

The Road to Excellence Starts with Safety

Sold To #: 300466		Ship To #: 3893749		Quote #: 0022490473		Sales Order #: 0905137061				
Customer: ANADARKO PETROLEUM CORP-EBUS				Customer Rep: LEVI						
Well Name: PETTINGER			Well #: 18-4HZ		API/UWI #: 05-123-47350-00					
Field: WATTENBERG		City (SAP): LOCHBUIE		County/Parish: WELD		State: COLORADO				
Legal Description: SW SE-18-1N-65W-978FSL-1791FEL										
Contractor: PRECISION DRLG				Rig/Platform Name/Num: PRECISION 464						
Job BOM: 7523 7523										
Well Type: HORIZONTAL GAS										
Sales Person: HALAMERICA\HX41066				Srv Supervisor: Vitali Neverdasov						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST						
Job depth MD		12981ft		Job Depth TVD		7250				
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	1835	0	1835
Casing	0	5.5	4.892	17	LTC	HCP110	0	12981	0	7250
Open Hole Section			7.875				1835	12986	1835	7250
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	5.5					Top Plug	5.5	1	WHED	
Float Shoe	5.5	1	WHED	12981		Bottom Plug	5.5	1	WHED	
Float Collar	5.5	1	WHED	12970		SSR plug set	5.5			
Insert Float	5.5					Plug Container	5.5	1	HES	
Stage Tool	5.5					Centralizers	5.5			
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				
0.70 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)								
0.25 gal/bbl		D-AIR 3000L, 5 GAL PAIL (101007444)								
79.92 lbm/bbl		BARITE, BULK (100003681)								

0.70 gal/bbl		MUSOL(R) A, 5 GAL PAIL (100064220)							
37.58 gal/bbl		FRESH WATER							
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	640	sack	13.2	1.59		6	7.81
0.10 Gal		D-AIR 3000L, TOTETANK (101396181)							
1.20 %		SCR-100 (100003749)							
5.21 Gal		FRESH WATER							
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
3	EconoCem	ECONOCEM (TM) SYSTEM	530	sack	13.5	1.68		6	7.98
0.10 %		SA-1015, 50 LB SACK (102077046)							
7.99 Gal		FRESH WATER							
0.50 %		HR-5, 50 LB SK (100005050)							
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
4	Biocide Water and MMCR	Biocide Water and MMCR	20	bbl	8.34				
0.50 gal/bbl		MICRO MATRIX CEMENT RETARDER, 5 GAL PAIL (100003781)							
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
5	Biocide Water	Biocide Water	281	bbl	8.34				
Cement Left In Pipe		Amount	ft		Reason			WET SHOE	
Comment ESTIMATED TOP OF SPACER @ 458'. TOP OF LEAD @ 1970'. TOP OF TAIL @ 7842'.									

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	9/17/2018	06:00:00	USER	For Location @ 11:00
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	9/17/2018	10:15:00	USER	Journey management meeting held prior to departure
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	9/17/2018	10:30:00	USER	Called Journey
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	9/17/2018	10:45:00	USER	6 MILES. Discussed numbers and job procedures with Customer. CONTAINMENT COMPANY NOT HERE. CONTAINMENT COMPANY ARRIVED @ 12:00
Event	5	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	9/17/2018	11:25:00	USER	JSA to discuss the hazards of rig-up
Event	6	Rig-Up Equipment	Rig-Up Equipment	9/17/2018	11:30:00	USER	START Rig-up all surface lines and equipment up to the Buffer zone
Event	7	Casing on Bottom	Casing on Bottom	9/17/2018	13:00:00	USER	CASING LANDED. RIG UP CEMENT HEAD/MANIFOLD FOR RIG TO CIRCULATE.
Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	9/17/2018	14:50:00	USER	With all essential personnel, to discuss the hazards of pumping the job, and pump schedule.
Event	9	Start Job	Start Job	9/17/2018	15:10:33	COM4	
Event	10	Test Lines	Test Lines	9/17/2018	15:24:24	USER	Load line with 2 bbls of water. Test lines @ 6608 psi
Event	11	Pump Spacer	Pump Spacer	9/17/2018	15:30:08	USER	BATCH/ WEIGHT/ PUMP 60 BBLS OF TUNED SPACER III WITH SURFACTANS + 1 GAL OF BIOCIDES @ 10.5 PPG
Event	12	Drop Bottom Plug	Drop Bottom Plug	9/17/2018	15:42:00	USER	Pre-loaded bottom plug in plug container, verified by customer rep

Event	13	Pump Lead Cement	Pump Lead Cement	9/17/2018	15:46:49	USER	BATCH/ WEIGH/ PUMP 640 SKS (181.2 BBLS) OF GASSTOP CEMENT USING LATEX WATER @ 13.2 ppg, verified with pressurized scales
Event	14	Pump Tail Cement	Pump Tail Cement	9/17/2018	16:28:00	USER	WEIGHT/ PUMP 530 SKS (158.6 BBLS) OF ECONOCEM @ 13.5 ppg, verified with pressurized scales.
Event	15	Shutdown	Shutdown	9/17/2018	16:53:00	USER	Finished pumping cement
Event	16	Clean Lines	Clean Lines	9/17/2018	16:55:00	USER	Wash pumps and lines
Event	17	Drop Top Plug	Drop Top Plug	9/17/2018	17:01:00	USER	Pre-loaded top plug in plug container verified by customer rep.
Event	18	Pump Displacement - Start	Pump Displacement - Start	9/17/2018	17:04:00	USER	301.5 BBLS OF FRESH WATER. FIRST 20 BBLS WITH MMCR. REMAINING WITH BIOCID. LAST 40 BBLS FRESH WATER
Event	19	Bump Plug	Bump Plug	9/17/2018	17:42:00	USER	@500 psi over final circulating pressure of 2110 psi. PER CUSTOMER HOLD 3000 PSI CASING TEST FOR 15 MIN.
Event	20	Pump Water	Pump Water	9/17/2018	17:59:10	USER	Open wet shoe sub @ 4870 psi, and pump 3 bbl wet shoe
Event	21	Check Floats	Check Floats	9/17/2018	18:01:15	USER	Floats held. 1.5 bbls back
Event	22	End Job	End Job	9/17/2018	18:07:48	COM4	
Event	23	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	9/17/2018	18:10:00	USER	JSA to discuss the hazards of rig-down

3.0 Attachments

3.1 Job Chart

