

Cynosure Energy LLC

Federal 14/15-3-21

Frontier 28

Post Job Summary

Cement Production Casing

Date Prepared: 11/23/2014
Job Date: 11/13/2014

Submitted by: Evan Russell – Grand Junction Cement Engineer

The Road to Excellence Starts with Safety

Sold To #: 373950		Ship To #: 3557148		Quote #:		Sales Order #: 0901823601					
Customer: CYNOSURE ENERGY LLC				Customer Rep: WHITEY COTTAM							
Well Name: FEDERAL		Well #: 14/15-3-21		API/UWI #: 05-045-22455-00							
Field: KOKOPELLI		City (SAP): NEW CASTLE		County/Parish: GARFIELD		State: COLORADO					
Legal Description: SE NE-21-6S-91W-2337FNL-743FEL											
Contractor:				Rig/Platform Name/Num: Frontier 28							
Job BOM: 7523											
Well Type: DIRECTIONAL GAS											
Sales Person: HALAMERICA\HB50180				Srvc Supervisor: Dustin Smith							
Job											
Formation Name											
Formation Depth (MD)		Top		Bottom							
Form Type				BHST							
Job depth MD		8129ft		Job Depth TVD							
Water Depth				Wk Ht Above Floor		5 FT					
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	STC	J-55	0	1520	0	0	
Casing		4.5	4	11.6	LTC	N-80	0	8129	0	0	
Open Hole Section			8.75				1520	8154	0	0	
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	4.5	1		8129		Top Plug	4.5	1	HES		
Float Shoe	4.5	1									
Float Collar	4.5	1		8082.35							
Insert Float	4.5	1				Plug Container	4.5	1	HES		
Stage Tool	4.5	1				Centralizers	4.5				
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 ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Mud Flush III (Powder)	Mud Flush III			20	bbl	8.4			4.0	
42 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	EconoCem	ECONOCER (TM) SYSTEM	300	sack	11.5	2.28		6	12.74
12.74 Gal		FRESH WATER							
0.25 lbm		POLY-E-FLAKE (101216940)							
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	VersaCem	VERSACER (TM) SYSTEM	350	sack	12.5	1.83		6	8.7
6 lbm		KOL-SEAL, BULK (100064233)							
0.25 lbm		POLY-E-FLAKE (101216940)							
8.70 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
4	ExpandaCem	EXPANDACER (TM) SYSTEM	900	sack	13.1	1.67		6	7.88
0.25 lbm		POLY-E-FLAKE (101216940)							
7.88 Gal		FRESH WATER							
5 lbm		KOL-SEAL, BULK (100064233)							
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	Fresh Water Displacement	Fresh Water Displacement	125.3	bbl	8.34			8.0	
Cement Left In Pipe		Amount	46.65 ft		Reason		Shoe Joint		
Comment									

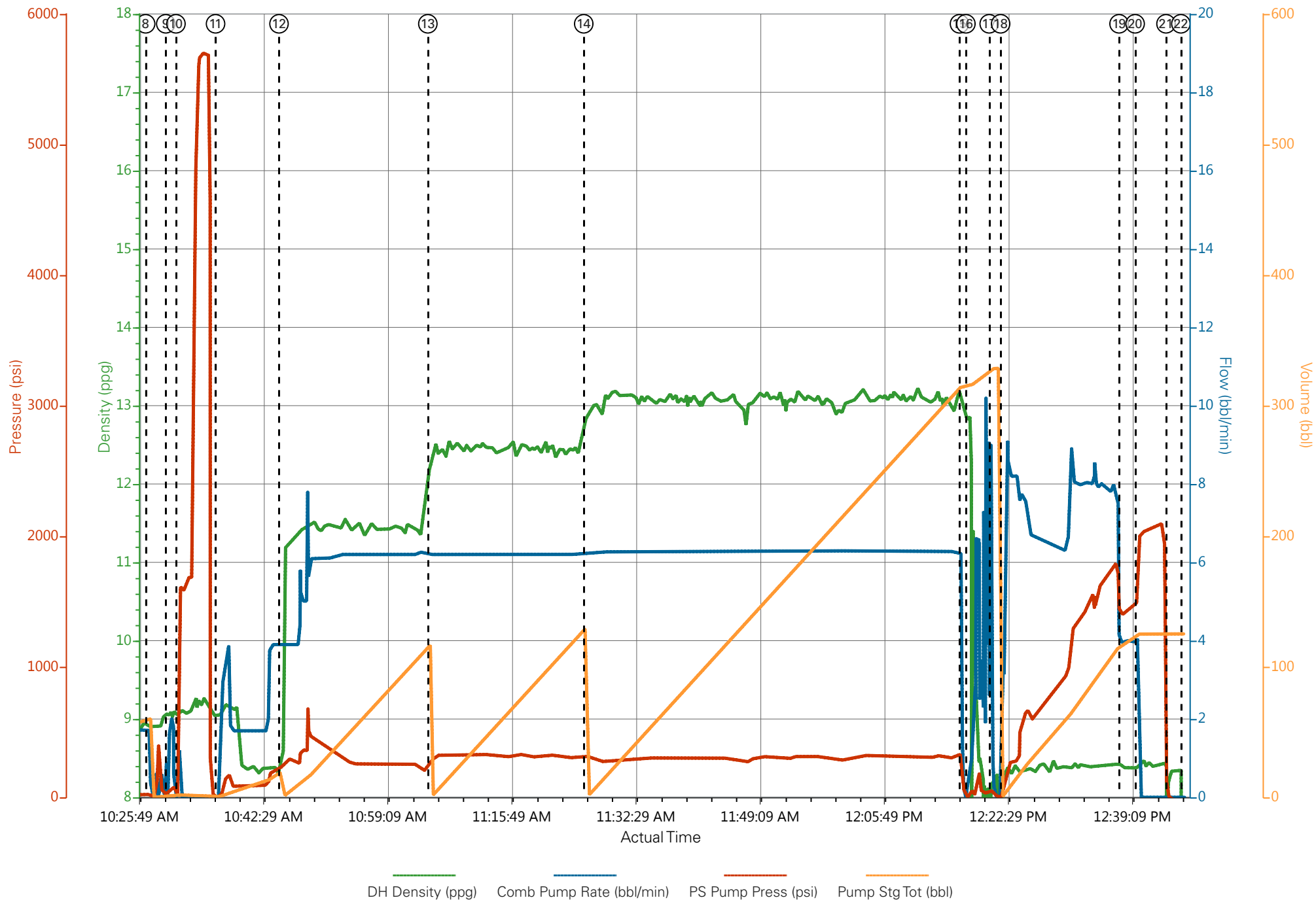
3.5 Job Event Log

Type	Seq. No.	Activity	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	11/12/2014	15:30:00	USER					ELITE # 2
Event	2	Pre-Convoy Safety Meeting	11/12/2014	18:00:00	USER					ALL HES EMPLOYEES
Event	3	Arrive At Loc	11/12/2014	20:30:00	USER					ARRIVED ON LOCATION 1/2 HOUR EARLY DIDNT START CHARGING TIME UNTIL REQUESTED ON LOCATION TIME RIG RUNNING CASING
Event	4	Assessment Of Location Safety Meeting	11/13/2014	04:00:00	USER					ALL HES EMPLOYEES
Event	5	Pre-Rig Up Safety Meeting	11/13/2014	04:10:00	USER					ALL HES EMPLOYEES
Event	6	Rig-Up Equipment	11/13/2014	04:20:00	USER					1 HT-400 PUMP TRUCK (ELITE #2) 2 660 BULK TRUCKS 1 FIELD STORAGE BIN 1 F-550 PICKUP
Event	7	Pre-Job Safety Meeting	11/13/2014	10:00:00	USER					ALL HES EMPLOYEES AND RIG CREW
Event	8	Start Job	11/13/2014	10:27:00	COM5					TD:8154 TP: 8129 SJ: 46.65 CCSG: 4 1/2 11.6# N-80 OH: 8 3/4 SP @ 1520 9 5/8 36# J-55 MUD WT 9.0 PPG
Event	9	Prime Pumps	11/13/2014	10:29:42	COM5	8.33	2.0	108	2.0	PRIME LINES WITH 2 BBLS FRESH WATER
Event	10	Test Lines	11/13/2014	10:31:04	COM5	8.33	0.00	5707	2.0	PRESSURE TEST OK
Event	11	Pump Spacer 1	11/13/2014	10:36:23	COM5	8.4	4.0	235	20	20 BBL MUD FLUSH III SPACER
Event	12	Pump Spacer 2	11/13/2014	10:44:54	COM5	11.5	6.0	460	121.8	300 SKS 11.5 PPG 2.38 YIELD 12.74 GAL/SK SCAVENGER CEMENT

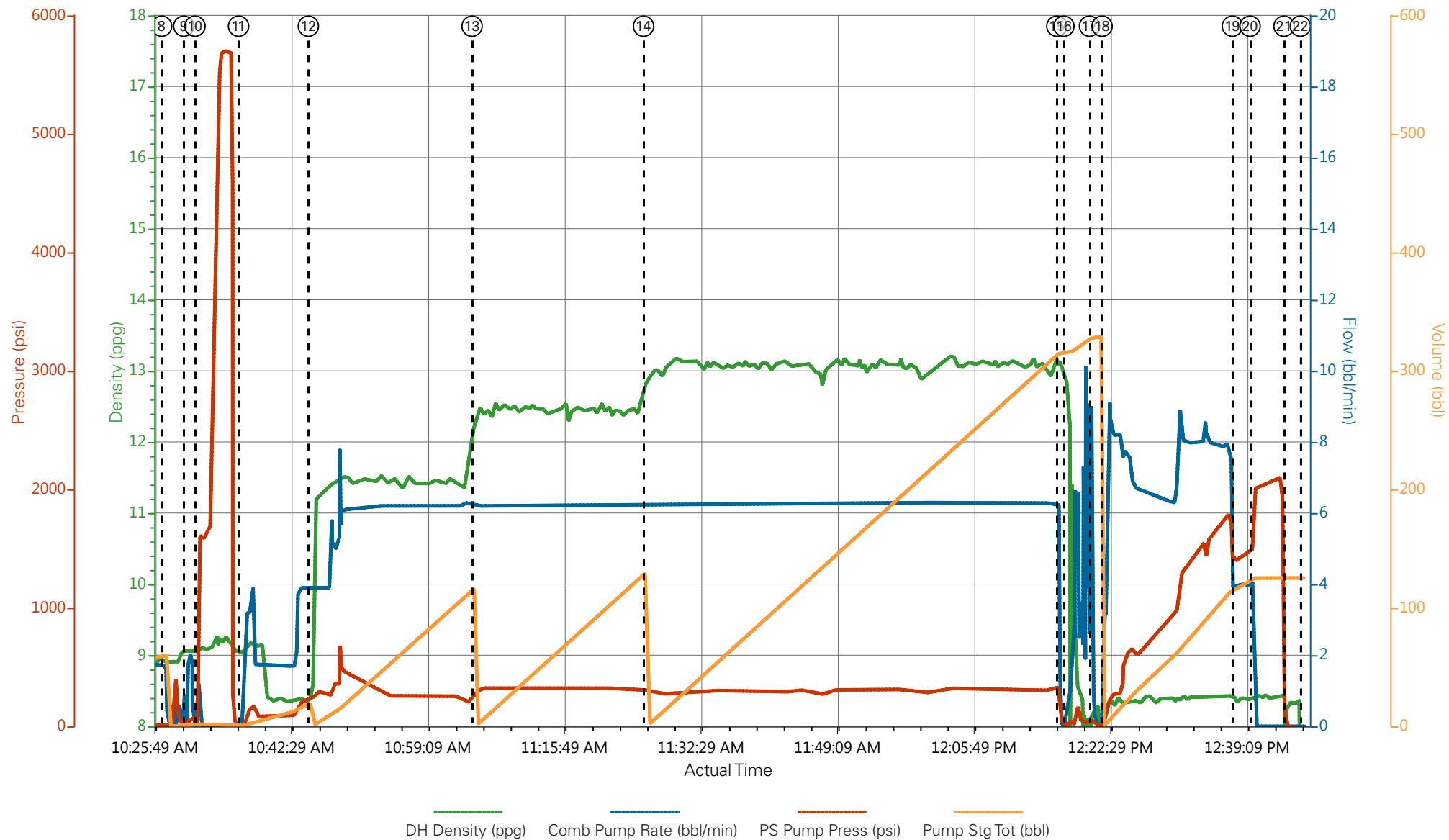
Type	Seq. No.	Activity	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
										WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES
Event	13	Pump Lead Cement	11/13/2014	11:04:53	COM5	12.5	6.0	320	114.1	350 SKS 12.5 PPG 1.83 YIELD 8.7 GAL/SK LEAD CEMENT WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES
Event	14	Pump Tail Cement	11/13/2014	11:25:49	COM5	13.1	6.0	325	267.7	900 SKS 13.1 PPG 1.67 YIELD 7.88 GAL/SK TAIL CEMENT WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES
Event	15	Shutdown	11/13/2014	12:16:16	COM5					
Event	16	Clean Lines	11/13/2014	12:17:08	USER	8.33			10	CLEAN PUMPS AND LINES TO CUTTINGS TANK
Event	17	Drop Top Plug	11/13/2014	12:20:15	COM5					PLUG AWAY NO PROBLEMS
Event	18	Pump Displacement	11/13/2014	12:21:47	COM5	8.4	8.0	1766	125.3	FRESH WATER DISPLACEMENT W/ 1BAG/ 10 BBL KCL
Event	19	Slow Rate	11/13/2014	12:37:41	USER	8.4	4.0	1490	115	SLOW RATE TO BUMP PLUG
Event	20	Bump Plug	11/13/2014	12:39:51	COM5	8.4	4.0	2101	125.3	PSI BEFORE LANDING PLUG @ 1490 BUMPED PLUG UP TO 2101 PSI
Event	21	Check Floats	11/13/2014	12:44:00	USER					FLOATS HELD 1 BBL BACK TO DISPLACEMENT TANKS
Event	22	End Job	11/13/2014	12:46:00	COM5					GOOD RETURNS THROUGHOUT JOB UNTIL LAST 30 BBLS OF DISPLACEMENT WHEN

Type	Seq. No.	Activity	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
										RETURNS WERE LOST FOR REMAINDER OF THE JOB PIPE STATIC THROUGHOUT JOB
Event	23	Pre-Rig Down Safety Meeting	11/13/2014	13:00:00	USER					ALL HES EMPLOYEES
Event	24	Rig-Down Equipment	11/13/2014	13:10:00	USER					
Event	25	Pre-Convoy Safety Meeting	11/13/2014	14:20:00	USER					ALL HES EMPLOYEES
Event	26	Crew Leave Location	11/13/2014	14:30:00	USER					THANK YOU FOR USING HALLIBURTON CEMENT DUSTIN SMITH AND CREW

CYNOSURE - FEDERAL 14/15-3-21 - 4 1/2 PRODUCTION



CYNOSURE - FEDERAL 14/15-3-21 - 4 1/2 PRODUCTION



- | | | | | | |
|-----------------------------------------|--------------------------|-----------------------------|---------------------|--------------------------------|------------------------|
| ① Call Out | ⑥ Rig-Up Equipment | ⑪ Pump Mud Flush III Spacer | ⑫ Clean Lines | 21 Check Floats | 26 Crew Leave Location |
| ② Pre-Convoy Safety Meeting | ⑦ Pre-Job Safety Meeting | ⑫ Pump Scavenger Cement | ⑬ Drop Top Plug | 22 End Job | |
| ③ Arrive At Loc | ⑧ Start Job | ⑬ Pump Lead Cement | ⑭ Pump Displacement | 23 Pre-Rig Down Safety Meeting | |
| ④ Assessment Of Location Safety Meeting | ⑨ Prime Lines | ⑭ Pump Tail Cement | ⑮ Slow Rate | 24 Rig-Down Equipment | |
| ⑤ Pre-Rig Up Safety Meeting | ⑩ Test Lines | ⑮ Shutdown | 20 Bump Plug | 25 Pre-Convoy Safety Meeting | |

▼ **HALLIBURTON** | iCem® Service

Created: 2014-11-12 17:48:58, Version: 4.0.248

Edit

Customer : CYNOSURE ENERGY LLC
Representative : WHITEY COTTAM

Job Date : 11/13/2014 12:00:00 AM
Sales Order # : 0901823601

Well : FEDERAL 14/15-3-21
ELITE # 2 : DUSTIN SMITH / BEN ROSE

HALLIBURTON

Water Analysis Report

Company: CYNOSURE

Submitted by: DUSTIN SMITH

Attention:

Lease FEDERAL

Well # 14/15-3-21

Date: 11/14/2014

Date Rec.:

S.O.# 901823601

Job Type: PRODUCTION

Specific Gravity	<i>MAX</i>	1
pH	<i>8</i>	7
Potassium (K)	<i>5000</i>	200 Mg / L
Calcium (Ca)	<i>500</i>	120 Mg / L
Iron (FE2)	<i>300</i>	0 Mg / L
Chlorides (Cl)	<i>3000</i>	0 Mg / L
Sulfates (SO ₄)	<i>1500</i>	UNDER 200 Mg / L
Chlorine (Cl ₂)		0 Mg / L
Temp	<i>40-90</i>	34 Deg
Total Dissolved Solids		520 Mg / L

Respectfully: DUSTIN SMITH

Title: CEMENTING SUPERVISOR

Location: Grand Junction, CO

NOTICE:

This report is limited to the described sample tested. Any person using or relying on this report agrees that Halliburton shall not be liable for any loss or damage whether due to act or omission resulting from such report or

Sales Order #: 0901823601	Line Item: 10	Survey Conducted Date: 11/14/2014
Customer: CYNOSURE ENERGY LLC		Job Type (BOM): CMT PRODUCTION CASING BOM
Customer Representative:		API / UWI: (leave blank if unknown) 05-045-22455-00
Well Name: FEDERAL		Well Number: 0080638653
Well Type: DIRECTIONAL GAS	Well Country: USA	
H2S Present: No	Well State: COLORADO	Well County: GARFIELD

Dear Customer,

We hope that you were satisfied with the service quality of this job performed by Halliburton. It is the aim of our management and service personnel to deliver equipment and service of a standard unmatched in the service sector of the energy industry.

Please take the time to let us know if our performance met with your satisfaction. Please be as critical as possible to ensure we constantly improve our service. Your comments are of great value to us and are intended for the exclusive use of Halliburton.

CUSTOMER SATISFACTION SURVEY

CATEGORY	CUSTOMER SATISFACTION RESPONSE	
Survey Conducted Date	The date the survey was conducted	11/14/2014
Survey Interviewer	The survey interviewer is the person who initiated the survey.	HX37079
Customer Participation	Did the customer participate in this survey? (Y/N)	No
Customer Representative	Enter the Customer representative name	
HSE	Was our HSE performance satisfactory? Circle Y or N	
Equipment	Were you satisfied with our Equipment? Circle Y or N	
Personnel	Were you satisfied with our people? Circle Y or N	
Customer Comment	Customer's Comment	

CUSTOMER SIGNATURE

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KEY PERFORMANCE INDICATORS

General	
Survey Conducted Date	11/14/2014
The date the survey was conducted	

Cementing KPI Survey	
Type of Job	0
Select the type of job. (Cementing or Non-Cementing)	
Select the Maximum Deviation range for this Job	Vertical
What is the highest deviation for the job you just completed? This may not be the maximum well deviation.	
Total Operating Time (hours)	5
Total Operating Hours Including Rig-up, Pumping, Rig-down. Enter in decimal format.	
HSE Incident, Accident, Injury	No
HSE Incident, Accident, Injury. This should be recordable incidents only.	
Was the job purpose achieved?	Yes
Was the job delivered correctly as per customer agreed design?	
Pumping Hours	2
Total number of hours pumping fluid on this job. Enter in decimal format.	
Type of Rig Classification Job Was Performed	Drilling Rig (Portable)
Type Of Rig (classification) Job Was Performed On	
Number Of JSAs Performed	6
Number Of Jsas Performed	
Was this a Primary Cement Job (Yes / No)	Yes
Primary Cement Job= Casing job, Liner job, or Tie-back job.	
Number of Unplanned Shutdowns	0
Unplanned shutdown is when injection stops for any period of time.	
Customer Non-Productive Rig Time (hrs)	0

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Customer Representative:		API / UWI: (leave blank if unknown) 05-045-22455-00
Well Name: FEDERAL		Well Number: 0080638653
Well Type: DIRECTIONAL GAS	Well Country: USA	
H2S Present: No	Well State: COLORADO	Well County: GARFIELD

Lost time due to Halliburton in the start, execution, or completion of an ordered service or product, or delays in a follow-on service. Enter in decimal format. 0 if none.	
Did We Run Wiper Plugs? Did We Run Top And Bottom Casing Wiper Plugs?	Top
If a top plug was run, was the plug bumped? (Yes/No/N/A) If a top plug was run, was the plug bumped? (Yes/No/N/A)	Yes
If applicable, did the floats hold? (Yes/No/N/A) If applicable, did the floats hold? (Yes/No/N/A)	Yes
Mixing Density of Job Stayed in Designed Density Range (0-100%) Density Range defined as +/- .20 ppg. Calculation: Total BBLs cement mixed at designed density divided by total BBLs of cement multiplied by 100	90
Pump Rate (percent) of Job Stayed At Designed Pump Rate Pump Rate range defined as +/- 1bbl/min. Calculation: Total BBLs of fluid pumped at the designed rate divided by Total BBLs of fluid pumped, multiplied by 100	90
If applicable, were there returns throughout the job? (Yes/No/N/A) If applicable, were there returns throughout the job? (Yes/No/N/A)	NO
Nbr of Remedial Plug Jobs Rqd - HES Number Of Remedial Plug Jobs Needed After Primary Plug Pumped By HES	0
Nbr of Remedial Sqz Jobs Rqd - HES Number Of Remedial Squeeze Jobs Required After Primary Job Performed By HES	0