

# 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

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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



<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>	45.00	<b>10 min SGS</b>	
<b>Circulation Rate (bpm)</b>	6.00	<b>30 min SGS</b>	
<b>Circulation Volume (bbls)</b>		<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>		<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>	26.00	<b>Slurry Cement Temperature (°F)</b>	50.00
<b>Mix Water Temperature (°F)</b>	45.00	<b>Flow Line Temperature (°F)</b>	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