

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	DRUSSEL A 9
Doc ID	1459234

All Electric Logs Run

ANNULAR HOLE VOLUME LOG 5 CASING
ARRAY COMPENSATED TRUE RESISTIVITY LOG 1
ARRAY COMPENSATED TRUE RESISTIVITY LOG 2
ARRAY COMPENSATED TRUE RESISTIVITY LOG 5
ARRAY TRUE RESISTIVITY SPECTRAL DENSITY DUAL SPACED NEUTRON SONIC QUAD COMBO LOG
BOREHOLE SONIC ARRAY LOG
MICROLOG

Form	ACO1 - Well Completion
Operator	Merit Energy Company, LLC
Well Name	DRUSSEL A 9
Doc ID	1459234

Tops

Name	Top	Datum
ST CORRAL	1820	
HUTCHINSON SALT	2322	
COUNCIL GROVE	3015	
HEEBNER	3888	
MARMATON	4508	
MORROW	4847	
CHESTER	4950	
ST GEN	5056	



Merit Energy

Finney County, KS (NAD 27)

Drussel

Drussel A-9

Drussel A-9

Plan: Design #4

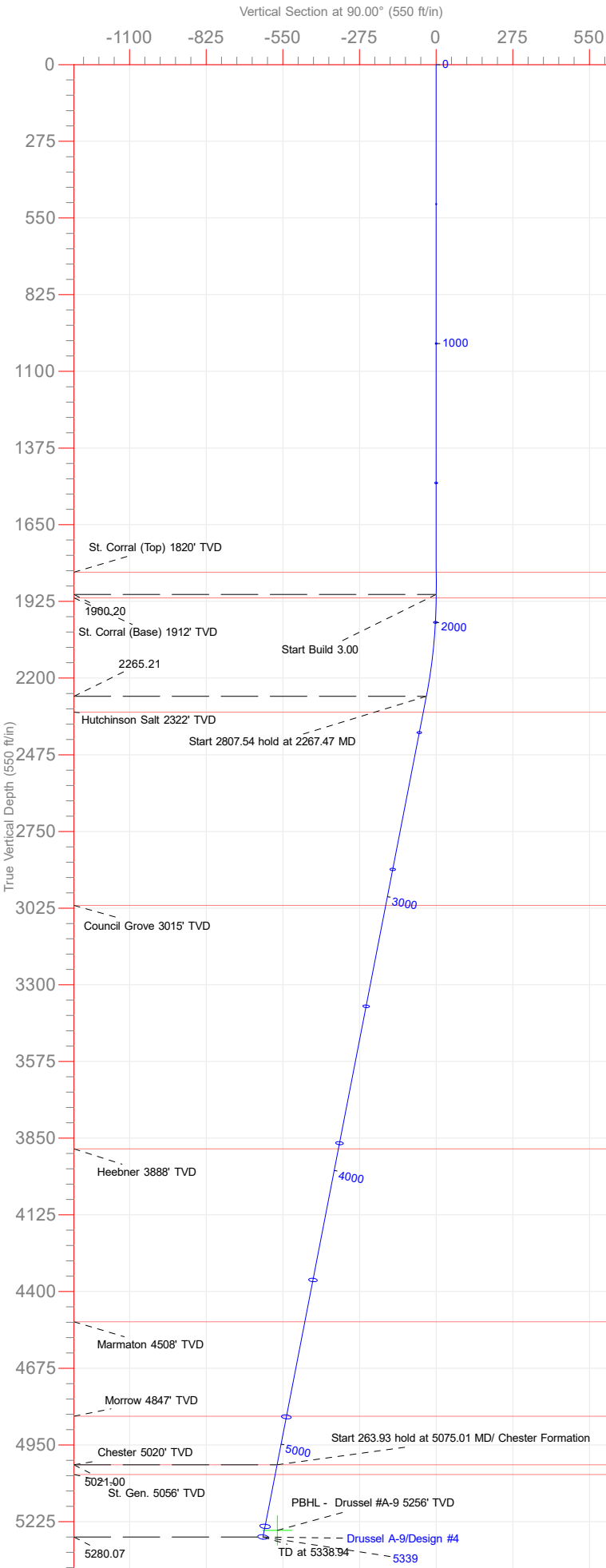
Standard Planning Report

10 March, 2019

gyro/data

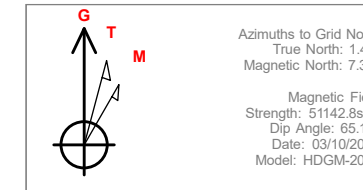
A thick red horizontal bar located at the bottom of the page, underlining the 'gyro/data' logo.

Plan: Design #4 (Drussel A-9/Drussel A-9)
 Duke #9 @ 2918.00ft (Duke #9 (2906 GE + 12 KB = 2918))



FORMATION TOPS ALONG WELLPATH			
TVDPath	MDPath	Formation	
1820.00	1820.00	St. Corral (Top)	
1912.00	1912.00	St. Corral (Base)	
2322.00	2325.33	Hutchinson Salt	
3015.01	3031.35	Council Grove	
3888.01	3920.74	Heebner	
4508.01	4552.39	Marmaton	
4847.01	4897.75	Morrow	
5021.00	5075.01	Chester	
5056.01	5110.68	St. Gen.	

CASING DETAILS	
No casing data is available	
Notice: Casing Depths are Estimates Only	

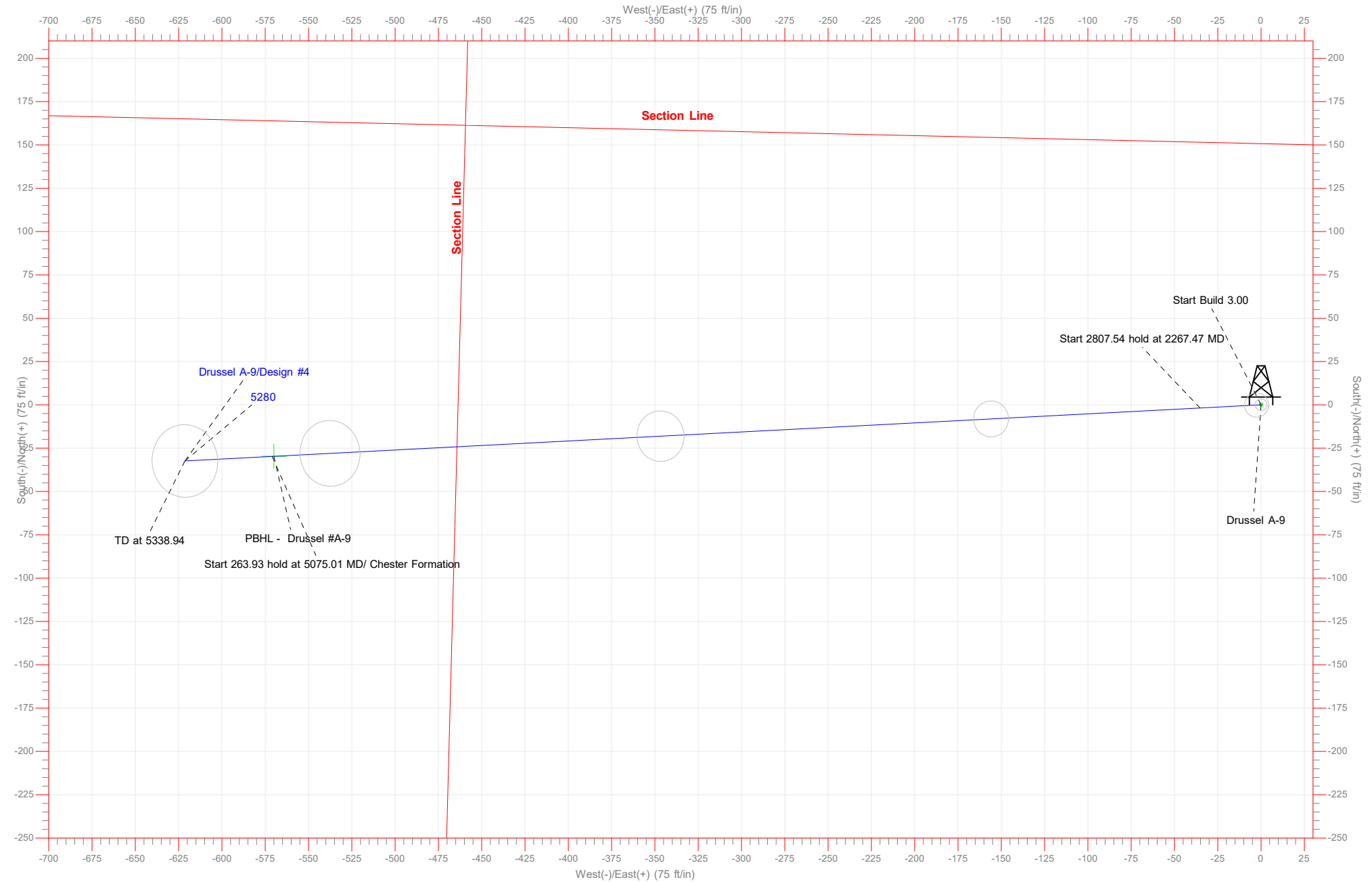


PROJECT DETAILS: Finney County, KS (NAD 27)			
Geodetic System: US State Plane 1927 (Exact solution)			
Datum: NAD 1927 (NADCON CONUS)			
Ellipsoid: Clarke 1866			
Zone: Kansas South 1502			
North Reference: Grid			
System Datum: Mean Sea Level			
To convert a Magnetic Direction to a Grid Direction, Add 7.33°			
To convert a Magnetic Direction to a True Direction, Add 5.84° East			
To convert a True Direction to a Grid Direction, Add 1.49°			

WELLBORE TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL - Drussel #A-9	5256.00	-29.70	-570.01	440316.27	1298669.68	Point

SECTION DETAILS											
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSect	Target	
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2	1900.20	0.00	0.00	1900.20	0.00	0.00	0.00	0.00	0.00		
3	2267.47	11.02	267.02	2265.21	-1.83	-35.16	3.00	267.02	-1.83	PBHL - Drussel #A-9	
4	5075.01	11.02	267.02	5021.00	-29.75	-571.00	0.00	0.00	-29.75		
5	5338.94	11.02	267.02	5280.07	-32.38	-621.37	0.00	0.00	-32.38		

Notice: Section Lines and Hardlines are estimates only and are subject to customer approval



Database:	Gyrodata NWDB	Local Co-ordinate Reference:	Well Drussel A-9
Company:	Merit Energy	TVD Reference:	Duke #9 @ 2918.00ft (Duke #9 (2906 GE + 12 KB = 2918))
Project:	Finney County, KS (NAD 27)	MD Reference:	Duke #9 @ 2918.00ft (Duke #9 (2906 GE + 12 KB = 2918))
Site:	Drussel	North Reference:	Grid
Well:	Drussel A-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Drussel A-9		
Design:	Design #4		

Project	Finney County, KS (NAD 27)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Kansas South 1502		

Site	Drussel				
Site Position:		Northing:	440,345.97 ft	Latitude:	37° 51' 3.508 N
From:	Map	Easting:	1,299,239.69 ft	Longitude:	100° 55' 38.234 W
Position Uncertainty:	0.00 ft	Slot Radius:	1.10 ft	Grid Convergence:	-1.49 °

Well	Drussel A-9					
Well Position	+N/-S	0.00 ft	Northing:	440,345.97 ft	Latitude:	37° 51' 3.508 N
	+E/-W	0.00 ft	Easting:	1,299,239.69 ft	Longitude:	100° 55' 38.234 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	2,906.00 ft

Wellbore	Drussel A-9				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM-2019	03/10/19	5.84	65.13	51,142.76837637

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

Plan Survey Tool Program	Date	03/10/19		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	5,338.87	Design #4 (Drussel A-9)	MWD+HDGM OWSG MWD + HDGM

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,900.20	0.00	0.00	1,900.20	0.00	0.00	0.00	0.00	0.00	0.00	
2,267.47	11.02	267.02	2,265.21	-1.83	-35.16	3.00	3.00	0.00	267.02	PBHL - Drussel #A
5,075.01	11.02	267.02	5,021.00	-29.75	-571.00	0.00	0.00	0.00	0.00	
5,338.94	11.02	267.02	5,280.07	-32.38	-621.37	0.00	0.00	0.00	0.00	

Database:	Gyrodata NWDB	Local Co-ordinate Reference:	Well Drussel A-9
Company:	Merit Energy	TVD Reference:	Duke #9 @ 2918.00ft (Duke #9 (2906 GE + 12 KB = 2918))
Project:	Finney County, KS (NAD 27)	MD Reference:	Duke #9 @ 2918.00ft (Duke #9 (2906 GE + 12 KB = 2918))
Site:	Drussel	North Reference:	Grid
Well:	Drussel A-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Drussel A-9		
Design:	Design #4		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-/S (ft)	+E-/W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,820.00	0.00	0.00	1,820.00	0.00	0.00	0.00	0.00	0.00	0.00
St. Corral (Top)									
1,900.20	0.00	0.00	1,900.20	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 3.00									
1,912.00	0.35	267.02	1,912.00	0.00	-0.04	0.00	3.00	3.00	0.00
St. Corral (Base)									
2,000.00	2.99	267.02	1,999.95	-0.14	-2.60	-0.14	3.00	3.00	0.00
2,100.00	5.99	267.02	2,099.64	-0.54	-10.43	-0.54	3.00	3.00	0.00
2,200.00	8.99	267.02	2,198.77	-1.22	-23.45	-1.22	3.00	3.00	0.00
2,267.47	11.02	267.02	2,265.21	-1.83	-35.16	-1.83	3.00	3.00	0.00
Start 2807.54 hold at 2267.47 MD									
2,300.00	11.02	267.02	2,297.14	-2.16	-41.37	-2.16	0.00	0.00	0.00
2,325.33	11.02	267.02	2,322.00	-2.41	-46.20	-2.41	0.00	0.00	0.00
Hutchinson Salt									
2,400.00	11.02	267.02	2,395.30	-3.15	-60.45	-3.15	0.00	0.00	0.00
2,500.00	11.02	267.02	2,493.45	-4.14	-79.54	-4.14	0.00	0.00	0.00
2,600.00	11.02	267.02	2,591.61	-5.14	-98.62	-5.14	0.00	0.00	0.00
2,700.00	11.02	267.02	2,689.77	-6.13	-117.71	-6.13	0.00	0.00	0.00
2,800.00	11.02	267.02	2,787.92	-7.13	-136.79	-7.13	0.00	0.00	0.00
2,900.00	11.02	267.02	2,886.08	-8.12	-155.88	-8.12	0.00	0.00	0.00
3,000.00	11.02	267.02	2,984.24	-9.12	-174.97	-9.12	0.00	0.00	0.00
3,031.35	11.02	267.02	3,015.01	-9.43	-180.95	-9.43	0.00	0.00	0.00
Council Grove									
3,100.00	11.02	267.02	3,082.39	-10.11	-194.05	-10.11	0.00	0.00	0.00
3,200.00	11.02	267.02	3,180.55	-11.11	-213.14	-11.11	0.00	0.00	0.00
3,300.00	11.02	267.02	3,278.71	-12.10	-232.22	-12.10	0.00	0.00	0.00
3,400.00	11.02	267.02	3,376.86	-13.09	-251.31	-13.09	0.00	0.00	0.00
3,500.00	11.02	267.02	3,475.02	-14.09	-270.40	-14.09	0.00	0.00	0.00
3,600.00	11.02	267.02	3,573.18	-15.08	-289.48	-15.08	0.00	0.00	0.00
3,700.00	11.02	267.02	3,671.34	-16.08	-308.57	-16.08	0.00	0.00	0.00
3,800.00	11.02	267.02	3,769.49	-17.07	-327.65	-17.07	0.00	0.00	0.00
3,900.00	11.02	267.02	3,867.65	-18.07	-346.74	-18.07	0.00	0.00	0.00

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Project:	Finney County, KS (NAD 27)	MD Reference:	Duke #9 @ 2918.00ft (Duke #9 (2906 GE + 12 KB = 2918))
Site:	Drussel	North Reference:	Grid
Well:	Drussel A-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Drussel A-9		
Design:	Design #4		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,920.74	11.02	267.02	3,888.01	-18.27	-350.70	-18.27	0.00	0.00	0.00
Heebner									
4,000.00	11.02	267.02	3,965.81	-19.06	-365.83	-19.06	0.00	0.00	0.00
4,100.00	11.02	267.02	4,063.96	-20.06	-384.91	-20.06	0.00	0.00	0.00
4,200.00	11.02	267.02	4,162.12	-21.05	-404.00	-21.05	0.00	0.00	0.00
4,300.00	11.02	267.02	4,260.28	-22.04	-423.08	-22.04	0.00	0.00	0.00
4,400.00	11.02	267.02	4,358.43	-23.04	-442.17	-23.04	0.00	0.00	0.00
4,500.00	11.02	267.02	4,456.59	-24.03	-461.25	-24.03	0.00	0.00	0.00
4,552.39	11.02	267.02	4,508.01	-24.55	-471.25	-24.55	0.00	0.00	0.00
Marmaton									
4,600.00	11.02	267.02	4,554.75	-25.03	-480.34	-25.03	0.00	0.00	0.00
4,700.00	11.02	267.02	4,652.90	-26.02	-499.43	-26.02	0.00	0.00	0.00
4,800.00	11.02	267.02	4,751.06	-27.02	-518.51	-27.02	0.00	0.00	0.00
4,897.75	11.02	267.02	4,847.01	-27.99	-537.17	-27.99	0.00	0.00	0.00
Morrow									
4,900.00	11.02	267.02	4,849.22	-28.01	-537.60	-28.01	0.00	0.00	0.00
5,000.00	11.02	267.02	4,947.37	-29.01	-556.68	-29.01	0.00	0.00	0.00
5,075.01	11.02	267.02	5,021.00	-29.75	-571.00	-29.75	0.00	0.00	0.00
Start 263.93 hold at 5075.01 MD/ Chester Formation - Chester									
5,100.00	11.02	267.02	5,045.53	-30.00	-575.77	-30.00	0.00	0.00	0.00
5,110.68	11.02	267.02	5,056.01	-30.11	-577.81	-30.11	0.00	0.00	0.00
St. Gen.									
5,200.00	11.02	267.02	5,143.69	-30.99	-594.86	-30.99	0.00	0.00	0.00
5,300.00	11.02	267.02	5,241.84	-31.99	-613.94	-31.99	0.00	0.00	0.00
PBHL - Drussel #A-9									
5,338.94	11.02	267.02	5,280.07	-32.38	-621.37	-32.38	0.00	0.00	0.00
TD at 5338.94									

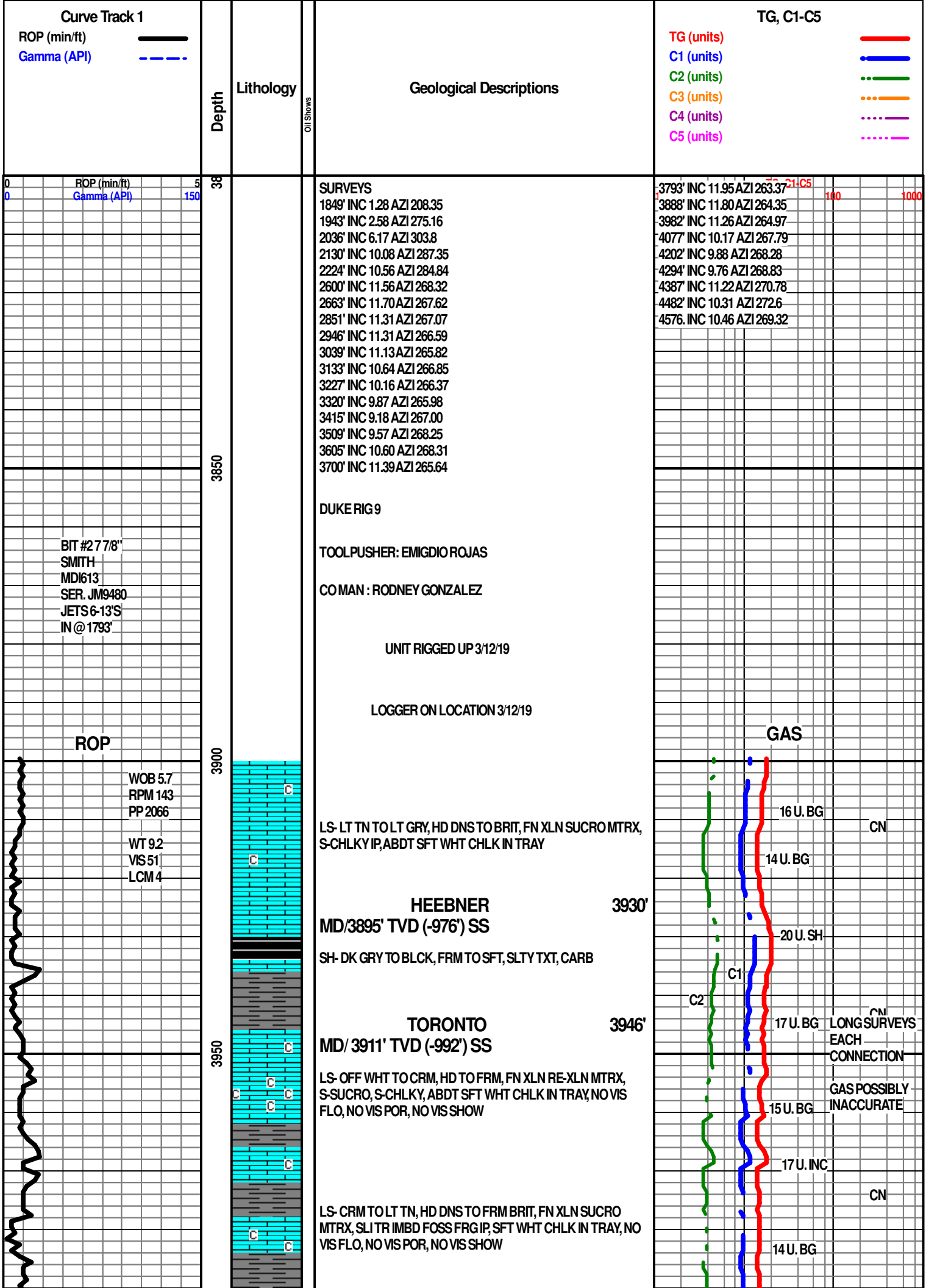
Design Targets

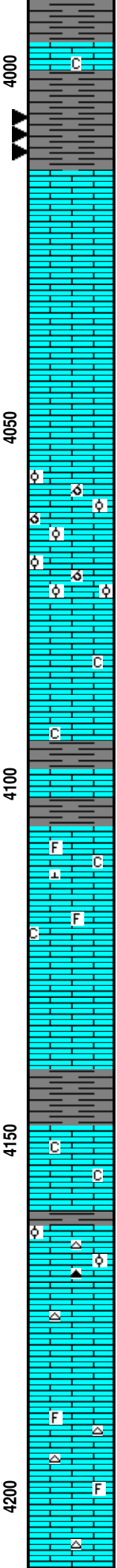
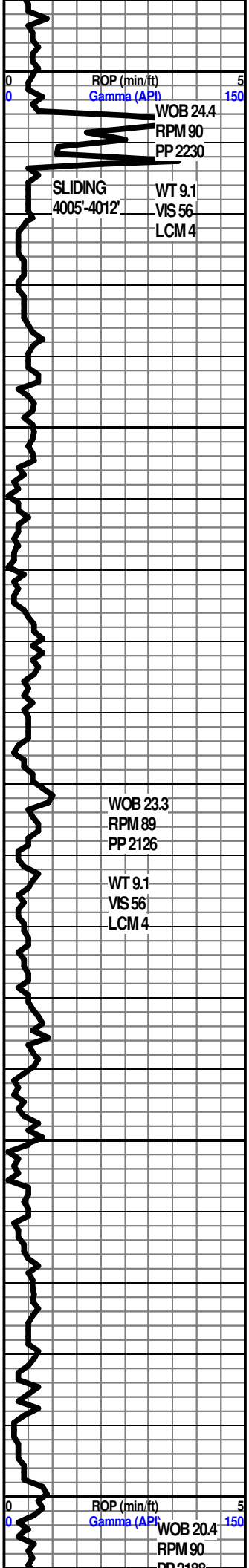
Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL - Drussel #A-9	-	0.00	0.00	5,256.00	-29.70	-570.01	440,316.27	1,298,669.68	37° 51' 3.068 N	100° 55' 45.329 W
	- plan misses target center by 46.21ft at 5300.00ft MD (5241.84 TVD, -31.99 N, -613.94 E)									
	- Point									

Database:	Gyrodata NWDB	Local Co-ordinate Reference:	Well Drussel A-9
Company:	Merit Energy	TVD Reference:	Duke #9 @ 2918.00ft (Duke #9 (2906 GE + 12 KB = 2918))
Project:	Finney County, KS (NAD 27)	MD Reference:	Duke #9 @ 2918.00ft (Duke #9 (2906 GE + 12 KB = 2918))
Site:	Drussel	North Reference:	Grid
Well:	Drussel A-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Drussel A-9		
Design:	Design #4		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,820.00	1,820.00	St. Corral (Top)		0.00		
1,912.00	1,912.00	St. Corral (Base)		0.00		
2,325.33	2,322.00	Hutchinson Salt		0.00		
3,031.35	3,015.01	Council Grove		0.00		
3,920.74	3,888.01	Heebner		0.00		
4,552.39	4,508.01	Marmaton		0.00		
4,897.75	4,847.01	Morrow		0.00		
5,075.01	5,021.00	Chester		0.00		
5,110.68	5,056.01	St. Gen.		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
1,900.20	1,900.20	0.00	0.00	Start Build 3.00	
2,267.47	2,265.21	-1.83	-35.16	Start 2807.54 hold at 2267.47 MD	
5,075.01	5,021.00	-29.75	-571.00	Start 263.93 hold at 5075.01 MD/ Chester Formation	
5,338.94	5,280.07	-32.38	-621.37	TD at 5338.94	





SH- LT GRY TO DK GRY, FRM BLKY, SMTH TO SLTY TXT

LANSING 4015'
MD/ 3979' TVD (-1060') SS

LS- CRM LT TN TO TN, HD DNS TO BRIT, FN XLN SUCRO MTRX, RE-XLN IP, TR SFT WHT CHLK IN TRAY, NO VIS FLO, SLI TR PR INTR XLN POR IP, NO VIS SHOW

LS- LT TN TO DK TN, HD DNS TO BRIT IP, V/FN TO FN XLN SUCRO MTRX, TR RE-XLN IP, IMBD OOL SCAT THRU, OOLMLD IP, BRT YEL FLO IN 80%, V/PR INTR OOL POR IP, PR OOLMLD POR IP, NO VIS CUT OR SHOW

LS- CRM LT TN TO TN, HD DNS TO BRIT IP, FN XLN SUCRO MTRX, RE-XLN IP, SLI TR SFT WHT CHLK IN TRAY, NO BRTYEL FLO IN 50%, NO VIS POR, NO VIS SHOW

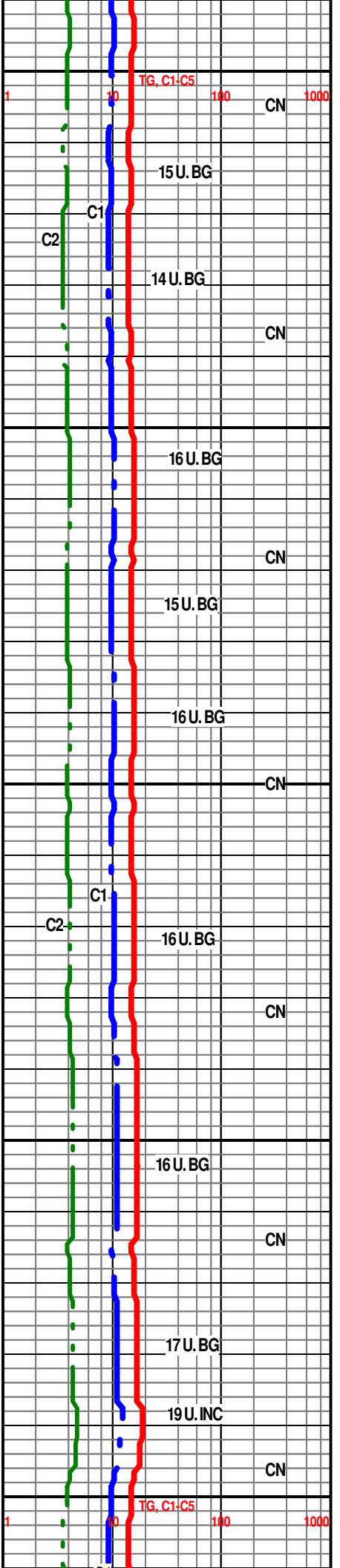
SH- LT BRWN TO DK BRWN, SFT, SLTY TXT

LS- CRM TO LT TN, HD DNS TO BRIT IP, FN TO MD XLN, RE-XLN IP, V/SLI TR CALC XLS IP, V/SLI TR IMBD FOSS FRG IP, SFT WHT CHLK IN TRAY, BRT YEL FLO IN 40%, V/ PR INTR FOSS POR IP, NO VIS SHOW

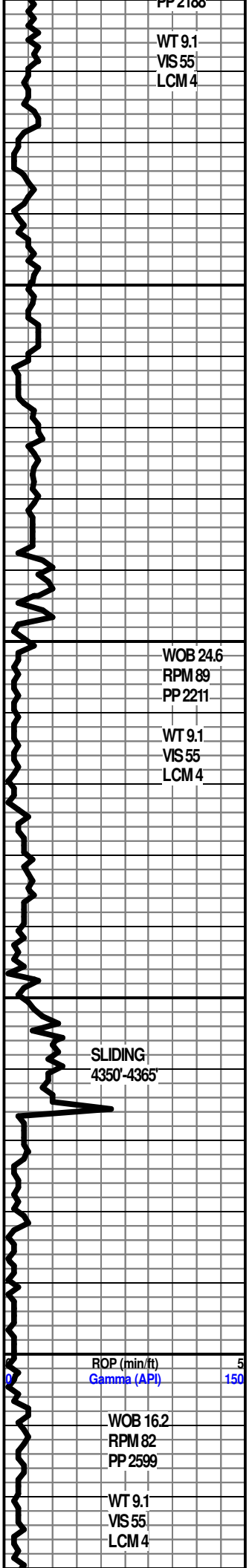
SH- GR GRN TO BRWN, SFT, SMTH TXT

LS- LT TN TN TO BRWN IP, HD DNS TO BRIT IP, MD XLN RE-XLN MTRX, S-CHLKY, TR IMBD OOL IP, SLI TR OFF WHT LT TN TO DK BRWN CHRT IN TRAY, BR YEL FLO IN 60%, NO VIS POR, NO VIS SHOW

LS- LT TN TO TN, HD DNS TO BRIT IP, FN XLN MTRX, S-SUCRO IP, TR IMBD FOSS FRG IP, TR FRSTY TO OFF WHT CHRT IN TRAY, BRT YEL FLO IN 60%, PR INTR XLN PR IP, NO VIS SHOW



WT 9.1
VIS 55
LCM 4



4250

4300

4350

4400

WOB 24.6
RPM 89
PP 2211

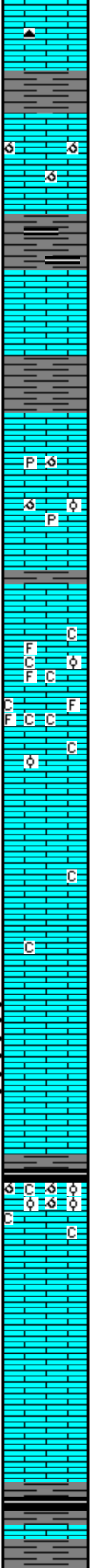
WT 9.1
VIS 55
LCM 4

SLIDING
4350'-4365'

ROP (min/ft)
Gamma (API)

WOB 16.2
RPM 82
PP 2599

WT 9.1
VIS 55
LCM 4



SH- LT GRY LT GRN TO BRWN, FRM BLKY, SLTY TXT

LS- TN, V/HD DNS, FN XLN MTRX, S-SUCRO, ABDT OOLMLD IP, TR FRSTY TO OFF WHT CHRT IN TRAY, BRT YEL FLO IN 80%, PR OOLMLD POR SCAT THRU, NO VIS CUT OR SHOW

SH- LT GRN TO LT TN, FRM SPLNTY, SLTY TXT

LS LT TN TN TO DKN, HD DNS TO BRIT IP, FN XLN MTRX, S-SUCRO, TR IMBD FOSS FRG IP, SLI TR IMBD OOL IP, OOLMLD IP, TR PYR CLSTR IN TRAY, BRT YEL GLD FLO IN 70%, PR INTR XLN POR IP, PR OOLMLD POR IP, NO VIS CUT OR SHOW

4301'-4304' LS LT TN TO TN, HD DNS, FN XLN MTRX, S-CHLKY IP, ABDT IMBD FOSS FRG, TR IMBD OOL IP, EXT ABDT SFT WHT CHLK IN TRAY, BRT YEL FLO IN 60%, DUL YEL GLD FLO IN 10%, PR INTR FOSS POR IP, V/WK FLSH CUT, V/WK GASSYSLW STRM, WK OIL ODOR PR TO FR RNG CUT ON DISH

LS- CRM LT TN TO GRY MOTT IP, HD DNS TO BRIT, V/FN TO FN SUCRO MTRX, TR S-CHLKY, SFT WHT CHLK IN TRAY, BRT YEL FLO IN 60%, PR INTR XLN POR IP, NO VIS CUT OR SHOW

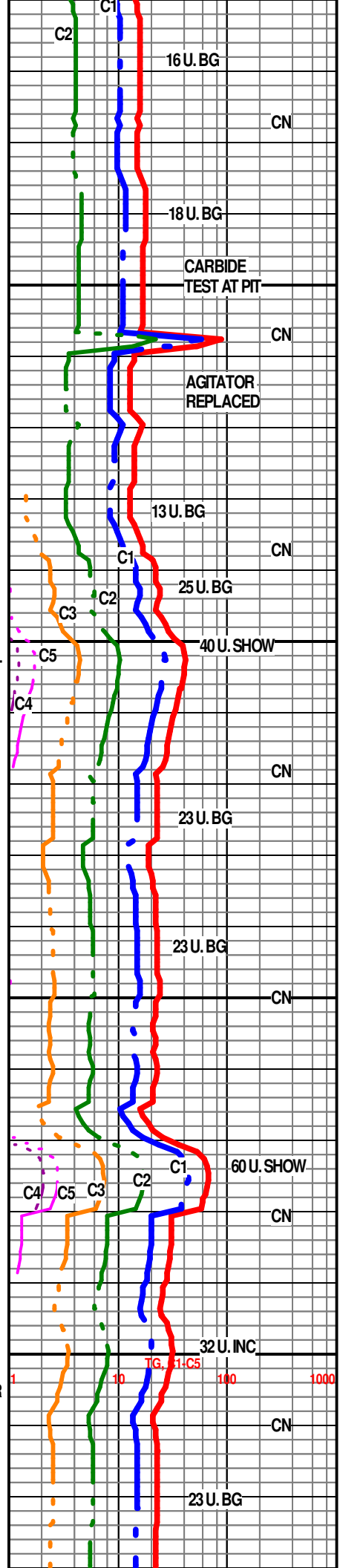
STARK 4373' MD/ 4331' TVD (-1512') SS

SH- GRY BRWN BLCK, SFT SPLNTY, SMTH TXT

4367'-4370' LS- OFF WHT TO CRM (W/ TN OIL STN IN 15%), HD DNS TO BRIT, FN XLN SUCRO MTRX, S-CHLKY, ABDT IMBD OOL, ABDT OOLMLD, SFT WHT CHLK IN TRAY, DUL YEL GLD FLO IN 15-20%, FR TO GD INTR OOL POR IP, FR TO GD OOLMLD POR IP, GD FLSH CUT IN 30%, GD TO V/GD SLW STRM IN 30%, FR TO GD OIL ODOR, GD RING CUT ON DISH

LS- LT TN, HD DNS TO BRIT, FN XLN MTRX, S-SUCRO, IMBD OOL, OOLMLD IP, DUL YEL FLO IN 40%, PR TO FR OOLMLD POR SCAT IP, NO VIS CUT OR SHOW, WK OIL ODOR

SH- GRY DK GRY TO TR BLCK, FRM BLKY, SMTH TO SLTY TXT



16 U. BG

18 U. BG

CARBIDE TEST AT PIT

AGITATOR REPLACED

13 U. BG

25 U. BG

40 U. SHOW

23 U. BG

23 U. BG

60 U. SHOW

32 U. INC

23 U. BG

CN

CN

CN

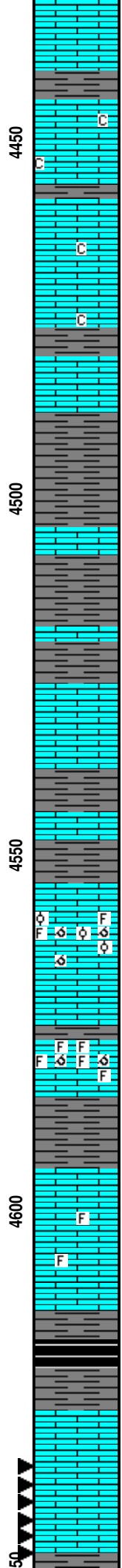
CN

CN

CN

CN

1 10 100 1000



LS- OFF WHT TO LT TN, HD DNS TO V/BRIT, FN TO MD XLN RE-XLN MTRX, S-SUCRO, S-CHLKY IP,ABDT SFT WHT CHLK IN TRAY, NO VIS FLO, PR INTR XLN POR IP, NO VIS CUT OR SHOW

LS- LT TN TO GRY IP, V/HD DNS TO BRIT IP, V/FN TO FN XLN MTRX, OFF WHT TO TN CHRT IN TRAY, TR SFT WHT CHLK IN TRAY, BRT YEL FLO IN 20%, NO VIS POR, NO VIS SHOW

SH- GRY BRWN TO DK GRY, FRM BLKY, SMTH TO SLTY TXT

MARMATON 4525'
MD/ 4481' TVD (-1562') SS

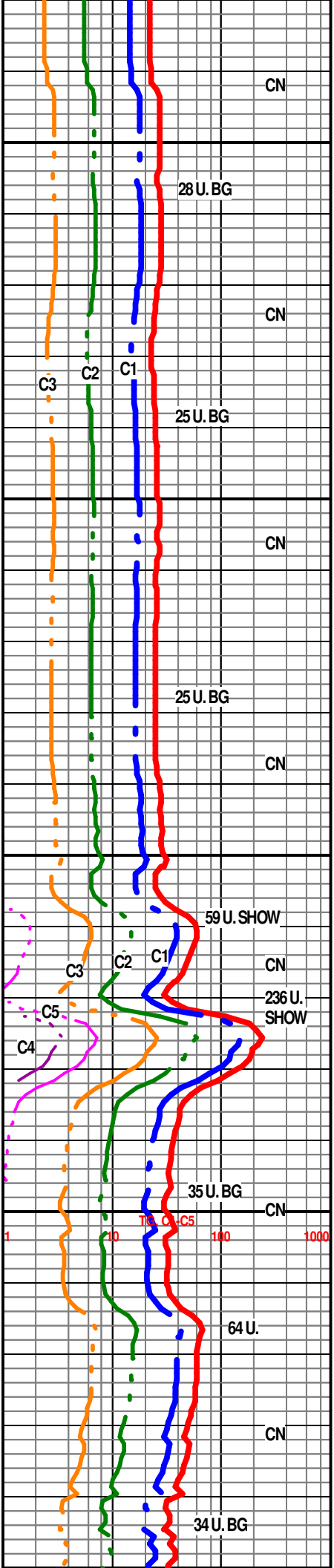
LS- LT TN TO TN, HD DNS TO BRIT, FN XLN RE-XLN MTRX, S-CHLKY, DUL YEL FLO IN 30%, NO VIS POR, NO VIS SHOW

4560'-4562' LS- OFF WHT TO CRM (LT TN STN IN 35%), HD DNS TO BRIT, FN XLN SUCRO MTRX, IMBD OOL IP, OOLMLD IP, IMBD FOSS FRG IP, BRT YEL GLD FLO IN 50%, FR TO GD INTR OOL/FOSS FRG POR IP, PR TO FR OOLMLD POR IP, GD FLSH CUT, GD MLKY BLU SLW STRM IN 60%, FR OIL ODOR GD RNG CUT ON DISH

4578'-4580' LT TN TN (DK TN OIL STN IN 90%), HD TO BRIT, V/FN TO FN XLN SUCRO MTRX, IMBD FOSS FRG IP, FOSS HASH THRU, TR OOLMLD, BRT YEL GLD FLO IN 80%, FR TO GD PHNTM FOSS POR THRU, GOOD OOLMLD POR IP, V/ GD FLSH CUT THRU, EXT GD MLKY BLU SLW STRM THRU, FR OIL ODOR, EXT GD RING CUT ON DISH

LS- CRM LT TN TO BFF, HD DNS TO BRIT IP, FN XLN SUCRO MTRX, TR IMBD FOSS FRG IP, DUL YEL FLO IN 40%, PR INTR XLN POR IP, NO VIS CUT OR SHOW

PAWNEE 4629'
MD/ 4584' TVD (-1665') SS



CN

28 U. BG

CN

25 U. BG

CN

25 U. BG

CN

59 U. SHOW

CN

236 U. SHOW

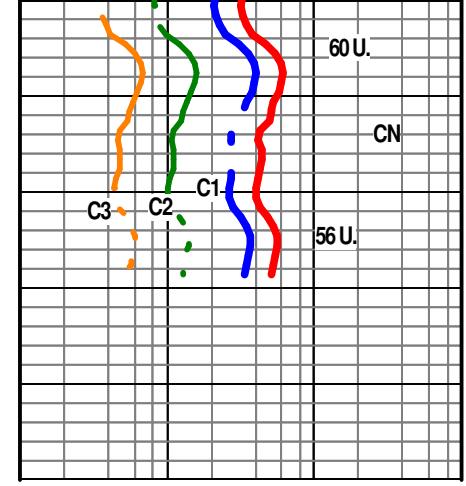
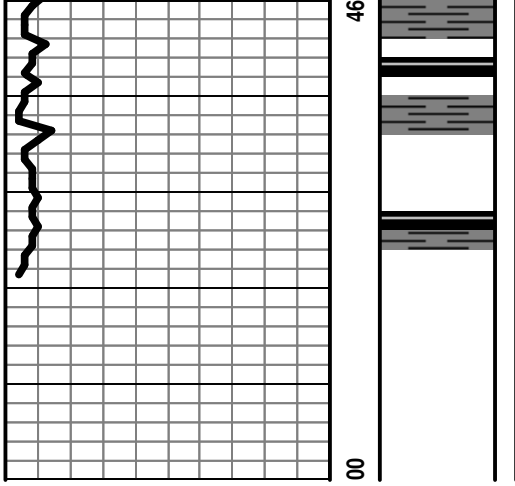
35 U. BG

CN

64 U.

CN

34 U. BG





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 4.5Hrs.	Operator TRK No.:	96816
Address:	gardencity.invoices@meritenergy.com	Ticket #:	1718 17291 L	Bulk TRK No.:	70897, 37725 Santiago 27808, 37725 Sam
City, State, Zip:	AFE# 63153	Job Type:	Z42 - Cement Surface Casing		
Service District:	1718 - Liberal, Ks.	Well Type:	OIL		
Well Name and No.:	Drussel "A" #9	Well Location:	27,25,33	County:	Finney State: Ks

Type of Cmt	Sacks	Additives	Truck Loaded On		
A-Con Blend	167	3% Calcium Chloride, 1/2# Polyflake	70897, 37725 Santiago	Front	Back
A-Con' Blend	358	3% Calcium Chloride, 1/2# Polyflake	27808, 37725 Sam	Front	Back
Premium Plus Cement	165	3% Calcium Chloride, 1/2# Polyflake	27808, 37725	Front	Back

Lead/Tail:	Weight #1 Gal.	Cu/Ft/sk	Water Requirements	CU. FT.	Man Hours / Personnel	
Lead #1:	11.2	3.16	19.64	527.72	TT Man Hours:	33
Lead #2	12.1	2.41	14	862.78	# of Men on Job:	4
Tail:	14.8	1.34	6.33	221.1		

Time (am/pm)	(BPM)	Volume (BBLs)	Pumps		Pressure(PSI)		Description of Operation and Materials
			T	C	Tubing	Casing	
5:20							ON LOCATION & SAFETY MEETING
5:30							RIG UP
6:50 AM							RIG TO PT
7:04 AM							PRESSURE TEST TO 2000PSI
7:16 AM	6	93.9 slurry				110	PUMP 167SX LEAD#1 # @ 11.2#
7:30	6	153.6 slurry				110	PUMP 358SX LEAD#2 @ 12.1#
7:57 AM	6	39.3 slurry				160	PUMP 165SX TAIL @ 14.8#
8:06							SHUTDOWN / DROP PLUG
8:09	5.5	10				80	DISPLACE
	5.5	20				80	
	5.5	30				120	
	5.5	40				170	
8:23	5.5	50				240	57BBL IN CEMENT RETURNS
	5.5	60				270	
	5.5	70				360	
	5.5	80				430	
	5.5	90				490	
	5.5	100				560	
8:32	5.4	101				580	SLOW RATE TO 2.0BPM @ 500PSI
8:37	1.9	111				590	LAND PLUG / PRESSURE UP TO 1020PSI
8:53							RELEASE BACK --- FLOAT HELD
							JOB COMPLETE

Size Hole	12 1/4"	Depth	1793'		TYPE	Plug Container	
Size & Wt. Csg.	8 5/8" 24#	Depth	1788.58'	New / Used	Packer	Depth	
Landing Press.	416.5psi	Depth			Retainer	Depth	
Shoe Jt.	43.25'	Type			Perfs	CIBP	

Customer Signature:	Basic Representative:	Daniel Beck
	Basic Signature:	<i>Daniel Beck</i>
	Date of Service:	3/11/2019



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 10HRS	Operator TRK No.:	78938
Address:	gardencity.invoices@meritenergy.com	Ticket #:	1718 19341 L	Bulk TRK No.:	14354 19578 Sam
City, State, Zip:	AFE# 63153	Job Type:	Z42 - Cement Production Casing		
Service District:	1718-Liberal KS	Well Type:	OIL		
Well Name and No.:	Drussel "A" #9	Well Location:	27,25,33	County:	Finney
				State:	Ks

Type of Cmt	Sacks	Additives	Truck Loaded On		
50/50 Poz	125	6% Gypsum, 10% Salt, .5% C-17, 1/4# Defoamer, 5# Gilsonite, 1/4# Celloflake	14354 19578 Sam	Front	Back
50/50 Poz	130	6% Gypsum, 10% Salt, .5% C-17, 1/4# Defoamer, 5# Gilsonite, 1/4# Celloflake	14354 19578	Front	Back
				Front	Back

Lead/Tail:	Weight #1 Gal.	Cu/Ft/sk	Water Requirements	CU. FT.	Man Hours / Personnel	
Lead:	13.6	1.57	7.18	196.25	TT Man Hours:	38
Tail:				130	# of Men on Job:	3

Time (am/pm)	(BPM)	Volume (BBLS)	Pumps		Pressure (PSI)		Description of Operation and Materials
			T	C	Tubing	Casing	
12:00am							Arrived at location
3:00am							Rig up/Prime up pump/safety meeting
4:30am					3000		Pressure test lines to psi
4:32am	5	11			250		Pump 500gallons mud flush
4:38am	2	13.98					Pump Rat and Mouse Hole 13.98bbbls
4:50am	7	57.32			430		Pump 57.32bbbls of cement from 205Sks @13.6#
5:08am							Drop plug/wash out lines
5:12am							Start Displacement of 121.1bbbls
5:15am	7	20			150		20bbbls gone
5:18am	7	40			160		40bbbls gone
5:21am	7	60			150		60bbbls gone
5:24am	7	80			320		80bbbls gone
5:27am	7	100			700		100bbbls gone
5:29am	7	110			720		110bbbls gone/slow down rate
5:34am	2	121			1420		Bump plug
							Check if float holds
5:37am					1500		Pressure test casing to 1500 psi for 15 minutes
							Rig down
							Job completed

Size Hole	7 7/8	Depth	5261		TYPE	
Size & Wt. Csg.	5 1/2 17#	Depth	5261	New / Used	Float Collar	5221.79
Shoe Joint		Depth	39.21		Retainer	Depth
Top Plugs		Type			Perfs	CIBP

Customer Signature:	Basic Representative:	Victor A. Corona
	Basic Signature:	<i>Victor A. Corona</i>
	Date of Service:	3/15/2019

Pumping Order / Mixture

Client: Merit Energy
Date: 3/15/2019
Job: 5 1/2 Production

Well Name & No: Drussell "A" #9
Location Supervisor: Victor Corona-Marta
COMPANY REP. Rodney Gonzales

Differential Pressure 657 psi
Lift Pressure: 500 psi

Recipe

Pressure Test PSI: 3000

MAX PSI: 2000

11 BBLs OF MUD FLUSH SPACER

14 BBLs RAT AND MOUSE HOLE

57 BBLs TAIL SLURRY YIEL 1.57

13.6 LBS

13.6 LBS

50SKS 7.18G/SK

205SKS 7.18G/SK

DROP PLUG/WASH PUMP ON TO PIT

121.0 BBLs DISPLACEMENT

110.0 BBLs @ 5 BPM SLOW RATE AT:

121.0 BBLs TO 3 BPM BUMP PLUG 500 PSI OVER

DISP PLUG WITH 121BBLs OF H2O W/ 4%KCL