

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
--	---

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
---	---	------------------------------------

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:	
----------------	-------	---------	------------	--

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 1434

Date	5-15-19	Sec.	22	Twp.	11	Range	19	County	Ellis	State	KS	On Location		Finish	10:00p
Lease								Well No.		Location					
M.R. Allen								17		Yacamenta River Road 1/2 S Rinto					
Contractor								Owner							
Discovery #2								To Quality Oilwell Cementing, Inc.							
Type Job								You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.							
Surface															
Hole Size				T.D.				Charge To							
12 1/4				238				Mustang Energy							
Csg.				Depth				Street							
8 5/8				237											
Tbg. Size				Depth				City				State			
Tool				Depth				The above was done to satisfaction and supervision of owner agent or contractor.							
Cement Left in Csg.				Shoe Joint				Cement Amount Ordered							
10'								150 com 3 1/2 2 1/2 gal							
Meas Line				Displace											
				14/32											
EQUIPMENT															
Pumptrk		No.		Cementer		Helper		Common		150					
20				Craig		Terry		Poz. Mix							
Bulktrk		No.		Driver		Driver		Gel.		3					
9				Michael				Calcium		6					
JOB SERVICES & REMARKS															
Remarks:								Hulls							
Rat Hole								Salt							
Mouse Hole								Flowseal							
Centralizers								Kol-Seal							
Baskets								Mud CLR 48							
D/V or Port Collar								CFL-117 or CD110 CAF 38							
8' from bottom - Est. Circulation								Sand							
Mix 150 SK + Displace								Handling				159			
Cement + Circulated								Mileage							
FLOAT EQUIPMENT															
								Guide Shoe							
								Centralizer							
								Baskets							
								AFU Inserts							
								Float Shoe							
								Latch Down							
								Pumptrk Charge				Surface			
								Mileage				18			
Tax															
Discount															
Total Charge															
Signature								Total Charge							
[Signature]															

Thanks

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 1289

Date	5-24-19	Sec.	22	Twp.	11	Range	19	County	Ellis	State	Ks	On Location		Finish	10:15 AM
------	---------	------	----	------	----	-------	----	--------	-------	-------	----	-------------	--	--------	----------

Lease	M.R. Allen	Well No.	17	Location	Yocemento - N to Gun Range	3/4 N, E 1/4
-------	------------	----------	----	----------	----------------------------	--------------

Contractor	Discovery #2	Owner	To Quality Oilwell Cementing, Inc.
Type Job	Longstring	You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.	

Hole Size	5 7/8"	T.D.	3590'	Charge To	Mustang Energy
Csg.	5 1/2" 15 1/2" New	Depth	3585.69'	Street	

Tbg. Size		Depth		City	State
Tool		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	

Cement Left in Csg.	42.26'	Shoe Joint	42.26'	Cement Amount Ordered	350 80/20 QMDC 1/4# FS.
Meas Line		Displace	84 1/2 BUS	150 Com 10% Salt 5% Gilsomite 500 gal mud Clear 48	

EQUIPMENT					
Pumptrk	5	No.	Cement Helper David Rick	Common	150
Bulktrk	21	No.	Driver Tim	Poz. Mix	350 80/20 QMDC
Bulktrk	14	No.	Driver Mike	Gel.	
				Calcium	

JOB SERVICES & REMARKS

Remarks:		Hulls	
Rat Hole	30 sx	Salt	13
Mouse Hole	15 sx	Flowseal	90#
Centralizers	1, 3, 5, 7, 9, 48, 65	Kol-Seal	750#
Baskets	2, 49, 66, 75	Mud CLR 48	500 gal
D/V or Port Collar	Pipe on bottom, break Circulation	CFL-117 or CD110 CAF 38	

Pump	500 gal mud Clear 48, plus Rat hole + Mouse hole, Hook to 5 1/2" Casing + Mix 305 5x QMDC, 150 Com 10% 5%	Handling	52/
Shut down, wash pump + lines. Displace plug w/ 84 1/2 BUS H2O. Released + held.		Mileage	

FLOAT EQUIPMENT

Lift pressure	1000 #	Side Shoe	
Land plug	to 1500 #	Centralizer	7
		Baskets	4
		AFU Inserts	
		Float Shoe	1
		Latch Down	1

Cement did Circulate in Cellar

Rotating head	
Pumptrk Charge	
Mileage	18

Signature	Bob [Signature]	Tax	
		Discount	
		Total Charge	



MUSTANG
ENERGY CORPORATION

Scale 1:240 Imperial

Well Name: M.R. ALLEN #17
Surface Location: SE SE NW S22 T11S R19W
Bottom Location:
API: 15-051-26951
License Number: 33922
Spud Date: 5/15/2019 Time: 2:45 PM
Region: ELLIS COUNTY Time: 5:10 PM
Drilling Completed: 5/23/2019
Surface Coordinates: 2310' FNL & 2310' FWL
Bottom Hole Coordinates:
Ground Elevation: 1980.00ft
K.B. Elevation: 1988.00ft
Logged Interval: 2800.00ft To: 3590.00ft
Total Depth: 3590.00ft
Formation: ARBUCKLE
Drilling Fluid Type: CHEMICAL- PAC

OPERATOR

Company: MUSTANG ENERGY CORPORATION
Address: PO BOX 1121

Contact Geologist: ROD BRIN
Contact Phone Nbr: 785-623-0533
Well Name: M.R. ALLEN #17
Location: SE SE NW S22 T11S R19W
API: 15-051-26951
Pool: State: KS Field: SOLOMON
Country:

SURFACE CO-ORDINATES

Well Type: Vertical
Longitude: -99.4176837
Latitude: 39.0820557
N/S Co-ord: 2310' FNL
E/W Co-ord: 2310' FWL

LOGGED BY

Company:
Address: 2717 HICKORY ST.
HAYS, KS 67601

Phone Nbr: (785)-639-0721
Logged By: Geologist Name: CAMERON BRIN

CONTRACTOR

Contractor: DISCOVERY DRILLING CO., INC
Rig #: 2
Rig Type: MUD ROTARY
Spud Date: 5/15/2019 Time: 2:45 PM
TD Date: 5/23/2019 Time: 5:10 PM
Rig Release: 5/24/2019 Time: 10:45 AM

ELEVATIONS

K.B. Elevation: 1988.00ft Ground Elevation: 1980.00ft

NOTES

RECOMMENDATION TO RUN PRODUCTION CASING BASED ON FAVORABLE STRUCTURE, LOG ANALYSIS AND RESIVOIR DEVELOPMENT AS INDICATED BY DST #1

OPEN HOLE LOGGING PROVIDED BY: ELI
 DUAL INDUCTION LOG, COMPENSATED DENSITY/ NEUTRON LOG, AND MICRO LOGS WERE COMPLETED

DRILL STEM TESTING PROVIDED BY: TRILOBITE TESTING, INC
 ARBUCKLE (3422' to 3509') CONVENTIONAL BOTTOM HOLE TEST


WELL COMPARISON SHEET

	Mustang Energy Corporation		Skelly Oil Company		T.E. Anderson & Solomon Production		Mustang Energy Corporation	
	M.R. Allen #17		Mauder R. Allen #8		M.R. Allen #11		M.R. Allen #13	
			Producing		Producing		Producing	
	SE SE NW 22-11S-19W		NE SE NW 22-11S-19W		SE SW SE NW 22-11S-19W		W2 NW SE NW 22-11S-19W	
	KB 1988		KB 1967		KB 1996		KB 1964	
Formation	Sample Tops	Log Tops	Log Tops		Log Tops		Log Tops	
Anhydrite	1278' (+710)	1278' (+710)	1256' (+711)	-1	1277' (+719)	-9	1251' (+713)	-3
Base	1314' (+674)	1312' (+676)	1291' (+676)	0	1320' (+676)	-2	1294' (+670)	+4
Topeka	2938' (-950)	2937' (-949)	2915' (-948)	-1	2940' (-944)	-5	2913' (-949)	0
Heebner	3160' (-1172)	3160' (-1172)	3136' (-1169)	-3	3161' (-1165)	-7	3133' (-1169)	-3
LKC	3201' (-1213)	3202' (-1214)	3177' (-1210)	-4	3203' (-1207)	-7	3176' (-1212)	-2
BKC	3426' (-1438)	3425' (-1437)	3400' (-1433)	-4	3426' (-1430)	-7	3499' (-1535)	-2
Arbuckle	3504' (-1516)	3504' (-1516)	3481' (-1514)	-2	3501' (-1505)	-11	3479' (-1515)	-1

Daily Activity Summary

- 5/15/19** R.U., SPUD @ 2:45PM, DRILLING, 8 5/8" SURFACE CASING SET @ 237' KB w/150 SKS COMMON 2%GEL & 3%CC, WOC
- 5/16/19** 286', DRILLED PLUG @ 6:00AM, DRILLING
- 5/17/19** 1798', DRILLING
- 5/18/19** 2258', TWISTED OFF JOINT OF HW PIPE, FISHED w/ MAGNET, DRILLING, TWISTED OFF DRILL COLLAR PIN @ 2:00 PM, RAN OVERSHOT IN THE HOLE AND GOT STUCK ONCE ON THE FISH, GOT OFF OF FISH, TOH, TIH w/ BIT, CTCH, SHORT TRIP 20 STANDS, CTCH, TOH, START IN WITH WASHPIPE
- 5/19/19** 2441', TIH WITH WASHPIPE, TOH, MUD UP @ 2441'
- 5/20/19** 2441', TOH, WATING ON DRILL COLLARS, TIH, DRILLING
- 5/21/19** 2847', DRILLING, CFS @ 2978, DRILLING, TOH TO CHANGE BIT
- 5/22/19** 3255', TIH, DRILLING
- 5/23/19** 3509', CFS @ 3509, SHORT TRIP (25 STANDS), CCH, TOWB, TIWT, DST #1 3222'-3509', TOWT, TIWB, DRILLING, RTD 3590' @ 5:10pm, TOWB, LOGGING
- 5/24/19** 3590', RAN PRODUCTION CASING AND CEMENT, COMPLETED @10:15am, RIG RELEASED @10:45am

DST #1

	DRILL STEM TEST REPORT	
	Mustang Energy Corporation	22-11S-19W Ellis, KS

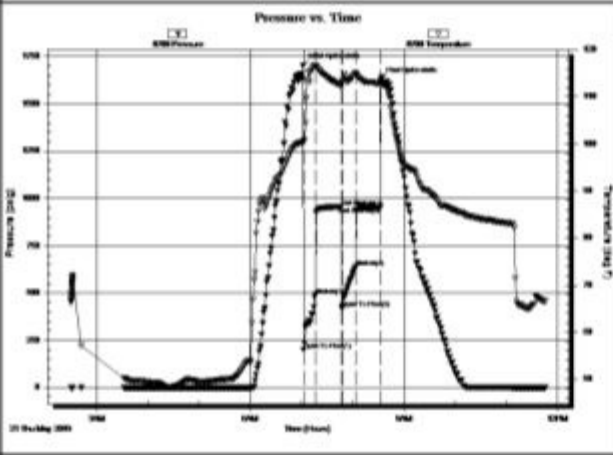


GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 07:02:29
 Time Test Ended: 11:46:13
 Interval: **3422.00 ft (KB) To 3509.00 ft (KB) (TVD)**
 Total Depth: 3509.00 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: 1990.00 ft (KB)
 1982.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8700 Outside
 Press@RunDepth: 635.68 psig @ 3423.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2019.05.23 End Date: 2019.05.23 Last Calib.: 2019.05.23
 Start Time: 02:29:54 End Time: 11:46:13 Time On Btmr: 2019.05.23 @ 07:01:59
 Time Off Btmr: 2019.05.23 @ 08:32:59

TEST COMMENT: 15- IF- BOB 90 secs. Built to 91.41"
 30- ISI- No blow
 15- FF- BOB 90 secs. Built to 86.23"
 30- FSI- No blow



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1704.01	100.47	Initial Hydro-static
1	199.75	100.29	Open To Flow (1)
15	489.11	116.55	Shut-in(1)
45	954.68	112.39	End Shut-in(1)
46	419.11	112.96	Open To Flow (2)
62	635.68	114.96	Shut-in(2)
91	953.98	112.64	End Shut-in(2)
91	1629.98	113.19	Final Hydro-static

Length (ft)	Description	Volume (bbl)
1200.00	OCMW, 20%O 40%M 40%W	15.32
150.00	OCM, 10%O 90%M	2.13

Choke (inches)	Pressure (psig)	Gas Rate (Mcfd)

ROCK TYPES

Clystcol Dolprim Lmst fw7> Lscongl shale, grn shale, gry Carbon Sh shale, red Ss

ACCESSORIES

MINERAL
 ▲ Chert, dark
 P Pyrite
 • Sandy
 • Varicolored chert
 △ Chert White
 / Euhed rhombs of dol or

FOSSIL
 F Fossils < 20%
 φ Oolite

TEXTURE
 C Chalky

Curve Track #1 ROP (min/ft)						Curve Track #3
--------------------------------	--	--	--	--	--	----------------

Depth | Interval
Cored Interval
DST Interval

DST

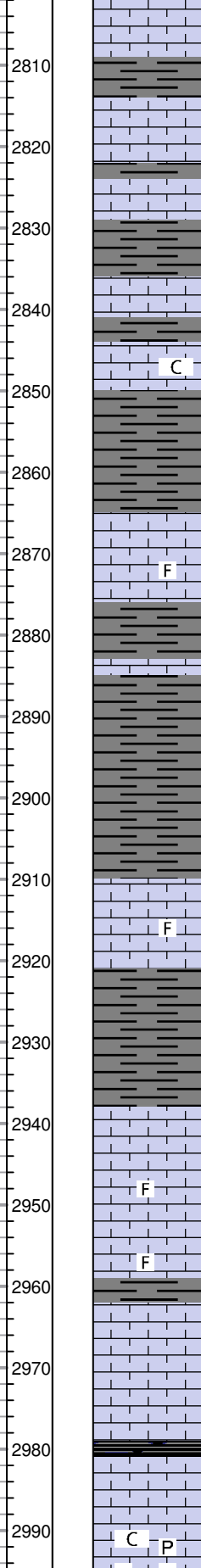
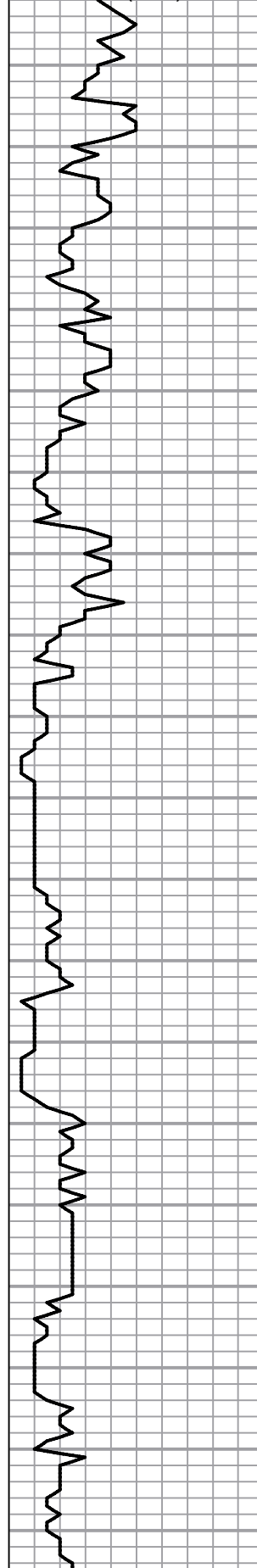
Lithology

Oil Show

Geological Descriptions

1:240 Imperial

0 1:240 Imperial ROP (min/ft) 10



ANHYDRITE: SPL 1278' (+710) LOG 1287' (+710)
BASE: SPL 1314' (+674) LOG 1312' (+676)

START 1' DRILL TIME THROUGH ANHYDRITE FROM 1250' TO 1350'
RESUME 1' DRILL TIME FROM 2800' TO RTD
START 10' WET/ DRY SAMPES FROM 2830' TO RTD

C Lm- cream- gray, fnxln, slightly chalky

Sh- black- gray, soft

F Lm- gray- tan, fn-md xln, slightly fossiliferous

Sh- gray- green

F Lm- gray, fnxln, very dense, slightly fossiliferous

Sh- black- gray

Sh- black, grey, green, soft

TOPEKA: SPL 2938' (-948) LOG 2937' (-949)

F Lm- cream, fnxln, slightly fossiliferous throughout

F Lm- cream- gray, fnxln, no show, no odor, no porosity, dense, ammonite fossils in part

○ Lm- cream, fnxln, 5-6 chips w/ poor pinpoint porosity, SFO when crushed and slight sheen on top of cup, few chips with poor brown stain, fair gasy odor

Sh- Black, carbonaceous, waxy, firm

C P Lm- cream- gray, fn- med grain, few chips w/ very light brown stain, SFO when crushed, slight sheen on top of cup, poor inxln porosity, slightly chalky, cherty in part, pyrite, fair odor

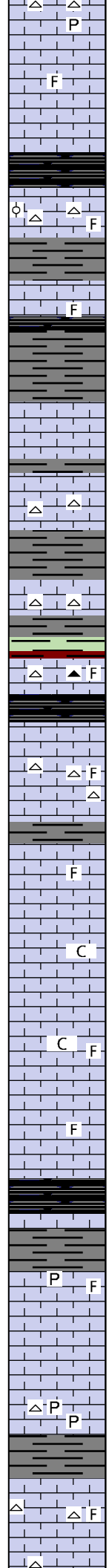
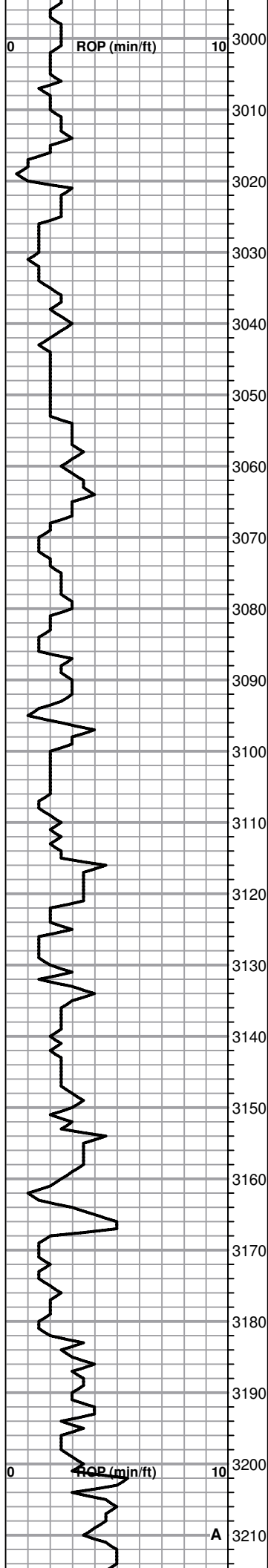
○

SURFACE CASING SET @ 237' KB w/ 150 SKS COMMON, 2% GEL & 3% CC (DID CIRCULATE)

SURVEY @ 238' (1/4°)

GEO ON SITE @ 6:00AM 5/21/19

CFS @ 2978



slightly chalky, cherty in part, pyrite, fair odor

Lm- cream, fnxln, few chips with poor inxln porosity, SFO in porosity, light brown stain, slightly fossiliferous, slight odor

Sh- black, carbonaceous, boxy, firm

Lm- cream, fnxln, fossiliferous in part, oomoldic, chert

Sh- black, red, green, earthy, soft

Lm- tan- cream, fnxln, fossiliferous in part, fairly dense

Sh- black, green, red, soft, sticky

Lm- cream- tan, fnxln, few chips w/ poor vuggy- inxln porosity, light brown stain, SFO in porosity, slightly cherty, dense, tight, poor odor, porosity has gas bubbles when heated

Lm- cream, fnxln, slightly sand, few chips white angular chert

Lm- off white, fnxln, no shows, very barren, soft white chert throughout

Sh- gray, red, green

Lm- cream, fnxln, no shows, barren, white- brown chert throughout, fossiliferous

Sh- black, carbonaceous

OREAD: LOG 3096' (-1108)

Lm- crm, fnxln, Chert white, sharp, angular, slightly fossiliferous,

Lm- cream, fnxln, no shows of live oil, scattered chips with very fine inxln porosity, fossiliferous, slight odor

Lm- cream, fnxln, few chips with poor- fair vuggy- inxln porosity, light brown stain, SFO when crushed, slight odor, chalky

Lm- cream- light gray- fnxln, scattered pinpoint- inxln porosity, light brown stain, SFO in porosity, fossiliferous, chalky, fair odor

Lm- cream, fnxln, scattered poor- fair vuggy- fnxln porosity, light brown stain, SFO when crushed, fossiliferous, fair odor

HEEBNER: SPL 3160' (-1172) LOG 3160' (-1172)

Sh- black, carbonaceous, waxy, soft

TORONTO: LOG 3175' (-1187)

Lm- cream, fnxln, scattered poor inxln porosity, 1 chip with good vuggy- inxln porosity, SFO in porosity, brown stain, fossiliferous, pyrite, fair odor

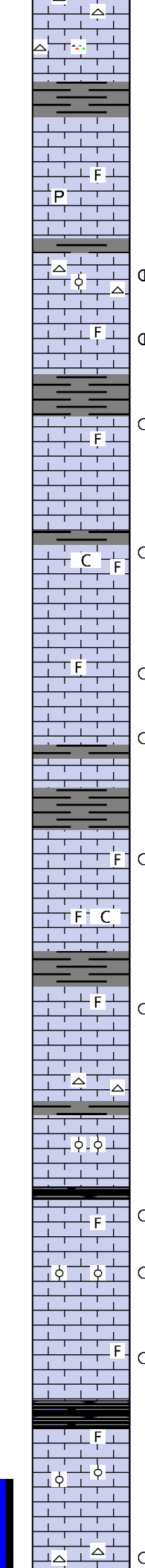
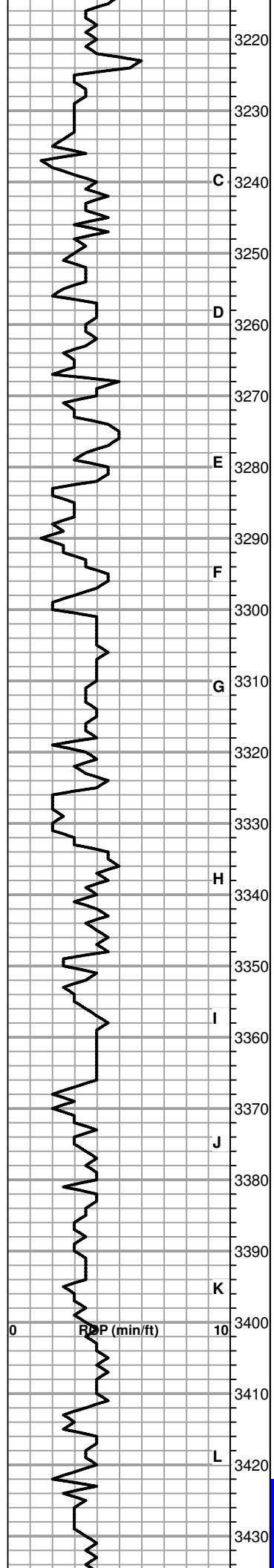
Lm- tan. fnxln, scattered poor very fine inxln porosity, dead oil stain, very dense, 1 chip with fair-good inxln porosity, SFO in porosity, brown stain, pyrite throughout, chert in part

Sh- gray, red

LKC: SPL 3201' (-1213) LOG 3202' (-1214)

Lm- creamn- gray, fnxln- med grain, scattered microxln porosity, NSFO, dead oil, cherty, fossiliferous, scattered oolites, no odor

Lm- cream, off white, fnxln, calcitic in part, scattered inxln in face



Lm- cream- off white, fnxn, oolitic in part, scattered inxn- in-foss porosity, no show oil, no odor, cherty

Lm- off white, fnxn, 1 chip w/ fr pinpoint porosity, slight SFO when crushed, brown stain, no odor, orange chert through

Sh- gray

Lm- cream, micro- fnxn, very dense, cherty, slightly fossiliferous, pyrite, no odor

Lm- cream- fnxn, fair pinpoint- in- oolitic porosity, light brown stain, fair SFO when crushed, fairly tight, dense, cherty

Lm- cream, fnxn, scattered fair inxn- infossiliferous porosity, light brown stain, NSFO, oolitic, fairly dense, fair- good odor

Sh- gray black

Lm- cream, fnxn, scattered fair inxn- vuggy porosity, SFO when crushed and on top of cup, light brown stain, few chips with good saturation, fossiliferous, fair odor

Lm- cream, fnxn, scattered inxn porosity, fair SFO when crushed and in cup, light brown stain, chalky, fossiliferous, fair odor

Lm- cream, very fnxn, dense, few chips with fnxn porosity, fair SFO, brown stain, fossiliferous, slight odor

Lm- cream, fnxn, barren, dense, 2 chips with fair inxn porosity, fair SFO, brown stain, tight, slight odor

Sh- gray

Lm- cream, fnxn, fossiliferous, barren, few chips with fair in-foss porosity, brown stain, poor SFO, slight odor

Lm- cream, fnxn, fossiliferous, oomoldic, barren, chalky in part

Sh- black, gray

Lm- cream, fnxn, fossiliferous, few chips with fair inxn- in-foss porosity, fair SFO, fair- good light brn stain, no odor

Lm- crm, fnxn, foss, dense, scat pr inxn porosity, lt brn stn, pr SFO when crushed, fr odor, sltly cherty

Lm- crm, fnxn scat oolites, 1 chip w/ gd in-oolitic porosity, fr SFO, brn stn, no odor

Sh- black

Lm- crm - fnxn, few chips w/ pr- fr inxn- in-foss porosity, brn stn, fr SFO, slt odor

Lm- crm, fnxn, 6-8 chips w/ gd in-oolitic porosity, gd SFO oozing from pores and sheen on top of cup, brn stn, fr sat, fr odor

Lm- crm- brn- sltly foss, 6-8 chips w/ fr-gd vuggy- inxn porosity, gd SFO, brn stn, fr sat brn stn, fr odor when oily rock is crushed

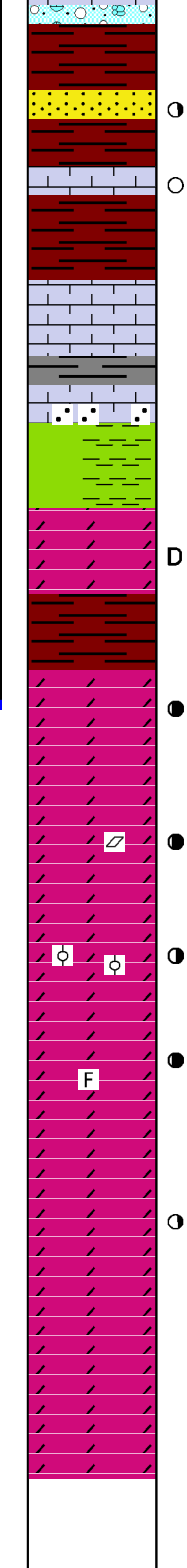
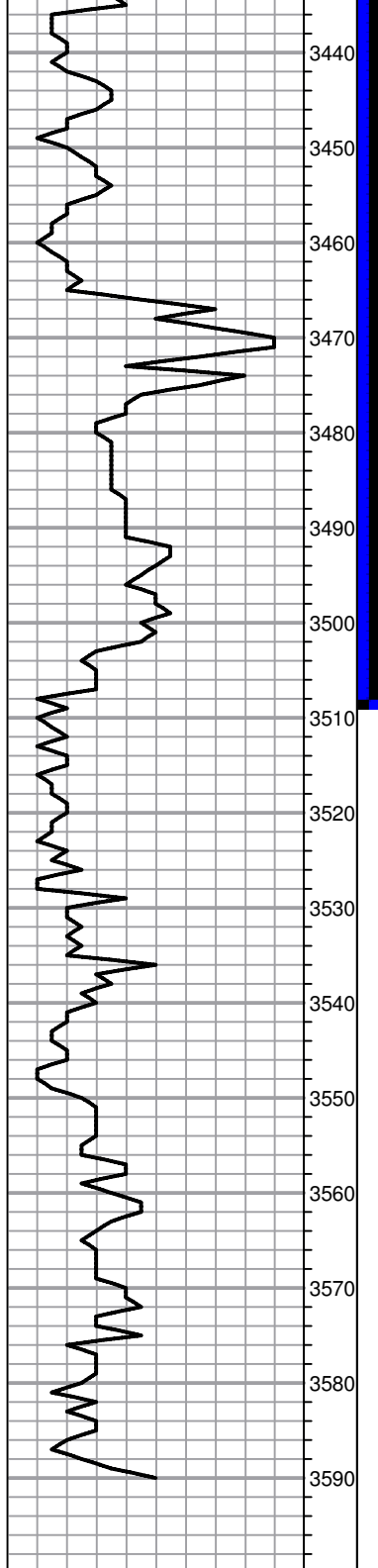
Sh- black

Lm- crm, fnxn, foss, pr scat oolitic porosity, NS, no odor

BKC: SPL 3426' (-1438) LOG 3425' (-1437)

Lm- crm-off wt, fnxn, cherty, few chips w/ pr-fr inxn porosity, drk brn stn, NSFO, no odor

shn, NSFO, no odor



Sh- red

○ Ss- quarts, clear, fn-md grain, sub rounded, fair sorting, consolidated, 3-4 chips w/ fr in-grain porosity, gd SFO, fr sat, slt odor, slty cherty, foss

○ Lm- crm, fnxln, foss, pr in-xln porosity, scat pr light brn stn, gd SFO on top of cup, fair odor

Sh- red

Lm- crm, fnxln, v dense, pr inxln porosity, pr lt brn stn, pr SFO, fr odor

Lm- off wt- brn, fnxln- md grain, slight SFO in cup, slightly sandy

Sh- red, green, firm, sticky

SIMPSON: LOG 3488 (-1500)

D Dolo- wt-crm, fn-md granular, scat pr in-grain porosity, no show, dead oil

sh- red

ARBUCKLE: SPL 3504' (-1516) LOG 3504' (-1516)

● Dolo- crm- fn-md grain, sucrosic, fr-gd in-grain slty vuggy porosity, gd SFO in cup and throughout spl, gd drk brn sat stn, fr-gd odor

● Dolo- wt, vfn-md grain, , slty rhombic, fr inxln-pinpoint porosity, drk brn sat stn, gd SFO, fr odor

● Dolo- wt-crm, fn-md grain, sucrosic, pr-fr pinpoint- in-grain porosity, fr brn sat stn, gd SFO, no odor, oolitic in part

● Dolo-wt, fn-md grain, pr-fr inxln porosity with scat vuggs, drk brn fr-gd sat stain, gd SFO, slt odor, foss in part

F

○ Dolo- crm- lt pk, fn-mdxln, scat sucrosic chips w/ pr-fr inxln porosity, brn stn, gd SFO, no odor

Dolo- off wt- lt pk fn-mdxln

Dolo- off wt- lt pk, fn-mdxln

CFS @ 3509

SURVERY @ 3509 (6°)

5 1/2" CASING SET @
3585.69' KB w/350 SKS
QMDC-FS/sk & 150 SKS
COMMON. CEMENT
CIR TO CELLAR

SURVERY @ 3590
(5 1/2°)



DRILL STEM TEST REPORT

Prepared For: **Mustang Energy Corporation**

4100 Yellowstone Rd.
Hays, KS 67601

ATTN: Cameron Brin

MR Allen #17

22-11S-19W Ellis,KS

Start Date: 2019.05.23 @ 02:29:53

End Date: 2019.05.23 @ 11:46:13

Job Ticket #: 65691 DST #: 1

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

Printed: 2019.05.24 @ 09:54:34



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mustang Energy Corporation
 4100 Yellow stone Rd.
 Hays, KS 67601
 ATTN: Cameron Brin

22-11S-19W Ellis,KS

MR Allen #17

Job Ticket: 65691

DST#: 1

Test Start: 2019.05.23 @ 02:29:53

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 07:02:29
 Time Test Ended: 11:46:13
 Interval: **3422.00 ft (KB) To 3509.00 ft (KB) (TVD)**
 Total Depth: 3509.00 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: 1990.00 ft (KB)
 1982.00 ft (CF)
 KB to GR/CF: 8.00 ft

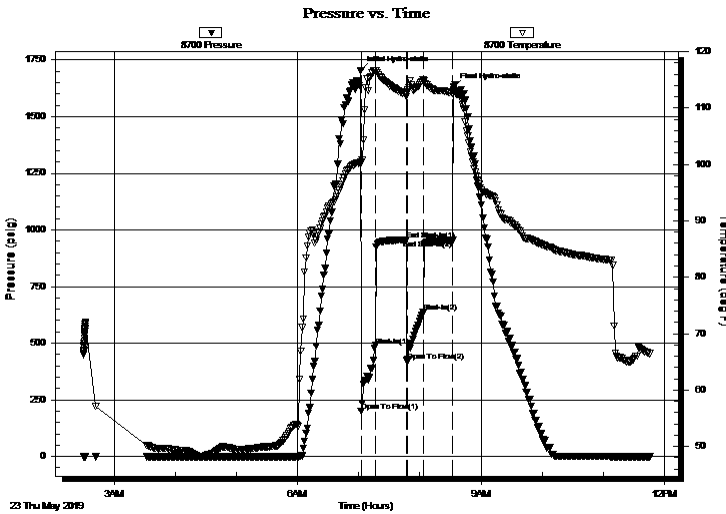
Serial #: 8700

Outside

Press@RunDepth: 635.68 psig @ 3423.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2019.05.23 End Date: 2019.05.23 Last Calib.: 2019.05.23
 Start Time: 02:29:54 End Time: 11:46:13 Time On Btm: 2019.05.23 @ 07:01:59
 Time Off Btm: 2019.05.23 @ 08:32:59

TEST COMMENT: 15- IF- BOB 90 secs. Built to 91.41"
 30- IS- No blow
 15- FF- BOB 90 secs. Built to 86.23"
 30- FS- No blow

PRESSURE SUMMARY



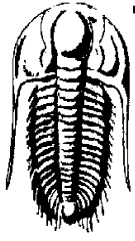
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1704.01	100.47	Initial Hydro-static
1	199.75	100.29	Open To Flow (1)
15	489.11	116.55	Shut-In(1)
45	954.68	112.39	End Shut-In(1)
46	419.11	112.96	Open To Flow (2)
62	635.68	114.96	Shut-In(2)
91	953.98	112.64	End Shut-In(2)
91	1629.98	113.19	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1200.00	OCMW, 20%O 40%M 40%W	15.32
150.00	OCM, 10%O 90%M	2.13

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Mustang Energy Corporation
4100 Yellow stone Rd.
Hays, KS 67601
ATTN: Cameron Brin

22-11S-19W Ellis,KS

MR Allen #17

Job Ticket: 65691

DST#: 1

Test Start: 2019.05.23 @ 02:29:53

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:02:29

Time Test Ended: 11:46:13

Test Type: Conventional Bottom Hole (Initial)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3422.00 ft (KB) To 3509.00 ft (KB) (TVD)

Total Depth: 3509.00 ft (KB) (TVD)

Hole Diameter: 7.88 inchesHole Condition: Fair

Reference Elevations: 1990.00 ft (KB)

1982.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 6771

Inside

Press@RunDepth: psig @ 3423.00 ft (KB)

Start Date: 2019.05.23

End Date: 2019.05.23

Start Time: 02:29:37

End Time: 11:45:56

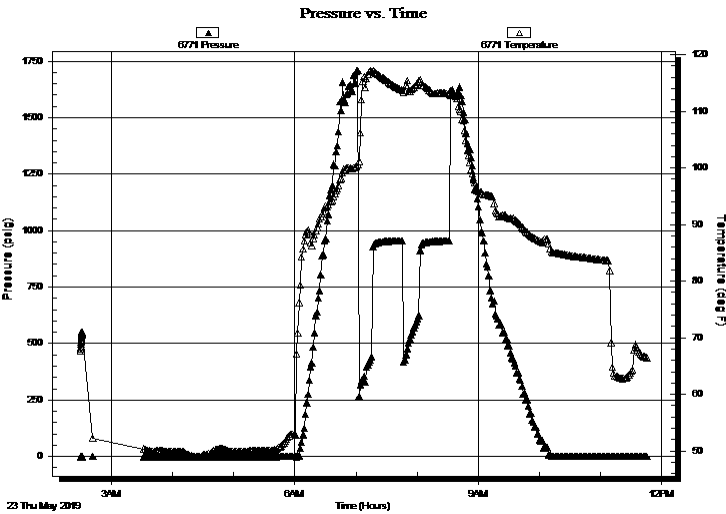
Capacity: 8000.00 psig

Last Calib.: 2019.05.23

Time On Btm:

Time Off Btm:

TEST COMMENT: 15- IF- BOB 90 secs. Built to 91.41"
30- IS- No blow
15- FF- BOB 90 secs. Built to 86.23"
30- FS- No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
1200.00	OCMW, 20%O 40%M 40%W	15.32
150.00	OCM, 10%O 90%M	2.13

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mustang Energy Corporation

22-11S-19W Ellis,KS

4100 Yellow stone Rd.
Hays, KS 67601

MR Allen #17

Job Ticket: 65691

DST#: 1

ATTN: Cameron Brin

Test Start: 2019.05.23 @ 02:29:53

Tool Information

Drill Pipe:	Length: 3162.00 ft	Diameter: 3.82 inches	Volume: 44.82 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 247.00 ft	Diameter: 2.75 inches	Volume: 1.81 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 46.63 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3422.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	87.00 ft			
Tool Length:	107.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			3403.00	
Shut In Tool	5.00			3408.00	
Hydraulic tool	5.00			3413.00	
Packer	5.00			3418.00	20.00 Bottom Of Top Packer
Packer	4.00			3422.00	
Stubb	1.00			3423.00	
Recorder	0.00	6771	Inside	3423.00	
Recorder	0.00	8700	Outside	3423.00	
Perforations	19.00			3442.00	
Change Over Sub	1.00			3443.00	
Drill Pipe	62.00			3505.00	
Change Over Sub	1.00			3506.00	
Bullnose	3.00			3509.00	87.00 Bottom Packers & Anchor

Total Tool Length: 107.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mustang Energy Corporation

22-11S-19W Ellis,KS

4100 Yellow stone Rd.
Hays, KS 67601

MR Allen #17

Job Ticket: 65691

DST#: 1

ATTN: Cameron Brin

Test Start: 2019.05.23 @ 02:29:53

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

29 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

30000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1200.00	OCMW, 20%O 40%M 40%W	15.324
150.00	OCM, 10%O 90%M	2.126

Total Length: 1350.00 ft Total Volume: 17.450 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

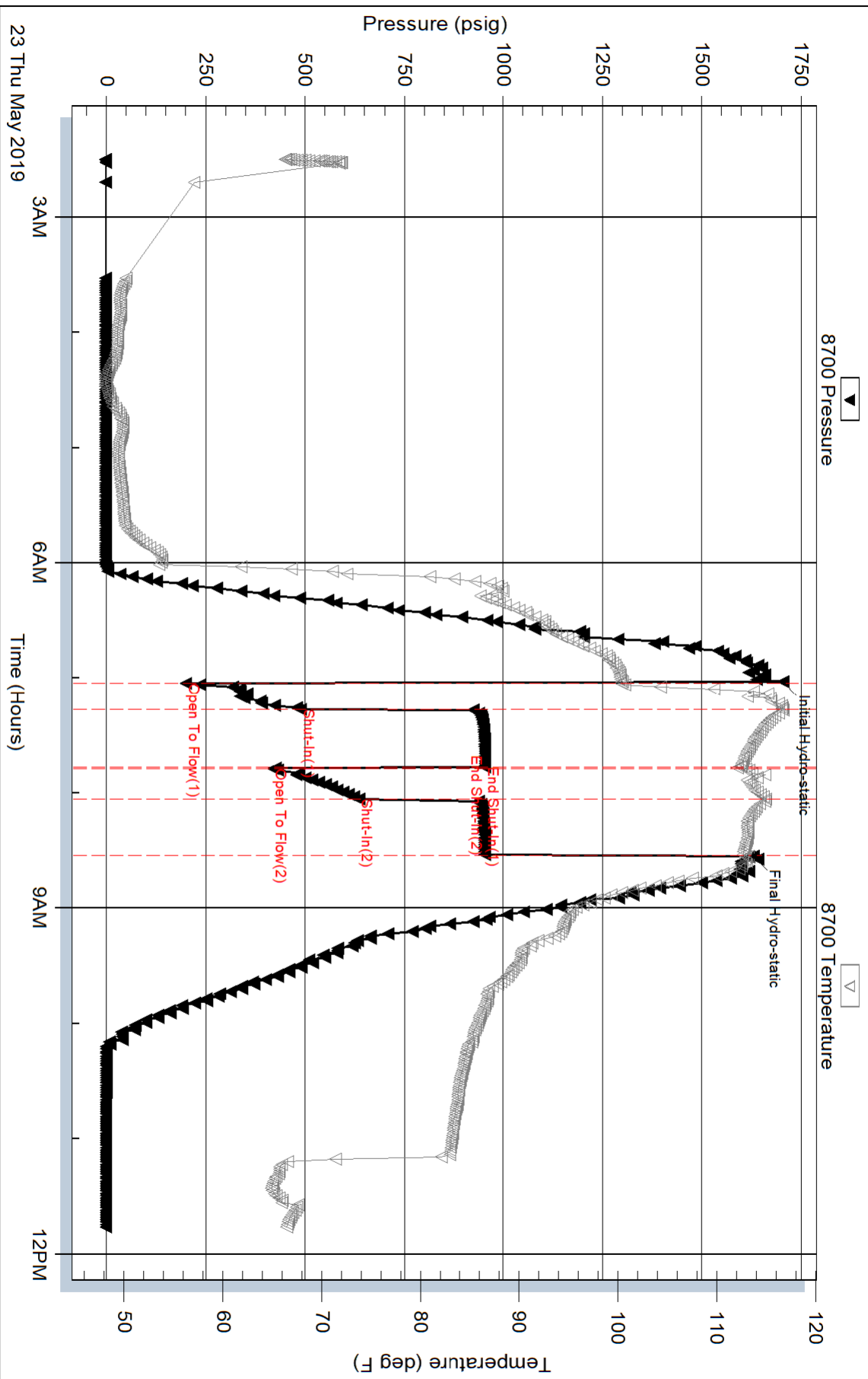
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: .25@59deg

Pressure vs. Time



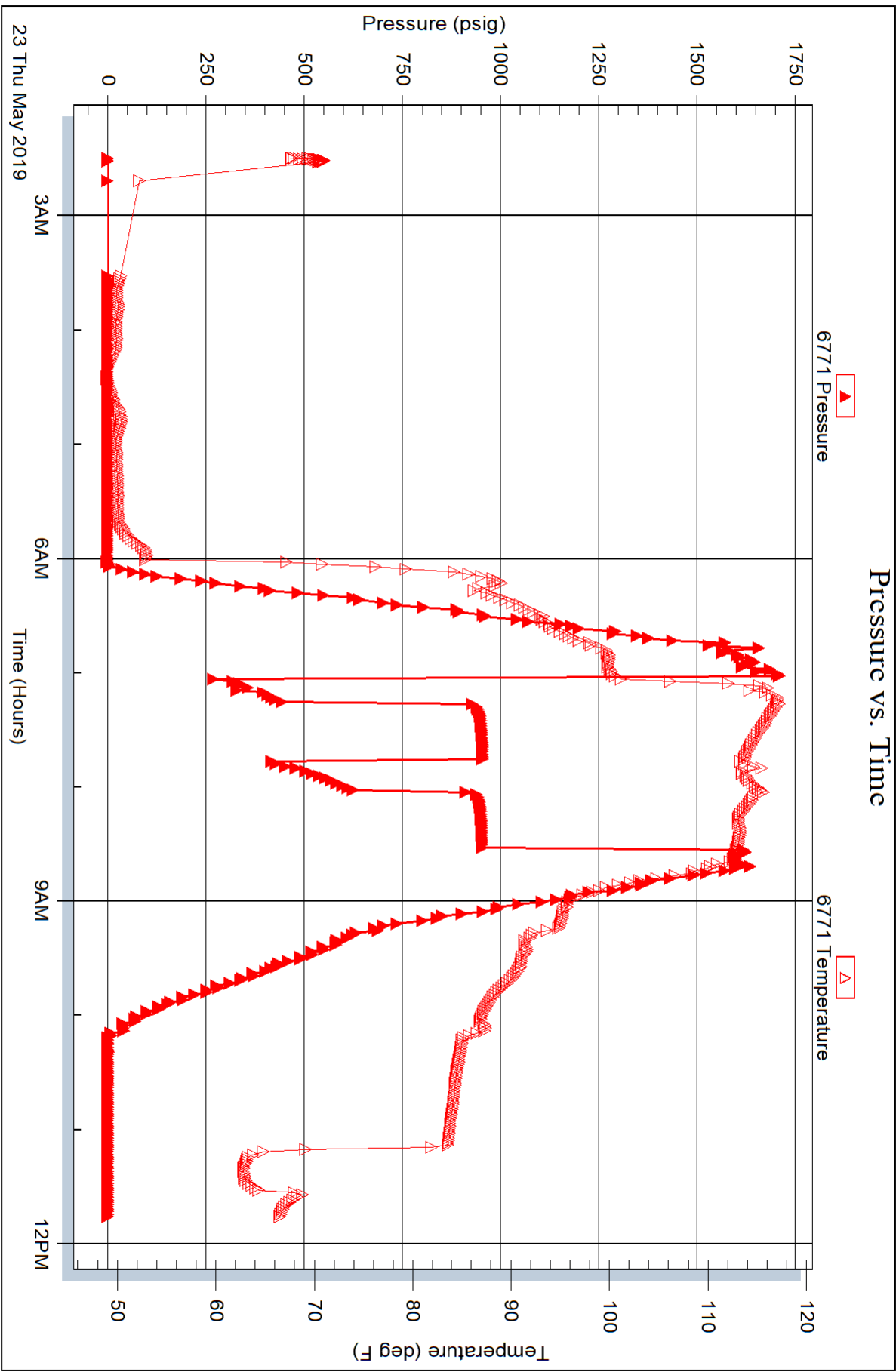
Serial #: 6771

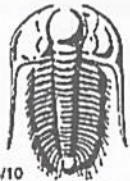
Inside

Mustang Energy Corporation

MR Allen #17

DST Test Number: 1





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **65691**

Well Name & No. Mr. B. Allen #17 Test No. 1 Date 5/23/19
 Company Mustang Energy Corporation Elevation 1990 KB 1982 GL
 Address 4100 Yellowstone Rd. Hays, KS 67601
 Co. Rep / Geo. Cameron Brin Rig Discovery 2
 Location: Sec. 22 Twp 11 Rge. 19 Wbo. Ellis State KS

Interval Tested 3422-3509 Zone Tested Arbuckle
 Anchor Length 87' Drill Pipe Run 3162 Mud Wt. 8.9
 Top Packer Depth 3417 Drill Collars Run --- Vis 48
 Bottom Packer Depth 3422 Wt. Pipe Run 247 WL 8.4
 Total Depth 3509 Chlorides 8,500 ppm System LCM 3 1/2"

Blow Description IF-BOB 90 secs. Built to 91.41"
ISF- No blow
FF-BOB 90 secs. Built to 86.23"
FSI- No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>1200</u>	<u>OCMW</u>	<u>20</u>	<u>40</u>	<u>40</u>	<u>40</u>
<u>150</u>	<u>OCM</u>	<u>10</u>	<u>---</u>	<u>---</u>	<u>90</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 1350' BHT 113° Gravity 29 API RW .25 @ 59° F Chlorides 30,000 ppm
 (A) Initial Hydrostatic 1704 Test 1200 T-On Location 0130
 (B) First Initial Flow 200 Jars _____ T-Started 0229
 (C) First Final Flow 489 Safety Joint _____ T-Open 0701
 (D) Initial Shut-In 955 Circ Sub _____ T-Pulled 0831
 (E) Second Initial Flow 419 Hourly Standby .25h 25 T-Out 1146
 (F) Second Final Flow 636 Mileage 44 RT 44 Comments Shut-in tool
 (G) Final Shut-In 954 Sampler _____ severely plugged
 (H) Final Hydrostatic 1630 Straddle _____ after test

Initial Open 15 Shale Packer _____ EM Tool _____
 Initial Shut-In 30 Extra Packer _____ Ruined Shale Packer _____
 Final Flow 15 Extra Recorder _____ Ruined Packer _____
 Final Shut-In 30 Day Standby _____ Extra Copies _____
 Sub Total 1269 Accessibility _____ Sub Total 0
 Sub Total 1269 MP/DST Disc't _____ Total 1269

Approved By _____ Our Representative Braman Lonsdale

TriLOBITE 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.