

Khewra Salt Mine Project

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Preface

As a part of the MS Project management program, we have learnt a number of mythologies and tools. We have implemented different project on different management tool to gain the practical knowledge of Management Sciences.

To get practical knowledge, we have initiated a study tour project of Khewra salt mine so that we can understand the process of salt mining in khewra. We have summarized this report on working process of khewra mine that is from initiating of project till salt is excavated. We have implement this project on Primavera that is enterprise level tool for project management. Our report features little bit about history, introduction, tourism and production. Focus are of this is mining and production of salt using Primavera management tool.

Acknowledgment

First of all thank Allah Almighty who made it easy and enable us to research on “Khewra Salt Mines” Project and compile this report on it.

I would really thankful to our respected supervisor Mr. Shehzad Ahmad for arranging such an information study tour to “Khewra Salt Mines”. His guidance made it easy for us to work on this project. He had guided is from initiation of project till execution and closing of the project. This report is very small glimpse of this devoted guidance and supervision for this project.

We are also thankful to university management who had made it easy to initiate and complete this project. We are extremely to thankful to all the teacher who had taught us during the program, who taught us the mythologies that we have implemented in this project.

Abstract

This report is based on the Kherwa salt mines history, introduction, and production of salt. 1st part include history of khewra that how salt was founded. Then there is little bit discussion of tourism activities in salt mine. After that production process is implanted on primavera p6. It include cost, schedule, resource estimates that are presented in from form of graphs and tables.

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1. Introduction to Khewra Salt Mine

1.1. History

The Greek famous King Alexander who is famous for building huge empire from Europe to Asia and Africa. During his journey he crossed across Pakistan.

Stopping his soldiers for a rest inside the mountains now called Khewra, Horses of Alexander started to lick the stones on the ground and mountain range.

Seeing that each one the horses had been started to lick those stones, so he takes notice of that. A soldier also tried to analyze that what's the issue, after checking he reported to King that rocks have been salty to some extent. At that time Khewra salt deposits have been discovered.

Trade of salt was started during Mughal era. They started to export this salt to different markets including central Asia. After that British Empire took over the charge of Mines and they made further development in the mine to increase its production. Due to small size of tunnel it was very difficult to put out salt from the mine. Terrain was too much rocky, there was no water supply in the mine. Labor and engineers feel it too much difficult for mining. So they improved infrastructure in the area, increased size of tunnel and supplied water and other amenities inside the mine for labor. Then they developed warehouses for the storage of salt and applied best and latest mechanism salt excavation.

After Pakistan came into being in 1947, Pakistan Mineral development Corporation (PMDC) took the responsibility of the mines. Now PMDC only excavate and produce salt.

1.2. Brief Introduction

Khewra salt mine is the second biggest mine of the world. Its Pakistan's oldest and largest salt mine. It is situated in Pind Dadan Khan, a Tehsil of Jehlum district of

province Punjab that is 130km away from Islamabad. Salt mine is easy reachable from Lahore and Islamabad, falling midway between the 2 cities, and reached by exiting the Kallar Kahar interchange on the M2.

It is estimated that salt reserves in khewra mines are 82 million tons to about 600 million tons. Total Leased area of mine is about 3,398.53 Acres. Mines tunnel have very pleasant temperature all the year that is about 18-20 degree Celsius. In this mine we can find salt in three different colors that is pink salt, white salt and red salt. Tunnel's length inside the mine is about 40km. Salt from this mine is of best quality in the region that is about 98% of purity level.

1.3 Salt Production

400, 000 tons salt is produced every year from khewra mine. The salt is in crude form but impurities are in very less amount. Very less amount of potassium, calcium, magnesium and moisture is present. It also possess a minor amount of copper, iron, zinc, lead and chromium as trace element.

In the beginning era of british rule, 28,000 tons to 30,000 tons was produced per year. This production raised to about 187,400 tons per year in 1950. In 2003 salt production was raised to 385,000 tons that can last for 350 years.

There are 19 stories with 11 floors are above ground and rest are underground. From the doorway, the mine stretches concerning 730 meters within the mountains.

Void and column method is used for extraction purpose, 50% of salt is extracted and 50% is used for the support of Mines. The thin track railroad of the British-period Khewra salt mines (610 mm) is utilized to separate salt from the mine in rail route wagons.

Khewra salt is the well-known stone salt in Pakistan. Salt of khewra rocks are very well famous in palkistan. It is utilized as a crude material for some, ventures including cooking, shower salts, brackish water and a soft drink plant established

by AkzoNobel in 1940. Salt from the Khewra mine is additionally used to make items for decoration, for example, lights, containers, statues and ashtrays. All these things are also exported all over the world including United States and numerous European nations.

The utilization of rock salt to make creative and ornamental items started during the Mughal period when numerous craftsman's made dishes and enhancements from them. Warth presented the utilization of a machine to cut bits of rock salt craftsmanship since he found that his physical properties took after mortar.

The mine is currently worked by the Pakistan Mineral Development Corporation, an administration office by government of Pakistan.

1.4 About PMDC

PMDC is an independent organization under the authoritative control of Ministry of Petroleum and Natural Resources, Government of Pakistan. It was built up in 1974 with an approved investment of Rs.1, 000 million to support and help in mineral advancement exercises in Pakistan.

It is associated with investigation and assessment of monetary mineral stores, readiness of techno-financial attainability reports, mining and showcasing.

PMDC is working 4 Coal Mines in country to manage the coal and energy needs of country. They operates 4 Salt Mines in the country and a silica sand excavation. PMDC produces 17% of the coal requirement of country and 58% of the all-out salt generation in the nation.

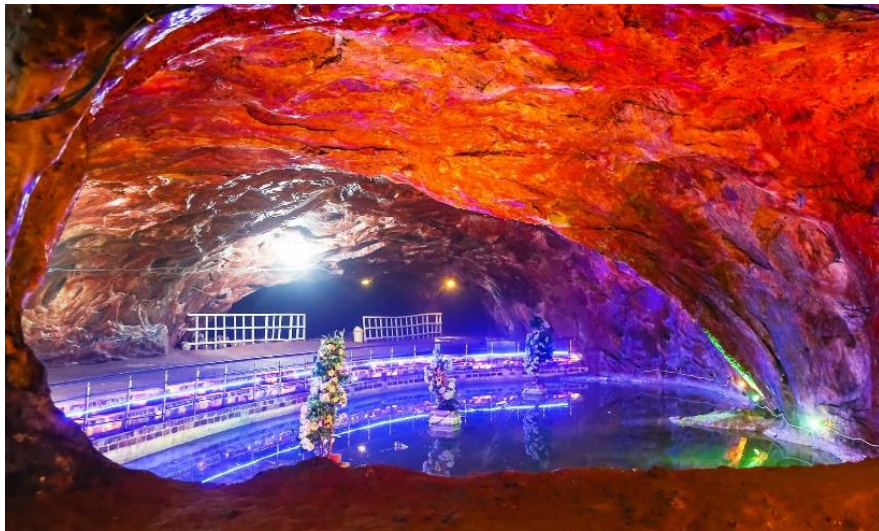
2. Tourism

The Khewra Salt Mine is drawn upon eighteen stories, spreading great over forty kilometers.

One floor from the total of eighteen stories was open in 2003 for tourists. Every year nearly 250,000 tourists visits this mine. Khewra has sufficient facilities for travelers. An electric train takes you to within the mine, despite the fact that you can generally walk your way there on the off chance that you need. Initially, the train was implied uniquely for the vehicle of salt, yet its capacity was changed to cook for developing the travel industry. As the train winds inside the dim mine with artificial glowing lights set up, the adjustment in temperature is substantial. Regardless of whether it's the sweltering Punjabi summer, the temperature of the mine is constantly kept up at an agreeable 18-20 degrees.

2.1 Salt water ponds

As you stroll into the core of the mine, the world expect the type of salt, which is just about all over the place. There are various salt water lakes present, some of them supposedly hundreds of years old.

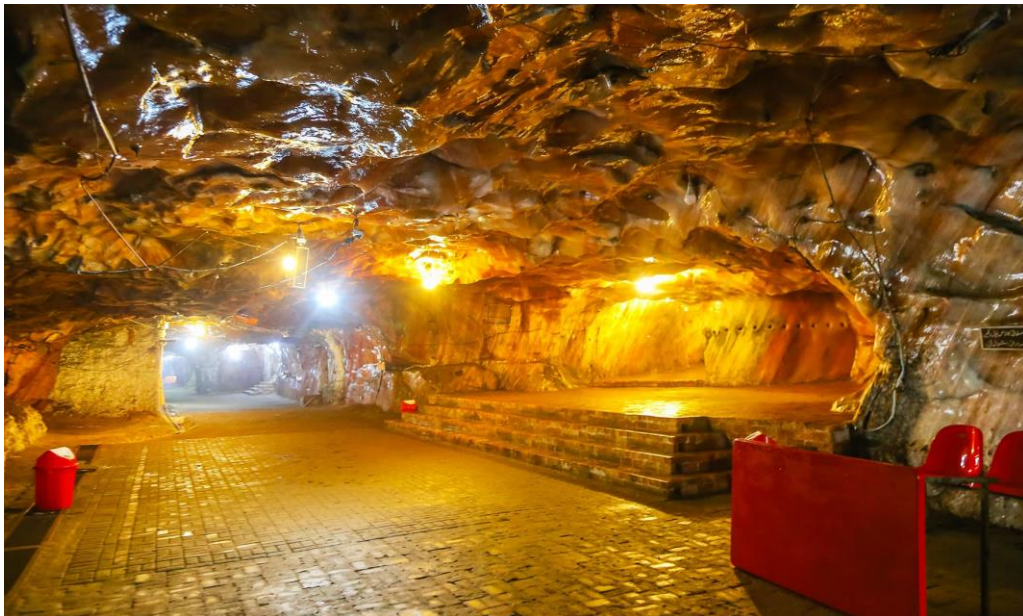


2.2 Salt Structures

There are different structures that are made up of rock salt. It includes structures of Historic Minar-e-Pakistan and replica of historic “Badshahi Mosque”.



Lights inside these structures make this view peaceful and loveable.



Different sights includes a "gathering lobby" chamber with coil shape stairs up the dividers, there is Long bridge made up of salt having length of 25 feet called "pul-e-sarat" a scaffold that everyone have to cross on the of judgment.

Among the most intriguing sights with regards to the mine are the salt scaffold that stands strong with no help at all, the precious stone display, and the carvings of sections and faces of the founders of Pakistan on the top of a chamber.



2.3 Facilities inside the Mine

In salt mine there is a dispensary set up for the tourist. An asthma center was likewise opened in 2007, where numerous respiratory illnesses are treated through "salt treatment". Different offices are additionally set up. There is a post office made up of salt inside the salt mine. The post office is constructed altogether from salt blocks and is the only post office worked out of salt on the planet. There is a gift shop for the tourists so that they can shop salt made item like lights, bowls etc.

2.4 Resort for Tourists

There are a lot of attractions for the travelers inside the mine. Dazzled by the enthusiasm of the traveler, the PMDC Management propelled Resort in the mining project in February, 2002 with an expected cost of Rs.4.2 million that has been increased by additional Rs.3 million.

Khewra Salt Mines Tourist Resort has been created by PMDC utilizing its own assets. There are some ponds that are filled in with immersed saline solution. These lakes when ignited up with exaggerated lights give marvelous look.

Shish Mahal is also constructed with the help of pink salt bricks that gives a royal look inside the mine. Various chambers are connected with salt extensions over water lakes and when enlightened with bright salt color lights, shows a wonderful impression of various shades of salt. The improvement program imagines creation and advancement of following offices at Khewra Salt Mines in the main period of advancement program, which have since been finished.

Footpath: The footpath from reception lobby to the Mine Entrance has been built by setting pavers for the easy movement of vacationer.

Gift Shop: To facilitate the travelers, a keepsake shop has been set up in the gathering/preparation lobby zone where visitors can discover model lights and different gift and decorations made of salt.



Cleaning of Mine: The area of mine that is open for traveler has been cleaned on daily basis from the undesirable materials, wastes, debris and jetsam to facilitate the visitors.

Brightening: Very attractive lights are installed inside the mines that increase the beauty of pink salt everywhere in the mine. Salt rock rocks glowing with lights gives a very a beautiful effect.

Electric Train: For the convenience of visitors, electric train is accessible to have a moonlight trip up to primary crossroads inside the Mines. Ticket of train is 50 rupees.

Refreshment: Seating courses of action have been made in side the mine. Refreshments is available inside these glowing mine, where stands have been fitted, having adequate limit with respect to tourists to chill out and appreciate light refreshments.

3 Khewra Salt Extraction Plan on Primavera

3.1. Introduction

Primavera is a portfolio management tool that is used for Enterprise level projects.

In 1983, it was developed and introduced first time in the market for project management. After 2008, it is a property of Oracle. Now this tool is widely used in the world for project planning and project management. It can also be conned with ERP systems and cater a huge number of targets. Basic purpose of use of primavera is planning and monitoring and controlling, also useful for reporting task's status. Mostly it is in use of planning managers, planning engineer especially in the field of construction management and related projects.

Planning

It is utilized to make complete project plan by planning team with the consultation of site engineers and other related teams.

Primavera is software in which project resources can be assigned to the activities that require them. In this manner It is anything but difficult to show signs of improvement picture with respect to the yearly, quarterly, month to month, week by week and day by day program.

In large scale project, the information related to the use of resources with respect to activities is very important, so that you can calculate project estimates.

Monitoring of Project

After setting complete project plan and get it approved. We would now be able to screen the undertaking effectively.

The Baseline program would now be able to give a clear estimate that can be checked so that you can check that variation between planned and actual site progress.

It is relatively exceptionally simple in this tool instead of any other programming projects.

Controlling of Project

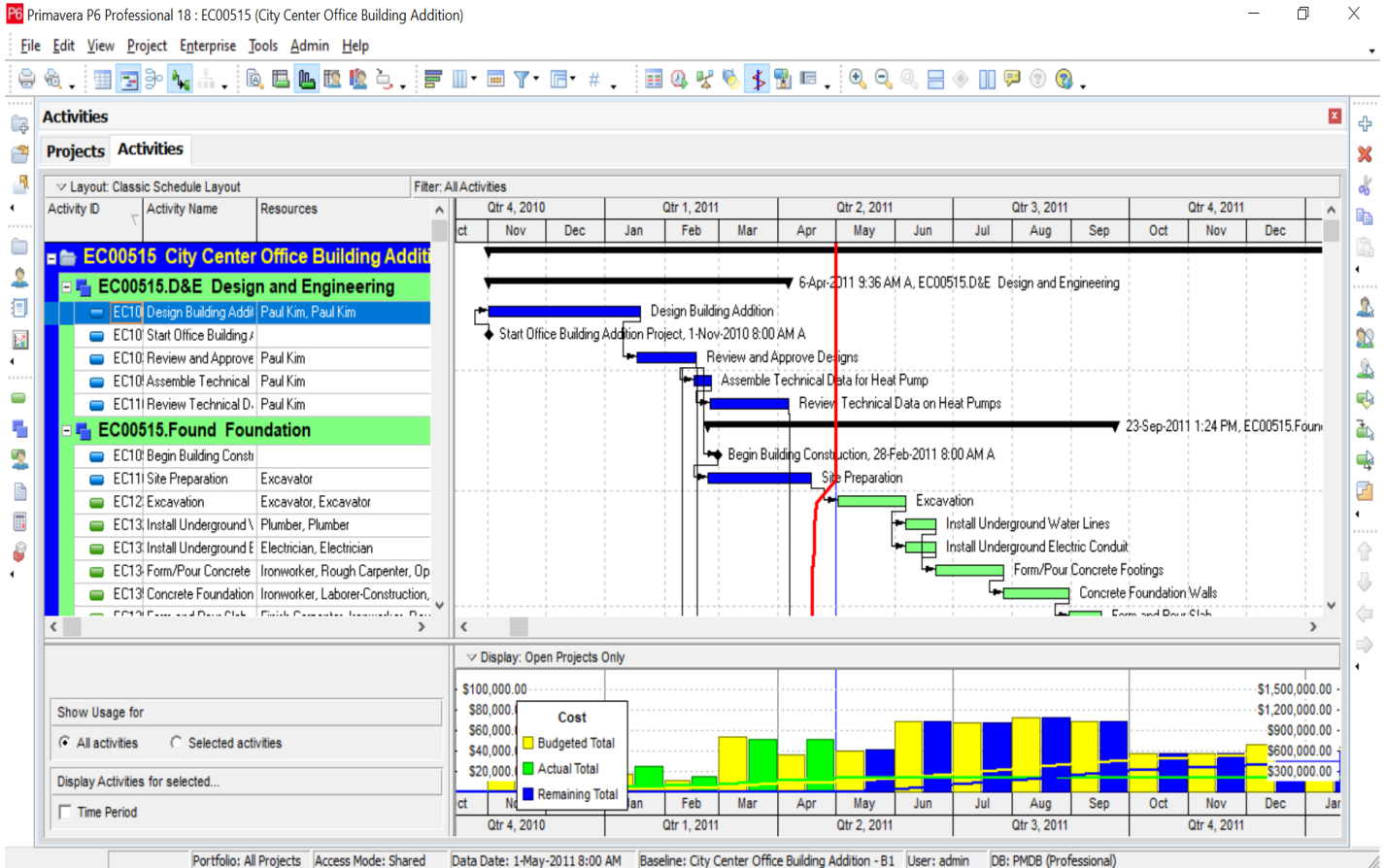
In this tool the Total Float and free float can be effectively determined after doing easy steps. Consequently primavera is exceptionally simple to recognize the basic and sub basic exercises and keep it away from delay.

Reporting of Project

Primavera had made is easy for reporting the project status at any time. Different design and structures can be used as per need and requirement of industry.

3.2. Primavera Layout

Below is the Main interface of primavera p6.



Below is the resources that you can enter and change in this tool

Primavera P6 Professional 18 : EC00515 (City Center Office Building Addition)

File Edit View Project Enterprise Tools Admin Help

Resources

Projects Activities Resources

Display: All Resources

Resource ID	Resource Name	Resource Type	Unit of Measure	Primary Role	Default Units / Time
M1	Water	Material	Bottles		500.00Bottles/h
E&C Resources	E&C Resources	Labor			100%
Trades	Trades	Labor			100%
INSP	Inspections	Labor			100%
Cretefinisher	Concrete Finisher	Labor		Trades	
Hydro	Hydroblaster	Labor			100%
Operator	Operator	Labor		Trades	
OPTGP	Operations Test Group	Labor			100%
Elec	Electrician	Labor		Trades	100%
Paint	Painter	Labor		Trades	100%
Exc	Excavator	Labor		Trades	100%
Floor	Floor and Carpet Layer	Labor		Trades	100%
Ironwrk	Ironworker	Labor		Trades	100%

General Codes Details Units & Prices Roles Notes

Shift Calendar: Shift: 1

Effective Date	Max Units / Time	Standard Rate
1-Jan-2019 12:00 AM	100.00Bottles/h	\$25.00/Bottles

Add Delete

Tool bar where we can select different options for our use

Primavera P6 Professional 18 : EC00515 (City Center Office Building Addition)

File Edit View Project Enterprise Tools Admin Help

User preferences are really helpful during planning, so we can get our desired planning in required formats.

User Preferences



Time Units	Date Format	Options
Dates	<input type="radio"/> Month, Day, Year	4-digit year <input checked="" type="checkbox"/>
Currency	<input checked="" type="radio"/> Day, Month, Year	Month name <input checked="" type="checkbox"/>
Assistance	<input type="radio"/> Year, Month, Day	Leading zeroes <input type="checkbox"/>
Application		Separator <input type="text" value="-"/>
Password		
Resource Analysis		
Calculations		
Startup Filters		
	Time	
	<input checked="" type="radio"/> 12 hour (1:30 PM)	
	<input type="radio"/> 24 hour (13:30)	
	<input type="radio"/> Do not show time	
	<input checked="" type="checkbox"/> Show minutes	
	Sample	
	<input type="text" value="13-Jan-2020 12:00 AM"/>	
	<input type="button" value="Help"/>	<input type="button" value="Close"/>

Admin Preferences tab enables us to change our preference as project requirements.

The image shows a software dialog box titled "Admin Preferences" with a close button (X) in the top right corner. On the left side, there is a vertical navigation menu with the following items: "General" (selected), "Data Limits", "ID Lengths", "Time Periods", "Earned Value", "Reports", "Options", "Rate Types", and "Industry". The main content area is divided into four sections:

- Code Separator:** Contains the text "Specify the character for separating concatenated codes. It is also the default WBS code separator for new projects." and a text input field labeled "Code Separator" containing a period ".".
- Starting Day of Week:** Contains the text "Specify the starting day of the week for calendars." and a dropdown menu labeled "First day of week" with "Sunday" selected.
- Activity Duration:** Contains the text "Specify the default duration for new activities." and a text input field labeled "Default Duration" containing "5d".
- Password Policy:** Contains the text "The Password Policy requires a minimum length of 8 characters and at least one number and one letter in a user's password." and a checkbox labeled "Enable password policy" which is currently unchecked.

At the bottom right of the dialog box, there are three buttons: a help button (question mark icon), a "Help" button, and a "Close" button (window icon).

4. Khewra Salt Mine Project Planning on Primevara

4.1. OBS

Organization breakdown structure of PMDC is shown below.

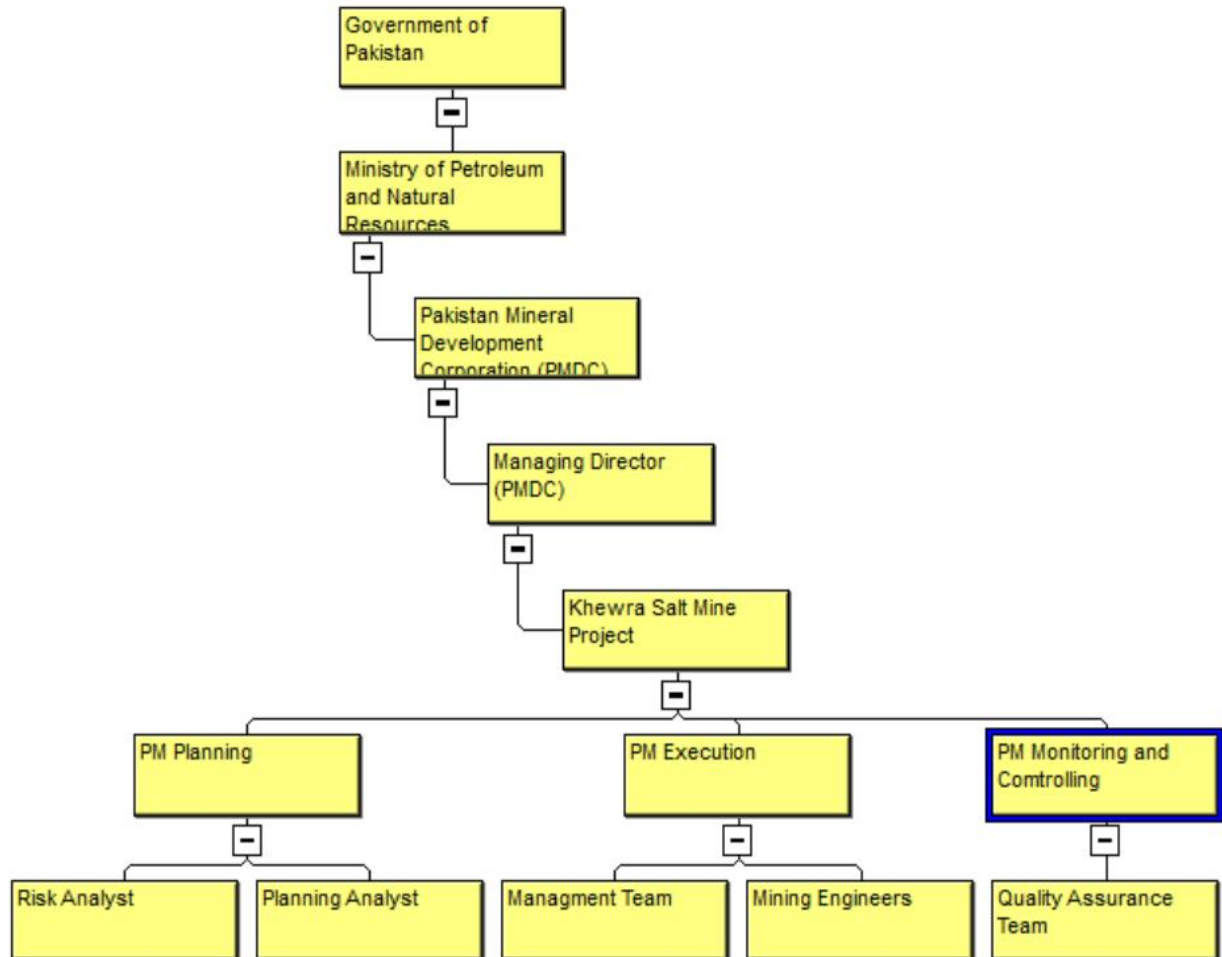


Table View of OBS

P6 Organizational Breakdown Structure

▼ Display: All OBS Elements

OBS Name	rtl
Government of Pakistan	
Ministry of Petroleum and Natural Resources	
Pakistan Mineral Development Corporation (PMDC)	
Managing Director (PMDC)	
Project Manager	
PM Planning	
Risk Analyst	
Planning Analyst	
PM Execution	
Managment Team	
Mining Engineers	
PM Monitoring and Controlling	
Quality Assurance Team	

General	Responsibility
OBS Name	
Government of Pakistan	

4.2. User Preferences

We have changed Units and Duration formats to Days.

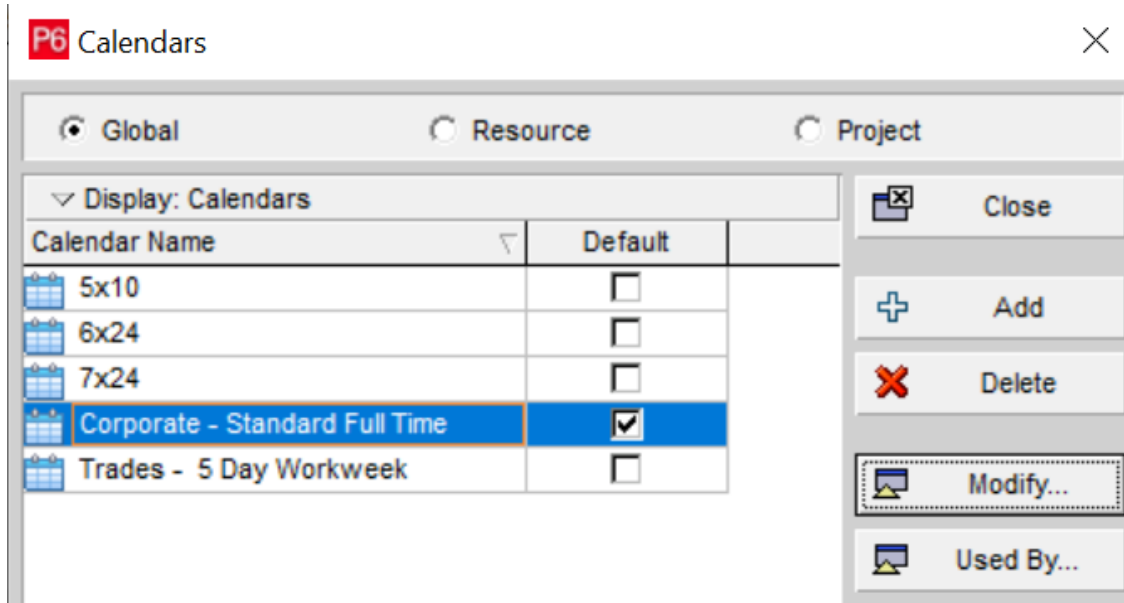
User Preferences



Time Units	Units Format		
Dates	Unit of Time Day	Sub-unit <input checked="" type="checkbox"/> Hours	Decimals 2
Currency	<input checked="" type="checkbox"/> Show Unit label		Example 5d 0.50h
Assistance	Durations Format		
Application	Unit of Time Day	Sub-unit <input checked="" type="checkbox"/> Hours	Decimals 2
Password	<input checked="" type="checkbox"/> Show Duration label		Example 10d 0.50h
Resource Analysis	Units/Time Format		
Calculations	Resource Units/Time can be shown as a percentage or as units per duration		
Startup Filters	<input checked="" type="radio"/> Show as a percentage (50%)		
	<input type="radio"/> Show as units/duration (4h/d)		
		Help	Close

4.3. Calendar

We have changed calendar settings to 6 day a week and 8 hours a day.



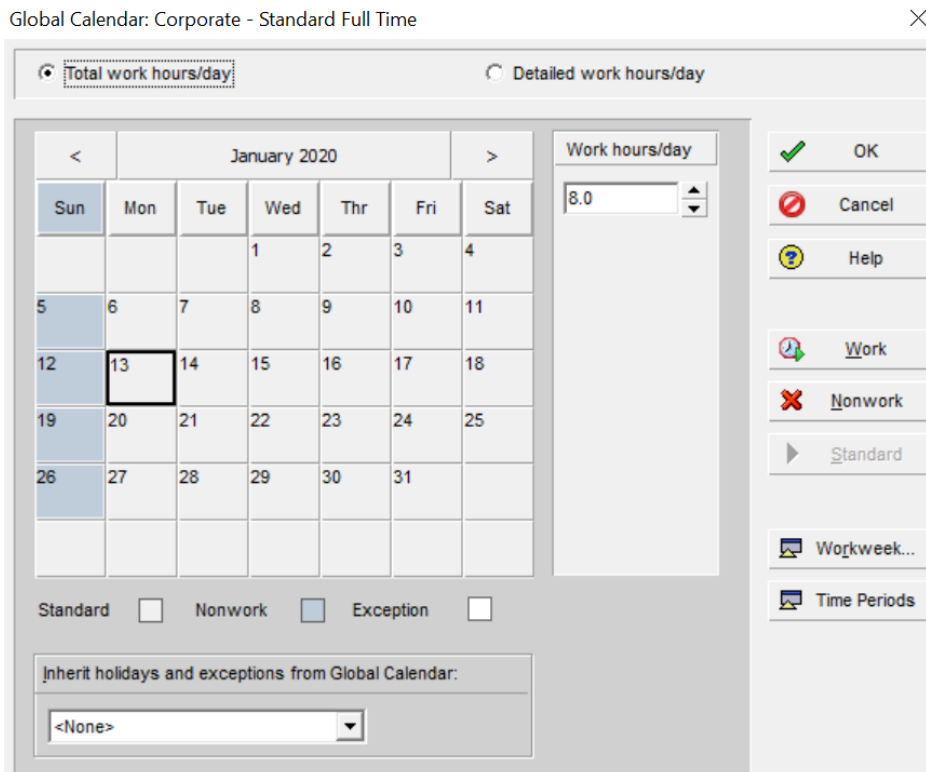
P6 Calendars [Close]

Global Resource Project

▼ Display: Calendars

Calendar Name	Default
5x10	<input type="checkbox"/>
6x24	<input type="checkbox"/>
7x24	<input type="checkbox"/>
Corporate - Standard Full Time	<input checked="" type="checkbox"/>
Trades - 5 Day Workweek	<input type="checkbox"/>

Close
Add
Delete
Modify...
Used By...



Global Calendar: Corporate - Standard Full Time [Close]

Total work hours/day Detailed work hours/day

Work hours/day: 8.0

January 2020

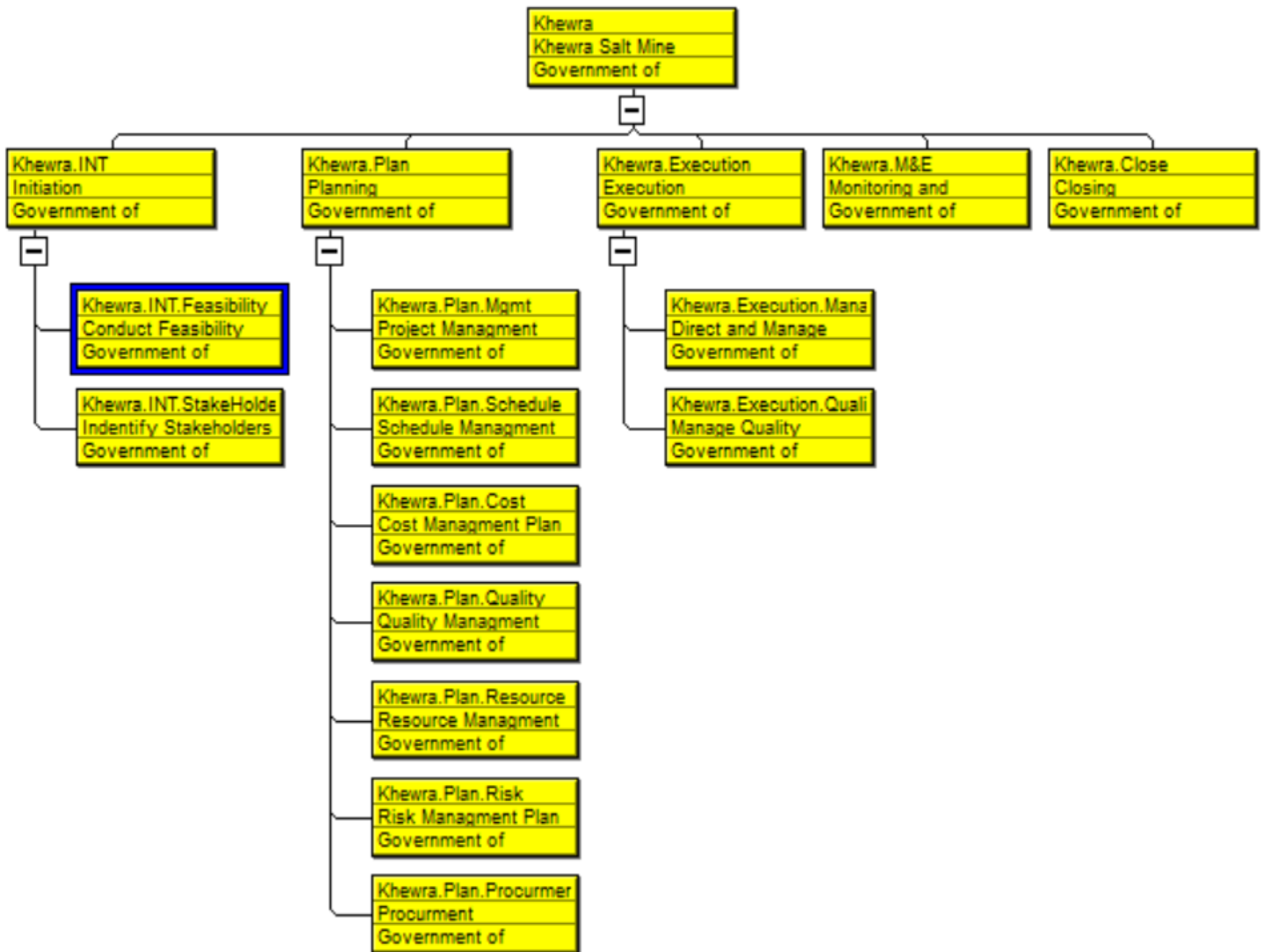
Sun	Mon	Tue	Wed	Thr	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Standard Nonwork Exception

Inherit holidays and exceptions from Global Calendar:
<None>

OK
Cancel
Help
Work
Nonwork
Standard
Workweek...
Time Periods

4.4. WBS



WBS in Table View

Layout:WBS		
WBS Code	WBS Name	Total Activities
Khewra	Khewra Salt Mine Project	61
Khewra.INT	Initiation	8
Khewra.INT.Feasibility	Conduct Feasibility Study	5
Khewra.INT.StakeHolders	Identify Stakeholders	3
Khewra.Plan	Planning	19
Khewra.Plan.Mgmt	Project Management Plan	3
Khewra.Plan.Schedule	Schedule Management Plan	5
Khewra.Plan.Cost	Cost Management Plan	3
Khewra.Plan.Quality	Quality Management Plan	1
Khewra.Plan.Resource	Resource Management Plan	3
Khewra.Plan.Risk	Risk Management Plan	3
Khewra.Plan.Procurment	Procurment Management Plan	1
Khewra.Execution	Execution	27
Khewra.Execution.Manage	Direct and Manage Project	23
Khewra.Execution.Quality	Manage Quality	4
Khewra.M&E	Monitoring and Controlling	6
Khewra.Close	Closing	1

4.5 Resources

Resources have been added for the project.

Resources

Projects | Activities | Reports | Tracking | **Resources** | WBS | Resource Assignments | WPs & Docs | Project Expenses | Risks

▼ Display: All Resources

Resource ID	Resource Name	Resource Type	Standard Rate	Default Units / Time	Unit of Measure
PM	Project Manager	Labor	\$100.00/d	100%	
AM	Assist Manager	Labor	\$40.00/d	100%	
ME	Mechanical Engineer	Labor	\$50.00/d	100%	
EE	Electric Engineer	Labor	\$50.00/d	100%	
CE	Civil Engineer	Labor	\$50.00/d	100%	
SE	Structure Engineer	Labor	\$50.00/d	100%	
QAE	QA Engineer	Labor	\$40.00/d	100%	
SO	Security Officer	Labor	\$40.00/d	100%	
R-3	Doctor	Labor	\$60.00/d	100%	
ML	Minning Labors	Labor	\$20.00/d	100%	
TL	Transport Labors	Labor	\$20.00/d	100%	
Exp	Explosive	Material	\$200.00/\$	200.00\$/d	\$
Exc	Excavators	Material	\$8,000.00/\$	8000.00\$/d	\$
D	Drills	Material	\$200.00/\$	200.00\$/d	\$
Elc	Electricity	Material	\$3,000.00/\$	300.00\$/d	\$
T	Train	Material	\$1,000.00/\$	1000.00\$/d	\$

General | Codes | Details | Units & Prices | Roles | Notes

Shift Calendar: Shift: 1

Effective Date	Max Units / Time	Standard Rate
1-Jan-2020 12:00 AM	100%	\$100.00/d

+ Add X Delete

4.6. Activities

Added all planned activities in related (WBS)s.

Layout: Classic Schedule Layout		Filter: All Activities		
Activity ID	Activity Name	Schedule % Complete	Original Duration	Remaining Duration
Khewra	Khewra Salt Mine Project	0%	297d	297d
Khewra.INT	Initiation	0%	17d	17d
Khewra.INT.Feasibility	Conduct Feasibility Study	0%	6d	6d
1	Investigate Infrastructure	0%	2d	2d
2	Soil Test	0%	1d	1d
3	Air Quality Test	0%	1d	1d
4	Electricity Availability	0%	1d	1d
5	Water Availability	0%	1d	1d
Khewra.INT.StakeHolders	Identify Stakeholders	0%	11d	11d
6	Define Scope	0%	3d	3d
7	Identify Stake Holders	0%	5d	5d

Projects	Activities	Reports	Tracking	Resources	WBS	Resource Assignments	WPs
Layout: Classic Schedule Layout		Filter: All Activities					
Activity ID	Activity Name	Schedule % Complete	Original Duration	Remaining Duration			
7	Identify Stake Holders	0%	5d	5d			
8	Develop Project Charter	0%	3d	3d			
Khewra.Plan	Planning	0%	51d	51d			
Khewra.Plan.Mgmt	Project Management Plan	0%	8d	8d			
10	Planning Documents	0%	3d	3d			
11	Collect Requirement	0%	3d	3d			
12	Create WBS	0%	2d	2d			
Khewra.Plan.Schedule	Schedule Management Plan	0%	15d	15d			
13	Plan Schedule Management	0%	6d	6d			
14	Define Activities	0%	2d	2d			

Projects	Activities	Reports	Tracking	Resources	WBS	Resource Assignments	WPs
Layout: Classic Schedule Layout				Filter: All Activities			
Activity ID	Activity Name	Schedule % Complete	Original Duration	Remaining Duration			
15	Sequence Activities	0%	3d	3d			
16	Estimate Durations	0%	2d	2d			
17	Develop Schedule	0%	2d	2d			
Khewra.Plan.Cost Cost Managment Plan		0%	10d	10d			
18	Plan Cost management	0%	4d	4d			
19	Estimates Cost	0%	2d	2d			
20	Determine Budget	0%	4d	4d			
Khewra.Plan.Quality Quality Managment Plan		0%	2d	2d			
21	Plan Quality Management	0%	2d	2d			
Khewra.Plan.Resource Resource Managment Pla		0%	7d	7d			
22	Estimate Required Resources	0%	2d	2d			
23	Sequences Reources	0%	2d	2d			
24	Plan Resource Managment	0%	3d	3d			

Layout: Classic Schedule Layout				Filter: All Activities			
Activity ID	Activity Name	Schedule % Complete	Original Duration	Remaining Duration			
Khewra.Plan.Risk Risk Managment Plan		0%	7d	7d			
25	Inditify Risks	0%	2d	2d			
26	Preform Risk Analysis	0%	3d	3d			
27	Risk Managment Plan	0%	2d	2d			
Khewra.Plan.Procurment Procurment Managment		0%	2d	2d			
28	Plan Procurments	0%	2d	2d			
Khewra.Execution Execution		0%	222d	222d			
Khewra.Execution.Manage Direct and Manage Proc		0%	218d	218d			
29	Identify Location	0%	2d	2d			
31	Test the Soil	0%	1d	1d			

Layout: Classic Schedule Layout		Filter: All Activities			
Activity ID	Activity Name	Schedule % Complete	Original Duration	Remaining Duration	
32	Conduct Site Survey	0%	1d	1d	
33	Procure Man Power	0%	2d	2d	
34	Procure Machinery	0%	5d	5d	
35	Procure Material	0%	7d	7d	
36	Procure Exploratives	0%	7d	7d	
37	Procure Mining Equipment	0%	5d	5d	
38	Procure Safety Equipment	0%	3d	3d	
39	Arrange Water Supply	0%	12d	12d	
40	Construct Electric Supply Lines	0%	20d	20d	
41	Construct Road and Rail	0%	30d	30d	

Layout: Classic Schedule Layout		Filter: All Activities			
Activity ID	Activity Name	Schedule % Complete	Original Duration	Remaining Duration	
41	Construct Road and Rail	0%	30d	30d	
42	Construct Site Office	0%	14d	14d	
43	Start Drilling	0%	5d	5d	
44	Build Tunnel	0%	30d	30d	
45	Use Explosive for Blast	0%	1d	1d	
46	Build Pillar Inside the Tunnel	0%	30d	30d	
47	Develop air ventilation system	0%	20d	20d	
48	Excavate Salt	0%	14d	14d	
49	Collect and Transport salt	0%	2d	2d	

Layout: Classic Schedule Layout		Filter: All Activities			
Activity ID	Activity Name	Schedule % Complete	Original Duration	Remaining Duration	
49	Collect and Transport salt	0%	2d	2d	
50	Refine Salt	0%	4d	4d	
51	Pack Salt	0%	2d	2d	
52	Market Salt To Cities	0%	1d	1d	
Khewra.Execution.Quality Manage Quality		0%	4d	4d	
53	Quality check at Extraction	0%	1d	1d	
54	Quality check at refining	0%	1d	1d	
55	Quality check during packing	0%	1d	1d	
56	Quality check for marketing	0%	1d	1d	

56	Quality check for marketing	0%	1d	1d	
Khewra.M&E Monitoring and Controlling		0%	6d	6d	
57	Control Procurment	0%	1d	1d	
58	Control Schedule	0%	1d	1d	
59	Monitor communication	0%	1d	1d	
60	Monitor Resources	0%	1d	1d	
61	Monitor Risks	0%	1d	1d	
62	Monitor Stakeholder	0%	1d	1d	
Khewra.Close Closing		0%	1d	1d	
63	Close the Project	0%	1d	1d	

Add relationships to Activities

Assign successor activities where needed and make their relation.

Activities

Projects Activities Reports Tracking Resources WBS Resource Assignment

Layout: Classic Schedule Layout Filter: All Activities

Activity ID	Activity Name	Resources
53	Quality check at Extraction	Assist Manager, QA Engineer
54	Quality check at refining	QA Engineer, Assist Manager
55	Quality check during packing	QA Engineer, Assist Manager
56	Quality check for marketing	QA Engineer, Assist Manager, Project Manag
Khewra.M&E Monitoring and Controlling		
57	Control Procurement	Project Manager, Assist Manager
58	Control Schedule	QA Engineer, Project Manager
59	Monitor communication	Assist Manager, Project Manager
60	Monitor Resources	QA Engineer, Assist Manager, Project Manag
61	Monitor Risks	QA Engineer, Assist Manager, Project Manag
62	Monitor Stakeholder	Assist Manager, Project Manager
Khewra.Close Closing		
63	Close the Project	Project Manager

▼ Display: All Activities

Search

Activity ID	Activity Name	Activity Status
48	Excavate Salt	Not Started
49	Collect and Transport salt	Not Started
50	Refine Salt	Not Started
51	Pack Salt	Not Started
52	Market Salt To Cities	Not Started
Manage Quality		
53	Quality check at Extraction	Not Started
54	Quality check at refining	Not Started
55	Quality check during packing	Not Started
56	Quality check for marketing	Not Started
Monitoring and Controlling		
57	Control Procurement	Not Started
58	Control Schedule	Not Started
59	Monitor communication	Not Started
60	Monitor Resources	Not Started
61	Monitor Risks	Not Started
62	Monitor Stakeholder	Not Started
Closing		
63	Close the Project	Not Started

General Status Resources Predecessors Successors Relationships Expenses Feedback

Activity 58 Control Schedule

Predecessors

Project ID	WBS	Activity ID	Activity Name	Relations	Lag	A
Khewra	Khewra.M&E M	57	Control Procurement	FS	0d	N

Successors

Project ID	WBS	Activity ID	Activity Name	Relations	Lag	A
Khewra	Khewra.M&E M	59	Monitor communication	FS		

Assign Remove GoTo

General Status Resources Predecessors Successors Relationships Expenses Feedback

Activity 32 Conduct Site Survey Project Khewra

Predecessors

Project ID	WBS	Activity ID	Activity Name	Relations	Lag	A
Khewra	Khewra.Execu	31	Test the Soil	FS	0d	N

Successors

Project ID	WBS	Activity ID	Activity Name	Relations	Lag	Activity Stat
Khewra	Khewra.Execu	33	Procure Man Power	FS	0d	Not Started

Assign Remove GoTo

4.7 Assign Duration

Add duration to the activities as per requirement.

Activities

Projects | **Activities** | Reports | Tracking | Resources | WBS | Resource Assignments | WPs & Docs | Project Expenses | Risks

Layout: Classic Schedule Layout | Filter: All Activities

Activity ID	Activity Name	Resour	Igeted Total	Original Duration	Remaining Duration	Schedule % Complete	Start	Finish
Khewra Khewra Salt Mine Project			50.00	301d	301d	0%	2-Mar-2020 9:00 AM	16-Feb-2021 9:00 AM
Khewra.INT Initiation			100.00	38d	38d	0%	2-Mar-2020 9:00 AM	15-Apr-2020 9:00 AM
Khewra.INT.Feasibility Conduct Feasibility Study			100.00	21d	21d	0%	2-Mar-2020 9:00 AM	26-Mar-2020 9:00 AM
1	Investigate Infrastructure	Project	50.00	2d	2d	0%	2-Mar-2020 9:00 AM	4-Mar-2020 9:00 AM
2	Soil Test	Civil En	150.00	1d	1d	0%	7-Mar-2020 9:00 AM	9-Mar-2020 9:00 AM
3	Air Quality Test	QA Eng	150.00	1d	1d	0%	13-Mar-2020 9:00 AM	14-Mar-2020 9:00 AM
4	Electricity Availability	Electric	50.00	1d	1d	0%	19-Mar-2020 9:00 AM	20-Mar-2020 9:00 AM
5	Water Availability	QA Eng	100.00	1d	1d	0%	25-Mar-2020 9:00 AM	26-Mar-2020 9:00 AM
Khewra.INT.StakeHolders Indentify Stakeholder			100.00	13d	13d	0%	31-Mar-2020 9:00 AM	15-Apr-2020 9:00 AM
6	Define Scope	Project	100.00	3d	3d	0%	31-Mar-2020 9:00 AM	3-Apr-2020 9:00 AM
7	Indentify Stake Holders	Project	100.00	5d	5d	0%	6-Apr-2020 9:00 AM	11-Apr-2020 9:00 AM
8	Develop Project Charter	Project	100.00	3d	3d	0%	11-Apr-2020 9:00 AM	15-Apr-2020 9:00 AM

General | Status | Resources | Predecessors | Successors | Relationships | Expenses | Feedback

Activity 1 | Investigate Infrastructure

Predecessors						Successors			
Project ID	WBS	Activity ID	Activity Name	Relations	Lag	Project ID	WBS	Activity ID	Activity Name
						Khewra	Khewra.INT Fe	2	Soil Test

Assign | Remove | GoTo

4.8 Resources

Assign required resources to the respected activities.

The screenshot displays the Primavera P6 interface for resource assignment. The main window shows a project hierarchy for 'Khewra Khewra Salt Mine Project' under the 'Initiation' phase. Activities include 'Investigate Infrastructure', 'Soil Test', 'Air Quality Test', 'Electricity Availability', 'Water Availability', 'Define Scope', 'Identify Stake Holders', and 'Develop Project Charter'. The 'Assign Resources' dialog is open, showing a list of resources with their IDs, names, and types. The 'Project Manager' resource is highlighted. Below the dialog, a table shows the resource assignment details for the selected activity.

Resource ID	Resource Name	Resource Type	Unit of Measure
PMDC	PMDC	Nonlabor	
PM	Project Manager	Labor	
AM	Assist Manager	Labor	
ME	Mechanical Engineer	Labor	
EE	Electric Engineer	Labor	
CE	Civil Engineer	Labor	
SE	Structure Engineer	Labor	
QAE	QA Engineer	Labor	
SO	Security Officer	Labor	
R-3	Doctor	Labor	
ML	Minning Labors	Labor	
TL	Transport Labors	Labor	
Exp	Explosive	Material	\$
Exc	Excavators	Material	\$
D	Drills	Material	\$
Elc	Electricity	Material	\$
T	Train	Material	\$

Resource ID Name	Primary Resource	Resource Type	Remaining Units / Time	Original Lag	Start	Finish	Actual Regular Units	Budgeted Units	Remaining Units	Role
CE.Civil Engineer	<input type="checkbox"/>	Labor	250%	0d	2-Mar-2020	4-Mar-2020	0d	5d	5d	
PM.Project Manager	<input checked="" type="checkbox"/>	Labor	250%	0d	2-Mar-2020	4-Mar-2020	0d	5d	5d	
QAE.QA Engineer	<input type="checkbox"/>	Labor	250%	0d	2-Mar-2020	4-Mar-2020	0d	5d	5d	
SO.Security Officer	<input type="checkbox"/>	Labor	250%	0d	2-Mar-2020	4-Mar-2020	0d	5d	5d	

Activities after adding resources and duration assigned

Activities										
Projects	Activities	Reports	Tracking	Resources	WBS	Resource Assignments	WPs & Docs	Project Expenses	Risks	
Layout: Classic Schedule Layout Filter: All Activities										
Activity ID	Activity Name	Resources	Budgeted Total Cost	Original Duration	Remaining Duration	Schedule %	Start	Finish	Total Float	
Khewra Khewra Salt Mine Project			\$1,641,636,150.00	301d	301d	0%	2-Mar-2020 9:00 AM	16-Feb-2021 9:00 AM	0d	
Khewra.INT Initiation			\$4,500.00	38d	38d	0%	2-Mar-2020 9:00 AM	15-Apr-2020 9:00 AM	0d	
Khewra.INT.Feasibility Conduct Feasibility Study			\$3,000.00	21d	21d	0%	2-Mar-2020 9:00 AM	26-Mar-2020 9:00 AM	0d	
1	Investigate Infrastructure	Project Manager, Civil Engineer, QA Engine	\$1,150.00	2d	2d	0%	2-Mar-2020 9:00 AM	4-Mar-2020 9:00 AM	0d	
2	Soil Test	Civil Engineer, QA Engineer	\$450.00	1d	1d	0%	7-Mar-2020 9:00 AM	9-Mar-2020 9:00 AM	0d	
3	Air Quality Test	QA Engineer, Civil Engineer	\$450.00	1d	1d	0%	13-Mar-2020 9:00 AM	14-Mar-2020 9:00 AM	0d	
4	Electricity Availability	Electric Engineer, Project Manager	\$750.00	1d	1d	0%	19-Mar-2020 9:00 AM	20-Mar-2020 9:00 AM	0d	
5	Water Availability	QA Engineer	\$200.00	1d	1d	0%	25-Mar-2020 9:00 AM	26-Mar-2020 9:00 AM	0d	
Khewra.INT.StakeHolders Identify Stakeholders			\$1,500.00	13d	13d	0%	31-Mar-2020 9:00 AM	15-Apr-2020 9:00 AM	0d	
6	Define Scope	Project Manager	\$500.00	3d	3d	0%	31-Mar-2020 9:00 AM	3-Apr-2020 9:00 AM	0d	
7	Identify Stake Holders	Project Manager	\$500.00	5d	5d	0%	6-Apr-2020 9:00 AM	11-Apr-2020 9:00 AM	0d	
8	Develop Project Charter	Project Manager	\$500.00	3d	3d	0%	11-Apr-2020 9:00 AM	15-Apr-2020 9:00 AM	0d	
Khewra.Plan Planning			\$9,700.00	92d	92d	0%	17-Apr-2020 9:00 AM	3-Aug-2020 9:00 AM	0d	
Khewra.Plan.Mgmt Project Management Plan			\$2,050.00	12d	12d	0%	17-Apr-2020 9:00 AM	1-May-2020 9:00 AM	0d	
10	Planning Documents	Assist Manager	\$200.00	3d	3d	0%	17-Apr-2020 9:00 AM	21-Apr-2020 9:00 AM	0d	
11	Collect Requirement	QA Engineer, Structure Engineer, Civil Engine	\$1,150.00	3d	3d	0%	23-Apr-2020 9:00 AM	27-Apr-2020 9:00 AM	0d	
12	Create WBS	Project Manager, Assist Manager	\$700.00	2d	2d	0%	29-Apr-2020 9:00 AM	1-May-2020 9:00 AM	0d	
Khewra.Plan.Schedule Schedule Management Plan			\$3,150.00	22d	22d	0%	5-May-2020 9:00 AM	30-May-2020 9:00 AM	0d	
13	Plan Schedule Management	Project Manager, Assist Manager	\$700.00	6d	6d	0%	5-May-2020 9:00 AM	12-May-2020 9:00 AM	0d	
14	Define Activities	Assist Manager	\$200.00	2d	2d	0%	11-May-2020 9:00 AM	13-May-2020 9:00 AM	0d	

Activities										
Projects	Activities	Reports	Tracking	Resources	WBS	Resource Assignments	WPs & Docs	Project Expenses	Risks	
Layout: Classic Schedule Layout Filter: All Activities										
Activity ID	Activity Name	Resources	Budgeted Total Cost	Original Duration	Remaining Duration	Schedule %	Start	Finish	Total Float	
14	Define Activities	Assist Manager	\$200.00	2d	2d	0%	11-May-2020 9:00 AM	13-May-2020 9:00 AM	0d	
15	Sequence Activities	Civil Engineer, Structure Engineer, QA Engine	\$1,150.00	3d	3d	0%	16-May-2020 9:00 AM	20-May-2020 9:00 AM	0d	
16	Estimate Durations	QA Engineer, Assist Manager	\$400.00	2d	2d	0%	22-May-2020 9:00 AM	25-May-2020 9:00 AM	0d	
17	Develop Schedule	Project Manager, Assist Manager	\$700.00	2d	2d	0%	28-May-2020 9:00 AM	30-May-2020 9:00 AM	0d	
Khewra.Plan.Cost Cost Management Plan			\$1,100.00	14d	14d	0%	3-Jun-2020 9:00 AM	19-Jun-2020 9:00 AM	0d	
18	Plan Cost management	Assist Manager	\$200.00	4d	4d	0%	3-Jun-2020 9:00 AM	8-Jun-2020 9:00 AM	0d	
19	Estimates Cost	Assist Manager	\$200.00	2d	2d	0%	9-Jun-2020 9:00 AM	11-Jun-2020 9:00 AM	0d	
20	Determine Budget	Assist Manager, Project Manager	\$700.00	4d	4d	0%	15-Jun-2020 9:00 AM	19-Jun-2020 9:00 AM	0d	
Khewra.Plan.Quality Quality Management Plan			\$400.00	2d	2d	0%	20-Jun-2020 9:00 AM	23-Jun-2020 9:00 AM	0d	
21	Plan Quality Management	QA Engineer, Assist Manager	\$400.00	2d	2d	0%	20-Jun-2020 9:00 AM	23-Jun-2020 9:00 AM	0d	
Khewra.Plan.Resource Resource Management Plan			\$800.00	13d	13d	0%	26-Jun-2020 9:00 AM	11-Jul-2020 9:00 AM	0d	
22	Estimate Required Resources	Assist Manager	\$200.00	2d	2d	0%	26-Jun-2020 9:00 AM	29-Jun-2020 9:00 AM	0d	
23	Sequences Reources	Assist Manager	\$200.00	2d	2d	0%	2-Jul-2020 9:00 AM	4-Jul-2020 9:00 AM	0d	
24	Plan Resource Management	Assist Manager, QA Engineer	\$400.00	3d	3d	0%	8-Jul-2020 9:00 AM	11-Jul-2020 9:00 AM	0d	
Khewra.Plan.Risk Risk Management Plan			\$1,500.00	12d	12d	0%	14-Jul-2020 9:00 AM	28-Jul-2020 9:00 AM	0d	
25	Inditify Risks	QA Engineer, Assist Manager	\$400.00	2d	2d	0%	14-Jul-2020 9:00 AM	16-Jul-2020 9:00 AM	0d	
26	Preform Risk Analysis	QA Engineer, Assist Manager	\$400.00	3d	3d	0%	20-Jul-2020 9:00 AM	23-Jul-2020 9:00 AM	0d	
27	Risk Management Plan	Project Manager, Assist Manager	\$700.00	2d	2d	0%	25-Jul-2020 9:00 AM	28-Jul-2020 9:00 AM	0d	
Khewra.Plan.Procurement Procurement Management Plan			\$700.00	2d	2d	0%	31-Jul-2020 9:00 AM	3-Aug-2020 9:00 AM	0d	
28	Plan Procuments	Project Manager, Assist Manager	\$700.00	2d	2d	0%	31-Jul-2020 9:00 AM	3-Aug-2020 9:00 AM	0d	

Layout: Classic Schedule Layout		Filter: All Activities								
Activity ID	Activity Name	Resources	Budgeted Total Cost	Original Duration	Remaining Duration	Schedule %	Start	Finish	Total Float	
28	Plan Procurements	Project Manager, Assist Manager	\$700.00	2d	2d	0%	31-Jul-2020 9:00 AM	3-Aug-2020 9:00 AM	0d	
Khewra.Execution Execution			\$1,641,616,850.00	131d	131d	0%	6-Aug-2020 9:00 AM	6-Jan-2021 9:00 AM	0d	
Khewra.Execution.Manage Direct and Manage Project			\$1,641,614,750.00	111d	111d	0%	6-Aug-2020 9:00 AM	14-Dec-2020 9:00 AM	0d	
29	Identify Location	Civil Engineer, Assist Manager, Project Mana	\$950.00	2d	2d	0%	6-Aug-2020 9:00 AM	8-Aug-2020 9:00 AM	0d	
31	Test the Soil	Civil Engineer, Assist Manager	\$450.00	1d	1d	0%	12-Aug-2020 9:00 AM	13-Aug-2020 9:00 AM	0d	
32	Conduct Site Survey	Civil Engineer, Electric Engineer, Structure E	\$1,350.00	1d	1d	0%	18-Aug-2020 9:00 AM	19-Aug-2020 9:00 AM	0d	
33	Procure Man Power	Assist Manager	\$200.00	2d	2d	0%	24-Aug-2020 9:00 AM	26-Aug-2020 9:00 AM	0d	
34	Procure Machinery	Assist Manager, Mechanical Engineer	\$450.00	5d	5d	0%	29-Aug-2020 9:00 AM	4-Sep-2020 9:00 AM	0d	
35	Procure Material	Assist Manager, Structure Engineer, Civil Eng	\$700.00	7d	7d	0%	4-Sep-2020 9:00 AM	12-Sep-2020 9:00 AM	0d	
36	Procure Exploratives	Structure Engineer, QA Engineer, Assist Man	\$650.00	7d	7d	0%	10-Sep-2020 9:00 AM	18-Sep-2020 9:00 AM	0d	
37	Procure Mining Equipment	Mechanical Engineer, Assist Manager	\$2,000.00	5d	5d	0%	16-Sep-2020 9:00 AM	22-Sep-2020 9:00 AM	0d	
38	Procure Safety Equipment	Doctor, QA Engineer, Security Officer, Assist	\$900.00	3d	3d	0%	22-Sep-2020 9:00 AM	25-Sep-2020 9:00 AM	0d	
39	Arrange Water Supply	Assist Manager	\$200.00	12d	12d	0%	28-Sep-2020 9:00 AM	12-Oct-2020 9:00 AM	0d	
40	Construct Electric Supply Lines	Electric Engineer	\$250.00	20d	20d	0%	3-Oct-2020 9:00 AM	27-Oct-2020 9:00 AM	0d	
41	Construct Road and Rail	Civil Engineer, Assist Manager, Structure Eng	\$700.00	30d	30d	0%	9-Oct-2020 9:00 AM	13-Nov-2020 9:00 AM	0d	
42	Construct Site Office	Civil Engineer, Structure Engineer	\$500.00	14d	14d	0%	15-Oct-2020 9:00 AM	31-Oct-2020 9:00 AM	0d	
43	Start Drilling	Civil Engineer, Drills, Excavators, Electricity	\$324,702,000.00	5d	5d	0%	21-Oct-2020 9:00 AM	27-Oct-2020 9:00 AM	0d	
44	Build Tunnel	Electricity, Drills, Excavators	\$324,700,000.00	30d	30d	0%	27-Oct-2020 9:00 AM	1-Dec-2020 9:00 AM	0d	
45	Use Explosive for Blast	Excavators, Explosive, Electricity	\$324,700,000.00	1d	1d	0%	2-Nov-2020 9:00 AM	3-Nov-2020 9:00 AM	0d	
46	Build Piller Inside the Tunnel	Excavators, Electricity, Civil Engineer, Struct	\$324,500,600.00	30d	30d	0%	7-Nov-2020 9:00 AM	12-Dec-2020 9:00 AM	0d	
47	Develop air ventilation system	Structure Engineer, QA Engineer, Electricity	\$4,500,450.00	20d	20d	0%	13-Nov-2020 9:00 AM	7-Dec-2020 9:00 AM	0d	
49	Excavate Salt	Excavators, Mining Labo	\$320,000,100.00	14d	14d	0%	19-Nov-2020 9:00 AM	5-Dec-2020 9:00 AM	0d	

Projects Activities Reports Tracking Resources WBS Resource Assignments WPs & Docs Project Expenses Risks

Layout: Classic Schedule Layout		Filter: All Activities								
Activity ID	Activity Name	Resources	Budgeted Total Cost	Original Duration	Remaining Duration	Schedule % Complete	Start	Finish	Total Float	
40	Construct Electric Supply Lines	Electric Engineer	\$250.00	20d	20d	0%	11-Jul-2020 9:00 AM	4-Aug-2020 9:00 AM	0d	
41	Construct Road and Rail	Civil Engineer, Assist Man	\$700.00	30d	30d	0%	4-Aug-2020 9:00 AM	8-Sep-2020 9:00 AM	0d	
42	Construct Site Office	Civil Engineer, Structure E	\$500.00	14d	14d	0%	8-Sep-2020 9:00 AM	24-Sep-2020 9:00 AM	0d	
43	Start Drilling	Civil Engineer, Drills, Exca	\$324,702,000.00	5d	5d	0%	24-Sep-2020 9:00 AM	30-Sep-2020 9:00 AM	0d	
44	Build Tunnel	Electricity, Drills, Excavate	\$324,700,000.00	30d	30d	0%	30-Sep-2020 9:00 AM	4-Nov-2020 9:00 AM	0d	
45	Use Explosive for Blast	Excavators, Explosive, El	\$324,700,000.00	1d	1d	0%	4-Nov-2020 9:00 AM	5-Nov-2020 9:00 AM	0d	
46	Build Piller Inside the Tunnel	Excavators, Electricity, Cr	\$324,500,600.00	30d	30d	0%	5-Nov-2020 9:00 AM	10-Dec-2020 9:00 AM	0d	
47	Develop air ventilation system	Structure Engineer, QA Ei	\$4,500,450.00	20d	20d	0%	10-Dec-2020 9:00 AM	2-Jan-2021 9:00 AM	0d	
48	Excavate Salt	Excavators, Mining Labo	\$320,000,100.00	14d	14d	0%	2-Jan-2021 9:00 AM	19-Jan-2021 9:00 AM	0d	
49	Collect and Transport salt	Transport Labors, Electric	\$9,500,100.00	2d	2d	0%	19-Jan-2021 9:00 AM	21-Jan-2021 9:00 AM	0d	
50	Refine Salt	Electricity, QA Engineer, /	\$4,500,400.00	4d	4d	0%	21-Jan-2021 9:00 AM	26-Jan-2021 9:00 AM	0d	
51	Pack Salt	QA Engineer, Assist Man	\$4,500,900.00	2d	2d	0%	26-Jan-2021 9:00 AM	28-Jan-2021 9:00 AM	0d	
52	Market Salt To Cities	Project Manager, Assist M	\$900.00	1d	1d	0%	28-Jan-2021 9:00 AM	29-Jan-2021 9:00 AM	0d	
Khewra.Execution.Quality Manage Quality			\$2,100.00	4d	4d	0%	29-Jan-2021 9:00 AM	3-Feb-2021 9:00 AM	0d	
53	Quality check at Extraction	Assist Manager, QA Engr	\$400.00	1d	1d	0%	29-Jan-2021 9:00 AM	30-Jan-2021 9:00 AM	0d	

Layout: Classic Schedule Layout		Filter: All Activities								
Activity ID	Activity Name	Resources	Budgeted Total Cost	Original Duration	Remaining Duration	Schedule %	Start	Finish	Total Float	
46	Build Piller Inside the Tunnel	Excavators, Electricity, Civil Engineer, Struct.	\$324,500,600.00	30d	30d	0%	7-Nov-2020 9:00 AM	12-Dec-2020 9:00 AM	0d	
47	Develop air ventilization system	Structure Engineer, QA Engineer, Electricity	\$4,500,450.00	20d	20d	0%	13-Nov-2020 9:00 AM	7-Dec-2020 9:00 AM	0d	
48	Excavate Salt	Excavators, Mining Labors	\$320,000,100.00	14d	14d	0%	19-Nov-2020 9:00 AM	5-Dec-2020 9:00 AM	0d	
49	Collect and Transport salt	Transport Labors, Electricity, Train	\$9,500,100.00	2d	2d	0%	25-Nov-2020 9:00 AM	27-Nov-2020 9:00 AM	0d	
50	Refine Salt	Electricity, QA Engineer, Assist Manager	\$4,500,400.00	4d	4d	0%	1-Dec-2020 9:00 AM	5-Dec-2020 9:00 AM	0d	
51	Pack Salt	QA Engineer, Assist Manager, Project Manag	\$4,500,900.00	2d	2d	0%	7-Dec-2020 9:00 AM	9-Dec-2020 9:00 AM	0d	
52	Market Salt To Cities	Project Manager, Assist Manager, Security D	\$900.00	1d	1d	0%	12-Dec-2020 9:00 AM	14-Dec-2020 9:00 AM	0d	
Khewra.Execution.Quality Manage Quality			\$2,100.00	16d	16d	0%	18-Dec-2020 9:00 AM	6-Jan-2021 9:00 AM	0d	
53	Quality check at Extraction	Assist Manager, QA Engineer	\$400.00	1d	1d	0%	18-Dec-2020 9:00 AM	19-Dec-2020 9:00 AM	0d	
54	Quality check at refining	QA Engineer, Assist Manager	\$400.00	1d	1d	0%	24-Dec-2020 9:00 AM	25-Dec-2020 9:00 AM	0d	
55	Quality check during packing	QA Engineer, Assist Manager	\$400.00	1d	1d	0%	30-Dec-2020 9:00 AM	31-Dec-2020 9:00 AM	0d	
56	Quality check for marketing	QA Engineer, Assist Manager, Project Manag	\$900.00	1d	1d	0%	5-Jan-2021 9:00 AM	6-Jan-2021 9:00 AM	0d	
Khewra.M&E Monitoring and Controlling			\$4,600.00	26d	26d	0%	11-Jan-2021 9:00 AM	10-Feb-2021 9:00 AM	0d	
57	Control Procurement	Project Manager, Assist Manager	\$700.00	1d	1d	0%	11-Jan-2021 9:00 AM	12-Jan-2021 9:00 AM	0d	
58	Control Schedule	QA Engineer, Project Manager	\$700.00	1d	1d	0%	16-Jan-2021 9:00 AM	18-Jan-2021 9:00 AM	0d	
59	Monitor communication	Assist Manager, Project Manager	\$700.00	1d	1d	0%	22-Jan-2021 9:00 AM	23-Jan-2021 9:00 AM	0d	
60	Monitor Resources	QA Engineer, Assist Manager, Project Manag	\$900.00	1d	1d	0%	28-Jan-2021 9:00 AM	29-Jan-2021 9:00 AM	0d	
61	Monitor Risks	QA Engineer, Assist Manager, Project Manag	\$900.00	1d	1d	0%	3-Feb-2021 9:00 AM	4-Feb-2021 9:00 AM	0d	
62	Monitor Stakeholder	Assist Manager, Project Manager	\$700.00	1d	1d	0%	9-Feb-2021 9:00 AM	10-Feb-2021 9:00 AM	0d	
Khewra.Close Closing			\$500.00	1d	1d	0%	15-Feb-2021 9:00 AM	16-Feb-2021 9:00 AM	0d	
63	Close the Project	Project Manager	\$500.00	1d	1d	0%	15-Feb-2021 9:00 AM	16-Feb-2021 9:00 AM	0d	

Total Duration of project is 297 days at budgeted cost of \$1,641,632,850.

4.9. Run Schedule

After assigning resources, run schedule to get planned duration of the project.

Activities

Projects | **Activities** | Reports | Tracking | Resources | WBS | Resource Assignments | WPs & Docs | Project Expenses | Risks

Layout: Classic Schedule Layout | Filter: All Activities

Activity ID	Activity Name	Resources	Budgeted Total Cost	Original Duration	Remaining Duration	Schedule % Complete	Start	Finish
Khewra Khewra Salt Mine Project								
Khewra.INT Initiation								
Khewra.INT.Feasibility Conduct Feasibility Study								
1	Investigate Infrastructure	Project Manager, Civil Engineer	\$1,150.00	2d	2d	0%	2-Mar-2020 9:00 AM	4-Mar-2020 9:00 AM
2	Soil Test	Civil Engineer, QA Engineer	\$450.00	1d	1d	0%	4-Mar-2020 9:00 AM	5-Mar-2020 9:00 AM
3	Air Quality Test	QA Engineer, Civil Engineer	\$450.00	1d	1d	0%	5-Mar-2020 9:00 AM	6-Mar-2020 9:00 AM
4	Electricity Availability	Electric Engineer, Project	\$750.00	1d	1d	0%	6-Mar-2020 9:00 AM	7-Mar-2020 9:00 AM
5	Water Availability	QA Engineer	\$200.00	1d	1d	0%	7-Mar-2020 9:00 AM	9-Mar-2020 9:00 AM
Khewra.INT.StakeHolders Identify Stakeholders								
6	Define Scope	Project Manager	\$500.00	3d	3d	0%	9-Mar-2020 9:00 AM	12-Mar-2020 9:00 AM
7	Identify Stake Holders	Project Manager	\$500.00	5d	5d	0%	12-Mar-2020 9:00 AM	18-Mar-2020 9:00 AM
8	Develop Project Charter	Project Manager	\$500.00	3d	3d	0%	18-Mar-2020 9:00 AM	21-Mar-2020 9:00 AM

Resource Assignments Table:

Resource ID	Name	Primary Resource	Resource Type	Remaining Units / Time	Original Lag	Start	Finish	Actual Regular Units	Budgeted Units	Remaining Units
CE	Civil Engineer	<input type="checkbox"/>	Labor	250% / 250d	0d	2-Mar-2020	4-Mar-2020	0d	5d	5d
PM	Project Manager	<input checked="" type="checkbox"/>	Labor	250% / 250d	0d	2-Mar-2020	4-Mar-2020	0d	5d	5d
QAE	QA Engineer	<input type="checkbox"/>	Labor	250% / 250d	0d	2-Mar-2020	4-Mar-2020	0d	5d	5d
SO	Security Officer	<input type="checkbox"/>	Labor	250% / 250d	0d	2-Mar-2020	4-Mar-2020	0d	5d	5d

Schedule Dialog Box:

Project(s) to schedule: 1

Current Data Date: 2-Mar-2020 9:00 AM

Project Forecast Start Date: [Empty]

Set Data Date and Planned Start to Project Forecast Start during scheduling

Log to file

File path: C:\Users\user\Documents\SchedLog.txt

Overwrite existing Append to existing

Buttons: Cancel, Schedule, View Log, Help, Options...

Activities

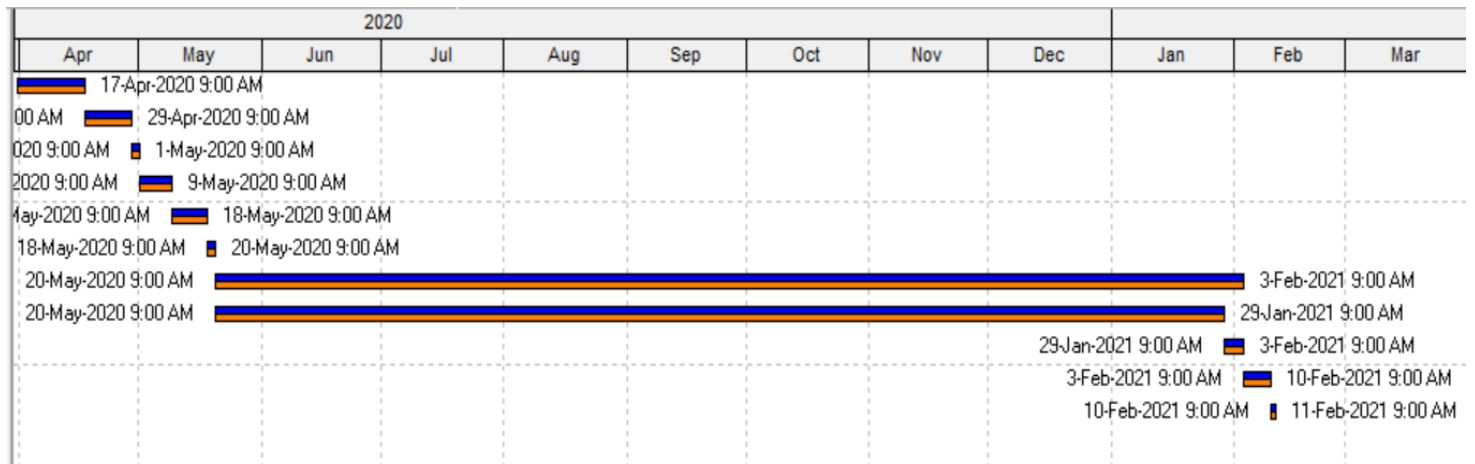
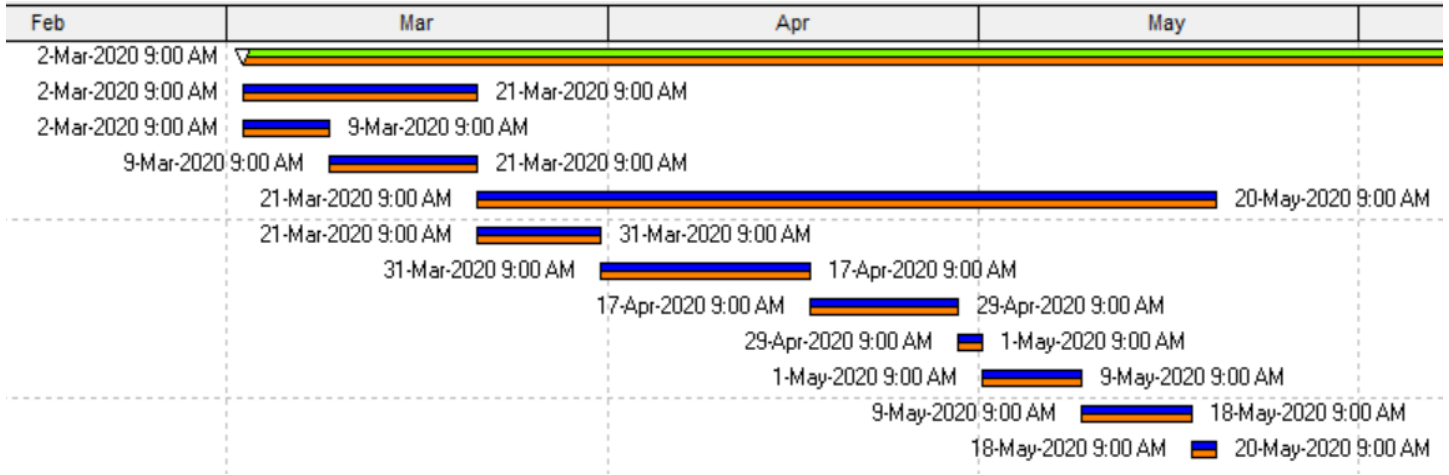
Projects | **Activities** | Reports | Tracking | Resources | WBS | Resource Assignments | WPs & Docs | Project Expenses | Risks

Layout: Classic Schedule Layout | Filter: All Activities

Activity ID	Activity Name	Resources	Budgeted Total Cost	Original Duration	Remaining Duration	Schedule % Complete	Start	Finish
Khewra Khewra Salt Mine Project			\$1,641,636,150.00	297d	297d	0%	2-Mar-2020 9:00 AM	11-Feb-2021 9:00 AM
Khewra.INT Initiation			\$4,500.00	17d	17d	0%	2-Mar-2020 9:00 AM	21-Mar-2020 9:00 AM
Khewra.INT.Feasibility Conduct Feasibility Study			\$3,000.00	6d	6d	0%	2-Mar-2020 9:00 AM	9-Mar-2020 9:00 AM
1	Investigate Infrastructure	Project Manager, Civil Engineer	\$1,150.00	2d	2d	0%	2-Mar-2020 9:00 AM	4-Mar-2020 9:00 AM
2	Soil Test	Civil Engineer, QA Engineer	\$450.00	1d	1d	0%	4-Mar-2020 9:00 AM	5-Mar-2020 9:00 AM
3	Air Quality Test	QA Engineer, Civil Engineer	\$450.00	1d	1d	0%	5-Mar-2020 9:00 AM	6-Mar-2020 9:00 AM
4	Electricity Availability	Electric Engineer, Project	\$750.00	1d	1d	0%	6-Mar-2020 9:00 AM	7-Mar-2020 9:00 AM
5	Water Availability	QA Engineer	\$200.00	1d	1d	0%	7-Mar-2020 9:00 AM	9-Mar-2020 9:00 AM
Khewra.INT.StakeHolders Identify Stakeholders			\$1,500.00	11d	11d	0%	9-Mar-2020 9:00 AM	21-Mar-2020 9:00 AM
6	Define Scope	Project Manager	\$500.00	3d	3d	0%	9-Mar-2020 9:00 AM	12-Mar-2020 9:00 AM
7	Identify Stake Holders	Project Manager	\$500.00	5d	5d	0%	12-Mar-2020 9:00 AM	18-Mar-2020 9:00 AM
8	Develop Project Charter	Project Manager	\$500.00	3d	3d	0%	18-Mar-2020 9:00 AM	21-Mar-2020 9:00 AM

4.10. Giant Chart

It will show the duration of each activity in the form bar showing duration on them.



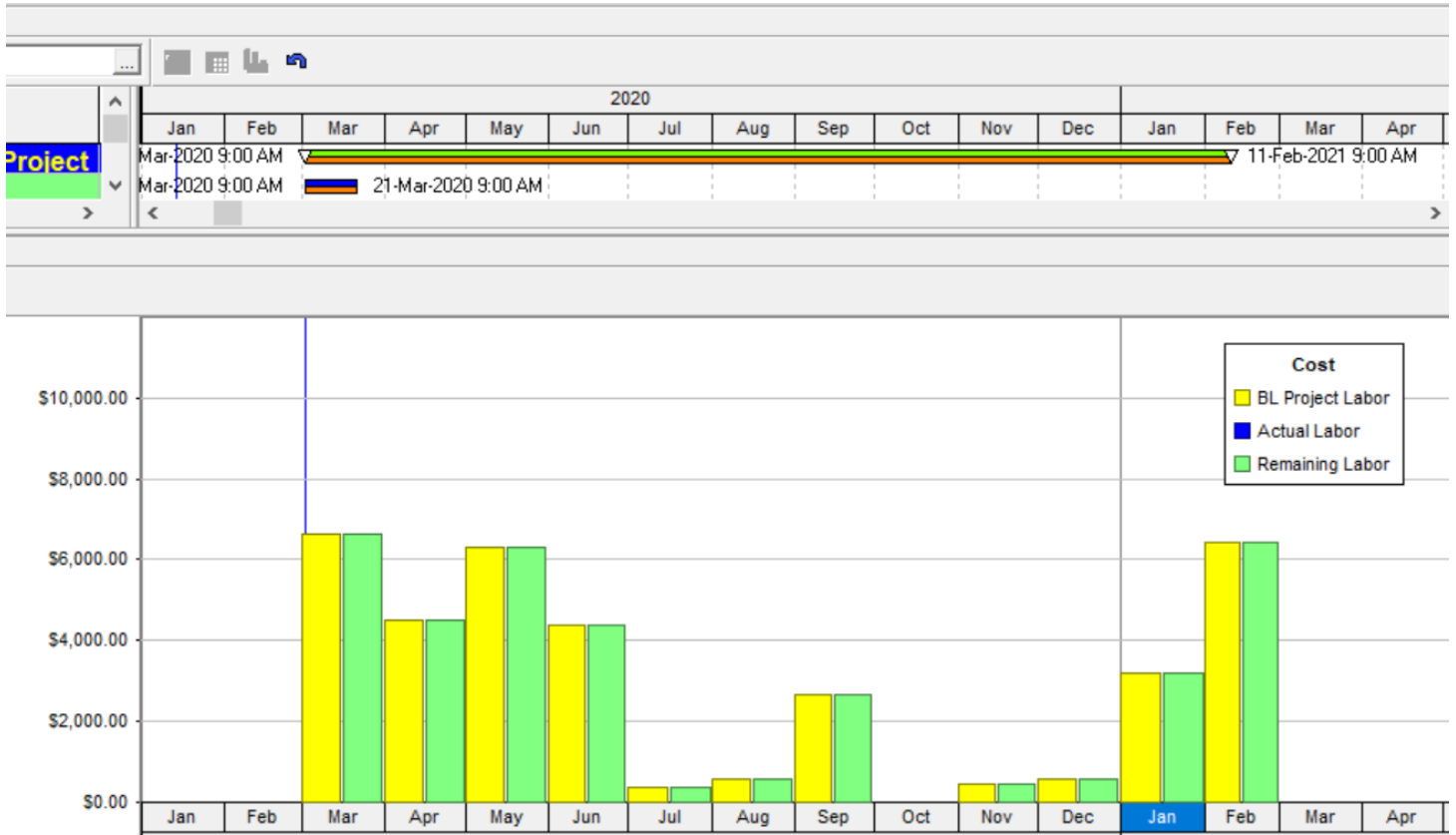
4.11. Cost/Expenses Spread Sheet

It will show you the planned cost of the entire project.

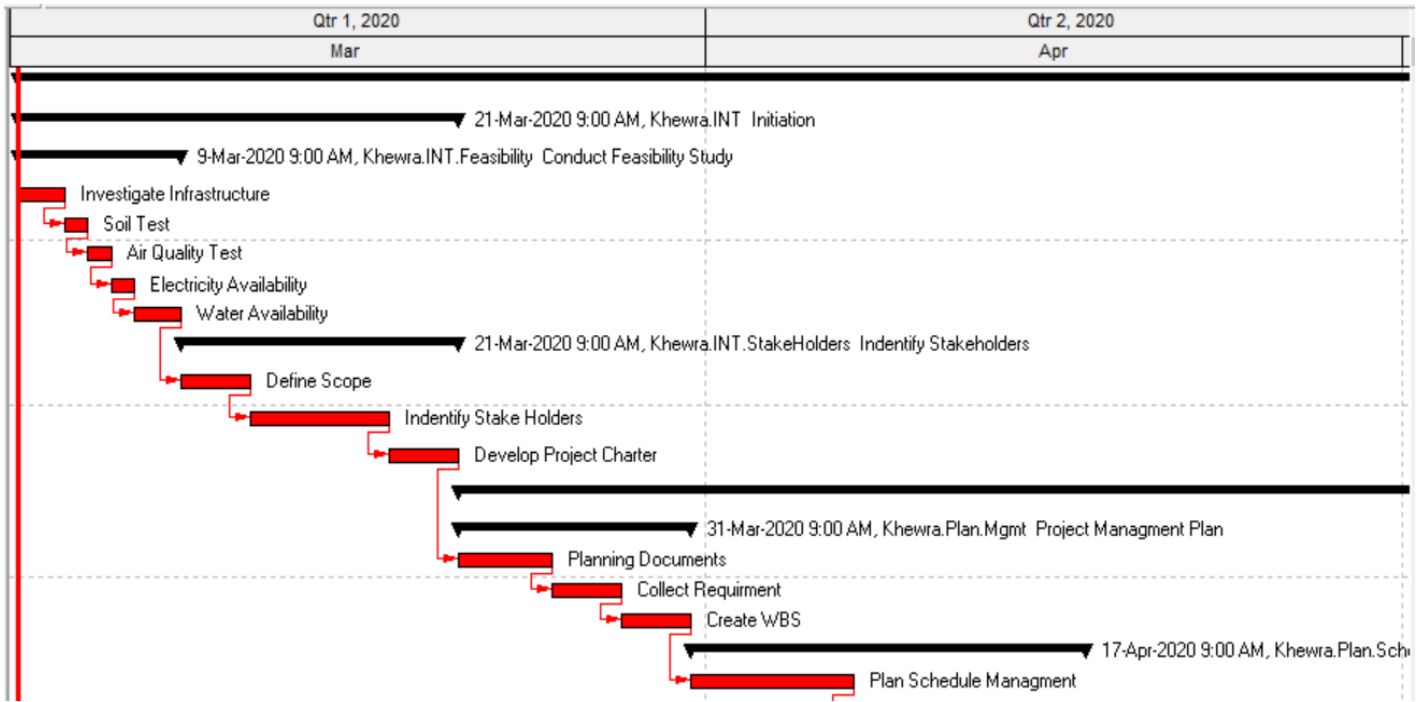
WBS Code		WBS Name	Start	2020							
				Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
KheKhewra Salt Mine Project			2-M	\$6,652.08	\$4,522.92	\$6,323.75	\$4,399.17	\$375.52	\$583.65	\$334,173,059.58	\$292,230,000.00
KI Initiation			2-M	\$4,500.00							
Conduct Feasibility Study			2-M	\$3,000.00							
Identify Stakeholders			9-M	\$1,500.00							
KI Planning			21-	\$2,152.08	\$4,522.92	\$3,025.00					
Project Management Plan			21-	\$2,050.00							
Schedule Management Plan			31-	\$102.08	\$3,047.92						
Cost Management Plan			17-		\$1,100.00						
Quality Management Plan			29-		\$375.00	\$25.00					
Resource Management Plan			1-M			\$800.00					
Risk Management Plan			9-M			\$1,500.00					
Procurement Management Plan			18-			\$700.00					
KI Execution			20-			\$3,298.75	\$4,399.17	\$375.52	\$583.65	\$334,173,059.58	\$292,230,000.00
Direct and Manage Project			20-			\$3,298.75	\$4,399.17	\$375.52	\$583.65	\$334,173,059.58	\$292,230,000.00
Manage Quality			29-								
KI Monitoring and Controlling			3-F								
KI Closing			10-								

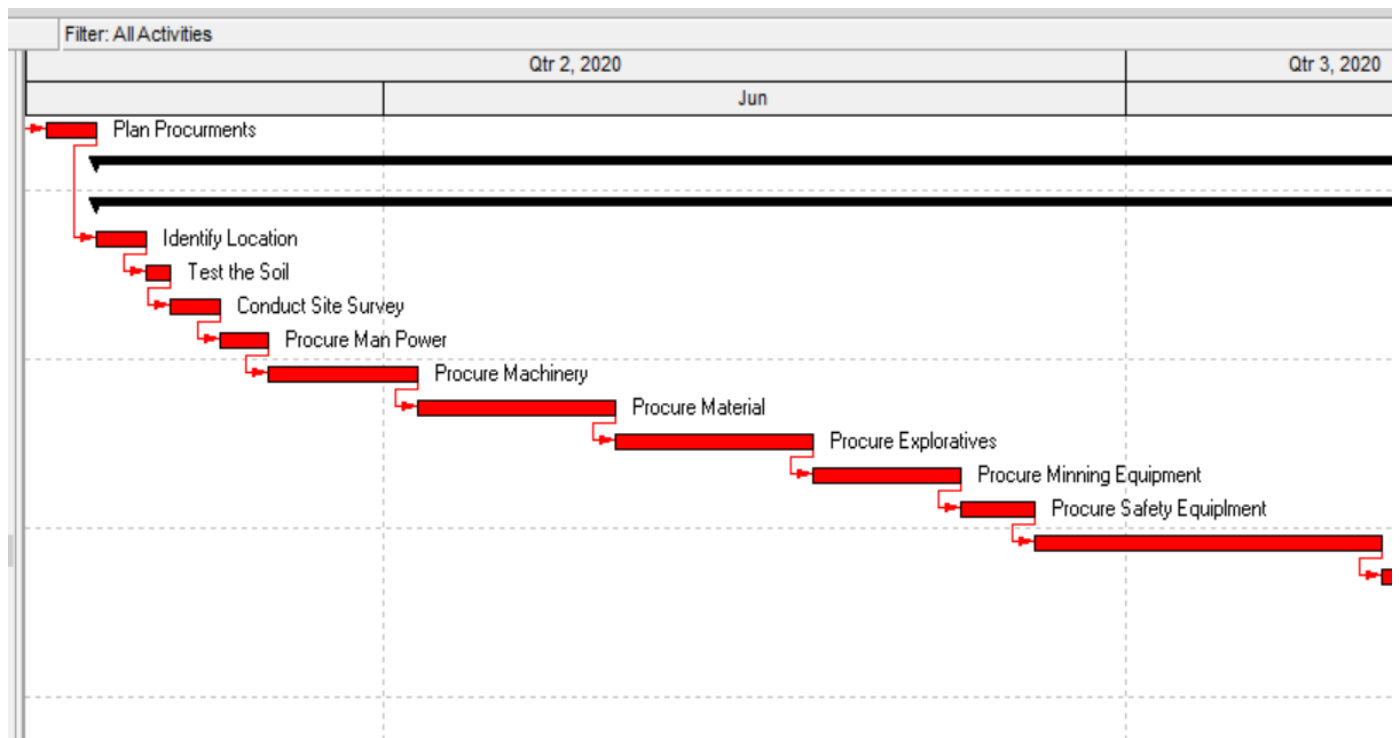
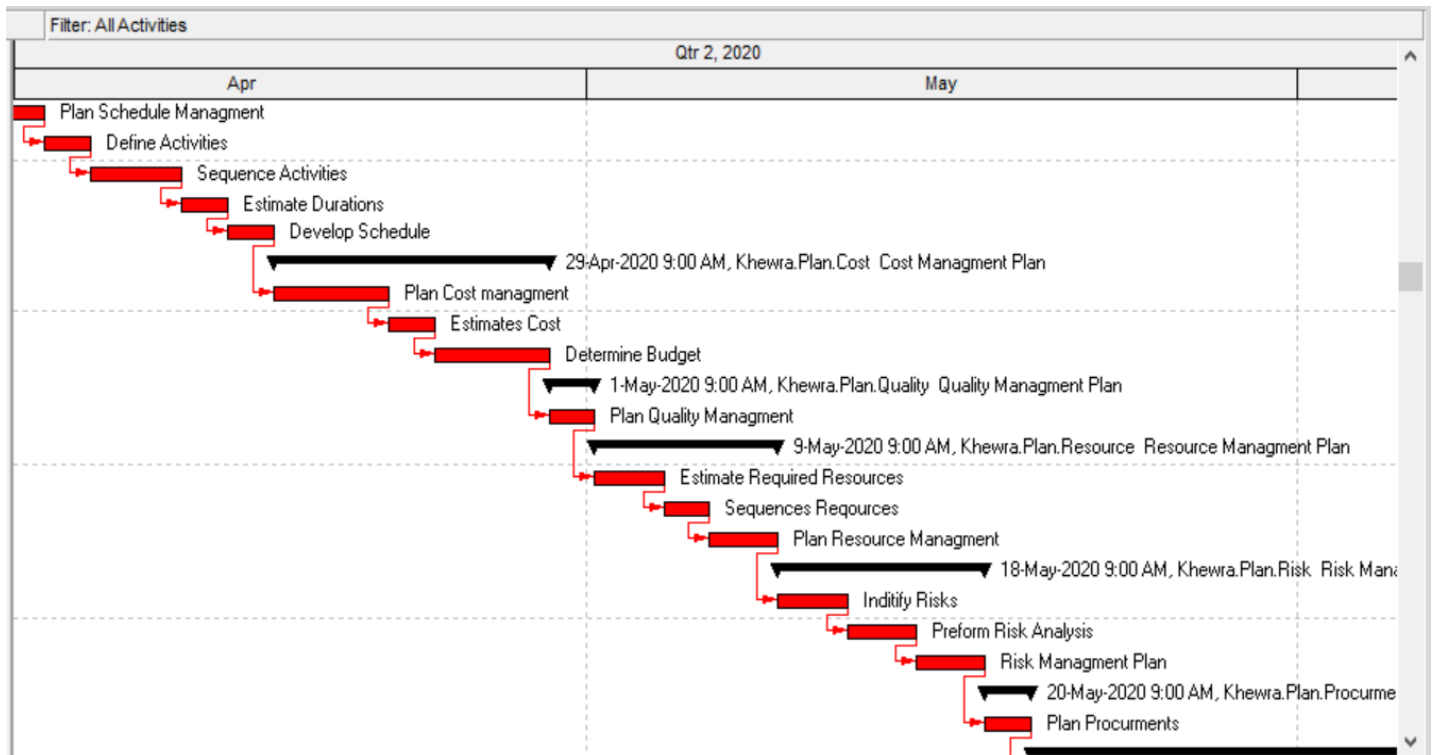
WBS Code		WBS Name	Start	2020					2021	
				Aug	Sep	Oct	Nov	Dec	Jan	Feb
KheKhewra Salt Mine Project			2-M	\$583.65	\$334,173,059.58	\$292,230,000.00	\$584,314,604.17	\$92,132,878.85	\$338,756,300.31	\$6,450.00
KI Initiation			2-M							
Conduct Feasibility Study			2-M							
Identify Stakeholders			9-M							
KI Planning			21-							
Project Management Plan			21-							
Schedule Management Plan			31-							
Cost Management Plan			17-							
Quality Management Plan			29-							
Resource Management Plan			1-M							
Risk Management Plan			9-M							
Procurement Management Plan			18-							
KI Execution			20-	\$583.65	\$334,173,059.58	\$292,230,000.00	\$584,314,604.17	\$92,132,878.85	\$338,756,300.31	\$1,350.00
Direct and Manage Project			20-	\$583.65	\$334,173,059.58	\$292,230,000.00	\$584,314,604.17	\$92,132,878.85	\$338,755,550.31	
Manage Quality			29-						\$750.00	\$1,350.00
KI Monitoring and Controlling			3-F							\$4,600.00
KI Closing			10-							\$500.00

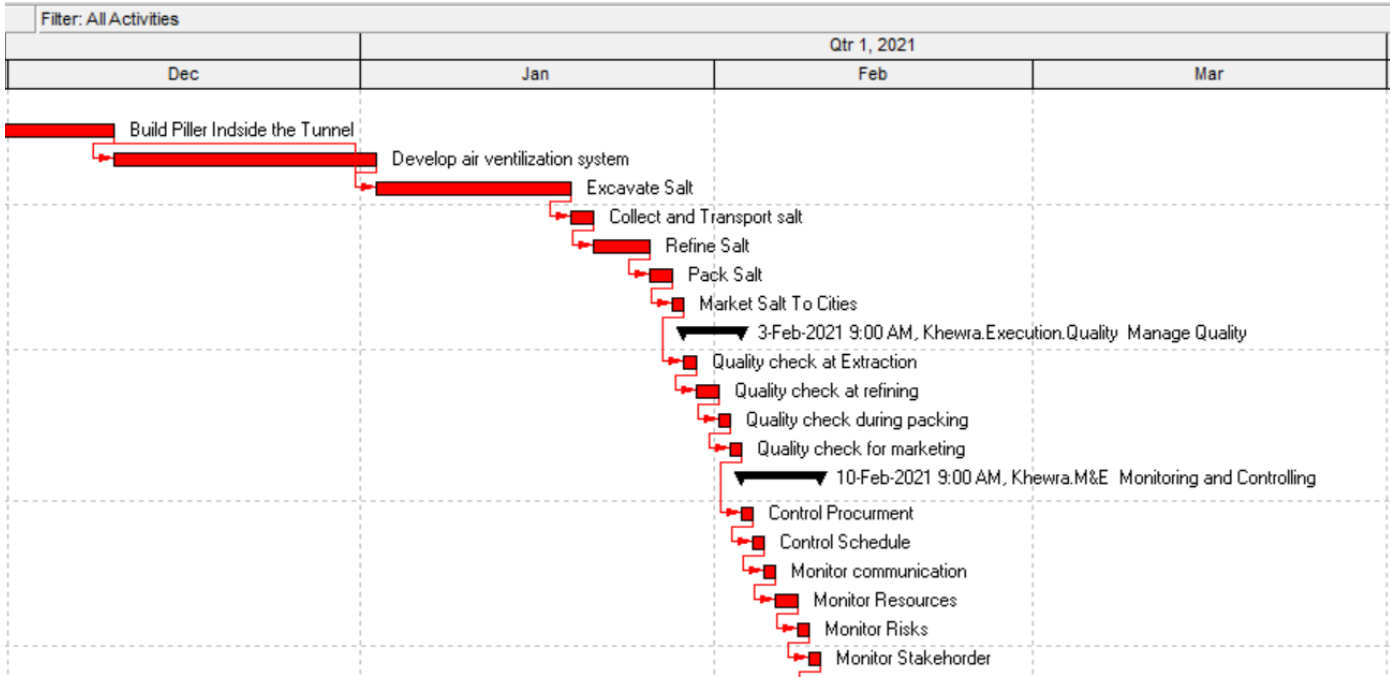
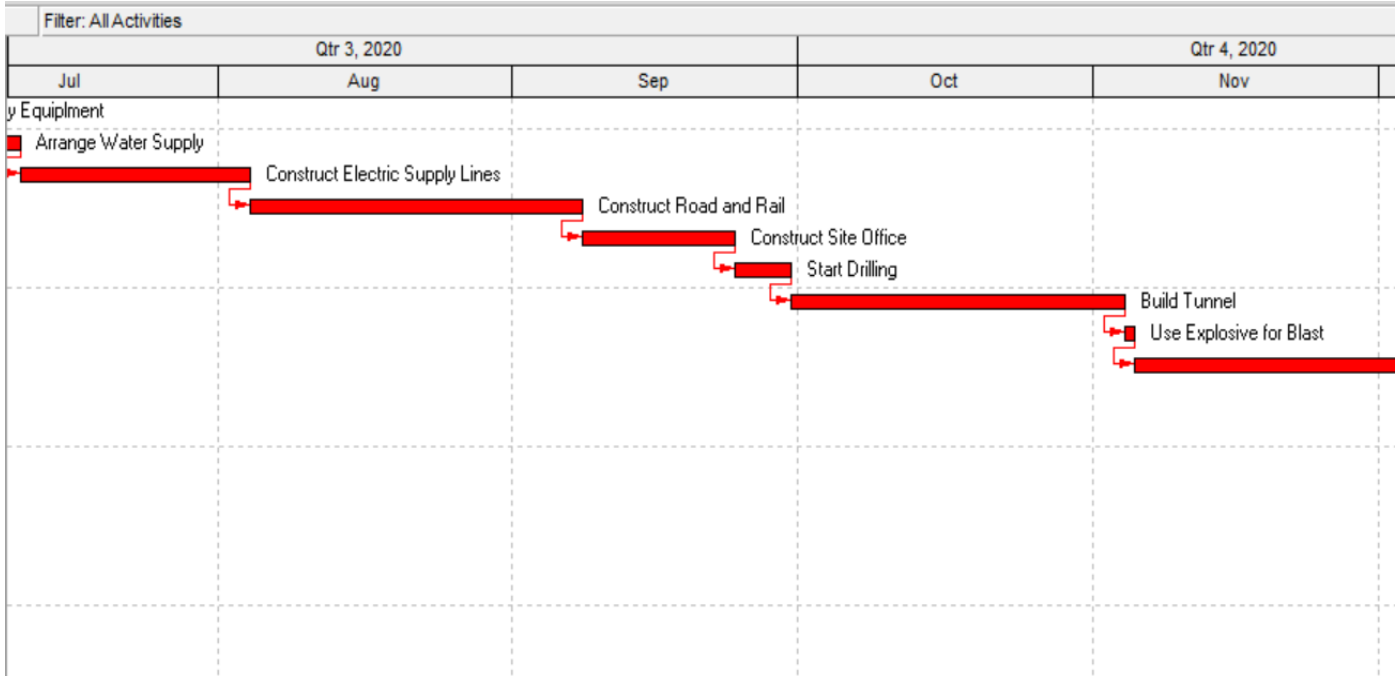
4.12. Histogram

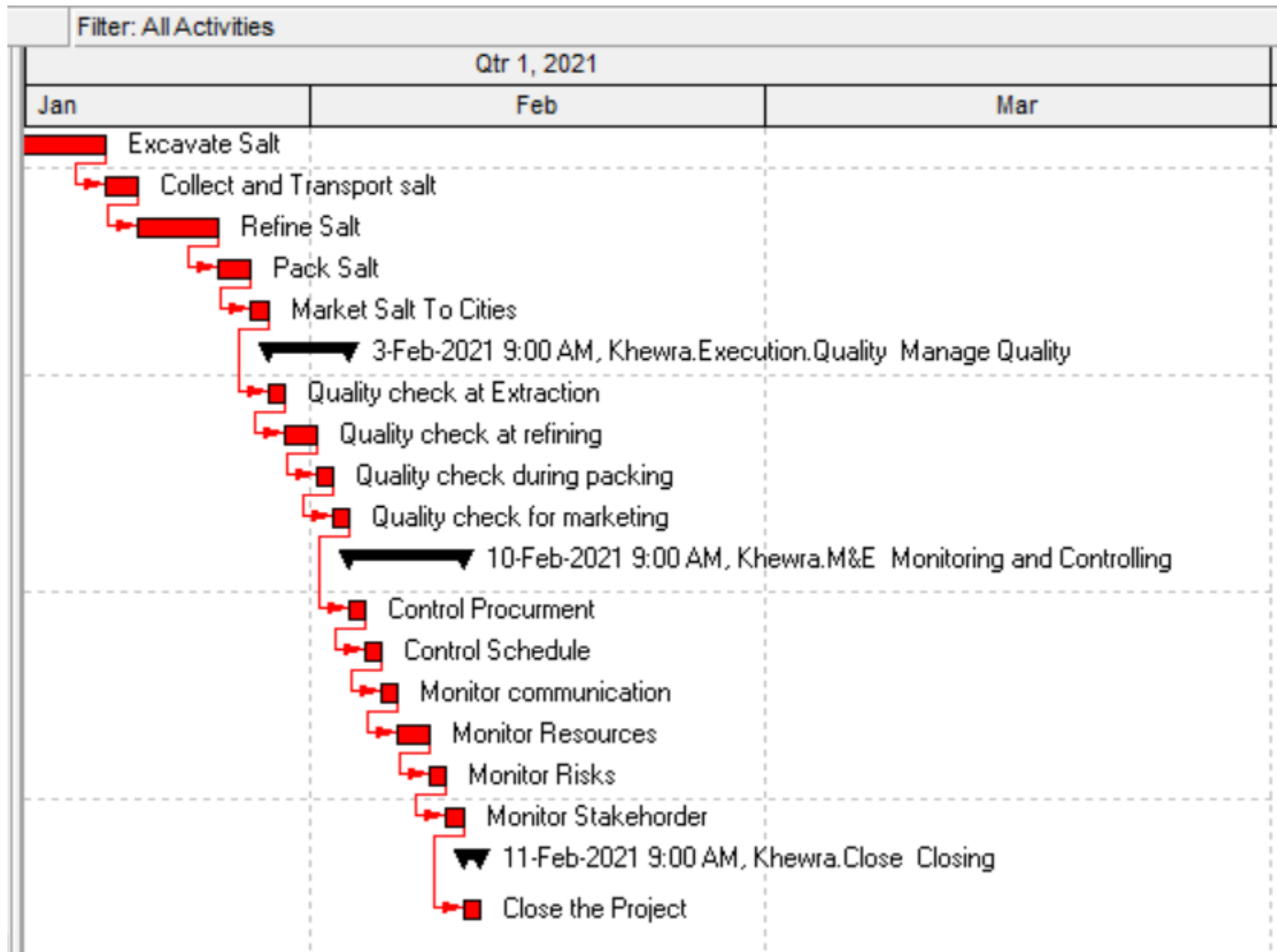


4.13 Project TimeLine

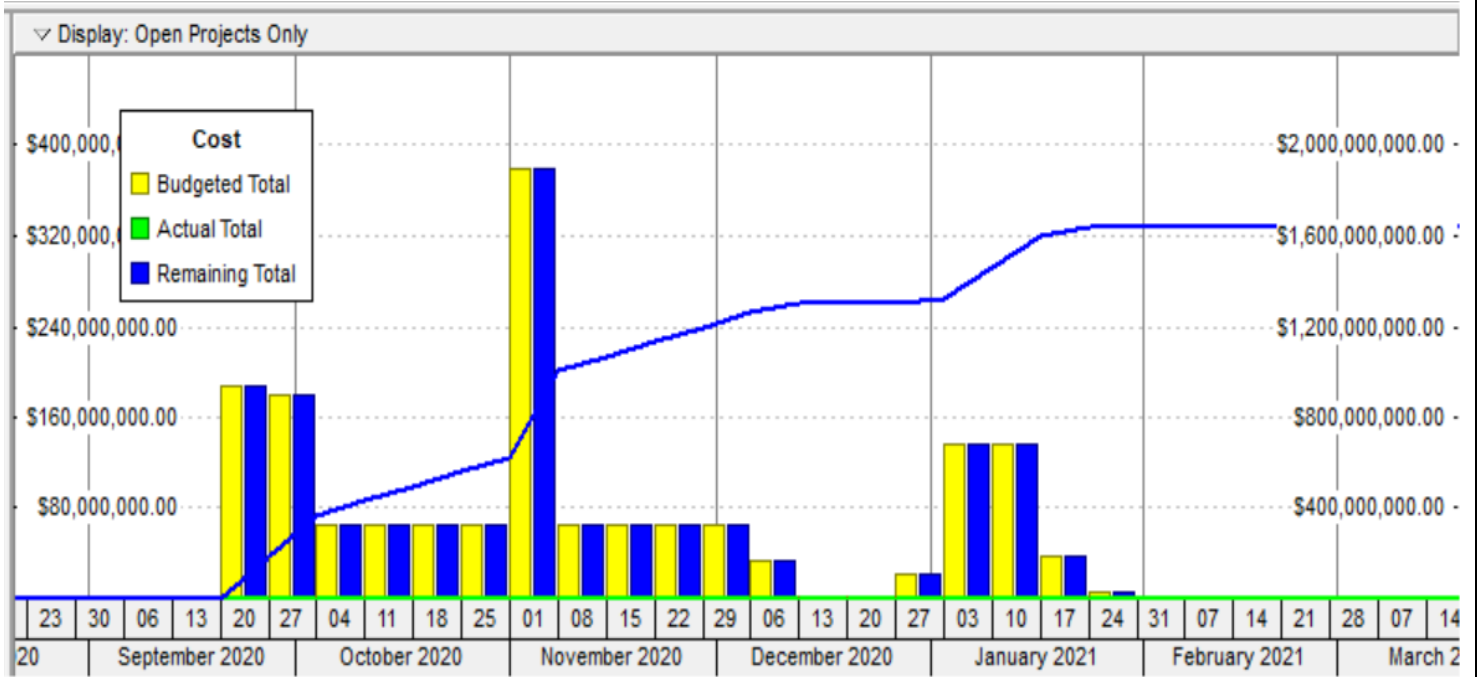








4.13 S-Curve



4.14 References

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Khewra Salt Mine

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