

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 785-483-1071
Cell 785-324-1041

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

No. **3425**

| | | | | | | | | | | | | | | | |
|------|---------|------|----|------|-----|-------|-----|--------|-------|-------|----|-------------|--|--------|----------|
| Date | 9/12/23 | Sec. | 31 | Twp. | 11S | Range | 19W | County | ellis | State | KS | On Location | | Finish | 11:30 am |
|------|---------|------|----|------|-----|-------|-----|--------|-------|-------|----|-------------|--|--------|----------|

Location **Yocemento N Buckeye E 170 4N 1/2W**

| | | | | | |
|---------------------|-----------|------------|-------|--|--|
| Lease | M-S | Well No. | 1-31 | Owner | To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed. |
| Contractor | Discovery | | | Charge To | Mustang Energy |
| Type Job | Surface | | | Street | |
| Hole Size | | T.D. | 221 | | |
| Csg. 8 5/8 | | Depth | | | |
| Tbg. Size | | Depth | | | |
| Tool | | Depth | | | |
| Cement Left in Csg. | | Shoe Joint | | The above was done to satisfaction and supervision of owner agent or contractor. | |
| Meas Line | | Displace | 13.10 | Cement Amount Ordered 150 80% 3cc 2% | |

EQUIPMENT

| | | | | | |
|------------|-----|----------|-------|----------|-----|
| Pumptrk 17 | No. | Cementer | Jordy | Common | 120 |
| | | Helper | | Poz. Mix | 30 |
| Bulktrk 14 | No. | Driver | Doug | Gel. | 3 |
| Bulktrk PU | No. | Driver | Nick | 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 |
| Ran Surface pipe, broke circulation pumped 150SKS, displaced 13.10 bbl cement did circulate! | Sand |
| | Handling 159 |
| | Mileage |

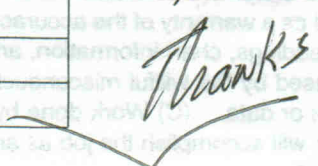
FLOAT EQUIPMENT

| | |
|--|-------------|
| | Guide Shoe |
| | Centralizer |
| | Baskets |
| | AFU Inserts |
| | Float Shoe |
| | Latch Down |

Thanks!

| | | | |
|----------------|---------|--------------|--|
| Pumptrk Charge | Surface | Tax | |
| Mileage | 15 | Discount | |
| | | Total Charge | |

X Signature 

Thanks 


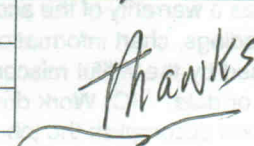
QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071
Cell 785-324-1041

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

No. **3592**

| | | | | | | | | | | | | | | | | | |
|---|---------|------|----|------|----|-------|----|-------------------------|-------|-----------------------|--------|---|--|--------|---------|--|--|
| Date | 9/18/23 | Sec. | 31 | Twp. | 11 | Range | 19 | County | Ellis | State | Kansas | On Location | | Finish | 12:15am | | |
| Lease | | | | | | | | M-5 unit | | Well No. | | 1-71 | | | | | |
| Contractor | | | | | | | | Discovery Drilling | | | | | | | | | |
| Type Job | | | | | | | | Owner | | | | | | | | | |
| Hole Size | | | | | | | | 7 7/8 | | T.D. | | 3800 | | | | | |
| Csg. | | | | | | | | Drill pipe | | Depth | | 3700 | | | | | |
| Tbg. Size | | | | | | | | | | Depth | | | | | | | |
| Tool | | | | | | | | | | Depth | | | | | | | |
| Cement Left in Csg. | | | | | | | | Shoe Joint | | Charge To | | Mustang Energy | | | | | |
| Meas Line | | | | | | | | Displace | | Cement Amount Ordered | | 305 ⁶⁰ / ₄₀ 4% gel 1/4 # Flow | | | | | |
| EQUIPMENT | | | | | | | | Pumptrk 16 | | No. | | Cementer | | Tim | | | |
| | | | | | | | | Bulktrk 9 | | No. | | Driver | | Doug | | | |
| JOB SERVICES & REMARKS | | | | | | | | Bulktrk PU | | No. | | Driver | | David | | | |
| | | | | | | | | Common | | | | 183 | | | | | |
| Remarks: | | | | | | | | Poz. Mix | | 122 | | | | | | | |
| Rat Hole | | | | | | | | Flowseal | | 5-75 | | | | | | | |
| Mouse Hole | | | | | | | | Kol-Seal | | | | | | | | | |
| Centralizers | | | | | | | | Mud CLR 48 | | | | | | | | | |
| Baskets | | | | | | | | CFL-117 or CD110 CAF 38 | | | | | | | | | |
| D/V or Port Collar | | | | | | | | Sand | | | | | | | | | |
| 3700'- 50 sks | | | | | | | | Handling | | 316 | | | | | | | |
| 1500'- 50 sks | | | | | | | | Mileage | | | | | | | | | |
| 800'- 100 sks | | | | | | | | FLOAT EQUIPMENT | | | | | | | | | |
| 270'- 50 sks | | | | | | | | | | Guide Shoe | | | | | | | |
| 40'- 10 sks | | | | | | | | Centralizer | | | | | | | | | |
| Rat hole - 30 sks | | | | | | | | Baskets | | | | | | | | | |
| Mouse hole - 15 sks | | | | | | | | AFU Inserts | | | | | | | | | |
| | | | | | | | | Float Shoe | | | | | | | | | |
| | | | | | | | | Latch Down | | | | | | | | | |
| Cement did circulate | | | | | | | | 1-Dry hole plug | | | | | | | | | |
| | | | | | | | | Pumptrk Charge | | plug | | | | | | | |
| | | | | | | | | Mileage | | 15 | | | | | | | |
|  | | | | | | | | Tax | | | | | | | | | |
| | | | | | | | | Discount | | | | | | | | | |
| | | | | | | | | Total Charge | | | | | | | | | |
|  | | | | | | | | Thanks | | | | | | | | | |



MUSTANG

ENERGY CORPORATION

Scale 1:240 Imperial

Well Name: M-S UNIT #1-31
Surface Location: N2, N2, Sec 31, T11S, R19W
Bottom Location:
API: 15-051-27094
License Number: 33922
Spud Date: 9/12/2023 Time: 8:00 AM
Region: ELLIS COUNTY
Drilling Completed: 9/17/2023 Time: 11:00 AM
Surface Coordinates: 660' FNL & 2640' FEL
Bottom Hole Coordinates:
Ground Elevation: 2147.00ft
K.B. Elevation: 2155.00ft
Logged Interval: 3050.00ft To: 3800.00ft
Total Depth: 3800.00ft
Formation: ARBUCKLE
Drilling Fluid Type: CHEMICAL MUD

OPERATOR

Company: MUSTANG ENERGY CORPORATION
Address: PO BOX 1121
HAYS, KS 67601

Contact Geologist: ROD BRIN
Contact Phone Nbr: 785-623-0533
Well Name: M-S UNIT #1-31
Location: N2, N2, Sec 31, T11S, R19W
API: 15-051-27094
Pool: Field: STAR
State: KS Country:

SURFACE CO-ORDINATES

Well Type: Vertical
Longitude: -99.472789
Latitude: 39.057739
N/S Co-ord: 660' FNL
E/W Co-ord: 2640' FEL

LOGGED BY

Company: KEYSTONE CONSULTING, LLC
Address: 2511 E 19TH
HAYS, KS 67601
Phone Nbr: (785) 639-0721
Logged By: Geologist Name: CAMERON BRIN

CONTRACTOR

Contractor: DISCOVERY DRILLING
Rig #: 2
Rig Type: MUD ROTARY
Spud Date: 9/12/2023 Time: 8:00 AM
TD Date: 9/17/2023 Time: 11:00 AM

ELEVATIONS

K.B. Elevation: 2155.00ft
K.B. to Ground: 8.00ft

Ground Elevation: 2147.00ft

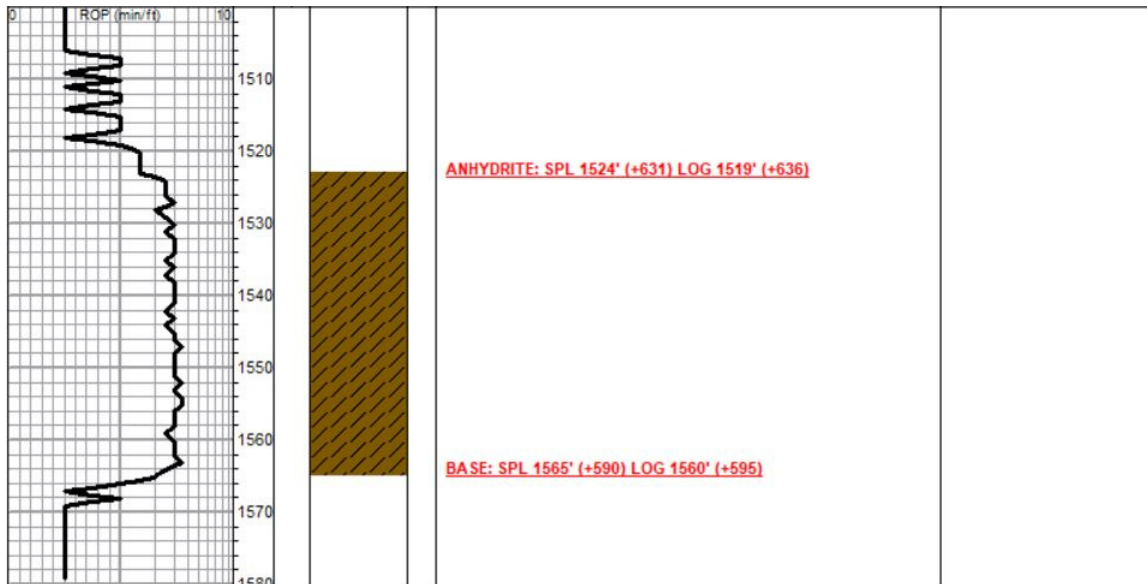
NOTES

DUE TO NEGATIVE RESULTS ON DST #1, DECISION WAS MADE TO PLUG AND ABANDON THE M-S UNIT #1-31

TOPS COMPARISON

| FORMATION | M-S UNIT #1-31 | | | | ROXANNE #1-31 | | | | P&A 12/14/95 | | | | P&A 12/18/90 | | | | D&A 9/11/82 | | | |
|---------------|------------------------------------|-------|-------|-------|----------------------|-------|-------|-------|----------------------|-------|-------|-------|----------------|-------|-------|-------|-------------|-------|-------|------|
| | SE, NW, NW, NE, SEC 31, T11S, R19W | | | | DALE SOLOMON B #6-31 | | | | DALE SOLOMON B #7-31 | | | | SPREEN B #2-31 | | | | | | | |
| | MUSTANG ENERGY | | | | DON E PRATT | | | | DON E PRATT | | | | DON E PRATT | | | | | | | |
| | KB | 2155 | GL | 2147 | KB | 2142 | SMPL. | LOG | KB | 2147 | SMPL. | LOG | KB | 2155 | SMPL. | LOG | KB | 2137 | SMPL. | LOG |
| DEPTH | DATUM | DEPTH | DATUM | DEPTH | DATUM | CORR. | CORR. | DEPTH | DATUM | CORR. | CORR. | DEPTH | DATUM | CORR. | CORR. | DEPTH | DATUM | CORR. | CORR. | |
| ANHYDRITE TOP | 1519 | 636 | 1524 | 631 | 1503 | 639 | - 3 | - 8 | 1510 | 637 | - 1 | - 6 | 1521 | 634 | + 2 | - 3 | 1507 | 630 | + 6 | + 1 |
| BASE | 1560 | 595 | 1565 | 590 | 1544 | 598 | - 3 | - 8 | 1546 | 601 | - 6 | - 11 | 1558 | 597 | - 2 | - 7 | 1551 | 586 | + 9 | + 4 |
| TOPEKA | 3169 | -1014 | 3170 | -1015 | 3146 | -1004 | - 10 | - 11 | 3150 | -1003 | - 11 | - 12 | 3167 | -1012 | - 2 | - 3 | 3160 | -1023 | + 9 | + 8 |
| HEEBNER SHALE | 3391 | -1236 | 3390 | -1235 | 3367 | -1225 | - 11 | - 10 | 3372 | -1225 | - 11 | - 10 | 3388 | -1233 | - 3 | - 2 | 3384 | -1247 | + 11 | + 12 |
| TORONTO | 3413 | -1258 | 3409 | -1254 | 3386 | -1244 | - 14 | - 10 | 3394 | -1247 | - 11 | - 7 | 3411 | -1256 | - 2 | + 2 | 3405 | -1268 | + 10 | + 14 |
| LKC | 3430 | -1275 | 3430 | -1275 | 3407 | -1265 | - 10 | - 10 | 3414 | -1267 | - 8 | - 8 | 3430 | -1275 | + 0 | + 0 | 3424 | -1287 | + 12 | + 12 |
| BKC | 3655 | -1500 | 3651 | -1496 | 3630 | -1488 | - 12 | - 8 | 3636 | -1489 | - 11 | - 7 | 3654 | -1499 | - 1 | + 3 | 3649 | -1512 | + 12 | + 16 |
| CONGLOMERATE | 3700 | -1545 | 3700 | -1545 | | | | | | | | | | | | | | | | |
| ARBUCKLE | 3732 | -1577 | 3725 | -1570 | 3699 | -1557 | - 20 | - 13 | 3706 | -1559 | - 18 | - 11 | 3730 | -1575 | - 2 | + 5 | | | | |
| TOTAL DEPTH | 3800 | -1645 | 3800 | -1645 | 3791 | -1649 | + 4 | + 4 | 3800 | -1653 | + 8 | + 8 | 3781 | -1626 | - 19 | - 19 | 3749 | -1612 | - 33 | - 33 |

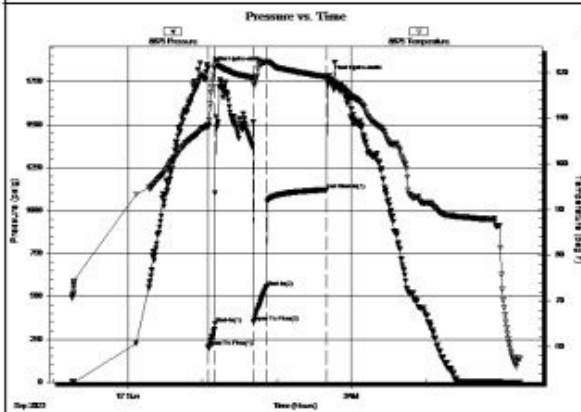
ANHYDRITE



DST #1 3682'-3740' (ARBUCKLE)

| | | |
|---|---|--|
| | DRILL STEM TEST REPORT | |
| | Mustang Energy Corporation PO BOX 1121 Hays KS 67601+1121 ATTN: Cameron Brin | 31-11s-19w Ellis KS M-S-Unit #1-31 Job Ticket: 71140 DST# 1 Test Start: 2023.09.16 @ 23:15:00 |
| GENERAL INFORMATION: | | |
| Formation: Arbuckle | Deviated: No Whipstock: ft (KB) | Test Type: Conventional Bottom Hole (Initial) |
| Time Tool Opened: 01:04:57 | Time Test Ended: 05:16:52 | Tester: Spencer J Staab |
| Interval: 3682.00 ft (KB) To 3740.00 ft (KB) (TVD) | Total Depth: 3740.00 ft (KB) (TVD) | Unit No: 84 |
| Hole Diameter: 7.88 inches-hole Condition: Poor | Reference Elevations: 2155.00 ft (KB) 2147.00 ft (CF) | KB to GR/CF: 8.00 ft |
| Serial #: 8875 Inside | Press@RunDepth: 338.97 psig @ 3685.00 ft (KB) | Capacity: psig |
| Start Date: 2023.09.16 | End Date: 2023.09.17 | Last Calib.: 2023.09.17 |
| Start Time: 23:15:01 | End Time: 05:16:52 | Time On Btm: 2023.09.17 @ 01:04:42 |
| | | Time Off Btm: 2023.09.17 @ 02:42:22 |
| TEST COMMENT: 5-IF-BOB 1.5 mins Built to 54" | | |

30-ISO-Weak Surface Died @20 mins ***Trapped Hydrostatic***
 10-FF-BOB 1.5 mins Built to 85.75"
 45-FSI-No Return



| PRESSURE SUMMARY | | | |
|------------------|-----------------|--------------|----------------------|
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
| 0 | 1831.00 | 108.41 | Initial Hydro-static |
| 1 | 204.28 | 108.02 | Open To Flow (1) |
| 6 | 338.97 | 120.98 | Shut-in(1) |
| 37 | 350.92 | 118.28 | Open To Flow (2) |
| 48 | 554.46 | 122.33 | Shut-in(2) |
| 96 | 1121.46 | 119.07 | End Shut-in(1) |
| 98 | 1781.54 | 118.76 | Final Hydro-static |

| Recovery | | |
|-------------|-----------------------------|--------------|
| Length (ft) | Description | Volume (bbl) |
| 300.00 | SMCW 10%M 90%W | 3.97 |
| 660.00 | MW w/ scum oil 50%M 50%W | 9.36 |
| 120.00 | SWCM w/ oil spots 10%W 90%M | 1.70 |
| 0.00 | RW= 294@55F=29,000 | 0.00 |

| Gas Rates | | |
|----------------|-----------------|-------------------|
| Choke (inches) | Pressure (psig) | Gas Rate (MMcf/d) |
| | | |

Trilobite Testing, Inc

Ref. No: 71140

Printed: 2023.09.17 @ 08:05:02

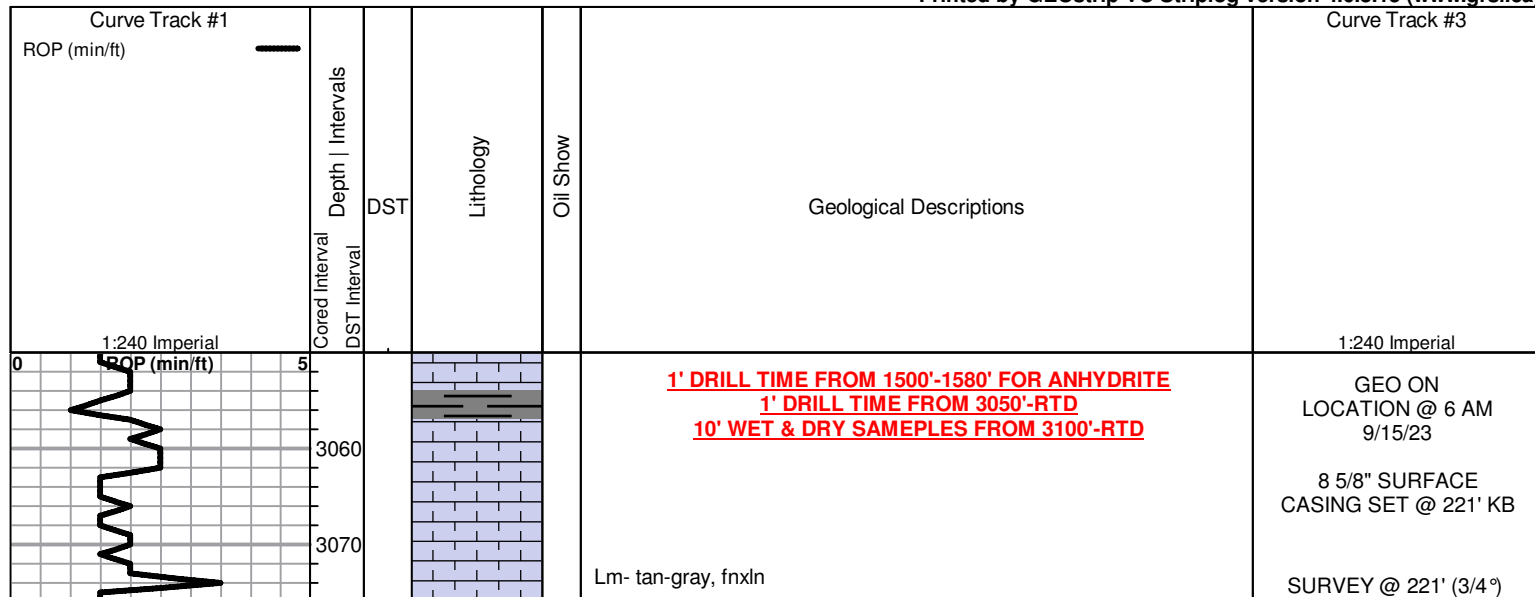
ROCK TYPES

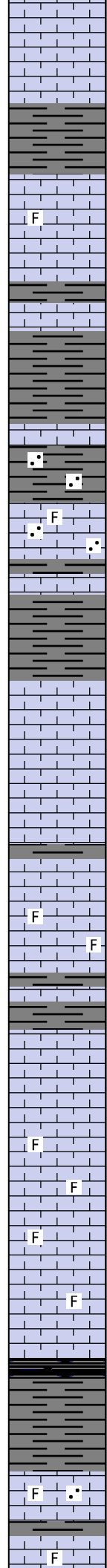
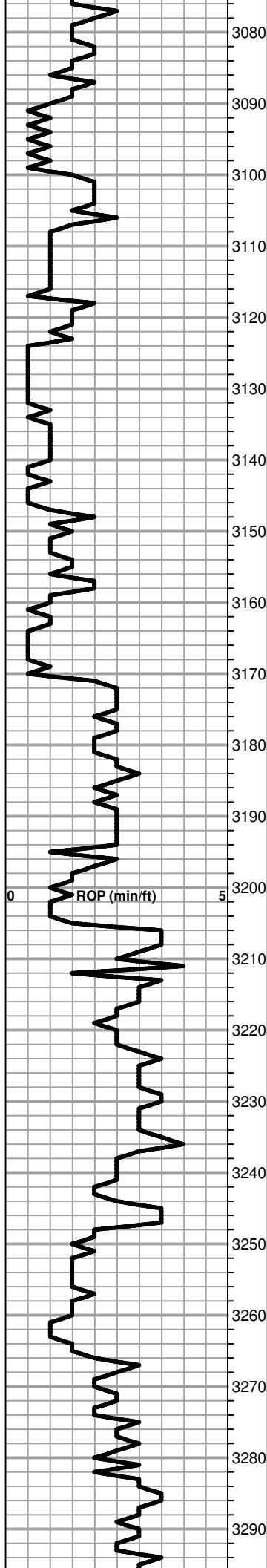
| | | | |
|---------|-----------|------------|------------|
| Dolprim | Lmst fw7> | shale, gry | shale, red |
| Dolsec | Lscong1 | Carbon Sh | |

ACCESSORIES

| | | |
|--|---|--|
| <p>MINERAL</p> <ul style="list-style-type: none"> ▲ Chert, dark • Sandy • Silty △ Chert White ◊ Euhed rhombs of dol or | <p>FOSSIL</p> <ul style="list-style-type: none"> F Fossils < 20% ○ Oolite ⊕ Oomoldic | <p>STRINGER</p> <ul style="list-style-type: none"> ~ Chert ■ Limestone — green shale |
|--|---|--|

Printed by GEOstrip VC Striplog version 4.0.8.15 (www.grsi.ca)





Lm- A/A, sli cherty

Sh- gray-green, blocky

Lm- tan-gray, fnxln-v.fngn, few scat foss

Lm- A/A, cherty in prt, chalky in prt

Sh- gray, soft

Lm- tan, fnxln

Sh- gray, sandy in prt

Lm- tan-gray, v.fn-fnxln, cherty in prt, sact foss, scat Ss clusters, v. fngn, well sorted, well rounded

Sh- gray, soft

TOPEKA: SPL 3170' (-1015) LOG 3169' (-1014)

Lm- crm, fnxln-fngn, cherty in prt

Lm- A/A

Lm- crm-gray, cherty

Lm- crm-tan-gray, v.fnxln-fngn, scat foss, cherty in prt

Sh- gray, waxy

Lm- tan-gray, v.fnxln, cherty

Lm- crm, v.fn-fnxln, scat foss, cherty in prt

Lm- tan, fnxln-fngn, scat foss, sli chalky

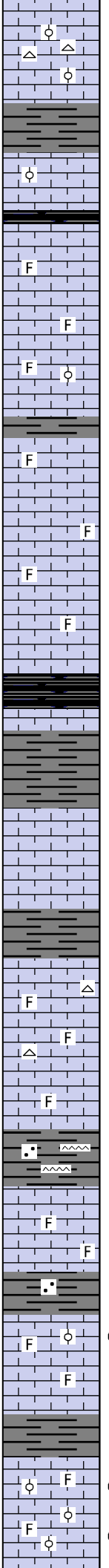
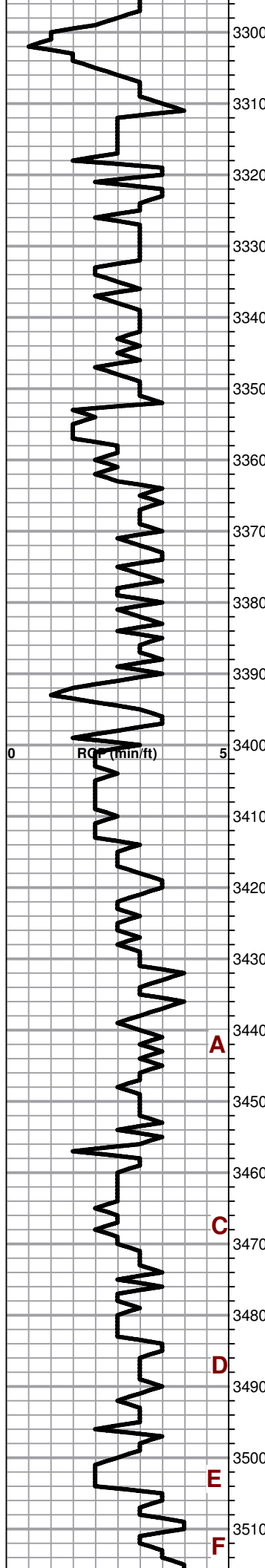
Lm- A/A, tr xln por, NSO

Sh- blk, carb

Sh- gray, soft

Lm- tan, fnxln-fngn, scat foss, sandy

Lm- crm-tan, micro-fnxln, scat foss, cherty in prt



Lm- crm-tan, micro-fnxln, scat foss, cherty in prt

Lm- crm, fnxln, oolitic in prt, scat tan-wt chert

Sh- gray, waxy

Lm- crm-gray, v.fn-fnxln, oolitic in prt, chalky in prt

Sh- blk, carb

Lm- crm-tan-gray, micro-fnxln, scat foss, cherty

Lm- crm-tan, fnxln, oolitic in prt, **no vis stn, v. sli sheen FO in cup, v. faint odor**

Lm- crm-tan, v.fn-fnxln, foss

Lm- crm, v.fn-fnxln, foss, sli chalky

Lm- A/A

HEEBNER: SPL 3390' (-1235) LOG 3391' (-1236)

Sh- blk, carb

Lm- crm-tan, v.fnxln, dense

Sh- gray- blk

TORONTO: SPL 3409' (-1254) LOG 3413' (-1258)

Lm- crm-tan, v.fnxln, cherty in prt

Sh- gray, splintery

LANSING: SPL 3430' (-1275) LOG 3430' (-1275)

Lm- crm, v.fnxln, foss, scat tan-wt chert

Lm-chert- A/A, sli chalky in prt

Sh- lt. gray- green, sli sandy
Chert- tan-wt, angular, fresh

Lm- crm-tan, v.fnxln-fngrn, scat foss, cherty in prt

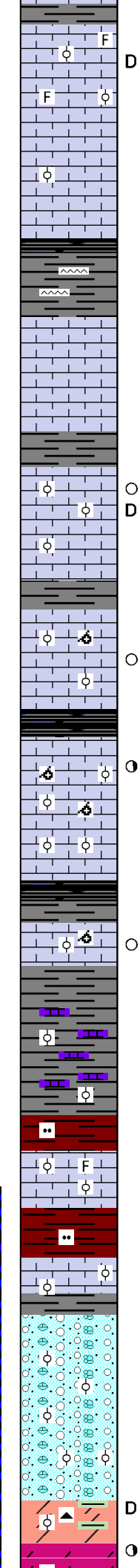
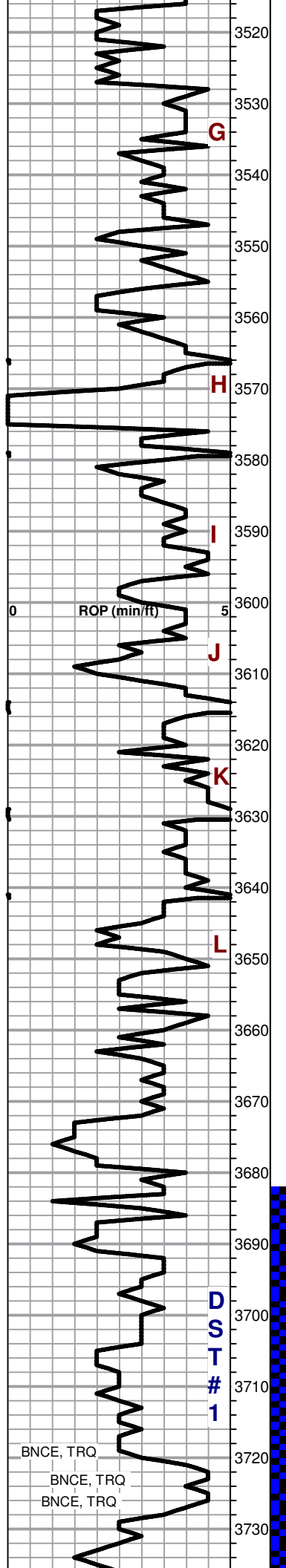
Sh- lt. gray-green, sandy

Lm- crm-tan, v.fn-fnxln, foss, oolitic in prt, **4-5 scat pcs w/ pr ppt-oolitic por, spotty brn stn in por, NSFO, no odor**

Sh- gray

Lm- crm, v.fn-fnxln, foss, oolitic, **3-4 scat pcs w/ v. pr ppt por, v. spotty brn face stn & tr stn in por, NSFO, no odor**

Lm- crm, v.fn-fnxln, foss, oolitic in prt, **1 pc w/ v. pr ppt por, brn spotty face stn, NSFO, no odor**



Sh- gray, soft

D Lm- crm-tan, v.fnxln, foss, oolitic in prt, cherty, dense, 2-3 pcs w/ dead blk flaky stn

F

3520

3530

G

3540

Lm- A/A, no stn

3550

Sh- blk, carb

Sh- gray

Chert- tan-wt, sub angular- angular

3560

Lm- crm, v.fnxln, dense, cherty

H

3570

Sh- gray

D Lm- crm, fnxln, oolitic, **scat pr ppt-inoolitic por, scat spotty brn stn in por & blk dead stn, NSFO, mod odor**

3580

Lm- A/A

3590

D Lm- crm, v.fnxln, oolitic in prt, **scat pr ppt & tr oomoldic por, scat brn spotty stn & blk dead stn, NSFO, mod odor**

3600

Sh- blk, carb

O Lm- crm, fnxln, oolitic, **scat pr ppt & pr-fr oomoldic-oolicastic por, scat brn-blk sli sat stn in por, mod SFO in cup & bleeding when heated, gd odor**

3610

Lm- crm, fnxln, oolitic, chalky in prt

3620

Sh- blk, carb

O Lm- crm, fnxln, oolitic, **scat pr ppt & pr-fr oomoldic por, scat spotty, brn stn in por, sli SFO in cup, mod odor**

3630

Sh- green- gray

Lm- crm, fnxln, foss, oolitic, chalky in prt

3640

Sh- red, silty

3650

BKC: SPL 3651' (-1496) LOG 3655' (-1500)

3660

Sh- red, silty

3670

Lm- crm, v.fn-fnxln, foss, oolitic, cherty, dense

3680

Sh- red, silty

3690

Lm- crm- tan, v.fn-fnxln, oolitic

3700

DST # 1

3710

Lm- A/A, dense

Chert-tan, sub angular, oolitic

Sh- brn-green

3720

D Dolo- crm, fn-mdxln, reworked, scat pr xln por, dead blk stn, scat turq shale, Lm- crm, v.fn-fnxln, oolitic, Chert- tan-orange

3730

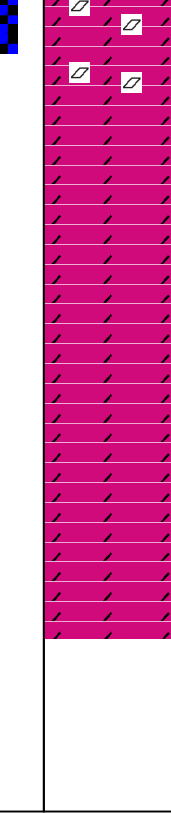
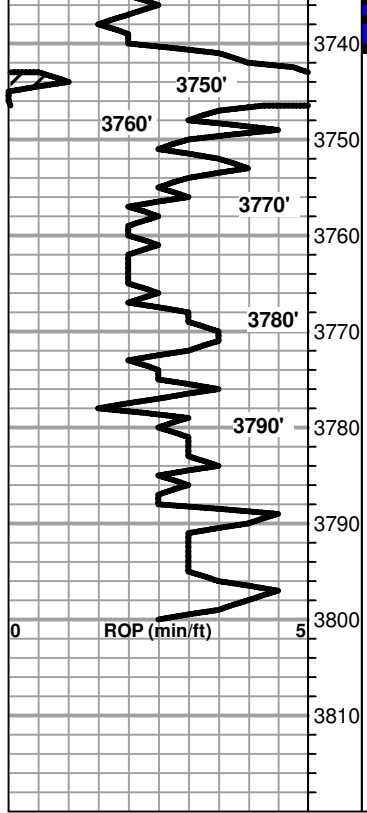
O **ARBuckle: SPL 3725' (-1570) LOG 3732' (-1577)**

Dolo- crm, md-corxln, rhombic in prt, **scat fairly tight inxln**

CLOCK STOPPED FROM 3570'-3575'

DST #1
3682'-3740' (ARB)
 5-30-10-45
300' SMCW
660' MW w/ SCUM O
120' SWCM w/ O SPTS
 SIP: 1121#
INITIAL SHUT IN TRAPPED HYDROSTATIC

CFS @ 3731'



por w/ few scat vugs, brn-blk sli sat stn, sheen FO in cup & upon crush, mod odor

3737'-30min Dolo- crm, md-corxln, rhombic, pr-fr inxln por w/ few scat vugs, brn-blk sub sat stn in por, fr sheen FO in cup & upon crush, mod odor

3740'- Dolo- A/A

3750'- Dolo- crm, fn-corxln, rhombic in prt, scat pr ppt-inxln por, few scat pcs w/ spotty brn-blk stn, few FO drops in cup, faint odor

3760'- Dolo, crm, fn-mdxln, dense, sucrosic in prt, scat pr ppt-inxln por, scat spotty brn-blk stn, v. sli sheen FO in cup, mod odor

3770'- Dolo- A/A

3780'- Dolo- crm, fn-mdxln, sucrosic in prt, scat pr ppt-inxln & tr vuggy por, few scat pcs w/ spotty brn-blk stn, sli sheen FO in cup, faint odor

3790'- Dolo- crm, fnxln, sucrosic in prt, scat pr inxln & tr vuggy por, few scat pcs w/ blk dead stn, NSFO, pr odor

Dolo- A/A, NSO, no odor

RTD: SPL 3800' (-1645)

CFS @ 3735'
CFS @ 3737'
CFS @ 3740'

SURVEY @ 3740' (3°)
MISRUN

PIPE STRAP 0.87'
SHORT TO BOARD

SURVEY @ RTD (1 3/4°)
GEO OFF LOCATION
@ 5:30 PM 9/17/23



DRILL STEM TEST REPORT

Prepared For: **Mustang Energy Corporation**

PO Box 1121
Hays KS 67601+1121

ATTN: Cameron Brin

M-S-Unit #1-31

31-11s-19w Ellis,KS

Start Date: 2023.09.16 @ 23:15:00

End Date: 2023.09.17 @ 05:16:52

Job Ticket #: 71140 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2023.09.19 @ 16:24:28



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Mustang Energy Corporation

31-11s-19w Ellis,KS

PO Box 1121
Hays KS 67601+1121

M-S-Unit #1-31

Job Ticket: 71140

DST#: 1

ATTN: Cameron Brin

Test Start: 2023.09.16 @ 23:15:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:04:57

Time Test Ended: 05:16:52

Test Type: Conventional Bottom Hole (Initial)

Tester: Spencer J Staab

Unit No: 84

Interval: 3682.00 ft (KB) To 3740.00 ft (KB) (TVD)

Reference Elevations: 2155.00 ft (KB)

Total Depth: 3740.00 ft (KB) (TVD)

2147.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

Serial #: 8875

Inside

Press@RunDepth: 338.97 psig @ 3685.00 ft (KB)

Capacity: psig

Start Date: 2023.09.16

End Date:

2023.09.17

Last Calib.:

2023.09.17

Start Time: 23:15:01

End Time:

05:16:52

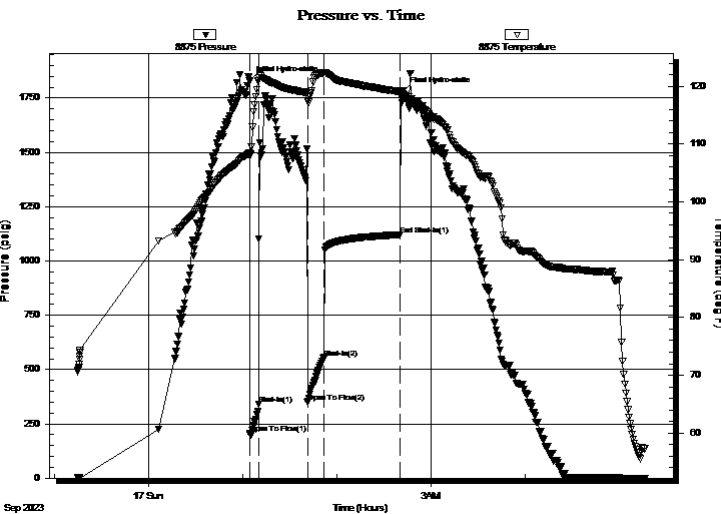
Time On Btm:

2023.09.17 @ 01:04:42

Time Off Btm:

2023.09.17 @ 02:42:22

TEST COMMENT: 5-IF-BOB 1.5 mins Built to 54"
30-ISI-Weak Surface Died @20 mins - tool slid - ***Trapped Hydrostatic***
10-FF-BOB 1.5 mins Built to 85.75"
45-FSI-No Return



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1831.00 | 108.41 | Initial Hydro-static |
| 1 | 204.28 | 108.02 | Open To Flow (1) |
| 6 | 338.97 | 120.98 | Shut-In(1) |
| 37 | 350.92 | 118.28 | Open To Flow (2) |
| 48 | 554.46 | 122.33 | Shut-In(2) |
| 96 | 1121.46 | 119.07 | End Shut-In(1) |
| 98 | 1781.54 | 118.76 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|------------------------------|--------------|
| 300.00 | SMCW 10%M 90%W | 3.97 |
| 660.00 | MW w / scum oil 50%M 50%W | 9.36 |
| 120.00 | SWCM w / oil spots 10%W 90%M | 1.70 |
| 0.00 | RW=.294@55F=29,000 | 0.00 |
| | | |
| | | |

Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (MMcf/d) |
|--|----------------|-----------------|-------------------|
| | | | |



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mustang Energy Corporation

31-11s-19w Ellis,KS

PO Box 1121
Hays KS 67601+1121

M-S-Unit #1-31

Job Ticket: 71140

DST#: 1

ATTN: Cameron Brin

Test Start: 2023.09.16 @ 23:15:00

Tool Information

| | | | | | |
|---------------------------|--------------------|-----------------------|----------------------|------------------------|--------------|
| Drill Pipe: | Length: 3628.00 ft | Diameter: 3.82 inches | Volume: 51.43 bbl | Tool Weight: | 2200.00 daN |
| Heavy Wt. Pipe: | Length: ft | Diameter: 2.75 inches | Volume: - bbl | Weight set on Packer: | 25000.00 daN |
| Drill Collar: | Length: 30.00 ft | Diameter: 2.25 inches | Volume: 0.15 bbl | Weight to Pull Loose: | 70000.00 daN |
| | | | <u>Total Volume:</u> | Tool Chased | ft |
| | | | - bbl | String Weight: Initial | 62000.00 daN |
| Drill Pipe Above KB: | 3.00 ft | | | Final | 66000.00 daN |
| Depth to Top Packer: | 3682.00 ft | | | | |
| Depth to Bottom Packer: | ft | | | | |
| Interval between Packers: | 58.00 ft | | | | |
| Tool Length: | 85.00 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 | | | 3656.00 | |
| Shut In Tool | 5.00 | | | 3661.00 | |
| Hydraulic tool | 5.00 | | | 3666.00 | |
| Gap Sub | 4.00 | | | 3670.00 | |
| Safety Joint | 3.00 | | | 3673.00 | |
| Packer | 5.00 | | | 3678.00 | 27.00 Bottom Of Top Packer |
| Packer | 4.00 | | | 3682.00 | |
| Stubb | 1.00 | | | 3683.00 | |
| Perforations | 1.00 | | | 3684.00 | |
| Change Over Sub | 1.00 | | | 3685.00 | |
| Recorder | 0.00 | 6838 | Inside | 3685.00 | |
| Recorder | 0.00 | 8875 | Inside | 3685.00 | |
| Drill Pipe | 32.00 | | | 3717.00 | |
| Change Over Sub | 1.00 | | | 3718.00 | |
| Perforations | 19.00 | | | 3737.00 | |
| Bullnose | 3.00 | | | 3740.00 | 58.00 Bottom Packers & Anchor |
| Total Tool Length: | 85.00 | | | | |



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mustang Energy Corporation

31-11s-19w Ellis,KS

PO Box 1121
Hays KS 67601+1121

M-S-Unit #1-31

Job Ticket: 71140

DST#: 1

ATTN: Cameron Brin

Test Start: 2023.09.16 @ 23:15:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

29000 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbbl |
|--------------|------------------------------|----------------|
| 300.00 | SMCW 10%M 90%W | 3.975 |
| 660.00 | MW w / scum oil 50%M 50%W | 9.356 |
| 120.00 | SWCM w / oil spots 10%W 90%M | 1.701 |
| 0.00 | RW=.294@55F=29,000 | 0.000 |

Total Length: 1080.00 ft

Total Volume: 15.032 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 2#LCM

RW=.294@55F

Serial #: 8875

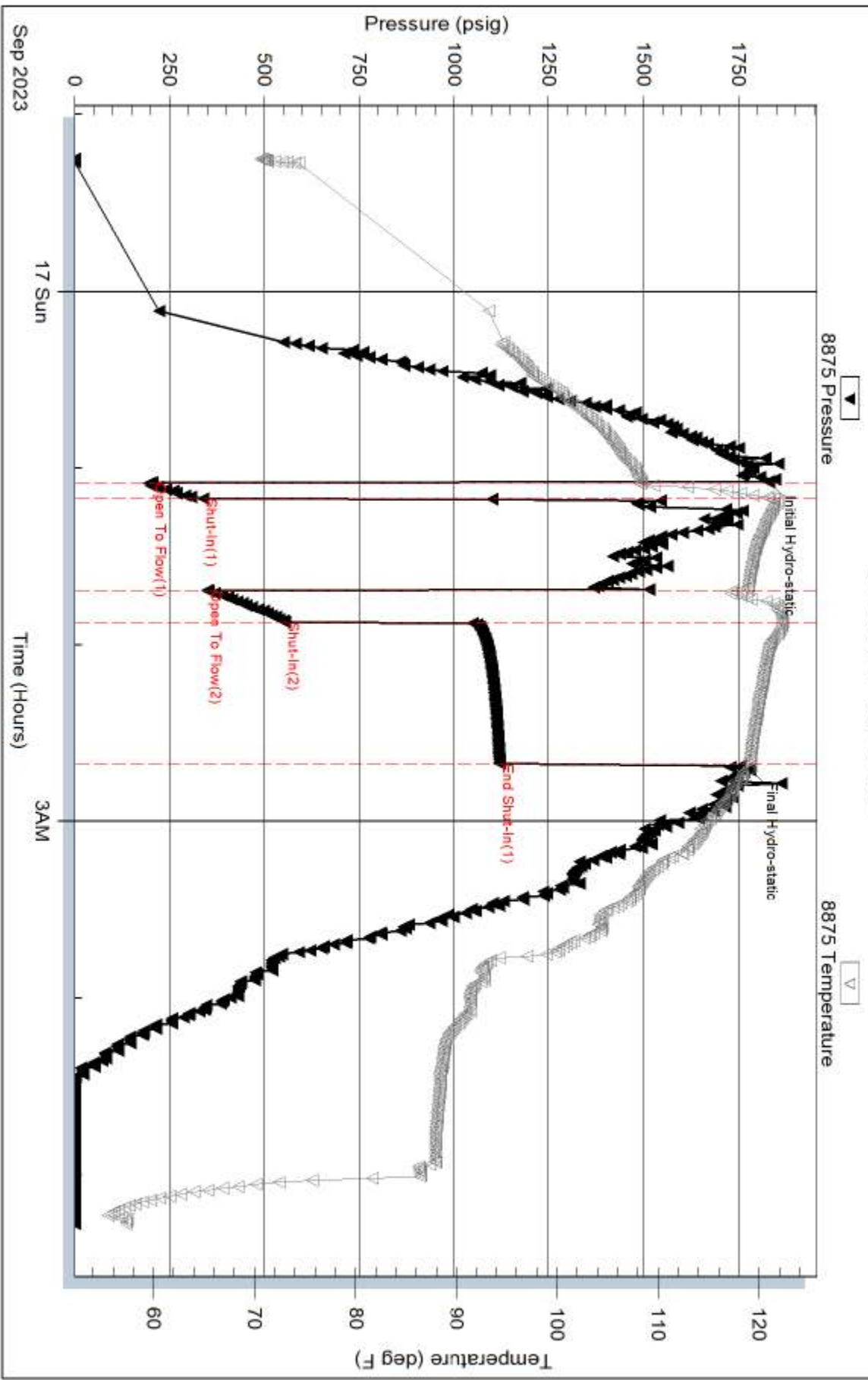
Inside

Mustang Energy Corporation

M-S-Unit #1-31

DST Test Number: 1

Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 71140

Printed: 2023.09.19 @ 16:24:29

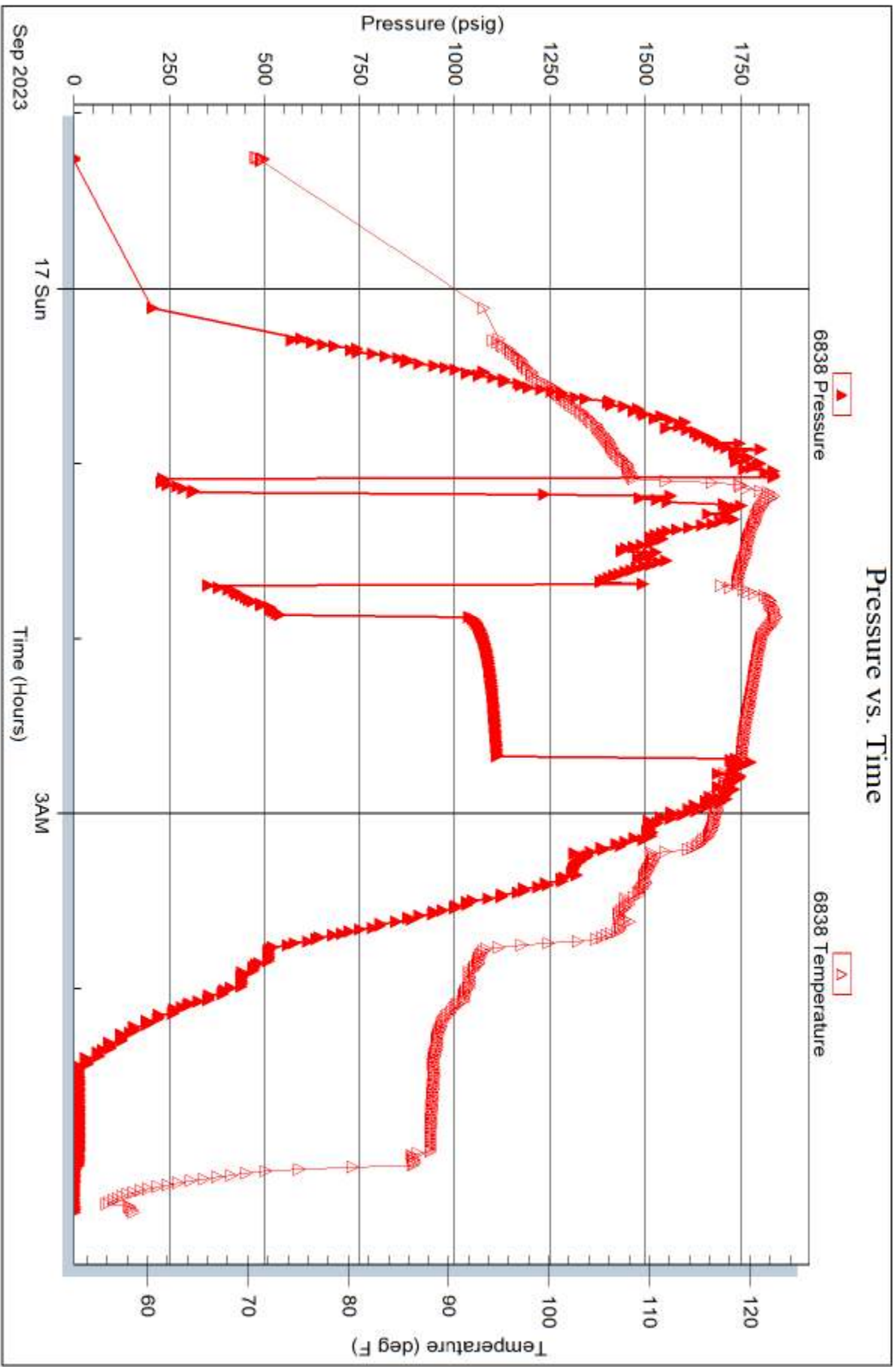
Serial #: 6838

Inside

Mustang Energy Corporation

M-S-Unit #1-31

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 71140

Printed: 2023.09.19 @ 16:24:29



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **71140**

Well Name & No. M-S Unit #1-31 Test No. 1 Date 09/16/2023
 Company Mustang Energy Corporation Elevation 2155' KB 2147' GL
 Address PO BOX 1121 Hays KS 67601 +1121
 Co. Rep / Geo Cameron Brin Rig Discovery #2
 Location: Sec. 31 Twp 11S Rge. 19W Co. Ellis State Ks

Interval Tested 3682' - 3740' Zone Tested Arbuckle
 Anchor Length 58' Drill Pipe Run 3628' Mud Wt. 9.0
 Top Packer Depth 3677' Drill Collars Run 30' Vis 54
 Bottom Packer Depth 3682' Wt. Pipe Run - WL 7.2
 Total Depth 3740' Chlorides 3000 ppm System LCM 2#

Blow Description: 77-BOB 1.5 mins; Built to 54"
1st Weak Surface; Died @ 20 mins
77-BOB 1.5 mins; Built to 85.75"
75d - No Return

| Rec | Feet of | %gas | %oil | %water | %mud |
|------|------------------|------|------|--------|------|
| 300' | SMCW | | 90 | 10 | |
| 660' | MW w/scom oil | | 50 | 50 | |
| 120' | SUXM w/oil spots | | 10 | 90 | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Rec Total 1080' BHT 119° Gravity 22.1 API RW 5.274 @ 55 °F Chlorides 29,000 ppm
 Initial Hydrostatic 1831 Test 1800 Ruined Shale Packer
 Initial Flow 204 to 338 Jars Ruined Packer
 Initial Shut-In - trapped Hydrostatic Circ Sub Hotel
 Final Flow 350 to 554 Hourly Standby EM Tool Successful -350
 Final Shut-In 1121 Mileage 4427.2 77+77 Accessibility
 Final Hydrostatic 1781 Sampler Gas Sample
 T- On Location 21:15 Straddle Oversized Hole
 Initial Flow 5 T-Started 23:15 Shale Packer Sub Total -350
 Initial Shut-In 30 T-Open 01:05 Extra Packer Total 1604
 Final Flow 10 T-Pulled 02:35 Extra Recorder Tool Loaded 09/17 @ 18:00
 Final Shut-In 45 T-Out 05:16 Day Standby MP/DST Disc't

Comments _____

Approved By _____ Our Representative [Signature]

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