

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) (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	MAE 1 16
Doc ID	1435405

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

Form	ACO1 - Well Completion
Operator	Merit Energy Company, LLC
Well Name	MAE 1 16
Doc ID	1435405

Tops

Name	Top	Datum
HEEBNER	3880	
TORONTO	3907	
LANSING	3970	
KANSAS CITY	4310	
MARMATON	4478	
PAWNEE	4572	
CHEROKEE	4617	
ATOKA	4720	
MORROW	4820	
CHESTER LIME	4890	
ST GENEVIEVE	4917	

MERIT ENERGY COMPANY

FINNEY COUNTY, KANSAS (NAD27 - GRID)

NW NW SEC. 16 T24S R33W 6th P.M.

MAE 1-16

ORIGINAL WELLBORE

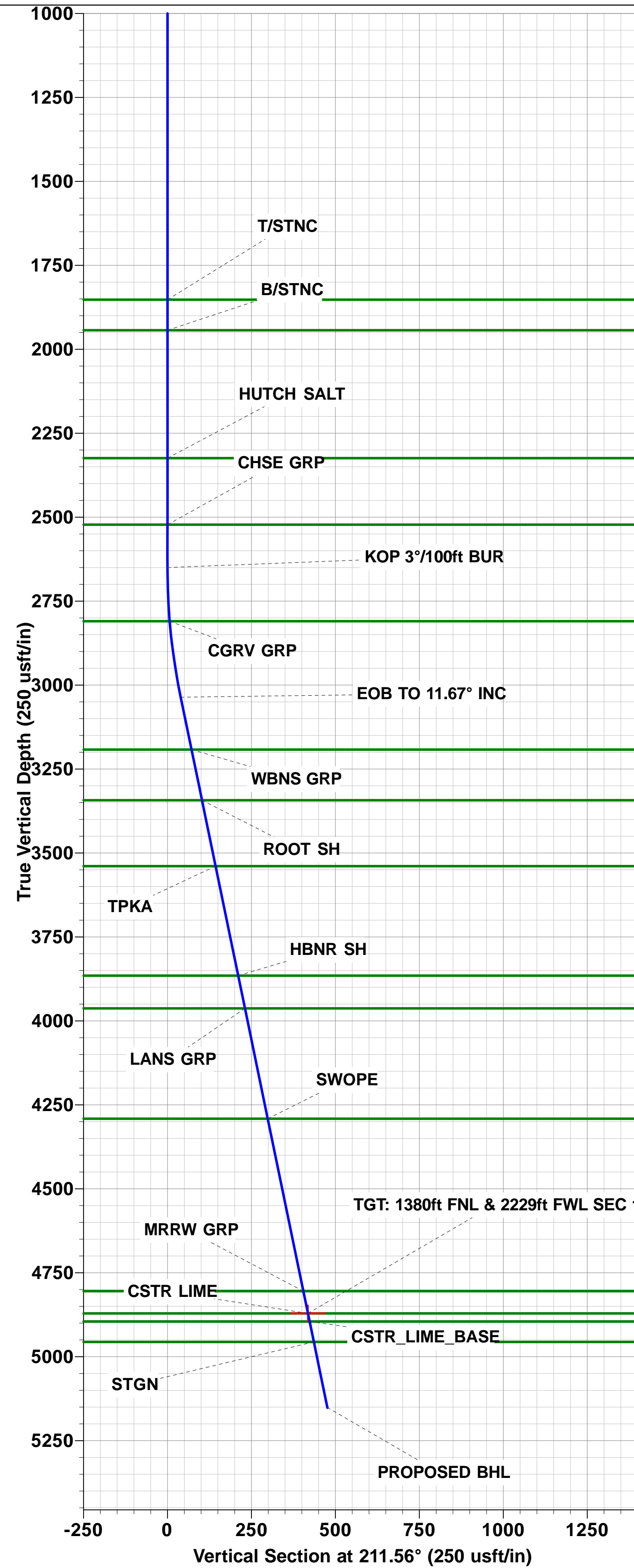
25 September, 2018

Plan: PROPOSAL #1



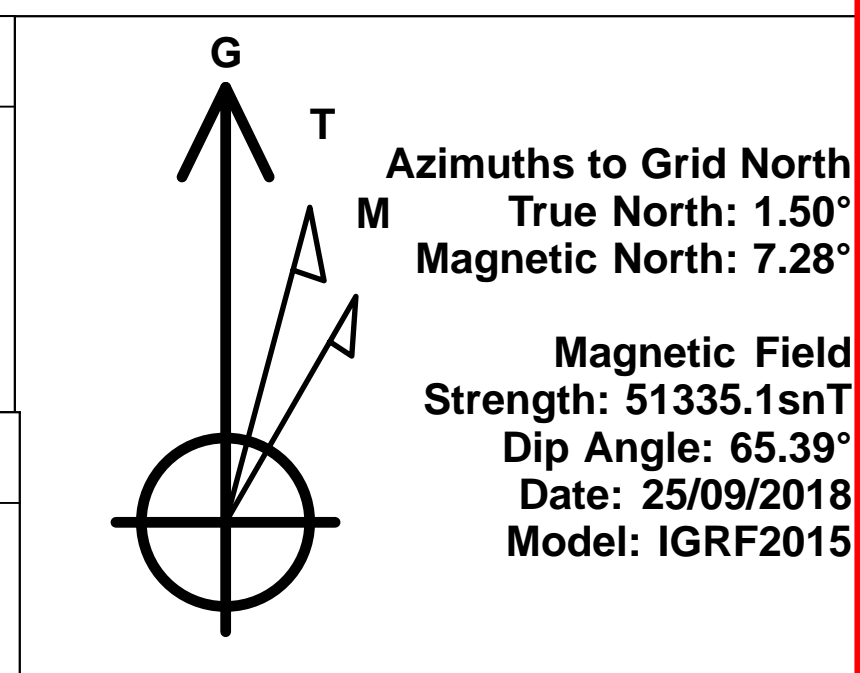


Project: FINNEY COUNTY, KANSAS (NAD27 - GRID)
Site: NW NW SEC. 16 T24S R33W 6th P.M.
Well: MAE 1-16
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #1

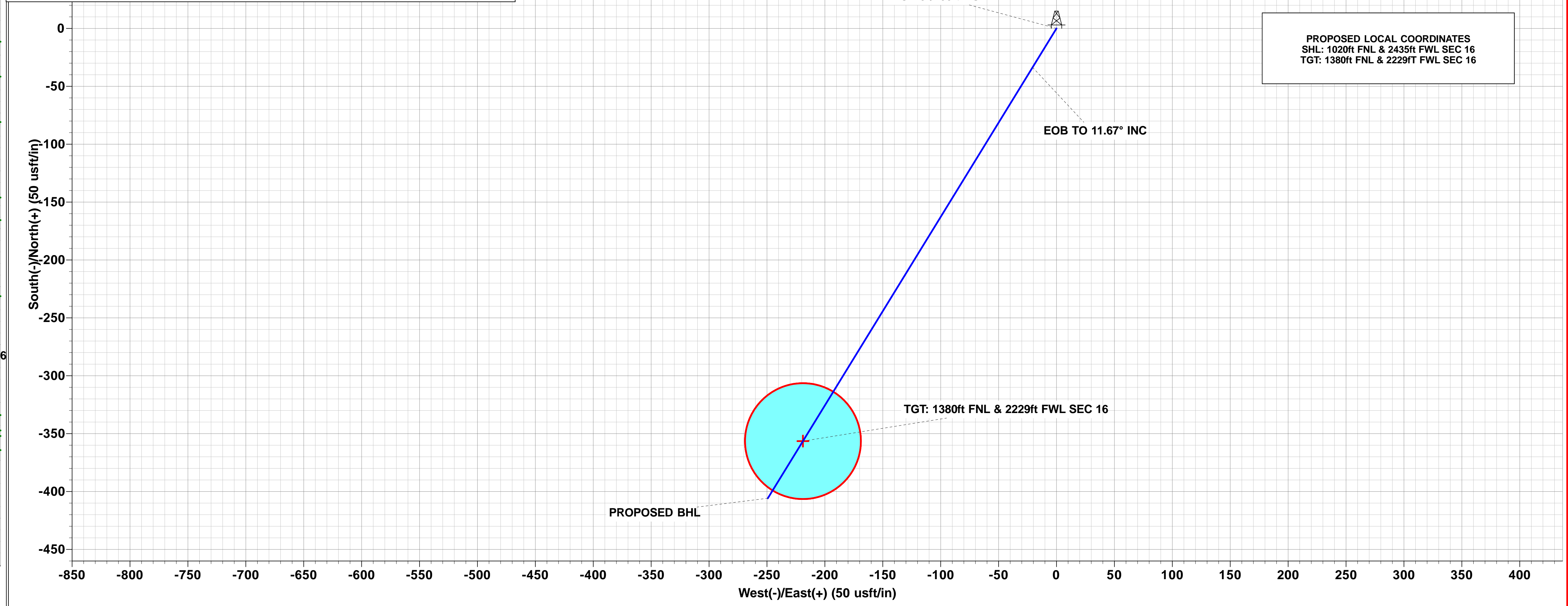


PROJECT DETAILS: FINNEY COUNTY, KANSAS (NAD27 - GRID)		
Geodetic System: US State Plane 1927 (Exact solution)		
Datum: NAD 1927 (NADCON CONUS)		
Ellipsoid: Clarke 1866		
Zone: Kansas South 1502		
Padsite: NW NW SEC. 16 T24S R33W 6th P.M.		
FORMATION TOP DETAILS		
TVDPATH	MDPATH	FORMATION
1852.41	1852.41	T/STNC
1943.25	1943.25	B/STNC
2324.46	2324.46	HUTCH SALT
2522.37	2522.37	CHSE GRP
2809.89	2810.08	CGRV GRP
3192.00	3197.97	WBNS GRP
3343.23	3352.39	ROOT SH
3539.46	3552.76	TPKA
3865.26	3885.43	HBNR SH
3962.76	3984.99	LANS GRP
4291.47	4320.63	SWOPE
4804.77	4844.76	MRRW GRP
4871.04	4912.42	CSTR LIME
4895.22	4937.11	CSTR_LIME_BASE
4956.06	4999.24	STGN

WELL DETAILS: MAE 1-16							
Ground Level: 2861.60							
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude		
0.00	0.00	484501.24	1294417.71	37.971854	-100.947988		
DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
TGT - MAE 1-16	4871.00	-356.43	-218.91	484144.83	1294198.81	37.970860	-100.948714



ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL: 1020ft FNL & 2435ft FWL SEC 16	
2650.00	2650.00	0.00	0.00	0.00	0.00	0.00	0.00	KOP 3°/100ft BUR	
3036.19	3038.87	11.67	211.56	-33.62	-20.65	39.45	39.45	EOB TO 11.67° INC	
4871.00	4912.38	11.67	211.56	-356.43	-218.91	418.29	418.29	TGT: 1380ft FNL & 2229ft FWL SEC 16	
5151.45	5198.75	11.67	211.56	-405.77	-249.22	476.20	476.20	PROPOSED BHL	



PROPOSED LOCAL COORDINATES
 SHL: 1020ft FNL & 2435ft FWL SEC 16
 TGT: 1380ft FNL & 2229ft FWL SEC 16

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well MAE 1-16
Company:	MERIT ENERGY COMPANY	TVD Reference:	KB 12' @ 2873.60usft
Project:	FINNEY COUNTY, KANSAS (NAD27 - GRID)	MD Reference:	KB 12' @ 2873.60usft
Site:	NW NW SEC. 16 T24S R33W 6th P.M.	North Reference:	Grid
Well:	MAE 1-16	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Project	FINNEY COUNTY, KANSAS (NAD27 - GRID)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Kansas South 1502		Using geodetic scale factor

Site	NW NW SEC. 16 T24S R33W 6th P.M.				
Site Position:		Northing:	484,501.24 usft	Latitude:	37.971854
From:	Map	Easting:	1,294,417.71 usft	Longitude:	-100.947988
Position Uncertainty:	0.00 usft	Slot Radius:	1.10000 ft	Grid Convergence:	-1.50 °

Well	MAE 1-16					
Well Position	+N/-S	0.00 usft	Northing:	484,501.24 usft	Latitude:	37.971854
	+E/-W	0.00 usft	Easting:	1,294,417.71 usft	Longitude:	-100.947988
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	2,861.60 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	25/09/2018	5.77	65.39	51,335

Design	PROPOSAL #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	4,871.00	0.00	0.00	211.56

Plan Sections											
MD (usft)	Inc (°)	Azi (°)	Vertical Depth	SS (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	-2,873.60	0.00	0.00	0.00	0.00	0.00	0.00	
2,650.00	0.00	0.00	2,650.00	-223.60	0.00	0.00	0.00	0.00	0.00	0.00	
3,038.87	11.67	211.56	3,036.19	162.59	-33.62	-20.65	3.00	3.00	0.00	211.56	
4,912.38	11.67	211.56	4,871.00	1,997.40	-356.43	-218.91	0.00	0.00	0.00	0.00	TGT - MAE 1-16
5,198.75	11.67	211.56	5,151.45	2,277.85	-405.77	-249.22	0.00	0.00	0.00	0.00	



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well MAE 1-16
Company:	MERIT ENERGY COMPANY	TVD Reference:	KB 12' @ 2873.60usft
Project:	FINNEY COUNTY, KANSAS (NAD27 - GRID)	MD Reference:	KB 12' @ 2873.60usft
Site:	NW NW SEC. 16 T24S R33W 6th P.M.	North Reference:	Grid
Well:	MAE 1-16	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Planned Survey										
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
SHL: 1020ft FNL & 2435ft FWL SEC 16										
0.00	0.00	0.00	0.00	2,873.60	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	2,773.60	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	2,673.60	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	2,573.60	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	2,473.60	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	2,373.60	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	2,273.60	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	2,173.60	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	2,073.60	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	1,973.60	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	1,873.60	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	1,773.60	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	1,673.60	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	1,573.60	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	1,473.60	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	1,373.60	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	1,273.60	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	1,173.60	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	1,073.60	0.00	0.00	0.00	0.00	0.00	0.00
T/STNC										
1,852.41	0.00	0.00	1,852.41	1,021.19	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	973.60	0.00	0.00	0.00	0.00	0.00	0.00
B/STNC										
1,943.25	0.00	0.00	1,943.25	930.35	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	873.60	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	773.60	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	673.60	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	573.60	0.00	0.00	0.00	0.00	0.00	0.00
HUTCH SALT										
2,324.46	0.00	0.00	2,324.46	549.14	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	473.60	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	373.60	0.00	0.00	0.00	0.00	0.00	0.00
CHSE GRP										
2,522.37	0.00	0.00	2,522.37	351.23	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	273.60	0.00	0.00	0.00	0.00	0.00	0.00
KOP 3°/100ft BUR										
2,650.00	0.00	0.00	2,650.00	223.60	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	1.50	211.56	2,699.99	173.61	-0.56	-0.34	0.65	3.00	3.00	0.00
2,800.00	4.50	211.56	2,799.85	73.75	-5.02	-3.08	5.89	3.00	3.00	0.00
CGRV GRP										
2,810.08	4.80	211.56	2,809.89	63.71	-5.71	-3.51	6.70	3.00	3.00	0.00
2,900.00	7.50	211.56	2,899.29	-25.69	-13.92	-8.55	16.34	3.00	3.00	0.00
3,000.00	10.50	211.56	2,998.04	-124.44	-27.25	-16.74	31.98	3.00	3.00	0.00
EOB TO 11.67° INC										
3,038.87	11.67	211.56	3,036.19	-162.59	-33.62	-20.65	39.45	3.00	3.00	0.00
3,100.00	11.67	211.56	3,096.06	-222.46	-44.15	-27.12	51.81	0.00	0.00	0.00
WBNS GRP										
3,197.97	11.67	211.56	3,192.00	-318.40	-61.03	-37.48	71.62	0.00	0.00	0.00
3,200.00	11.67	211.56	3,193.99	-320.39	-61.38	-37.70	72.03	0.00	0.00	0.00
3,300.00	11.67	211.56	3,291.92	-418.32	-78.61	-48.28	92.26	0.00	0.00	0.00
ROOT SH										
3,352.39	11.67	211.56	3,343.23	-469.63	-87.64	-53.83	102.85	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well MAE 1-16
Company:	MERIT ENERGY COMPANY	TVD Reference:	KB 12' @ 2873.60usft
Project:	FINNEY COUNTY, KANSAS (NAD27 - GRID)	MD Reference:	KB 12' @ 2873.60usft
Site:	NW NW SEC. 16 T24S R33W 6th P.M.	North Reference:	Grid
Well:	MAE 1-16	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Planned Survey										
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,400.00	11.67	211.56	3,389.86	-516.26	-95.84	-58.86	112.48	0.00	0.00	0.00
3,500.00	11.67	211.56	3,487.79	-614.19	-113.07	-69.45	132.70	0.00	0.00	0.00
TPKA										
3,552.76	11.67	211.56	3,539.46	-665.86	-122.16	-75.03	143.36	0.00	0.00	0.00
3,600.00	11.67	211.56	3,585.73	-712.13	-130.30	-80.03	152.92	0.00	0.00	0.00
3,700.00	11.67	211.56	3,683.66	-810.06	-147.53	-90.61	173.14	0.00	0.00	0.00
3,800.00	11.67	211.56	3,781.60	-908.00	-164.76	-101.19	193.36	0.00	0.00	0.00
HBNR SH										
3,885.43	11.67	211.56	3,865.26	-991.66	-179.48	-110.24	210.63	0.00	0.00	0.00
3,900.00	11.67	211.56	3,879.53	-1,005.93	-181.99	-111.78	213.58	0.00	0.00	0.00
LANS GRP										
3,984.99	11.67	211.56	3,962.76	-1,089.16	-196.64	-120.77	230.76	0.00	0.00	0.00
4,000.00	11.67	211.56	3,977.46	-1,103.86	-199.23	-122.36	233.80	0.00	0.00	0.00
4,100.00	11.67	211.56	4,075.40	-1,201.80	-216.46	-132.94	254.02	0.00	0.00	0.00
4,200.00	11.67	211.56	4,173.33	-1,299.73	-233.69	-143.53	274.24	0.00	0.00	0.00
4,300.00	11.67	211.56	4,271.27	-1,397.67	-250.92	-154.11	294.46	0.00	0.00	0.00
SWOPE										
4,320.63	11.67	211.56	4,291.47	-1,417.87	-254.47	-156.29	298.63	0.00	0.00	0.00
4,400.00	11.67	211.56	4,369.20	-1,495.60	-268.15	-164.69	314.68	0.00	0.00	0.00
4,500.00	11.67	211.56	4,467.14	-1,593.54	-285.38	-175.27	334.90	0.00	0.00	0.00
4,600.00	11.67	211.56	4,565.07	-1,691.47	-302.61	-185.86	355.13	0.00	0.00	0.00
4,700.00	11.67	211.56	4,663.00	-1,789.40	-319.84	-196.44	375.35	0.00	0.00	0.00
4,800.00	11.67	211.56	4,760.94	-1,887.34	-337.07	-207.02	395.57	0.00	0.00	0.00
MRRW GRP										
4,844.76	11.67	211.56	4,804.77	-1,931.17	-344.78	-211.76	404.62	0.00	0.00	0.00
4,900.00	11.67	211.56	4,858.87	-1,985.27	-354.30	-217.60	415.79	0.00	0.00	0.00
TGT: 1380ft FNL & 2229ft FWL SEC 16										
4,912.38	11.67	211.56	4,871.00	-1,997.40	-356.43	-218.91	418.29	0.00	0.00	0.00
CSTR LIME										
4,912.42	11.67	211.56	4,871.04	-1,997.44	-356.44	-218.92	418.30	0.00	0.00	0.00
CSTR_LIME_BASE										
4,937.11	11.67	211.56	4,895.22	-2,021.62	-360.69	-221.53	423.29	0.00	0.00	0.00
STGN										
4,999.24	11.67	211.56	4,956.06	-2,082.46	-371.40	-228.11	435.85	0.00	0.00	0.00
5,000.00	11.67	211.56	4,956.81	-2,083.21	-371.53	-228.19	436.01	0.00	0.00	0.00
5,100.00	11.67	211.56	5,054.74	-2,181.14	-388.76	-238.77	456.23	0.00	0.00	0.00
PROPOSED BHL										
5,198.75	11.67	211.56	5,151.45	-2,277.85	-405.77	-249.22	476.20	0.00	0.00	0.00



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well MAE 1-16
Company:	MERIT ENERGY COMPANY	TVD Reference:	KB 12' @ 2873.60usft
Project:	FINNEY COUNTY, KANSAS (NAD27 - GRID)	MD Reference:	KB 12' @ 2873.60usft
Site:	NW NW SEC. 16 T24S R33W 6th P.M.	North Reference:	Grid
Well:	MAE 1-16	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,852.41	1,852.41	T/STNC				
1,943.25	1,943.25	B/STNC				
2,324.46	2,324.46	HUTCH SALT				
2,522.37	2,522.37	CHSE GRP				
2,810.08	2,809.89	CGRV GRP				
3,197.97	3,192.00	WBNS GRP				
3,352.39	3,343.23	ROOT SH				
3,552.76	3,539.46	TPKA				
3,885.43	3,865.26	HBNR SH				
3,984.99	3,962.76	LANS GRP				
4,320.63	4,291.47	SWOPE				
4,844.76	4,804.77	MRRW GRP				
4,912.42	4,871.04	CSTR LIME				
4,937.11	4,895.22	CSTR_LIME_BASE				
4,999.24	4,956.06	STGN				

Plan Annotations					
MD (usft)	TVD (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
0.00	0.00	0.00	0.00	SHL: 1020ft FNL & 2435ft FWL SEC 16	
2,650.00	2,650.00	0.00	0.00	KOP 3°/100ft BUR	
3,038.87	3,036.19	-33.62	-20.65	EOB TO 11.67° INC	
4,912.38	4,871.00	-356.43	-218.91	TGT: 1380ft FNL & 2229ft FWL SEC 16	
5,198.75	5,151.45	-405.77	-249.22	PROPOSED BHL	



PAGE	CUST NO	YARD #	INVOICE DATE
1 of 1	1002716	1718	10/10/2018
INVOICE NUMBER			
92821917			

Pratt (620) 672-1201
 B MERIT ENERGY
 I PO BOX 250
 L HOLCOMB
 L KS US 67851
 T
 O ATTN: ALISHA

J LEASE NAME Mae 1-16
 O LOCATION
 B COUNTY Finney
 S STATE KS
 I JOB DESCRIPTION Cement-New Well Casing/Pi JOB
 T
 E CONTACT **Conductor Cement**

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
41138391	19919		Net - 30 days	11/09/2018

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
For Service Dates: 10/05/2018 to 10/05/2018				
0041138391				
171815954L Cement-New Well Casing/Pi 10/05/2018 Cement Conductor Casing/AFE#62182				
Premium Plus Cement	180.00	EA	12.23	2,201.40 T
Calcium Chloride	510.00	LB	0.79	402.90 T
Celloflake	90.00	LB	2.78	250.20 T
"Unit Mileage Chg (PU, cars one way)"	80.00	MI	3.38	270.40
Heavy Equipment Mileage	160.00	MI	5.63	900.80
Proppant & Bulk Del. Chgs., per ton mil	680.00	EA	1.88	1,278.40
Blending & Mixing Service Charge	180.00	SK	1.05	189.00
Plug Container Utilization Charge	1.00	EA	187.50	187.50
Cement Data Acquisition Monitor	1.00	EA	412.50	412.50
Depth Charge; 0-500'	1.00	EA	750.00	750.00
"Service Supervisor, first 8 hrs on loc.	1.00	EA	131.25	131.25
Additional Discount Per Agreement	1.00	EA	697.44	697.44

PLEASE REMIT TO:	SEND OTHER CORRESPONDENCE TO:	SUB TOTAL	6,276.91
BASIC ENERGY SERVICES, LP	BASIC ENERGY SERVICES, LP	TAX	226.93
PO BOX 841903	801 CHERRY ST, STE 2100	INVOICE TOTAL	6,503.84
DALLAS, TX 75284-1903	FORT WORTH, TX 76102		



1700 S. Country Estates Road
 Liberal, KS 67901
 PH (620)-624-2277 FAX (620) 624-2280

SERVICE ORDER - 1718 15954 L

0041138391

Date: 10/5/2018

TTL MHR 23.5

Well Name: Mae 1-16 Location: 16,24,33
 County - State: Finney, Ks RRC #: 19919-3
 Type Of Service: Z42 - Cement Conductor Casing Customer's Order #: 1002716-2007689

Customer: Merit Energy

Address: P.O. Box 250
 Holcomb Ks 67851
 AFE# 62182

gardencityinvoices@meritenergy.com

As a consideration, the above named Customer agrees to pay Basic Energy Services in accord with the rates and terms stated in Basic Energy Services current price lists. Invoices are payable NET 30 (SEE 10.2) after date of Invoice. Upon Customer's default in payment of Customers account by such date, Customer agrees to pay interest thereon after default at 18% per annum. In the event it becomes necessary to employ an attorney to enforce collection of said account, Customer agrees to pay all the collection costs and attorney fees. These terms and conditions shall be governed by the laws of the state where services are performed or equipment or materials are furnished.

Basic Energy Services, warrants only title to the products, supplies and materials and that the same are free from defects in workmanship. THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE WHICH EXTEND BEYOND THOSE STATED IN THE IMMEDIATELY PRECEDING SENTENCE. Basic Energy Services, liability and Customer's exclusive remedy in any cause of action (whether in contract, tort, product liability, breach of warranty or otherwise) arising out of the sale or use of any products, supplies, or materials upon their return to Basic Energy Services, is expressly limited to the replacement of such products, supplies or materials or, at Basic Energy Services, option, to the allowance to the Customer of credit for the cost of such items. In no event shall Basic Energy Services be liable for special, indirect, punitive or consequential damages.

CODE	QTY	UOM	DESCRIPTION	PRICE	TOTAL
CL110	180	Sk	Premium Plus Cement	16.30	2934.00
CC109	510	Lb	Calcium Chloride	1.05	535.50
CC102	90	Lb	Celloflake	3.70	333.00
E101	160	Mi	Heavy Equipment Mileage	7.50	1200.00
CE240	180	Sk	Blending & Mixing Service Charge	1.40	252.00
E113	680	Tn/Mi	Proppant and Bulk Delivery Charges, per ton mile	2.50	1700.00
CE200	1	4 Hrs	Depth Charge; 0-500'	1000.00	1000.00
CE504	1	Job	Plug Container Utilization Charge	250.00	250.00
E100	80	Mi	Unit Mileage Charge-Pickups, Small Vans & Cars (one way)	4.50	360.00
S003	1	Ea	Service Supervisor, first 8 hrs on loc.	175.00	175.00
T105	1	Ea	Cement Data Acquisition Monitor / Strip Chart Recorder	550.00	550.00

Well Mae 1-16
 AFE 62182
 GL 83001075
 Office Garden City
 Date 10-5-18

Book Total: \$9,289.50
 Taxes:
 Disc. Price: \$6,974.35
 10% Disc \$697.44
 Adjusted Price \$6,276.91

Additional 10% Discount as per Agreement on Cement Services

PUMP TRUCK NUMBER: 38117, 19919

DRIVER: Angel Echevarria
Daniel Beuk
 BASIC ENERGY SERVICES

THIS JOB WAS SATISFACTORILY COMPLETED
 OPERATION OF EQUIPMENT WAS SATISFACTORY
 PERFORMANCE OF PERSONNEL WAS SATISFACTORY

YES NO

[Signature]
 CUSTOMER OR HIS AGENT

TD

Customer Comments or Concerns:
Good Job!

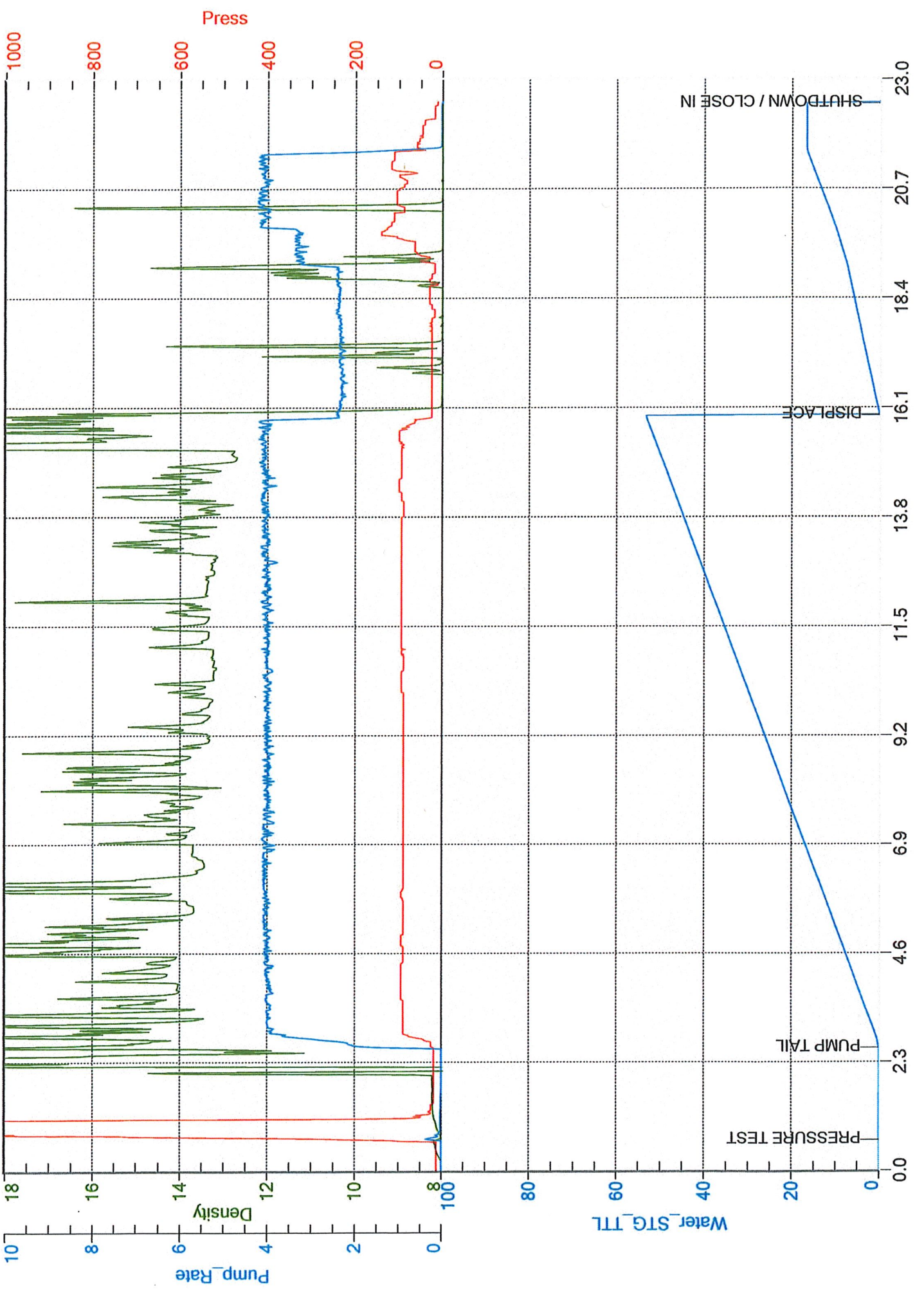


Liberal Yard #1717 - Phone 620-624-2277 - 1700 S. Country Estates Road, Liberal KS 67901

PRESSURE PUMPING Job Log

Customer:	Merit Energy		Cement Pump No.:	38117, 19919 Hrs.		Operator TRK No.:	96816	
Address:			Ticket #:	1718 15954 L		Bulk TRK No.:	30463, 37547	Oscar
City, State, Zip:	AFE# 62182		Job Type:	Z42 - Cement Conductor Casing				
Service District:	1718 - Liberal, Ks.		Well Type:	OIL				
Well Name and No.:	Mae 1-16		Well Location:	16,24,33	County:	Finney	State:	Ks
Type of Cmt	Sacks	Additives			Truck Loaded On			
Premium Plus Cement	180	3% Calcium Chloride, 1/2# Celloflake			30463, 37547 Oscar		Front	Back
							Front	Back
							Front	Back
Lead/Tail:	Weight #1 Gal.	Cu/Ft/sk	Water Requirements		CU. FT.	Man Hours / Personnel		
Tail:	14.8	1.36	6.34		244.8	TT Man Hours:	23.5	
						# of Men on Job:	3	
Time (am/pm)	(BPM)	Volume (BBLS)	Pumps		Pressure(PSI)		Description of Operation and Materials	
			T	C	Tubing	Casing		
0:15							ON LOCATION	
0:20							SAFETY MEETING	
12:30 AM							RIG UP	
12:45 AM							RIG TO CIRCULATE	
1:12 AM							RIG TO P.T.	
1:14 AM							PRESSURE TEST TO 1040PSI	
1:16	4	43.5 slurry				90	PUMP 180SX TAIL @ 14.8# SET @119	
	4.1	10				120	DISPLACE / CEMENT RETURNS	
1:35 AM	4	15.6				120	SHUTDOWN / CLOSE IN	
1:36							RELEASE BACK	
							JOB COMPLETE	
Size Hole	17 1/2"	Depth			TYPE		Swage	
Size & Wt. Csg.	13 3/8" 48#	Depth	119.75'	New / Used	Packer		Depth	
Landing Press.	33.4psi	Depth			Retainer		Depth	
Cement Left In C.	20'	Type			Perfs		CIBP	
Customer Signature:					Basic Representative:		Daniel Beck	
					Basic Signature:			
					Date of Service:		10/5/2018	

Merit Energy Mae #1-16





PAGE	CUST NO	YARD #	INVOICE DATE
1 of 1	1002716	1718	10/11/2018
INVOICE NUMBER			
92822717			

Pratt (620) 672-1201
 B MERIT ENERGY
 I PO BOX 250
 L HOLCOMB
 L KS US 67851
 T
 O ATTN: ALISHA

J LEASE NAME Mae 1-16
 O LOCATION
 B COUNTY Finney
 S STATE KS
 I JOB DESCRIPTION Cement-New Well Casing/Pi
 T
 E JOB CONTACT

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
41138550	19570		Net - 30 days	11/10/2018

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
<i>For Service Dates: 10/06/2018 to 10/06/2018</i>				
0041138550				
171815985L Cement-New Well Casing/Pi 10/06/2018				
Cement Surface Casing/AFE#62182				
A-Con' Blend	500.00	EA	13.95	6,975.00 T
Premium Plus Cement	165.00	EA	12.23	2,017.95 T
Celloflake	333.00	LB	2.78	925.74 T
Calcium Chloride	1,722.00	LB	0.79	1,360.38 T
Guide Shoe - Regular, 8 5/8" (Blue)	1.00	EA	380.00	380.00
Flapper Type Insert Float Valves. 8 5/8"	1.00	EA	280.00	280.00
Centralizer, 8 5/8" (Blue)	6.00	EA	90.00	540.00
Top Rubber Cement Plug, 8 5/8"	1.00	EA	225.00	225.00
Cement Data Acquisition Monitor	1.00	EA	412.50	412.50
"Unit Mileage Chg (PU, cars one way)"	80.00	MI	3.38	270.40
Heavy Equipment Mileage	240.00	MI	5.63	1,351.20
Proppant & Bulk Del. Chgs., per ton mil	2,504.00	EA	1.88	4,707.52
Blending & Mixing Service Charge	665.00	SK	1.05	698.25
Plug Container Utilization Charge	1.00	EA	187.50	187.50
Depth Charge; 1001'-2000'	1.00	EA	1,125.00	1,125.00
Cement Pumper, Additional on Location	2.00	HR	375.00	750.00
"Service Supervisor, first 8 hrs on loc.	1.00	EA	131.25	131.25
Additional Discount Per Agreement	1.00	EA	2,233.77-	2,233.77-

PLEASE REMIT TO:	SEND OTHER CORRESPONDENCE TO:	SUB TOTAL	20,103.92
BASIC ENERGY SERVICES, LP	BASIC ENERGY SERVICES, LP	TAX	896.69
PO BOX 841903	801 CHERRY ST, STE 2100	INVOICE TOTAL	21,000.61
DALLAS, TX 75284-1903	FORT WORTH, TX 76102		



Liberal Yard #1717 - Phone 620-624-2277 - 1700 S. Country Estates Road, Liberal KS 67901

PRESSURE PUMPING Job Log

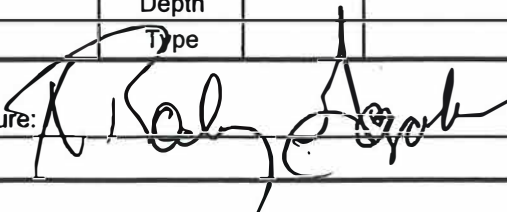
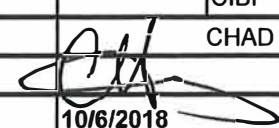
Customer:	Merit Energy	Cement Pump No.:	38119-19570 10 HRS	Operator TRK No.:	96815
Address:		Ticket #:	1718-15985 L	Bulk TRK No.:	70897-37725 19827-19808
City, State, Zip:	AFE# 62182	Job Type:	Z42 - Cement Surface Casing		
Service District:		Well Type:	OIL		
Well Name and No.:	MAE 1-16	Well Location:	16,24,33	County:	Finney State: Ks

Type of Cmt	Sacks	Additives	Truck Loaded On		
A-CON	500	3%CaCl, 1/2#POLYFLAKE	70897-37725	Front	Back
PREMIUM PLUS	165	2%CaCl, 1/2#POLYFLAKE	19827-19808	Front	Back
				Front	Back

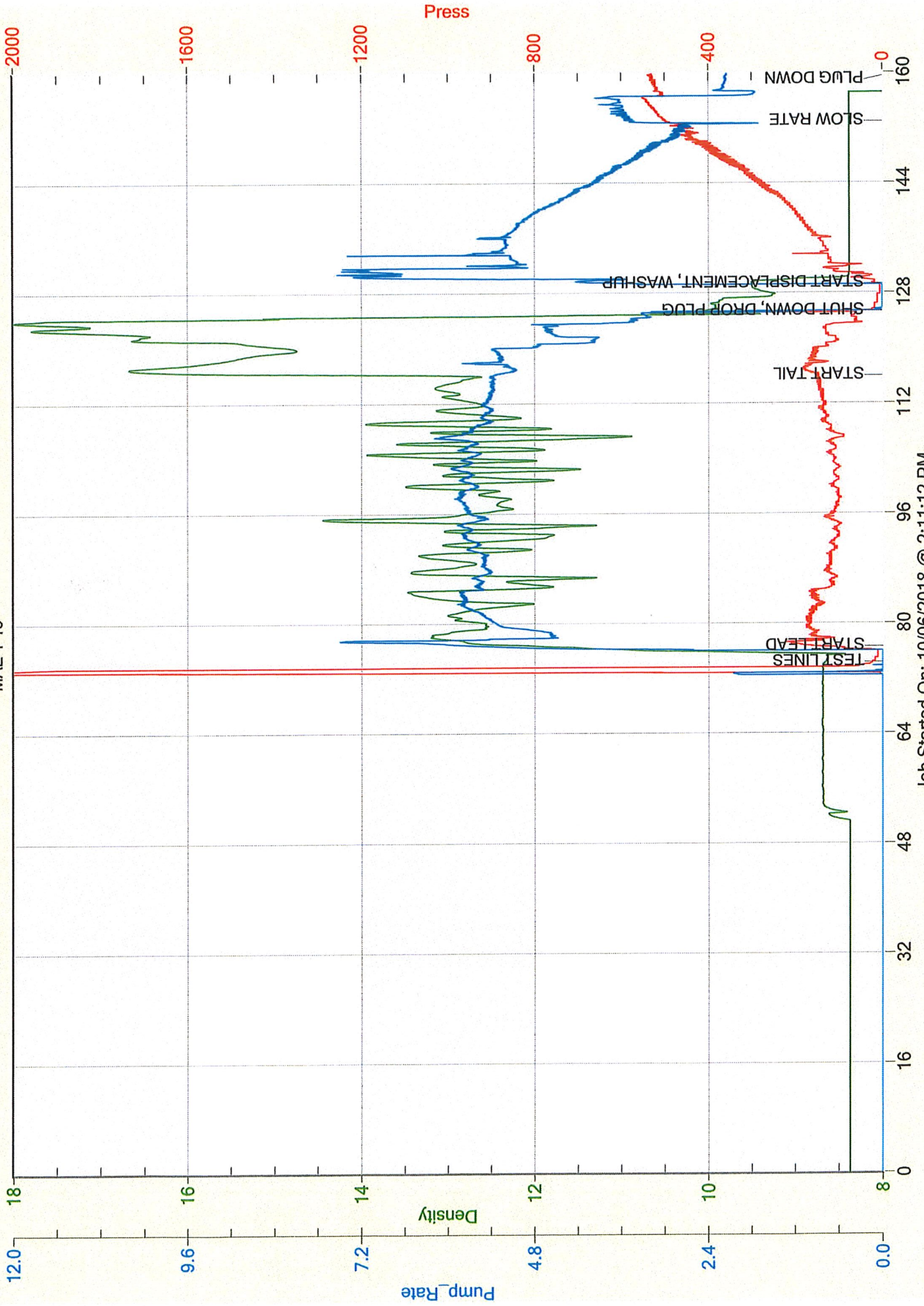
Lead/Tail:	Weight #1 Gal.	Cu/Ft/sk	Water Requirements	CU. FT.	Man Hours / Personnel	
Lead:	12.1	2.41	14	1205	Man Hours:	50
Tail:	14.8	1.34	6.32	221.1	# of Men on Job:	4

Time (am/pm)	(BPM)	Volume (BBLs)	Pumps		Pressure(PSI)		Description of Operation and Materials
			T	C	Tubing	Casing	
7:00							ON LOC, SAFTEY MTG, R.U.
15:23						2300	TEST LINES
3:26 PM	5					160	START LEAD @ 12.1#
4:06 PM	5.4	214.5				150	ON TAIL @14.8#
4:18 PM		40					SHUT DOWN, DROP PLUG
16:19	5					80	START DISPLACEMENT, WASHUP
16:47	2.3	100				510	SLOW RATE
4:52 PM		111				520-1050	PLUG DOWN
16:55							RELEASE PSI, FLOAT HELD
							JOB COMPLETE
							Set surface casing @ 1782

Size Hole	12 1/4	Depth	1783'		TYPE	
Size & Wt. Csg.	8 5/8 24	Depth	1783'	New / Used	Packer	Depth
tbg.		Depth			Retainer	Depth
Top Plugs		Type			Perfs	CIBP

Customer Signature:  Basic Representative: CHAD HINZ
 Basic Signature: 
 Date of Service: 10/6/2018

MERIT
MAE 1-16



Job Started On: 10/06/2018 @ 2:11:12 PM