

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 Recompletion Date \_\_\_\_\_ 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:	
----------------	-------	---------	------------	--

Form	ACO1 - Well Completion
Operator	Questa Energy Corporation
Well Name	BEAR 34-1
Doc ID	1407917

All Electric Logs Run

Sonic
Induction
MicroDual Compensated Porosity
Micro Resistivity





## DRILL STEM TEST REPORT

Prepared For: **Questa Energy Corporation**

PO Box 50968  
Amarillo, TX 79159

ATTN: Justin Carter

### **Bear #34-1**

#### **34-6S.-37W Sherman,KS**

Start Date: 2018.04.15 @ 04:05:00

End Date: 2018.04.15 @ 12:12:50

Job Ticket #: 63306                      DST #: 1

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.04.16 @ 08:20:54



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Questa Energy Corporation

**34-6S.-37W Sherman,KS**

PO Box 50968  
Amarillo, TX 79159

**Bear #34-1**

Job Ticket: 63306

**DST#: 1**

ATTN: Justin Carter

Test Start: 2018.04.15 @ 04:05:00

## GENERAL INFORMATION:

Formation: **Ft. Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:00:20

Time Test Ended: 12:12:50

Test Type: Conventional Straddle (Initial)

Tester: Martine Salinas

Unit No: 82

**Interval: 4710.00 ft (KB) To 4757.00 ft (KB) (TVD)**

Reference Elevations: 3426.00 ft (KB)

Total Depth: 5060.00 ft (KB) (TVD)

3421.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8734 Outside**

Press@RunDepth: 26.36 psig @ 4714.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.04.15

End Date:

2018.04.15

Last Calib.: 2018.04.15

Start Time: 04:05:01

End Time:

12:12:50

Time On Btm: 2018.04.15 @ 08:00:10

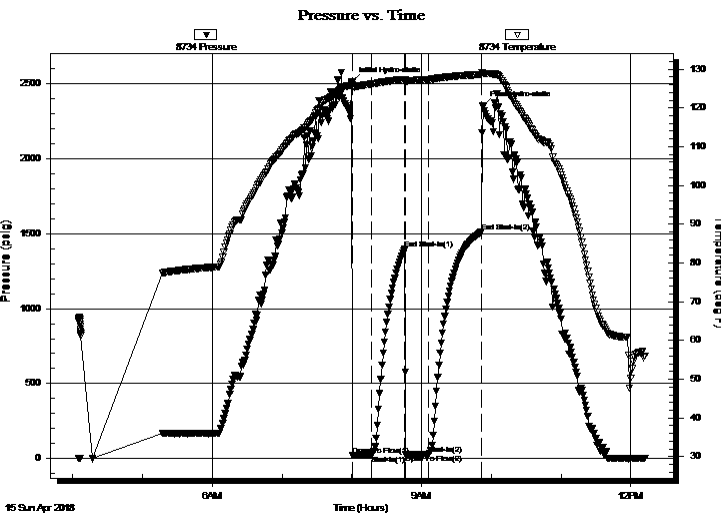
Time Off Btm: 2018.04.15 @ 09:52:50

**TEST COMMENT:** 15-IF-Surface blow built to 1/2"

30-ISI-No blow

20-FF-No blow

45-FSI-No blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2512.31	125.94	Initial Hydro-static
1	21.95	124.94	Open To Flow (1)
17	23.03	126.15	Shut-In(1)
46	1395.73	127.33	End Shut-In(1)
46	24.61	126.86	Open To Flow (2)
67	26.36	127.34	Shut-In(2)
112	1509.67	128.62	End Shut-In(2)
113	2351.67	128.80	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	100% Mud	0.02

## Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE TESTING, INC.**

## DRILL STEM TEST REPORT

Questa Energy Corporation

**34-6S.-37W Sherman,KS**

PO Box 50968  
Amarillo, TX 79159

**Bear #34-1**

Job Ticket: 63306

**DST#: 1**

ATTN: Justin Carter

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Reference Elevations: 3426.00 ft (KB)

Total Depth: 5060.00 ft (KB) (TVD)

3421.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8520**

**Below (Straddle)**

Press@RunDepth: psig @ 4768.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.04.15 End Date: 2018.04.15

Last Calib.: 1899.12.30

Start Time: 04:05:01 End Time: 12:12:40

Time On Btm:

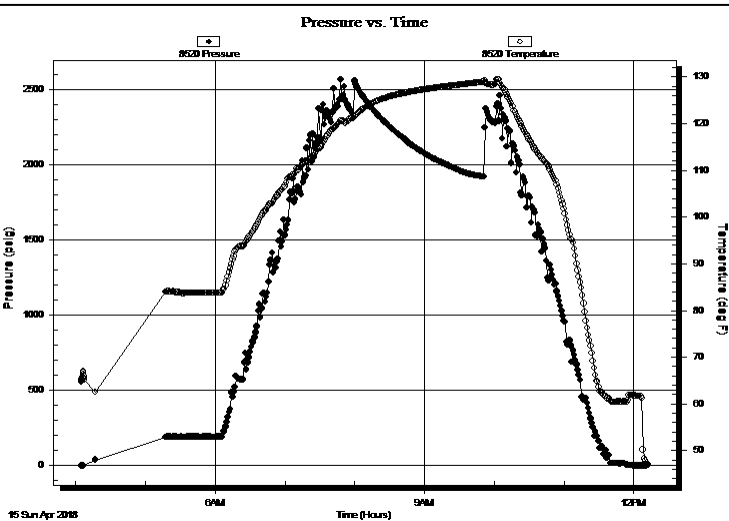
Time Off Btm:

TEST COMMENT: 15-IF-Surface blow built to 1/2"

30-ISI-No blow

20-FF-No blow

45-FSI-No blow



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

### Recovery

Length (ft)	Description	Volume (bbl)
5.00	100% Mud	0.02

### Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Questa Energy Corporation

**34-6S.-37W Sherman,KS**

PO Box 50968  
Amarillo, TX 79159

**Bear #34-1**

Job Ticket: 63306

**DST#: 1**

ATTN: Justin Carter

Test Start: 2018.04.15 @ 04:05:00

## Tool Information

Drill Pipe:	Length: 4497.00 ft	Diameter: 3.80 inches	Volume: 63.08 bbl	Tool Weight:	3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 216.00 ft	Diameter: 2.25 inches	Volume: 1.06 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume: 64.14 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial	68000.00 lb
Depth to Top Packer:	4710.00 ft			Final	68000.00 lb
Depth to Bottom Packer:	5060.00 ft				
Interval between Packers:	350.00 ft				
Tool Length:	378.00 ft				
Number of Packers:	3	Diameter: 6.75 inches			
Tool Comments:					

## Tool Description

**Length (ft) Serial No. Position Depth (ft) Accum. Lengths**

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4687.00	
Hydraulic tool	5.00			4692.00	
Jars	5.00			4697.00	
Safety Joint	3.00			4700.00	
Packer	5.00			4705.00	28.00 Bottom Of Top Packer
Packer	5.00			4710.00	
Stubb	1.00			4711.00	
Perforations	2.00			4713.00	
Change Over Sub	1.00			4714.00	
Recorder	0.00	8959	Inside	4714.00	
Recorder	0.00	8734	Outside	4714.00	
Drill Pipe	32.00		Outside	4746.00	
Change Over Sub	1.00		Outside	4747.00	
Perforations	5.00			4752.00	
Blank Off Sub	1.00			4753.00	
Packer - Shale	4.00			4757.00	
Stubb	1.00			4758.00	
Perforations	9.00			4767.00	
Change Over Sub	1.00			4768.00	
Recorder	0.00	8520	Below	4768.00	
Drill Pipe	286.00		Below	5054.00	
Change Over Sub	1.00			5055.00	
Bullnose	5.00			5060.00	350.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>378.00</b>				





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Questa Energy Corporation

**34-6S.-37W Sherman,KS**

PO Box 50968  
Amarillo, TX 79159

**Bear #34-1**

Job Ticket: 63306

**DST#: 1**

ATTN: Justin Carter

Test Start: 2018.04.15 @ 04:05:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 65.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.38 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	100% Mud	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

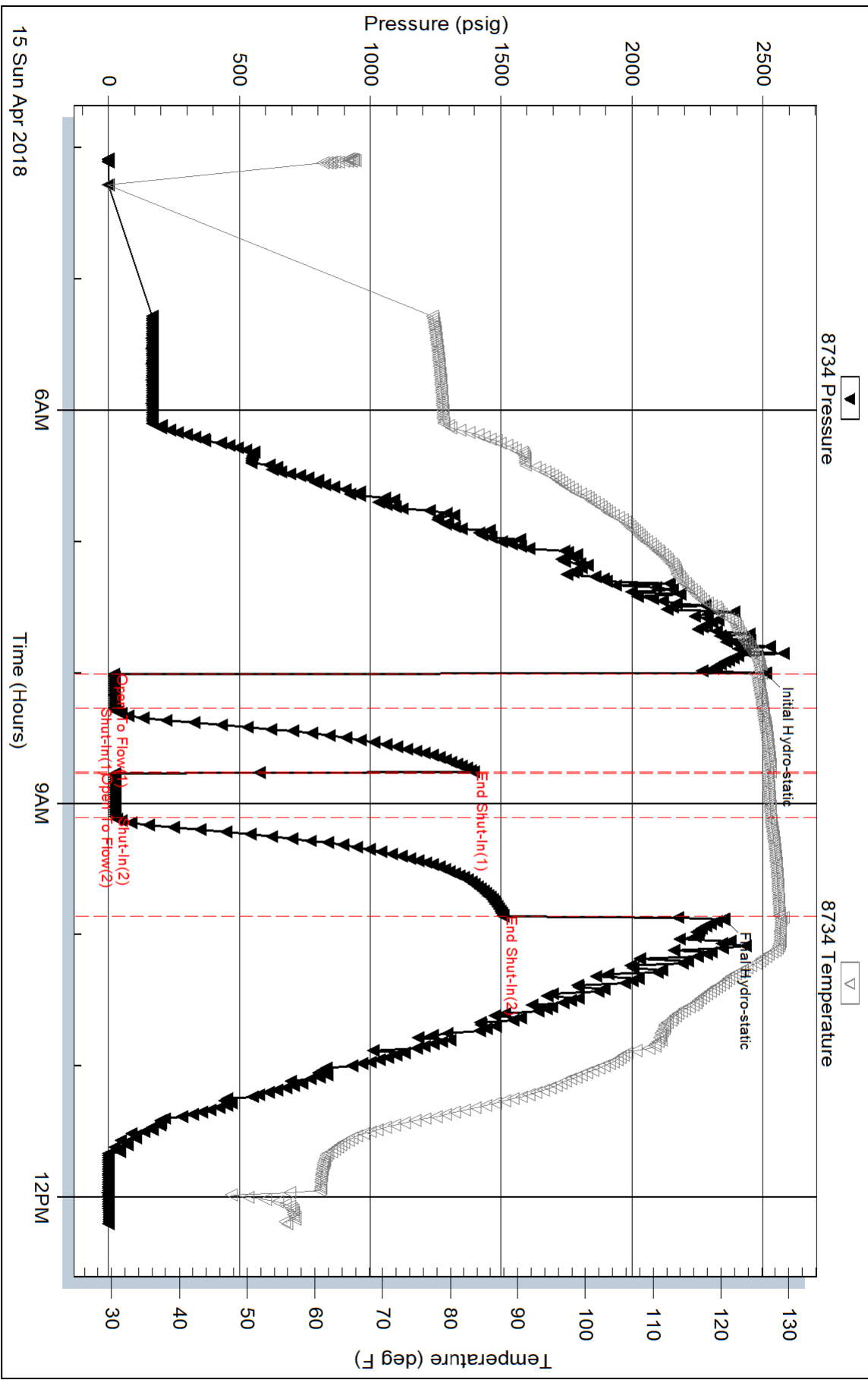
Serial #:

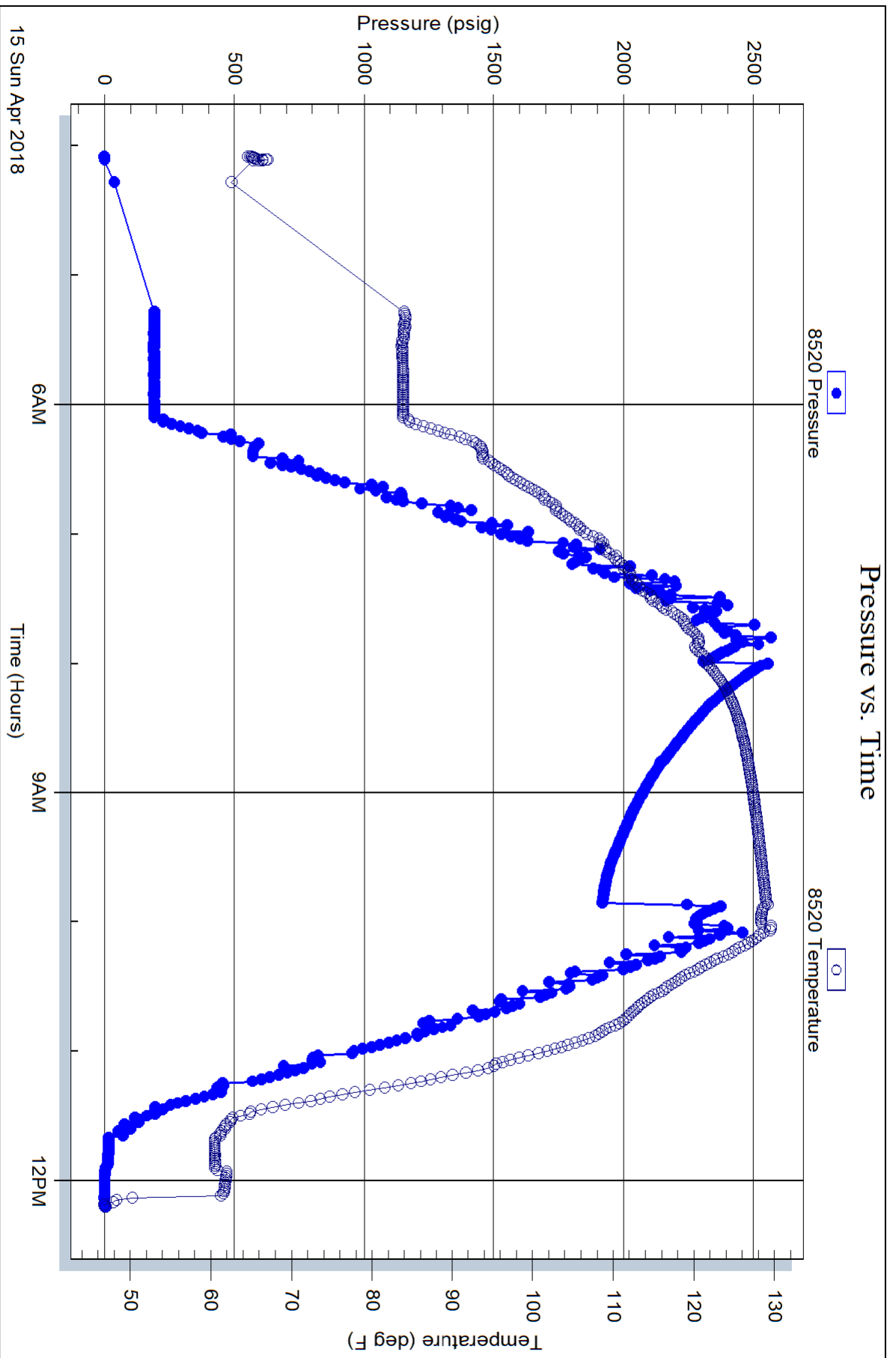
Laboratory Name:

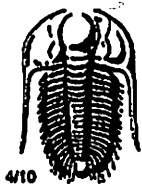
Laboratory Location:

Recovery Comments:

### Pressure vs. Time







# TRIOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 63306

Well Name & No. Bear 34-1 Test No. 1 Date 04-15-18  
 Company Questa Energy Corporation Elevation 3426 KB 3421 GL  
 Address P.O. Box 50968 Amarillo, Tx 79159  
 Co. Rep / Geo. Justin Carter Rig Mudfin #7  
 Location: Sec. 34 Twp 6S Rge. J7W Co. Sherman State KS

Interval Tested 4710 - 4757 Zone Tested Ft. Scott.  
 Anchor Length 47' 303' T.P. Drill Pipe Run 4497 Mud Wt. 9.4  
 Top Packer Depth 4705 - 4710 Drill Collars Run 216 Vis 65  
 Bottom Packer Depth 4757 (Shale) Wt. Pipe Run — WL 10.4  
 Total Depth 5060 Chlorides 4000 ppm System LCM 3#  
 Blow Description IF - S. blow built to 1/2"

ISI - No blow

FF - No blow

FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 129 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

- (A) Initial Hydrostatic 2512
- (B) First Initial Flow 22
- (C) First Final Flow 23
- (D) Initial Shut-In 1396
- (E) Second Initial Flow 25
- (F) Second Final Flow 26
- (G) Final Shut-In 1510
- (H) Final Hydrostatic 2352

- Test 1150
- Jars 250
- Safety Joint 75
- Circ Sub
- Hourly Standby
- Mileage 146 RT 146
- Sampler
- Straddle 600
- Shale Packer 250
- Extra Packer
- Extra Recorder
- Day Standby
- Accessibility
- Sub Total 2471

- T-On Location 01:50
- T-Started 04:05
- T-Open 08:01
- T-Pulled 09:51
- T-Out 12:13
- Comments Tools loaded @ 14:00
- Ruined Shale Packer
- Ruined Packer
- Extra Copies
- Sub Total 0
- Total 2471
- MP/DST Disc't \_\_\_\_\_

Initial Open 15  
 Initial Shut-In 30  
 Final Flow 20  
 Final Shut-In 45

Approved By Justin Carter

Our Representative Justin Carter

Triobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



PRESSURE PUMPING LLC

REMIT TO
QES Pressure Pumping LLC
Dept:970
P.O.Box 4346
Houston, TX 77210-4346

MAIN OFFICE

P.O.Box884  
Chanute,KS 66720  
620/431-9210,1-800/467-8676  
Fax 620/431-0012

Invoice

Invoice#

812865

Invoice Date: 04/11/18

Terms: Net 30

Page 1

QUESTA ENERGY CORPORATION

P.O. Box 50968  
Amarillo TX 79159-0968  
USA  
8063588161

BEAR #34-1

Part No	Description	Quantity	Unit Price	Discount(%)	Total
CE0471	Cement Pump Charge 301' - 500' (Coalbed/Methane)	1.000	1,150.0000	30.000	805.00
CE0002	Equipment Mileage Charge - Heavy Equipment	50.000	7.1500	30.000	250.25
CE0710	Cement Delivery Charge	587.430	1.7500	30.000	719.60
CC5871	Surface Blend II, 2% Gel/3% CaCl	250.000	24.0000	30.000	4,200.00

Subtotal 8,535.50

Discounted Amount 2,560.65

SubTotal After Discount 5,974.85

Amount Due 9,060.50 If paid after 05/11/18

Tax: 367.50

Total: 6,342.35



PRESSURE PUMPING LLC  
PO Box 884, Chanute, KS 66720  
620-431-9210 or 800-467-9576

10412  
10299

TICKET NUMBER 55070  
LOCATION Oakley, KS  
FOREMAN Walt Dunkel

FIELD TICKET & TREATMENT REPORT  
CEMENT

Invoice #812865

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
4-9-18	10409	Bear #34-1	34	65	32W	Sherman
CUSTOMER <u>Questa Energy Corp</u>			Brewster North to Rex 3-west			
MAILING ADDRESS <u>PO Box 50968</u>			TRUCK #	DRIVER	TRUCK #	DRIVER
CITY <u>Abilene</u>			731	Cory Davis	566	Neil White
STATE <u>TX</u>			ZIP CODE <u>79159-0968</u>			

JOB TYPE Sur Face HOLE SIZE 12 1/4 HOLE DEPTH 366' CASING SIZE & WEIGHT 8 5/8 - 23#  
 CASING DEPTH 366 DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
 SLURRY WEIGHT 15.2 SLURRY VOL \_\_\_\_\_ WATER gal/sk \_\_\_\_\_ CEMENT LEFT in CASING 1.5 to 20'  
 DISPLACEMENT 22 DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE 4 BPM

REMARKS: Safety Meeting, Rig up on Murfin #7, Circ Casing on bottom, mix 250 sks Surface Blend II, Displace 22 BBI H2O, Shut in  
Cement Did Circ

Thank You  
Walt + Crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
<del>Ceo 471</del>	1	PUMP CHARGE	1,150.00	1,150.00
<del>Ceo 002</del>	50	MILEAGE	7.15	357.50
<del>Ceo 710</del>	11.75	Tow Mileage Delivery	175	1,028.00
<del>10232</del> CE 5871	250 sks	Surface Blend II	24.00	6,000.00
				8,535.50
Less 30% Disc				-2,560.65
				5,974.85
SALES TAX				367.50
ESTIMATED TOTAL				6,342.35

Revin 3737

AUTHORIZATION [Signature] TITLE Supervisor DATE 4/11

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.

## TERMS AND CONDITIONS

### ATTENTION: THESE TERMS AND CONDITIONS CONTAIN INDEMNITY PROVISIONS FOR DAMAGE TO PERSONS AND PROPERTY.

All Services or Products provided by QES Pressure Pumping LLC (i/k/a Consolidated Oil Well Services LLC) are subject to these Terms and Conditions unless superseded by a Master Service Agreement signed by the parties. In the event Customer does not accept these Terms and Conditions as written, Customer must request a Master Service Agreement from QES' Contracts Administration Department at [msa@qeslp.com](mailto:msa@qeslp.com).

The operations, services, supplies, materials, personnel or goods to be provided ("Services" or "Products" as applicable) by QES Pressure Pumping LLC ("QES") will be provided to you as customer ("Customer") in accordance with the following terms and conditions ("Agreement"). QES and Customer may be referred to as "Party" or "Parties".

**1. Price and Taxes.** Customer will pay QES for the Services or Products in accordance with QES' quoted prices which exclude applicable taxes or process license fees. Customer shall pay all applicable taxes and process license fees related to the Services and/or Products. QES' prices are subject to change without notice.

**2. Terms of Payment.** Customer will pay QES cash in advance for Services and Products unless QES has approved credit prior to the performance of the Services and/or delivery of the Products. Credit terms for approved accounts require full payment of the invoiced amount within 30 days from the date of invoice. All invoices not paid within 30 days will be charged an interest rate of 1 1/2% per month or the maximum rate allowed under applicable state law, whichever is higher. Customer will be responsible for any fees incurred by QES in the collection of any amounts owed to QES including but not limited to attorney's fees and/or collection fee costs.

**3. Proof of Services or Delivery of Products.** QES will furnish verification of proof of Services performed and Product delivered to Customer's representative at the time of performance of the Services or Product delivery. Customer agrees to sign and return such verification indicating Customer's acceptance of the Services or Products.

**4. Delivery or Completion.** All liability and responsibility of QES ceases when (1) Products are delivered to the Customer by QES and no longer in the care, custody and control of QES or (2) when the carrier receives the Products and/or shipment. QES will not be responsible for loss or damage to Products in transit or for delays of carriers in delivering goods. In case of shortage, non-conformance, or apparent damage, it is the Customer's responsibility to secure written acknowledgment from the carrier before Customer accepts delivery. Additionally, QES will not be liable for any damage for delays in delivery or completion due to a Force Majeure (as defined below), acts or omissions of the Customer, third party material or manufacturing delays, impossibility or impracticability of performance or any other cause or causes beyond the control of QES. In the event of a delay caused by the elements, the delivery or completion date will be extended for a period equal to any such delay, and the purchase or service will not be void or voidable as a result thereof.

**5. Well or Service Site Conditions.** Customer, having custody and control of the well and/or service site, and having superior knowledge of the same and the conditions surrounding them, warrant that the well and/or service site will be in proper condition to receive and accommodate Services and Products. Upon QES' request, Customer will provide documentation to verify that the well or service site is adequate to support the Services and the delivery of Products. Customer also warrants that QES' personnel and equipment will be able to safely access the well and service site and that any special equipment or road improvements required for such access will be the responsibility of Customer, unless otherwise agreed to by the parties.

**6. Chemical Handling and Hazardous Materials.** Customer agrees that for any waste created as part of the Services, Customer will be considered the "generator" for purposes of any applicable laws or regulations pertaining to the transportation, storage and handling of chemicals and hazardous materials.

**7. Data, Data Transmission and Storage.** QES does not warrant or guarantee the accuracy of any research analysis, survey, or other data generated for the Services. QES is not responsible for any accidental or intentional interception of such data by third parties and it is the responsibility of the Customer to safeguard such data against loss including any need to secure digital or paper copies for storage.

### 8. WARRANTIES - LIMITATION OF LIABILITY.

QES warrants that the Services and Products will: (i) be free from defects in materials and workmanship; (ii) be performed in a good and workmanlike manner, in accordance with good oilfield servicing practices; and (iii) conform to the plans, specifications and technical information provided in writing by Customer and the Services or Products are accepted by Customer or QES' contractual obligations are met. In the event that Customer discovers a defect in the Services or Products within the warranty period specified above, Customer will notify QES of such defect. In the event that QES confirms that the Services or Products are defective, QES's liability and Customer's exclusive remedy in any cause of action (whether in tort, contract, breach of warranty or otherwise) arising out of the sale or use of any Services or Products is expressly limited to, at QES' option, the (i) replacement of such Services or Products upon their return to QES or (ii) a credit to Customer for the full price paid by Customer for the defective segment of the Services or Products upon their return to QES. In the case of products or parts not wholly of QES' manufacture, QES' liability will be limited to the extent of its recovery from the manufacturer of such products or parts under its liability to QES. QES will not be liable for any damages, claims, losses or expenses of Customer resulting from such defects or for damages resulting from delays, loss of use, or other direct, indirect, incidental, punitive or consequential damages of any kind. QES will not be responsible for: (i) failures of Services that have been in any way tampered with or altered by anyone other than an authorized representative of QES; (ii) failures due to lack of compliance with recommended maintenance procedures; and (iii) products requiring replacement due to normal wear and tear.

**b) EXCEPT FOR THE WARRANTIES EXPRESSLY STATED ABOVE, THERE ARE NO OTHER WARRANTIES. THE PARTIES EXPRESSLY EXCLUDE AND CUSTOMER WAIVES ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

**c) IN NO EVENT WILL QES' ENTIRE LIABILITY (IN TORT, CONTRACT, WARRANTY, INFRINGEMENT OR OTHERWISE) TO CUSTOMER EXCEED THE PURCHASE PRICE ACTUALLY PAID BY CUSTOMER FOR THE SERVICES OR PRODUCTS THAT GIVE RISE TO A DISPUTE. THIS PROVISION WILL SURVIVE ANY TERMINATION OF THIS AGREEMENT.**

### 9. INDEMNIFICATION AND WAIVER OF CONSEQUENTIAL DAMAGES.

9.1 For purposes of this Section 9, the following definitions will apply. "QES Group" means QES Pressure Pumping LLC, its parent company, and affiliated companies, and its and their officers, directors, employees, contractors, subcontractors and invitees. "Customer Group" means Customer, its parent (if any), subsidiary and affiliated companies, co-owners, co-venturers, partners and any entity with whom Customer has an economic interest with respect to the Services, including Customer's joint interest owners and partners and its and their officers, directors, employees, contractors (not including QES), subcontractors and invitees.

**9.2 QES INDEMNITY. QES AGREES TO PROTECT, DEFEND, INDEMNIFY AND HOLD HARMLESS CUSTOMER GROUP FROM AND AGAINST ALL CLAIMS, DEMANDS, AND CAUSES OF ACTION, OF EVERY KIND AND CHARACTER, ARISING IN CONNECTION WITH THE SERVICES, ON ACCOUNT OF BODILY INJURY, ILLNESS, OR DEATH OF ANY MEMBER OF QES GROUP OR DAMAGE TO OR LOSS OF PROPERTY OF ANY MEMBER OF QES GROUP.**

**9.3 CUSTOMER INDEMNITY. CUSTOMER AGREES TO PROTECT, DEFEND, INDEMNIFY AND HOLD HARMLESS QES GROUP FROM AND AGAINST ALL CLAIMS, DEMANDS, AND CAUSES OF ACTION OF EVERY KIND AND CHARACTER, ARISING IN CONNECTION WITH THE SERVICES, ON ACCOUNT OF BODILY INJURY, ILLNESS, OR DEATH OF ANY MEMBER OF CUSTOMER GROUP OR DAMAGE TO OR LOSS OF PROPERTY OF ANY MEMBER OF CUSTOMER GROUP.**

**9.4 WELL. CUSTOMER WILL RELEASE, PROTECT, DEFEND, AND INDEMNIFY QES GROUP FROM AND AGAINST ALL CLAIMS, DEMANDS AND CAUSES OF ACTION OF EVERY KIND AND CHARACTER IN THE EVENTS OF: (i) LOSS OR DAMAGE TO ANY GEOLOGICAL FORMATION, STRATA OR OIL OR GAS RESERVOIR OR MINERAL OR WATER RESOURCE BENEATH THE SURFACE OF THE LAND OR WATER, (ii) LOSS OR DAMAGE TO THE HOLE OR WELL, (iii)**

**IMPAIRMENT OF PROPERTY RIGHTS OR OTHER INTERESTS IN OR TO OIL, GAS, MINERAL OR WATER RESOURCES, AND (iv) REGAINING CONTROL OF ANY WILD WELL OR OUT OF CONTROL WELL, UNDERGROUND OR ABOVE THE SURFACE, INCLUDING REMOVAL OF WRECK, DEBRIS, EQUIPMENT, AND HAZARDOUS MATERIALS AND REMEDIATING ENVIRONMENTAL DAMAGE.**

**9.5 POLLUTION RESPONSIBILITY.** Subject to paragraphs 9.2 and 9.3, it is understood and agreed between Customer and QES that the responsibility for pollution shall be as follows:

(a) QES WILL ASSUME RESPONSIBILITY FOR CONTROL AND REMOVAL OF AND WILL PROTECT, DEFEND AND INDEMNIFY CUSTOMER GROUP FROM AND AGAINST ALL CLAIMS, DEMANDS AND CAUSES OF ACTION OF EVERY KIND OF CHARACTER ARISING FROM POLLUTION OR CONTAMINATION WHICH ORIGINATES ABOVE THE SURFACE OF THE LAND OR WATER FROM THE EQUIPMENT OF ANY MEMBER OF QES GROUP MAINTAINED IN QES GROUPS' CARE, CUSTODY AND CONTROL, AND ARISING FROM THE PERFORMANCE OF THE SERVICES.

(b) CUSTOMER WILL ASSUME RESPONSIBILITY FOR CONTROL AND REMOVAL OF AND WILL PROTECT, DEFEND AND INDEMNIFY QES GROUP FROM AND AGAINST ALL CLAIMS, DEMANDS AND CAUSES OF ACTION OF EVERY KIND AND CHARACTER ARISING FROM POLLUTION OTHER THAN THAT DESCRIBED IN SECTION 9.5(A) ABOVE, WHICH MAY OCCUR DURING THE CONDUCT OF OPERATIONS HEREUNDER INCLUDING, BUT NOT LIMITED TO, POLLUTION RESULTING FROM FIRE, BLOWOUT, CRATERING, SEEPAGE OR OTHER UNCONTROLLED FLOW OF OIL, GAS OR OTHER SUBSTANCE.

**9.6 WAIVER OF CONSEQUENTIAL DAMAGES. NOTWITHSTANDING ANY PROVISION TO THE CONTRARY, CUSTOMER AND QES FURTHER AGREE THAT NEITHER PARTY WILL BE LIABLE TO THE OTHER OR EACH OTHER'S RESPECTIVE GROUP FOR ANY CONSEQUENTIAL, INCIDENTAL OR INDIRECT DAMAGES; INCLUDING BUT NOT LIMITED TO, LOSS OF PROFIT, LOSS OF PRODUCTION, REVENUE, OR ANTICIPATED BUSINESS ("LOSSES"). CUSTOMER AGREES TO INDEMNIFY AND HOLD QES GROUP HARMLESS FROM AND AGAINST ANY AND ALL CLAIMS FOR SUCH LOSSES ASSERTED BY MEMBERS OF CUSTOMER GROUP. QES AGREES TO INDEMNIFY AND HOLD CUSTOMER GROUP HARMLESS FROM AND AGAINST ANY AND ALL CLAIMS FOR SUCH LOSSES ASSERTED BY MEMBERS OF QES GROUP.**

**9.7 EXCEPT AS OTHERWISE EXPRESSLY LIMITED BY THIS AGREEMENT OR BY LAW, ALL RELEASES, INDEMNITY OBLIGATIONS AND OTHER LIABILITIES ASSUMED UNDER THIS AGREEMENT WILL BE WITHOUT LIMIT AND WITHOUT REGARD TO THE CAUSE OR CAUSES, INCLUDING, WITHOUT LIMITATION, PREEXISTING CONDITIONS, UNSEAWORTHINESS, STRICT LIABILITY, WILLFUL MISCONDUCT, AND THE SOLE, JOINT, GROSS, OR CONCURRENT NEGLIGENCE OF ANY PARTY.**

**9.8 Each Party hereunder agrees to support its indemnity obligations with liability insurance coverage with limits of liability not less than ten million dollars (\$10,000,000). It is the express intention of the Parties that the indemnities contained herein apply to the fullest extent permitted by applicable law, and in no event will a Party's indemnity obligation be limited to the amount of insurance carried by each Party.**

**THIS SECTION 9 WILL SURVIVE THE TERMINATION OR EXPIRATION OF THIS AGREEMENT.**

**10. Insurance.** All insurance policies of either Party, in any way related to the Services, whether or not required by this Agreement, shall to the extent of the risks and benefits assumed by such party: (i) name the other party group as additional insured (except for worker's compensation, OEE/COW, or professional liability policies), (ii) waive subrogation as to the other party group; and (iii) be primary and non-contributory to any insurance of the other party group.

**11. Force Majeure.** Except the obligation to make payments when due, neither QES nor Customer will be liable nor deemed to be in breach of this Agreement for any delay or failure in performance resulting from the acts of God, civil or military authority, material change of law, any governmental action, acts of public enemy, war, accidents, fires, explosions, earthquakes, floods, failure of transportation, national strikes, acts or unusual labor, material or equipment shortages, or any similar or dissimilar cause beyond the reasonable control of either Party. The Party so affected will as soon as such a cause or event occurs promptly notify the other Party in writing concerning the cause and the estimated effect and take reasonable measures with proper dispatch to remedy the condition. In the event Customer declares a force majeure occurrence, QES will be compensated at the standard daily rate for the materials and personnel that are standing idle as a consequence of the force majeure occurrence until Customer terminates the work order or work resumes.

**12. Governing Law.** This Agreement will be governed by the laws of the State of Texas, without regard to its conflicts of law provisions. The Parties agree to submit to the exclusive jurisdiction of the federal or state courts located in Houston, Harris County, Texas with respect to any and all disputes that arise out of or are related in any way to the subject matter of this Agreement. This Section 12 will survive the termination or expiration of this Agreement.

**13. Independent Contractor.** QES will be an independent contractor with respect to the Services performed, and neither QES nor anyone employed by QES will be deemed for any purpose to be the employee, agent, servant, borrowed servant or representative of Customer.

**14. Severability.** In the event any provision of this Agreement is inconsistent with or contrary to any applicable law, rule or regulation, the provision will be deemed modified to the extent required to comply, and the remaining terms, as modified, will remain in full force and effect.

**15. Waiver.** A waiver on the part of either Party of any breach of any term, provision or condition of this Agreement will not constitute a precedent and not bind either Party hereto to a waiver of any succeeding or other breach of the same or any other term, provision or condition of this Agreement.

**16. Entire Agreement.** This Agreement contains the entire agreement of the Parties with regard to the subject matter hereof and supersedes any prior oral and written agreements, contracts, representations or warranty between the Parties relating to the subject matter hereof. No amendment or modification of this Agreement will be effective unless it is in writing and signed by an authorized representative of each Party. If the Parties enter into a Master Service Agreement, then any term or condition herein which conflicts with the provisions of such Master Service Agreement will be deemed invalid.

# JUSTIN D. CARTER

## CONSULTING GEOLOGIST

Scale 1:240 (5"=100') Imperial  
Measured Depth Log

Well Name: BEAR 34-1  
Well Id:  
Location: NE, NE, NE, SE Sec. 34 - 6S - 37W Sherman Co., KS  
License Number: 15-181-20612-0000  
Spud Date: 04/09/18  
Surface Coordinates: 2622' FSL, 180' FEL  
Region: Wildcat  
Drilling Completed: 04/14/18

Bottom Hole  
Coordinates:  
Ground Elevation (ft): 3421' K.B. Elevation (ft): 3426'  
Logged Interval (ft): 4000' To: 5060' Total Depth (ft): 5060'  
Formation: L/KC, MARMATON, PAWNEE, FT. SCOTT  
Type of Drilling Fluid: Chemical Mud

Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

### OPERATOR

Company: QUESTA ENERGY CORPORATION  
Address: P.O. Box 50968  
Amarillo, TX 79159-0968  
Co. Geo.: Ms. Nita Hunt

### GEOLOGIST

Name: Justin D. Carter  
Company: Consulting Geologist  
Address: 1640 N. Roosevelt Ave.  
Liberal, KS 67901  
Phone: 620-655-187

### Comments

Drilling Contractor: Murfin Drilling Rig #7  
Tool Pusher: Kelly Wilson

8 5/8" surface casing set at 366'

Mud: Mudco  
Engineer: Reid Atkins

Gas Detector: Earth Tech OGL, Inc.

DSTs: Trilobite Testing  
Tester: Martine Salinas

Open-Hole Loggers: Pioneer Wireline





**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Questa Energy Corporation

**34-6S-.37W**

**Sherman, Co.**

P.O. Box 50968  
Amarillo, TX 79159

**Bear # 34-1**

Job Ticket: 63306

**DST#: 1**

ATTN: Justin Carter

Test Start: 2018.04.15 @ 04:05:00

**GENERAL INFORMATION:**

Formation: **Ft. Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:00:20

Time Test Ended: 12:12:50

Test Type: Conventional Straddle (Initial)

Tester: Martine Salinas

Unit No: 82

**Interval: 4710.00 ft (KB) To 4757.00 ft (KB) (TVD)**

Total Depth: 5060.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches-Hole Condition: Fair

Reference Elevations: 3426.00 ft (KB)

3421.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 8734**

Press@RunDepth: 26.36 psig @ 4714.00 ft (KB)

Start Date: 2018.04.15

End Date:

2018.04.15

Capacity: 8000.00 psig

Last Calib.: 2018.04.15

Start Time: 04:05:01

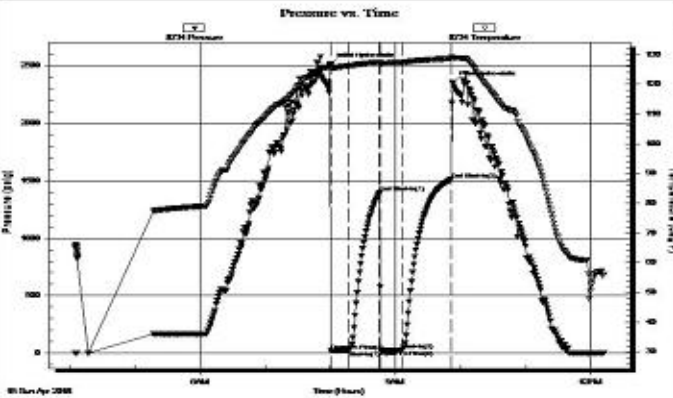
End Time:

12:12:50

Time On Btm: 2018.04.15 @ 08:00:10

Time Off Btm: 2018.04.15 @ 09:52:50

**TEST COMMENT:** 15-IF-S. blow built to 1/2"  
30-ISI-No blow  
20-FF-No blow  
45-FSI-No blow



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2512.31	125.94	Initial Hydro-static
1	21.95	124.94	Open To Flow (1)
17	23.03	126.15	Shut-in(1)
46	1395.73	127.33	End Shut-In(1)
46	24.61	126.86	Open To Flow (2)
67	26.36	127.34	Shut-in(2)
112	1509.67	128.62	End Shut-In(2)
113	2351.67	128.80	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
5.00	100% Mud	0.02

**Gas Rates**

Choke (inches)	Pressure (psig)	Gas Rate (Mcft/d)

Trilobite Testing, Inc

Ref. No: 63306

Printed: 2018.04.15 @ 21:28:41

**Remarks**

After careful review of the sample log, electric logs, and DST reports, the decision was made to P&A the Bear 34-1.

Respectfully submitted,

**Justin D. Carter**  
Consulting Geologist

### ROCK TYPES

- Anhy
- Bent
- Brec
- Cht
- Clyst
- Coal
- Congl
- Dol

- Gyp
- Igne
- Lmst
- Meta
- Mrst
- Salt
- Shale
- Shcol

- Shgy
- Sltst
- Ss
- Till
- Carb sh
- Dol
- Dtd
- Gry sh

- Sandylms
- Shale
- Sltstn
- Shlyslts
- Sltyslts
- Lms

### ACCESSORIES

#### FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom
- Fuss
- Oomold

#### MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brecfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr

- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff
- Chlorite
- Dol
- Sand
- Sltly

- Dol
- Grysh
- Gryslt
- Lms
- Sandylms
- Sh
- Sltstn

#### TEXTURE

- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest

#### STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg
- Carbsh
- Clystn

### OTHER SYMBOLS

#### INTERVALS

- Core
- Dst

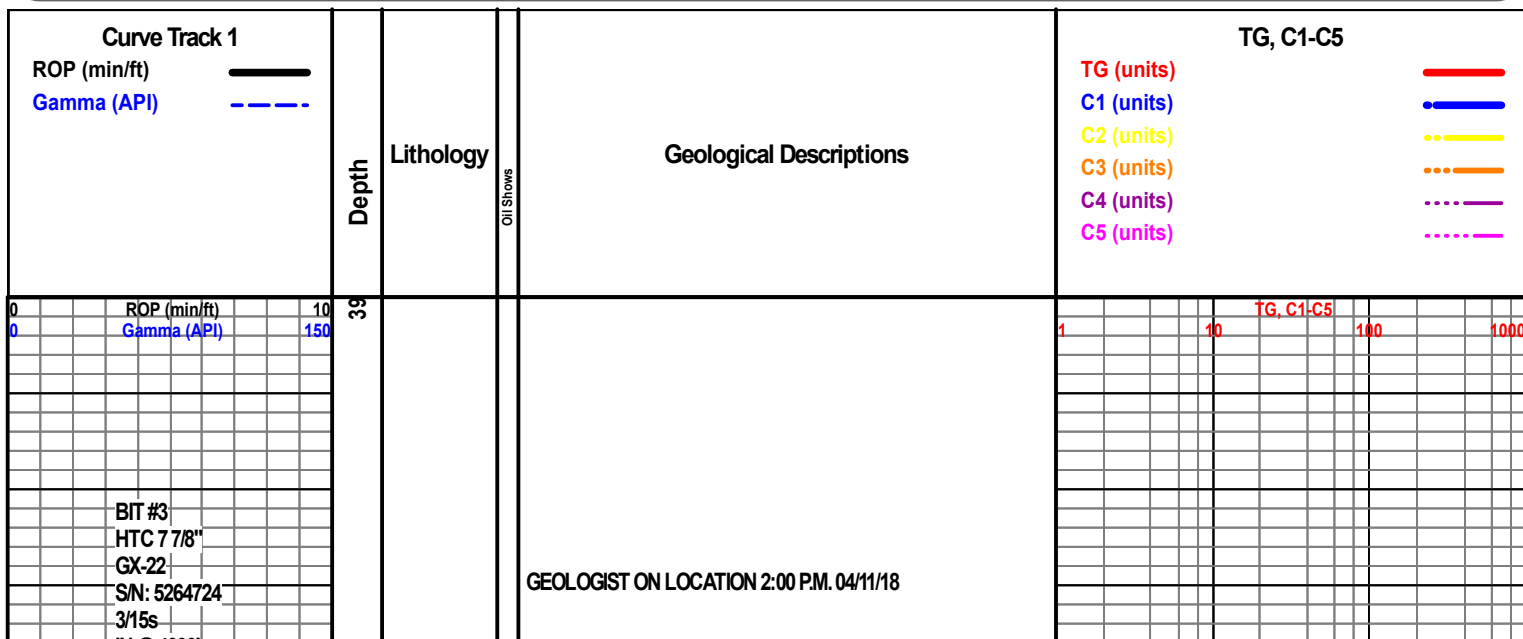
- Dst

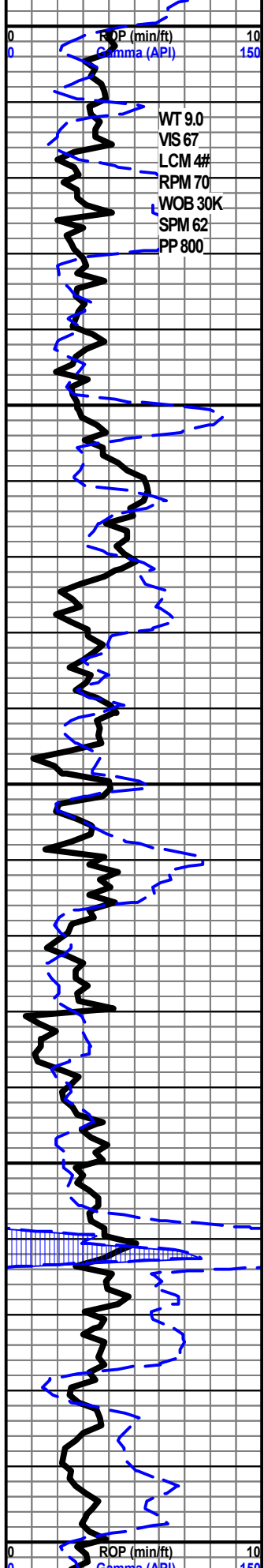
#### OIL SHOWS

- Even
- Spotted

- Ques

- Dead
- Gas show





WT 9.0  
 VIS 67  
 LCM 4#  
 RPM 70  
 WOB 30K  
 SPM 62  
 PP 800

4000  
 4050  
 4100  
 4150  
 4200



STRAP OUT @ 4000', 0.55' LONG TO BOARD

LS- CRM, HRD DNS TO BRITT IP, FMF-XLN, RE-XLN MTRX IP TO SUB-SUCRO MTRX IP, TR IMBED FOSS FRAGS, NO FLO, NO VIS POR

SH- GRN, FRM, SLTY TO TR SLTST

LS- CRM LT TN, HRD DNS TO BRITT IP, VF-XLN, RE-XLN MTRX THRU, SFT WHT CHLK IP, TR OPQ CHRT, TR IMBED FOSS FRAGS, NO FLO, NO VIS POR

LS- LT GRY, HRD DNS, VF/CRYPTO-XLN, RE-XLN MTRX IP, TR RD CHRT, NO FLO, NO VIS POR

SH- RD, SFT, GMMY

**TOPEKA 4079' (-653')**

LS- CRM BFF, BRITT, VF-XLN, SUB-CHLKY MTRX THRU, TR SNDY LS, NO FLO, NO VIS POR

LS- GY, HRD TO BRITT IP, FMF-XLN, SUB-SUCRO MTRX THRU TO TR SUB-CHLKY, ABDT SFT WHT CHLK THRU, NO FLO, NO VIS POR

LS- LT GY, HRD TO BRITT IP, VF-XLN, SUB-SUCRO MTRX THRU, ABDT SFT WHT CHLK THRU, NO FLO, NO VIS POR

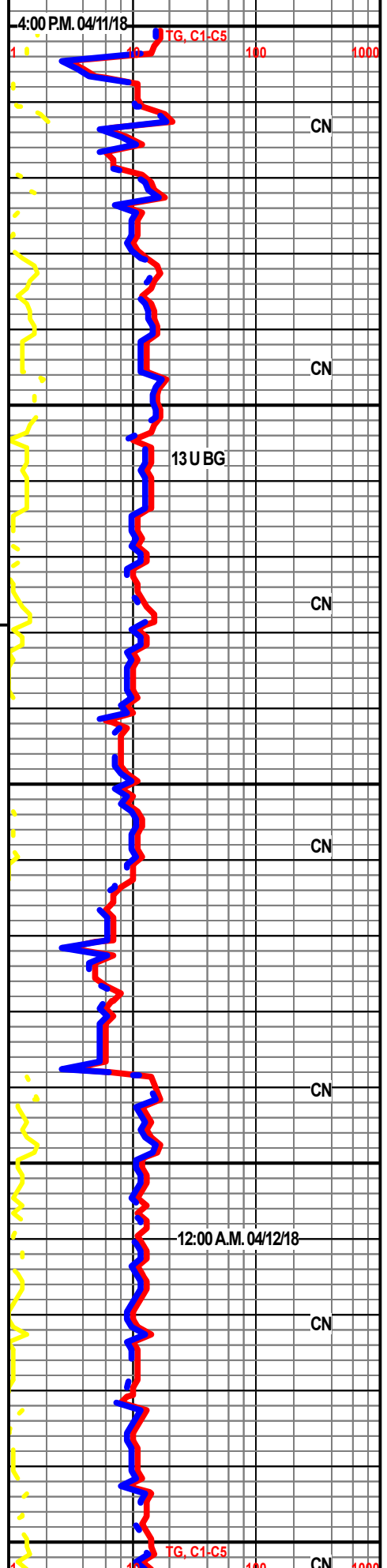
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LS- CRM, HRD TO BRITT IP, FMF-XLN, RE-XLN MTRX THRU, SFT WHT CHLK IP, NO FLO, NO VIS POR

SH- RD GRN, SFT, GMMY

SH- RD, SFT, GMMY

LS- LT GY BFF, HRD DNS, CRYPTO-XLN, RE-XLN MTRX IP, SFT WHT CHLK IP, NO FLO, NO VIS POR



4:00 P.M. 04/11/18

13 U BG

12:00 A.M. 04/12/18

TG, C1-C5

CN

CN

CN

CN

CN

CN

CN

WT 9.3  
 VIS 56  
 LCM 3#  
 RPM 70  
 WOB 30K  
 SPM 65  
 PP 900

LS- CRM BFF, HRD DNS, FVF-XLN, SUB-SUCRO MTRX IP TO RE-XLN MTRX IP,

LS- CRM BFF, HRD TO BRITT IP, F-XLN, SUCRO MTRX IPTO RE-XLN MTRX IP, SFT WHT CHLK IP, NO FLO, TR INTER-XLN POR TO NO VIS POR THRU, NS

**HEEBNER 4245' (-819')**

12U BG

CN

SH- RD, SFT, GMMY

SH- A/A

LS- WHT CRM, BRITT, FVF-XLN, CHLKY MTRX TO TR SUCRO MTRX, TR IMBED FOSS FRAGS, ABDT SFT WHT CHLK, NO FLO, TR INTER-XLN POR, NS

**LANSING 4298' (-872')**

MUD CHECK @4270'

WT 9.3  
 VIS 59  
 LCM 4#  
 PV 16  
 YP 15  
 PH 10.0  
 FIL 6.8  
 CAL 40  
 CHL 3,000

CN

CN

LS- LT CRM, HRD, FVF-XLN, SUB-SUCRO MTRX IP TO TR GRST, NO FLO, NO VIS POR

SH- DK RD, SFT, GMMY TO TR FISS

LS- LT GY DK GY, HRD DNS, VF/CRYPTO-XLN, RE-XLN MTRX IP, NO FLO, NO VIS POR

LS- BFF CRM, BRITT TO HRD IP, VF-XLN, SUB-SUCRO MTRX THRU, ABDT SFT WHT CHLK THRU, NO VIS POR

CN

LS- CRM, HRD DNS, FVF-XLN, RE-XLN MTRX THRU, NO FLO, NO VIS POR

CN

LS- CRM, HRD DNS, FVF-XLN, RE-XLN MTRX IP TO SUB-SUCRO MTRX IP, SFT WHT CHLK IP, NO FLO, NO ODOR, TR RESIDUAL STAIN, NS

CN

LS- LT CRM, HRD TO BRITT IP, F-XLN, GRST, IMBED OOL IP, SFT WHT CHLK IP, NO FLO, TR INTER-XLN POR TO NO VIS POR IP, NS

CN

LS- BFF, HRD DNS, VF-XLN, RE-XLN MTRX THRU, NO FLO, NO VIS POR

CN

4250

4300

4350

4400

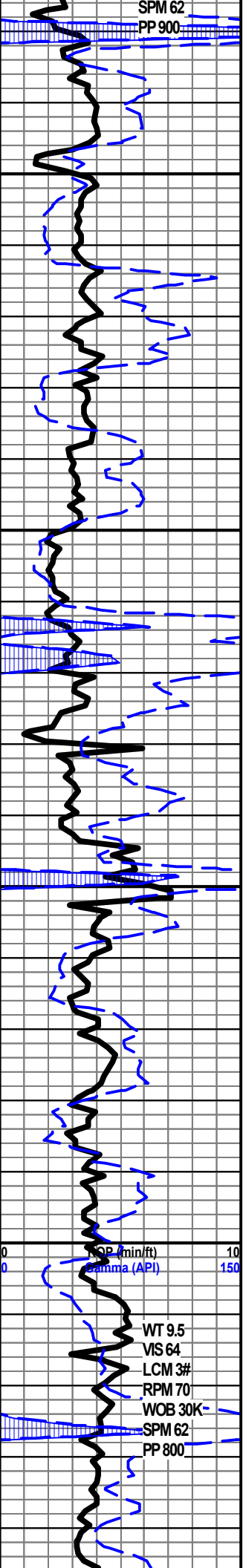
ROP (min/ft)  
 Gamma (API)

WT 9.2  
 VIS 58  
 LCM 3#  
 RPM 70  
 WOB 30K

TG, C1-C5

CN

SPM 62  
PP 900



4450

4500

4550

4600

ROP (min/ft) 10  
Gamma (API) 150

WT 9.5  
VIS 64  
LCM 3#  
RPM 70  
WOB 30K  
SPM 62  
PP 800



H

J

K

L

LS- CRM, BRITT, VF-XLN, SUB-CHLKY MTRX THRU TO TR RE-XLN MTRX, TR SFT WHT CHLK, NO FLO, NO VIS POR

LS- BFF, HRD DNS, VF-XLN, RE-XLN MTRX THRU, NO FLO, NO VIS POR

LS- CRM TN, HRD DNS, VF-XLN, RE-XLN MTRX IP, TR SLTST, NO FLO, NO VIS POR

LS- RDISH CRM, HRD, VF-XLN, SUB-SUCRO MTRX THRU, IMBED OOL SCAT THRU, ONE SMPLE W/ YEL GLD FLO SCAT THRU, PR FLUSH TO PR/FR SLO BLU STRM CUT, TR INTER-OOL POR TO NO VIS POR THRU, NO ODOR, SCAT BLK STAIN

LS- OFF WHT, HRD TO BRITT IP, F/VF-XLN, SUB-CHLKY MTRX THRU TO TR SUB-SUCRO, TR CORSE CALC XLS, YEL GLD FLO IN 30%, PR FLUSH TO PR SLO BLU STRM CUT, TR INTER-XLN POR, SCAT BLK STAIN TO TR LIVE OIL STAIN, NO ODOR

LS- LT GY, HRD DNS, CRYPTO-XLN, RE-XLN MTRX IP, NO FLO, NO VIS POR

SH- RD GRN GY, FRM, BLKY, LMY, ABDT LS THRU

**STARK SH 4547' (-1121')**

LS- CRM GY, HRD DNS, VF-XLN, SUB-SUCRO TO TR SUCRO MTRX THRU, IMBED OOL IP, NO FLO, NO VIS POR

SH- RD GRN GY, SFT TO FRM IP, GMMY TO TR FISS

LS- CRM, HRD DNS TO BRITT IP, VF-XLN, SUB-SUCRO MTRX THRU, TR OOL, DLL YEL FLO IN 20%, FAINT FLUSH TO PR SLO STRM CUT, TR INTER-OOL POR TO TR INTER-XLN POR, DK BLK STAIN IN 30%, NO ODOR

SH- RD, VISFT, GMMY

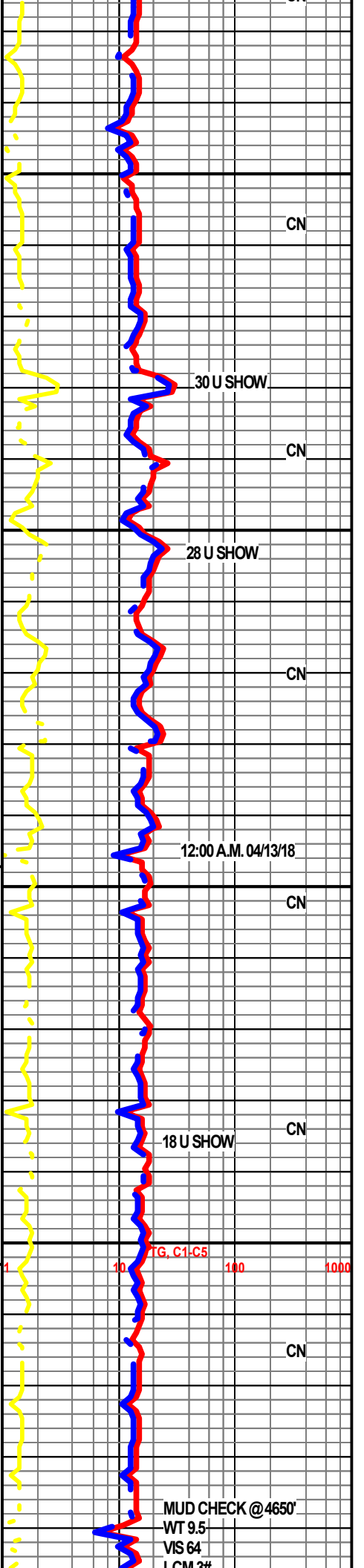
**MARMATON 4603' (-1177')**

LS- CRM, HRD DNS, VF/CRYPTO-XLN, RE-XLN MTRX IP, NO FLO, NO VIS POR

SH- GY GRN, FRM TO SFT IP, BLKY TO TR GMMY

LS- CRM, HRD DNS, VF-XLN, SUB-SUCRO MTRX THRU, SFT WHT CHLK IP, NO FLO, NO VIS POR

SH- LT GRN, SFT, GMMY



CN

CN

CN

CN

CN

CN

30 U SHOW

28 U SHOW

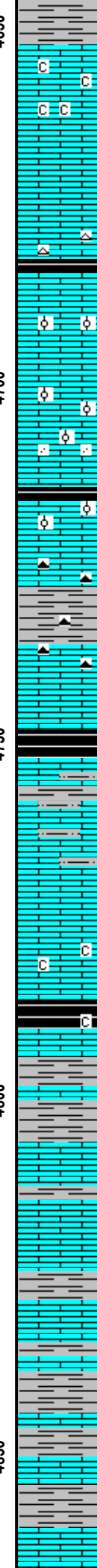
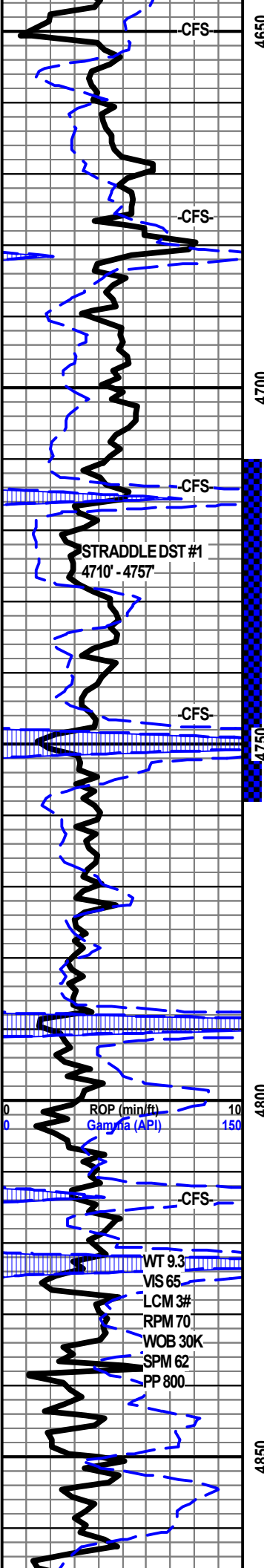
12:00 A.M. 04/13/18

18 U SHOW

TG, C1-C5 1 10 100 1000

MUD CHECK @ 4650'

WT 9.5  
VIS 64  
LCM 3#



LS- CRM, HRD DNS, VF-XLN, RE-XLN MTRX IP,ABDT SFT WHT CHLK THRU, NO FLO, NO VIS POR

LS- WHT, HRD DNS, VF-XLN, SUB-SUCRO MTRX THRU TO TR SUB-CHLKY, TR SFT WHT CHLK, TR PYR, YEL GLD FLO IN 10%, PR FLUSH TO PR SLO BLU STRM CUT, TR INTER-XLN POR TO NO VIS POR THRU, TR SPOTTED BLK STAIN, NO ODOR

**PAWNEE 4684' (-1258')**

LS- CRM, HRD TO BRITT IP, VF-XLN, SUB-SUCRO MTRX THRU, TR IMBED OOL, DLLYEL GLD FLO IN 50%, FAINT SLO BLU STRM CUT, TR INTER-OOL POR, TR V/LT TN STAIN, V/FAINT ODOR

LS- V/LT CRM, HRD DNS, F/VF-XLN, RE-XLN MTRX IP TO TR SUCRO MTRX, YEL GLD FLO THRU, FAINT FLUSH TO PR SLO BLU STRM CUT, TR INTER-XLN POR, V/LT STAIN IN 30%, NO ODOR

**FT. SCOTT 4716' (-1290')**

LS- CRM BLK, HRD DNS, F-XLN, SUB-SUCRO MTRX THRU, IMBED OOL SCAT THRU, LAM BLK SH THRU, NO FLO, TR INTER-OOL POR TO NO VIS POR THRU, NS

LS- CRM, HRD DNS, VF/CRYPTO-XLN, RE-XLN MTRX IPTO TR SUB-CHLKY, OPQ CHRT IP, NO FLO, NO VIS POR

**CHEROKEE SH 4748' (-1322')**

LS- CRM LT GY, HRD DNS, VF-XLN, RE-XLN MTRX THRU, LAM DK GY SH/SLTST IP, NO FLO, NO VIS POR

LS- CRM TN, HRD DNS, VF/CRYPTO-XLN, RE-XLN MTRX THRU, NO FLO, NO VIS POR

SH- BLK, CARB

LS- CRM TN, HRD DNS, MED/CRYPTO-XLN, GRST IP TO RE-XLN MTRX IP, SFT WHT CHLK IP, NO FLO, TR INTER-XLN POR

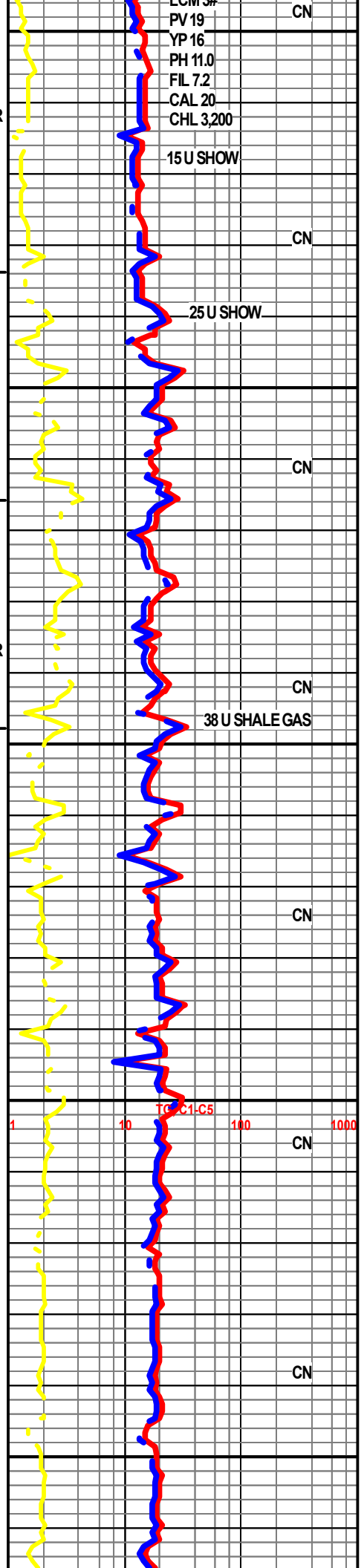
LS- LT CRM, HRD DNS, CRYPTO-XLN, RE-XLN MTRX THRU, NO FLO, POSS FRAC POR TO NO VIS POR

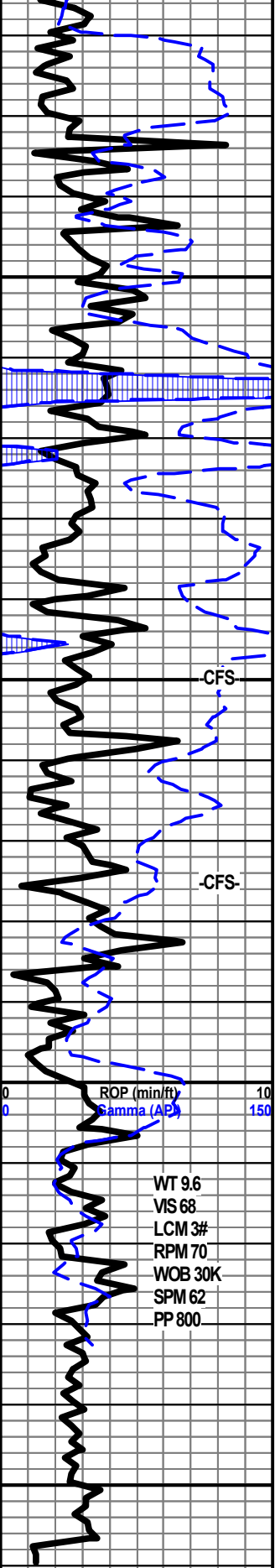
LS- OFF WHT TN, HRD DNS, VF/CRYPTO-XLN, RE-XLN MTRX IP, IMBED BLK SH IP, NO FLO, NO VIS POR

LS- LT TN, HRD DNS, VF/CRYPTO-XLN, RE-XLN MTRX IP, SFT WHT CHLK IP, GMMY GRN DK GYSH, NO VIS POR

SH- RD, SFT, GMMY

LS- LT GY, HRD DNS, CRYPTO-XLN, RE-XLN MTRX THRU, LAM BLK SH IP, NO FLO, NO VIS POR





4900

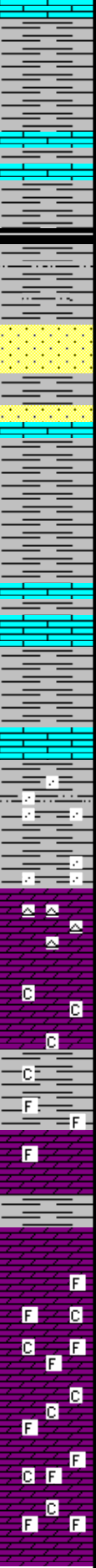
4950

5000

5050

ROP (min/ft)  
Gamma (API)

WT 9.6  
VIS 68  
LCM 3#  
RPM 70  
WOB 30K  
SPM 62  
PP 800



SH- RD GY GRN, SFT, GMMY IP, SFT WHT CHLK IP

LS- CRM BFF, HRD DNS, VF/CRYPTO-XLN, RE-XLN MTRX IP, NO FLO, NO VIS POR

**MORROW 4894' (-1468')**

SLTST- GRN, TT, VF-GRNS, NO VIS POR

SS- WHT, TT TO FRI IP, MD/F-GRNS, FR SRT, ANG TO SUB-RND GRNS, SLI CALC CMNT, TR SFT WHT CHLK, TR PYR, TR DISS SH, NO FLO, NO VIS CUT, FR INTER-GRN POR THRU, NS

SH- GRN GY RD, SFT, LMY, FISS

LS- CRM TN, HRD DNS, CRYPTO-XLN, RE-XLN MTRX IP, NO FLO, NO VIS POR

SH- BLK GRN RD GY, SFT, GMMY TO TR FISS SH

SLTST- GY, TT TO FRI IP, F-GRNS, LAM BLK SH IP TO MICA SH IP, PR INTER-GRN POR, ABDT RD GRN GY FISS AND GMMY SH

**MISSISSIPPIAN 4977' (-1551')**

DOLO- WHT LT TN, HRD TO BRITT IP, F/VF-XLN, SUCRO MTRX THRU TO TR RE-XLN MTRX, ABDT CHRT, NO FLO, NO VIS CUT, TR BLK STAIN, NO ODOR

SH- GY BLK, FRM TO SFT IP, BLKY, SLTY IP TO GMMY SH IP, SFT WHT CHLK IP

DOLO- CRM GY, HRD DNS, MD/VF-XLN, SUCRO MTRX THRU TO TR RE-XLN MTRX, IMBED FOSS FRAGS IP, NO FLO, PR INTER-XLN POR IP, NS

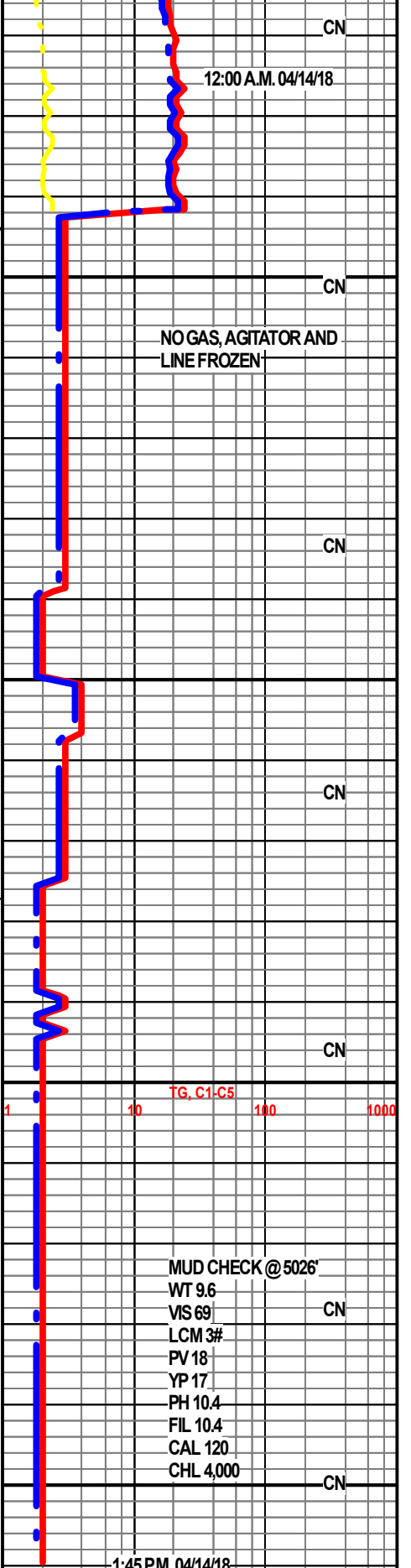
DOLO- GY, HRD DNS, F-XLN, SUCRO MTRX THRU, IMBED FOSS FRAGS IP, IMBED BLK SH IP, NO FLO, NO VIS POR

DOLO- CRM WHT, HRD DNS, F-XLN, SUCRO MTRX THRU, IMBED FOSS FRAGS SCAT THRU, SFT WHT CHLK IP, NO FLO, PR INTER-XLN POR SCAT THRU, NS

STRADDLE TEST AFTER E-LOGS

R.T.D. 5060'

L.T.D. 5060'



12:00 A.M. 04/14/18

NO GAS, AGITATOR AND LINE FROZEN

TG, C1-C5

MUD CHECK @ 5026'  
WT 9.6  
VIS 69  
LCM 3#  
PV 18  
YP 17  
PH 10.4  
FIL 10.4  
CAL 120  
CHL 4,000

1:45 P.M. 04/14/18

CN

CN

CN

CN

CN

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CN

