KOLAR Document ID: 1400796

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 # 32446
Name: Merit Energy Company, LLC
Address 1: 13727 NOEL ROAD, SUITE 1200
Address 2:
City: DALLAS State: TX Zip: 75240 + ____
Contact Person: IDANIA MEDINA
Phone: (620) 629-4228
CONTRACTOR: License # 5929
Name: Duke Drilling Co., Inc.
Wellsite Geologist: Merit Energy 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 #:

11/29/2017	12/5/2017	12/14/2017
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No.: 15-055-22469-01-00
Spot Description:
NE - SW - NW - NW Sec. 26 Twp. 24 S. R. 32 ☐ East ☑ West
960 Feet from ☑ North / ☐ South Line of Section
566 Feet from ☐ East / ☑ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☑ NW ☐ SE ☐ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Finney
Lease Name: RIVER BEND Well #: 2
Field Name: Arkansas River
Producing Formation: Chester
Elevation: Ground: 2806 Kelly Bushing: 2818
Total Vertical Depth: 4980 Plug Back Total Depth: 4935
Amount of Surface Pipe Set and Cemented at: 1752 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: 1000 ppm Fluid volume: 691 bbls
Dewatering method used: Evaporated
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: 03/27/2018
☐ **Confidential Release Date:** 03/26/2020
☑ **Wireline Log Received** ☐ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** Karen Ritter **Date:** 03/28/2018

Operator Name: Merit Energy Company, LLC Lease Name: RIVER BEND Well #: 2

Sec. 26 Twp. 24 S. R. 32 ☐ East ☑ West County: Finney

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 *(Attach Additional Sheets)*	☐ Yes	☑ No
Samples Sent to Geological Survey	☑ Yes	☐ No
Cores Taken	☐ Yes	☑ No
Electric Log Run	☑ Yes	☐ No
Geologist Report / Mud Logs	☑ Yes	☐ No

List All E. Logs Run:
Attached

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
Attached	Attached	Attached

CASING RECORD ☑ New ☐ 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
Conductor	17.5	13.375	48	125	Class A	160	See Attached
Surface	12.25	8.625	24	1752	Class A	645	See Attached
Production	7.875	5.5	17	4975	Class A	185	See Attached

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
☐ Perforate ☐ Protect Casing ☐ Plug Back TD ☐ 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: 12/15/2017

Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	260		5		

DISPOSITION OF GAS:
☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION:
☐ Open Hole ☑ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*

PRODUCTION INTERVAL:

Top	Bottom
4850	4856

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)*
4	4850	4856			

TUBING RECORD: Size: 2.8750 Set At: 4881 Packer At:

Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Merit Energy Company, LLC
Well Name	RIVER BEND 2
Doc ID	1400796

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 LOG
REPEAT SECTION

Form	ACO1 - Well Completion
Operator	Merit Energy Company, LLC
Well Name	RIVER BEND 2
Doc ID	1400796

Tops

Name	Top	Datum
HEEBNER	3891	
LANSING	3983	
SWOPE	4324	
MARMATON	4490	
PAWNEE	4569	
EXCELLO	4609	
CHEROKEE	4613	
MORROW	4789	
ST GENEVIEVE	4864	
ST LOUIS	4906	

Form	ACO1 - Well Completion
Operator	Merit Energy Company, LLC
Well Name	RIVER BEND 2
Doc ID	1400796

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Conductor	17.5	13.375	48	125	Class A	160	See Attached
Surface	12.25	8.625	24	1752	Class A	645	See Attached
Production	7.875	5.5	17	4975	Class A	185	See Attached

POST JOB REPORT

Merit Energy

Conductor Post Job Report

River Bend 2

Finney KS

Quote #: J6G4J6 | Execution #: V7D8N902

Merit Energy

Attention: Mr. Daniel Coats | (972) 628-1613 | Daniel.Coats@meritenergy.com

Merit Energy | 13727 Noel Rd, Suite 1200 | Dallas, TX 75240

Dear Mr. Daniel Coats,

Thank you for the opportunity to provide cementing services on this well. BJ Services strives to achieve complete customer satisfaction. If you have any questions regarding the services or data provided, please contact BJ Services at any time.

Sincerely,
Kevin Aldridge
Sales Engineer | (405) 423-6862 | kevin.aldridge@bjservices.com

Customer Name: Merit Energy Company
Well Name: River Bend 2
Job Type: Conductor

District: Liberal
Supervisor: Erik Chavez
Engineer: Kevin Aldridge

Seq No.	Start Date/Time	Category	Event	Equipment	Event ID	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1	11/29/2017 21:00	Mobilization	Arrive on Location	Cement Pump Truck						
2	21:10	Operational	Safety Meeting		53					Pre-Rig up Safety Meeting
3	21:20	Operational	Rig Up		50					
4	22:30	StandBy	3rd Party Other		84					Wait on Casing
5	22:50	Operational	Safety Meeting		53					Operation Safety Meeting
6	23:21	Operational	Prime Up		52					Fresh H20
7						8.33	2	2	40	Pressure/Volume/Rate
8	23:26	Operational	Pressure Test		54				2500	
9		Operational	Pump Tail Cement							TCmt 160 sks @ 15.6 ppb
10	23:40					15.6	5.1	34	210	Pressure/Volume/Rate
11		Operational	Pump Displacement							Fresh H20
12	23:50					8.33	2.3	17.5	60	Pressure/Volume/Rate
13	23:51	Operational	End Pumping							Shutdown / Shutin well spot Cement @ 111 ft
14	23:53	Operational	Other (See comments)							Release Pressure
15		Operational	Cement Back to Surface					20 bbls bck		TCmt @ 15.6 ppb
16	0:00	Operational	Safety Meeting							AAR / Rig down Safety Meeting
17	1:00	Operational	Rig Down							Rig down Equipment
18	1:15	Operational	Safety Meeting							Journey Management
19	1:30	Mobilization	Leave Location							
20										
21										
22										
23										
24										
25										
26										
27										
28										
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31										
32										
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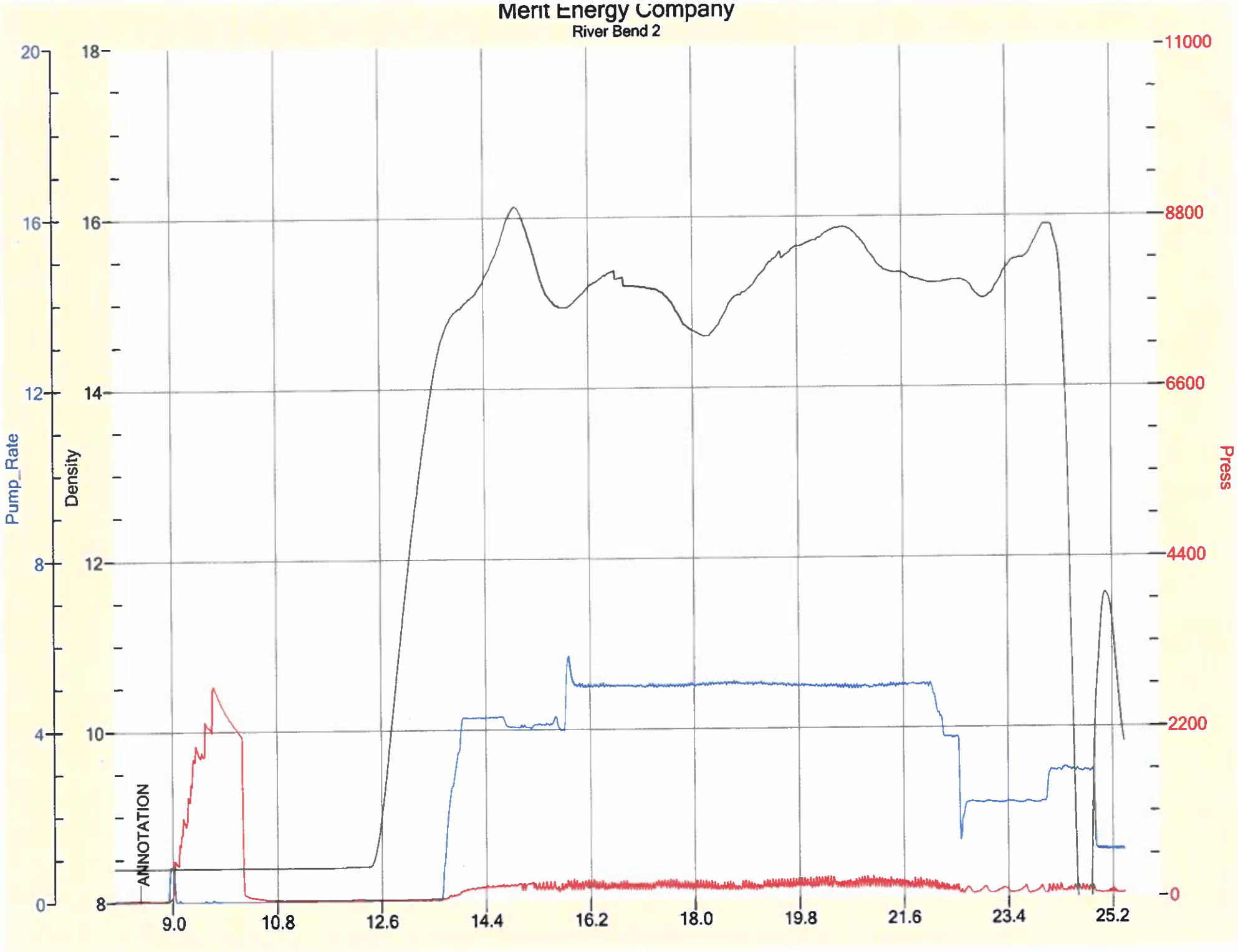
40										
41										
42										

Customer:	MERIT ENERGY COMPANY
Date:	Wednesday, November 29, 2017
Well Name:	River Bend 2
Well Location:	
Supervisor:	Erik Chavez

Equipment Operators: Erik Chavez - Jose Calderon - Jaime Torres

Performance	Customer	
Was the appearance of the personnel and equipment satisfactory?	Yes	No
Was the job performed in a professional manner?	Yes	No
Were the calculations prepared and explained properly?	Yes	No
Were the correct services dispatched to the job site?	Yes	No
Were the services performed as requested?	Yes	No
Did the job site environment remain unchanged?	Yes	No
Did the equipment perform in the manner expected?	Yes	No
Did the materials meet your expectations?	Yes	No
Was the crew prepared for the job?	Yes	No
Was the crew prompt in the rig-up and actual job?	Yes	No
Were reasonable recommendations given, as requested?	Yes	No
Did the crew perform safely?	Yes	No
Was the job performed to your satisfaction?	Yes.	No
Customer Signature:	Date: 11-30-17	
Additional Comments: Good Job!		


Merit Energy Company
River Bend 2
Pump_Rate
Density
Press
ANNOTATION
20
16
12
8
4
0
18
16
14
12
10
8
11000
8800
6600
4400
2200
0
9.0
10.8
12.6
14.4
16.2
18.0
19.8
21.6
23.4
25.2

CEMENT MIXING WATER GUIDELINES

Company Name: **Merit Energy Company**

Lease Name: **River Bend 2**

County: **Finney** State: **KS**

Water Source: **TANK**

Submitted By: **Erik Chavez** Date: **11/29/2017**

pH Level	6.5	Must be less than 8.5
Sulfates	375	Must be less than 1,000 PPM
Chlorides	0	Must be less than 3,000 PPM
Temperature	50	

COMMENTS

Customer Signature

Thank You

Cementing Treatment

Start Date	11/28/2017	**Well**	River Bend 2
End Date	11/29/2017	**County**	Finney
Client	MERIT ENERGY COMPANY	**State/Province**	KS
Client Field Rep		**API**	15-055-22469
Service Supervisor		**Formation**	
Field Ticket No.		**Rig**	
District	Liberal, KS	**Type of Job**	Conductor

WELL GEOMETRY

Type	ID (in)	OD (in)	Wt. (lb/ft)	MD (ft)	TVD (ft)	Excess(%)	Grade	Thread
Open Hole	17.50			126.00	126.00	100.00		
Casing	12.72	13.38	48.00	124.00	124.00			

Shoe Length (ft): 20

HARDWARE

Bottom Plug Used?	No	**Tool Type**	
Bottom Plug Provided By		**Tool Depth (ft)**	
Bottom Plug Size		**Max Tubing Pressure - Rated (psi)**	
Top Plug Used?	No	**Max Tubing Pressure - Operated (psi)**	
Top Plug Provided By		**Max Casing Pressure - Rated (psi)**	1,080.00
Top Plug Size		**Max Casing Pressure - Operated (psi)**	864.00
Centralizers Used	No	**Pipe Movement**	None
Centralizers Quantity		**Job Pumped Through**	Manifold
Centralizers Type		**Top Connection Thread**	8rd
Landing Collar Depth (ft)	131	**Top Connection Size**	13.375

CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	**Solids Present at End of Circulation**	No

Cementing Treatment

Circulation Prior to Job	Yes	**10 sec SGS**	
Circulation Time (min)	0.50	**10 min SGS**	
Circulation Rate (bpm)	5.00	**30 min SGS**	
Circulation Volume (bbls)	150.00	**Flare Prior to/during the Cement Job**	No
Lost Circulation Prior to Cement Job	No	**Gas Present**	No
Mud Density In (ppg)	8.00	**Gas Units**	
Mud Density Out (ppg)			
PV Mud In			
PV Mud Out			
YP Mud In			
YP Mud Out			

TEMPERATURE

Ambient Temperature (°F)	44.00	**Slurry Cement Temperature (°F)**	
Mix Water Temperature (°F)	50.00	**Flow Line Temperature (°F)**	

BJ FLUID DETAILS

Fluid Type	Fluid Name	Density (ppg)	Yield (Cu Ft/sk)	H2O Req. (gals/sk)	Vol (sk)	Vol (Cu Ft)	Vol (bbls)
Tail Slurry	Tail Cement	15.6000	1.2078	5.23	160	193.0000	34.3000
Displacement Final	Displacement	8.3400				0.0000	16.6000

Fluid Type	Fluid Name	Component	Concentration	UOM
Tail Slurry	Tail Cement	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	3.00	BWOB
Tail Slurry	Tail Cement	CEMENT, ASTM TYPE I	100.00	PCT
Tail Slurry	Tail Cement	IntegraSeal CELLO	0.50	LBS/SK

TREATMENT SUMMARY

Cementing Treatment

Time	Fluid	Rate (bpm)	Fluid Vol. (bbls)	Pipe Pressure (psi)	Annulus Pressure (psi)	Comments
11/29/2017 11:40 PM	Tail Cement	5.10	34.30	210.00		
11/29/2017 11:50 PM	Displacement	2.30	16.60	60.00		

	Min	Max	Avg
Pressure (psi)	40.00	210.00	100.00
Rate (bpm)	2.00	5.10	5.00

DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	**Amount of Cement Returned/Reversed**	20.00
Calculated Displacement Volume (bbls)	17.50	**Method Used to Verify Returns**	Visual
Actual Displacement Volume (bbls)	17.50	**Amount of Spacer to Surface**	
Did Float Hold?	No	**Pressure Left on Casing (psi)**	0.00
Bump Plug	No	**Amount Bled Back After Job**	0.25
Bump Plug Pressure (psi)		**Total Volume Pumped (bbls)**	51.50
Were Returned Planned at Surface	Yes	**Top Out Cement Spotted**	No
Cement returns During Job	Full	**Lost Circulation During Cement Job**	No

CEMENT PLUG

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

SQUEEZE

Injection Rate (bpm)	**Fluid Density (ppg)**
Injection Pressure (psi)	**ISIP (psi)**

Cementing Treatment

Type of Squeeze **FSIP (psi)**

Operators Max SQ Pressure (psi)

COMMENTS

Treatment Report

Job Summary

Prime Lines 2 bbls
Pressure Test 2500 psi
TCmt 160 sks @ 15.6 ppg / 34 bbls
Displacement : 17.5 bbls
Shut in well to spot in cement
Release Pressure

POST JOB REPORT

Merit Energy

Surface Post Job Report

River Bend 2

Finney KS

Quote #: H2J4H9 | Execution #: J7Q6J202

Merit Energy

Attention: Mr. Daniel Coats | (972) 628-1613 | Daniel.Coats@meritenergy.com

Merit Energy | 13727 Noel Rd, Suite 1200 | Dallas, TX 75240

Dear Mr. Daniel Coats,

Thank you for the opportunity to provide cementing services on this well. BJ Services strives to achieve complete customer satisfaction. If you have any questions regarding the services or data provided, please contact BJ Services at any time.

Sincerely,
Kevin Aldridge
Sales Engineer | (405) 423-6862 | kevin.aldridge@bjservices.com

Customer Name MERIT ENERGY COMPANY
Well Name RIVER BEND 2
Job Type Surface

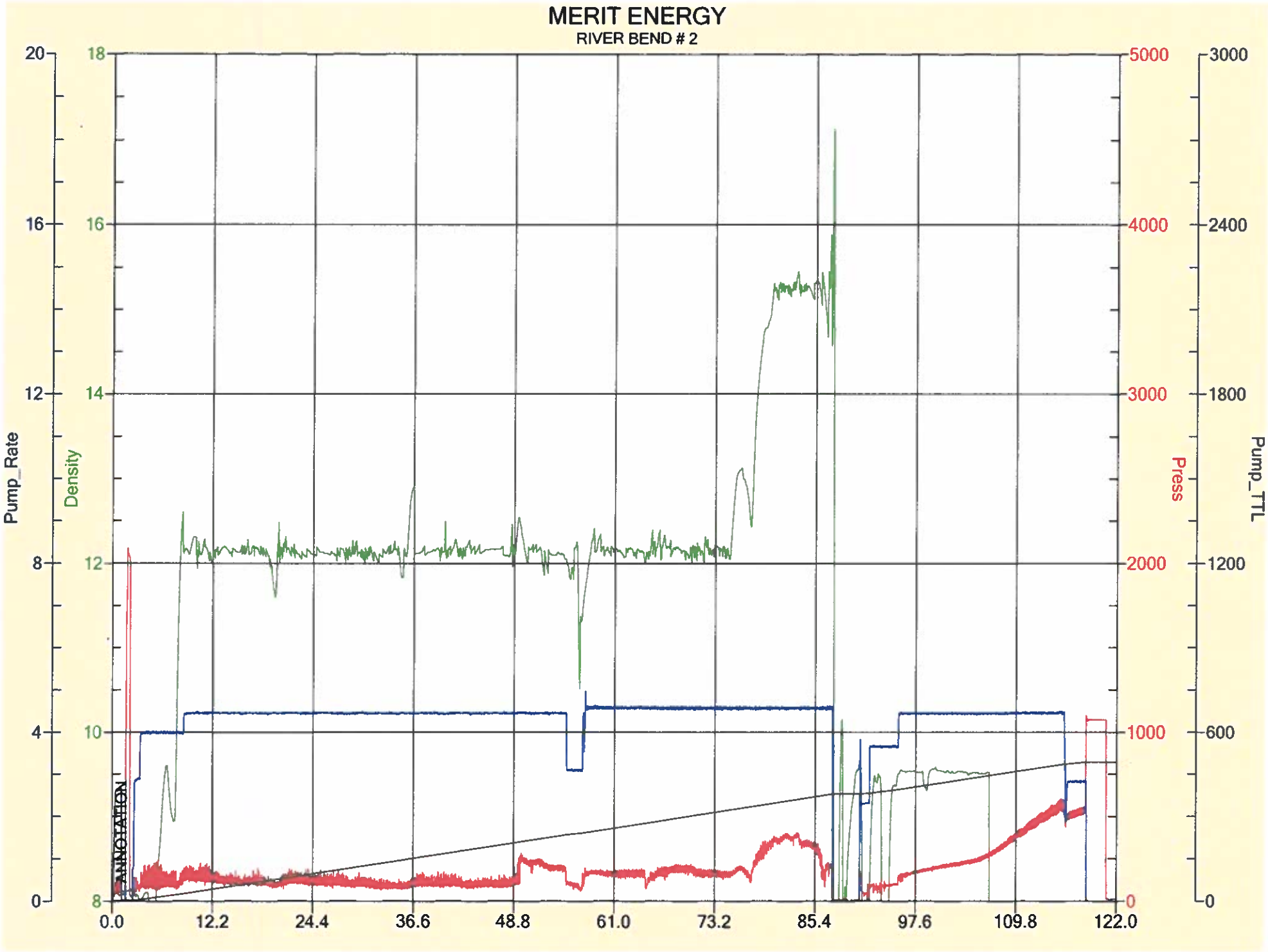
District Liberal
Supervisor ALDO ESPINOZA
Engineer LENNY BAEZA

Seq No.	Start Date/Time	Category	Event	Equipment	Event ID	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1	11/30/2017 23:00	Mobilization	Arrive on Location	Cement Pump Truck						ON LOCATION
2	12/1/2017 0:00	Operational	Rig Up	Cement Pump Truck						RIG UP
3	300AM									CASING ON BOTTOM
4	335AM		SAFETY MEETING							SAFETY MEETING
5	342AM		PRESSURE TEST						2500	PRESSURE TEST LINES
6	344AM		LEAD			12.1	4	211	100	470 SK/211 BBL LEAD CEMENT @ 12.1 #
7	459AM		TAIL			15.2	4	39	150	175 SK/39 BBL TAIL CEMENT @ 15.2 #
8	510AM		RELEASE PLUG							RELEASE PLUG
9	512AM		START DISPLACING			8.34	3		70	START DISPLACEMENT
10	518AM						5	20	150	20 BBL GONE
11	523AM						5	20	300	40 BBL GONE
12	528AM						5	20	270	60 BBL GONE
13	534AM						5	20	400	80 BBL GONE
14	538AM		SLOW DOWN				5	20	500	100 BBL SLOW DOWN TO LAND PLUG
15	542AM		BUMP PLUG				3	8	500-1000	108 BBL BUMP PLUG
16	545AM		CHECK FLOATS						0	CHECK FLOATS
17										FLOATS HOLDING
18	600AM									RIG DOWN
19	700AM									LEAVE LOCATION
20										
21										GOOD CIRCULATION DURING ENTIRE JOB
22										90 BBL OF CEMENT BACK TO SURFACE
23										THANKS
24										

Customer:	MERIT ENERGY COMPANY
Date:	Friday, December 01, 2017
Well Name:	River Bend # 2
Well Location:	Garden City
Supervisor:	Aldo Espinoza

Equipment Operators: Aldo Espinoza - Cristian Camacho - Gerardo Burciaga - Alex Ayala

Performance	Customer	
Was the appearance of the personnel and equipment satisfactory?	Yes	No
Was the job performed in a professional manner?	Yes	No
Were the calculations prepared and explained properly?	Yes	No
Were the correct services dispatched to the job site?	Yes	No
Were the services performed as requested?	Yes	No
Did the job site environment remain unchanged?	Yes	No
Did the equipment perform in the manner expected?	Yes	No
Did the materials meet your expectations?	Yes	No
Was the crew prepared for the job?	Yes	No
Was the crew prompt in the rig-up and actual job?	Yes	No
Were reasonable recommendations given, as requested?	Yes	No
Did the crew perform safely?	Yes	No
Was the job performed to your satisfaction?	Yes	No
Customer Signature: Date: 12-1-17		
Additional Comments: Good Job!		


MERIT ENERGY
RIVER BEND # 2
Pump_Rate
Density
Press
Pump_TTL
20
16
12
8
4
0
18
16
14
12
10
8
5000
4000
3000
2000
1000
0
3000
2400
1800
1200
600
0
0.0
12.2
24.4
36.6
48.8
61.0
73.2
85.4
97.6
109.8
122.0
CIRCULATION

CEMENT MIXING WATER GUIDELINES

Company Name: **MERIT ENERGY COMPANY**

Lease Name: **River Bend # 2**

County: **finney** State: **KS**

Water Source: **TANK**

Submitted By: **Aldo Espinoza** Date: **12/1/2017**

pH Level	7	Must be less than 8.5
Sulfates	400	Must be less than 1,000 PPM
Chlorides	0	Must be less than 3,000 PPM
Temperature	64	

COMMENTS

Customer Signature

Thank You

Cementing Treatment

Start Date	12/1/2017	**Well**	River Bend 2
End Date	12/1/2017	**County**	Finney
Client	MERIT ENERGY COMPANY	**State/Province**	KS
Client Field Rep	Rodney Gonsalez	**API**	15-055-22469
Service Supervisor		**Formation**	
Field Ticket No.	8.625" Surface	**Rig**	
District	Liberal, KS	**Type of Job**	Surface

WELL GEOMETRY

Type	ID (in)	OD (in)	Wt. (lb/ft)	MD (ft)	TVD (ft)	Excess(%)	Grade	Thread
Open Hole	12.25			1,757.00	1,757.00	0.00		
Open Hole	12.25			1,757.00	1,757.00	130.00		
Casing	8.10	8.63	24.00	1,752.00	1,752.00		J-55	LTC

Shoe Length (ft): 42

HARDWARE

Bottom Plug Used?	No	**Tool Type**	
Bottom Plug Provided By		**Tool Depth (ft)**	
Bottom Plug Size		**Max Tubing Pressure - Rated (psi)**	
Top Plug Used?	Yes	**Max Tubing Pressure - Operated (psi)**	
Top Plug Provided By	BJ	**Max Casing Pressure - Rated (psi)**	2,950.00
Top Plug Size	8.625	**Max Casing Pressure - Operated (psi)**	1,500.00
Centralizers Used	Yes	**Pipe Movement**	None
Centralizers Quantity	10.00	**Job Pumped Through**	Manifold
Centralizers Type	Bow	**Top Connection Thread**	ltc
Landing Collar Depth (ft)	1,708	**Top Connection Size**	8 5/8

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)	20.00	**10 min SGS**	
Circulation Rate (bpm)	6.00	**30 min SGS**	
Circulation Volume (bbls)	150.00	**Flare Prior to/during the Cement Job**	No
Lost Circulation Prior to Cement Job	No	**Gas Present**	No
Mud Density In (ppg)	9.40	**Gas Units**	
Mud Density Out (ppg)	9.00		
PV Mud In			
PV Mud Out			
YP Mud In			
YP Mud Out			

TEMPERATURE

Ambient Temperature (°F)	33.00	**Slurry Cement Temperature (°F)**	58.00
Mix Water Temperature (°F)	50.00	**Flow Line Temperature (°F)**	60.00

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	470	1,186.0000	211.1000
Tail Slurry	Class A Cement	15.2000	1.2692	5.74	175	222.0000	39.4000
Displacement Final	Displacement	8.3400				0.0000	108.8000

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

Cementing Treatment

Lead Slurry	Multi Density Cement	SALT,SODIUM CHLORIDE, A-5	2.00	BWOW
Lead Slurry	Multi Density Cement	EXTENDER, BENTONITE	4.00	BWOB
Lead Slurry	Multi Density Cement	CEMENT EXTENDER, SODIUM METASILICATE, A-2	2.00	BWOB
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	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	2.00	BWOB
Tail Slurry	Class A Cement	CEMENT, ASTM TYPE I	100.00	PCT
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	5.00	211.10			
	Class A Cement	5.00	39.40			
	Displacement	5.00	108.80			

	Min	Max	Avg
Pressure (psi)	0.00	2,500.00	300.00
Rate (bpm)	1.00	6.00	4.00

DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	**Amount of Cement Returned/Reversed**	90.00
Calculated Displacement Volume (bbls)	109.00	**Method Used to Verify Returns**	Visual
Actual Displacement Volume (bbls)	109.00	**Amount of Spacer to Surface**	
Did Float Hold?	Yes	**Pressure Left on Casing (psi)**	0.00
Bump Plug	Yes	**Amount Bled Back After Job**	1.00

Cementing Treatment

Bump Plug Pressure (psi)	1,000.00	**Total Volume Pumped (bbls)**	360.00
Were Returned Planned at Surface	Yes	**Top Out Cement Spotted**	No
Cement returns During Job	Full	**Lost Circulation During Cement Job**	No

CEMENT PLUG

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

SQUEEZE

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

COMMENTS

Treatment Report

Job Summary

pressure test line to 2500 psi
470 sk/211 bbl lead cement @ 12.1 #
175 sk/39 bbl tail cement @ 15.2 #
release pre-loaded plug
displace 109 bbl fresh water
bump plug 500 psi over
floats holding
90 bbl of cement back to surface

POST JOB REPORT

Merit Energy

Production Post Job Report

River Bend 2

Finney KS

Quote #: G9D3X3 | Execution #: P2V3P302

Merit Energy

Attention: Mr. Daniel Coats | (972) 628-1613 | Daniel.Coats@meritenergy.com

Merit Energy | 13727 Noel Rd, Suite 1200 | Dallas, TX 75240

Dear Mr. Daniel Coats,

Thank you for the opportunity to provide cementing services on this well. BJ Services strives to achieve complete customer satisfaction. If you have any questions regarding the services or data provided, please contact BJ Services at any time.

Sincerely,
Kevin Aldridge
Sales Engineer | (405) 423-6862 | kevin.aldridge@bjservices.com

Customer Name Merit Energy Company
Well Name River Bend 2
Job Type Surface

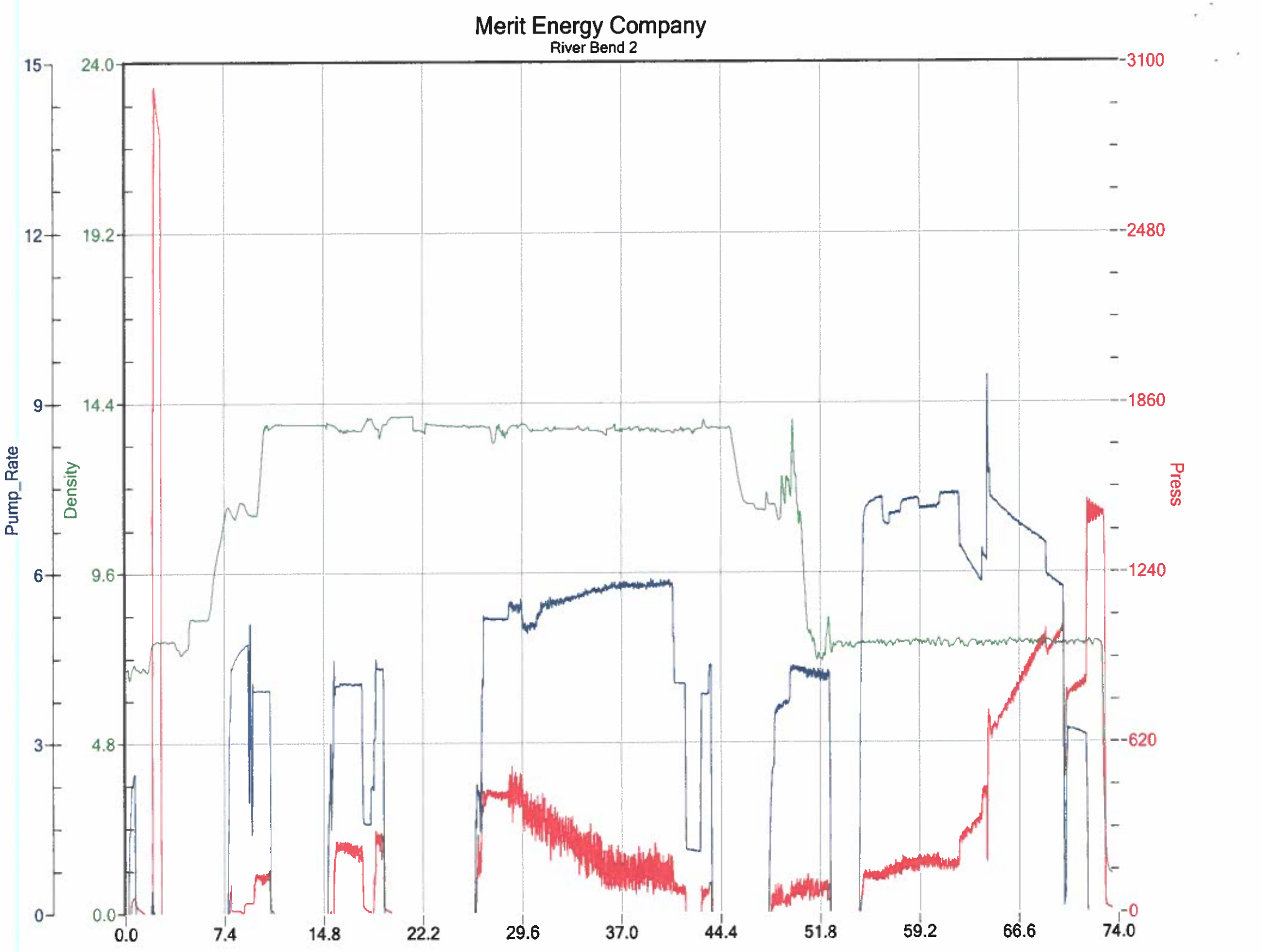
District Liberal
Supervisor Hector Esqueda
Engineer Kevin Aldridge

Seq No.	Start Date/Time	Category	Event	Equipment	Event ID	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1	12/6/2017 17:00	Mobilization	Callout		1					
2	12/6/2017 18:30	Mobilization	Arrive on Location		48					
3	12/6/2017 18:35	Operational	Spot Units	Cement Pump Truck	49					
4	12/6/2017 18:45	Operational	Rig Up							
5	12/6/2017 19:10	Operational	Prime Up	Cement Pump Truck						
6	12/6/2017 19:30	Operational	Safety Meeting							Hold STEACS meeting
7	12/6/2017 19:59	Operational	Pressure Test	Cement Pump Truck					3000	
8	12/6/2017 20:10	Operational	Pumping Cement	Cement Pump Truck		13.6				Plug RAT hole
9	12/6/2017 20:15	Operational	Pumping Cement	Cement Pump Truck		13.6				Plug MOUSE hole
10	12/6/2017 20:24	Operational	Pump Spacer	Cement Pump Truck			5.2	10	450	start pumping the HIVIS SWEEP
11	12/6/2017 20:26	Operational	Pump Lead Cement	Cement Pump Truck		13.6	5.4	63	570	start mixing the TAIL cement @ 13.60#
12	12/6/2017 20:41	Operational								shut down close in the bottom valve on the manifold and open valve to the pit ot wash up
13	12/6/2017 20:50	Operational	Drop Top Plug							drop the plug (close the valve to the pit and open the top valve on the manifold to start the displacement
14	12/6/2017 20:52	Operational	Pump Displacement	Cement Pump Truck			7.2	115	140	start the 115bbl displacement of 2%KCL water
15	12/6/2017 20:55	Operational	Pump Displacement	Cement Pump Truck	64		7.2	20	180	20bbls gone
16	12/6/2017 21:00	Operational	Pump Displacement	Cement Pump Truck	64		6	60	340	60bbls gone
17	12/6/2017 21:03	Operational	Pump Displacement	Cement Pump Truck	64		6.9	80	840	80bbls gone
18	12/6/2017 21:06	Operational	Pump Displacement	Cement Pump Truck	64		5.8	100	1000	100bbls gone
19	12/6/2017 21:07	Operational	Pump Displacement	Cement Pump Truck	64		3.2	105	810	105bbls gone slow rate down to 3.2bpm to land the plug
20	12/6/2017 21:09	Operational	Land Plug		67				1500	landed plug @ 1500PSI
21										hold the pressure for a few minuted to make sure that the floats are holding goog
22	12/6/2017 21:12	Operational	Check Floats		68					released pressure to check floats and they held good got 1/2bbl back to the tank
23	12/6/2017 21:18	Operational	Safety Meeting		53					Hold AAR meeting
24	12/6/2017 21:28	Operational	Rig Down		73					
25	12/6/2017 22:30	Mobilization	Leave Location		74					
26										THANK YOU
27										had good circulation throughout the hole job

Customer:	Merit Energy Company
Date:	Wednesday, December 6, 2017
Well Name:	River Bend # 2
Well Location:	Garden City,KS
Supervisor:	Hector Esqueda

Equipment Operators: Hector Esqueda, Gabriel Mendoza, Carlos Ibarra

Performance	Customer	
Was the appearance of the personnel and equipment satisfactory?	Yes	No
Was the job performed in a professional manner?	Yes	No
Were the calculations prepared and explained properly?	Yes	No
Were the correct services dispatched to the job site?	Yes	No
Were the services performed as requested?	Yes	No
Did the job site environment remain unchanged?	Yes	No
Did the equipment perform in the manner expected?	Yes	No
Did the materials meet your expectations?	Yes	No
Was the crew prepared for the job?	Yes	No
Was the crew prompt in the rig-up and actual job?	Yes	No
Were reasonable recommendations given, as requested?	Yes	No
Did the crew perform safely?	Yes	No
Was the job performed to your satisfaction?	Yes	No
Customer Signature: Date:10/8/2017		
Additional Comments: Good Job!		


Merit Energy Company
River Bend 2
Pump_Rate
Density
Press
15
12
9
6
3
0
24.0
19.2
14.4
9.6
4.8
0.0
3100
2480
1860
1240
620
0
0.0
7.4
14.8
22.2
29.6
37.0
44.4
51.8
59.2
66.6
74.0

CEMENT MIXING WATER GUIDELINES

Company Name: **Merit Energy Company**

Lease Name: **River Bend # 2**

County: **Finney** State: **KS**

Water Source: **Frack Tank/Transport**

Submitted By: **Hector Esqueda** Date: **12/6/2017**

pH Level	6.5	Must be less than 8.5
Sulfates	450	Must be less than 1,000 PPM
Chlorides	0	Must be less than 3,000 PPM
Temperature	55	

COMMENTS

Customer Signature

Thank You

[Type here]

FLOAT EQUIPMENT SALES RECORD
LOCATION: Liberal KS #21

Customer: Merit Energy Company **Ticket/ Contract #** FT-0157-P2V3P30202-46689

Date: 12/6/17 **Well/ Lease Name:** River Bend 2

Cementer: Hector Esquedo **State:** ks **County:** Finney

BRAND	SIZE	QUANTITY	DESCRIPTION
Weatherford	5 1/2	1	Guideshoe
Weatherford	5 1/2	1	Float collar
Weatherford	5 1/2	20	Centralizers

EMAILED BY: _____ **DATE:** _____

CUSTOMER	WELL	RIG	TRUCK #	TRAILER #	DATE
Merit Energy	RIVER BEND 2	DUKE #6	1080-4	553-5	12/6/2017

DIRECTIONS

PROD. LONG STRING

BULK PLANT LOADING SHEET

NUMBER OF SACKS	50	SLURRY	RAT AND MOUSE

FRONT TIER

PRODUCT CODE	DESCRIPTION	AMOUNT	UOM (LBS)
CCAC	CLASS A COMMON	4,794.00	LBS
CA-200	SODIUM CHLORIDE	405.28	LBS
CA-500	GYPSUM	287.64	LBS
CGEL	GEL-BENTONITE	95.88	LBS
CFL-210	FLUID LOSS ADDITIVE LOW T	23.97	LBS
CLC-KOL	KOLSEAL	255	LBS
CLC-CPF	CELLOPHANE FLAKES	12.75	LBS
CDF-100P	DEFOAMER	9.59	LBS
	TOTAL WEIGHT	5884.11	LBS

NUMBER OF SACKS	185	SLURRY	TAIL 1

BACK TIER

PRODUCT CODE	DESCRIPTION	AMOUNT	UOM (LBS)
CCAC	CLASS A COMMON	17,390.00	LBS
CA-200	SODIUM CHLORIDE	1,470.12	LBS
CA-500	GYPSUM	1043.4	LBS
CGEL	GEL-BENTONITE	347.8	LBS
CFL-210	FLUID LOSS ADDITIVE LOW T	86.95	LBS
CLC-KOL	KOLSEAL	925	LBS
CLC-CPF	CELLOPHANE FLAKES	46.25	LBS
CDF-100P	DEFOAMER	34.78	LBS
	TOTAL WEIGHT	21344.3	LBS

SIGNATURE SECTION

LOADER: MACARIO A

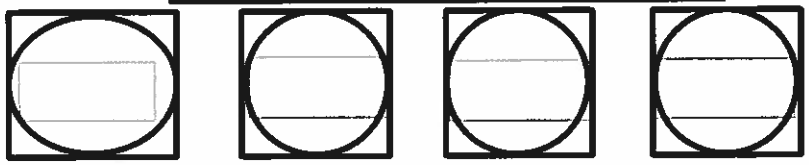
DRIVER: Carlos Ibarra

DESTINATION		BIN #	

SUPERVISOR: Hector Esqueda

SCALE STAMP SECTION

ASSIGNED LOAD #	
ASSIGNED LOAD #	



Cementing Treatment

Start Date	12/6/2017	**Well**	River Bend 2
End Date	12/6/2017	**County**	Finney
Client	MERIT ENERGY COMPANY	**State/Province**	KS
Client Field Rep	Rodney Gonsalez	**API**	15-055-22469
Service Supervisor		**Formation**	
Field Ticket No.	Production	**Rig**	
District	Liberal, KS	**Type of Job**	Long String

WELL GEOMETRY

Type	ID (in)	OD (in)	Wt. (lb/ft)	MD (ft)	TVD (ft)	Excess(%)	Grade	Thread
Open Hole	7.88			4,975.00	4,975.00	30.00		
Casing	4.89	5.50	17.00	4,975.00	4,975.00		J-55	LTC
Previous Casing	8.10	8.63	24.00	1,750.00	1,750.00		J-55	LTC

Shoe Length (ft): 38

HARDWARE

Bottom Plug Used?	No	**Tool Type**	Float Collar
Bottom Plug Provided By		**Tool Depth (ft)**	4,936.92
Bottom Plug Size		**Max Tubing Pressure - Rated (psi)**	
Top Plug Used?	Yes	**Max Tubing Pressure - Operated (psi)**	
Top Plug Provided By	BJ	**Max Casing Pressure - Rated (psi)**	4,522.00
Top Plug Size	5.500	**Max Casing Pressure - Operated (psi)**	
Centralizers Used	Yes	**Pipe Movement**	None
Centralizers Quantity	15.00	**Job Pumped Through**	No Manifold
Centralizers Type	Bow	**Top Connection Thread**	LTC
Landing Collar Depth (ft)	4,937	**Top Connection Size**	5.5

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)	60.00	**10 min SGS**	
Circulation Rate (bpm)	7.00	**30 min SGS**	
Circulation Volume (bbls)	300.00	**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)	36.00	**Slurry Cement Temperature (°F)**	55.00
Mix Water Temperature (°F)	48.00	**Flow Line Temperature (°F)**	57.00

BJ FLUID DETAILS

Fluid Type	Fluid Name	Density (ppg)	Yield (Cu Ft/sk)	H2O Req. (gals/sk)	Vol (sk)	Vol (Cu Ft)	Vol (bbls)
Spacer / Pre Flush / Flush	UltraFlush	8.4000					12.0000
Tail Slurry	Tail Cement	13.6000	1.9159	9.53	185	355.0000	63.1000
Top-Out / Scavenger Slurry	Mouse/Rat Hole Plug	13.6000	1.9159	9.53	51	96.0000	17.1000
Displacement Final	Displacement	8.3400				0.0000	115.3000

Fluid Type	Fluid Name	Component	Concentration	UOM

Cementing Treatment

Spacer / Pre Flush / Flush	UltraFlush	IntegraGuard ULTRA II	100.00	PCT
Tail Slurry	Tail Cement	IntegraSeal KOL	5.00	LBS/SK
Tail Slurry	Tail Cement	CEMENT, ASTM TYPE I	100.00	PCT
Tail Slurry	Tail Cement	EXTENDER, BENTONITE	2.00	BWOB
Tail Slurry	Tail Cement	SALT,SODIUM CHLORIDE, A-5	10.00	BWOW
Tail Slurry	Tail Cement	CFL-210	0.50	BWOB
Tail Slurry	Tail Cement	IntegraSeal CELLO	0.25	LBS/SK
Tail Slurry	Tail Cement	FP-25, Dry Foam Preventer (BJS Only)	0.20	BWOB
Tail Slurry	Tail Cement	CEMENT EXTENDER, GYPSUM, A-10	6.00	BWOB
Top-Out / Scavenger Slurry	Mouse/Rat Hole Plug	CFL-210	0.50	BWOB
Top-Out / Scavenger Slurry	Mouse/Rat Hole Plug	SALT,SODIUM CHLORIDE, A-5	10.00	BWOW
Top-Out / Scavenger Slurry	Mouse/Rat Hole Plug	IntegraSeal CELLO	0.25	LBS/SK
Top-Out / Scavenger Slurry	Mouse/Rat Hole Plug	EXTENDER, BENTONITE	2.00	BWOB
Top-Out / Scavenger Slurry	Mouse/Rat Hole Plug	IntegraSeal KOL	5.00	LBS/SK
Top-Out / Scavenger Slurry	Mouse/Rat Hole Plug	CEMENT, ASTM TYPE I	100.00	PCT
Top-Out / Scavenger Slurry	Mouse/Rat Hole Plug	CEMENT EXTENDER, GYPSUM, A-10	6.00	BWOB
Top-Out / Scavenger Slurry	Mouse/Rat Hole Plug	FP-25, Dry Foam Preventer (BJS Only)	0.20	BWOB

TREATMENT SUMMARY

Time	Fluid	Rate (bpm)	Fluid Vol. (bbls)	Pipe Pressure (psi)	Annulus Pressure (psi)	Comments
	UltraFlush	5.00	12.00			
	Tail Cement	5.00	63.10			
	Mouse/Rat Hole Plug	3.00	17.10			
	Displacement	5.00	115.30			

Cementing Treatment

	Min	Max	Avg
Pressure (psi)	0.00	3,000.00	900.00
Rate (bpm)	0.00	7.00	7.00

DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	**Amount of Cement Returned/Reversed**	0.00
Calculated Displacement Volume (bbls)	115.42	**Method Used to Verify Returns**	Visual
Actual Displacement Volume (bbls)	115.42	**Amount of Spacer to Surface**	0.00
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)	1,500.00	**Total Volume Pumped (bbls)**	195.00
Were Returned Planned at Surface	No	**Top Out Cement Spotted**	No
Cement returns During Job	None	**Lost Circulation During Cement Job**	No

CEMENT PLUG

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

SQUEEZE

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

COMMENTS

Treatment Report

Cementing Treatment

Job Summary

pressure tested the lines to 3000PSI
plugged RAT/MOUSE HOLES
start going downhole with 10bbls of HIVIS SWEEP
63bbls of Tail cement @ 13.60#
shut down wash up to pit
drop the plug
115bbls of 2%KCL displacement water
land plug 1500PSI

Company:	MERIT ENERGY CO.	Job Number:		Proposed Azimuth:	360.000
Field:	1st run	Magnetic Decl:		Target Inclination:	0.00
County:		Grid Corr:		TVD:	
Well Name:	River Bend 2	Total Survey Corr:		BRN From Survey:	#VALUE!
Rig:	DUKE RIG # 9	Date Printed:		BRN From Bit:	#DIV/0!

No.	Tool Type	Survey Depth (ft)	Incl (°)	Azimuth (°)	Quadrant	Course Lgth(ft)	TVD (ft)	VS (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	Closure Dist (ft)	Closure Ang (°)	DLS (°/100')	Bld Rate (°/100')
0	TIE-ON	0	0	0	N 0.00 E		0.00	0.00	0.00	0.00				
1	INC	319	0.5	128	S 52.00 E	319	319.00	-0.86	0.86 S	1.10 E	1.39	128.00	0.16	0.16
2	INC	498	0.3	190	S 10.00 W	179	497.99	-1.80	1.80 S	1.63 E	2.43	137.81	0.25	-0.11
3	MWD	684	0.4	210	S 30.00 W	186	683.99	-2.84	2.84 S	1.22 E	3.09	156.73	0.08	0.05
4	MWD	944	0.2	245	S 65.00 W	260	943.99	-3.82	3.82 S	0.36 E	3.84	174.66	0.10	-0.08
5	MWD	1102	0.1	239	S 59.00 W	158	1101.98	-4.01	4.01 S	0.01 W	4.01	180.16	0.06	-0.06
6	MWD	1292	0.5	293	N 67.00 W	190	1291.98	-3.77	3.77 S	0.92 W	3.88	193.67	0.24	0.21
7	MWD	1449	0.3	270	N 90.00 W	157	1448.98	-3.50	3.50 S	1.96 W	4.01	209.23	0.16	-0.13
8	MWD	1608	0.7	114	S 66.00 E	159	1607.97	-3.90	3.90 S	1.49 W	4.17	200.90	0.62	0.25
9	MWD	1702	0.8	122	S 58.00 E	94	1701.97	-4.48	4.48 S	0.41 W	4.49	185.18	0.15	0.11
10	MWD	1789	0.7	115.01	S 64.99 E	87	1788.96	-5.02	5.02 S	0.59 E	5.06	173.30	0.16	-0.11
11	MWD	1852	1.1	138.7	S 41.30 E	63	1851.95	-5.64	5.64 S	1.34 E	5.80	166.65	0.85	0.63
12	MWD	1915	2.3	174.4	S 5.60 E	63	1914.92	-7.35	7.35 S	1.86 E	7.58	165.80	2.45	1.90
13	MWD	1977	4	176.8	S 3.20 E	62	1976.83	-10.75	10.75 S	2.10 E	10.95	168.93	2.75	2.74
14	MWD	2040	5.6	180.4	S 0.40 W	63	2039.61	-16.02	16.02 S	2.20 E	16.17	172.16	2.58	2.54
15	MWD	2103	6.5	184	S 4.00 W	63	2102.25	-22.65	22.65 S	1.93 E	22.73	175.12	1.55	1.43
16	MWD	2165	7.2	186.9	S 6.90 W	62	2163.81	-30.01	30.01 S	1.22 E	30.03	177.67	1.26	1.13
17	MWD	2229	8.3	187	S 7.00 W	64	2227.23	-38.57	38.57 S	0.18 E	38.57	179.74	1.72	1.72
18	MWD	2292	9.6	190.5	S 10.50 W	63	2289.46	-48.25	48.25 S	1.33 W	48.27	181.58	2.24	2.06
19	MWD	2353	10.7	192.5	S 12.50 W	61	2349.50	-58.78	58.78 S	3.49 W	58.89	183.39	1.89	1.80
20	MWD	2416	12	190	S 10.00 W	63	2411.27	-70.94	70.94 S	5.89 W	71.19	184.75	2.21	2.06
21	MWD	2479	12	188	S 8.00 W	63	2472.89	-83.88	83.88 S	7.94 W	84.25	185.41	0.66	0.00
22	MWD	2542	11.7	188.8	S 8.80 W	63	2534.55	-96.68	96.68 S	9.83 W	97.18	185.80	0.54	-0.48
23	MWD	2605	11.3	188.6	S 8.60 W	63	2596.29	-109.09	109.09 S	11.73 W	109.72	186.14	0.64	-0.63
24	MWD	2667	11.6	190.5	S 10.50 W	62	2657.05	-121.23	121.23 S	13.77 W	122.01	186.48	0.78	0.48
25	MWD	2731	11.8	189.8	S 9.80 W	64	2719.72	-134.00	134.00 S	16.06 W	134.96	186.83	0.38	0.31
26	MWD	2794	11.5	190.1	S 10.10 W	63	2781.42	-146.53	146.53 S	18.26 W	147.67	187.10	0.49	-0.48
27	MWD	2856	11.6	188.9	S 8.90 W	62	2842.17	-158.78	158.78 S	20.30 W	160.07	187.29	0.42	0.16
28	MWD	2919	11.3	188.4	S 8.40 W	63	2903.91	-171.14	171.14 S	22.19 W	172.57	187.39	0.50	-0.48
29	MWD	3014	11.6	186.9	S 6.90 W	95	2997.02	-189.83	189.83 S	24.69 W	191.43	187.41	0.44	0.32
30	MWD	3109	12.7	185.4	S 5.40 W	95	3089.90	-209.71	209.71 S	26.82 W	211.42	187.29	1.20	1.16
31	MWD	3204	12	185.8	S 5.80 W	95	3182.70	-229.93	229.93 S	28.80 W	231.73	187.14	0.74	-0.74
32	MWD	3297	12.1	185.5	S 5.50 W	93	3273.65	-249.25	249.25 S	30.72 W	251.14	187.03	0.13	0.11
33	MWD	3392	12.2	186.4	S 6.40 W	95	3366.52	-269.14	269.14 S	32.79 W	271.13	186.95	0.23	0.11

Company:	MERIT ENERGY CO.	Job Number:		Proposed Azimuth:	360.000
Field:	1st run	Magnetic Decl:		Target Inclination:	0.00
County:		Grid Corr:		TVD:	
Well Name:	River Bend 2	Total Survey Corr:		BRN From Survey:	#VALUE!
Rig:	DUKE RIG # 9	Date Printed:		BRN From Bit:	#DIV/0!

No.	Tool Type	Survey Depth (ft)	Incl (°)	Azimuth (°)	Quadrant	Course Lgth(ft)	TVD (ft)	VS (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	Closure Dist (ft)	Closure Ang (°)	DLS (°/100')	Bld Rate (°/100')
34	MWD	3456	11.9	184.3	S 4.30 W	64	3429.11	-282.44	282.44 S	34.04 W	284.48	186.87	0.83	-0.47
35	MWD	3518	11.6	182.7	S 2.70 W	62	3489.81	-295.04	295.04 S	34.81 W	297.09	186.73	0.71	-0.48
36	MWD	3581	11.7	179.9	S 0.10 E	63	3551.51	-307.75	307.75 S	35.10 W	309.75	186.51	0.91	0.16
37	MWD	3644	12.6	177.3	S 2.70 E	63	3613.10	-321.01	321.01 S	34.76 W	322.88	186.18	1.67	1.43
38	MWD	3705	12.6	179	S 1.00 E	61	3672.63	-334.30	334.30 S	34.33 W	336.06	185.86	0.61	0.00
39	MWD	3767	12.6	177.6	S 2.40 E	62	3733.14	-347.82	347.82 S	33.93 W	349.47	185.57	0.49	0.00
40	MWD	3831	12.4	177.1	S 2.90 E	64	3795.62	-361.66	361.66 S	33.29 W	363.19	185.26	0.36	-0.31
41	MWD	3894	12.1	178.5	S 1.50 E	63	3857.19	-375.02	375.02 S	32.78 W	376.45	184.99	0.67	-0.48
42	MWD	3958	11.7	177.7	S 2.30 E	64	3919.81	-388.21	388.21 S	32.34 W	389.55	184.76	0.68	-0.63
43	MWD	4021	11.5	177.7	S 2.30 E	63	3981.53	-400.86	400.86 S	31.83 W	402.12	184.54	0.32	-0.32
44	MWD	4084	11.2	177.4	S 2.60 E	63	4043.29	-413.25	413.25 S	31.30 W	414.43	184.33	0.49	-0.48
45	MWD	4148	10.8	178.4	S 1.60 E	64	4106.12	-425.45	425.45 S	30.85 W	426.57	184.15	0.69	-0.62
46	MWD	4243	9.1	179.1	S 0.90 E	95	4199.68	-441.86	441.86 S	30.49 W	442.91	183.95	1.79	-1.79
47	MWD	4306	7.2	173.2	S 6.80 E	63	4262.05	-450.77	450.77 S	29.94 W	451.76	183.80	3.29	-3.02
48	MWD	4369	5.4	171.6	S 8.40 E	63	4324.66	-457.62	457.62 S	29.04 W	458.54	183.63	2.87	-2.86
49	MWD	4432	4	178.11	S 1.89 E	63	4387.45	-462.75	462.75 S	28.53 W	463.63	183.53	2.37	-2.22
50	MWD	4496	3.5	178.3	S 1.70 E	64	4451.31	-466.93	466.93 S	28.40 W	467.79	183.48	0.78	-0.78
51	MWD	4558	3.3	175	S 5.00 E	62	4513.20	-470.60	470.60 S	28.19 W	471.44	183.43	0.45	-0.32
52	MWD	4624	3	173.7	S 6.30 E	66	4579.10	-474.21	474.21 S	27.84 W	475.03	183.36	0.47	-0.45
53	MWD	4686	1.8	162.21	S 17.79 E	62	4641.05	-476.75	476.75 S	27.36 W	477.53	183.28	2.08	-1.94
54	MWD	4781	1.3	143.61	S 36.39 E	95	4736.02	-479.04	479.04 S	26.27 W	479.76	183.14	0.74	-0.53
55	MWD	4878	1.1	150.9	S 29.10 E	97	4832.99	-480.74	480.74 S	25.16 W	481.40	183.00	0.26	-0.21
56	MWD	4925	1.2	155	S 25.00 E	47	4879.98	-481.58	481.58 S	24.73 W	482.21	182.94	0.28	0.21
57	MWD													
58	MWD													
59	MWD													
60	MWD													
61	MWD													
62	MWD													
63	MWD													
64	MWD													
65	MWD													
66	MWD													
67	MWD													
68	MWD													

			Company:	MERIT ENERGY CO.			Job Number:					Proposed Azimuth:	360.000					
			Field:	1st run			Magnetic Decl:					Target Inclination:	0.00					
			County:				Grid Corr:					TVD:						
			Well Name:	River Bend 2			Total Survey Corr:					BRN From Survey:	#VALUE!					
			Rig:	DUKE RIG # 9			Date Printed:					BRN From Bit:	#DIV/0!					

No.	Tool Type	Survey Depth (ft)	Incl (°)	Azimuth (°)	Quadrant	Course Lgth(ft)	TVD (ft)	VS (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	Closure Dist (ft)	Closure Ang (°)	DLS (°/100')	Bld Rate (°/100')
434														
435														
436														
437														
438														
439														
440														
441														
442														
443														
444														
445														
446														
447														
448														
449														
450		3000	55.00	0.00	N 0.00 E	3000	#VALUE!	851.09	851.09 N	24.73 W	851.45	358.34	1.83	1.83
451		3330	90.00	20.00	N 20.00 E	330	#VALUE!	1153.48	1153.48 N	34.07 E	1153.98	1.69	12.02	10.61
452														
453														
454														
455														
456														
457														
458														
459														
460														
461														
462														
463														

Wlk Rate (°/100')
40.13
34.64
10.75
13.46
-3.80
28.42
-14.65
-98.11
8.51
-8.03
37.60
56.67
3.87
5.71
5.71
4.68
0.16
5.56
3.28
-3.97
-3.17
1.27
-0.32
3.06
-1.09
0.48
-1.94
-0.79
-1.58
-1.58
0.42
-0.32
0.95

Wlk Rate (°/100')
-3.28
-2.58
-4.44
-4.13
2.79
-2.26
-0.78
2.22
-1.25
0.00
-0.48
1.56
0.74
-9.37
-2.54
10.33
0.30
-5.32
-1.97
-18.53
-19.58
7.52
8.72

0.00
6.06


Wlk Rate
(°/100')

TARGET

TVD	
VS	**0.00**
N/S	**0.00 N**
E/W	**0.00 E**

Inc. Needed	Direction Needed	Dist To Target
-0.25	308.0	1.39
-0.28	317.8	2.43
-0.26	336.7	3.09
-0.23	354.7	3.84
-0.21	0.2	4.01
-0.17	13.7	3.88
-0.16	29.2	4.01
-0.15	20.9	4.17
-0.15	5.2	4.49
-0.16	353.3	5.06
-0.18	346.7	5.80
-0.23	345.8	7.58
-0.32	348.9	10.95
-0.45	352.2	16.17
-0.62	355.1	22.73
-0.80	357.7	30.03
-0.99	359.7	38.57
-1.21	1.6	48.27
-1.44	3.4	58.89
-1.69	4.7	71.19
-1.95	5.4	84.25
-2.20	5.8	97.18
-2.42	6.1	109.72
-2.63	6.5	122.01
-2.84	6.8	134.96
-3.04	7.1	147.67
-3.22	7.3	160.07
-3.40	7.4	172.57
-3.65	7.4	191.43
-3.91	7.3	211.42
-4.16	7.1	231.73
-4.39	7.0	251.14
-4.60	6.9	271.13

TARGET

TVD	
VS	**0.00**
N/S	**0.00 N**
E/W	**0.00 E**

Inc. Needed	Direction Needed	Dist To Target
-4.74	6.9	284.48
-4.87	6.7	297.09
-4.98	6.5	309.75
-5.11	6.2	322.88
-5.23	5.9	336.06
-5.35	5.6	349.47
-5.47	5.3	363.19
-5.57	5.0	376.45
-5.68	4.8	389.55
-5.77	4.5	402.12
-5.85	4.3	414.43
-5.93	4.1	426.57
-6.02	3.9	442.91
-6.05	3.8	451.76
-6.05	3.6	458.54
-6.03	3.5	463.63
-6.00	3.5	467.79
-5.96	3.4	471.44
-5.92	3.4	475.03
-5.87	3.3	477.53
-5.78	3.1	479.76
-5.69	3.0	481.40
-5.64	2.9	482.21