

The Road to Excellence Starts with Safety

Sold To #: 300466	Ship To #: 0003863310	Quote #: 0022478435	Sales Order #: 0905070625
Customer: ANADARKO PETROLEUM CORP-EBUS		Customer Rep: Alan Maden	
Well Name: GRACIE		Well #: 24-7HZ	API/UWI #: 05-123-46437-00
Field: WATTENBERG	City (SAP): IONE	County/Parish: WELD	State: COLORADO
Legal Description: SE SW-24-2N-66W-345FSL-1685FWL			
Contractor: PRECISION DRLG		Rig/Platform Name/Num: PRECISION 461	
Job BOM: 7523 7523			
Well Type: HORIZONTAL GAS			
Sales Person: HALAMERICA\HX41066		Srvc Supervisor: Luke Kosakewich	

Job

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type	BHST		
Job depth MD	12728ft	Job Depth TVD	7504ft
Water Depth		Wk Ht Above Floor	
Perforation Depth (MD)	From		To

Well Data

Description	New / Used	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
Casing		9.625	8.921	36		J-55	0	1844	0	1844
Casing		5.5	4.892	17	LTC	HCP110	0	12718	0	7504
Open Hole Section			7.875				1844	12728	1844	7504

Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe					Top Plug	5.5	1	HES
Float Shoe	5.5			12718	Bottom Plug	5.5	1	HES
Float Collar	5.5			12705	SSR plug set			
Insert Float					Plug Container	5.5	1	HES
Stage Tool					Centralizers			

Fluid Data

Stage/Plug #: 1										
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
1	Tuned Spacer III	Tuned Spacer III	60	bbl	10.5	6.96		4		

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
2	Gasstop B1	GASSTOP (TM) SYSTEM	630	sack	13.2	1.59		6	7.82
3	EconoCem	ECONOCEM (TM) SYSTEM	510	sack	13.5	1.68		7	7.99
4	Biocide Water and MMCR	Biocide Water and MMCR	20	bbl	8.34			8	
5	Biocide Water	Biocide Water	274.7	bbl	8.34			8	
Cement Left In Pipe									
Amount		0 ft			Reason			Wet Shoe	
Mix Water: pH 7		Mix Water Chloride: 0 ppm			Mix Water Temperature: 78 °F				
Plug Bumped? Yes		Bump Pressure: 2,650 psi			Floats Held? Yes				
<p>Comment There were full returns throughout the job. We bumped the plug at 2,650 psi. at 2 bpm. Final pressure was 3,250. Held pressure for a 15 minute casing test. Pressured up to 4,900 psi. to burst the plug. Pumped a 3 bbl. wet shoe at 4 bpm. Check floats. Floats held. Got 2.5 bbls. of fluid back to the truck. There was no spacer or cement to surface. Estimated Tops are, TOT 7,789', TOL 2,015', and TOS 702'.</p>									

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comments
Event	1	Call Out	Call Out	8/16/2018	06:00:00	USER	Crew was called out at 06:00 for an on location time of 12:00.
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	8/16/2018	10:50:00	USER	Crew held a pre journey safety meeting and JSA.
Event	3	Depart Shop for Location	Depart Shop for Location	8/16/2018	11:00:00	USER	Started journey management with dispatch and left location.
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	8/16/2018	11:30:00	USER	Crew performed a site assessment, safety meeting and hazard hunt on location. Checked in with the customer and discussed the job procedures, rig up and well bore schematics. The rig was running casing.0
Event	5	Other	Other	8/16/2018	11:35:00	USER	Well bore: MD: 12,728', TP: 5.5" 17# set at 12,718', FC: 12,705', TVD: 7,504', SC: 9.625" 36# set at 1,844'. OH: 7.875". Mud # 9.5 ppg. Water test: PH: 7, Chlorides: 0, Temp: 78 Degrees.
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	8/16/2018	11:40:00	USER	The crew held a pre rig up safety meeting and JSA.
Event	7	Rig-Up Equipment	Rig-Up Equipment	8/16/2018	11:45:00	USER	The crew rigged up all lines, hoses and equipment for the job.
Event	8	Safety Meeting	Safety Meeting	8/16/2018	15:00:00	USER	Halliburton cement crew held a pre cement job safety meeting and JSA with third party personnel and rig crew.
Event	9	Start Job	Start Job	8/16/2018	15:35:20	COM5	Pumped 3 bbls. of fresh water at 3 bpm. to fill lines and establish circulation.
Event	10	Test Lines	Test Lines	8/16/2018	15:37:52	COM5	Pressure tested lines to 6,500 psi. with a 500 psi. electronic kick out test.
Event	11	Pump Spacer	Pump Spacer	8/16/2018	15:47:55	USER	Pumped 60 bbls. of Tuned Spacer III with

surfactants mixed at 10.5 ppg., Yield: 6.96 ft³/sk, 44.4 gal/sk. Density was verified by pressurized scales.

Event	12	Drop Bottom Plug	Drop Bottom Plug	8/16/2018	16:01:40	COM5	Halliburton dropped the bottom plug, which was witnessed by the customer.
Event	13	Pump Lead Cement	Pump Lead Cement	8/16/2018	16:09:51	COM5	Pumped 178 bbls. (630 sks.) of Gas stop mixed at 13.2 ppg., Yield: 1.59 ft ³ /sk, 7.82 gal/sk. Density was verified by pressurized scales.
Event	14	Check Weight	Check Weight	8/16/2018	16:26:39	COM5	Cement weighed up at 13.2 ppg. Density was verified by pressurized scales.
Event	15	Pump Tail Cement	Pump Tail Cement	8/16/2018	16:44:39	COM5	Pumped 153 bbls. (510 sks.) of Econocem mixed at 13.5 ppg. Yield: 1.68 ft ³ /sk, 7.99 gal/sk. Density was verified by pressurized scales.
Event	16	Check Weight	Check Weight	8/16/2018	17:03:59	COM5	Cement weighed up 13.5 ppg.
Event	17	Shutdown	Shutdown	8/16/2018	17:11:56	COM5	Pumped all cement away.
Event	18	Clean Lines	Clean Lines	8/16/2018	17:20:07	USER	Washed pumps and lines until clean.
Event	19	Drop Top Plug	Drop Top Plug	8/16/2018	17:27:34	COM5	Dropped the top plug, which was witnessed by the customer.
Event	20	Pump Displacement	Pump Displacement	8/16/2018	17:27:39	COM5	Pumped 294.7 bbls. of fresh water with MMCR in the first 20 bbls. Biocide was added throughout the rest of displacement.
Event	21	Bump Plug	Bump Plug	8/16/2018	18:20:22	COM5	Bumped the plug 500 psi. over 2,650 psi. at 2 bpm. Final pressure was 3,250 psi. Estimated TOT is 7,789', TOL 2,015', TOS 702'.

Event	22	Other	Other	8/16/2018	18:20:29	COM5	Held pressure for a 15 minute casing test. Pressure held. Final pressure was 3,500 psi.
Event	23	Pressure Up Well	Pressure Up Well	8/16/2018	18:36:37	USER	Pressured up the well to 4,930 psi. to burst the plug. Pumped 3 bbls. of fresh water at 4 bpm. for a wet shoe.
Event	24	Check Floats	Check Floats	8/16/2018	18:38:16	USER	Bled off pressure to check floats. Floats held. Got 2.5 bbls. of fluid back to the truck.
Event	25	End Job	End Job	8/16/2018	18:40:22	COM5	Washed and blew down all pumps and lines until clean and dry.
Event	26	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	8/16/2018	18:45:00	USER	Halliburton cement crew held a pre rig down safety meeting and JSA.
Event	27	Rig-Down Equipment	Rig-Down Equipment	8/16/2018	18:55:00	USER	Rigged down all lines, hoses and equipment.
Event	28	Safety Meeting - Departing Location	Safety Meeting - Departing Location	8/16/2018	20:50:00	USER	Held a pre journey safety meeting with the crew.
Event	29	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	8/16/2018	21:00:00	USER	Started journey management with dispatch and left location.

3.0 Attachments

3.1 Job Chart

