documentation (waste + edible)	5d 07-Jan-20 01:48 PM	14-Jan-20 01:48 PM
A146 Re	Receving PO from Vendors/Salt Refiners/Chemical In	5d 14-Jan-20 01:48 PM	21-Jan-20 01:48 PM
A147 Pa	Payment from Buyer	1d 21-Jan-20 01:48 PM	22-Jan-20 01:48 PM
A148 W	Weighting Waste Salt	0d 4h 22-Jan-20 01:48 PM	23-Jan-20 08:48 AM
A149 Lo	Loading and Dispatching Waste Salt to Chemical Ind	0d 4h 23-Jan-20 08:48 AM	23-Jan-20 01:48 PM
A150 Di	Dispatching of Edible Salt to respective Buyer	0d 4h 23-Jan-20 08:48 AM	23-Jan-20 01:48 PM
A151 Fi	Finish	РО	23-Jan-20 01:48 PM

13.6 Gantt Chart for Activity Relationship and Schedule



Gantt Chart for Activity Relationship and Schedule (PLANNED)



13.7 Resources List

Chewra Salt Mines Project	December News	December 7-12	All Resources
source ID	Resource Name	Resource Type Unit of	of Measure Price / Unit Rs.1,700.00/h
L1	Project Manager KSM		
L2	Head Inventory & Marketing	Labor	Rs.400.00/h
L30	Supervisor Marketing & Selling	Labor	Rs.100.00/h
<u>♣</u> L3	Head Admin & HR	Labor	Rs.400.00/h
<u>♀</u> L4	AM Admin & HR	Labor	Rs.200.00/h
<u>♣</u> L5	Head Saftey Dept	Labor	Rs.400.00/h
<u>♣</u> L6	Supervisor Saftey	Labor	Rs.230.00/h
♣ L7	Head Transport/Hauling	Labor	Rs.400.00/h
<u>↑</u> L8	Supervisor Transport/Hauling	Labor	Rs.200.00/h
<u>↑</u> L9	Chief Mining Engineer	Labor	Rs.1,135.00/h
£ L28	Mine Inspector	Labor	Rs.285.00/h
1.29	Junior Mine Inspector	Labor	Rs.200.00/h
£ L27	Geologist	Labor	Rs.340.00/h
£10	Planning Engineer	Labor	Rs.340.00/h
♠ L11	Head Surveyor/Explorer	Labor	Rs.340.00/h
<u>↑</u> L12	Senior Mining Engineer	Labor	Rs.340.00/h
L13	Junior Mining Engieer	Labor	Rs.285.00/h
◆ L14	Blasting Expert	Labor	Rs.200.00/h
♣ 3 ♠ L15	Head Electrician	Labor	Rs.145.00/h
116 £16	Electrician	Labor	Rs.115.00/h
1 L18	Electrician Helper	Labor	Rs.100.00/h
n L19	Head Plumber	Labor	Rs.145.00/h
- L20	Plumber Helper	Labor	Rs.110.00/h
♠ L21	Mining Supervisor	Labor	Rs.230.00/h
			Rs.200.00/h
£ L22	Foreman	Labor	
L23	Miner	Labor	Rs.1,000.00/d
124	Labourer	Labor	Rs.800.00/d
<u>♣</u> L25	Drilling Supervisor	Labor	Rs.200.00/h
<u>♣</u> L26	Driller Helper	Labor	Rs.145.00/h
NL1	Driller Machine (Portable)	Nonlabor	Rs.100.00/h
NL2	Core Sampling Machine	Nonlabor	Rs.200.00/h
NL3	Jack Hammer	Nonlabor	Rs.150.00/h
NL4	Small Excavaltor	Nonlabor	Rs.1,000.00/h
NL5	Tractor Trolly	Nonlabor	Rs.400.00/h
NL6	Heavy Loader	Nonlabor	Rs.500.00/h
NL7	Seismometer	Nonlabor	Rs.10,000.00/d
NL8	Water Bowser	Nonlabor	Rs.2,000.00/d
Oracle Corporation	Pag	e 1 of 2	Muhammad Haroon Rasheed (074) Seerat Ghafoor (027)

Resources List

Khewra Salt Mines Project			All Resou	ırces
esource ID	Resource Name	Resource Type	Unit of Measure	Price / Unit
NL9	Crane	Nonlabor	0.	Rs.2,000.00/h
M1	Timber Planks	Material	Each	Rs.300.00/Each
M2	Pre Casted Concete Slab	Material	Each	Rs.600.00/Each
M3	Electric Wire	Material	100 ft Coil	Rs.2,200.00/Coil
€ M4	PVC Pipe Length	Material	20 ft Length	Rs.700.00/Length
€ M5	Electric Lights 250W	Material	Each	Rs.500.00/Each
M6	Blast Unit	Material	Each	Rs.2,000.00/Each
© Oracle Corporation	1	Page 2 of 2	Muhammad Seerat Gha	Haroon Rasheed (074) foor (027)

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13.8 Resource Assignment to Activities

Khewra Salt Mines Project	s Project	Resource Assignments	nments
Activity ID	Activity Name	Resources	
Khewra S	Khewra Salt Mines Project		
Salt Exploration	loration		
A100	Start		
A101	Reconnaissance Survey inside Main Shaft	Chief Mining Engineer, Head Surveyor/Explorer, Senior Minin, Manager KSM	Chief Mining Engineer, Head Surveyor/Explorer, Senior Mining Engineer, Junior Mining Engieer, Planning Engineer, Project Manager KSM
A102	Mine Survey	Planning Engineer, Chief Mining Engineer, Head Surveyor/Ex Manager KSM	Planning Engineer, Chief Mining Engineer, Head Surveyor/Explorer, Senior Mining Engineer, Junior Mining Engieer, Project Manager KSM
A103	Salt Ore Sampling 1 via drilling	Drilling Supervisor, Driller Helper, Driller Machine (Portable), Chief Mining Engineer, Senior Mining Engineer, Junior Mining Engineer, Core Sampling Machine	ilef Mining Engineer, Senior Mining Engineer, Junior Mining
A104	Salt Ore Sampling 2 via drilling	Chief Mining Engineer, Senior Mining Engineer, Junior Mining Engieer, Dilling Supervisor, Diller Helper, Diller Machine (Portable), Core Sampling Machine	l Engieer, Drilling Supervisor, Driller Helper, Driller Machine
A105	Testing of salt samples in laboratory	Geologist	
A106	Ore sample Reporting and veting	Geologist, Project Manager KSM, Chief Mining Engineer, Senior Mining Engineer	ior Mining Engineer
A107	Planning Report Generation (chamber addition)	Project Manager KSM, Supervisor Saffey, Chief Mining Engin Engineer, Junior Mining Engieer, Head Surveyor/Explorer	Project Manager KSM, Supervisor Saftey, Chief Mining Engineer, Head Transport/Hauling, Planning Engineer, Senior Mining Engineer, Junior Mining Engieer, Head Surveyor/Explorer
Mining	Mining of "Development and Cross Tunnels"		
A108	Mining Work for Development Tunnel 1 (100 ft)	Chief Mining Engineer, Senior Mining Engineer, Junior Mining Hammer, Small Excavaltor, Heavy Loader, Tractor Trolly, Wate	Chief Mining Engineer, Senior Mining Engineer, Junior Mining Engieer, Mining Supervisor, Foreman, Miner, Labourer, Jack Hammer, Small Excavaltor, Heavy Loader, Tractor Trolly, Water Bowser, Supervisor Saftey
A109	Roofing Work of Development Tunnel 1	Chief Mining Engineer, Senior Mining Engineer, Junior Mining Stab	Chief Mining Engineer, Sentor Mining Engineer, Junior Mining Engieer, Labourer, Foreman, Timber Planks, Pre Casted Concete Slab
A110	Installation of Electric Pipes and Lights Dev Tunnel 1	Head Electrician, Electrician, Electric Wire, Electric Lights 250W	W
A111	Installation of Water Pipeline in Dev Tunnel 1	Plumber Helper, Head Plumber, PVC Pipe Length	
A112	Inspection of Dev Tunnel 1	Mine Inspector, Junior Mine Inspector, Supervisor Saftey, Head Saftey Dept	rd Saftey Dept
A113	Mining Work for Development Tunnel 2 (100 ft)	Chief Mining Engineer, Supervisor Saftey, Senior Mining Engi Jack Hammer, Small Excavator, Tractor Trolly, Heavy Loader,	Chief Mining Engineer, Supervisor Saftey, Senior Mining Engineer, Junior Mining Engieer, Mining Supervisor, Foreman, Miner, Jack Hammer. Small Excevator, Tractor Trolly, Heavy Loader, Water Bowser
A114	Roofing Work of Development Tunnel 2	Chief Mining Engineer, Senior Mining Engineer, Junior Mining Slab	Chief Mining Engineer, Senior Mining Engineer, Junior Mining Engieer, Foreman, Labourer, Timber Planks, Pre Casted Concete Stab
		8.	
		Page 1 of 4	Muhammad Haroon Rasheed (074) , Seerat Ghafoor (027) © Oracle Corporation

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Resource Assignment to Activities

e, Bectric Lights 250W, Electrician, Head Electrician, Bectrician Helper ber, Plumber Helper, PVC Pipe Length ctor, Junior Mine Inspector, Supensions Saffey, Head Saffey Dept g Engineer, Senior Mining Engineer, Junior Mining Engineer, Mater Bowser not Engineer, Junior Mining Engineer, Chief Mining Engineer, Mater Bowser ber Plants, Small Excavaltor, Trackor Trolly, Heavy Loader, Water Bowser ber, Plumber Helper, PVC Pipe Length ber, Plumber Helper, PVC Pipe Length ctor, Junior Mining Engineer, Junior Mining Engineer, Mining Engineer, Junior Mining Engineer, Senior Mining Engineer, Junior Mining Engi	Khewra Salt Mines Project	les Project	Resource Assignments	ents
Tunnel 2 Bedric Wee, Bedric Lights 250W, Bedrician, Head Bedrician Heber Tunnel 2 Mine Inspector, Jumber Helper, PVC Pipe Length Tunnel 3 Mine Inspector, Jumior Mine Inspector, Supervisor Safety, Head Safety Dept Tunnel 4 Machine (Pothelle), Small Excendior, Tindor Tindor, Head Safety, Head Bedrician Tooss Tunnel 1 Sablo, Cane Senior Mining Engineer, Junior Mining Engineer, Junior Mining Engineer, Trocher Mining Supervisor, Foreman, Miner, Jac Sanior Mining Engineer, Senior Mining Engineer, Junior Mining Engineer, Thead Bedrician Head Pumber, Pumber Helper, PVC Pipe Length Head Pumber, Pumber Helper, PVC Pipe Length Machine (Pothelle), Small Excendior, Teoreman, Labourer, Timber Planks, Pre Tooss Tunnel 1 Machine (Pothelle), Small Excendior, Medical Timber, Maler Boweer Charle Mining Engineer, Mining Engineer, Mining Engineer, Junior Mining Engineer, Supervisor Safety Basting Experts Send Vine Reasing Cone Samping Machine Endicidian, Bedrician, Heber, Electric Wire, Head Electrician, Basting Expert, Labourer, Supervisor, Safet	Activity ID	Activity Name	Resources	
Head Plumber, Plumber Heiper, PVC Pipe Length Tunnel 2 Mine Inspector, Junior Mine Inspector, Supervisor Safety, Head Safety Dept Cost Minior Branch (Minior Branch Small Exervation Shiperer, Junior Minior Branch Heiper, Maker Bowser Senior Minior Branch (Minior Branch Small Exervation Tractor Tools, Nebory Leader, Maker Bowser Senior Minior Branch Small Exervation Tractor Tools, Nebory Leader, Maker Bowser Senior Minior Branch Small Exervation Tractor Tools, Nebory Leader, Maker Bowser Senior Minior Branch Small Exervation Tractor Tools, Nebory Leader, Maker Bowser Senior Minior Branch Small Exervation (Tractor Tools, Nebory Leader, Maker Bowser Bectric Wire, Bedrift Lights 250W, Bedrift Lights 250W, Bedrift Small Exervation (Tractor Tools, Nebory Lead Bedriftian The Peptine in Cross Tunnel 1 Mine Inspector, Minior Branch Small Exervation (Tractor Tools, Nebory Leader, Maker Bowser Tools Minior Branch Small Exervation (Tractor Tools, Nebory Leader, Waler Bowser Tools Tunnel 2 Machiner Planks, Pre Casted Concete Slab, Foreman, Labourer, Senior Mining Brajteer, Junior Mining Engineer, Junior Mining Engine	A115	Installation of Electric Pipes and Lights in Dev Tunnel 2	Electric Wire, Electric Lights 250W, Electrician, Head Electrician, E	Jectrician Helper
Tunnel 2 One Minne Inspedor, Junior Minne Inspedor, Supervisor Saftey, Head Saftey Dept Cone Minning Engineer, Junior M	A116	Installation of Water Pipeline in Dev Tunnel 2	Head Plumber, Plumber Helper, PVC Pipe Length	
Tooss Tunnel 1 Chief Mining Brigheer, Senior Mining Engineer, Senior Mining Engineer, Junior Mining E	A117		Mine Inspector, Junior Mine Inspector, Supervisor Saftey, Head St	aftey Dept
Senior Mining Engineer, Chief Mining Engineer, Chief Mining Engineer, Foreman, Labourer, Timber Planks, Pre Bab, Crane Bedrif Wike, Electric Lights 250W, Electrician Helper, Head Electrician Head Plumber, Plumber Helper, PVC Pipe Length Mine Inspector, Junior Mine Inspector, Linior Mining Engineer, Aunior Mining Engineer, Mining Supervisor Saftey Chief Mining Engineer, Aunior Mining Engineer, Aunior Mining Engineer, Junior Mining Engineer, Mining Supervisor, Foreman, Miner, Jac Machine (Portable), Small Excavalior, Tractor How, Heavy Loader, Water Bowser Zoss Tunnel 2 Annel 3 Annel 2 Annel 3 Annel 4 Annel 5 Annel 5 Annel 5 Annel 6 Annel 6 Annel 7 Annel	A118	Mining Work for Cross Tunnel 1	Chief Mining Engineer. Senior Mining Engineer, Junior Mining Eng Machine (Portable), Small Excavaltor, Tractor Trolly, Heavy Loader	gieer, Mining Supervisor, Foreman, Miner, Jack Hammer, Diller, Vatter Bowser
Annual 1 Head Plumber, Plumber Helper, PVC Pipe Length Head Plumber, Plumber Helper, PVC Pipe Length Mine Inspector, Junior Mine Inspector, Junior Mine Inspector, Junior Mining Engineer, Junior M	A119	Roofing Work of Cross Tunnel 1	Senior Mining Engineer, Junior Mining Engleer, Chief Mining Engi Slab, Crane	neer, Foreman, Labourer, Timber Planks, Pre Casted Concete
Innnel 1 Mine Inspector, Junior Mine Inspector, Head Saftey Dept, Supervisor Saftey Mine Inspector, Junior Mine Inspector, Head Saftey Dept, Supervisor Saftey Chief Mining Engineer, Senior Mining Engineer, Junior Mining	A120	Installation of Electric Pipes and Lights Gross Tunnel 1	Electric Wire, Electric Lights 250W, Electrician, Electrician Helper, I	Head Electrician
Nine inspector, Junior Mine Inspector, Head Saftey Dept, Supervisor Saftey Chief Mining Engineer, Senior Mining Engineer, Junior Mining Engineer, Junior Mining Engineer, Mining Supervisor, Foreman, Miner, Jac Machine (Pottable), Small Excavator, Tractor Trolly, Heavy Loader, Water Bowser Cane. Timber Planks, Pre Casted Concete Slab, Foreman, Labourer, Senior Mining Engineer, Mining Engineer Bectrician, Head Electrician Helper, Electric Wire, Electric Lights 250W PVC Pipe Length, Head Plumber, Plumber Helper Supervisor Saftey, Mine Inspector, Junior Mine Inspector, Senior Mining Engineer, Junior Mining Engineer, Junior Mining Engineer, Junior Mining Engineer, Junior Mining Engineer, Labourer, Driller Maching String Powder Units Blasting Expert, Senior Mining Engineer, Junior Mining Engineer, Chief Mining Engineer, Labourer, Driller Maching Coe Sampling Machine Blasting Expert, Senior Mining Engineer, Junior Mining Engineer, Supervisor Saftey Electrician, Electrician Helper, Electric Wire, Head Electrician, Blasting Expert, Supervisor Saftey Electrician, Electrician Helper, Electric Wire, Head Electrician, Blasting Expert, Supervisor Saftey Muhammad Haroon Rasheed (074), Seerat G	A121	Installation of Water Pipeline in Cross Tunnel 1	Head Plumber, Plumber Helper, PVC Pipe Length	
Cabier Mining Engineer, Senior Mining Engineer, Junior Mining Engineer, Small Excavator, Trador Trolly, Heavy Loader, Water Bowser Crane, Timber Planks, Pre Casted Concete Slab, Foreman, Labourer, Senior Mining Engineer, Junior Mining Engineer,	A122	Inspection of Cross Tunnel 1	Mine Inspector, Junior Mine Inspector, Head Saftey Dept, Supervi	isor Saftey
Cane, Timber Planks, Pre Casted Concete Slab, Foreman, Labourer, Senior Mining Engineer, Junior Mining Engineer Mining Engineer Rectrician, Head Electrician, Head Plumber, Plumber Helper PVC Pipe Length, Head Plumber, Plumber Helper Supervisor Saftey, Mine Inspector, Junior Mine Inspector, Head Saftey Dept Chief Mining Engineer, Mine Inspector, Junior Mine Inspector, Senior Mining Engineer, Junior Mining E	A123	Mining Work for Gross Tunnel 2	Chief Mining Engineer, Senior Mining Engineer, Junior Mining Eng Machine (Portable), Small Excavaltor, Tractor Trolly, Heavy Loader	gieer, Mining Supervisor, Foreman, Miner, Jack Hammer, Driller , Water Bowser
ter Pipeline in Cross Tunnel 2 PVC Pipe Length, Head Electrician, Electrician Helper, Electric Lights 250W PVC Pipe Length, Head Plumber, Plumber Helper Supervisor Saftey, Mine Inspector, Junior Mine Inspector, Head Saftey Dept Chief Mining Engineer, Mine Inspector, Junior Mine Inspector, Senior Mining Engineer, Junior Mining Engineer,	A124	Roofing Work of Cross Tunnel 2	Crane, Timber Planks, Pre Casted Concete Slab, Foreman, Labor Mining Engineer	urer, Senior Mining Engineer, Junior Mining Engleer, Chief
FVC Pipe Length, Head Plumber, Plumber Heiper Supervisor Saftey, Mine Inspector, Junior Mine Inspector, Head Saftey Dept Chief Mining Engineer, Mine Inspector, Junior Mine Inspector, Senior Mining Engineer, Junior Mining	A125	Installation of Electric Pipes and Lights Cross Tunnel 2	Electrician, Head Electrician, Electrician Helper, Electric Wire, Elect	tric Lights 250W
for Basting Chief Mining Engineer, Mine Inspector, Junior Mine Inspector, Head Saftey Dept Chief Mining Engineer, Mine Inspector, Junior Mine Inspector, Senior Mining Engineer, Junior Mining Engineer, Junior Mining Engineer, Junior Mining Engineer, Junior Mining Engineer, Chief Mining Engineer, Labourer, Diller Maching Engineer, Chief Mining Engineer, Labourer, Diller Maching Core Sampling Machine Blast Unit, Pre Casted Concete Slab, Blasting Expert, Labourer, Supervisor Saftey Electrician, Electrician Helper, Electric Wire, Head Electrician, Blasting Expert, Supervisor Saftey Page 2 of 4 Muhammad Haroon Rasheed (074), Seerat G	A126	Installation of Water Pipeline in Gross Tunnel 2	PVC Pipe Length, Head Plumber, Plumber Heiper	
for Blasting Chief Mining Engineer, Mine Inspector, Junior Mine Inspector, Senior Mining Engineer, Junior Mining Engineer, Junior Mining Engineer, Junior Mining Engineer, Junior Mining Engineer, Chief Mining Engineer, Labourer, Chiller Machine Care Sampling Machine Blast Unit, Pre Casted Concete Slab, Blasting Expert, Labourer, Supervisor Saftey Electrician, Electrician Helper, Electric Wire, Head Electrician, Blasting Expert, Supervisor Saftey Blasting Expert, Supervisor Saftey Electrician, Electrician Helper, Electric Wire, Head Electrician, Blasting Expert, Supervisor Saftey Page 2 of 4 Muhammad Haroon Rasheed (074), Seerat G	A127	Inspection of Cross Tunnel 2	Supervisor Safley, Mine Inspector, Junior Mine Inspector, Head Si	aftey Dept
Inspection of Site for Blasting Chief Mining Engineer, Mine Inspector, Junior Mining Engineer, Labourer, Diller Maching Engineer, Units Blasting Expert, Senior Mining Engineer, Labourer, Diller Maching Engineer, Labourer, Supervisor Saftey Blast Unit, Pre Casted Concete Slab, Blasting Expert, Labourer, Supervisor Saftey Electrician, Blasting Expert, Labourer, Supervisor Saftey Electrician, Blasting Expert, Supervisor Saftey Page 2 of 4 Muhammad Haroon Rasheed (074), Seerat G	Salt Mil	ning/Extraction		
Cavity Diffling Basting Expert, Senior Mining Engineer, Unior Mining Engineer, Chief Mining Engineer, Labourer, Diller Machin Core Sampling Machine Installation of Blasting Powder Units Blast Unit, Pre Casted Concete Slab, Blasting Expert, Labourer, Supervisor Saftey Electrician, Electrician, Electrician Helper, Electric Wire, Head Electrician, Blasting Expert, Supervisor Saftey Page 2 of 4 Muhammad Haroon Rasheed (074), Seerat G	A128		Chief Mining Engineer, Mine Inspector, Junior Mine Inspector, Ser Supervisor Saffey	nior Mining Engineer, Junior Mining Engieer, Blasting Expert,
Installation of Blasting Powder Units Blast Unit, Pre Casted Concete Stab, Blasting Expert, Labourer, Supervisor Saftey Installation of Electric System for Blasting Expert, Supervisor Saftey Blasting Expert, Supervisor Saftey Page 2 of 4 Muhammad Haroon Rasheed (074), Seerat G	A129	Cavity Drilling	Blasting Expert, Senior Mining Engineer, Junior Mining Engieer, Core Sampling Machine	hief Mining Engineer, Labourer, Driller Machine (Portable),
Installation of Electric System for Blasting Electrician, Electrician Helper, Electric Wire, Head Electrician, Blasting Expert, Supervisor Saftey Page 2 of 4 Muhammad Haroon Rasheed (074), Seerat G	A130	Installation of Blasting Powder Units	Blast Unit, Pre Casted Concete Slab, Blasting Expert, Labourer, S	upervisor Saftey
Muhammad Haroon Rasheed (074) , Seerat G	A131	Installation of Electric System for Blasting	Electrician, Electrician Helper, Electric Wire, Head Electrician, Blast	ing Expert, Supervisor Saftey
				Muhammad Haroon Rasheed (074) , Seerat Ghafoor (027) © Oracle Corporation

Resource Assignment to Activities

Act Place Busking inspection Act Place Busking Buski	Khewra Salt Mines Project	les Project	Resource Assignments	gnments
Basting Expert, Senior Mining Engineer, Junior Mining Engineer, Supervisor Saftey, Geologist, Mine Inspector, Junior Mining Engineer, Junior Mining Engineer, Junior Mining Engineer, Supervisor Saftey, Senior Mining Engineer, Junior Mining Engineer Chief Mining Engineer, Supervisor Saftey, Senior Mining Engineer, Junior Mining Engineer Chead Thansport/Hauling, Supervisor Transport/Hauling, Labourer, Head Transport/Hauling, Supervisor Marketing Head Inventory & Marketing Head Inventory & Marketing, Supervisor Marketing & Selling	ivity ID	Activity Name	Resources	
Chief Mining Engineer, Bussing Expet, Senior Mining Engineer, Junior Mining Engineer, Supervisor Saftey Geologist, Mine Inspector, Junior Min Bright	A132	Pre Blasting Inspection	I Blasting Expert, Senior Mining Engineer, Junior Mining Engi	er, Mine Inspector, Junior Mine Inspector, Supervisor Saftey
Geologist, Mine Inspector, Junior Wine Inspector, Seismometer Chief Mining Engineer, Supervisor Saftey, Senior Mining Engineer, Junior Mining Engineer Chief Mining Engineer, Supervisor Transport/Hauling, Jack Hammer Head Transport/Hauling, Supervisor Transport/Hauling, Labourer, Head Transport/Hauling, Labourer, Head Transport/Hauling, Supervisor Transport/Hauling Labourer, Head Transport/Hauling, Supervisor Transport/Hauling Labourer, Head Transport/Hauling, Supervisor Transport/Hauling Tractor Trolly, Heavy Loader, Labourer, Head Transport/Hauling Head Inventory & Marketing Head Inventory & Marketing, Labourer Head Inventory & Marketing, Supervisor Marketing & Seiling Head Inventory & Marketing, Supervisor Marketing, Seiling Head Inventory & Marketing, Supervisor Marketing, Seiling Head Inventory & Marketing, Supervisor Marketing, Seiling	A133	Blasting	Chief Mining Engineer, Blasting Expert, Senior Mining Engin	eer, Junior Mining Engieer, Supervisor Saftey
Chief Mining Engineer, Supervisor Safley, Senior Mining Engineer, Junior Mining Engineer Labourer, Foreman, Supervisor Transport/Hauling, Jack Hammer Head Transport/Hauling, Supervisor Transport/Hauling, Labourer, Heav Loader Labourer, Foreman, Supervisor Transport/Hauling My Labourer, Foreman, Supervisor Transport/Hauling Labourer, Head Transport/Hauling Anator Trolly, Heavy Loader, Labourer, Head Transport/Hauling Head Inventory & Marketing Head Inventory & Marketing, Supervisor Marketing & Selling	A134	Cesmic Inspection/Test	Geologist, Mine Inspector, Junior Mine Inspector, Seismome	ter
Labourer, Foreman, Supervisor Transport/Hauling, Jack Hammer Head Transport/Hauling, Supervisor Transport/Hauling, Labourer, Heav Loader Labourer, Head Transport/Hauling, Supervisor Transport/Hauling My Tractor Trolly, Head Transport/Hauling, Supervisor Transport/Hauling And Inventory & Marketing Head Inventory & Marketing Head Inventory & Marketing Head Inventory & Marketing, Supervisor Marketing & Selling	A135	Reporting and Clearence	Chief Mining Engineer, Supervisor Saftey, Senior Mining En	jineer, Junior Mining Engieer
Head Transport/Hauling, Supervisor Transport/Hauling, Labourer, Head Transport/Hauling, Labourer, Head Transport/Hauling, Supervisor Transport/Hauling Labourer, Foreman, Supervisor Transport/Hauling Tractor Trolly, Heavy Loader, Labourer, Head Transport/Hauling, Supervisor Transport/Hauling Head Inventory & Marketing Head Inventory & Marketing, Labourer Head Inventory & Marketing, Supervisor Marketing & Selling	A136	Breaking of Salt (transportable size 75 - 150 KG)	Labourer, Foreman, Supervisor Transport/Hauling, Jack Han	mer
at in Iron Tubs Head Transport/Hauling, Supervisor Transport/Hauling, Labourer, Head Transport/Hauling Labourer, Head Transport/Hauling Labourer, Foreman, Supervisor Transport/Hauling Labourer, Foreman, Supervisor Transport/Hauling Tractor Trolly, Heavy Loader, Labourer, Head Transport/Hauling Head Inventory & Marketing Tractor Trolly, Heavy Loader, Labourer Head Inventory & Marketing Tractor Trolly, Heavy Loader, Labourer Head Inventory & Marketing, Labourer Head Inventory & Marketing, Supervisor Marketing & Selling Trolly Head Inventory & Marketing, Supervisor Marketing & Selling Head Inventory & Marketing, Supervisor Marketi	Transp	ortation and Inventory		
tubs to Main shat/level Platform Labourer, Head Transport/Hauling Salt to Tractor Trolly Tractor Trolly Tractor Trolly Tractor Trolly Head Inventory & Marketing at in Inventory Tractor Trolly Head Inventory & Marketing Coording to Type of Edible Salt Labourer, Head Inventory & Marketing A Waste Salt Ing of Salt Head Inventory & Marketing, Supervisor Marketing & Selling From Vendors/Salt Refiners/Chemical Industry Head Inventory & Marketing, Supervisor Marketing & Selling From Vendors/Salt Refiners/Chemical Industry Head Inventory & Marketing, Supervisor Marketing & Selling	A137	Loading of Salt in Iron Tubs	Head Transport/Hauling, Supervisor Transport/Hauling, Labo	urer, Heavy Loader
Tractor Trolly Tractor Trolly Tractor Trolly, Heavy Loader, Labourer, Head Transport/Hauling Tractor Trolly Head Inventory & Marketing Coording to Type of Edible Salt Labourer, Head Inventory & Marketing Coording to Type of Edible Salt Labourer, Head Inventory & Marketing Tractor Trolly Head Inventory & Marketing Head Inventory & Marketing Find of Salt Head Inventory & Marketing, Supervisor Marketing & Selling Find Documentation (waste + edible) Fead Inventory & Marketing, Supervisor Marketing & Selling Feat Inventory & Marketing, Supervisor Marke	A138	Hauling Iron tubs to Main shaft/level Platform	Labourer, Head Transport/Hauling, Supervisor Transport/Hau	ling
Tractor Trolly. Heavy Loader, Labourer, Head Transport/Hauling, Supervisor Transport/Hauling Tractor Trolly Head Inventory & Marketing coording to Type of Edible Salt Labourer, Head Inventory & Marketing coording to Type of Edible Salt Head Inventory & Marketing, Labourer Ing of Salt Ing of Salt Head Inventory & Marketing, Supervisor Marketing & Seiling Head Inventory & Marketing, Supervisor Marketing & Seiling In Buyer Page 3 of 4 Muhammad Haroon Rasheed (074), Seerat G	A139	Transfering Salt to Tractor Trolly	Labourer, Foreman, Supervisor Transport/Hauling	
Tractor Troity Head Inventory & Marketing coording to Type of Edible Salit Labourer, Head Inventory & Marketing coording to Type of Edible Salit Labourer, Head Inventory & Marketing Head Inventory & Marketing, Labourer Iing of Salit Head Inventory & Marketing, Supervisor Marketing & Selling	A140	Moving Salt to Inventory Depot	Tractor Trolly, Heavy Loader, Labourer, Head Transport/Haul	ng, Supervisor Transport/Hauling
at in Inventory Lead Inventory & Marketing coording to Type of Edible Salt Labourer, Head Inventory & Marketing, Labourer (Ing of Salt Head Inventory & Marketing, Supervisor Marketing & Selling	A141		Head Inventory & Marketing	
coording to Type of Edible Salt Labourer, Head Inventory & Marketing Head Inventory & Marketing, Labourer Head Inventory & Marketing, Labourer Head Inventory & Marketing, Supervisor Marketing & Selling	A142	Unloading Salt in Inventory	Head Inventory & Marketing	
ling of Salt Head Inventory & Marketing, Labourer ling of Salt Head Inventory & Marketing, Supervisor Marketing & Selling reling Documentation (waste + edible) Head Inventory & Marketing, Supervisor Marketing & Selling h from Vendors/Salt Refiners/Chemical Industry Head Inventory & Marketing, Supervisor Marketing & Selling m Buyer Head Inventory & Marketing, Supervisor Marketing & Selling Page 3 of 4 Muhammad Haroon Rasheed (074), Seerat G	A143	Seperation according to Type of Edible Salt	Labourer, Head Inventory & Marketing	
ing of Salt Head Inventory & Marketing, Supervisor Marketing & Selling Page 3 of 4 Muhammad Haroon Rasheed (074), Seerat G	A144	Seperation of Waste Salt	Head Inventory & Marketing, Labourer	
PMDC Salt Selling Documentation (waste + edible) Head Inventory & Marketing, Supervisor Marketing & Selling Receving PO from Vendors/Salt Refiners/Chemical Industry Head Inventory & Marketing, Supervisor Marketing & Selling Payment from Buyer Payment from Buyer Page 3 of 4 Muhammad Haroon Rasheed (074), Seerat G	Market	ing and Selling of Salt		
Receving PO from Vendors/Salt Refiners/Chemical Industry Head Inventory & Marketing, Supervisor Marketing & Selling Payment from Buyer Page 3 of 4 Muhammad Haroon Rasheed (074), Seerat G	A145	PMDC Salt Selling Documentation (waste + edible)	Head Inventory & Marketing, Supervisor Marketing & Selling	
Payment from Buyer Head Inventory & Marketing, Supervisor Marketing & Setting Page 3 of 4 Muhammad Haroon Rasheed (074), Seerat G	A146	Receving PO from Vendors/Salt Refiners/Chemical Industry	Head Inventory & Marketing, Supervisor Marketing & Selling	
Muhammad Haroon Rasheed (074) , Seerat G	A147	Payment from Buyer	Head Inventory & Marketing, Supervisor Marketing & Selling	
			Page 3 of 4	Muhammad Haroon Rasheed (074) , Seerat Ghafoor (027)

Resource Assignment to Activities

Khewra Salt Mines Project	s Project	Resource Assignments	nents
Activity ID	Activity Name	Resources	
A148	Weighting Waste Salt	Head Inventory & Marketing, Supervisor Marketing & Selling, Labourer	bourer
A149	Loading and Dispatching Waste Salt to Chemical Industry	Supervisor Marketing & Selling	
A150	Dispatching of Edible Salt to respective Buyer	Labourer, Supervisor Marketing & Selling, Head Inventory & Marketing	keting
A151	Finish		
		Page 4 of 4 M.	Muhammad Haroon Rasheed (074) , Seerat Ghafoor (027) © Oracle Corporation
	_	_	

13.9 Primary Resources for each Activity

wra Salt Mine		Primary Re	
'ID	Activity Name	Primary Resource	е
Khewra S	alt Mines Project		
Salt Exp	loration		
A100	Start		
A101	Reconnaissance Survey inside Main Shaft	L9.Chief Mining	Engineer
A102	Mine Survey	L10.Planning En	gineer
A103	Salt Ore Sampling 1 via drilling	L25.Drilling Supe	ervisor
A104	Salt Ore Sampling 2 via drilling	L25.Drilling Supe	ervisor
A105	Testing of salt samples in laboratory	L27.Geologist	
A106	Ore sample Reporting and veting	L9.Chief Mining	Engineer
A107	Planning Report Generation (chamber addition)	L1.Project Mana	ger KSM
Mining	of "Development and Cross Tunnels"		
A108	Mining Work for Development Tunnel 1 (100 ft)	L9.Chief Mining	Engineer
A109	Roofing Work of Development Tunnel 1	L9.Chief Mining	Engineer
A110	Installation of Electric Pipes and Lights Dev Tunnel 1	L15.Head Electri	cian
A111	Installation of Water Pipeline in Dev Tunnel 1	L19.Head Plumb	per
A112	Inspection of Dev Tunnel 1	L28.Mine Inspec	tor
A113	Mining Work for Development Tunnel 2 (100 ft)	L9.Chief Mining	Engineer
A114	Roofing Work of Development Tunnel 2	L12.Senior Minin	g Engineer
A115	Installation of Electric Pipes and Lights in Dev Tunnel 2	L16.Electrician	
A116	Installation of Water Pipeline in Dev Tunnel 2	L19.Head Plumb	per
A117	Inspection of Dev Tunnel 2	L28.Mine Inspec	tor
A118	Mining Work for Cross Tunnel 1	L9.Chief Mining	Engineer
A119	Roofing Work of Cross Tunnel 1	L12.Senior Minin	g Engineer
A120	Installation of Electric Pipes and Lights Cross Tunnel 1	L16.Electrician	
A121	Installation of Water Pipeline in Cross Tunnel 1	L19.Head Plumb	per
A122	Inspection of Cross Tunnel 1	L28.Mine Inspec	tor
A123	Mining Work for Cross Tunnel 2	L9.Chief Mining	Engineer
A124	Roofing Work of Cross Tunnel 2	L22.Foreman	
A125	Installation of Electric Pipes and Lights Cross Tunnel 2	L16.Electrician	
	Page 1 of 2	2	Muhammad Haroon Rasheed (074) , Ghafoor (027)

Primary Resources for each Activity

Khe	wra Salt Mine	s Project		Primary Re	esources	
tivit	y ID	Activity Name		Primary Resource	ce	
	A126	Installation of Water Pipe	line in Cross Tunnel 2	L19.Head Plum	ber	
	A127	Inspection of Cross Tunne	el 2	L28.Mine Inspe	ctor	
١	Salt Min	ing/Extraction				
ſ	A128	Inspection of Site for Blas	sting	L14.Blasting Ex	pert	
	A129	Cavity Drilling		L14.Blasting Ex	pert	
	A130	Installation of Blasting Po	wder Units	L14.Blasting Ex	pert	
	A131	Installation of Electric Sys	tem for Blasting	L16.Electrician		
	A132	Pre Blasting Inspection		L28.Mine Inspe	ctor	
	A133	Blasting		L9.Chief Mining	Engineer	
	A134	Cesmic Inspection/Test		L27.Geologist		
	A135	Reporting and Clearence		L9.Chief Mining	Engineer	
	A136	Breaking of Salt (transpor	table size 75 - 150 KG)	L24.Labourer		
l	Transpo	rtation and Invento	ory			
ſ	A137	Loading of Salt in Iron Tu	bs	L7.Head Transp	ort/Hauling	
	A138	Hauling Iron tubs to Main	shaft/level Platform	L24.Labourer		
	A139	Transfering Salt to Tractor	r Trolly	L24.Labourer		
	A140	Moving Salt to Inventory	Depot	L24.Labourer		
	A141	Weighting of Tractor Trolly	y	L2.Head Inventor	ory &	
	A142	Unloading Salt in Invento	ry	L2.Head Inventor	ory &	
	A143	Seperation according to 7	Type of Edible Salt	L24.Labourer		
	A144	Seperation of Waste Salt		L2.Head Inventor	ory &	
	Marketin	ng and Selling of Sa	alt			
Ī	A145	PMDC Salt Selling Docum	nentation (waste + edible)	L2.Head Inventor	ory &	
	A146	Receving PO from Vendo Industry	ors/Salt Refiners/Chemical	L2.Head Inventor	ory &	
	A147	Payment from Buyer		L2.Head Inventor	ory &	
	A148	Weighting Waste Salt		L2.Head Inventor	ory &	
	A149	Loading and Dispatching	Waste Salt to Chemical Industry	L30.Supervisor Selling	Marketing &	
	A150	Dispatching of Edible Salt	t to respective Buyer	L24.Labourer		
	A151	Finish				
			Page 2 of 2		Muhammad Haroon Rashe	ed (0
					Ghafoor (027)	

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13.10 Budgeted Total Cost (including Labor, Material and Non-Labor Cost) for each activity

Active Name Active Name Code Early Name Early Name	Khewra Salt Mines Project	es Project		Budgeted Total C	ost, Labour, Non La	Budgeted Total Cost, Labour, Non Labor and Material Budgeted Cost	geted Cost
124 Rs.276,360.00 Rs.1,502,200.00 Rs.200,360.00 Rs.2	Activity ID	Adivity Name	Original Duration	Budgeted Total Cost	Budgeted Material Cost	Budgeted Nonlabor Cost	Budgeted Labor Cost
12d Rs. 276;360 00 Rs. 000 Rs. 12,300 00 Rs. 12,30	Khewra S	salt Mines Project	100d 5h	Rs.5,224,160.00	Rs.623,200.00	Rs.1,502,600.00	Rs.3,098,360.00
0d Rs.0.00 Rs.28,580.00 Rs.0.00 Rs.28,580.00 Rs.0.00 Rs.12,300.00 Rs.12,300.00 Rs.12,300.00 Rs.12,300.00 Rs.12,300.00 Rs.12,300.00 Rs.12,300.00 Rs.12,300.00 Rs.12,300.00 Rs.12,400.00 Rs.12,200.00	SaltExp	oloration	12d		Rs.0.00	Rs.4,800.00	Rs.271,560.00
1d Rs.28,580.00 Rs.00 Rs.00 Rs.28,580.00 1d Rs.14,700.00 Rs.00 Rs.24,00.00 Rs.12,300.00 1d Rs.14,700.00 Rs.00 Rs.24,00.00 Rs.12,300.00 3d Rs.8,160.00 Rs.00 Rs.14,700.00 Rs.10,00 Rs.12,300.00 2d Rs.47,160.00 Rs.00 Rs.00 Rs.14,480.00 Rs.14,480.00 Rs.14,480.00 Rs.14,480.00 4d Rs.134,480.00 Rs.00 Rs.00 Rs.1454,500.00 Rs.134,480.00 2d Rs.456,580.00 Rs.00 Rs.00 Rs.1454,500.00 Rs.134,480.00 2d Rs.456,580.00 Rs.00 Rs.1454,500.00 Rs.326,00.00 2d Rs.524,000.00 Rs.40,000.00 Rs.1454,500.00 Rs.134,480.00 5d Rs.524,000.00 Rs.41,000.00 Rs.10,400.00 Rs.10,400.00 5d Rs.524,000.00 Rs.14,000.00 Rs.30,00 Rs.30,00 Rs.30,00 2d Rs.633,000.00 Rs.90,000 Rs.237,500.00 Rs.329,600.00	A100	Start	PO	Rs.0.00	Rs.0.00	Rs.0.00	Rs.0.00
1d Rs.28,580.00 Rs.0.00 Rs.20,680.00 Rs.28,580.00 1d Rs.14,700.00 Rs.0.00 Rs.2,400.00 Rs.12,300.00 3d Rs.8,160.00 Rs.0.00 Rs.2,400.00 Rs.12,300.00 2d Rs.47,160.00 Rs.0.00 Rs.145,00.00 Rs.145,00.00 4d Rs.134,480.00 Rs.00 Rs.134,480.00 Rs.314,480.00 2d Rs.632,000.00 Rs.00 Rs.145,500.00 Rs.314,480.00 2d Rs.632,000.00 Rs.00 Rs.145,600.00 Rs.328,600.00 5d Rs.524,000.00 Rs.1400.00 Rs.328,600.00 Rs.1400.00 5d Rs.24,200.00 Rs.14,000.00 Rs.00 Rs.00 5d Rs.8,920.00 Rs.14,000.00 Rs.00 Rs.328,600.00 2dd Rs.419,600.00 Rs.90,000.00 Rs.329,500.00 Rs.329,600.00 2dd Rs.419,600.00 Rs.90,000.00 Rs.329,500.00 Rs.329,600.00	A101	Reconnaissance Survey inside Main Shaft	14	Rs.28,580.00	Rs.0.00	Rs.0.00	Rs.28,580.00
1d Rs.14,700.00 Rs.0.00 Rs.2,400.00 Rs.12,300.00 3d Rs.8,160.00 Rs.0.00 Rs.0.00 Rs.14,00.00 2d Rs.47,160.00 Rs.0.00 Rs.0.00 Rs.47,160.00 4d Rs.134,480.00 Rs.000 Rs.1454,500.00 Rs.134,480.00 2d Rs.652,000.00 Rs.000 Rs.1454,500.00 Rs.134,480.00 2d Rs.652,000.00 Rs.000 Rs.1454,500.00 Rs.134,480.00 2d Rs.528,800.00 Rs.000 Rs.1454,500.00 Rs.238,600.00 5d Rs.524,000.00 Rs.41,000.00 Rs.000 Rs.10,400.00 5d Rs.24,200.00 Rs.14,000.00 Rs.000 Rs.10,200.00 5d Rs.8,920.00 Rs.10,000.00 Rs.000 Rs.30,500.00 2dd Rs.419,600.00 Rs.90,000.00 Rs.237,500.00 Rs.329,600.00 2dd Rs.419,600.00 Rs.90,000.00 Rs.237,500.00 Rs.329,600.00	A102	Mine Survey	14	Rs.28,580.00	Rs.0.00	Rs.0.00	Rs.28,580.00
1d Rs.14,700.00 Rs.0.00 Rs.2,400.00 Rs.12,300.00 2d Rs.47,160.00 Rs.0.00 Rs.0.00 Rs.134,460.00 4d Rs.134,480.00 Rs.0.00 Rs.134,460.00 2d Rs.4565,880.00 Rs.60.00 Rs.134,460.00 2d Rs.692,000.00 Rs.000 Rs.1454,500.00 2d Rs.524,000.00 Rs.00 Rs.134,400.00 5d Rs.524,000.00 Rs.42,000.00 Rs.14,600.00 5d Rs.524,000.00 Rs.41,000.00 Rs.10,400.00 5d Rs.632,000.00 Rs.14,000.00 Rs.00 2d Rs.633,000.00 Rs.00 Rs.00 2d Rs.419,600.00 Rs.90,000.00 Rs.237,500.00 2d Rs.419,600.00 Rs.90,000.00 Rs.323,500.00	A103	Salt Ore Sampling 1 via drilling	J4	Rs.14,700.00	Rs.0.00	Rs.2,400.00	Rs.12,300.00
3d Rs.8,160.00 Rs.0.00 Rs.0.00 Rs.0,00 Rs.160.00 4d Rs.134,480.00 Rs.0.00 Rs.0.00 Rs.134,480.00 4d Rs.134,480.00 Rs.620.000.00 Rs.1454,500.00 Rs.134,480.00 25d Rs.692,000.00 Rs.000 Rs.299,500.00 Rs.328,600.00 20d Rs.328,800.00 Rs.000 Rs.000 Rs.238,600.00 5d Rs.52,400.00 Rs.41,000.00 Rs.000 Rs.10,400.00 5d Rs.24,200.00 Rs.14,000.00 Rs.000 Rs.10,200.00 5d Rs.8,920.00 Rs.10,000.00 Rs.000 Rs.000 2dd Rs.633,000.00 Rs.000 Rs.337,500.00 Rs.395,500.00 2dd Rs.419,600.00 Rs.90,000.00 Rs.237,500.00 Rs.329,600.00	A104	Salt Ore Sampling 2 via drilling	J4	Rs.14,700.00	Rs.0.00	Rs.2,400.00	Rs.12,300.00
2d Rs.134,480.00 Rs.0.00 Rs.0.00 Rs.0.00 Rs.134,480.00 2d Rs.134,480.00 Rs.0.00 Rs.0.00 Rs.134,480.00 2d Rs.256,580.00 Rs.562,000.00 Rs.295,500.00 2d Rs.328,800.00 Rs.90,000 Rs.0.00 Rs.295,600.00 5d Rs.524,000.00 Rs.40,000 Rs.0.00 Rs.0.00 Rs.10,400.00 5d Rs.524,000.00 Rs.0.00 Rs.0.00 Rs.0.00 Rs.0.00 2d Rs.633,000.00 Rs.0.00 Rs.0.00 Rs.0.00 Rs.395,500.00 2d Rs.633,000.00 Rs.0.00 Rs.0.00 Rs.295,600.00 2d Rs.419,600.00 Rs.90,000 Rs.0.00 Rs.237,500.00 Rs.329,500.00	A105	Testing of salt samples in laboratory	95 34	Rs.8,160.00	Rs.0.00	Rs.0.00	Rs.8,160.00
4d Rs.134,480.00 Rs.0.00 Rs.0.00 Rs.134,480.00 4ed Rs.4,586,880.00 Rs.0.00 Rs.1,454,500.00 Rs.134,480.00 25d Rs.922,000.00 Rs.0.00 Rs.239,500.00 Rs.328,800.00 2d Rs.52,400.00 Rs.0,000 Rs.0.00 Rs.10,400.00 5d Rs.24,200.00 Rs.14,000.00 Rs.0.00 Rs.10,200.00 1d Rs.8,920.00 Rs.0.00 Rs.0.00 Rs.0.00 2dd Rs.633,000.00 Rs.0.00 Rs.337,500.00 Rs.395,500.00 2dd Rs.419,600.00 Rs.90,000.00 Rs.237,500.00 Rs.329,600.00	A106	Ore sample Reporting and veting	2d	Rs.47,160.00	Rs.0.00	Rs.0.00	Rs.47,160.00
46d Rs.4.556,580.00 Rs.520,000.00 Rs.1.454,500.00 Rs.2540,080.00 25d Rs.692,000.00 Rs.000 Rs.299,500.00 Rs.392,500.00 20d Rs.524,000.00 Rs.90,000.00 Rs.00 Rs.304,000.00 5d Rs.24,200.00 Rs.41,000.00 Rs.0.00 Rs.10,400.00 5d Rs.24,200.00 Rs.14,000.00 Rs.0.00 Rs.0.00 2d Rs.633,000.00 Rs.0.00 Rs.237,500.00 Rs.329,500.00 2d Rs.419,600.00 Rs.90,000.00 Rs.200.00 Rs.329,600.00	A107	Planning Report Generation (chamber addition)	44	Rs.134,480.00	Rs.0.00	Rs.0.00	Rs.134,480.00
Mining Work for Development Tunnel 1 (100 ft) 25d Rs.328,000.00 Rs.000 Rs.299,500.00 Rs.328,500.00 Roofing Work of Development Tunnel 1 Installation of Development Tunnel 1 Installation of Development Tunnel 1 Installation of Water Pipeline in Dev Tunnel 1 Installation of Water for Development Tunnel 2 (100 ft) Rs.524,000.00 Installation Of Rs.000 Installation	Mining	of "Development and Cross Tunnels"	46d	Rs.4,556,580.00	Rs.562,000.00	Rs.1,454,500.00	Rs.2,540,080.00
Roofing Work of Development Tunnel 1 20d Rs.328,800.00 Rs.90,000.00 Rs.0.00 Rs.0.00 Rs.10,400.00 Installation of Bedrift Pipes and Lights Dev Tunnel 1 5d Rs.52,400.00 Rs.14,000.00 Rs.0.00 Rs.10,400.00 Inspection of Dev Tunnel 1 1d Rs.824,200.00 Rs.14,000.00 Rs.0.00 Rs.10,200.00 Mining Work for Development Tunnel 2 (100 ft) 25d Rs.633,000.00 Rs.0.00 Rs.327,500.00 Rs.385,500.00 Roofing Work of Development Tunnel 2 20d Rs.419,600.00 Rs.90,000.00 Rs.323,500.00 Rs.329,600.00	A108	Mining Work for Development Tunnel 1 (100 ft)	25d	Rs.692,000.00	Rs.0.00	Rs.299,500.00	Rs.392,500.00
Installation of Bectric Pipes and Lights Dev Tunnel 1 5d Rs.52,400.00 Rs.14,000 00 Rs.000 Rs.000 Rs.10,400.00 Installation of Water Pipeline in Dev Tunnel 1 5d Rs.24,200.00 Rs.14,000 00 Rs.000 Rs.20,600	A109	Roofing Work of Development Tunnel 1	20d	Rs.328,800.00	Rs.90,000.00	Rs.0.00	Rs.238,800.00
Installation of Water Pipeline in Dev Tunnel 1 1d Rs.8,920.000 Rs.0,000 Rs.0,000 Rs.0,000 Rs.0,000 Rs.920.000 Mining Work for Development Tunnel 2 (100 ft) Roofing Work of Development Tunnel 2 25d Rs.633,000.00 Rs.90,000.00 Rs.237,500,00 Rs.395,500.00 Rs.0,000 Rs.329,600.00 Rs.0,000 Rs.329,600.00 Rs.0,000 Rs.329,600.00	A110	Installation of Electric Pipes and Lights Dev Tunnel 1	PS	Rs.52,400.00	Rs.42,000.00	Rs.0.00	Rs.10,400.00
Inspection of Dev Tunnel 1	A111	Installation of Water Pipeline in Dev Tunnel 1	PS	Rs.24,200.00	Rs.14,000.00	Rs.0.00	Rs.10,200.00
Mining Work for Development Tunnel 2 (100 ft) 25d Rs 633,000.00 Rs 0.00 Rs 237,500.00 Rs 239,500.00 Roofing Work of Development Tunnel 2 20d Rs 419,600.00 Rs 90,000.00 Rs 0.00 Rs 329,600.00 Page 1 of 4 Muhammad Haroon Rasheed (074) , Seeral Gallacian Control Res 100.00 Rs 329,600.00	A112	Inspection of Dev Tunnel 1	1d	Rs.8,920.00	Rs.0.00	Rs.0.00	Rs.8,920.00
Roofing Work of Development Tunnel 2 20d Rs.419,600.00 Rs.90,000.00 Rs.0.00 Rs.0.00 Rs.329,600.00	A113	Mining Work for Development Tunnel 2 (100 ft)	25d		Rs.0.00	Rs.237,500.00	Rs.395,500.00
Muhammad Haroon Rasheed (074) , Seerat G	A114	Roofing Work of Development Tunnel 2	200	Rs.419,600.00	Rs.90,000.00	Rs.0.00	Rs.329,600.00
Muhammad Haroon Rasheed (074) , Seerat G							
			ă	age 1 of 4		Muhammad Haroon I	Rasheed (074), See

Budgeted Total Cost (including Labor, Material and Non-Labor Cost) for each activity

Khewra Salt Mines Project	les Project		Budgeted Total	Cost, Labour, Non L	Budgeted Total Cost, Labour , Non Labor and Material Budgeted Cost	Jeted Cost
Activity ID	Activity Name	Original Duration	Budgeted Total Cost	Budgeted Material Cost	Budgeted Nonlabor Cost	Budgeted Labor Cost
A115	Installation of Electric Pipes and Lights in Dev Tunnel 2	P9	Rs.56,400.00	Rs.42,000.00	Rs.0.00	Rs.14,400.00
A116	Installation of Water Pipeline in Dev Tunnel 2	29	Rs.38,200.00	Rs.28,000.00	Rs.0.00	Rs.10,200.00
A117	Inspection of Dev Tunnel 2	14	Rs.8,920.00	Rs.0.00	Rs.0.00	Rs.8,920.00
A118	Mining Work for Cross Tunnel 1	20d	Rs.497,100.00	Rs.0.00	Rs.217,500.00	Rs.279,600.00
A119	Roofing Work of Cross Tunnel 1	15d	Rs.559,200.00	Rs.72,000.00	Rs.240,000.00	Rs.247,200.00
A120	Installation of Electric Pipes and Lights Cross Tunnel 1	29	Rs.56,400.00	Rs.42,000.00	Rs.0.00	Rs.14,400.00
A121	Installation of Water Pipeline in Cross Tunnel 1	29	Rs.24,200.00	Rs.14,000.00	Rs.0.00	Rs.10,200.00
A122	Inspection of Cross Tunnel 1	14	Rs.8,920.00	Rs.0.00	Rs.0.00	Rs.8,920.00
A123	Mining Work for Cross Tunnel 2	20d	Rs.499,600.00	Rs.0.00	Rs.220,000.00	Rs.279,600.00
A124	Roofing Work of Cross Tunnel 2	15d	Rs.559,200.00	Rs.72,000.00	Rs.240,000.00	Rs.247,200.00
A125	Installation of Electric Pipes and Lights Cross Tunnel 2	29	Rs.56,400.00	Rs.42,000.00	Rs.0.00	Rs.14,400.00
A126	Installation of Water Pipeline in Cross Tunnel 2	2d	Rs.24,200.00	Rs.14,000.00	Rs.0.00	Rs.10,200.00
A127	Inspection of Gross Tunnel 2	10	Rs.8,920.00	Rs.0.00	Rs.0.00	Rs.8,920.00
Salt Mir	Salt Mining/Extraction	16d 4h	Rs.248,900.00	Rs.61,200.00	Rs.29,300.00	Rs.158,400.00
A128	Inspection of Site for Blasting	1d	Rs.21,400.00	Rs.0.00	Rs.0.00	Rs.21,400.00
A129	Cavity Drilling	2d	Rs.37,760.00	Rs.0.00	Rs.4,800.00	Rs.32,960.00
A130	Installation of Blasting Powder Units	14	Rs.21,440.00	Rs.17,200.00	Rs.0.00	Rs.4,240.00
A131	Installation of Electric System for Blasting	14	Rs.50,320.00	Rs.44,000.00	Rs.0.00	Rs.6,320.00
		Pa	Page 2 of 4		Muhammad Haroon F	Muhammad Haroon Rasheed (074) , Seerat Ghafoor (027) © Oracle Corporation

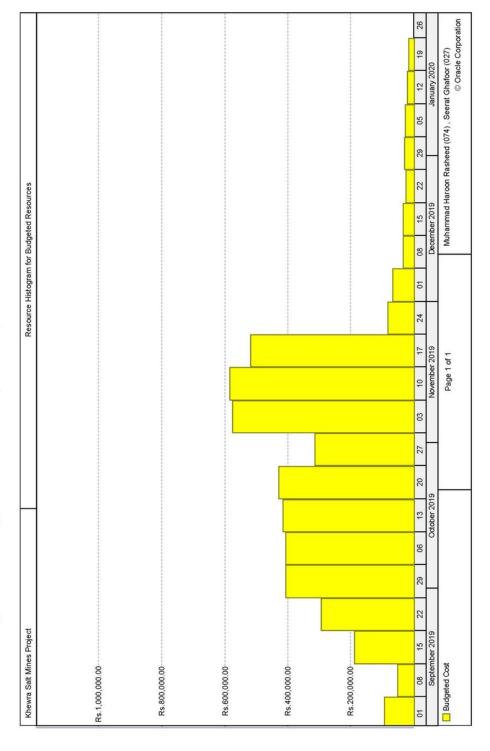
Budgeted Total Cost (including Labor, Material and Non-Labor Cost) for each activity

Activity ID Activi	Activity Name				Designation of Manufacture	Dudostod Labor	
	orderly regular	Original Duration	Budgeted Total Cost	Budgeted Material	Budgeted Nonlabor	Cost	
	Pre Blasting Inspection	2d	Rs.24,640.00	Rs.0.00	Rs.0.00	Rs.24,640.00	
A133 BI	Blasting	0d 4h	Rs.6,490.00	Rs.0.00	Rs.0.00	Rs.6,490.00	
A134 Q	Oesmic Inspection/Test	2d	Rs.30,480.00	Rs.0.00	Rs.20,000.00	Rs.10,480.00	
A135 Re	Reporting and Clearence	PE 34	Rs.31,870.00	Rs.0.00	Rs.0.00	Rs.31,870.00	
A136 Br	Breaking of Salt (transportable size 75 - 150 KG)	99	Rs.24,500.00	Rs.0.00	Rs.4,500.00	Rs.20,000.00	
Transportation an	tion and Inventory	14d 1h	Rs.92,720.00	Rs.0.00	Rs.14,000.00	Rs.78,720.00	
A137 Lo	Loading of Salt in Iron Tubs	9q	Rs.38,000.00	Rs.0.00	Rs.10,000.00	Rs.28,000.00	
A138 H	Hauling Iron tubs to Main shaft/level Platform	99	Rs.28,000.00	Rs.0.00	Rs.0.00	Rs.28,000.00	
A139 Tr	Transfering Salt to Tractor Trolly	0d 4h	Rs.2,000.00	Rs.0.00	Rs.0.00	Rs.2,000.00	
A140 M	Moving Salt to Inventory Depot	14	Rs.6,800.00	Rs.0.00	Rs.4,000.00	Rs.2,800.00	
A141 W	Weighting of Tractor Trolly	0d 1h	Rs.320.00	Rs.0.00	Rs.0.00	Rs.320.00	
A142 Ur	Unloading Salt in Inventory	0d 4h	Rs.1,600.00	Rs.0.00	Rs.0.00	Rs.1,600.00	
A143 St	Seperation according to Type of Edible Salt	2d	Rs.8,000.00	Rs.0.00	Rs.0.00	Rs.8,000.00	
A144 St	Seperation of Waste Salt	2d	Rs.8,000.00	Rs.0.00	Rs.0.00	Rs.8,000.00	
Marketing	Marketing and Selling of Salt	12d	Rs.49,600.00	Rs.0.00	Rs.0.00	Rs.49,600.00	
A145 PI	PMDC Salt Selling Documentation (waste + edible)	2d	Rs.20,000.00	Rs.0.00	Rs.0.00	Rs.20,000.00	
A146 R	Receving PO from Vendors/Salt Refiners/Chemical Industry	P9	Rs.20,000.00	Rs.0.00	Rs.0.00	Rs.20,000.00	
A147 P8	Payment from Buyer	14	Rs.4,000.00	Rs.0.00	Rs.0.00	Rs.4,000.00	
		Pa	Page 3 of 4		Muhammad Haroon F	Muhammad Haroon Rasheed (074) , Seerat Ghafoor (027)	Shafoor (027) © Oracle Corporation

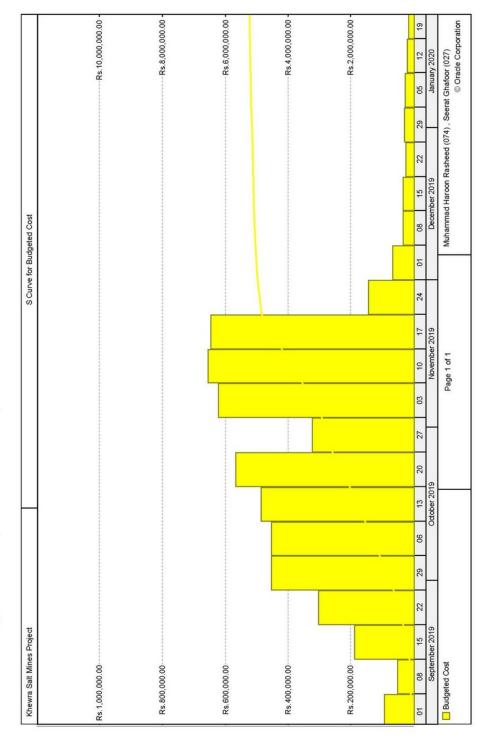
Budgeted Total Cost (including Labor, Material and Non-Labor Cost) for each activity

Khewra Salt Mines Project			Budgeted Total Co	ost, Labour, Non La	Budgeted Total Cost, Labour, Non Labor and Material Budgeted Cost	teted Cost	
Activity Name	ne	Original Duration	Budgeted Total Cost	Budgeted Material Cost	Budgeted Nonlabor Cost	Budgeted Labor Cost	
A148 Weighting Waste Salt	Waste Salt	0d 4h	Rs.2,400.00	Rs.0.00	Rs.0.00	Rs.2,400.00	
A149 Loading and	Loading and Dispatching Waste Salt to Chemical Industry	0d 4h	Rs.400.00	Rs.0.00	Rs.0.00	Rs.400.00	
A150 Dispatching	Dispatching of Edible Salt to respective Buyer	0d 4h	Rs.2,800.00	Rs.0.00	Rs.0.00	Rs.2,800.00	
A151 Finish		РО	Rs.0.00	Rs.0.00	Rs.0.00	Rs.0.00	
		Pa	Page 4 of 4		Muhammad Haroon F	Muhammad Haroon Rasheed (074) , Seerat Ghafoor (027)	Ghafoor (027) © Oracle Corporation

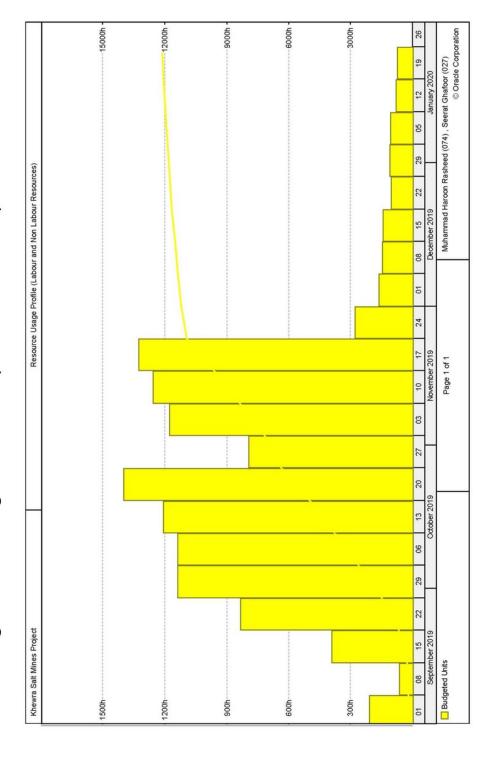
13.11 Resource Histogram for Budgeted Resources (Planned)



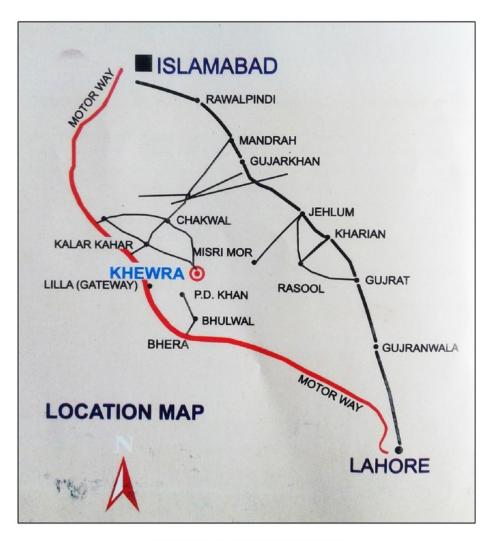
13.12S-Curve for Budgeted Cost (Total Resources)



13.13 Resource Usage Profile for Budgeted Resources (Labor and Non-Labor)



14. Appendix



APPENDIX A: MAP OF KHEWRA

15. References • "The Salt Kingdom Khewra" by Mr. Muhammad Naeem Murtaza, (published by Shalimar Publishers, 2008)

Khewra Salt Mines Project

ORIGINALITY REPORT

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