

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)</i> <i>(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	Abercrombie Energy, LLC
Well Name	WATT 1-14
Doc ID	1411581

All Electric Logs Run

DIL
MEL
POR
SON

Form	ACO1 - Well Completion
Operator	Abercrombie Energy, LLC
Well Name	WATT 1-14
Doc ID	1411581

Tops

Name	Top	Datum
ANHY	2080	+610
HEEB	3747	-1057
LANS	3782	-1092
MUN CK	3952	-1262
STRK	4048	-1358
MARM	4153	-1463
PAW	4240	-1550
FT SCT	4296	-1606
CHER	4320	-1630
JOHN ZN	4362	-1672
MISS	4397	-1707

GEOLOGIC REPORT

DAVID J. GOLDAK

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

Well Name: Watt #1-14
API: 15-101-22607
Location: Section 14 - T16S - R30W
License Number: _____ Region: Lane Co., KS
Spud Date: 05 / 12 / 2018 Drilling Completed: 05 / 20 / 2018
Surface Coordinates: 486' FNL and 607' FWL
Approx. SE - NW - NW - NW
Bottom Hole
Coordinates:
Ground Elevation (ft): 2685' K.B. Elevation (ft): 2690'
Logged Interval (ft): 3500' To: 4460' Total Depth (ft): 4460
Formation: Mississippian
Type of Drilling Fluid: Chemical - Mud Co

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Abercrombie Energy, LLC
Address: 10209 W Central, Suite 2
Wichita, KS 67212

GEOLOGIST

Name: David J. Goldak
Company: D. J. GOLDAK, INC.
Address: 12427 W Ridgepoint Cir
Wichita, Kansas 67235

General Info

CONTRACTOR: WW Drilling, Rig #2

BIT RECORD:

No.	Size	Make	Jets	Out	Feet	Hours
1	12-1/4	Smith MT	4-15s	302	302	4.50
2	7-7/8	Smith-F27	3-15s	4460	4158	115.50

SURVEYS: 302'-0.75, 4330'-1.25, 4460'-0.75

GENERAL DRILLING & PUMP INFORMATION:

Drilling with 16 collars (6.25"x2.25"): 475.41
Drilling with 37,000-38,000 lbs on bit and 75-85 RPM.
Pumping 60 S/M; 7.74 B/M; and 800 psi at the Standpipe.

Daily Status

05/12/18 - Spud at 10:00 AM; Set 8-5/8" Csg at 301'
 05/13/18 - 611' Drilling (DP @ 1:00 AM)
 05/14/18 - 2,250' Drilling
 05/15/18 - 2,975' Drilling; Displace @ 3,373'
 05/16/18 - 3,570' Drilling
 05/17/18 - 3,993' Drilling
 05/18/18 - 4,282' Drilling; DST #1 @ 4,320'
 05/19/18 - 4,371' Drilling; DST #2 @ 4,383'
 05/20/18 - 4,460' RTD; TOH & Prepare for logging

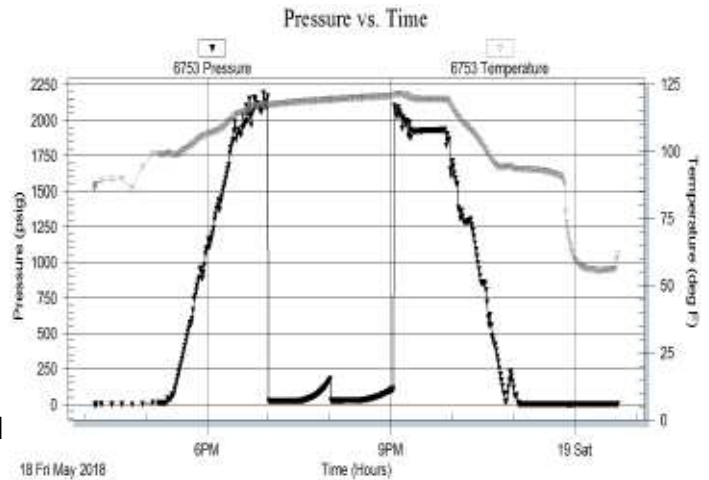
	Log Tops	Sample Tops
Anhydrite	2080 (+610)	2080 (+610)
Base/Anhy	2109 (+581)	2109 (+581)
Heebner	3747 (-1057)	3747 (-1057)
Lansing	3782 (-1092)	3786 (-1096)
Muncie Creek	3952 (-1262)	3952 (-1262)
Stark Sh	4048 (-1358)	4049 (-1359)
Marmaton	4153 (-1463)	4152 (-1462)
Pawnee	4240 (-1550)	4238 (-1548)
Ft Scott	4296 (-1606)	4294 (-1604)
Cherokee	4320 (-1630)	4320 (-1630)
Johnson Zone	4362 (-1672)	4362 (-1672)
Mississippian	4397 (-1707)	4396 (-1706)
Total Depth	4461 (-1771)	4460 (-1770)

DST #1: 4,232' - 4,330' (Pawnee - Ft Scott)
 30" - 30" - 30" - 30"

IF: Weak surface blow; died in 10 minutes
 ISI: No blow back
 FF: No blow
 FSI: No blow back

RECOVERY: 15' Total Fluid, consisting of:
 15' OSM (100% Mud)

SIP: 174-105; FP: 25-27, 28-29; HP: 2166-2103; BHT: 121

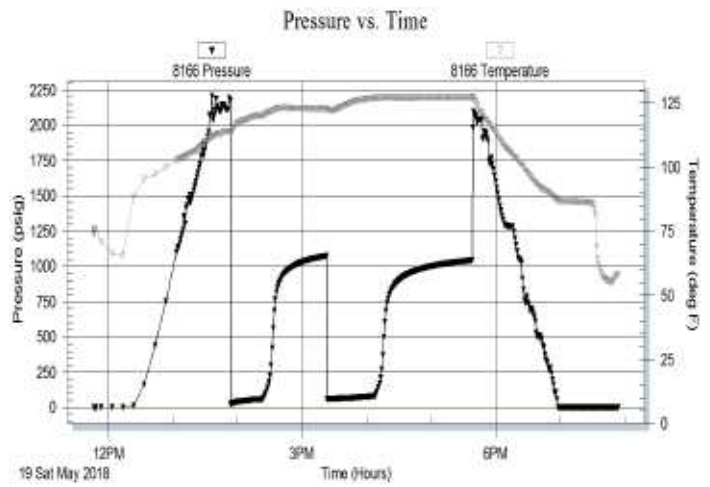


DST #2: 4,340' - 4,376' (Johnson Zone)
 30" - 60" - 45" - 90" (Straddle Test)

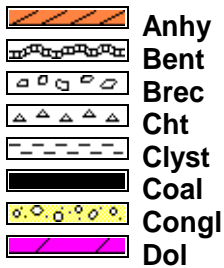
IF: Fair blow building to BOB in 19 minutes
 ISI: Weak surface blow back, died in 35 minutes
 FF: Good blow building to BOB in 8 minutes
 FSI: Surface blow back building to 9 inches

RECOVERY: 557' GIP & 199' Total Fluid, consisting of:
 41' CO (100% Oil); Gravity 28 API
 94' MCGO (5% Gas, 55% Oil & 40% Mud)
 63' GOCM (10% Gas, 30% Oil & 60% Mud)

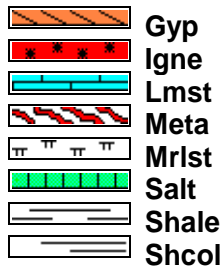
SIP: 1072-1041; FP: 21-55, 59-78; HP: 2193-2096;
 BHT: 127



ROCK TYPES



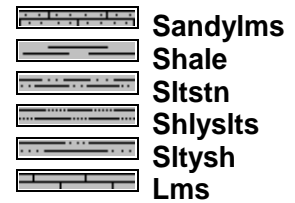
Anhy
 Bent
 Brec
 Cht
 Cyst
 Coal
 Congl
 Dol



Gyp
 Igne
 Lmst
 Meta
 Mrlst
 Salt
 Shale
 Shcol



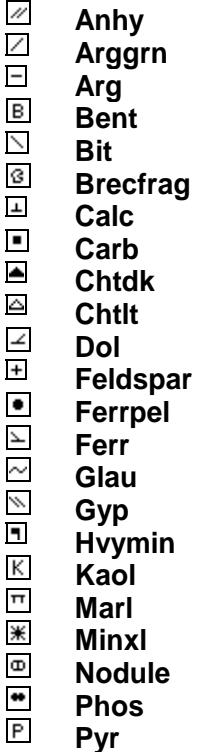
Shgy
 Sltst
 Ss
 Till
 Carb sh
 Dol
 Dtd
 Gry sh



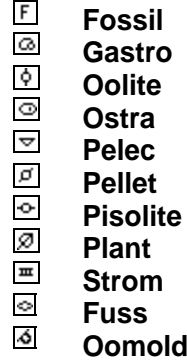
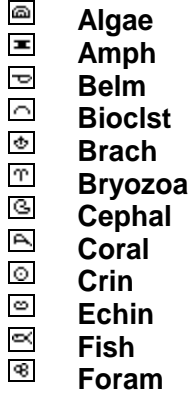
Sandylms
 Shale
 Sltstn
 Shlyslts
 Sltysch
 Lms

ACCESSORIES

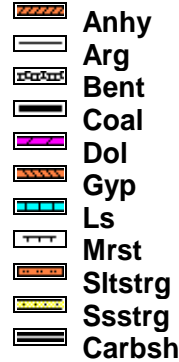
MINERAL



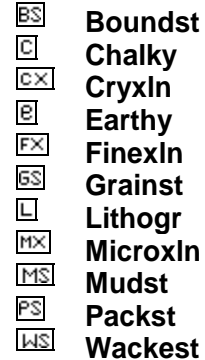
FOSSIL



STRINGER



TEXTURE



OTHER SYMBOLS

POROSITY TYPE

- E Earthy
- F Fenest
- X Fracture
- I Inter
- M Moldic
- O Organic
- P Pinpoint
- V Vuggy

SORTING

- W Well
- M Moderate
- P Poor

ROUNDING

- R Rounded
- F Subrnd
- a Subang
- A Angular

OIL SHOWS

- Even
- ◉ Spotted
- ◻ Ques
- ◻ Dead
- ⊠ Gas show

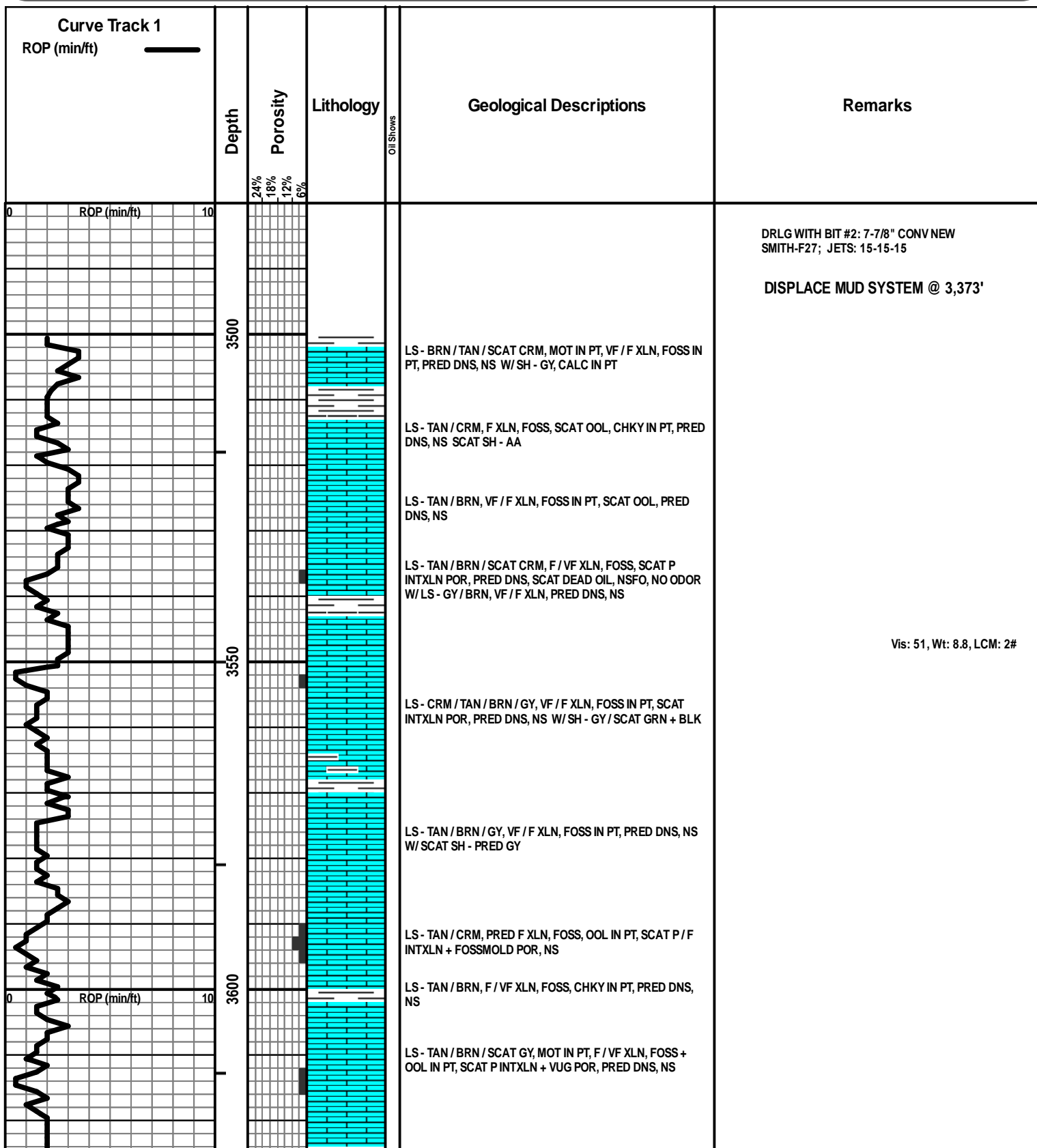
INTERVALS

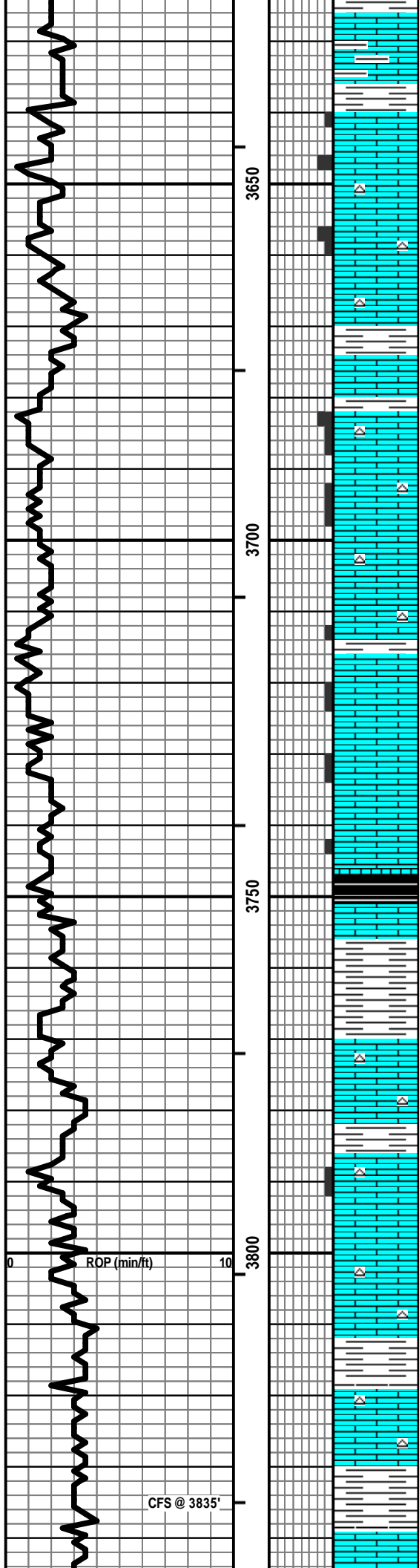
- Core
- Dst

- Dst_1_t
- Dst_1_b
- Dst

EVENTS

- ▽ Rft
- ▶ Sidewall
- ▬ Conn





LS - TAN / BRN / GY, MOT IN PT, VF / F XLN, FOSS IN PT, CHKY IN PT, SCAT OOL, PRED DNS, NS W/ SH - GY / BLK, CALC IN PT

LS - CRM / TAN, F / VF XLN, SCAT REXLN CALC, OOL + FOSS IN PT, TR INTXLN POR, CHKY IN PT / DNS, NS

LS - CRM / TAN, F XLN, OOL, SL FOSS, P / F VUG POR IN PT, SCAT P OOM POR, NS W/ SCAT CHT - GY/ WHT

LS - SIM TO ABOVE W/ SCAT GY / TAN, MOT, SCAT POR AA, PRED DNS, NS W/ SCAT CHT - GY / WHT W/ SCAT SH - GY

LS - CRM / TAN, VF / F XLN, OOL + FOSS, PRED DNS, NS

LS - TAN / CRM / SCAT GY, VF / F XLN, OOL + FOSS IN PT, SCAT INTXLN + PPT POR / DNS, NS W/ SCAT CHT - WHT / LT GY

LS - TAN / CRM / SCAT BRN, VF / F XLN, FOSS + OOL IN PT, CHKY IN PT / DNS, NS W/ SCAT CHT - WHT / LT GY

LS - TAN / CRM / SCAT BRN, F / VF XLN, FOSS + OOL, TR INTXLN + PPT POR, CHKY, NS W/ SCAT CHT - WHT / LT GY

LS - TAN / BRN / CRM, F / VF XLN, FOSS, OOL IN PT, ARGIL IN PT, SCAT PFOSSMOLD POR, CHKY IN PT, SCAT DEAD OIL, NSFO, NO ODOR

SH - BLK, CARB W/ LS - TAN, VF / F XLN, PRED DNS, NS

SH - PRED GY

LS - CRM / WHT, VF / F XLN, FOSS IN PT, TR FOSSMOLD POR, CHKY IN PT / DNS, NS W/ CHT - WHT / CRM

LS - CRM, F / VF XLN, OOL, TR P INTXLN POR, PRED DNS, NS W/ TR CHT - TAN / WHT, MOT

LS - CRM, VF / F XLN, OOL IN PT, PRED DNS, NS W/ SCAT CHT - TAN / WHT, MOT

SH - RED / GY

LS - CRM / TAN, VF / F XLN, FOSS IN PT, SCAT OOL, PRED DNS, NS W/ CHT - VARICOL, MOT

SH - GY / SCAT GRN / RED

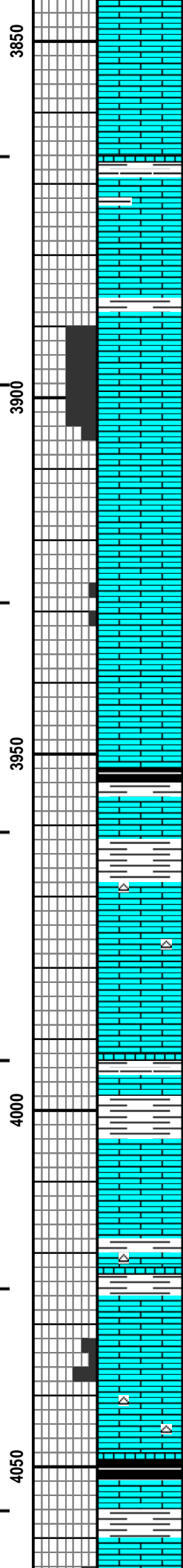
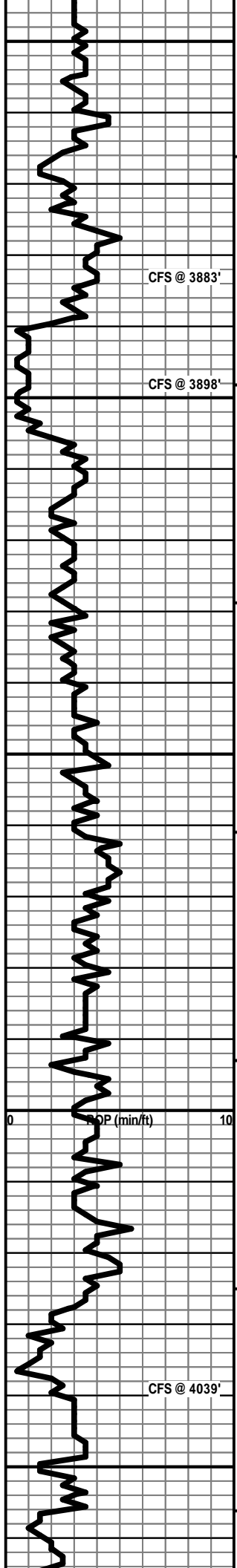
Vis: 52, Wt: 8.9, YP: 15,
 GeIS: 9/34, pH: 11.0, WL: 8.0,
 Chl: 1,800, Sol: 4.3, LCM: 1#

HEEBNER 3747 (-1057)

Vis: 55, Wt: 9.0, LCM: 2#

LANSING 3786 (-1096)

CFS @ 3835'



LS - CRM / LT GY, VF / F XLN, FOSS IN PT, SCAT CHKY, PRED DNS, NS

LS - CRM / LT GY, VF / F XLN, FOSS IN PT, SCAT CHKY, PRED DNS, NS

LS - ASABOVE W/ SCAT SH - GY W/LS - TAN / BRN, F / VF XLN, OOL IN PT, PRED DNS, NS

LS - CRM / TAN / SCAT BRN, VF / F XLN, OOL IN PT, TR FOSS, SCAT CHKY, PRED DNS, NS

LS - TAN / CRM, F XLN, OOL, G OOM POR, F / G INTXLN POR, NS

LS - ASABOVE W/ SCAT CRM/ GY, VF / F XLN, OOL IN PT, PRED DNS, NS

LS - CRM / GY / TAN, VF / F XLN, SCAT OOL, SCAT CHKY, PRED DNS, NS

LS - CRM / GY / TAN, VF / F XLN, OOL IN PT, SCAT POOM POR, SCAT CHKY, PRED DNS, NS

LS - CRM / GY / TAN, VF / F XLN, SCAT REXLN CALC, SCAT OOL, PRED DNS, NS

SH - BLK, CARB W/LS - TAN / BRN / GY, MOT, F XLN, OOL IN PT, SL FOSS, PRED DNS, NS

SH - GY / GRN W/LS - TAN / BRN / CRM, VF / F XLN, SCAT OOL, PRED DNS, NS W/ SCAT CHT - CRM / WHT

LS - CRM / TAN / LT GY, VF / F XLN, SCAT CRYPTO XLN, SCAT OOL, PRED DNS, NS

LS - TAN / BRN, VF / F XLN, TR FOSS, PRED DNS, NS W/ SH - PRED GY / GRN

LS - TAN / CRM, VF / F XLN, OOL IN PT, TR FOSS, CHKY IN PT, PRED DNS, NS

LS - TAN / BRN, MOT IN PT, F / VF XLN, OOL, PRED DNS, NS W/ SH - GY / GRN / RED W/ SCAT CHT

LS - TAN / GY, F / VF XLN, OOL IN PT, P / G OOM + INTXLN POR, TR GB, NSO, NO ODOR

LS - TAN / CRM, VF / F XLN, TR OOL, PRED DNS, NS W/ CHT - PRED GY

SH - BLK, CARB W/LS - TAN / BRN, MOT IN PT, VF / F XLN, SL FOSS, PRED DNS, NS

LS - CRM / TAN, F / VF XLN, OOL IN PT, SCAT P/F INTXLN +

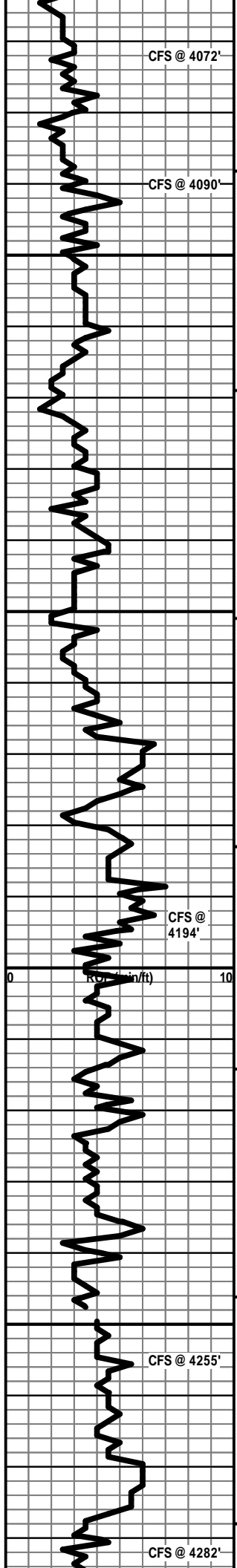
WIPER TRIP 30 STANDS @ 3,883'

Vis: 50, Wt: 9.1, LCM: 2#

MUNCIE CREEK 3952 (-1262)

Vis: 65, Wt: 9.2, YP: 16,
GelS: 10/41, pH: 10.5, WL: 6.8,
Cht: 3,200, Sol: 6.3, LCM: 1#

STARK SHALE 4049 (-1359)



VUG POR, TR P OOM POR, PRED CHKY / DNS, NS W / SCAT SH - GY / GRN

LS - TAN / SCAT CRM, VF / F XLN, SCAT OOL, PRED DNS, NS W / CHT - WHT / LT GY

SH - BLK, CARB W / LS - TAN / BRN / SCAT CRM, VF / F XLN, PRED DNS, TR SPTY DEAD OIL, NSFO, V FT ODOR

LS - TAN / CRM / GY, MOT IN PT, VF / F XLN, SCAT REXLN CALC, OOL IN PT, SL FOSS, SCAT CHKY, PRED DNS, NS

DOLO - GY / TAN, F XLN, P / SCAT F INTXLN POR, NS W / SCAT CHT - LT GY / WHT

LS - BRN / TAN / GY, MOT IN PT, F XLN, M REXLN CALC, BREC IN PT, SL OOL + FOSS, DNS, NS

SH + SLTST - GY / GRN, CALC IN PT W / LS - GY / TAN, VF XLN, PRED DNS, NS

SH - GY / GRN / RED W / SLTST - GY / GRN

LS - CRM / TAN, F / VF XLN, SCAT REXLN CALC, OOL IN PT, CHKY IN PT, PRED DNS, NS

LS - SIM TO ABOVE W / LS - TAN / BRN, F XLN, SL FOSS, PRED DNS, NS W / SCAT SH - GY / GRN

SH - GY / RED / GRN W / LS - GY / TAN, F XLN, PRED DNS W / LS - CRM / TAN, F XLN, OOL, CHKY IN PT / DNS, NS

LS - AS ABOVE W / ABNT SH - GY / RED / GRN W / LS - GY, F XLN, FOSS IN PT, DNS, NS

LS - TAN / CRM, F / VF XLN, OOL IN PT, SCAT CHKY, PRED DNS, NS W / SCAT SH - AS ABOVE

LS - TAN / SCAT BRN + CRM, F / VF XLN, SCAT OOL, CHTY IN PT, PRED DNS, NS W / CHT - ORG / TAN W / SCAT SH - GY / TR MAR

LS - TAN, F XLN, OOL, SL FOSS, PRED DNS, NS W / SH - GY / MAR

LS - CRM / SCAT TAN, F / VF XLN, OOL, SL FOSS, CHKY IN PT, PRED DNS, NS

LS - CRM / TAN, F / VF XLN, OOL + FOSS IN PT, SCAT P / F INTPART / INTXLN POR, TR VUG POR, SL / F SFO, TR GB, FT ODOR, SPTY / SAT STN, G FLUOR + CUT

LS - CRM / TAN, F / VF XLN, OOL + FOSS IN PT, SCAT POR + SHOW AS ABOVE, PRED DNS, NS

LS - PRED TAN, F / VF XLN, FOSS IN PT, SCAT CHKY, PRED DNS, NS W / CHT - WHT / LT GY

SH - BLK, CARB W / LS - TAN / BRN, F / VF XLN, PRED DNS, NS

LS - TAN / CRM, VF / F XLN, CHKY IN PT, SL FOSS, SCAT OOL, CHKY IN PT, NS W / CHT - LT GY / WHT

MARMATON 4152 (-1462)

Vis: 51, Wt: 9.1, LCM: 1#

DST #1: 4,232' - 4,330' (Pawnee-Ft Scott)
30" - 30" - 30" - 30"

IF: Weak surface blow; died in 10 min.
ISI: No blow back
FF: No blow
FSI: No blow back

RECOVERY: 15' Total Fluid:
15' OSM (100% Mud)

SIP: 174-105 HP: 2166-2103
FP: 25-27, 28-25 BHT: 121

UPPER PAWNEE 4238 (-1548)

DST #2: 4,340' - 4,376' (Johnson Zone)
30" - 45" - 60" - 90" (Straddle)

IF: Fair blow bldg to BOB in 19 min.
ISI: Surface blow, died in 35 min.
FF: Good blow bldg to BOB in 8 min.
FSI: Surface blow bldg to 9 in.

RECOVERY: 557' GIP & 199' Total Fluid:
41' CO (100% Oil); Gravity 28 API
94' MCGO (5% G, 55% O, 40% M)
63' GOCM (10% G, 30% O, 60% M)

SIP: 1072-1041 HP: 2193-2096

FT SCOTT 4294 (-1604)

Vis: 53, Wt: 9.3, YP: 15,
GelS: 11/43, pH: 10.0, WL: 7.2,
Chl: 1,800, Sol: 7.0, LCM: 1#

CHEROKEE SH 4320 (-1630)

PIPE STRAP @ 4,330': SHORT 2.91'

JOHNSON ZONE 4362 (-1672)

Vis: 56, Wt: 9.15, YP: 13,
GelS: 10/41, pH: 10.5, WL: 7.6,
Chl: 2,000, Sol: 6.3, LCM: 1#

MISSISSIPPIAN 4396 (-1706)

Vis: 58, Wt: 9.2, LCM: 2#

LS - ASABOVE W/SH - BLK, CARB

LS - TAN / BRN, MOT IN PT, F / VF XLN, OOL IN PT, SL FOSS,
PRED DNS, NS W/ CHT - WHT / TAN, OOL IN PT W/ SH - DK
GY / BLK

LS - TAN / CRM, F / VF XLN, OOL IN PT, SL FOSS, SCAT CHKY,
PRED DNS, NS

SH - BLK, CARB W/LS - TAN / GY, MOT, VF / F XLN, OOL,
PRED DNS, NS

LS - CRM / TAN / SCAT GY, MOT IN PT, VF / F XLN, SCAT
REXLN CALC, OOL IN PT, CHKY IN PT, PRED DNS, NS SH -
GY / BLK

LS - TAN / BRN, VF / F XLN, FOSS + OOL IN PT, PRED DNS,
SCAT DEAD OIL STN, NSFO, NO ODOR W/ SH - GY / BLK

LS - TAN, VF XLN, DNS, NS W/ SH - PRED GY

LS - TAN / GY, F / VF XLN, SL FOSS + OOL, P / G VUG POR IN
PT, SCAT P / F INTXLN POR, SL / G SFO, SCAT ASPH, G
ODOR, SPTY / SAT STN, P / F FLUOR, G CUT

LS - ASABOVE, CHKY IN PT, PRED DNS, NS W/ SS - LT GY,
VF GR, W SRTD, SA / SR, SIL CEM, FRI, NS

SS - ASABOVE, NS W/SH + SLTST - GY / GRN W/ TRIP
TRASH

SS + SH - ASABOVE W/LS - CRM / TAN, F / SCAT M XLN,
OOL + FOSS IN PT, PRED DNS, NS W/ CHT - CRM / WHT /
TAN

LS - CRM / TAN, PRED F XLN, OOL IN PT, SL FOSS, SCAT
CHKY, PRED DNS, SCAT DEAD OIL STN, NSFO, NO ODOR W/
TR CHT - AA

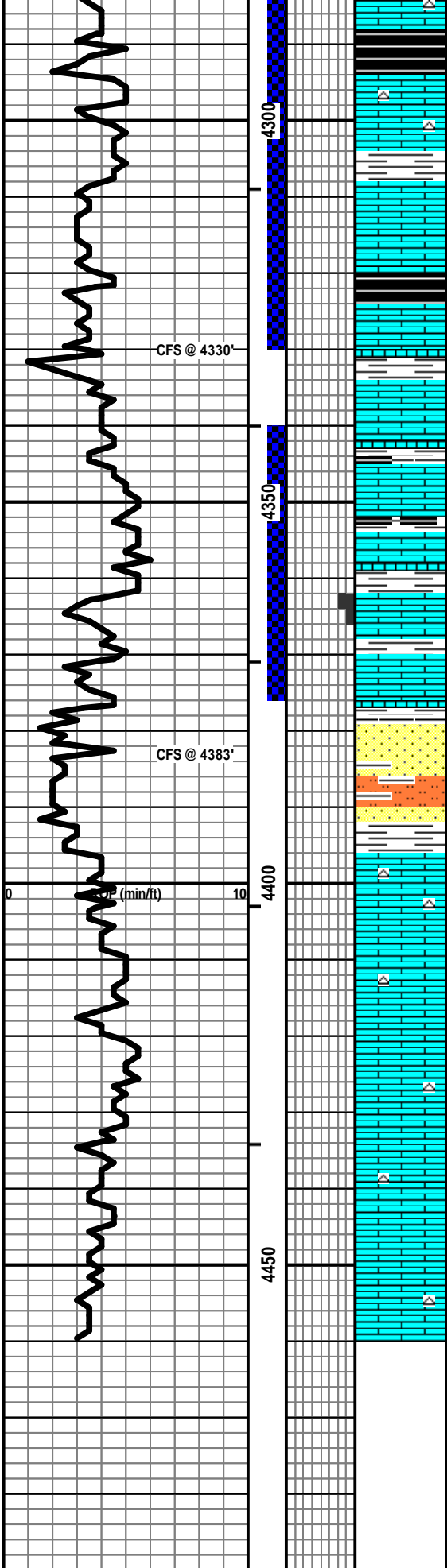
LS - CRM / TAN, F / VF XLN, FOSS IN PT, SL OOL, CHKY IN PT,
PRED DNS, TR DEAD OIL STN, NSFO, NO ODOR, PRED NS

LS - V SIM TO ABOVE, PRED DNS, NS W/ SCAT CHT - WHT /
CRM / TAN

LS - CRM / TAN, F / VF XLN, OOL IN PT, SL FOSS, PRED DNS,
NS W/ SCAT CHT - AA

LS - CRM / TAN, F / VF / CRYPTO XLN, OOL IN PT, SL FOSS,
PRED DNS, NS W/ SCAT CHT - AA

TOTAL DEPTH 4460 (-1770)





DRILL STEM TEST REPORT

Prepared For: **Abercrombie Energy, LLC**

10209 W. Central Ste. 2
Wichita, KS 67212

ATTN: Dave Goldak

Watt #1-14

14-16S-30W Lane,KS

Start Date: 2018.05.18 @ 16:09:44

End Date: 2018.05.19 @ 00:42:44

Job Ticket #: 63440 DST #: 1

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

Printed: 2018.05.21 @ 14:15:07



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Abercrombie Energy, LLC

14-16S-30W Lane, KS

10209 W. Central Ste. 2
Wichita, KS 67212

Watt #1-14

Job Ticket: 63440

DST#: 1

ATTN: Dave Goldak

Test Start: 2018.05.18 @ 16:09:44

GENERAL INFORMATION:

Formation: **Pawnee- Ft. Scott**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 19:00:14
 Tester: Brannan Lonsdale
 Time Test Ended: 00:42:44
 Unit No: 73
 Interval: **4232.00 ft (KB) To 4330.00 ft (KB) (TVD)**
 Reference Elevations: 2690.00 ft (KB)
 Total Depth: 4330.00 ft (KB) (TVD)
 2685.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 5.00 ft

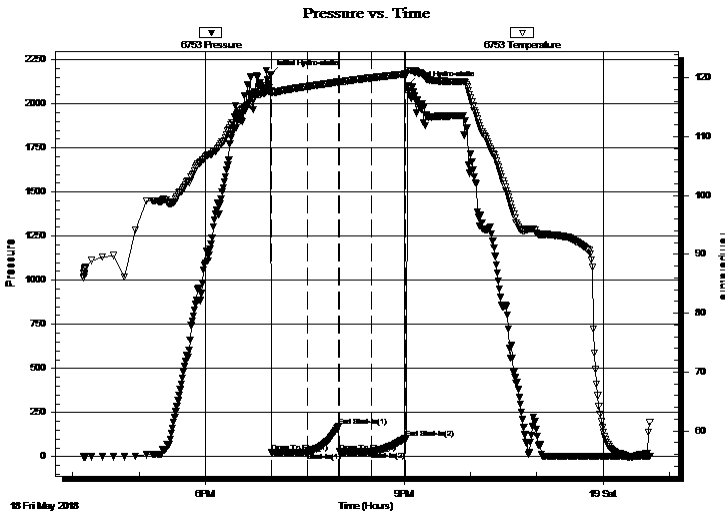
Serial #: 6753

Outside

Press@RunDepth: 29.25 psig @ 4261.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.05.18 End Date: 2018.05.19 Last Calib.: 2018.05.19
 Start Time: 16:09:49 End Time: 00:42:44 Time On Btm: 2018.05.18 @ 18:59:14
 Time Off Btm: 2018.05.18 @ 21:03:14

TEST COMMENT: 30- IF- Weaksurface blow died 20 mins
 30- IS- No blow
 30- FF- No blow
 30- FSI- No blow

PRESSURE SUMMARY



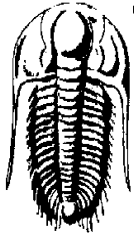
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2166.15	117.83	Initial Hydro-static
1	24.97	117.53	Open To Flow (1)
33	27.08	118.51	Shut-In(1)
62	174.08	119.29	End Shut-In(1)
62	27.71	119.25	Open To Flow (2)
92	29.25	119.98	Shut-In(2)
122	105.05	120.63	End Shut-In(2)
124	2103.27	121.12	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	OSM 100%M	0.07

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Abercrombie Energy, LLC

10209 W. Central Ste. 2
Wichita, KS 67212

ATTN: Dave Goldak

14-16S-30W Lane, KS

Watt #1-14

Job Ticket: 63440

DST#: 1

Test Start: 2018.05.18 @ 16:09:44

GENERAL INFORMATION:

Formation: **Pawnee- Ft. Scott**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 19:00:14
 Time Test Ended: 00:42:44
 Interval: **4232.00 ft (KB) To 4330.00 ft (KB) (TVD)**
 Total Depth: 4330.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Brannan Lonsdale
 Unit No: 73
 Reference Elevations: 2690.00 ft (KB)
 2685.00 ft (CF)
 KB to GR/CF: 5.00 ft

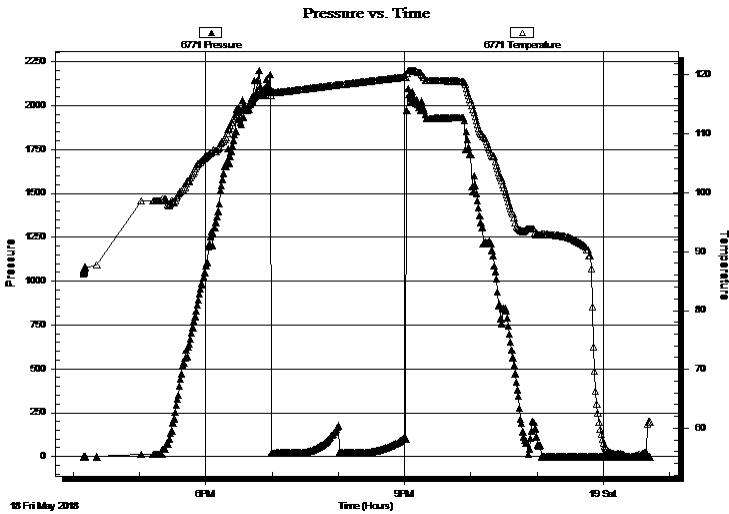
Serial #: 6771

Inside

Press@RunDepth: psig @ 4261.00 ft (KB)
 Start Date: 2018.05.18 End Date: 2018.05.19
 Start Time: 16:09:19 End Time: 00:42:23
 Capacity: 8000.00 psig
 Last Calib.: 2018.05.19
 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30- IF- Weaksurface blow died 20 mins
 30- IS- No blow
 30- FF- No blow
 30- FSI- No blow

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
15.00	OSM 100%M	0.07

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Abercrombie Energy, LLC

14-16S-30W Lane, KS

10209 W. Central Ste. 2
Wichita, KS 67212

Watt #1-14

Job Ticket: 63440

DST#: 1

ATTN: Dave Goldak

Test Start: 2018.05.18 @ 16:09:44

Tool Information

Drill Pipe:	Length: 4109.00 ft	Diameter: 3.82 inches	Volume: 58.25 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 118.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 53000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4232.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	98.00 ft			
Tool Length:	126.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4205.00	
Shut In Tool	5.00			4210.00	
Hydraulic tool	5.00			4215.00	
Jars	5.00			4220.00	
Safety Joint	3.00			4223.00	
Packer	5.00			4228.00	28.00 Bottom Of Top Packer
Packer	4.00			4232.00	
Stubb	1.00			4233.00	
Perforations	28.00			4261.00	
Recorder	0.00	6771	Inside	4261.00	
Recorder	0.00	6753	Outside	4261.00	
Change Over Sub	1.00			4262.00	
Drill Pipe	64.00			4326.00	
Change Over Sub	1.00			4327.00	
Bullnose	3.00			4330.00	98.00 Bottom Packers & Anchor

Total Tool Length: 126.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Abercrombie Energy, LLC

14-16S-30W Lane, KS

10209 W. Central Ste. 2
Wichita, KS 67212

Watt #1-14

Job Ticket: 63440

DST#: 1

ATTN: Dave Goldak

Test Start: 2018.05.18 @ 16:09:44

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: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	OSM 100%M	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

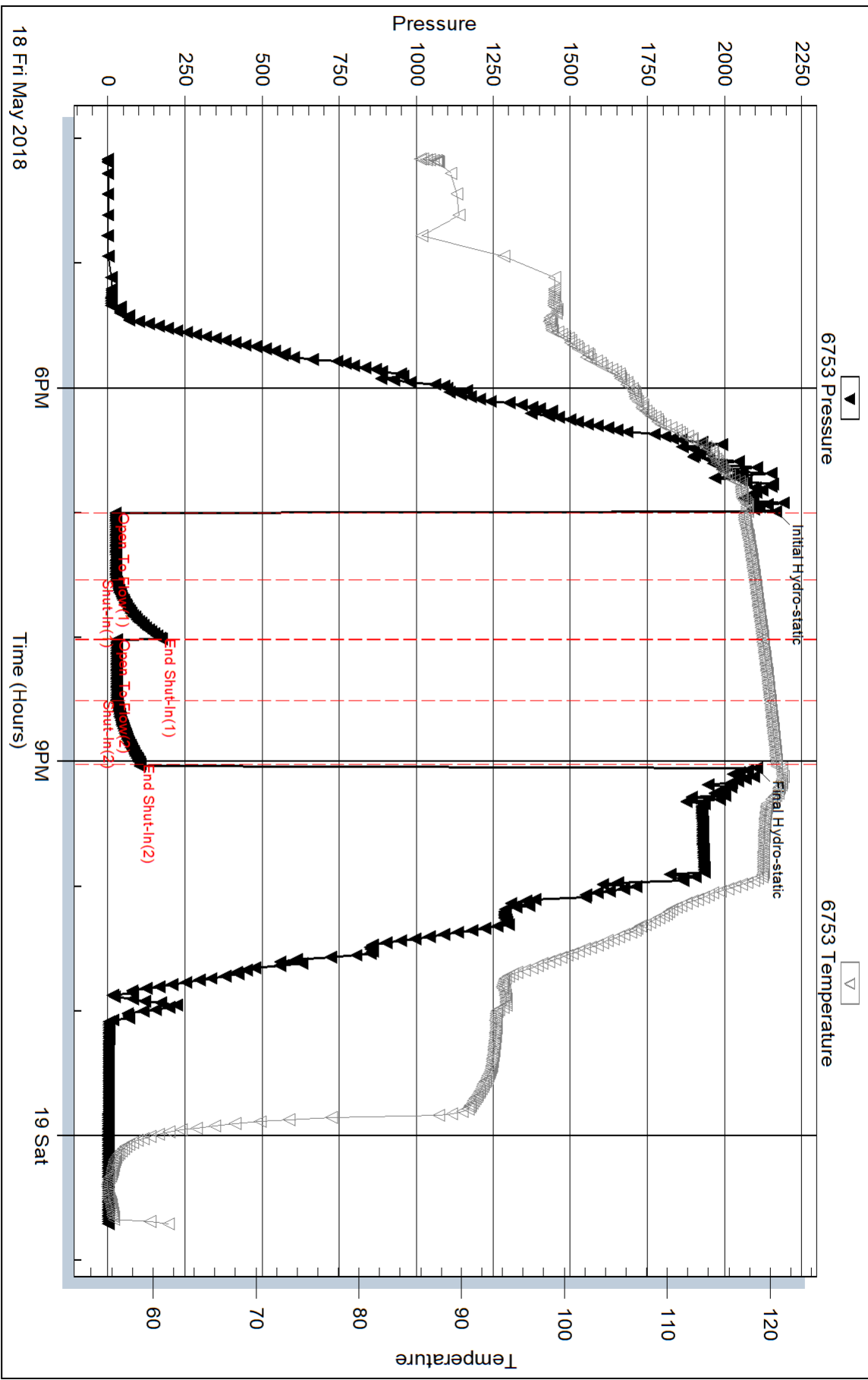
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



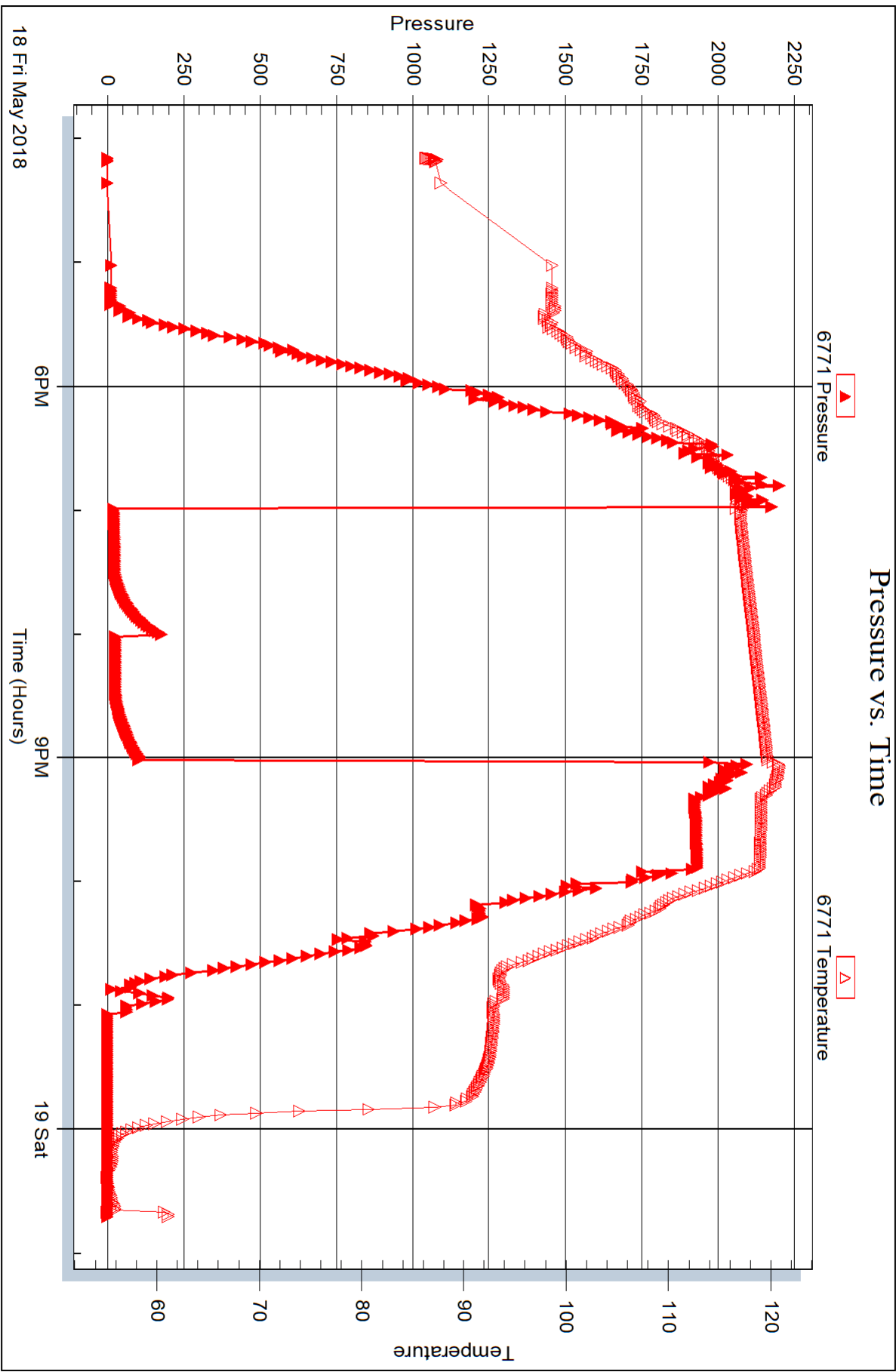
Serial #: 6771

Inside

Abercrombie Energy, LLC

Watt#1-14

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Abercrombie Energy, LLC**

10209 W. Central Ste. 2
Wichita, KS 67212

ATTN: Dave Goldak

Watt #1-14

14-16S-30W Lane,KS

Start Date: 2018.05.19 @ 11:46:03

End Date: 2018.05.19 @ 19:54:03

Job Ticket #: 63644 DST #: 2

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

Printed: 2018.05.21 @ 14:14:11



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Abercrombie Energy, LLC

14-16S-30W Lane, KS

10209 W. Central Ste. 2
Wichita, KS 67212

Watt #1-14

Job Ticket: 63644

DST#: 2

ATTN: Dave Goldak

Test Start: 2018.05.19 @ 11:46:03

GENERAL INFORMATION:

Formation: **Johnson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:53:33

Time Test Ended: 19:54:03

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: 4340.00 ft (KB) To 4376.00 ft (KB) (TVD)

Reference Elevations: 2690.00 ft (KB)

Total Depth: 4376.00 ft (KB) (TVD)

2685.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8166 Outside

Press@RunDepth: 78.93 psig @ 4341.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.19 End Date: 2018.05.19

Last Calib.: 2018.05.19

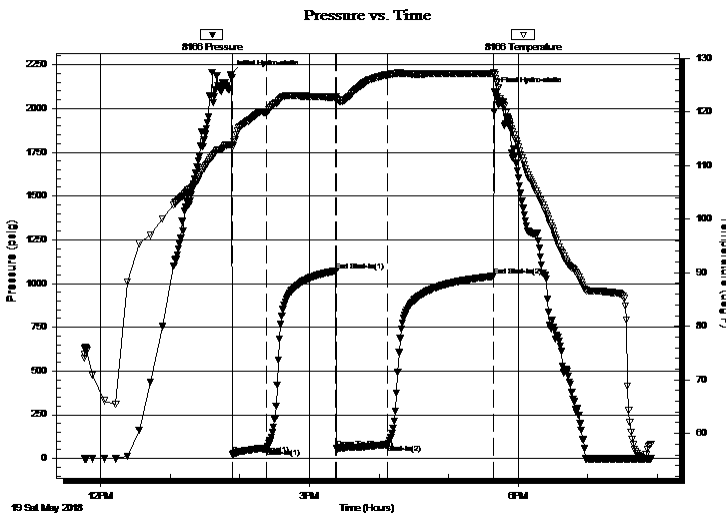
Start Time: 11:46:08 End Time: 19:54:02

Time On Btm: 2018.05.19 @ 13:52:03

Time Off Btm: 2018.05.19 @ 17:39:33

TEST COMMENT: IF: BOB in 19 min.
IS: Surface blow died in 35 min.
FF: BOB in 8 min.
FS: Surface blow built to 9"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2193.83	113.91	Initial Hydro-static
2	21.36	113.43	Open To Flow (1)
31	55.89	119.87	Shut-In(1)
91	1072.26	122.75	End Shut-In(1)
91	59.89	122.42	Open To Flow (2)
136	78.93	126.95	Shut-In(2)
226	1041.21	127.21	End Shut-In(2)
228	2096.33	127.02	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	gocm 10%g 30%o 60%m	0.31
94.00	mogo 5%g 55%o 40%m	0.82
41.00	oil 100%o	0.58
0.00	557 GIP	0.00

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Abercrombie Energy, LLC
10209 W. Central Ste. 2
Wichita, KS 67212
ATTN: Dave Goldak

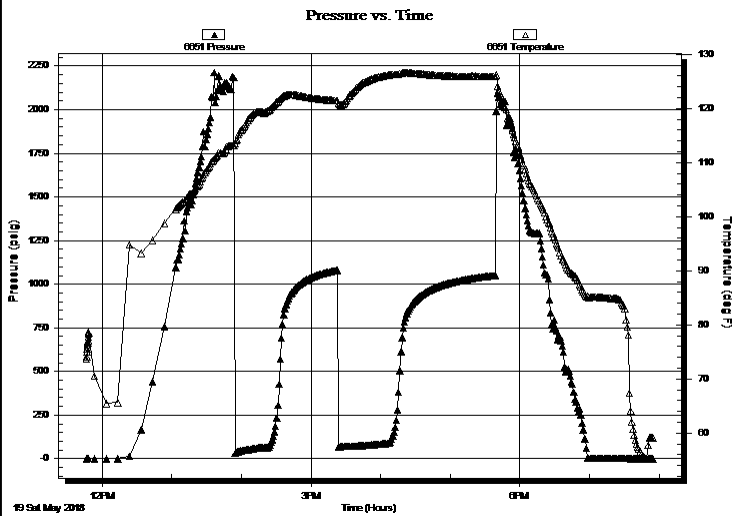
14-16S-30W Lane, KS
Watt #1-14
Job Ticket: 63644 **DST#: 2**
Test Start: 2018.05.19 @ 11:46:03

GENERAL INFORMATION:

Formation: **Johnson**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:53:33
Time Test Ended: 19:54:03
Interval: 4340.00 ft (KB) To 4376.00 ft (KB) (TVD)
Total Depth: 4376.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Brandon Turley
Unit No: 79
Reference Elevations: 2690.00 ft (KB)
2685.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 6651 Inside
Press@RunDepth: psig @ 4341.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2018.05.19 End Date: 2018.05.19 Last Calib.: 2018.05.19
Start Time: 11:46:36 End Time: 19:54:30 Time On Btm:
Time Off Btm:

TEST COMMENT: IF: BOB in 19 min.
IS: Surface blow died in 35 min.
FF: BOB in 8 min.
FS: Surface blow built to 9"



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
63.00	gocm 10%g 30%o 60%m	0.31
94.00	mogo 5%g 55%o 40%m	0.82
41.00	oil 100%o	0.58
0.00	557 GIP	0.00

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Abercrombie Energy, LLC

14-16S-30W Lane, KS

10209 W. Central Ste. 2
Wichita, KS 67212

Watt #1-14

Job Ticket: 63644

DST#: 2

ATTN: Dave Goldak

Test Start: 2018.05.19 @ 11:46:03

GENERAL INFORMATION:

Formation: **Johnson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:53:33

Time Test Ended: 19:54:03

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: 4340.00 ft (KB) To 4376.00 ft (KB) (TVD)

Total Depth: 4376.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2690.00 ft (KB)

2685.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8650 Below (Straddle)

Press@RunDepth: psig @ 4378.00 ft (KB)

Start Date: 2018.05.19

End Date:

2018.05.19

Capacity: 8000.00 psig

Last Calib.:

2018.05.19

Start Time: 11:46:25

End Time:

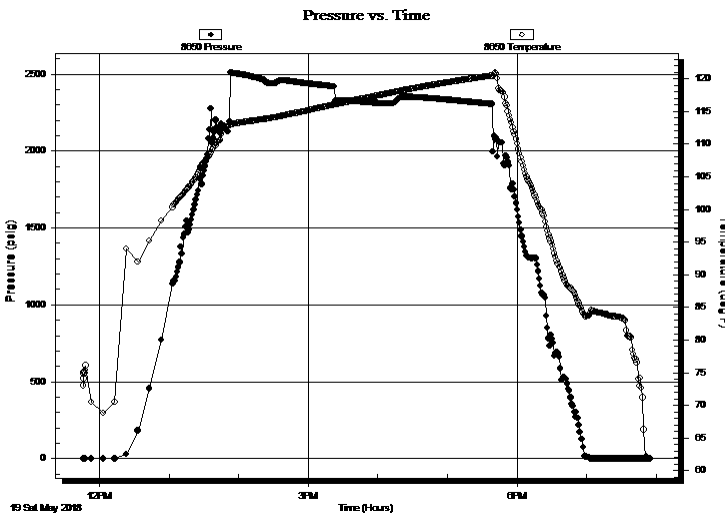
19:54:49

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: BOB in 19 min.
IS: Surface blow died in 35 min.
FF: BOB in 8 min.
FS: Surface blow built to 9"

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
63.00	gocm 10%g 30%o 60%m	0.31
94.00	mogo 5%g 55%o 40%m	0.82
41.00	oil 100%o	0.58
0.00	557 GIP	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Abercrombie Energy, LLC

14-16S-30W Lane, KS

10209 W. Central Ste. 2
Wichita, KS 67212

Watt #1-14

Job Ticket: 63644

DST#: 2

ATTN: Dave Goldak

Test Start: 2018.05.19 @ 11:46:03

Tool Information

Drill Pipe:	Length: 4205.00 ft	Diameter: 3.82 inches	Volume: 59.61 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 118.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 60.19 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4340.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	43.00 ft			
Tool Length:	65.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			4319.00	
Shut In Tool	5.00			4324.00	
Hydraulic tool	5.00			4329.00	
Safety Joint	2.00			4331.00	
Packer	5.00			4336.00	22.00 Bottom Of Top Packer
Packer	4.00			4340.00	
Stubb	1.00			4341.00	
Recorder	0.00	6651	Inside	4341.00	
Recorder	0.00	8166	Outside	4341.00	
Perforations	30.00			4371.00	
Blank Off Sub	1.00			4372.00	
Packer - Shale	4.00			4376.00	
Stubb	1.00			4377.00	
Perforations	1.00			4378.00	
Recorder	0.00	8650	Below	4378.00	
Bullnose	5.00			4383.00	43.00 Bottom Packers & Anchor
Total Tool Length:	65.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Abercrombie Energy, LLC

14-16S-30W Lane, KS

10209 W. Central Ste. 2
Wichita, KS 67212

Watt #1-14

Job Ticket: 63644

DST#: 2

ATTN: Dave Goldak

Test Start: 2018.05.19 @ 11:46:03

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

28 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.59 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
63.00	gocm 10%g 30%o 60%m	0.310
94.00	mcgo 5%g 55%o 40%m	0.823
41.00	oil 100%o	0.581
0.00	557 GIP	0.000

Total Length: 198.00 ft

Total Volume: 1.714 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

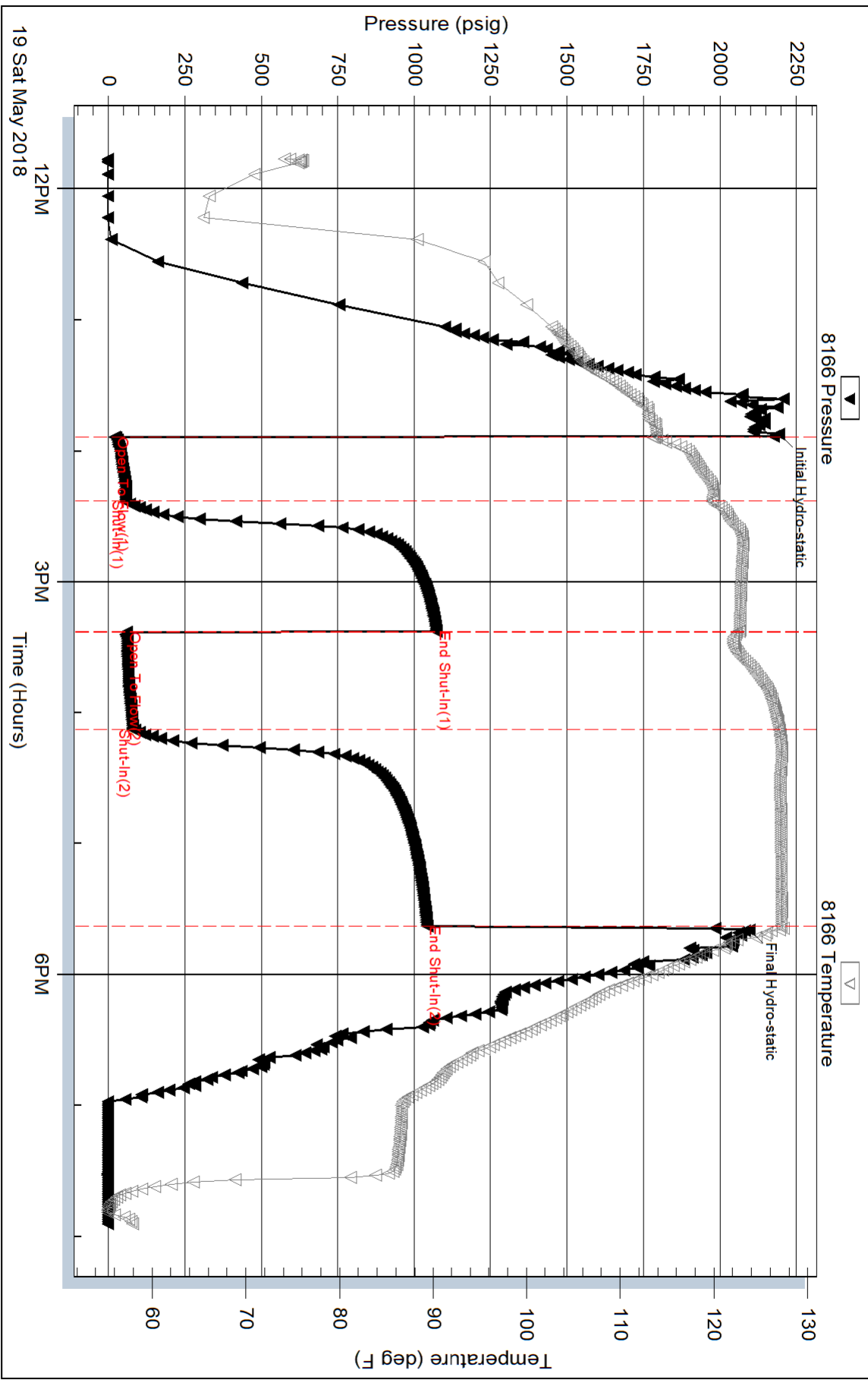
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 28@60=28

Pressure vs. Time



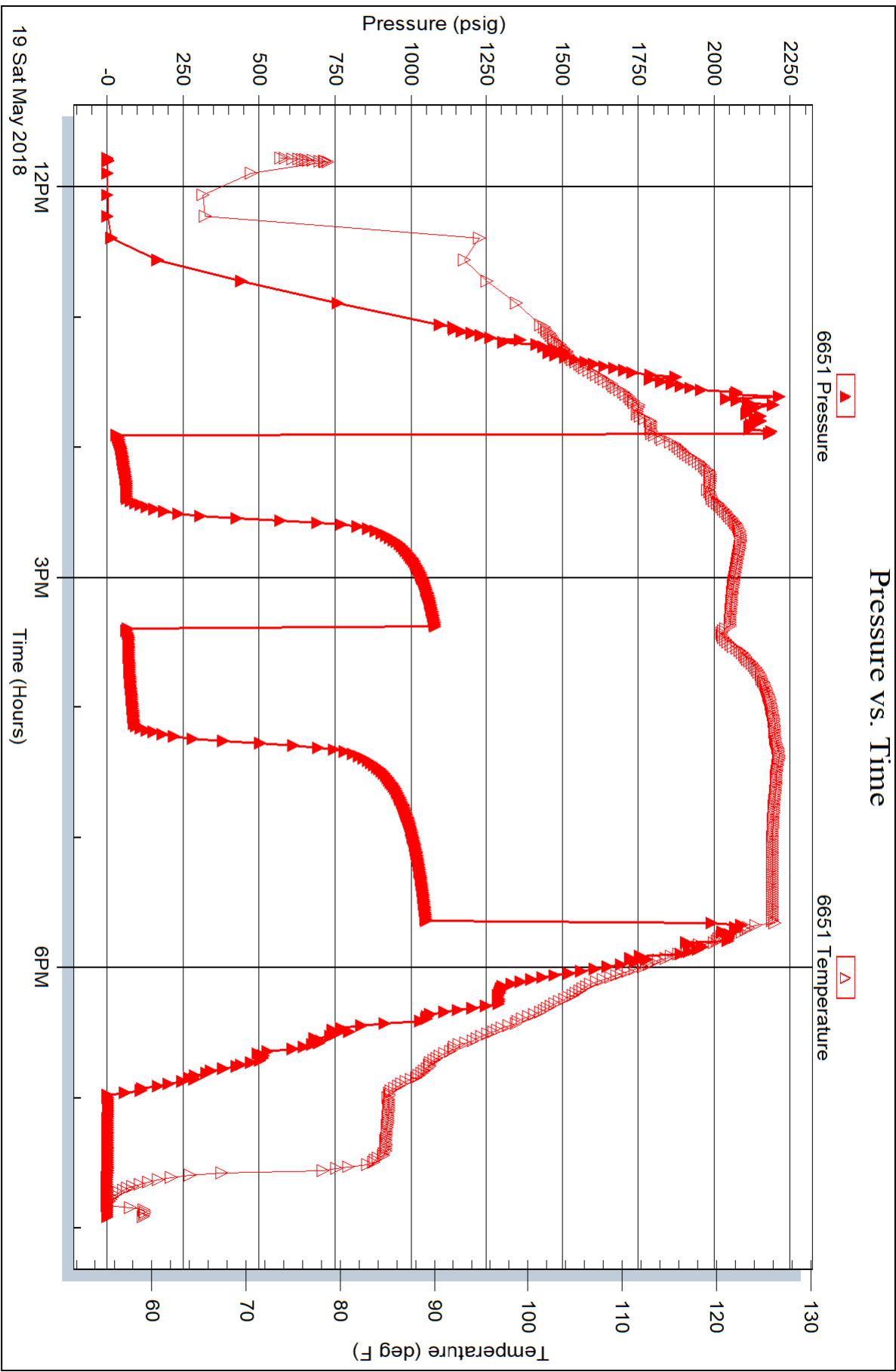
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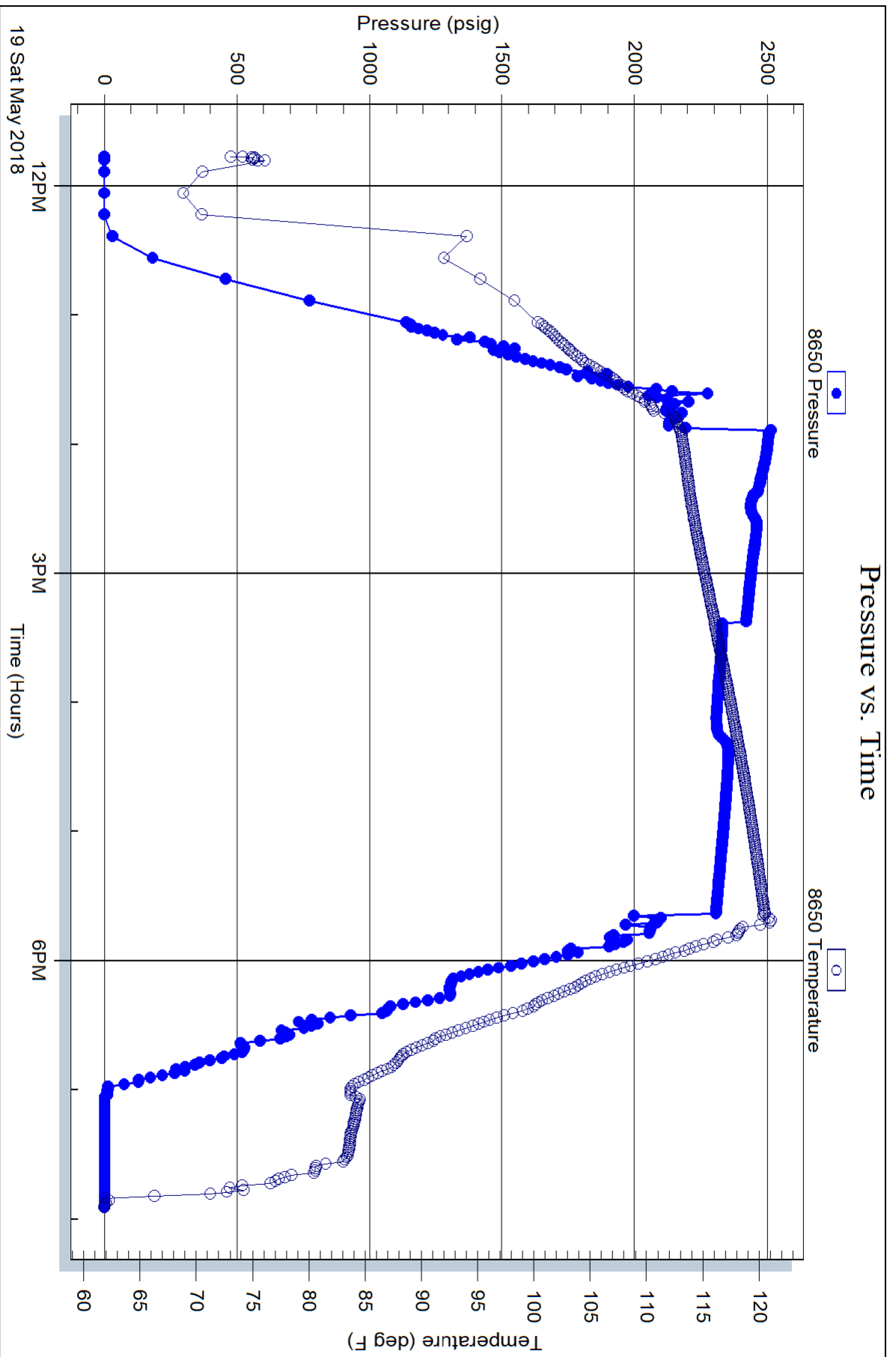
Inside

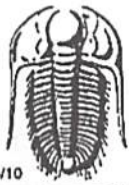
Abercrombie Energy, LLC

Watt#1-14

DST Test Number: 2







TRIBOLITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63440

Well Name & No. Watt #1-14 Test No. 1 Date 5/18/18
 Company Abercrombie #1-14 Elevation 2690 KB 2685 GL
 Address 10209 W. Central, Ste. #2 Wichita KS 67212
 Co. Rep / Geo. Dave Goldak Rig WW #2
 Location: Sec. 14 Twp 16 S Rge. 30 W Co. Lane State KS

Interval Tested 4232-4330 Zone Tested Pawnee - Ft. Scott
 Anchor Length 98' Drill Pipe Run 4109 Mud Wt. 9.3
 Top Packer Depth 4227 Drill Collars Run 118 Vis 53
 Bottom Packer Depth 4237 Wt. Pipe Run WL 2.2
 Total Depth 4330 Chlorides 1,800 ppm System LCM 1#

Blow Description IF - Weak surface blow died 20 mins
ISI - No blow
FF - No blow
FST - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>OSM</u>				

Rec Total 15' BHT 121° Gravity API RW @ ° F Chlorides ppm

(A) Initial Hydrostatic <u>2166</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>1520</u>
(B) First Initial Flow <u>25</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>1609</u>
(C) First Final Flow <u>27</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>1859</u>
(D) Initial Shut-In <u>174</u>	<input type="checkbox"/> Circ Sub <u> </u>	T-Pulled <u>2059</u>
(E) Second Initial Flow <u>28</u>	<input type="checkbox"/> Hourly Standby <u> </u>	T-Out <u>5/19 0042</u>
(F) Second Final Flow <u>29</u>	<input checked="" type="checkbox"/> Mileage <u>GORT 60</u>	Comments <u> </u>
(G) Final Shut-In <u>105</u>	<input type="checkbox"/> Sampler <u> </u>	<u> </u>
(H) Final Hydrostatic <u>2103</u>	<input type="checkbox"/> Straddle <u> </u>	<u> </u>
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer <u> </u>	<input type="checkbox"/> Ruined Shale Packer <u> </u>
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer <u> </u>	<input type="checkbox"/> Ruined Packer <u> </u>
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder <u> </u>	<input type="checkbox"/> Extra Copies <u> </u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby <u> </u>	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility <u> </u>	Total <u>1535</u>
	Sub Total <u>1535</u>	MP/DST Disc't <u> </u>

Approved By Our Representative Brannan Lonsdale

Tribolite 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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63644

Well Name & No. W944 1-14 Test No. 2 Date 5-19-18
 Company Abercrombie Energy Elevation 2690 KB 2685 GL
 Address _____
 Co. Rep / Geo. DAVE GOLD9K Rig WW #2
 Location: Sec. 14 Twp 16S Rge. 30W Co. Lane State KS

Interval Tested 4340 4376 Zone Tested Johnson
 Anchor Length _____ 36 Drill Pipe Run ~~4205~~ 4205 Mud Wt. 9.1
 Top Packer Depth _____ 4340 Drill Collars Run 118 Vis 56
 Bottom Packer Depth _____ 4376 Wt. Pipe Run _____ WL 7.6
 Total Depth _____ 4381 Chlorides 2000 ppm System LCM 2

Blow Description IF: 1/4 blow BoB in 19 min.
IS! surface blow died in 35 min.
FF! BoB in 8 min.
FS! surface blow built to 9.

Rec	Feet of	%gas	%oil	%water	%mud
<u>40</u>	<u>oil</u>	<u>100</u>			
<u>94</u>	<u>MC90</u>	<u>5</u>	<u>55</u>	<u>40</u>	
<u>63</u>	<u>90cm</u>	<u>10</u>	<u>30</u>	<u>60</u>	
	<u>557 GIP</u>				

Rec Total 199 BHT 127 Gravity 28 API RW — @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic 2193 Test 1150 T-On Location 11:00
 (B) First Initial Flow 21 Jars 250 T-Started 11:46
 (C) First Final Flow 55 Safety Joint 75 T-Open 13:54
 (D) Initial Shut-In 1072 Circ Sub NIL T-Pulled 18:39
 (E) Second Initial Flow 59 Hourly Standby _____ T-Out 19:55
 (F) Second Final Flow 78 Mileage 60 - 60 Comments _____
 (G) Final Shut-In 1041 Sampler _____
 (H) Final Hydrostatic 2096 Straddle 600 Ruined Shale Packer _____
 Shale Packer 250 Ruined Packer _____

Initial Open 30 Extra Packer _____ Extra Copies _____
 Initial Shut-In 60 Extra Recorder _____ Sub Total 0
 Final Flow 45 Day Standby _____ Total 2385
 Final Shut-In 90 Accessibility _____ MP/DST Disc't _____
 Sub Total 2385

Approved By [Signature] Our Representative [Signature]

Tribolite 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.



REMIT P.O. Box 3423
TO Wichita, KS 67201-3423



*Post
will file*

INVOICE

Invoice Number. 641039
Invoice Date 5/11/2018
Page 1

4/30

SOLD ABERCROMBIE ENERGY LLC
TO 5510 OIL CENTER ROAD SOUTH
GREAT BEND, KS 67530

SHIP WATT #1-14
TO PICKED UP
LANE CO



ORDER DATE:	5/11/2018	TERMS:	Net 30 Days	SHIP DATE:	5/11/2018
ORDER NUMBER:	0076309	DUE DATE:	6/10/2018	SHIP VIA:	Picked Up
PO NUMBER:		BUYER:	JOHN W/ WW DRILLING	SHIP TO ID:	PICKUPNC
CUSTOMER ID:	10200	KEYED BY:	THF_TC1-005		

ITEM	QTY	UOM	DESCRIPTION	LIST	DISC %	NET	AMOUNT	TAX
21277	297.75	FT	CSG LS 8-5/8 23 STC R3	13.50	0.0	13.50	4,019.63	Y

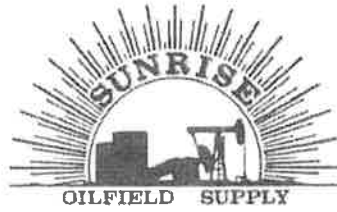
Notes: (7 JOINTS)

VENDOR NUMBER _____
 VOUCHER NUMBER _____
 VALUE OF RECEIPT _____ *AIC*
 CODE NUMBER _____
 1353097 _____
 WATT #1-14 _____
 NEW WELL SURFACE CSG _____
 APPROVAL _____
 VERIFIED ACCURACY _____

TAXABLE	NONTAXABLE	FREIGHT	SALES TAX	MISC	TOTAL
4,019.63	0.00	0.00	261.28	0.00	4,280.91
NET DUE					4,280.91

g

PIPE



TALLY

DATE May 11 2018

PAGE 1 OF 1

CUSTOMER Abbeville LEASE & WELL NO. Watt #1-14

USED/NEW COND A SIZE 8 5/8 WT 23 GRD LS THD STC R- 3

MFG _____ ORDER BY John w/w/w SHIP VIA W/W

#	FT.	IN.	#	FT.	IN.	#	FT.	IN.	#	FT.	IN.	#	FT.	IN.	#	FT.	IN.
1	42	70	26			51			76			101			126		
2		70	27			52			77			102			127		
3		65	28			53			78			103			128		
4		55	29			54			79			104			129		
5		40	30			55			80			105			130		
6		65	31			56			81			106			131		
7	41	90	32			57			82			107			132		
8			33			58			83			108			133		
9			34			59			84			109			134		
10			35			60			85			110			135		
11			36			61			86			111			136		
12			37			62			87			112			137		
13			38			63			88			113			138		
14			39			64			89			114			139		
15			40			65			90			115			140		
16			41			66			91			116			141		
17			42			67			92			117			142		
18			43			68			93			118			143		
19			44			69			94			119			144		
20			45			70			95			120			145		
21			46			71			96			121			146		
22			47			72			97			122			147		
23			48			73			98			123			148		
24			49			74			99			124			149		
25			50			75			100			125			150		
T	297	75	T			T			T			T			T		

TALLIED BY RH, FA TOTAL JTS 7 TOTAL FOOTAGE 297.75

SPECIAL INSTRUCTIONS _____

ORIGINAL TO REMAIN IN BOOK - DUPLICATE TO BE ATTACHED TO CUSTOMER'S INVOICE - TRIPLICATE TO BE GIVEN TO CUSTOMER'S REPRESENTATIVE AT TIME OF DELIVERY.



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

well file

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

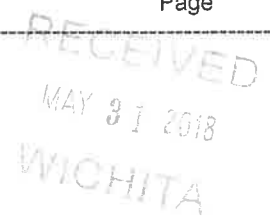
Invoice Invoice# 813192

Invoice Date: 05/22/18 Terms: Net 30 Page 1

ABERCROMBIE ENERGY
 5510 OIL CENTER ROAD SOUTH
 GREAT BEND KS 67530
 USA
 6207938186



WATT 1-14



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	45.000	7.1500	30.000	225.23
CE0710	Cement Delivery Charge	1.000	777.1500	30.000	544.01
CC5871	Surface Blend II, 2% Gel/3% CaCl	210.000	24.0000	30.000	3,528.00
Subtotal					7,288.90
Discounted Amount					2,186.67
SubTotal After Discount					5,102.23

Amount Due 7,666.90 If paid after 06/21/18

Tax: 264.60
 Total: 5,366.84

VENDOR NUMBER _____
 VOUCHER NUMBER _____
 TYPE OF RECEIPT _____
 CODE NUMBER _____
 _____ 1352062 _____
 _____ WATT 1-14 _____
 _____ CEMENT SURFACE CSG _____
 APPROVAL _____
 VERIFIED ACCURACY _____



PFESSURE PUMPING LLC
 PO Box 884, Chanute, KS 66720
 620-431-9210 or 800-467-8676

10706/10597

TICKET NUMBER 55152
 LOCATION Oakley, Ks
 FOREMAN Walt Dinkel

FIELD TICKET & TREATMENT REPORT
 CEMENT

Invoice #83192

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
5-12-18	1112	Watt 1-14	14	16 ²	30 ^W	Lane
CUSTOMER A. Descombie			Healy			
MAILING ADDRESS 5510 Oilcenter Road South			SN			
CITY Great Bend			E.S.			
STATE KS		ZIP CODE 67530				
TRUCK #		DRIVER		TRUCK #		DRIVER
75.3		Cory Davis				
70		Neil White				

JOB TYPE Surface HOLE SIZE 12 1/4 HOLE DEPTH 302' CASING SIZE & WEIGHT 8 5/8 23#
 CASING DEPTH 302' DRILL PIPE _____ TUBING _____ OTHER _____
 SLURRY WEIGHT 15.2 SLURRY VOL _____ WATER gal/sk _____ CEMENT LEFT in CASING 15' to 20'
 DISPLACEMENT 18.0 DISPLACEMENT PSI _____ MIX PSI _____ RATE 4 BPM

REMARKS: Safety Meeting, rig up on well #2, circ. casing on bottom
mix, 210 sls com, 3% cc, 2% bel, Displace 18.0 BBL H₂O, shut in
Cement Did Cure

Thank You
 Walt & crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
Ceo 471	1	PUMP CHARGE	1150 ⁰⁰	1150 ⁰⁰
Ce0002	45	MILEAGE	47 ¹⁵	321 ⁷⁵
Ceo 710	9.87	Ton Mileage Delivery	125	777 ¹⁵
CC5871	210 sls	Surface Blend OT	24 ⁰⁰	5,040 ⁰⁰
				7,288 ⁹⁰
		Less 30% Disc		2,186 ⁶⁰
				5,102 ²⁰
		7.5%	SALES TAX	264 ⁶⁰
			ESTIMATED TOTAL	5366 ⁸⁰

Havin 3737

AUTHORIZATION JA TITLE _____ DATE _____

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 (f/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.

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 price 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% 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 acknowledgement 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 aforesaid, 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.

a) 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 until 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 purpose 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 INDEMNIFY. 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 INDEMNIFY. 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 liabilities 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, acute 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.