

HO2BSOCD

JAN 05 2015 30-025-418H

HALLIBURTON

Cementing Job Summary

RECEIVED

The Road to Excellence Starts with Safety

Sold To #: 338667	Ship To #: 3473941	Quote #: 0021924026	Sales Order #: 0901651134
Customer: CHEVRON - PERMIAN BASIN EBIZ		Customer Rep:	
Well Name: GRAMMA RIDGE 14 24 34	Well #: 1H	API/UWI #: 30-025-41811-00	
Field: RED HILLS	City (SAP): JAL	County/Parish: LEA	State: NEW MEXICO
Legal Description: 14-24S-34E-330FNL-2300FEL			
Contractor: ENSIGN DRLG		Rig/Platform Name/Num: ENSIGN 153	
Job BOM: 7522			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HB87208		Srv Supervisor: Francisco Bautista Sanchez	
Job			

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type			BHST 120 degF
Job depth MD	5340ft		Job Depth TVD
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		13.375	12.715	48	STC	H-40	0	1200		
Casing		9.625	8.835	40	LTC	HCK-55	0	5340		
Open Hole Section			12.25				1200	4740		
Open Hole Section			12.25				4740	5340		

Tools and Accessories									
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make
Guide Shoe	9.625			5340		Top Plug	9.625		HES
Float Shoe	9.625					Bottom Plug	9.625		HES
Float Collar	9.625					SSR plug set	9.625		HES
Insert Float	9.625					Plug Container	9.625		HES
Stage Tool	9.625					Centralizers	9.625		HES

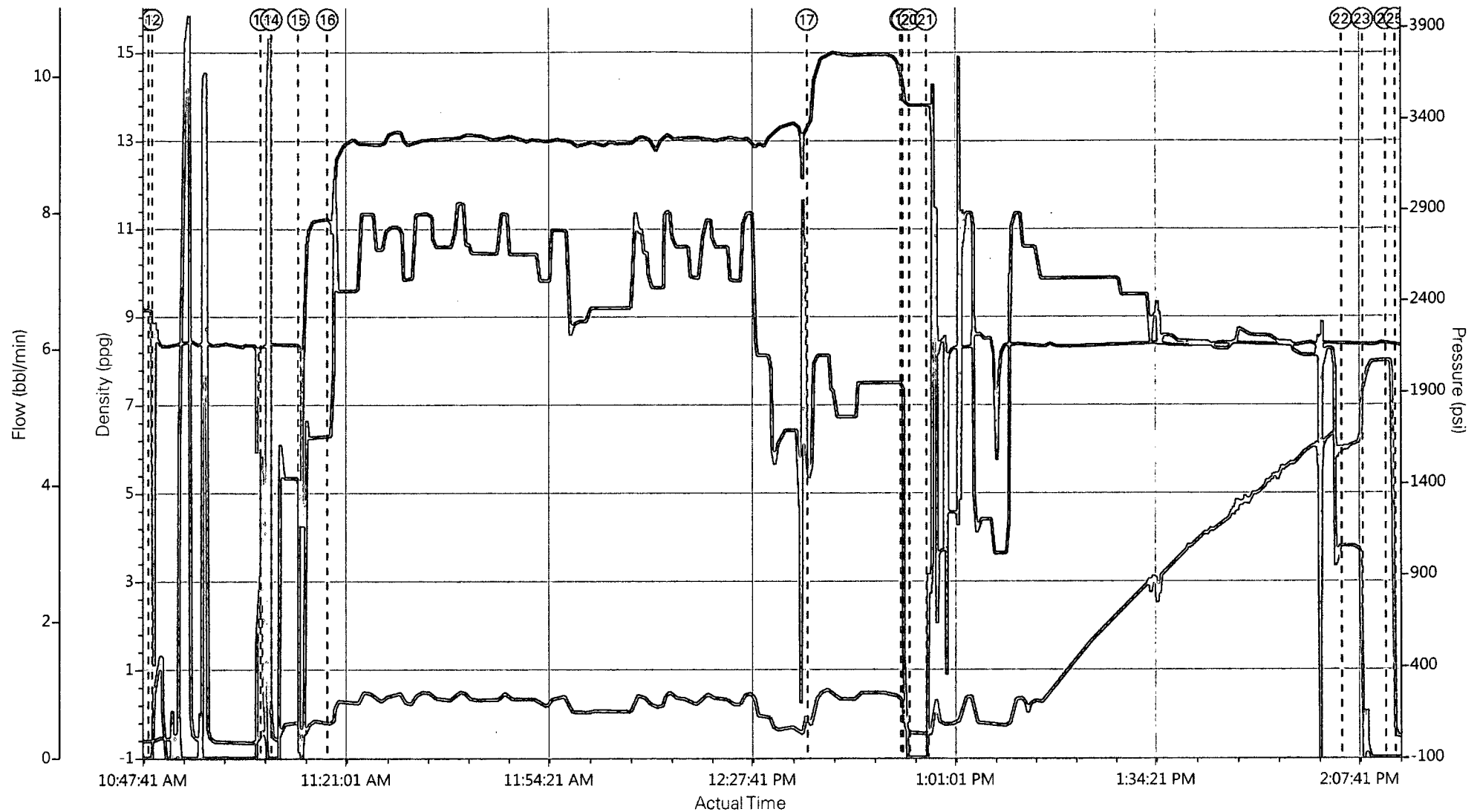
Miscellaneous Materials										
Gelling Agt		Conc		Surfactant		Conc		Acid Type		Qty
Treatment Fld		Conc		Inhibitor		Conc		Sand Type		Size

Fluid Data										
Stage/Plug #: 1										
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
1	Tuned Spacer III	Tuned Spacer III	20	bbl	11					
0.50 gal/bbl		SEM-7, 5 GAL PAIL (100003860)								
0.50 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)								
117.60 lbm/bbl		BARITE, BULK (100003681)								

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35.92 gal/bbl		FRESH WATER							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
2	EconoCem - HLC	ECONOCEM (TM) SYSTEM	1430	sack	12.9	1.873		6	9.73
5 %		SALT, BULK (100003695)							
3 lbm		KOL-SEAL, BULK (100064233)							
0.50 %		HR-800, 50 LB SACK (101619742)							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
3	HalCem - C	HALCEM (TM) SYSTEM	310	sack	14.8	1.326			6.34
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
4	Displacement		399	bbl	8.34				
Cement Left In Pipe		Amount	82.74 ft		Reason		Shoe Joint		
Comment									

GRAMM RIDGE 14 24 34



⑪ Start Job 9.11;-8;0	⑬ Test Lines 8.33;30;0	⑮ Pump Tuned Spacer 4.85;27;0	⑰ Pump Tail Cement 13.47;69;4.1	⑲ Clean Lines 13.77;46;0	21 Pump Displacement 13.86;30;2.4
⑫ Pump Fresh Water 8.47;-2;1.2	⑭ Pump Fresh Water 8.4;-4;0	⑯ Pump Lead Cement 11.16;91;4.7	⑱ Shutdown 13.9;97;0	20 Drop Top Plug 13.83;35;0	22 Slow Rate 8.37;1612;3.1



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Created: 2014-09-16 08:32:20, Version: 4.0.248

Edit

Customer: CHEVRON - PERMIAN BASIN EBIZ

Job Date: 9/16/2014 8:33:12 AM

Well: #1H

Representative: Ralph Walker

Sales Order #: 901651134

Service Supervisor: Francisco A. Bautista

HALLIBURTON**Permian Basin, Hobbs****Lab Results- Lead****Job Information**

Request/Slurry	2160871/2	Rig Name	Ensign 153	Date	06/SEP/2014
Submitted By	Avory Word	Job Type	Intermediate Casing	Bulk Plant	
Customer	Chevron	Location	Lea	Well	Granna Ridge 14-24-34 1H

Well Information

Casing/Liner Size	9.625 in	Depth MD	5340 ft	BHST	117°F
Hole Size	12.25 in	Depth TVD	5340 ft	BHCT	94°F

Drilling Fluid Information

Mud Supplier Name	AMC	Mud Trade Name		Density	
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Cement Information - Lead Design

Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
		EconoCem				Slurry Density	12.902	lbm/gal
9.96	gal/sack	Fresh Water	Lab	15.10.08		Slurry Yield	1.8943	ft3/sack
		Hobbs - EconoCem - HLC				Water Requirement	9.9634	gal/sack
100	% BWOC	Cement Blend				Total Mix Fluid	9.96	gal/sack
5	% BWOW	NaCl (Sodium Chloride)	Lab	30.10.13		Water Source	Fresh Water	
		Salt				Water Chloride		
0.4	% BWOC	HR-800	Lab	30.10.13				
3	lb/sk	Kol-Seal	Lab	25.03.14				

Pilot Test Results Request ID 2160871/2**Thickening Time - ON-OFF-ON, Request Test ID:31739820**

Test Temp (°F)	Pressure (psi)	Reached in (min)	70 Bc (hh:min)
94	2600	17	4:48

Free Fluid API 10B-2 / ISO 10426-2, Request Test ID:31739821

Con. Temp (F)	Cond. Time (min)	Static time (min)	% Fluid
94	30	120	1.6

API Rheology, Request Test ID:31739822

Temp (°F)	300	200	100	6	3	PV/YP
70	24	20	16	12	11	13.01 / 11.82

API Rheology, Request Test ID:31739823

Temp (°F)	300	200	100	6	3	Cond Time (min)	PV/YP
94	92	86	75	35	24	30	66.19 / 37.74

UCA Comp. Strength, Request Test ID:31739824

End Temp (°F)	Pressure (psi)	500 psi (hh:mm)	12 hr CS (psi)	24 hr CS (psi)
117	3000	14:30	414	712

Free Fluid API 10B-2 / ISO 10426-2, Request Test ID:31755422

Con. Temp (F)	Cond. Time (min)	Static time (min)	% Fluid
94	30	120	0.8

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HALLIBURTON**Permian Basin, Hobbs****Lab Results- Tail****Job Information**

Request/Slurry	2168901/2	Rig Name	Ensign 153	Date	06/SEP/2014
Submitted By	Avory Word	Job Type	Intermediate Casing	Bulk Plant	
Customer	Chevron	Location	Lea	Well	Granna Ridge 14-24-34 1H

Well Information

Casing/Liner Size	9.625 in	Depth MD	5340 ft	BHST	117°F
Hole Size	12.25 in	Depth TVD	5340 ft	BHCT	94°F

Drilling Fluid Information

Mud Supplier Name	AMC	Mud Trade Name		Density	
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Cement Information - Tail Design

<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	<u>Cement Properties</u>		
		HalCem				Slurry Density	14.8	lbm/gal
100	% BWOC	Cemex Premium Plus C	Lab	25.03.14		Slurry Yield	1.3285	ft3/sack
6.37	gal/sack	Field (Fresh) Water	Lab	09.03.10		Water Requirement	6.3738	gal/sack
						Total Mix Fluid	6.37	gal/sack
						Water Source	Field (Fresh)	
							Water	
						Water Chloride		

Pilot Test Results Request ID 2168901/2**Mixability (0 - 5) - 0 is not mixable, Request Test ID:31818102**

Mixability rating (0 - 5)

4

Thickening Time - ON-OFF-ON, Request Test ID:31818103

Test Temp (°F)	Pressure (psi)	Reached in (min)	70 Bc (hh:mm)	Start Bc
94	3000	10	3:41	12

Free Fluid API 10B-2 / ISO 10426-2, Request Test ID:31818104

Con. Temp (°F)	Static time (min)	% Fluid
94	120	1.2

API Rheology, Request Test ID:31818105

Temp (°F)	300	200	100	6	3	PV/YP
71	75	64	51	21	14	60.02 / 21.78

API Rheology, Request Test ID:31818106

Temp (°F)	300	200	100	6	3	PV/YP
94	97	85	71	20	17	82.2 / 26.01

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1.0 Real-Time Job Summary

1.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	DS Pump Press (psi)	Comb Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	9/15/2014	22:00:00	USER				
Event	2	Safety Meeting - Service Center or other Site	Safety Meeting - Service Center or other Site	9/16/2014	00:01:00	USER				
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	9/16/2014	00:30:00	USER				
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	9/16/2014	02:30:00	USER				
Event	5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	9/16/2014	02:40:00	USER				MET WITH COMPANY MAN AND TESTED WATER.
Event	6	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	9/16/2014	02:50:00	USER				
Event	7	Rig-Up Equipment	Rig-Up Equipment	9/16/2014	03:00:00	USER				
Event	8	Rig-Up Completed	Rig-Up Completed	9/16/2014	04:00:00	USER				
Event	9	Comment	Comment	9/16/2014	05:00:00	USER				ALL CEMENT AND EQUIPMENT IS ON LOCATION.
Event	10	Pre-Job Safety Meeting	Pre-Job Safety Meeting	9/16/2014	10:30:00	USER	9.12	-8.00	0.00	
Event	11	Start Job	Start Job	9/16/2014	10:49:09	COM4	9.11	-8.00	0.00	
Event	12	Pump Spacer 1	Pump Fresh Water	9/16/2014	10:49:45	COM4	8.46	-3.00	1.20	PUMPED 3 BBLS OF FRESH WATER TO TEST LINES.
Event	13	Test Lines	Test Lines	9/16/2014	11:07:42	COM4	8.33	33.00	0.00	TESTED LINES TO 3800 PSI.
Event	14	Pump Spacer 1	Pump Fresh Water	9/16/2014	11:09:26	COM4	8.40	-3.00	0.00	PUMPED 10 BBLS. OF FRESH WATER TO CALIBRATE DENSOMETERS.
Event	15	Pump Spacer 2	Pump Tuned Spacer	9/16/2014	11:13:52	COM4	4.28	28.00	0.00	PUMPED 20 BBLS. OF TUNED SPACER.
Event	16	Pump Lead Cement	Pump Lead Cement	9/16/2014	11:18:35	COM4	11.19	90.00	4.70	MIXED AND PUMPED 1430 SKS. OF ECONOCEM W/ .50% HR-800, 5% SALT, 3#

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	DS Pump Press (psi)	Comb Pump Rate (bbl/min)	Comments
										KOL-SEAL.DENSITY:12.9, YIELD: 1.87, MIX WATER:9.73. WEIGHT AND TIME: 12.9 @ 11:23.
Event	17	Pump Tail Cement	Pump Tail Cement	9/16/2014	12:37:20	COM4	13.44	69.00	4.10	MIXED AND PUMPED 310 SKS. OF HALCEM. DENSITY:14.8, YIELD:1.326, MIX WATER:6.34. WEIGHT AND TIME: 14.8 @ 12:42.
Event	18	Shutdown	Shutdown	9/16/2014	12:52:43	COM4	13.89	103.00	0.00	TO DROP PLUG.
Event	19	Clean Lines	Clean Lines	9/16/2014	12:53:00	COM4	13.74	48.00	0.00	
Event	20	Drop Top Plug	Drop Top Plug	9/16/2014	12:54:06	COM4	13.83	35.00	0.00	
Event	21	Pump Displacement	Pump Displacement	9/16/2014	12:56:50	COM4	13.86	30.00	2.40	PUMPED 399 BBLS. OF FRESH WATER.
Event	22	Other	Slow Rate	9/16/2014	14:05:19	COM4				TO BUMP PLUG.
Event	23	Other	Bump Plug	9/16/2014	14:08:48	COM4				BUMPED PLUG @ 1670 PSI..
Event	24	Other	Check Floats	9/16/2014	14:12:33	COM4				CHECKED FLOATS @ 2072 PSI..
Event	25	End Job	End Job	9/16/2014	14:14:11	COM4				CIRCULATED 135 BBLS. OF FRESH WATER 405 SKS.
Event	26	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	9/16/2014	14:20:00	USER	8.31	6.00	0.00	
Event	27	Rig-Down Equipment	Rig-Down Equipment	9/16/2014	14:30:00	USER	-0.07	8.00	0.00	
Event	28	Rig-Down Completed	Rig-Down Completed	9/16/2014	15:30:00	USER				
Event	29	Safety Meeting - Departing Location	Safety Meeting - Departing Location	9/16/2014	15:45:00	USER				
Event	30	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	9/16/2014	16:00:00	USER				
Event	31	Return to Service Center from Job	Return to Service Center from Job	9/16/2014	18:00:00	USER				