

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

**WELL COMPLETION FORM**  
**WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

New Well  Re-Entry  Workover

Oil  WSW  SWD

Gas  DH  EOR

OG  GSW

CM (Coal Bed Methane)

Cathodic  Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

Deepening  Re-perf.  Conv. to EOR  Conv. to SWD  
 Plug Back  Liner  Conv. to GSW  Conv. to Producer

Commingled Permit #: \_\_\_\_\_

Dual Completion Permit #: \_\_\_\_\_

SWD Permit #: \_\_\_\_\_

EOR Permit #: \_\_\_\_\_

GSW Permit #: \_\_\_\_\_

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE  NW  SE  SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27  NAD83  WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

**Drilling Fluid Management Plan**

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite:

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

**AFFIDAVIT**

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

**KCC Office Use ONLY**

Confidentiality Requested

Date: \_\_\_\_\_

Confidential Release Date: \_\_\_\_\_

Wireline Log Received  Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No  List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Merit Energy Company, LLC
Well Name	HMU 208W
Doc ID	1405033

All Electric Logs Run

ANNULAR HOLE VOLUME
ARRAY COMPENSATED TRUE RESISTIVITY LOG
ARRAY COMPENSATED TRUE RESISTIVITY LOG 1
ARRAY COMPENSATED TRUE RESISTIVITY LOG 2
BOREHOLE COMPENSATED SONIC ARRAY LOG
DUAL SPACED NEUTRON SPECTRAL DENSITY LOG
MICROLOG
QUAD COMBO
REPEAT SECTION

Form	ACO1 - Well Completion
Operator	Merit Energy Company, LLC
Well Name	HMU 208W
Doc ID	1405033

Perforations

Shots Per Foot	Perforation Top	Perforation Bottom	BridgePlugType	BridgePlugSet At	Material Record
4	4800	4804			Morrow "C"
4	4791	4795			Morrow "C"
4	4783	4785			Morrow "C"
4	4750	4757			Morrow "B"
4	4717	4728			Morrow "A"
					DV@4214



# FIELD TICKET

**Client**           MERIT ENERGY COMPANY  
**Well**             HMU 208W  
**Job Description**   Surface  
**Date**             November 22, 2017



**Field Ticket #** FT-01159-G0B7Z70202-08152

## MATERIALS

Product Code	Description	UOM	Quantity	List Price	Gross Amount	Disc (%)	Net Amount
L100120	EXTENDER, BENTONITE	LB	1,880.0000	\$2.08	\$3,910.40	76.00	\$938.50
L100318	CEMENT EXTENDER, GYPSUM, A-10	LB	940.0000	\$0.72	\$676.80	76.00	\$162.43
L100275	CEMENT EXTENDER, SODIUM METASILICATE, A-2	LB	940.0000	\$3.28	\$3,083.20	76.00	\$739.97
L100112	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	LB	1,739.0000	\$2.40	\$4,173.60	76.00	\$1,001.66
L100295	IntegraSeal CELLO	LB	338.0000	\$5.76	\$1,946.88	76.00	\$467.25
L013156	Cement Nose, 8-5/8 in.	EA	1.0000	\$460.00	\$460.00	76.00	\$110.40
L016033	Float Collars with aluminum flapper, 8-5/8 in.	EA	1.0000	\$1,214.00	\$1,214.00	76.00	\$291.36
L017068	CENTRALIZER,8-5/8"NON-WELD	EA	10.0000	\$246.40	\$2,464.00	76.00	\$591.36
L86718	PLUG,CEMENT 8.6 TOP BJPL	EA	1.0000	\$287.04	\$287.04	76.00	\$68.89
L015399	Float collars with poppet valve, 8-5/8 in.	EA	1.0000	\$0.00	\$0.00	76.00	\$0.00
L488168	CEMENT, ASTM TYPE I	SK	675.0000	\$44.11	\$29,774.25	76.00	\$7,145.82
L100404	SALT,SODIUM CHLORIDE, A-5	LB	1,227.0000	\$1.04	\$1,276.08	76.00	\$306.26
<b>Product Material Subtotal:</b>					<b>\$49,266.25</b>		<b>\$11,823.90</b>

## SERVICES

Product Code	Description	UOM	Quantity	List Price	Gross Amount	Disc (%)	Net Amount
S-100049	Cement pump charge, 1,001-2,000 feet/ 301-600 m	4/HR	1.00	\$4,680.00	\$4,680.000	91.00	\$421.200
S-100475	Cement head	EA	1.00	\$2,656.00	\$2,656.000	91.00	\$239.040
S-100002	Mileage - vehicle light weight	MI	50.00	\$10.72	\$536.000	91.00	\$48.240
S-100001	Mileage - vehicle heavy weight	MI	50.00	\$18.96	\$948.000	91.00	\$85.320
S-100004	Cement Crew Mobilization-Demobilization Fee	EA	1.00	\$10,880.00	\$10,880.000	91.00	\$979.200

# FIELD TICKET

**Client**           MERIT ENERGY COMPANY

**Well**             HMU 208W

**Job Description**   Surface

**Date**             November 22, 2017

**Field Ticket #** FT-01159-G0B7Z70202-08152



10300801	Cement Pumping, Additional hrs	HR	2.00	\$440.00	\$880.000	50.00	\$440.000
				<b>Service Subtotal:</b>	<b>\$20,580.00</b>		<b>\$2,213.00</b>

# Cementing Treatment



<b>Start Date</b>	11/22/2017	<b>Well</b>	HMU 208W
<b>End Date</b>	11/22/2017	<b>County</b>	Finney
<b>Client</b>	MERIT ENERGY COMPANY	<b>State/Province</b>	KS
<b>Client Field Rep</b>	Rodney Gonzalez	<b>API</b>	15-055-22471
<b>Service Supervisor</b>		<b>Formation</b>	
<b>Field Ticket No.</b>	8.625" Surface	<b>Rig</b>	
<b>District</b>	Liberal, KS	<b>Type of Job</b>	Surface

## WELL GEOMETRY

Type	ID (in)	OD (in)	Wt. (lb/ft)	MD (ft)	TVD (ft)	Excess(%)	Grade	Thread
Open Hole	12.25			1,837.00	1,837.00	0.00		
Open Hole	12.25			1,328.00	1,328.00	130.00		
Casing	8.10	8.63	24.00	<u>1,827.00</u>	1,827.00		J-55	LTC

**Shoe Length (ft):** 42

## HARDWARE

<b>Bottom Plug Used?</b>	No	<b>Tool Type</b>	Float Collar
<b>Bottom Plug Provided By</b>		<b>Tool Depth (ft)</b>	
<b>Bottom Plug Size</b>		<b>Max Tubing Pressure - Rated (psi)</b>	
<b>Top Plug Used?</b>	Yes	<b>Max Tubing Pressure - Operated (psi)</b>	
<b>Top Plug Provided By</b>	BJ	<b>Max Casing Pressure - Rated (psi)</b>	2,950.00
<b>Top Plug Size</b>	8.625	<b>Max Casing Pressure - Operated (psi)</b>	2,350.00
<b>Centralizers Used</b>	Yes	<b>Pipe Movement</b>	
<b>Centralizers Quantity</b>	10.00	<b>Job Pumped Through</b>	Manifold
<b>Centralizers Type</b>	Bow	<b>Top Connection Thread</b>	LTC
<b>Landing Collar Depth (ft)</b>	1,784	<b>Top Connection Size</b>	8.625

## CIRCULATION PRIOR TO JOB



# Cementing Treatment



**Well Circulated By** Rig **Solids Present at End of Circulation** No  
**Circulation Prior to Job** Yes **10 sec SGS**  
**Circulation Time (min)** 45.00 **10 min SGS**  
**Circulation Rate (bpm)** 6.00 **30 min SGS**  
**Circulation Volume (bbls)** **Flare Prior to/during the Cement Job** No  
**Lost Circulation Prior to Cement Job** No **Gas Present** No  
**Mud Density In (ppg)** **Gas Units**  
**Mud Density Out (ppg)**  
**PV Mud In**  
**PV Mud Out**  
**YP Mud In**  
**YP Mud Out**

## TEMPERATURE

**Ambient Temperature (°F)** 26.00 **Slurry Cement Temperature (°F)** 50.00  
**Mix Water Temperature (°F)** 45.00 **Flow Line Temperature (°F)** 56.00

## BJ FLUID DETAILS

Fluid Type	Fluid Name	Density (ppg)	Yield (Cu Ft/sk)	H2O Req. (gals/sk)	Vol (sk)	Vol (Cu Ft)	Vol (bbls)
Lead Slurry	Multi Density Cement	12.1000	2.5410	14.71	500	1,260.0000	224.3000
Tail Slurry	Class A Cement	15.2000	1.2692	5.74	175	222.0000	39.4000

Fluid Type	Fluid Name	Component	Concentration	UOM
Lead Slurry	Multi Density Cement	CEMENT, ASTM TYPE I	100.00	PCT
Lead Slurry	Multi Density Cement	EXTENDER, BENTONITE	4.00	BWOB
Lead Slurry	Multi Density Cement	CEMENT EXTENDER, GYPSUM, A-10	2.00	BWOB

# Cementing Treatment



Lead Slurry	Multi Density Cement	CEMENT EXTENDER, SODIUM METASILICATE, A-2	2.00	BWOB
Lead Slurry	Multi Density Cement	SALT,SODIUM CHLORIDE, A-5	2.00	BWOW
Lead Slurry	Multi Density Cement	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A- 7P, PELLETS	3.00	BWOB
Lead Slurry	Multi Density Cement	IntegraSeal CELLO	0.50	LBS/SK
Tail Slurry	Class A Cement	CEMENT, ASTM TYPE I	100.00	PCT
Tail Slurry	Class A Cement	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A- 7P, PELLETS	2.00	BWOB
Tail Slurry	Class A Cement	IntegraSeal CELLO	0.50	LBS/SK

## TREATMENT SUMMARY

Time	Fluid	Rate (bpm)	Fluid Vol. (bbls)	Pipe Pressure (psi)	Annulus Pressure (psi)	Comments
	Multi Density Cement	0.00	224.30			
	Class A Cement	0.00	39.40			
			Min	Max		Avg
	Pressure (psi)		0.00	2,000.00		350.00
	Rate (bpm)		3.00	8.00		5.00

## DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amount of Cement Returned/Reversed	80.00
Calculated Displacement Volume (bbls)	113.00	Method Used to Verify Returns	Visual
Actual Displacement Volume (bbls)	113.00	Amount of Spacer to Surface	10.00
Did Float Hold?	Yes	Pressure Left on Casing (psi)	0.00
Bump Plug	Yes	Amount Bled Back After Job	0.50
Bump Plug Pressure (psi)	900.00	Total Volume Pumped (bbls)	379.00
Were Returns Planned at Surface	Yes	Top Out Cement Spotted	No

# Cementing Treatment



Cement returns During Job                      Full                      Lost Circulation During Cement Job                      No

## CEMENT PLUG

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Bottom of Cement Plug?                      No                      Wiper Balls Used?                      No  
Wiper Ball Quantity                                           Plug Catcher                      No  
Number of Plugs

## SQUEEZE

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Injection Rate (bpm)                      Fluid Density (ppg)  
Injection Pressure (psi)                      ISIP (psi)  
Type of Squeeze                      FSIP (psi)  
Operators Max SQ Pressure (psi)

## COMMENTS

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### Treatment Report

### Job Summary

pressure test to 3000PSI  
10bbbls of spacer fresh water  
226bbbls of lead cement  
39bbbls of tail cement  
113bbbls of displacement  
land plug @ 900PSI

# FIELD TICKET

**Client**                   MERIT ENERGY COMPANY  
**Well**                        HMU 208W  
**Job Description**        Long String  
**Date**                       November 27, 2017



**Field Ticket #** FT-01312-H5V8S90202-57453

## MATERIALS

Product Code	Description	UOM	Quantity	List Price	Gross Amount	Disc (%)	Net Amount
L100022	CEMENT, CLASS H	SK	86.0000	\$50.27	\$4,323.22	76.00	\$1,037.57
L100495	SALT, Sodium Chloride, Medium	LB	1,795.0000	\$0.57	\$1,023.15	76.00	\$245.56
L100120	EXTENDER, BENTONITE	LB	495.0000	\$2.08	\$1,029.60	76.00	\$247.10
20000018	CFL-210	LB	124.0000	\$22.72	\$2,817.28	76.00	\$676.15
L100294	LOST CIRCULATION, LCM-1	LB	1,405.0000	\$4.00	\$5,620.00	76.00	\$1,348.80
L100295	IntegraSeal CELLO	LB	71.0000	\$5.76	\$408.96	76.00	\$98.15
L100318	CEMENT EXTENDER, GYPSUM, A-10	LB	1,339.0000	\$0.72	\$964.08	76.00	\$231.38
20000002	CD-100	LB	29.0000	\$9.35	\$271.15	76.00	\$65.08
L101196	FP-25, Dry Foam Preventer (BJS Only)	LB	50.0000	\$14.52	\$726.00	76.00	\$174.24
L100317	CEMENT, FLY ASH (POZZOLAN)	SK	86.0000	\$25.68	\$2,208.48	76.00	\$530.04
L398117	IntegraGuard ULTRA II	BBL	24.0000	\$234.85	\$5,636.40	76.00	\$1,352.74
L100019	CEMENT, CLASS A	SK	110.0000	\$43.34	\$4,767.40	76.00	\$1,144.18
L014007	Float Shoe - circulating diff. type, 5-1/2 in.	EA	1.0000	\$545.00	\$545.00	76.00	\$130.80
L017421	Latch Down Plug & Assembly, 5-1/2 in.	EA	1.0000	\$660.00	\$660.00	76.00	\$158.40
L017348	STAGE TOOL,CEM,5-1/2"N80,8RD-L	EA	1.0000	\$11,495.00	\$11,495.00	76.00	\$2,758.80
L017116	Collars and Cement Baskets, 5-1/2 in.	EA	1.0000	\$395.00	\$395.00	76.00	\$94.80
L499632	RETARDER, SUGAR, GRANULAR	LB	50.0000	\$4.16	\$208.00	76.00	\$49.92
<b>Product Material Subtotal:</b>					<b>\$43,098.72</b>		<b>\$10,343.71</b>

## SERVICES

Product Code	Description	UOM	Quantity	List Price	Gross Amount	Disc (%)	Net Amount
S-100052	Cement pump charge, 4,001-5,000 feet/1,201 -1,500 m	6/HR	1.00	\$6,192.00	\$6,192.000	91.00	\$557.280
S-100475	Cement head	EA	1.00	\$2,656.00	\$2,656.000	91.00	\$239.040
S-100002	Mileage - vehicle light weight	MI	50.00	\$10.72	\$536.000	91.00	\$48.240
S-100001	Mileage - vehicle heavy weight	MI	50.00	\$18.96	\$948.000	91.00	\$85.320
S-100004	Cement Crew Mobilization-Demobilization Fee	EA	1.00	\$10,880.00	\$10,880.000	91.00	\$979.200

# Cementing Treatment



<b>Start Date</b>	11/26/2017	<b>Well</b>	HMU 208W
<b>End Date</b>	12/30/2017	<b>County</b>	Finney
<b>Client</b>	MERIT ENERGY COMPANY	<b>State/Province</b>	KS
<b>Client Field Rep</b>	Rodney Gonzalez	<b>API</b>	15-055-22471
<b>Service Supervisor</b>		<b>Formation</b>	
<b>Field Ticket No.</b>	Production	<b>Rig</b>	
<b>District</b>	Liberal, KS	<b>Type of Job</b>	Long String

## WELL GEOMETRY

Type	ID (in)	OD (in)	Wt. (lb/ft)	MD (ft)	TVD (ft)	Excess(%)	Grade	Thread
Open Hole	7.88			5,002.00	5,002.00	30.00		
Casing	4.89	5.50	17.00	4,998.00	4,998.00		J-55	LTC
Previous Casing	8.10	8.63	24.00	1,847.00	1,847.00		J-55	LTC

**Shoe Length (ft):** 42

## HARDWARE

<b>Bottom Plug Used?</b>	Yes	<b>Tool Type</b>	DV Tool
<b>Bottom Plug Provided By</b>	BJ	<b>Tool Depth (ft)</b>	4,214.00
<b>Bottom Plug Size</b>	5.500	<b>Max Tubing Pressure - Rated (psi)</b>	
<b>Top Plug Used?</b>	Yes	<b>Max Tubing Pressure - Operated (psi)</b>	
<b>Top Plug Provided By</b>	BJ	<b>Max Casing Pressure - Rated (psi)</b>	5,320.00
<b>Top Plug Size</b>	5.500	<b>Max Casing Pressure - Operated (psi)</b>	4,256.00
<b>Centralizers Used</b>	Yes	<b>Pipe Movement</b>	None
<b>Centralizers Quantity</b>	15.00	<b>Job Pumped Through</b>	Manifold
<b>Centralizers Type</b>	Bow	<b>Top Connection Thread</b>	8rd
<b>Landing Collar Depth (ft)</b>	4,998	<b>Top Connection Size</b>	5.5

## CIRCULATION PRIOR TO JOB

# Cementing Treatment



<b>Well Circulated By</b>	Rig	<b>Solids Present at End of Circulation</b>	No
<b>Circulation Prior to Job</b>	Yes	<b>10 sec SGS</b>	
<b>Circulation Time (min)</b>	1.00	<b>10 min SGS</b>	
<b>Circulation Rate (bpm)</b>	5.00	<b>30 min SGS</b>	
<b>Circulation Volume (bbls)</b>	300.00	<b>Flare Prior to/during the Cement Job</b>	No
<b>Lost Circulation Prior to Cement Job</b>	No	<b>Gas Present</b>	No
<b>Mud Density In (ppg)</b>	9.00	<b>Gas Units</b>	
<b>Mud Density Out (ppg)</b>			
<b>PV Mud In</b>			
<b>PV Mud Out</b>			
<b>YP Mud In</b>			
<b>YP Mud Out</b>			

## TEMPERATURE

<b>Ambient Temperature (°F)</b>	44.00	<b>Slurry Cement Temperature (°F)</b>
<b>Mix Water Temperature (°F)</b>	55.00	<b>Flow Line Temperature (°F)</b>

## BJ FLUID DETAILS

Fluid Type	Fluid Name	Density (ppg)	Yield (Cu Ft/sk)	H2O Req. (gals/sk)	Vol (sk)	Vol (Cu Ft)	Vol (bbls)
Spacer / Pre Flush / Flush	UltraFlush	8.4000					12.0000
Spacer / Pre Flush / Flush	UltraFlush	8.4000					12.0000
Tail Slurry	Second Stage Tail	13.6000	1.8626	8.94	110	203.0000	36.1000
Tail Slurry	First Stage Tail	13.6000	1.5590	6.83	120	186.0000	33.1000
Top-Out / Scavenger Slurry	Mouse hole/Rat hole Plug	13.6000	1.5590	6.83	51	78.0000	13.9000
Displacement	1st Stage	8.3300				0.0000	115.3000

# Cementing Treatment



Final Displacement	2nd Stage Displacement	8.3400	0.0000	97.6000
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Fluid Type	Fluid Name	Component	Concentration	UOM
Spacer / Pre Flush / Flush	UltraFlush	IntegraGuard ULTRA II	100.00	PCT
Spacer / Pre Flush / Flush	UltraFlush	IntegraGuard ULTRA II	100.00	PCT
Tail Slurry	Second Stage Tail	CFL-210	0.50	BWOB
Tail Slurry	Second Stage Tail	SALT, Sodium Chloride, Medium	10.00	BWOW
Tail Slurry	Second Stage Tail	LOST CIRCULATION, LCM-1	5.00	LBS/SK
Tail Slurry	Second Stage Tail	EXTENDER, BENTONITE	2.00	BWOB
Tail Slurry	Second Stage Tail	CEMENT EXTENDER, GYPSUM, A-10	6.00	BWOB
Tail Slurry	Second Stage Tail	FP-25, Dry Foam Preventer (BJS Only)	0.20	BWOB
Tail Slurry	First Stage Tail	CEMENT, CLASS H	50.00	PCT
Tail Slurry	First Stage Tail	IntegraSeal CELLO	0.25	LBS/SK
Tail Slurry	First Stage Tail	LOST CIRCULATION, LCM-1	5.00	LBS/SK
Tail Slurry	First Stage Tail	EXTENDER, BENTONITE	2.00	BWOB
Tail Slurry	First Stage Tail	SALT, Sodium Chloride, Medium	10.00	BWOW
Tail Slurry	First Stage Tail	CD-100	0.20	BWOB
Tail Slurry	First Stage Tail	CEMENT, FLY ASH (POZZOLAN)	50.00	PCT
Tail Slurry	Second Stage Tail	IntegraSeal CELLO	0.25	LBS/SK
Tail Slurry	Second Stage Tail	CEMENT, CLASS A	100.00	PCT
Tail Slurry	First Stage Tail	CEMENT EXTENDER, GYPSUM, A-10	5.00	BWOB
Tail Slurry	First Stage Tail	CFL-210	0.50	BWOB
Tail Slurry	First Stage Tail	FP-25, Dry Foam Preventer (BJS Only)	0.20	BWOB
Top-Out / Scavenger Slurry	Mouse hole/Rat hole Plug	CEMENT, CLASS H	50.00	PCT
Top-Out / Scavenger	Mouse hole/Rat hole	EXTENDER, BENTONITE	2.00	BWOB

# Cementing Treatment



Slurry	Plug		
Top-Out / Scavenger Slurry	Mouse hole/Rat hole Plug	LOST CIRCULATION, LCM-1	5.00 LBS/SK
Top-Out / Scavenger Slurry	Mouse hole/Rat hole Plug	IntegraSeal CELLO	0.25 LBS/SK
Top-Out / Scavenger Slurry	Mouse hole/Rat hole Plug	CD-100	0.20 BWOB
Top-Out / Scavenger Slurry	Mouse hole/Rat hole Plug	FP-25, Dry Foam Preventer (BJS Only)	0.20 BWOB
Top-Out / Scavenger Slurry	Mouse hole/Rat hole Plug	SALT, Sodium Chloride, Medium	10.00 BWOW
Top-Out / Scavenger Slurry	Mouse hole/Rat hole Plug	CFL-210	0.50 BWOB
Top-Out / Scavenger Slurry	Mouse hole/Rat hole Plug	CEMENT EXTENDER, GYPSUM, A-10	5.00 BWOB
Top-Out / Scavenger Slurry	Mouse hole/Rat hole Plug	CEMENT, FLY ASH (POZZOLAN)	50.00 PCT

## TREATMENT SUMMARY

Time	Fluid	Rate (bpm)	Fluid Vol. (bbls)	Pipe Pressure (psi)	Annulus Pressure (psi)	Comments
11/27/2017 3:55 AM	UltraFlush	5.00	12.00	350.00		
11/27/2017 4:09 AM	First Stage Tail	5.20	33.10	290.00		
11/27/2017 4:59 AM	1st Stage Displacement	5.50	115.30	570.00		
11/27/2017 9:43 AM	UltraFlush	5.00	12.00	270.00		
11/27/2017 9:56 AM	Second Stage Tail	5.20	36.10	280.00		
11/27/2017 10:23 AM	2nd Stage Displacement	5.50	97.60	400.00		

	Min	Max	Avg
Pressure (psi)	60.00	570.00	200.00
Rate (bpm)	3.00	6.00	5.00

## DISPLACEMENT AND END OF JOB SUMMARY



# Cementing Treatment



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<b>Displaced By</b>	BJ	<b>Amount of Cement Returned/Reversed</b>	
<b>Calculated Displacement Volume (bbls)</b>	115.00	<b>Method Used to Verify Returns</b>	Visual
<b>Actual Displacement Volume (bbls)</b>	115.00	<b>Amount of Spacer to Surface</b>	
<b>Did Float Hold?</b>	Yes	<b>Pressure Left on Casing (psi)</b>	0.00
<b>Bump Plug</b>	Yes	<b>Amount Bled Back After Job</b>	1.00
<b>Bump Plug Pressure (psi)</b>	1,500.00	<b>Total Volume Pumped (bbls)</b>	307.00
<b>Were Returns Planned at Surface</b>	No	<b>Top Out Cement Spotted</b>	No
<b>Cement returns During Job</b>		<b>Lost Circulation During Cement Job</b>	No

## CEMENT PLUG

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<b>Bottom of Cement Plug?</b>	Yes	<b>Wiper Balls Used?</b>	No
<b>Wiper Ball Quantity</b>		<b>Plug Catcher</b>	No
<b>Number of Plugs</b>			

## SQUEEZE

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<b>Injection Rate (bpm)</b>		<b>Fluid Density (ppg)</b>	
<b>Injection Pressure (psi)</b>		<b>ISIP (psi)</b>	
<b>Type of Squeeze</b>		<b>FSIP (psi)</b>	
<b>Operators Max SQ Pressure (psi)</b>			

## COMMENTS

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### Treatment Report

### Job Summary

# Cementing Treatment



## Stage 1

Prime Lines 2 bbls Fresh Water  
Rat and Mouse TCmt 50 sks @ 13.6 / 14 bbls  
Pressure Test Lines 3500 psi  
Spacer UltraFlush @ 8.4 ppg / 12 bbls  
TCmt 120 sks @ 13.6 ppg / 33 bbls  
Shutdown / Drop Btm Plug / Wash Equipment  
Displacement : 20 bbls H<sub>2</sub>O - 95 bbls MUD @ 9.0 ppg  
Slow Rate : 105 bbls  
Bump Plug 1000 over PLP  
Drop Opening Tool / Wait for 20 min  
Pressure up and open DVT @ 700-1000 psi  
Establish Circulation / Release back to Rig

## Stage 2

Prime Lines 2 bbls Fresh Water  
Pressure Test line 3500 psi  
Spacer UltraFlush @ 8.4 ppg / 12 bbls  
TCmt 110 sks @ 13.6 ppg / 36 bbls  
Shutdown / Drop Top Plug / Wash Equipment  
Displacement : 99 bbls Fresh Water  
Slow Rate : 89 bbls  
Bump Plug 1500 psi to close DVT  
Release Pressure / Check Floats