



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1224976
OIL & GAS CONSERVATION DIVISION

Form ACO-1
August 2013

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 SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- 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 ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

| | | |
|-----------------------------------|-----------------|---|
| Spud Date or Recompletion Date | Date Reached TD | Completion Date or Recompletion Date |
|-----------------------------------|-----------------|---|

API No. 15 - _____

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
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1224976

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 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 | | | | |
| | | | | |

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 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)*

| Shots Per Foot | PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated | Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i> | Depth |
|----------------|---|--|-------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| | | | | |
|----------------|-------|---------|------------|---|
| TUBING RECORD: | Size: | Set At: | Packer At: | Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No |
|----------------|-------|---------|------------|---|

| | |
|---|--|
| Date of First, Resumed Production, SWD or ENHR. | 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> <input type="checkbox"/> Other <i>(Specify)</i> _____ | PRODUCTION INTERVAL: _____ _____ |
|--|--|---|

| | |
|-----------|------------------------|
| Form | ACO1 - Well Completion |
| Operator | Mikol Oil LLC |
| Well Name | Gosser 3-14 |
| Doc ID | 1224976 |

Tops

| Name | Top | Datum |
|------------------------|------|-------|
| Stone Corral Anhydrite | 1286 | +764 |
| Base of Anhydrite | 1324 | +726 |
| Topeka Formation | 2988 | -938 |
| Heebner Shale | 3215 | -1165 |
| Lansing Group | 3254 | -1204 |
| LKC G Zone Porosity | 3354 | -1304 |
| Stark Shale | 3453 | -1403 |
| Base KS City Group | 3496 | -1446 |
| Arbuckle Formation | 3624 | -1574 |



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Mikol Oil LLC
 1407 Washington Cir
 Hays KS 67601
 ATTN: Bob Stolzle

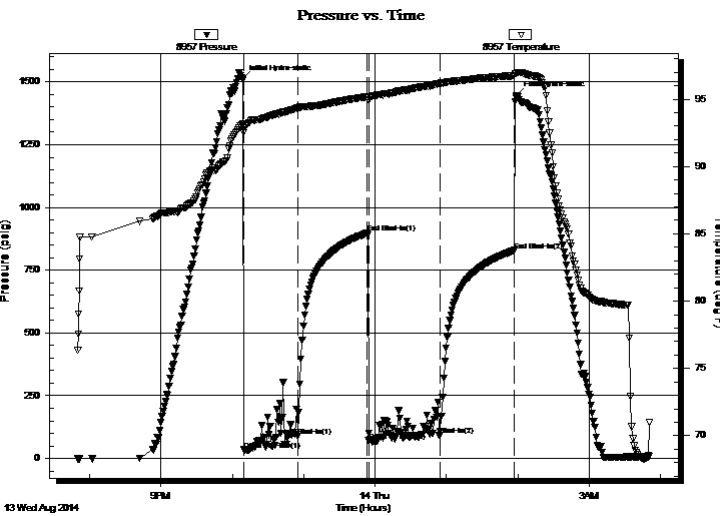
14-10-17, Rooks, KS
Gosser #3-14
 Job Ticket: 53961 **DST#: 1**
 Test Start: 2014.08.13 @ 19:50:00

GENERAL INFORMATION:

Formation: **KC "A-D"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 22:09:30
 Time Test Ended: 03:50:45
 Interval: **3207.00 ft (KB) To 3320.00 ft (KB) (TVD)**
 Total Depth: 3320.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Brett Dickinson
 Unit No: 59
 Reference Elevations: 2050.00 ft (KB)
 2043.00 ft (CF)
 KB to GR/CF: 7.00 ft

Serial #: 8957 Inside
 Press@RunDepth: 93.18 psig @ 3211.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.08.13 End Date: 2014.08.14 Last Calib.: 2014.08.14
 Start Time: 19:50:05 End Time: 03:50:44 Time On Btm: 2014.08.13 @ 22:08:30
 Time Off Btm: 2014.08.14 @ 01:59:00

TEST COMMENT: IF-2in Blow
 IS-No blow
 FF-1in blow
 FS-No blow



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1511.43 | 93.12 | Initial Hydro-static |
| 1 | 34.12 | 92.52 | Open To Flow (1) |
| 47 | 89.72 | 94.33 | Shut-In(1) |
| 105 | 897.43 | 95.18 | End Shut-In(1) |
| 106 | 70.51 | 94.93 | Open To Flow (2) |
| 166 | 93.18 | 96.16 | Shut-In(2) |
| 229 | 828.63 | 96.74 | End Shut-In(2) |
| 231 | 1444.54 | 96.94 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-----------------|--------------|
| 125.00 | VSWCM 10%W 90%M | 0.61 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mikol Oil LLC
1407 Washington Cir
Hays KS 67601
ATTN: Bob Stolzle

14-10-17, Rooks, KS
Gosser #3-14
Job Ticket: 53961 **DST#: 1**
Test Start: 2014.08.13 @ 19:50:00

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: | 14000 ppm |
| Viscosity: 62.00 sec/qt | Cushion Volume: bbl | | |
| Water Loss: 7.20 in ³ | 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 bbl |
|--------------|-----------------|---------------|
| 125.00 | VSWCM 10%W 90%M | 0.615 |

Total Length: 125.00 ft Total Volume: 0.615 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

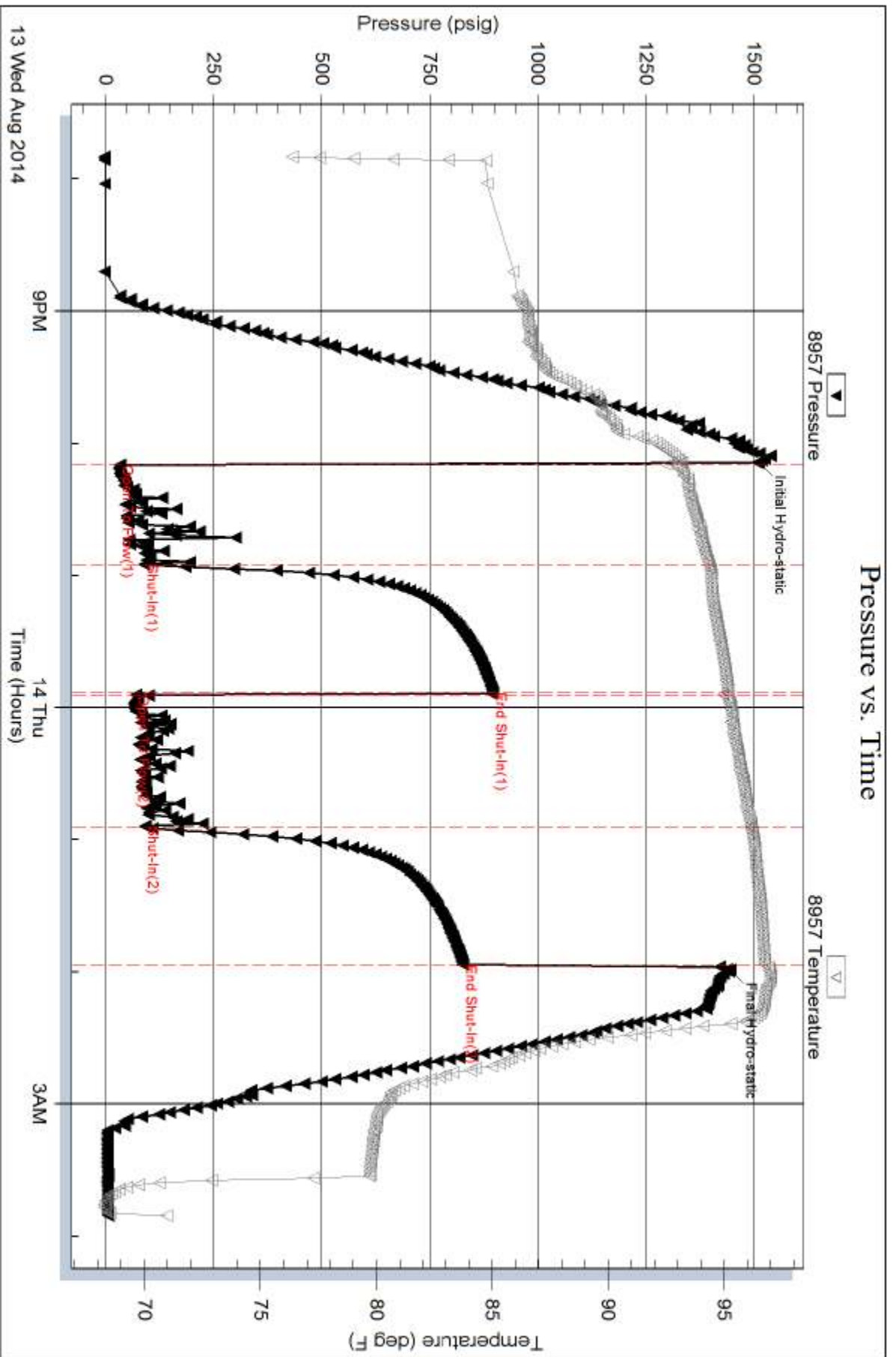
Serial #: 8957

Inside

Mkol Oil LLC

Gosser #3-14

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 53961

Printed: 2014.08.14 @ 08:01:05



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mikol Oil LLC
 1407 Washington Cir
 Hays KS 67601
 ATTN: Bob Stolzle

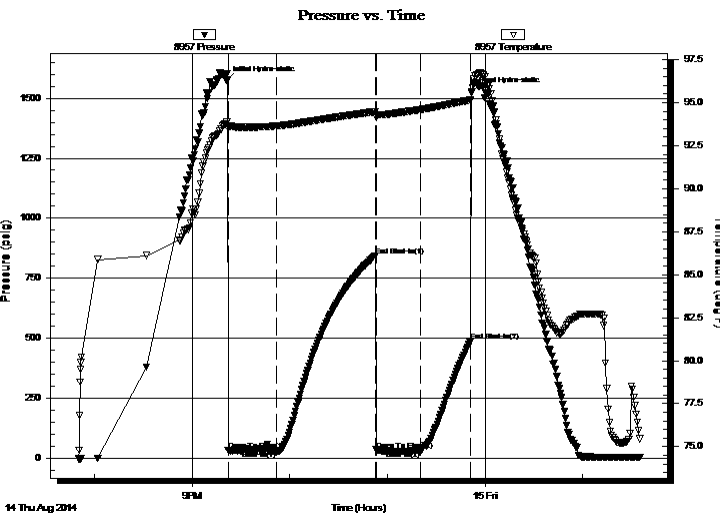
14-10-17, Rooks, KS
Gosser #3-14
 Job Ticket: 53962 **DST#: 2**
 Test Start: 2014.08.14 @ 19:50:00

GENERAL INFORMATION:

Formation: **KC"H-K"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 21:22:00
 Time Test Ended: 01:35:00
 Interval: **3380.00 ft (KB) To 3480.00 ft (KB) (TVD)**
 Total Depth: 3480.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brett Dickinson
 Unit No: 59
 Reference Elevations: 2050.00 ft (KB)
 2043.00 ft (CF)
 KB to GR/CF: 7.00 ft

Serial #: 8957 Inside
 Press @ Run Depth: 32.24 psig @ 3384.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.08.14 End Date: 2014.08.15 Last Calib.: 2014.08.15
 Start Time: 19:50:05 End Time: 01:34:59 Time On Btm: 2014.08.14 @ 21:21:15
 Time Off Btm: 2014.08.14 @ 23:52:15

TEST COMMENT: IF-Surface blow died in 26min
 IS-No blow
 FF-no blow
 FSI-No blow



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1574.02 | 93.90 | Initial Hydro-static |
| 1 | 33.49 | 93.47 | Open To Flow (1) |
| 31 | 31.61 | 93.65 | Shut-In(1) |
| 92 | 844.09 | 94.49 | End Shut-In(1) |
| 92 | 33.57 | 94.30 | Open To Flow (2) |
| 119 | 32.24 | 94.60 | Shut-In(2) |
| 150 | 486.32 | 95.15 | End Shut-In(2) |
| 151 | 1529.11 | 95.88 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 5.00 | Mud | 0.02 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mikol Oil LLC
1407 Washington Cir
Hays KS 67601
ATTN: Bob Stolzle

14-10-17, Rooks, KS
Gosser #3-14
Job Ticket: 53962 **DST#: 2**
Test Start: 2014.08.14 @ 19:50:00

Mud and Cushion Information

| | | | |
|----------------------------------|----------------------------|-----------------|---------|
| Mud Type: Gel Chem | Cushion Type: | Oil API: | deg API |
| Mud Weight: 9.00 lb/gal | Cushion Length: ft | Water Salinity: | ppm |
| Viscosity: 62.00 sec/qt | Cushion Volume: bbl | | |
| Water Loss: 7.19 in ³ | 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 bbl |
|--------------|-------------|---------------|
| 5.00 | Mud | 0.025 |

Total Length: 5.00 ft Total Volume: 0.025 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

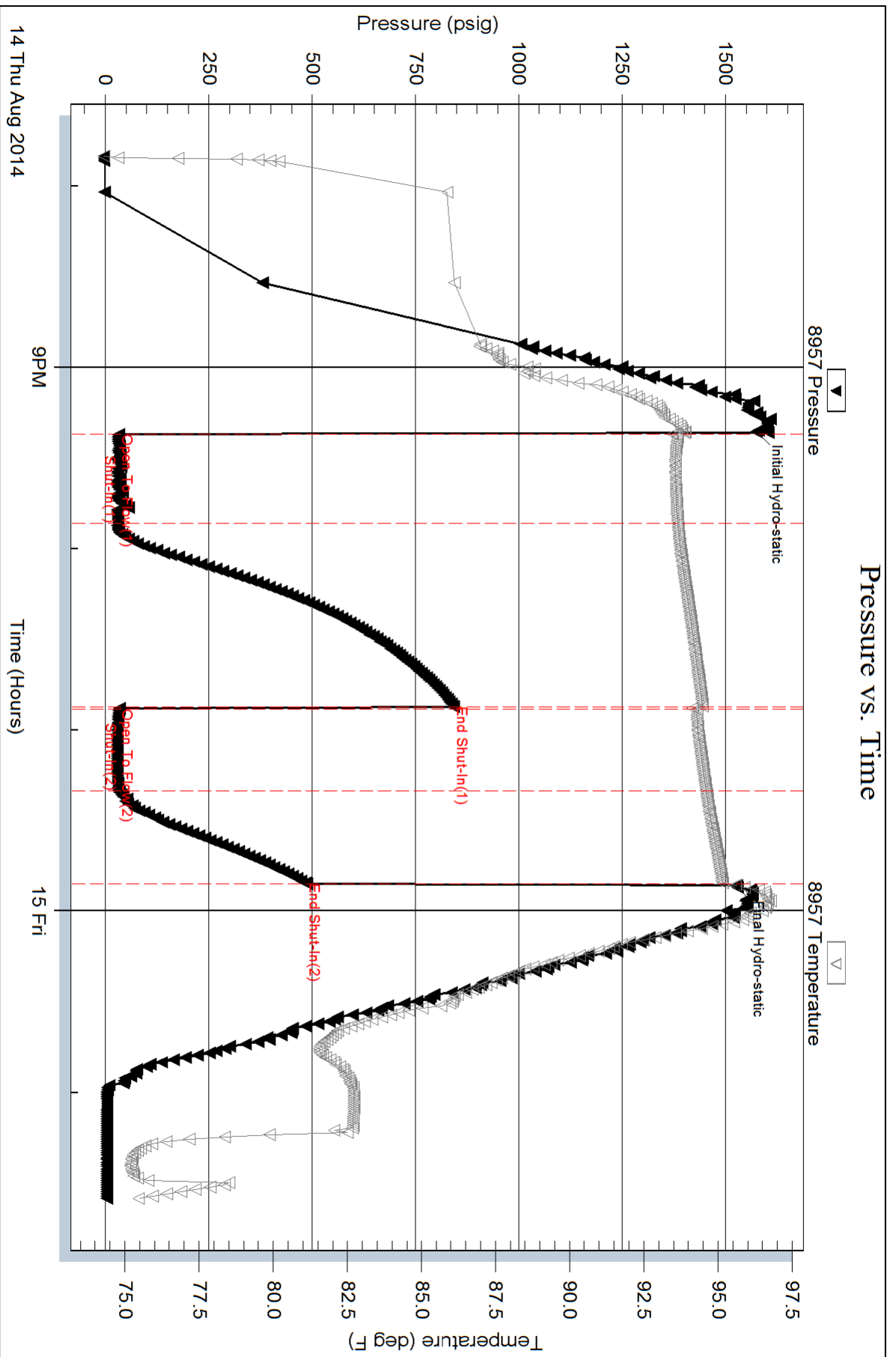
Serial #: 8957

Inside

Mkol Oil LLC

Gosser #3-14

DST Test Number: 2



ALLIED OIL & GAS SERVICES, LLC 055395

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT:
Russell KS

| | | | | | | | |
|--------------------------------|----------------|---------------------------------------|-----------------|------------|---------------------|-------------------------|--------------------------|
| DATE <u>8-9-14</u> | SEC. <u>14</u> | TWP. <u>10</u> | RANGE <u>17</u> | CALLED OUT | ON LOCATION | JOB START <u>1100AM</u> | JOB FINISH <u>1130PM</u> |
| LEASE <u>Gasser</u> | WELL# <u>3</u> | LOCATION <u>Codol 1 1/2 S W in 10</u> | | | COUNTY <u>Rooks</u> | STATE <u>KS</u> | |
| OLD OR <u>NEW</u> (Circle one) | | | | | | | |

CONTRACTOR Discovery #2

TYPE OF JOB surface

HOLE SIZE 12 1/4 T.D. 220

CASING SIZE 8 5/8 23" DEPTH 220

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT 15

CEMENT LEFT IN CSG. 15

PERFS.

DISPLACEMENT 13.661

OWNER

CEMENT AMOUNT ORDERED 160 com 39cc 29gel

EQUIPMENT

PUMP TRUCK CEMENTER Robert Y

409 HELPER Watson D

BULK TRUCK

481 DRIVER Tracy J

BULK TRUCK

DRIVER

| | | |
|---------------------------|-----------------|----------------|
| COMMON <u>160</u> | @ <u>17.90</u> | <u>2864.00</u> |
| POZMIX | @ | |
| GEL <u>301#</u> | @ <u>.50</u> | <u>150.50</u> |
| CHLORIDE <u>451#</u> | @ <u>1.10</u> | <u>496.10</u> |
| ASC | @ | |
| | @ | |
| <u>Material</u> | @ | <u>3510.60</u> |
| | @ | |
| <u>Misc</u> | @ <u>702.12</u> | |
| | @ | |
| | @ | |
| | @ | |
| HANDLING <u>160 sks</u> | @ <u>2.48</u> | <u>398.80</u> |
| MILEAGE <u>236.88 f/m</u> | <u>2.75</u> | <u>651.42</u> |
| TOTAL | | <u>4560.92</u> |

REMARKS:

See log

Cement did circulate to surface
pump 20 sks to pit
Thank you!!!

CHARGE TO: Mikal Oil LLC

STREET

CITY STATE ZIP

SERVICE

| | | |
|------------------------|----------------|--------------------|
| DEPTH OF JOB | <u>220</u> | |
| PUMP TRUCK CHARGE | <u>1512.25</u> | |
| EXTRA FOOTAGE | @ | |
| MILEAGE <u>30 LVMI</u> | @ <u>4.40</u> | <u>132.00</u> |
| MANIFOLD | @ | |
| <u>60 HVMI</u> | @ <u>7.70</u> | <u>462.00</u> |
| | @ | |
| TOTAL | | <u>3156.47</u> |
| | | 2156.25 |

Misc 631.29

PLUG & FLOAT EQUIPMENT

| | | |
|-------|---|--|
| | @ | |
| | @ | |
| | @ | |
| | @ | |
| | @ | |
| TOTAL | | |

To: Allied Oil & Gas Services, LLC.
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

SALES TAX (If Any)

TOTAL CHARGES 6667.07

DISCOUNT 1333.41 20% IF PAID IN 30 DAYS

Net 5333.66

PRINTED NAME

SIGNATURE [Signature]

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. 281

| | | | | | | | | | | | | | | | |
|------|---------|------|----|------|----|-------|----|--------|-------|-------|----|-------------|--|--------|--------|
| Date | 8-15-14 | Sec. | 14 | Twp. | 10 | Range | 17 | County | Rooks | State | KS | On Location | | Finish | 1:00AM |
|------|---------|------|----|------|----|-------|----|--------|-------|-------|----|-------------|--|--------|--------|

Location Codell, 3S, W12

| | | | | | |
|------------|---------------------|----------|-------------|-------|--|
| Lease | <u>Gosser</u> | Well No. | <u>3-14</u> | 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 | <u>Discovery #2</u> | | | | |
| Type Job | <u>Plug</u> | | | | |

| | | | | | |
|-----------|------------|------|-------------|-----------|------------------|
| Hole Size | <u>7/8</u> | T.D. | <u>3650</u> | Charge To | <u>Mikel Oil</u> |
|-----------|------------|------|-------------|-----------|------------------|

| | | | | | |
|-----------|--|-------|--|--------|-------|
| Csg. | | Depth | | Street | |
| Tbg. Size | | Depth | | City | State |

The above was done to satisfaction and supervision of owner agent or contractor.

| | | | | | |
|---------------------|--|------------|--|-----------------------|--|
| Cement Left in Csg. | | Shoe Joint | | Cement Amount Ordered | <u>305 sx 60/40, 4% gel, 1/4# Flow</u> |
|---------------------|--|------------|--|-----------------------|--|

| | | | | | |
|-----------|--|----------|--|--|--|
| Meas Line | | Displace | | | |
|-----------|--|----------|--|--|--|

EQUIPMENT

| | | | | | | | |
|---------|-----------|-----|--|----------|-----------------|----------|------------|
| Pumptrk | <u>17</u> | No. | | Cementer | | Common | <u>183</u> |
| | | | | Helper | <u>Lonniew.</u> | Poz. Mix | <u>122</u> |
| Bulktrk | <u>13</u> | No. | | Driver | | Gel. | <u>11</u> |
| | | | | Driver | <u>Lonniew.</u> | Calcium | |
| Bulktrk | <u>PU</u> | No. | | Driver | | | |
| | | | | Driver | <u>Travis</u> | | |

JOB SERVICES & REMARKS

| | | | |
|---------------------|--|-------------------------|------------|
| Remarks: | | Hulls | |
| Rat Hole | | Salt | |
| Mouse Hole | | Flowseal | <u>760</u> |
| Centralizers | | Kol-Seal | |
| Baskets | | Mud CLR 48 | |
| D/V or Port Collar | | CFL-117 or CD110 CAF 38 | |
| <u>50sx at 3604</u> | | Sand | |
| <u>50sx at 1325</u> | | Handling | |
| <u>100sx at 775</u> | | Mileage | |

FLOAT EQUIPMENT

| | | | |
|-----------------------------|--|--------------------|-------------|
| <u>50sx at 275</u> | | Guide Shoe | |
| <u>40sx at 40 with plug</u> | | Centralizer | |
| <u>30sx Rat</u> | | Baskets | |
| <u>15sx Mouse</u> | | AFU Inserts | |
| | | Float Shoe | |
| | | Latch Down | |
| | | <u>1 wood plug</u> | |
| | | Pumptrk Charge | <u>plug</u> |
| | | Mileage | <u>28</u> |

| | | | |
|-----------|--------------------|--------------|--|
| Signature | <u>[Signature]</u> | Tax | |
| | | Discount | |
| | | Total Charge | |

ROBERT STOLZLE

CONSULTING PETROLEUM GEOLOGIST
 AAPG Cert. # 6944
 6211 G. 201st St. W. - Grand, MN 55123 - 5900 (612) 704-0400

DRILLING TIME AND SAMPLE LOG

OPERATOR: **Miko Oil LLC**
 LEASE: **Gosser** WELL NO.: **3-14**
 FIELD: **Gosser**
 LOCATION: **824'FSL, 503'FEL (approx. SWNESESE)**
 SEC.: **14** TWP: **10S** RANGE: **17W**
 COUNTY: **Rooks** STATE: **KS**
 API NO.: **15-163-24237-00-00**

CONTRACTOR: **Discovery Drilling, Rig #2**
 COMMENCED: **August 9, 2014** COMPLETED: **Aug. 16, 2014**
 ROTARY TOTAL DEPTH: **3650'** LOG TOTAL DEPTH: **3650'**
 GEOLOGICAL SUPERVISION FROM: **2950'** vs. **T.D.**
 MUD-UP DEPTH: **2799'** MUD TYPE: **Chemical Polymer**

| FORMATION | LOG | DEPTH | THICKNESS |
|----------------------------------|--------------|-------|-----------|
| Stone Corral Fm., 1287 (4763) | 1286 (+764) | +5' | |
| Base of Anhydrite 1324 (4726) | 1324 (4726) | +4' | |
| Top of K formation 2988 (-938) | 2988 (-938) | -8' | |
| Haehnle shale 3215 (-1165) | 3215 (-1165) | -10' | |
| Lansing Group 3252 (-1202) | 3252 (-1204) | -6' | |
| LKC G. Zone Grossly 3355 (-1305) | 3354 (-1304) | -8' | |
| Stark shale 3454 (-1404) | 3453 (-1403) | -9' | |
| Base of C. G. 3497 (-1447) | 3496 (-1446) | -8' | |
| A. Buckle Fm. 3625 (-1575) | 3624 (-1574) | -58' | |
| Total Depth | 3650 | 3650 | |

ELEVATIONS:
 KB **2050**
 CL **2042**
 Measurements are all from KB

CASING RECORD
 SURFACE: **8 5/8" 23#**
 @ 221' circ.
 PROTECTION: **None - P.A.**

WIRELINE SURVEYS
 Gamma Ray
 Comp. Density
 Neutron and Dual
 Induction Logs
 Micro. Full.

LOCATIONS

| | |
|----------------------|--|
| KEY Well #14 Gosser | |
| Location Gosser 3-14 | |

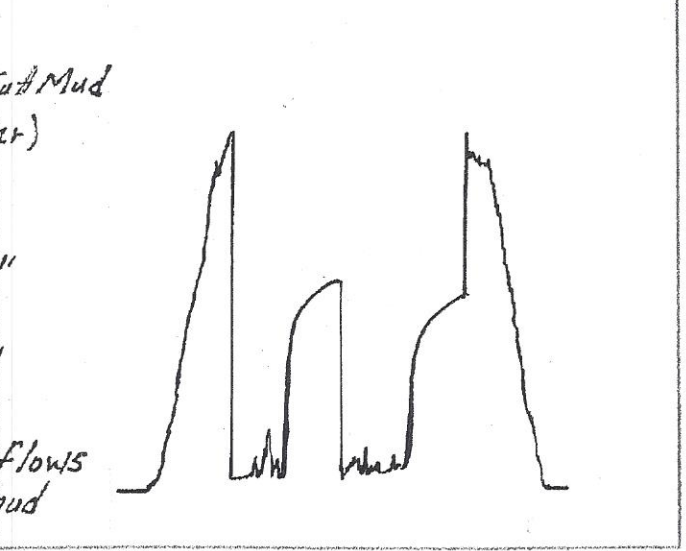
Reference Well for Structural Comparison: #1 Gosser 52369'FSL, 2626'FLL, Sec. 14, Combs and Recommendations: **Recommended well be plugged and abandoned.**

DST # 1 ZONE: Lansing A-D Zones
 INTERVAL: 3207'-3320'

| Pressures: | Time | Press. | RECOVERY |
|-------------------------|------|----------|-------------------------|
| 1. Initial Hydrostatic | | 1511 psi | 125' sh. water cur. Mud |
| 2. Initial Flow: Start | 0 | 34 psi | (10% salt water) |
| 3. Initial Flow: End | 45 | 90 psi | |
| 4. Initial Shut-in: End | 60 | 897 psi | Blow Desc. |
| 5. Final Flow: Start | 0 | 71 psi | I.F. - built to 2" |
| 6. Final Flow: End | 60 | 93 psi | I.S.I. - No blow |
| 7. Final Shut-in: End | 60 | 829 psi | F.F. - built to 1" |
| 8. Final Hydrostatic | | 1445 psi | F.S.I. - No blow |

BHT: 97°F deviation $\frac{1}{2}^\circ$ Note: Plugging flows
 Rv: .5 @ 70°F. 8# LCM in mud
 chlorides 14,000 ppm (Mud chl. 3,000 ppm)

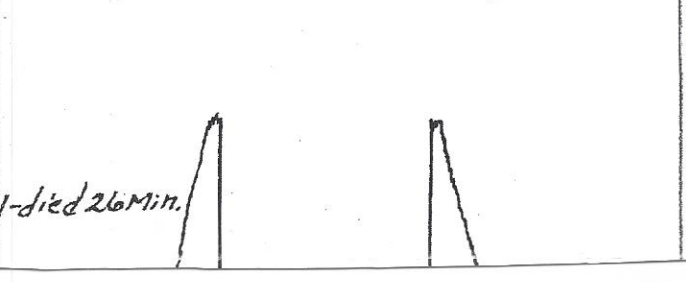
DST # 1 8957 Chart
 Interval: 3207'-3320' Depth: 3211'



DST # 2 ZONE: L-KC H, I, J, + K Zones
 INTERVAL: 3380'-3480'

| Pressures: | Time | Press. | RECOVERY |
|-------------------------|------|----------|------------------------------------|
| 1. Initial Hydrostatic | | 1574 psi | 5' Drilling Mud |
| 2. Initial Flow: Start | 0 | 33 psi | |
| 3. Initial Flow: End | 30 | 32 psi | Blow Desc. |
| 4. Initial Shut-in: End | 60 | 844 psi | I.F. - surface blow - died 26 min. |
| 5. Final Flow: Start | 0 | 34 psi | I.S.I. - No blow |

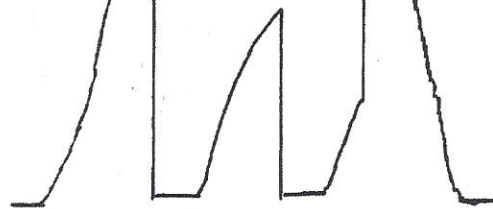
DST # 2 8957 Chart
 Interval: 3380'-3480' Depth: 3384'



6. Final Flow: End 30 32 psi F.F.-No blow
 7. Final Shut-in: End 30 486 psi F.S.I.-No blow
 8. Final Hydrostatic _____ 1529 psi _____

BHT: 96°F

Rv: _____



2

Note: Spotted 40 bbls Mud w/ LCM

ABBREVIATIONS USED

ROCK TYPES:

Ls - Limestone
 Sh - Shale
 Sc - Sandstone
 Sls - Siltsstone
 Ca - Calcarenite
 Cst - Chert
 Qz - Quartzite
 Grn - Granite
 Dol - Dolomite
 Chk - Chalky

COLOR:

Wh - White
 Crn - Cream
 Clr - Clear
 Rd - Red
 Grn - Green
 Yel - Yellow
 Blk - Black
 Mst - Mottled

HARDNESS:

Sft - Soft
 M.Sft - Moderately soft
 Hrd - Hard
 V.Hrd - Very hard

FABRIC:

Fn.grn - Finegrained
 VFG - Very Fine grained
 Med - Medium
 Grs - Coarse
 Det - Detrital
 P.f. - Pseudotafous
 Crn - Crystalline
 M.c. - Microcrystalline
 Pol - Politic
 Opa - Oolitic
 Mat - Matrix

OTHER TERMS:

fl - Fluorescence (of oil)
 min fl - mineral fluorescence
 pur - puritic
 glau - glauconitic
 carb - carbonaceous
 str - stain (of oil)
 cut - oil cut
 AA - as above
 G - gravity
 NEGOS - no stain, fluorescence, odor, or cut (of oil)
 eap - eapic
 opa - porosity
 F.D. - Free oil
 vug - vugular
 tr - trace
 w/ - with

MODIFIERS:

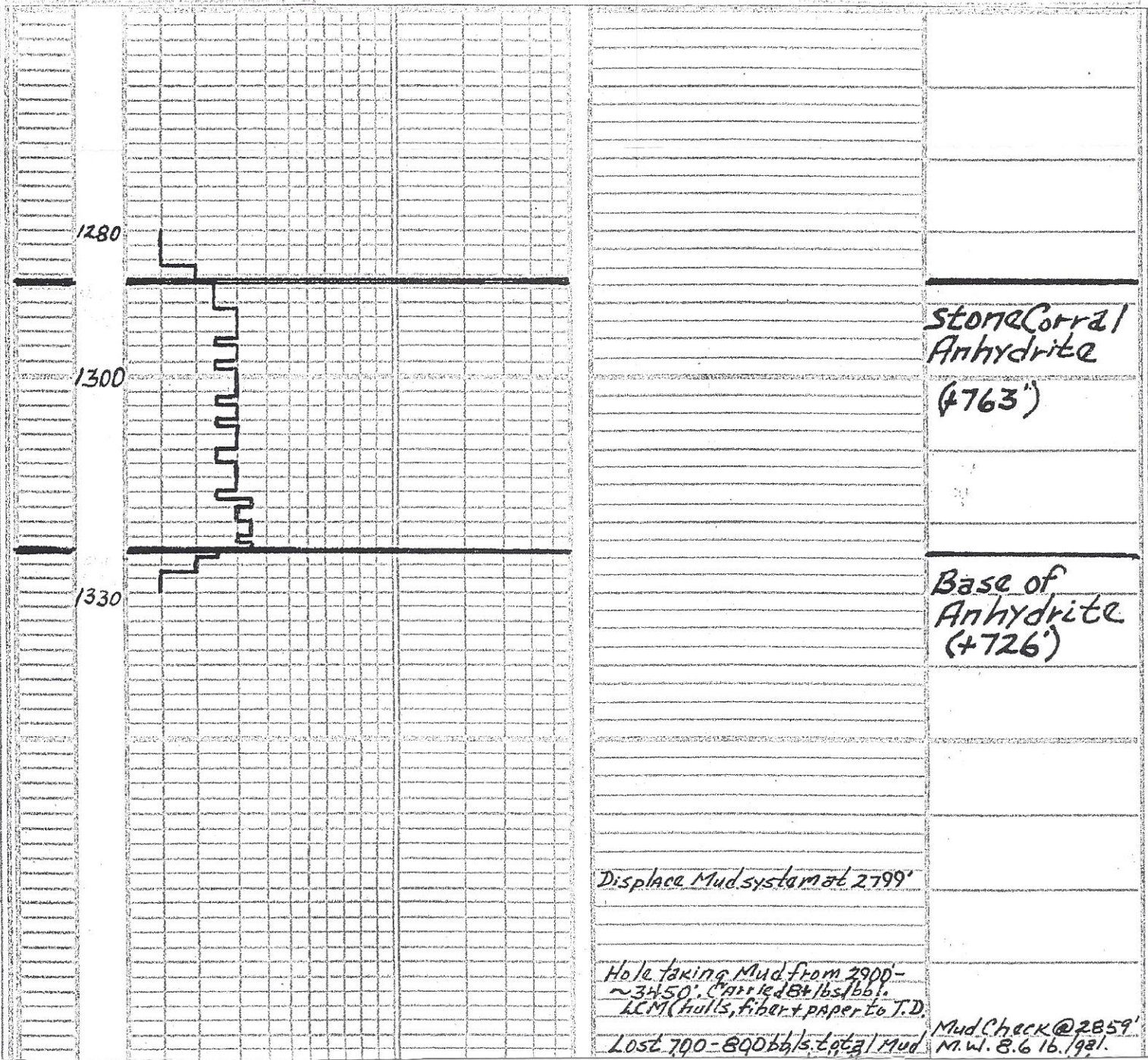
gd - Good
 fr - Fair
 pr - Poor
 ex - excellent
 v - very
 w - well
 tr - trace
 occ - occasional
 vis - visible
 N - no
 gran - granular
 intgran - intergranular
 ng - pinpoint
 oil - oiled
 omy - omy

TEXTURE:

Dns - Dense
 Fly - Flaky
 Fri - Friable
 Sck - Sackly
 Sck - Sackly
 Vtr - Vitreous
 Vug - Vugular
 Mic - Micritic

OIL SHOWS

- Weak Oil Show
- Fair Oil Show
- Good Oil Show
- Excellent Oil Show



Stone Corral
 Anhydrite
 (+763')

Base of
 Anhydrite
 (+726')

Displace Mud system at 2799'

Hole taking Mud from 2900 -
 ~3450'. Carried 84 lbs/bbl
 LCM (hulls, fiber & paper to T.D.)

Lost 700-800 bbls. total Mud

Mud Check @ 2859'
 M.W. 8.6 lb. 1921.

Pressure 300-400 psi - Average

V.S. 41 sec. 19c.

W.L. 8.8 ml/30 min.

Chl. 2500 P.P.M.

Solids 1.8%

LCM 2 1/2 lbs./bbl.

Sh. lt. dk. gry., m. sft., m. hrd., dns.,
occ. slty. - sandy, earthy

Sh. A.A., occ. v. sft. clayey
Ls. crm., m. sft. - hrd., dns., VEG - mxln.
tr. sh. chiky., occ. foss.

Ls. A.A.
Sh. lt. dk. gry., sft. - m. sft., clayey -
earthy

Sh. lt. gry. - gry., sft. - v. sft., occ.
slty. mica., earthy - clayey

Sh. A.A. - Abun. carings
Ls. crm., hrd., dns., VEG - mxln., tr. mic.
tr. chiky., occ. v. foss., 1-2 pc. sdy.

Ls. crm. - gry., hrd., dns., VEG - mxln.
mic., tr. chiky., occ. foss., tr.
sdy.

Ls. crm., occ. gry., m. hrd. - hrd., dns.
VEG - mxln., mic., occ. foss., tr.
chiky., tr. sdy.

Ls. crm. - gry., hrd., dns., tr. VEG - mxln., occ.
foss., tr. sh. stnd., wk. ool., tr. VEG
R.P. ool. and foss. gms., lt. tan. sh.,
wk. - tr. cut., fl. No. 10, V? perm. 3-4

Ls. crm. - gry., dns. tan. - mxln., mic.
6 pc. tr. ax. w/ VEG R.P. ool. sh.,
No. ool., wk. - tr. cut. fl., V? perm.
occ. sh. stnd., tr. chiky., tr. sdy.

Ls. crm. - tan. - gry., hrd., dns., VEG -
mxln., mic., occ. foss., tr. sh. stnd.
tr. sdy.

Ls. gry. - crm. - tan., m. sft. - hrd., dns.,
mxln. - mxln., mic., tr. ool., foss.
+ sh. stnd.

Ls. crm. - tan. - gry., hrd., dns., VEG -
mxln., mic., occ. foss., ool.,
Abun. sh. stnd.

Ls. crm. - tan. - gry., hrd., dns., tr. mxln.
- mxln., tr. mic., Abun. sh. stnd.,
foss., tr. ool. - dk. gry. foss.

Ls. crm. - tan. - gry., hrd. - sft. chiky.
VEG - mxln., tr. ch. sh. stnd., foss.
v. foss.

Ls. crm. - tan., tr. gry., hrd., dns. - sft.
chiky., VEG - mxln., tr. ch. sh. stnd.,
foss., tr. ool.

tr. sh. blk., m. sft., carb., earthy
Ls. crm., hrd. - sft. chiky., VEG - mxln.
foss. + sh. stnd.

tr. sh., gry., m. sft., earthy

Ls. crm., m. sft., chiky. - hrd., dns.,
mic., VEG - mxln., tr. sh. stnd.,
occ. foss.

Ls. crm. - tr. lt. gry., hrd. - m. sft.,
VEG - mxln., mic., occ. chiky.,
occ. foss., tr. sh. stnd.

Ls. crm. - lt. gry., hrd. - sft. chiky., VEG
- mxln., mic., sh. stnd., occ. foss.

Ls. crm. - lt. gry., m. sft., chiky. - hrd.,
dns., sh. stnd., occ. foss., VEG -
mxln., tr. mic.

Sh. dk. gry. - blk., m. sft., carb., earthy
Sh. blk., m. sft., carb., earthy

Ls. crm., sft. chiky. - hrd., dns.,
mic., VEG - mxln., tr. sh. stnd.,
rare foss.

Ls. crm. - tan., tr. gry., hrd., dns.,
VEG - mxln., mic., tr. chiky., occ.
foss., tr. sh. stnd.

Ls. crm. - gry., m. sft. - hrd., dns.,
VEG - mxln., tr. ool., occ. foss.,
ool., tr. sh. stnd., tr. mic.
tr. sdy.

Ls. crm. - tr. gry., sft. chiky. - hrd., dns.
mic., tr. ch. sh. stnd. - mxln., tr.
hexed., occ. foss., tr. sh. stnd.
tr. sdy.

Ls. A.A., 2-3 pc. tr. ax. w/ dr. int

Topeka Fm.
(-938')

Very weak show

Very weak show

Mud Check @ 3047'
M.W. 8.7
Vis. 70
W.L. 7.2
Chl. 3000
Solids 1.3%
LCM 8#

Quick Hills Sh.
(-1097')

Mud Check @ 3217'
M.W. 8.6
Vis. 62
W.L. 7.2
Chl. 3000
Solids 2%

3

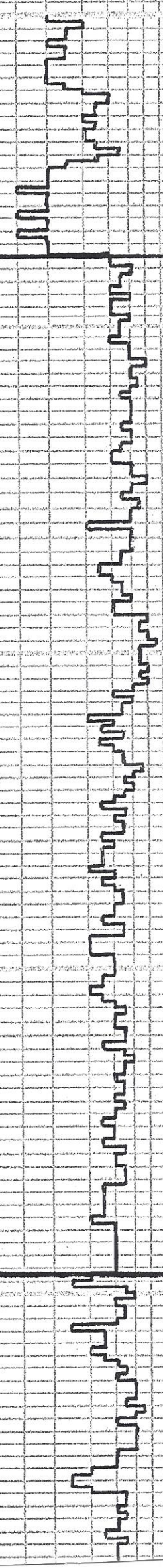
2950

3000

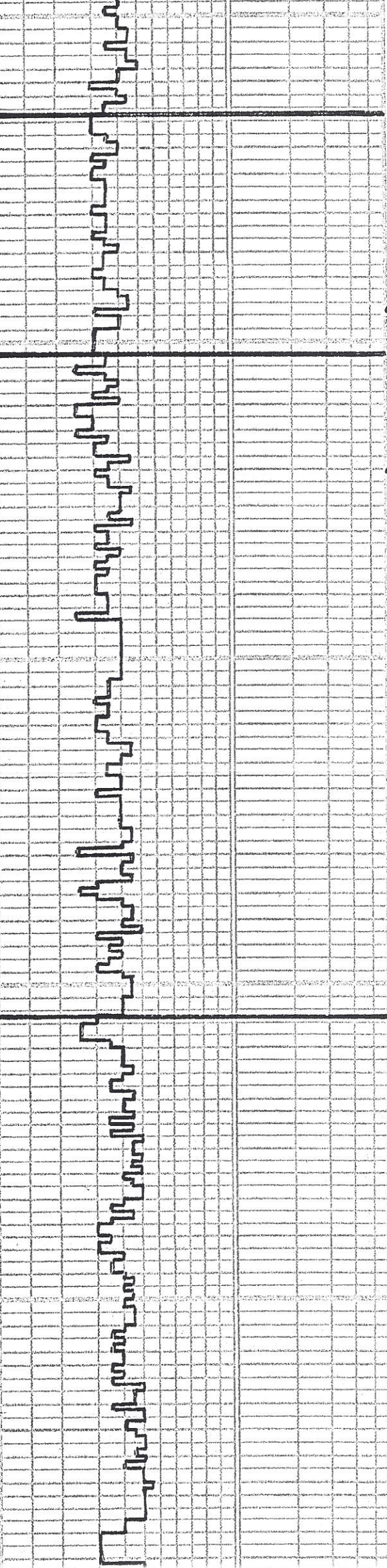
3050

3100

3150

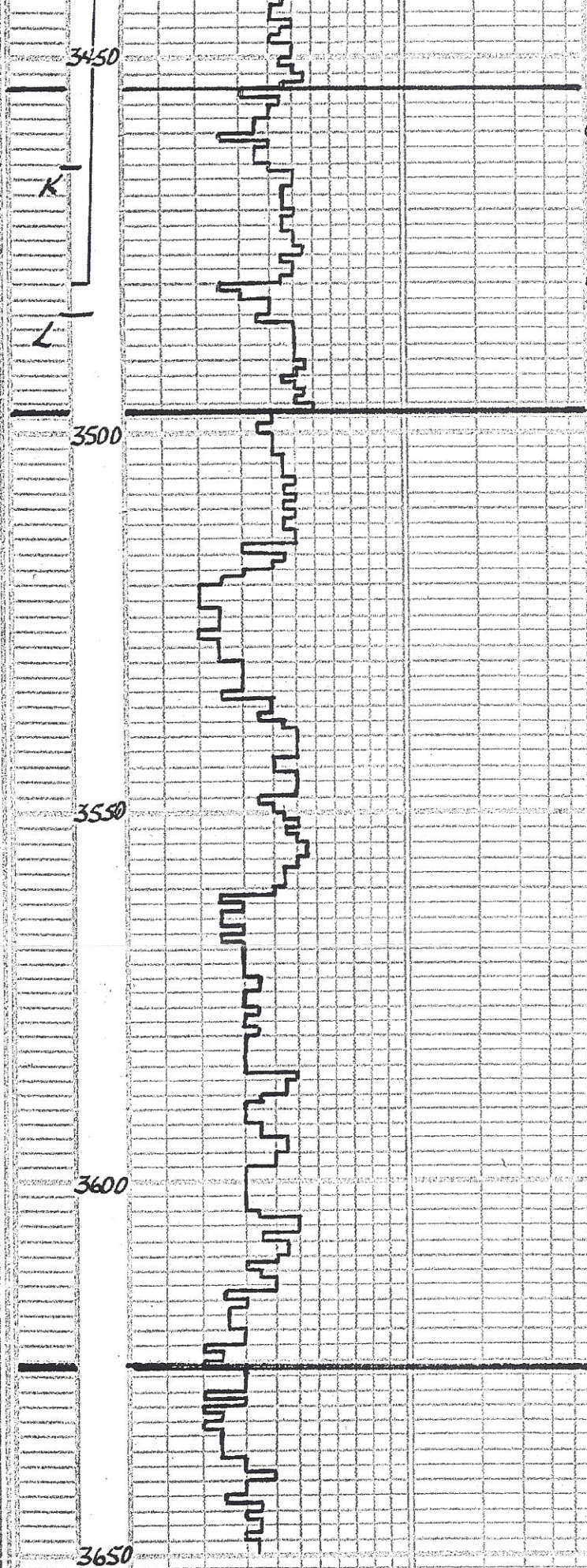


3200
1
3250
B
C
3300
D
E
F
3350
G
2
H
3400
I
J



Part. fossils, vug. fl., wk. cut + fl., No odor, No F.O.
 Ls: crm. - tan. to H. gry., hrd. - sft. + chiky., VEG - mxln., mic., tr. cht. Abun. sh. stn., tr. foss. NONSFOC
 Sh: dk. gry. - blk., m. sft., carb., earthy
 Ls: crm., hrd. - sft., chiky., VEG - mxln., mic., tr. cht. - chiky., Abun. sh. stn., rare foss. NONSFOC
 Sh: gry., sft., stly. mica., earthy
 Ls: crm. - gry., hrd., dns., occ. sft. + chiky., sh. stn., tr. foss. NONSFOC
 Ls: crm. - tan., tr. d., dns., tr. xln. - mxln., mic., occ. sft., chiky., tr. cht., sh. stn., rare foss. NONSFOC
 Ls: A. A. wh. - crm. NONSFOC
 Sh: lt. gry. - gry., sft., stly., earthy
 Ls: crm., lt. gry., sft. - hrd., NONSFOC
 tr. sh. gry., m. sft., earthy
 Sh: gry., m. sft., earthy
 Ls: crm. - wh., hrd., dns., VEG - mxln., mic., occ. chiky., rare foss. NONSFOC
 Ls: A. A. w/ l. pr. ool., w/ fr. int. ool. Vug. Φ + tr. l. qn. Vugs. tr. odor, tr. brn. stn., in vugs, fr. - wk. cut + fl., No F.O., 3-4 pc. / tray
 Ls: crm., hrd., dns., tr. VEG - mxln., occ. ool. + foss., tr. pr. - fr. Vug. Φ , tr. brn. stn., wk. odor, tr. cut + fl. No F.O., 2-3 pc. / tray
 Ls: crm. - gry., hrd., dns., VEG - mxln., mic., tr. foss., sh. stn., NONSFOC
 Sh: lt. dk. gry., m. sft., dns., tr. stly., earthy
 Sh: A. A., occ. rd. brn. - cavings?
 Ls: crm. - tan. - gry., hrd., dns., VEG - mxln., sh. stn., occ. chiky., tr. ch. tr. foss. NONSFOC
 Ls: crm. - tan., hrd., dns., tr. xln. - mxln., mic., tr. chik., 3-4 pc. / tray w/ pr. - fr. Vug. mod. dic. Φ , tr. stn., fr. cut + fl. No odor, No F.O., ? perm.
 Ls: crm., hrd., dns., VEG - mxln., foss. + ool., w/ tr. int. ool. Φ , wk. odor, tr. brn. stn., tr. - wk. cut + fl. No F.O., 3-4 pc. / tray
 Ls: crm. - wh., hrd., dns., occ. sft. + chiky., VEG - mxln., mic., rare foss. NONSFOC
 Sh: dk. gry., m. sft., earthy
 Sh: dk. gry. - blk., m. sft. - m. hrd., carb. earthy - hackly
 Ls: crm. - tan., hrd., dns., VEG - mxln., mic., chiky., occ. foss. NONSFOC
 Ls: A. A., occ. foss. + ool. w/ tr. tr. - pr. int. ool. Vug. Φ , tr. brn. stn. in Φ wk. odor, tr. cut + fl., No F.O., ? perm.
 Ls: crm. - wh., A. A., occ. foss. + ool. w/ pr. - fr. int. ool. Φ shows A. A.
 Ls: crm. - tan., hrd. - m. sft., VEG - mxln., occ. ool. w/ pr. - qd. ool. Φ NSFOC
 Ls: crm. - wh., hrd. - sft., VEG - mxln., mic., occ. chiky., occ. ool. w/ pr. - qd. ool. Φ NSFOC
 Ls: crm. - wh., hrd. - sft., dns., VEG - mxln., tr. rex/ed., mic. - chiky., rare foss. NONSFOC
 Ls: A. A., occ. gry., foss. NONSFOC
 tr. pyr
 Sh: gry. - blk., m. sft. - m. hrd., dns., tr. carb., earthy - hackly
 Sh: A. A.
 Ls: crm. - tan. - H. gry., hrd., dns., occ. chiky., VEG - mxln., mic., occ. foss. tr. sh. stn. NONSFOC
 Ls: A. A., tr. ool. w/ 2-3 pc. / tray pr. - fr. int. ool. Φ , tr. brn. stn., mod. wk. odor, tr. - pr. cut + fl., No F.O.
 Sh: gry. - blk., hrd. - sft., carb., hack.
 Ls: crm. - tan. - H. gry., hrd. - sft. + chik. VEG - mxln., mic., tr. cht., rare foss. NONSFOC
 Ls: A. A., tr. ool., tr. pr. VEG - pp. vug. Φ around foss. + ool. grns., tr. ool. VEG Φ , tr. brn. stn., wk. - fr. cut + fl. No odor, No F.O., ? perm.
 Sh: dk. gry. - blk., m. hrd., carb., hack.
 Ls: crm., hrd., dns., VEG - mxln., tr. foss. tr. pr. - pp. vug. Φ , dk. stn., No odor, No F.O., wk. cut + fl.
 Ls: crm. - tan., hrd., dns., VEG - mxln., occ.

V. Very Weak Show
4
Haebner Shale (-1165')
Lansing Group (-1202')
Weak Show
Very Weak Show
DST #1
3207'-3320'
Rec. 125' SWCM
Deviation 1/4°
Very Weak Show
Weak Show
Weak Show
Weak Show
G' Zone Porosity (-1305)
Mud Check @ 3370'
M.W. 8.6
Vis. 49
W.L. 80
LCM. 10#
Chl. 3,000
Solids 2%
DST #2
3380'-3480'
Rec. 5' Mud
Very Weak Show
V. Very Weak Show
V. Very Weak Show



VFg pp. Vug. ϕ , pass. hgr. Vugs dk. brn. stn. 1-200 ps f.d. v.wk. odor. fr. cut. fl. perm.

Ls. A.A. tr. VFg. pp. Vug. ϕ around foss. qms. 1 ppm. stn. 1. v.wk. odor. w.k. cut. fl. perm. No. F.D. perm.

Sh. b. k. m. hrd. dns. carb. hckly

Ls. crm. brn. gry. hrd. dns. VFg. h. tr. ool. foss. w/ VFg pp. around foss. qms. brn. ool. stn. tr. cut. fl. No odor. No. F.D. perm.

Ls. crm. brn. hrd. dns. VFg. mx/n. mic. occ. sft. chiky. foss. v. foss. NONSFOC

Sh. gry. dk. gry. m. sft. tr. sft. earthy

Ls. crm. tan. hrd. dns. VFg. mx/n. mic. occ. foss. pyk. NONSFOC

Ls. wh. tan. h. gry. hrd. dns. VFg. x/n. mic. mx/n. sdn. sh. stn. occ. foss. tr. chiky. NONSFOC

Ls. A.A. mica. sandy. glauc. NONSFOC

Sh. dk. gry. rd. brn. m. hrd. sft. dns. occ. sft. sandy. earthy

Sh. A.A. Ls. crm. gry. hrd. dns. VFg. mx/n. foss. sh. stn. NONSFOC

Ls. A.A. occ. rd. sh. stn. occ. dol. w/ tr. int. ool. ϕ NSFOC

Sh. dk. gry. rd. brn. sft. m. sft. occ. sft. earthy

Sh. lt. gry. rd. brn. sft. occ. sft. earthy

Ls. crm. hrd. m. sft. VFg. mx/n. mic. occ. chiky. occ. rd. sh. stn. NONSFOC

Ls. crm. tan. hrd. dns. VFg. mx/n. occ. sft. chiky. tr. ool. tr. rd. sh. stn. NONSFOC

Ls. crm. tan. hrd. sft. chiky. VFg. mx/n. mic. rare foss. NONSFOC

Ls. A.A. tr. sandy. NONSFOC

Sh. rd. brn. m. sft. occ. sft. sandy. occ. v. wh. ch. earthy

Sh. rd. brn. tr. gry. sft. occ. ch. x. ls. pebbles. sh. stn. occ. v. sandy. sh. earthy. tr. wh. ss. NO Cg/sh. A.A. - 30 min.

Cg/sh. - 30 min. rd. brn. gry. sh. sft. m. sft. earthy. Abund. ch. ls. pebbles

Cg/sh. rd. brn. sft. m. sft. Abund. ch. ls. pebb. occ. ss. wh. m. sft. tr. A. mod. wh. nd. pr. sft. w. cm. 2 ϕ NSFOC

Cg/sh. rd. brn. tr. blu. qms. sandy. m. sft. sft. occ. sft. Abund. ch. ls. pebb. tr. ss. PA. NSFOC No Dolomite

Cg/sh. rd. brn. tr. blu. gry. qm. m. sft. dns. occ. sandy. ch. ls. pebb. No dolomite

Cg/sh. A.A. occ. v. sandy tr. Dol. crm. tan. hrd. tr. x/n. tr. fr. int. ϕ . most filled w/ fine chiky dol. NSFOC

Dol. crm. tan. hrd. dns. fr. VFg. x/n. tr. pr. vug. ϕ . tr. pr. fr. int. x/n. ϕ . most dns. NSFOC

Abund. Cg. cavings.

Dol. crm. m. hrd. hrd. fr. x/n. tr. wh. ch. occ. fr. - 9d. int. x/n. vug. ϕ . tr. ool. ϕ NSFOC

Weak Show

Stark Shale
(-1404')
Very Weak Show

5
Very Weak Show

Base of Kansas City Group

Mud Check @ 3561'
M. w. 8.9 lb. gal.
V. s. 48 sec. 1 qt.
W. L. 8.8 ml. 130 min.

Chl. 3.000 ppm
Solids 4.2 %
L.C.M. 9 lbs. 1 bbl.

Arbuckle Fm.
(-1575')

D.T.D. 3650'
L.T.D.

Robert Stolye
8/15/14

