



Occidental Petroleum Corporation

SBJ 13-10HZ

Surface Casing

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SBJ 13-10HZ – Surface Casing

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1. Project Background

On October 08, 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 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 ³ /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

PUMP SCHEDULE							
RATE (BPM)	EVENT	VOLUME (BBL)	DENSITY (LB/GAL)	# OF SACKS	SACK WEIGHT (LB/SK)	YIELD (FT3/SK)	MIX WATER (GAL/SK)
	Start Job				Max PSI 1200		
	Drop Plug						
2.5	Fill Fresh Water	5.0					
	Test Lines 2500						
2.5	Fresh water	5.0					
2.5	MAG Mark	10.0					
2.5	Fresh water	10.0					
6	Mag S 14.1#	179.3	14.1	786.9	87.00	1.28	5.89
3	Slow at 100 away						
	Drop top plug						
6	Displacement	138.8					
	Land Plug						
	TOL						
	TOT				Bump Plug 500psi Over		
	Spacer to Surface	30.0					
	Cement to Surface	9.4					
TOTAL	TOTAL PIPE	SHOE JOINT		FLOAT COLLAR		BBL/FT	H2O REQ.
	1,873.00	42.00		1831.00		40.0000	301
SHOE JOINT CAP.	3.10	USE MUD SCALES TO VERIFY WEIGHT					
PRESSURE TO LAND (PSI)		548		TOTAL FLUID PUMPED (BBL)			349
Collapse (psi)	2,474	Burst (psi)	4600			JOB#	109396
Client	Occidental	Well Name	SBJ 13-10HZ			Job Type	Surface
Water Temp (°F)	62	Water pH	7			Water Chlorie (mg/L)	1000
Total Hardness (mg/L):	300						



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4. Job Sequence / Procedure 1 of 2

		US Treatment Report			
Customer: OCCIDENTAL PETROLEUM CORP. Rep: David Cornett Supervisor: TRAVIS TOLMAN Job Type: US Primary Casing-Surface		Rig: lkon 12 Well: SBJ 13-10HZ UWI: SBJ 13-10HZ Surface: SBJ 13-10HZ		Job #: JOB00109396 Job Date: Oct 08 @ 00:00 Time Requested: Oct 09 @ 00:00 Time Arrived: Oct 08 @ 03:00 Time Released: Oct 08 @ 07:30	
786.9 sk MAG S 14.1 + 1.00% MCA-1 + 0.10% MCDF-P					
		Yield: 1.28 ft3/sk = 179.39bbbls		Mix Water: 5.89 gal/sk = 4634.84gal	
BHCT (F)	81	BHST (F)	81	Surface Casing Casing Size (in)	9.625
Surface Casing Grade	L-80	Surface Casing Weight (lb/ft)	40	Collapse Csg Pressure (psi)	2472
Float Depth (ft)	1831	Hole Size (in)	13.5	Max Csg Pressure (psi)	4600
Max Pressure (psi)	1200	Mud Density (lb/gal)	8.6	Mud Type	WBM
Plug Size (in)	9.625	Plug Type	Rig Supplie d	TMD (ft)	1873
TVD (ft)	1873	Unkown UDF	Surface Casing		
Treatment Info: Sacks Used: 0 Sacks Not Used: 0					
Preflush: 10bbbls Fresh Water & 10bbbls MAG Mark & 10bbbls Fresh Water				Circulation Time: 1	
Displace: 138.8bbbls Fresh Water				Slurry Temp: 78	Bulk Sample: Yes
				Water Temp: 62	Water Sample: Yes
				Bulk Temp: 68	Slurry Sample: Yes
				Air Temp: 53	Air Pressure 29.92
Slurry Returns: 8		Plug Bumped: Yes		Pump Out Lines: No	Float Held: Yes
Cement Class: Type III		Humidity: 49		Precipitation: 0	



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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
03:00	0.00					Arrive on Location - Arrive on location, talk with company man to get number and discuss safety. On location time 3:00
04:20	0.00					Safety Meeting - Held safety meeting with company man, rig hands and crew
04:40	0.00					Drop Plug - Drop bottom plug
04:47	50.00		5		2.5	Fill Lines - Load pump and lines with fresh water
04:51	2,500.00					Start Pressure Test - Pressure test pump and lines with fresh water
04:55	58.00		25		2.5	Pump Preflush - Pump 5bbls fresh water, 10bbls MAG Mark, 10bbls fresh water
05:08	620.00		179.3		6	Pump Slurry - Pump 786.9sks/179.3bbls of MAG S at 14.1#-1.28Y-5.89gps
05:42	0.00					Stop Pumping
05:49	0.00					Drop Plug - Drop plug, witnessed by company man
05:52	890.00		130		6	Displace - Displace with fresh water, calculated displacement 138.8bbls
06:16	677.00		9		3	Decrease Rate - Slow rate to land plug
06:20	1,217.00					Bump Plug - Actual displacement 139bbls, got 8bbls cement to surface
06:23	1,202.00					Check Floats - Float held, got back 1bbl
06:30	0.00					Wash Up Truck
06:45	0.00					Rig Out
07:30	0.00					Leave Location



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5. Job Graph

