



# Occidental Petroleum Corporation

## SBJ 13-6HZ

### Surface Casing

**Date: October 04, 2021**



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## SBJ 13-6HZ – Surface Casing

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### ***1. Project Background***

On October 04, 2021, Magnum utilized PCMP-Q technology on the surface casing cementing job with a total of 344 bbl mixed and pumped, and maximum combined displacement rate of 6.5 bbl/min. The total time of operations was 2 hours.



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### 2. Cement Blend Data

This is the blend data of the Cement ordered for the job.

Blend Description	Cement Properties
Base Cement Blend : MAG S 14.1	
Mix Water (gal/sk)	5.89
Yield (ft <sup>3</sup> /sk)	1.28
Lab Results	
Density (ppg)	14.1
Working Time (hr:min)	2:13
Thickening Time (hr:min)	3:05
Compressive Strength (psi/12h)	698
Compressive Strength (psi/24h)	1070
Mix water Temperature (°F)	65
Slurry Temperature (°F)	65



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3. Pump Schedule




OXY - SBJ 13-6HZ - SURFACE

RATE	EVENT	VOLUME (BBLs)	SACKS	WEIGHT	YIELD	GAL/ SK
	START JOB		<b>1200</b>		<b><u>Max Psi</u></b>	
	DROP BOTTOM PLUG					
<b>2 BPM</b>	FILL LINES	<b>5.0</b>		<b>8.33 PPG</b>		
	PRESSURE TEST	<b>2500 PSI</b>		<b>8.33 PPG</b>		
<b>5 BPM</b>	FRESH WATER	<b>5.0</b>		<b>8.33 PPG</b>		
<b>5 BPM</b>	DYE WATER	<b>10.0</b>		<b>8.33 PPG</b>		
<b>5 BPM</b>	FRESH WATER	<b>10.0</b>		<b>8.33 PPG</b>		
<b>6 BPM</b>	CMT - MAG S 14.1	<b>179.4</b>	<b>786.9</b>	<b>14.1 PPG</b>	<b>1.28</b>	<b>5.89</b>
	SHUTDOWN		<b>WASH PUMPS AND LINES</b>			
	DROP TOP PLUG					
<b>6 BPM</b>	DISPLACEMENT	<b>143.2</b>				
	LAND PLUG	<b>BUMP PLUG 500 PSI OVER</b>				
		<b>SHOE JOINT LENGTH</b>		<b>BBLs TO SURFACE</b>		<b>H2O REQ</b>
<b>TP</b>	<b>1888'</b>	<b>42'</b>		<b>2.8 BBLs CEMENT</b>		<b>300 BBLs</b>
<b>TD</b>	<b>1898'</b>	<b><u>USE MUD SCALES ON EVERY TIER.</u></b>				
Total Displacement						
<b>PRESSURE TO LAND</b>		<b>553 PSI</b>				
<b>Collapse</b>	<b>3090 PSI</b>	<b>Burst</b>	<b>5750 PSI</b>	<b>JOB #</b>	<b>109159</b>	



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**4. Job Sequence / Procedure 1 of 2**

		US Treatment Report			
<b>Customer:</b> OCCIDENTAL PETROLEUM CORP.		<b>Job #:</b> JOB00109159			
<b>Rep:</b> David Cornett		<b>Rig:</b> Ikon 12		<b>Job Date:</b> Oct 04 @ 00:00	
<b>Supervisor:</b> VITALIJS NEVERDASOVS		<b>Well:</b> SBJ 13-6HZ		<b>Time Requested:</b> Oct 04 @ 00:00	
<b>Job Type:</b> US Primary Casing-Surface		<b>UWI:</b> SBJ 13-6HZ		<b>Time Arrived:</b> Oct 04 @ 21:00	
		<b>Surface:</b> T4N R68W S13		<b>Time Released:</b> Oct 05 @ 01:00	
786.9 sk MAG S 14.1 + 1.00% MCA-1 + 0.10% MCDP-P					
Yield: 1.28 ft3/sk = 179.39bbls    Mix Water: 5.89 gal/sk = 4634.84gal					
BHCT (F)	81	BHST (F)	81	Surface Casing Grade	L-80
Surface Casing Weight (lb/ft)	40	Collapse Csg Pressure (psi)	3090	Float Depth (ft)	1842'
Hole Size (in)	13.5	psi		psi	
Mud Density (lb/gal)	8.4	Max Csg Pressure (psi)	5750	Max Pressure (psi)	1200
Plug Type	Rig	Mud Type	psi	Plug Size (in)	9 5/8
Unkown UDF	Supplied	TMD (ft)	water based	TVD (ft)	1893'
	Surface Casing		1898'		
Treatment Info:    Sacks Used: 0    Sacks Not Used: 0					
Preflush: 10bbls Fresh Water & 10bbls MAG Mark & 10bbls Fresh Water				Circulation Time: 0.5	
Displace:				Slurry Temp:	63    Bulk Sample: Yes
				Water Temp:	61    Water Sample: Yes
				Bulk Temp:	60    Slurry Sample: Yes
				Air Temp:	58    Air Pressure
				Slurry Returns:	5 Plug Bumped: Yes    Pump Out Lines: Yes    Float Held: Yes
Cement Class:	Type III	Humidity:	Precipitation:		



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### Job Sequence / Procedure 2 of 2

Time	Pressure psi	Annular Pressure psi	Volume Per Stage bbls	Total Stage Volume bbls	Rate bbls/mi n	Treatment Detail
19:20	0.00					Arrive on Location - ARRIVED ON LOCATION. CUSTOMER REQUESTED CREW @ 21:00. RIG IS GETTING READY TO RUN CASING.
22:15	0.00					Safety Meeting - PRE JOB SAFETY MEETING WITH ALL PERSONEL
22:25	0.00					Drop Plug - DROP BOTTOM PLUG
22:32	2,550.00		5		2.0	Start Pressure Test - LOAD LINE AND PRESSURE TEST
22:36	100.00		5		5.0	Pump Preflush - FRESH WATER AHEAD
22:42	120.00		10		5.0	Pump Preflush - DYE SPACER
22:44	107.00		10		5.0	Pump Preflush - FRESH WATER
22:46	280.00		179.4		6.0	Pump Slurry - BATCH/ WEIGHT/ PUMP 786.9 SKS / 179.4 BBLs OF MAG S 14.1.
23:25	0.00					Stop Pumping - SHUTDOWN. FINISHED PUMPING CEMENT
23:29	0.00					Drop Plug - DROP TOP PLUG.
23:33	756.00		120		6.5	Displace - FRESH WATER DISPLACEMENT.
23:55	610.00		23.2		2.0	Slow Rate Pumping - SLOW RATE.
00:02	1,171.00			143.2		Bump Plug - BUMP PLUG WITH 500 PSI OVER FINAL CIRCULATING PRESSURE. 5 BBLs OF CEMENT TO SURFACE.
00:05	0.00					Check Floats - FLOATS HELD. 1 BBL BACK
00:15	0.00					Wash Up Truck
00:25	0.00					Rig Out



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## 5. Job Graph

