BASIC ENERGY SERVICES

CEMENT REPORT - PAGE 1

Service Order #: 70,144C **Date:** 26-May-17

Well Name	Location	County	St	API#
PAULINE PJ5		WELD	CO	

Formation	Cement Via	Type Of Service	Well Type	Age	AFE#	PO#
	TUBING	PLUG		REWORK		

Customer: NOBLE ENERGY

Remarks: CLASS G CMT, 1.15 YIELD, 15.8LBS/GAL
40 SKS, 8.2 BBLS, @ 4500'-3975'

Customer Rep: STEW PH:

WELLBORE DATA

Type	Size	Weight	Depth	Volume
Surface Casing:				
Production Casing:	4.500	11.6	4,500.0	
Intermediate:				
Drill Pipe:				
Tubing:	2.375	4.7	4,500.0	

Type	Size	Depth (Top)	Depth (Bot)	Volume
Liner:				
Open Hole:				

OTHER DATA

BHT	Max PSI	Total Depth
	589	4,500.0

Packer or RetainerType / Depth:

Perf Depths:		#	Total
		0	0
		0	
		0	

TIME	PUMP RATES		DENSITY	PRESS	STG TOT	TOTAL	REMARKS
	WATER (gpm)	PUMP (bpm)	(lb/gl)	(psi)	(bbls)	(bbls)	
10:44	0	0.0	6.88	2,086	77.5	149.0	PSI TEST
10:49	28	0.7	10.67	0	0.0	0.0	H20 SPACER
10:52	0	2.0	15.90	287	2.9	2.9	BROKE CIRCULATION START CMT
10:56	62	2.0	15.76	27	8.2	11.2	START DISPLACEMENT
11:02	0	0.0	15.73	0	15.2	26.5	OFFLINE
11:07	0	0.0	15.72	0	15.2	26.5	Paused 11:07:09

Summary

Max Fl. Rate	Avg Fl. Rate	Max Psi	Avg Psi
2.0	10.1	2,306	110

Customer Acknowledgement:

Service Rating:

☐ Satisfactory

☐ Unsatisfactory

Cementer: A.HOWELL

PRODUCTS USED

HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 345242	**Ship To #:** 2406864	**Quote #:**	**Sales Order #:** 0904061013
Customer: NOBLE ENERGY INC E-BUSINESS		**Customer Rep:**	
Well Name: Pauline PJ	**Well #:** 5		**API/UWI #:** 05-123-25616
Field:	**City (SAP):** KERSEY	**County/Parish:** WELD	**State:** COLORADO
Legal Description:			
Contractor: Noble		**Rig/Platform Name/Num:** Workover	
Job BOM: 7528 7528			
Well Type: OIL			
Sales Person: HALAMERICA\HB70026		**Srvc Supervisor:** Bryan Kraft	

Job

Formation Name				
Formation Depth (MD)	**Top**		**Bottom**	
Form Type			**BHST**	
Job depth MD	#1: 2111ft, #2: 611'		**Job Depth TVD**	#1: 2111ft, #2: 611'
Water Depth			**Wk Ht Above Floor**	3ft
Perforation Depth (MD)	**At**	200ft		

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
Tubing		2.375	1.995	4.7			0	2111	0	2111
Casing		4.5	4	11.6			0	4500	0	4500

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	Cement	PLUGCEM (TM) SYSTEM	40	sack	15.8	1.15	5	2	200
4.99 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
2	Displacement	FRESH WATER	5.9	bbl	8.33			2	248
42 gal/bbl		FRESH WATER							

Stage/ Plug #: 2

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	Cement	PLUGCEM (TM) SYSTEM	51	sack	15.8	1.15	5	2	255
5 Gal		FRESH WATER							

Stage/Top Out #: 2

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	Cement	PLUGCEM (TM) SYSTEM	98	sack	15.8	1.15	5	2	490
5 Gal		FRESH WATER							

Cement Left In Pipe	Amount	Surface	Reason	PTA
Mix Water:	pH 6.0	Mix Water Chloride:	<20 ppm	Mix Water Temperature: 55 °F

Comment:

Plug #1: Tubing: 2.375" 4.7# @ 2111' in the 4.5" Production Casing 11.6#. Pumped 40 SKS (8.2 BBLS) Cement for a balanced plug. Displacement of 5.9 BBLS Fresh Water to balance. TOC @ 1582' in the 4.5" casing.

Plug #2: Tubing: 2.375" 4.7# @ 611' in the 4.5" Production Casing 11.6#. Perfs @ 200'. First part of the plug, filled the tubing and production casing until cement returned to surface. Cement returned to surface @ 10.4 BBLS. Shutdown, rig pulled tubing out of hole and removed BOP. Second part of the plug, filled the production casing through the perfs into the 8.625" surface casing until cement returned to surface. Pumped 20 BBLS of cement down the production casing. Never had good returns to surface through the surface casing. No cement to surface through the surface casing and production casing.