



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1177000
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: _____

1177000

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> _____ <i>(Submit ACO-4)</i> | PRODUCTION INTERVAL: _____ _____ |
|--|---|---|

| | |
|-----------|------------------------|
| Form | ACO1 - Well Completion |
| Operator | H & D Exploration LLC |
| Well Name | Dudrey 1 |
| Doc ID | 1177000 |

Tops

| Name | Top | Datum |
|---------------|------|-------|
| Heebner | 3386 | -1486 |
| Toronto | 3402 | -1502 |
| Douglas | 3434 | -1534 |
| Brown Lime | 3539 | -1639 |
| Lansing | 3564 | -1664 |
| Base KC | 3842 | -1942 |
| Viola | 3977 | -2077 |
| Simpson Shale | 4079 | -2179 |
| Simpson Sand | 4086 | -2186 |
| Arbuckle | 4164 | -2264 |
| TD | 4250 | -2350 |

MORNING DRILLING REPORT

For: H&D Exploration, LLC

SOUTHWIND DRILLING, INC.

RIG No. 2

Well Name: **Dudrey #1**
 Location: **310° FSL & 996° FEL**
 Section: **32-245-12W**
 County: **Stafford**
 APN: **15-185-23842-00-00**

Elevation: **GL 1881'**
KB 1900'
 Est. TD: **4300'**
 Conductor: **N/A**

Rig No. 2 (Pusher: BII) Calipers: 625 617-0706
 Rig No. 2 (Doghouse) 623 617-5931
 Southwind Drilling Office 620 564-8800



Surface Casing: Ran 17 joints of new 2 3/8, 6 5/8" casing, Tally @ 712', Set @ 722', used _____ sacks of Common, 3% cc, 2% gel, cement circulated, by Basic (Ticket # _____) plug down @ 3:00 pm on 12.05.13.

Production Info: Ran 97 joints of 15.58, 5 1/2" casing, Tally @ 4233', Set @ 4242', used 200 sacks of 60/40 Poz, 2% gel, 18% cell, 34% CFR, 14% DeFoamer, 5% Gilscoths, cemented, by Basic (Ticket #66887), job complete @ 3:15 am on 12.17.13.

Rotary Total Depth: **4250'**
 Log Total Depth: **4251'**

Geologist: **Jim Musgrove**

| 7:00 A.M. Depth: 4250' | | 7:00 A.M. Current Operation: TEAR DOWN | | | | | | | | | | | | | | | |
|--|-------------|--|--------------|-------------|-------------|-------------|----------------|-------------|--------------|-------------|-------------|-------------|----------|----------|----------|----------|--------------|
| Speed Date & Time: | 12/05/13 | 12/06/13 | 12/07/13 | 12/08/13 | 12/09/13 | 12/10/13 | 12/11/13 | 12/12/13 | 12/13/13 | 12/14/13 | 12/15/13 | 12/16/13 | 12/17/13 | Total | | | |
| 12/05/2013 @ 10:30 PM | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 | Day 11 | Day 12 | Day 13 | | | | |
| Total Depth (7:00am) | 0 | 815 | 840 | 1813 | 2495 | 2868 | 3075 | 3455 | 3650 | 3805 | 3930 | 4250 | 4250 | 4250 | | | 4250 |
| Daily Progress | 815 | 225 | 970 | 683 | 371 | 269 | 300 | 195 | 195 | 155 | 320 | 0 | 0 | 0 | | | 3476 |
| Fl. Per Hr. | 111.82 | 75.00 | 55.76 | 38.06 | 47.87 | 56.35 | 19.48 | 22.39 | 17.22 | 13.81 | 15.24 | RDW00 | RDW00 | | | | |
| Current Operation (7:00am) | Rig Up | Drilling | Drilling | Drilling | Drilling | Drilling | TW/B | Drilling | Drilling | Drilling | Drilling | Drilling | Drilling | Drilling | Drilling | Drilling | Drilling |
| Formation | Surface | Surface | Redbed | Redbed | Redbed | Redbed | Redbed / Shale | Sand | Lime / Shale | Lansing | Lansing | Viola | Viola | Viola | Viola | Viola | Viola |
| Fuel Used (34.5 Gal/Inch) | 276.00 | 275.00 | 345.00 | 448.50 | 378.50 | 241.50 | 448.50 | 310.50 | 379.50 | 310.50 | 345.00 | 258.75 | 258.75 | | | | 4019.25 |
| Survey (degree & depth) | | 1° @ 722' | | | | 1° @ 3076' | | | 1° @ 3780' | | | 1° @ 4250' | | | | | |
| Mud Info | | | | | | | | | | | | | | | | | |
| Mud Cost | \$0.00 | \$0.00 | \$583.40 | \$4,188.20 | \$0.00 | \$613.80 | \$0.00 | \$113.90 | \$232.45 | \$17.85 | \$978.30 | \$0.00 | \$0.00 | | | | \$7,497.80 |
| Weight (# / Gall) | | | | | | | | 9.2 | 9.2 | 9.3 | 9.4 | | | | | | |
| Vis (Cpml) | | | | | | | | 52 | 61 | 58 | 59 | | | | | | |
| Water Loss (cc) | | | | | | | | 8.4 | 10.8 | 10.8 | | | | | | | |
| Bit #1 | | | | | | | | | | | | | | | | | |
| Bit Make / Type | Reed RbTip | Reed RbTip | | | | | | | | | | | | | | | |
| Bit Size | 12 1/4 | 12 1/4 | | | | | | | | | | | | | | | |
| Bit Hours | 5.50 | 1.25 | | | | | | | | | | | | | | | 6.75 |
| Bit #2 | | | | | | | | | | | | | | | | | |
| Bit Make / Type | | JZ HA200 | JZ HA200 | JZ HA200 | JZ HA200 | JZ HA200 | JZ HA200 | JZ HA200 | JZ HA200 | JZ HA200 | JZ HA200 | JZ HA200 | JZ HA200 | JZ HA200 | JZ HA200 | JZ HA200 | JZ HA200 |
| Bit Size | | 7 7/8 | 7 7/8 | 7 7/8 | 7 7/8 | 7 7/8 | 7 7/8 | 7 7/8 | 7 7/8 | 7 7/8 | 7 7/8 | 7 7/8 | 7 7/8 | 7 7/8 | 7 7/8 | 7 7/8 | 7 7/8 |
| Bit Hours | | 1.75 | 14.75 | 18.00 | 7.75 | 5.75 | 19.50 | 8.75 | 9.00 | 9.25 | 21.00 | | | | | | 115.50 |
| Bit Cumulative Hours | | 3.50 | 3.00 | 14.75 | 18.00 | 7.75 | 8.75 | 19.50 | 8.75 | 9.00 | 8.25 | 21.00 | 9.00 | 9.00 | | | 122.25 |
| Weight on Bit (WOB) | 15,000 | 15,000 | 20,000 | 30,000 | 35,000 | 35,000 | 35,000 | 35,000 | 35,000 | 35,000 | 35,000 | 35,000 | 35,000 | 35,000 | 35,000 | 35,000 | |
| RPM | 120 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | |
| Pump Pressure | 500 | 700 | 800 | 850 | 800 | 800 | 850 | 750 | 800 | 800 | 750 | 800 | 800 | 800 | 800 | 800 | |
| Drilling (Rotating) Hours | 5.50 | 3.00 | 14.75 | 18.00 | 7.75 | 8.75 | 19.50 | 8.75 | 8.00 | 8.25 | 21.00 | 0.00 | 0.00 | | | | 122.25 |
| Daywork Hrs. (Operator's time) | | | | | | | | | | | | | | | | | |
| Wait on Cement | | 12.00 | | | | | | | | | | | | | | | 12.00 |
| Tip | | 1.50 | | | | 6.00 | 0.75 | 7.75 | 7.25 | 7.50 | | | 4.75 | | | | 35.50 |
| Circulate | | 0.25 | | | | 1.50 | 1.50 | 2.50 | 2.25 | 2.00 | 1.50 | 1.75 | | | | | 12.75 |
| Tool | | | | | | 1.25 | 0.75 | 0.75 | 1.00 | | | | | | | | 3.75 |
| Trailing | | | | | | 3.25 | 3.00 | 3.00 | | | | | | | | | 12.25 |
| Clean Floor after DST | | | | | | 0.25 | | | | 0.25 | | | | | | | 0.50 |
| Logging | | | | | | | | | | | | | 4.50 | | | | 4.50 |
| Wait on Loggers | | | | | | | | | | | | | | | | | 0.00 |
| LODP & LODC | | | | | | | | | | | | | | | | | 3.00 |
| Run Casing / Cement | | | 3.00 | | | | | | | | | | | | | | 4.25 |
| Nipple Down / Jet Collar | | | | | | | | | | | | | | | | | 0.50 |
| Set Slips | | | | | | | | | | | | | | | | | 0.50 |
| Billable Hours | 0.00 | 16.75 | 0.00 | 0.00 | 0.00 | 11.75 | 2.25 | 14.00 | 13.25 | 13.75 | 1.50 | 19.75 | 0.00 | | | | 93.00 |
| Non-Billable Hours (Southwind's time) | | | | | | | | | | | | | | | | | |
| Rig Up / Rig Down | 13.50 | | | | | | | | | | | | | | | | 16.75 |
| Wait on Cement (if MC) | | 0.25 | | | | | | | | | | | 3.25 | | | | 0.25 |
| Drill Rat Hole (< 75 ins) | 0.50 | | | | | | | | | | | | | | | | 0.50 |
| Drill Plug | | 1.00 | | | | | | | | | | | | | | | 1.00 |
| Circulate / Trip (Surface) | | 1.00 | | | | | | | | | | | | | | | 1.00 |
| Rig Repair | 0.50 | 0.25 | 0.25 | 1.75 | 10.50 | 2.25 | | | 0.75 | | | | | | | | 22.25 |
| Connections | 2.25 | 1.50 | 2.25 | 1.75 | 0.75 | 0.50 | 1.00 | 0.75 | 0.50 | 0.25 | 0.75 | | | | | | 12.25 |
| Jet/Displace | 0.25 | 0.25 | 0.50 | 0.75 | 1.25 | | | | | | | | | | | | 3.50 |
| Surveys | | 0.25 | | | | 0.25 | | | 0.25 | | | | | | | | 1.00 |
| Rig Check | | 0.25 | 0.25 | 0.75 | 0.25 | 0.25 | 0.75 | 0.50 | 0.25 | 0.75 | 0.75 | 0.75 | | | | | 4.75 |
| Circulate (NB) | | 1.50 | | | | | | | | | | | | | | | 1.50 |
| Trip Time (NB) | | | | 1.00 | | | | | | | | | | | | | 1.00 |
| Trip Time for Repairs | | | | | 3.50 | | | | | | | | | | | | 3.50 |
| Trip Time Plugged Bit | | | | | | | 3.25 | | | | | | | | | | 3.25 |
| Lost Circulation (< 2 hrs) | | | | | | | | | | | | | | | | | 0.00 |
| Lay Down Kelly / RH | | | | | | | | | | | | | | | | | 0.75 |
| Non-Billable Hrs. | 18.50 | 4.25 | 0.25 | 6.00 | 16.25 | 6.50 | 2.25 | 1.25 | 1.75 | 1.00 | 1.50 | 4.25 | 0.00 | | | | 72.75 |
| Footage Cost | | | | | | | | | | | | | | | | | |
| | \$ 9,917.50 | \$ 3,262.50 | \$ 14,065.00 | \$ 8,932.50 | \$ 5,379.50 | \$ 3,030.50 | | \$ 2,827.50 | \$ 2,247.50 | \$ 1,812.50 | \$ 4,640.00 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 56,115.08 |
| Daywork Cost | \$ - | \$ 8,662.50 | \$ - | \$ - | \$ - | \$ 4,112.50 | \$ 787.50 | \$ 4,900.00 | \$ 4,837.50 | \$ 4,812.50 | \$ 5,025.00 | \$ 6,912.50 | \$ - | \$ - | \$ - | \$ - | \$ 32,550.00 |
| Combined Est. Cost* | \$ 9,917.50 | \$ 12,925.00 | \$ 14,065.00 | \$ 8,932.50 | \$ 5,379.50 | \$ 7,143.00 | \$ 787.50 | \$ 7,727.50 | \$ 8,685.00 | \$ 6,625.00 | \$ 9,665.00 | \$ 6,912.50 | \$ - | \$ - | \$ - | \$ - | \$ 88,665.00 |

*Please note that this is estimated footage & daywork cost only. Additional charges will apply on invoice (fuel, air, tires, water, transfer pumps, etc.)

| | | |
|----------------------|---------------------------------|--|
| DST #1 Info - | Footage Interval: 2995' - 3075' | Recovery: 80' Mud |
| DST #2 Info - | Footage Interval: 3570' - 3590' | Lansing "B" Recovery: Gas to surface - 2 minutes 80' Oil Cut Mud |
| DST #3 Info - | Footage Interval: 3695' - 3760' | Lansing "H" Recovery: 75' Gas 45' Oil Gassy Mud |
| DST #4 Info - | Footage Interval: 3760' - 3830' | Lansing "K" Recovery: 320' Gassy Oil 80' Slight Oil Cut Mud 40' Muddy Water |

Anhydrite @ Displaced @



Joshua R. Austin
Petroleum Geologist
report for
H&D Exploration, LLC



COMPANY: H&D Exploration LLC

LEASE: Dudrey #1

FIELD: Wildcat

LOCATION: W2-SW-SE-SE (330' FSL & 996' FEL)

SEC: 32 TWSP: 24s RGE: 12w

COUNTY: Stafford STATE: Kansas

KB: 1900' GL: 1891'

API # 15-185-23842-00-00

CONTRACTOR: Southwind Drilling Company (Rig # 2)

Spud: 12/05/2013 Comp: 12/16/2013

RTD: 4250' LTD: 4251'

Mud Up: 2800' Type Mud: Chemical was displaced

Samples Saved From: 2900' to RTD

Drilling Time Kept From: 2900' to RTD

Samples Examined From: 2900' to RTD

Geological Supervision From: 2900' to RTD

Geologist on Well: Josh Austin

Surface Casing: 8 5/8" @ 722'

Production Casing: 5 1/2" @ 4242'

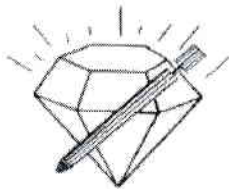
Electronic Surveys: By Pioneer Energy Services

NOTES

On the basis of the positive structural position and drill stem test, it was recommended by all parties involved in the Dudrey #1, that 5 1/2" production casing be set and cemented at the rotary total depth 4242'.
The following zones should be tested before plugging; Simpson Sand, Viola, Lansing 'L', Lansing 'J' and Lansing 'B'

H&D Exploration, LLC
well comparison sheet

| DRILLING WELL | | | | | COMPARISON WELL | | | |
|---------------|--------|---------|------|---------|-----------------|---------|-------------------------|-----|
| Dudrey #1 | | | | | Wright #1 | | | |
| 1900 KB | | | | | 1903 KB | | Structural Relationship | |
| Formation | Sample | Sub-Sea | Log | Sub-Sea | Sample | Sub-Sea | Sample | Log |
| Heebner | 3386 | -1486 | 3388 | -1488 | 3391 | -1488 | 2 | 0 |
| Toronto | 3402 | -1502 | 3402 | -1502 | 3406 | -1503 | 1 | 1 |
| Douglas | 3434 | -1534 | 3429 | -1529 | 3432 | -1529 | -5 | 0 |
| Brown Lime | 3539 | -1639 | 3540 | -1640 | 3549 | -1646 | 7 | 6 |
| Lansing | 3564 | -1664 | 3564 | -1664 | 3572 | -1669 | 5 | 5 |
| Base KC | 3842 | -1942 | 3844 | -1944 | 3850 | -1947 | 5 | 3 |
| Viola | 3977 | -2077 | 3970 | -2070 | 3982 | -2079 | 2 | 9 |
| Simpson Shale | 4079 | -2179 | 4082 | -2182 | 4112 | -2209 | 30 | 27 |
| Simpson Sand | 4086 | -2186 | 4086 | -2186 | 4134 | -2231 | 45 | 45 |
| Arbuckle | 4164 | -2264 | 4167 | -2267 | 4176 | -2273 | 9 | 6 |
| Total Depth | 4250 | -2350 | 4251 | -2351 | 4210 | -2307 | | |



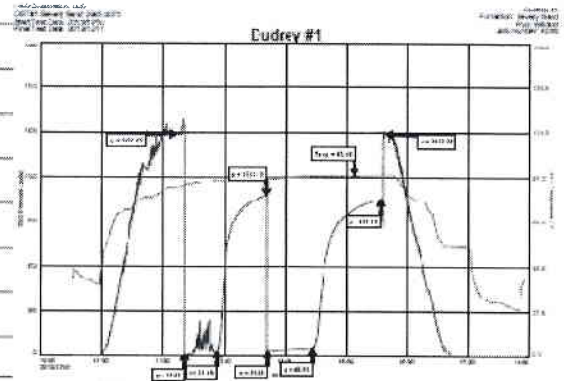
DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313
DRILL-STEM TEST TICKET
FILE: dudrey1dst1

TIME ON: 10:32 PM
TIME OFF: 5:58 AM

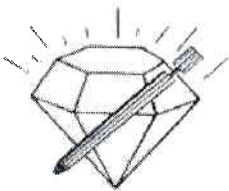
Company H&D Exploration, LLC Lease & Well No. Dudrey #1
Contractor Southwind #2 Charge to H&D Exploration, LLC
Elevation 1900 KB Formation Severy Sand Effective Pay _____ Ft. Ticket No. K066
Date 12-10-13 Sec. 32 Twp. 24 S Range 12 W County Stafford State KANSAS
Test Approved By Josh Austin Diamond Representative Jason McLemore
Formation Test No. 1 Interval Tested from 2995 ft. to 3075 ft. Total Depth 3075 ft.
Packer Depth 2990 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
Packer Depth 2995 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
Depth of Selective Zone Set _____
Top Recorder Depth (Inside) 2976 ft. Recorder Number 5513 Cap. 5000 P.S.I.
Bottom Recorder Depth (Outside) 2977 ft. Recorder Number 5588 Cap. 6000 P.S.I.
Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.
Mud Type Chemical Viscosity 58 Drill Collar Length _____ ft. I.D. 2 1/4 in.
Weight 8.6 Water Loss 7.8 cc. Weight Pipe Length _____ ft. I.D. 2 7/8 in.
Chlorides 7700 P.P.M. Drill Pipe Length 2962 ft. I.D. 3 1/2 in.
Jars: Make STERLING Serial Number 7 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.
Did Well Flow? NO Reversed Out No Anchor Length 80 ft. Size 4 1/2-FH in.
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. 63' DP in Anchor Surface Choke Size 1 in. Bottom Choke Size 5/8 in.
Blow: 1st Open: Weak Blow, Built to 5-1/2", No Blowback
2nd Open: Weak Blow, Built to 2" No Blowback

WEAK BLOW, BUILT TO 2. NO BLOWBACK

Recovered 80 ft. of Muddy Water, 60% Water, 40% Mud
 Recovered 80 ft. of Total Fluid
 Recovered ft. of _____
 Recovered ft. of CHLORIDES: 78000
 Recovered ft. of PH: 7
 Recovered ft. of RW: .120 @ 70
 Remarks: _____



Time Set Packer(s) 12:23 AM A.M. Time Started Off Bottom 3:23 AM P.M. Maximum Temperature 92
 Initial Hydrostatic Pressure..... (A) 1414 P.S.I.
 Initial Flow Period..... Minutes 30 (B) 10 P.S.I. to (C) 28 P.S.I.
 Initial Closed In Period..... Minutes 45 (D) 1022 P.S.I.
 Final Flow Period..... Minutes 45 (E) 31 P.S.I. to (F) 50 P.S.I.
 Final Closed In Period..... Minutes 60 (G) 998 P.S.I.
 Final Hydrostatic Pressure..... (H) 1412 P.S.I.



DIAMOND TESTING
 P.O. Box 157
 HOISINGTON, KANSAS 67544
 (800) 542-7313
DRILL-STEM TEST TICKET
 FILE: dudrey1dst2

TIME ON: 5:11 PM
 TIME OFF: 11:37 PM

Company H&D Exploration, LLC Lease & Well No. Dudrey #1
 Contractor Southwind #2 Charge to H&D Exploration, LLC
 Elevation 1900 KB Formation Lansing B Effective Pay _____ Ft. Ticket No. K067
 Date 12-12-13 Sec. 32 Twp. 24 S Range _____ 12 W County Stafford State KANSAS
 Test Approved By Josh Austin Diamond Representative Jason McLemore

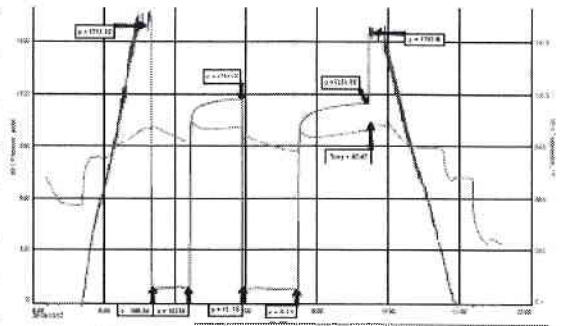
Formation Test No. 2 Interval Tested from 3570 ft. to 3590 ft. Total Depth 3590 ft.
 Packer Depth 3565 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
 Packer Depth 3570 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Depth of Selective Zone Set _____
 Top Recorder Depth (Inside) 3551 ft. Recorder Number 5513 Cap. 5000 P.S.I.
 Bottom Recorder Depth (Outside) 3552 ft. Recorder Number 5588 Cap. 6000 P.S.I.
 Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.
 Mud Type Chemical Viscosity 63 Drill Collar Length 0 ft. I.D. 2 1/4 in.
 Weight 9.5 Water Loss 10.8 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.
 Chlorides 12200 P.P.M. Drill Pipe Length 3537 ft. I.D. 3 1/2 in.
 Jars: Make STERLING Serial Number 7 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.
 Did Well Flow? NO Reversed Out No Anchor Length 20 ft. Size 4 1/2-FH in.
 Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

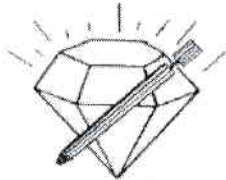
Blow: 1st Open: BOB on Open, GTS in 2 Min., Gaging Gas, No Blowback
2nd Open: O on Open, Gaging Gas, No Blowback

Recovered 60 ft. of Drilling Mud
 Recovered 60 ft. of Total Fluid

Recovered _____ ft. of
 Recovered _____ ft. of
 Recovered _____ ft. of
 Recovered _____ ft. of Tool Sample: Drilling Mud
 Remarks: Gas Gaged At 23# on a 3/4" Choke, =436000 MCF



Time Set Packer(s) 6:41 PM A.M. P.M. Time Started Off Bottom 9:41 PM A.M. P.M. Maximum Temperature 98
 Initial Hydrostatic Pressure..... (A) 1774 P.S.I.
 Initial Flow Period..... Minutes 30 (B) 106 P.S.I. to (C) 103 P.S.I.
 Initial Closed In Period..... Minutes 45 (D) 1298 P.S.I.
 Final Flow Period..... Minutes 45 (E) 108 P.S.I. to (F) 91 P.S.I.
 Final Closed In Period..... Minutes 60 (G) 1275 P.S.I.
 Final Hydrostatic Pressure..... (H) 1733 P.S.I.



DIAMOND TESTING
 P.O. Box 157
 HOISINGTON, KANSAS 67544
 (800) 542-7313
DRILL-STEM TEST TICKET
 FILE: dudrey1dst3

TIME ON: 5:31 PM
 TIME OFF: 12:27 AM

Company H&D Exploration, LLC Lease & Well No. Dudrey #1
 Contractor Southwind #2 Charge to H&D Exploration, LLC
 Elevation 1900 KB Formation Lansing H-J Effective Pay _____ Ft. Ticket No. K068
 Date 12-13-13 Sec. 32 Twp. 24 S Range _____ 12 W County Stafford State KANSAS
 Test Approved By Josh Austin Diamond Representative Jason McLemore

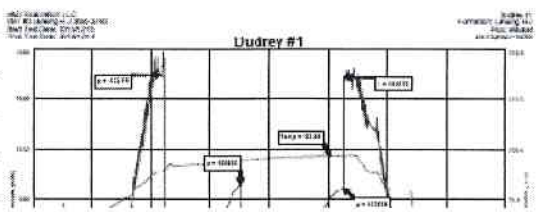
Formation Test No. 3 Interval Tested from 3695 ft. to 3760 ft. Total Depth 3760 ft.
 Packer Depth 3690 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
 Packer Depth 3695 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Depth of Selective Zone Set _____
 Top Recorder Depth (Inside) 3676 ft. Recorder Number 5513 Cap. 5000 P.S.I.
 Bottom Recorder Depth (Outside) 3677 ft. Recorder Number 5588 Cap. 6000 P.S.I.
 Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.

Mud Type Chemical Viscosity 59 Drill Collar Length 0 ft. I.D. 2 1/4 in.
 Weight 9.1 Water Loss 10.8 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.
 Chlorides 12000 P.P.M. Drill Pipe Length 3662 ft. I.D. 3 1/2 in.
 Jars: Make STERLING Serial Number 7 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.
 Did Well Flow? NO Reversed Out No Anchor Length 65 ft. Size 4 1/2-FH in.
 Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

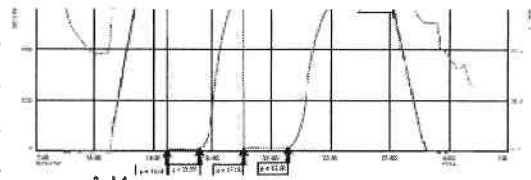
Blow: 1st Open: Fair Blow, Built to 7", No Blowback
 2nd Open: Fair Blow, Built to 5-1/2", No Blowback

Recovered 45 ft. of VSOCM 3% Oil, 97% Mud
 Recovered 45 ft. of Total Fluid
 Recovered _____ ft. of
 Recovered _____ ft. of 75' Gas In Pipe
 Recovered _____ ft. of



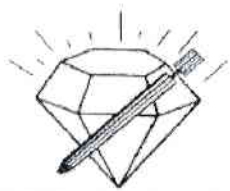
Recovered _____ ft. of Tool Sample: 10% Oil, 90% Mud

Remarks: _____



Time Set Packer(s) 7:17 PM ^{A.M.}/_{P.M.} Time Started Off Bottom 10:17 PM ^{A.M.}/_{P.M.} Maximum Temperature 102

Initial Hydrostatic Pressure..... (A) 1823 P.S.I.
Initial Flow Period..... Minutes 30 (B) 11 P.S.I. to (C) 22 P.S.I.
Initial Closed In Period..... Minutes 45 (D) 1099 P.S.I.
Final Flow Period..... Minutes 45 (E) 21 P.S.I. to (F) 32 P.S.I.
Final Closed In Period..... Minutes 60 (G) 1077 P.S.I.
Final Hydrostatic Pressure..... (H) 1811 P.S.I.



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313
DRILL-STEM TEST TICKET
FILE: dudrey1dst4

TIME ON: 11:09 AM
TIME OFF: 6:44 PM

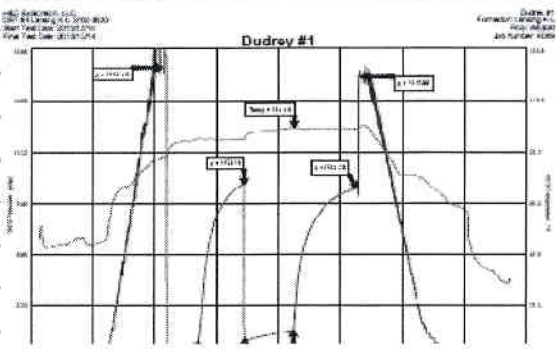
Company H&D Exploration, LLC Lease & Well No. Dudrey #1
Contractor Southwind #2 Charge to H&D Exploration, LLC
Elevation 1900 KB Formation Lansing K-L Effective Pay _____ Ft. Ticket No. K069
Date 12-14-13 Sec. 32 Twp. _____ 24 S Range _____ 12 W County Stafford State KANSAS
Test Approved By Josh Austin Diamond Representative Jason McLemore

Formation Test No. 4 Interval Tested from 3760 ft. to 3830 ft. Total Depth 3830 ft.
Packer Depth 3755 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
Packer Depth 3760 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Depth of Selective Zone Set _____
Top Recorder Depth (Inside) 3741 ft. Recorder Number 5513 Cap. 5000 P.S.I.
Bottom Recorder Depth (Outside) 3742 ft. Recorder Number 5588 Cap. 6000 P.S.I.
Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.
Mud Type Chemical Viscosity 58 Drill Collar Length 0 ft. I.D. 2 1/4 in.
Weight 9.4 Water Loss 14.4 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.
Chlorides 14000 P.P.M. Drill Pipe Length 3727 ft. I.D. 3 1/2 in.
Jars: Make STERLING Serial Number 7 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.
Did Well Flow? NO Reversed Out No Anchor Length 70 ft. Size 4 1/2-FH in.
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. 32" DP in Anchor Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: Strong, BOB in 45 Seconds, Surface Blowback
2nd Open: Strong, BOB in 30 Seconds, GTS in 20 Min. to weak to Gage, Blowback BOB in 10 Min.

Recovered 80 ft. of SOCM: 5% Oil, 95% Mud
Recovered 320 ft. of Frothy Oil, 60% Gas, 40% Oil
Recovered 40 ft. of Muddy Water, 82% Water, 18% Mud
Recovered 440 ft. of Total Fluid
Recovered _____ ft. of _____
Recovered _____ ft. of CHLORIDES: 64000
Remarks: PH: 7
RW: .160 @ 50



Time Set Packer(s) 1:13 PM A.M. P.M. Time Started Off Bottom 4:13 PM A.M. P.M. Maximum Temperature 104

Initial Hydrostatic Pressure..... (A) 1880 P.S.I.
 Initial Flow Period..... Minutes 30 (B) 62 P.S.I. to (C) 106 P.S.I.
 Initial Closed In Period..... Minutes 45 (D) 1124 P.S.I.
 Final Flow Period..... Minutes 45 (E) 128 P.S.I. to (F) 180 P.S.I.
 Final Closed In Period..... Minutes 60 (G) 1100 P.S.I.
 Final Hydrostatic Pressure..... (H) 1818 P.S.I.

ROCK TYPES

Cht Chtcong1 Lmst fw7> shale, gry Ss
 Congl Dolsec shale, grn Carbon Sh

ACCESSORIES

MINERAL
 △ Chert White

FOSSIL
 ○ Crinoids
 F Fossils < 20%
 φ Oolite
 ⚙ Oomoldic
 ⚙ Fussilnid

TEXTURE
 C Chalky

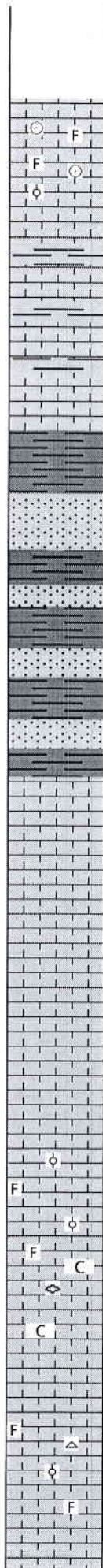
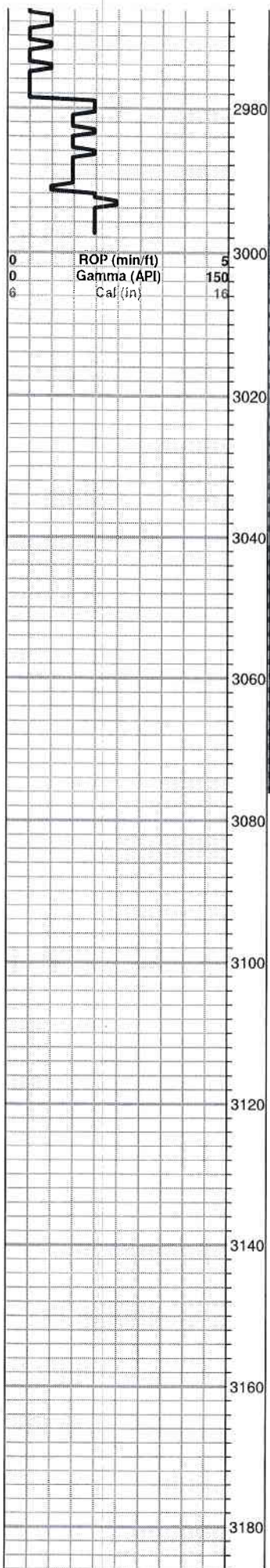
OTHER SYMBOLS

Oil Show
 ● Even Stn
 ● Spotted Stn 50-75
 ● Spotted Stn 25-50
 ● Spotted Stn 1-25
 ○ Questionable Stn
 D Dead Oil Stn
 ■ Fluorescence
 * Gas

DST
 ■ DST Int
 ■ DST alt
 ■ Core
 || tail pipe

Printed by GEOstrip VC Striplog version 4.0.7.0 (www.grsi.ca)

| Curve Track #1 | | | Depth Intervals | DST | Lithology | Oil Show | Geological Descriptions | TG, C1 - C5 | | | | |
|----------------|-------------|----------|-------------------|-----|-----------|----------|-------------------------|-------------------|------------|------------|------------|------------|
| ROP (min/ft) | Gamma (API) | Cal (in) | | | | | | Total Gas (units) | C1 (units) | C2 (units) | C3 (units) | C4 (units) |
| 0 | 150 | 16 | 2920 | | | | | 0 | 0 | 0 | 0 | 0 |
| 0 | 150 | 16 | 2940 | | | | | 0 | 0 | 0 | 0 | 0 |
| 0 | 150 | 16 | 2960 | | | | | 0 | 0 | 0 | 0 | 0 |



HOWARD 2979 (-1079)

Limestone; cream-lt. grey, fine xln, chalky, dense, few finely oolitic-fossiliferous pieces

Limestone; as above, dense

Shale; grey-green, soft plus limestone as above

SEVERY SAND 3030 (-1130)

Sand; grey, very fine grained, micaceous, sub angular, friable, when sample broke lt. spotty SFO, faint odor, trace gas bubbles

Sand as above plus grey-green-dark grey shale

TOPEKA 3074 (-1174)

Limestone; cream-tan, fine xln, dense, cherty, fossiliferous in part

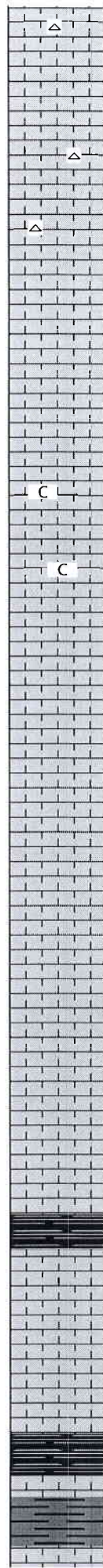
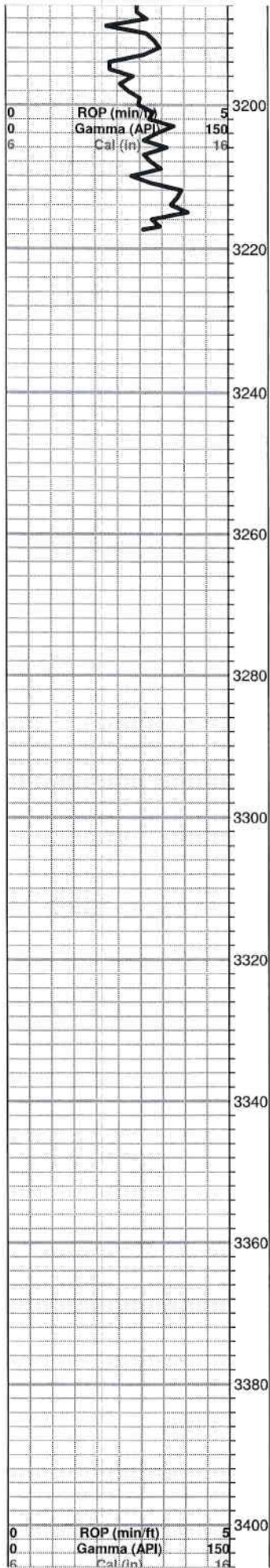
Limestone; tan-cream, fossiliferous, chalky in part, slightly granular, poorly developed porosity, no shows

Limestone; as above

Limestone; white-cream, fine xln, chalky, finely oolitic/fossiliferous, few cherty pieces, plus white chalk

Limestone; grey-cream, fine xln, dense, slightly fossiliferous, cherty, poor porosity, plus grey fossiliferous Chert, boney

| | | |
|---|-------------------|-----|
| 0 | Total Gas (units) | 100 |
| 0 | C1 (units) | 100 |
| 0 | C2 (units) | 100 |
| 0 | C3 (units) | 100 |
| 0 | C4 (units) | 100 |



Limestone; as above

Limestone; cream-tan, fine-medium xln, fossiliferous in part, slightly cherty, few sparry calcite inclusions, plus Chert; grey, fossiliferous, boney

as above

Limestone; cream-grey-buff, fine xln, dense, slightly fossiliferous, plus white chalk

Limestone; cream-buff, fine-medium xln, chalky, granular in part, few fossiliferous pieces, no shows

Limestone; as above, few scattered porosity

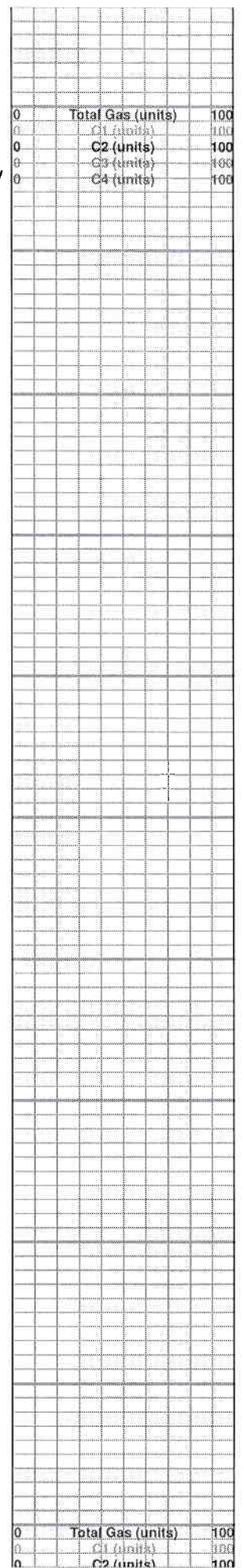
Limestone; cream, fine xln, dense, few inter xln type porosity, questionable trace spotty brown stain, NSFO, no odor

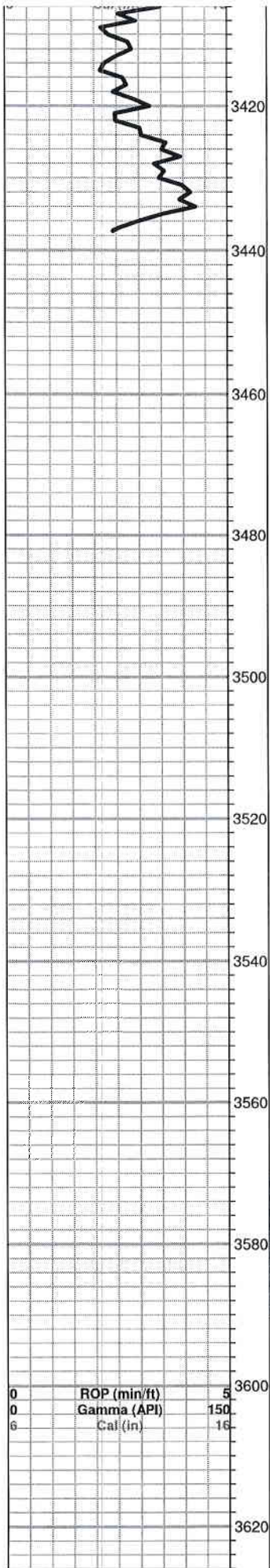
black-dark grey shale

HEEBNER 3386 (-1486)

black carboniferous Shale

TORONOT 3402 (-1502)





Limestone; cream-white, fine xln, chalky, few pin point type porosity, no shows

DOUGLAS SHALE 3434 (-1534)

grey-greyish green shale, silty in part, slightly micaceous

Shale as above, soft

Shale; grey-greyish green, soft, silty, micaceous

Sand; grey-greyish green, very fine grained, sud rounded, sub angular, micaceous, poor inter granular porosity, no shows

Sand as above, plus Shale; grey-greyish green, silty, micaceous, few soft pieces

Shale; grey-dark grey, silty in part, slightly micaceous

BROWN LIME 3539 (-1639)

Limestone; tan-brown, fine xln, dense, cherty in part

dark grey shale

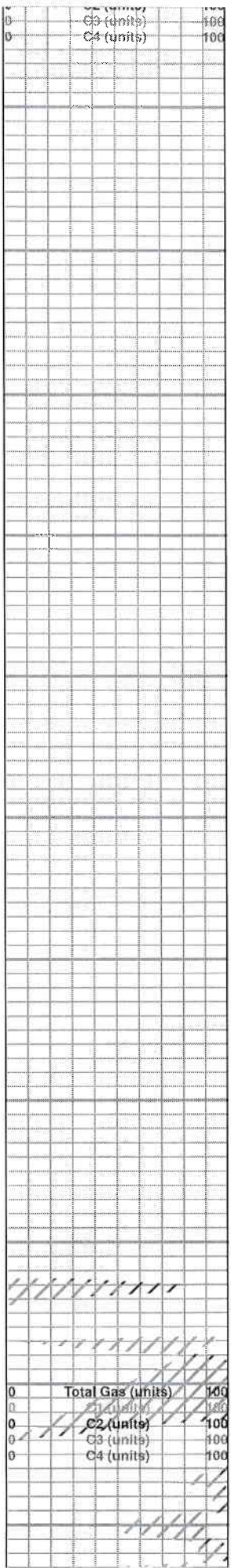
LANSING 3564 (-1664)

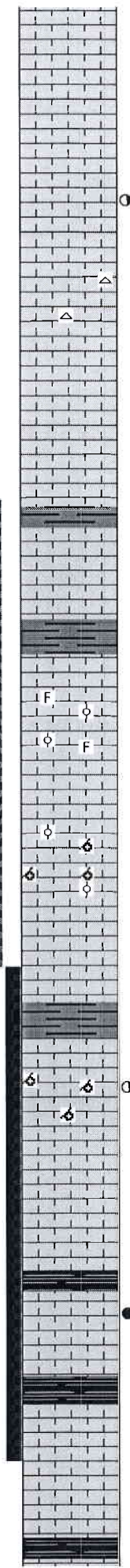
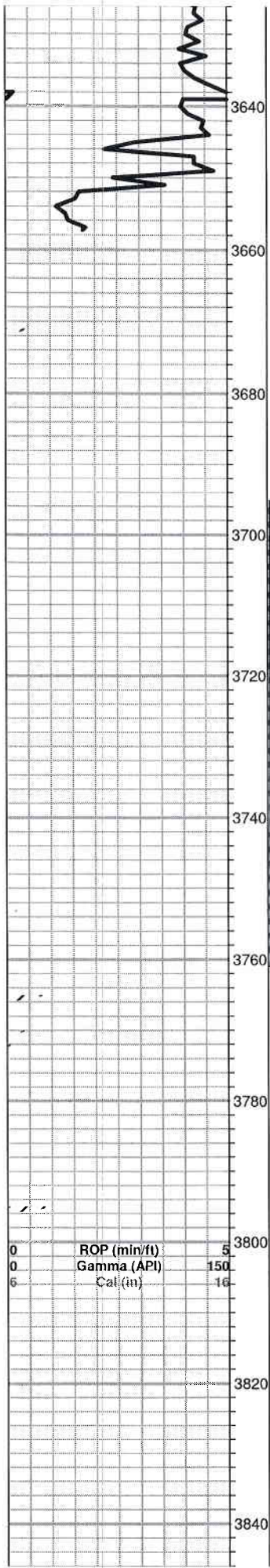
Limestone; grey-cream, fossiliferous-oolitic, chalky in part, poor visible porosity, no shows

Limestone; white, highly oolitic, fair oolitic porosity, black "dead oil" stain, questionable trace spotty free oil, "gassy" odor

Limestone; cream-lt. grey, fossiliferous, dense, sparry calcite inclusions, poorly developed porosity, no shows

Limestone; lt. grey, highly fossiliferous, fair fossil cast-vuggy type porosity, brown stain, SFO, faint-fair odor





Limestone; tan-buf, fine xln, dense, cherty, plus grey-dark grey shale

Limestone; cream, highly fossiliferous-few oolitic, vuggy type porosity, brown-grey stain, lt. SFO, faint odor

Limestone; cream-grey-buff, fine xln, fossiliferous, dense, cherty in part, plus grey-smokey chert

Limestone; as above, cherty, dense.

grey shale

Limestone; cream-tan, fine xln, dense, trace inter xln porosity, brown stain, trace free oil, no odor

grey-black shale

Limestone; cream-white, fine xln, chalky, slight oolitic/fossiliferous, poorly developed porosity, black stain, questionable SFO, faint odor

Limestone; cream-tan, oolitic in part, fair-good scattered porosity, brown stain, trace free oil, faint odor

Limestone; cream-grey, fine xln, dense, chalky in part

grey-dark grey shale

Limestone; cream, highly oolitic, fair-good oolitic porosity, brown spotty stain, NSFO, no odor

Limestone; grey-buff, fine xln, dense, cherty, no shows

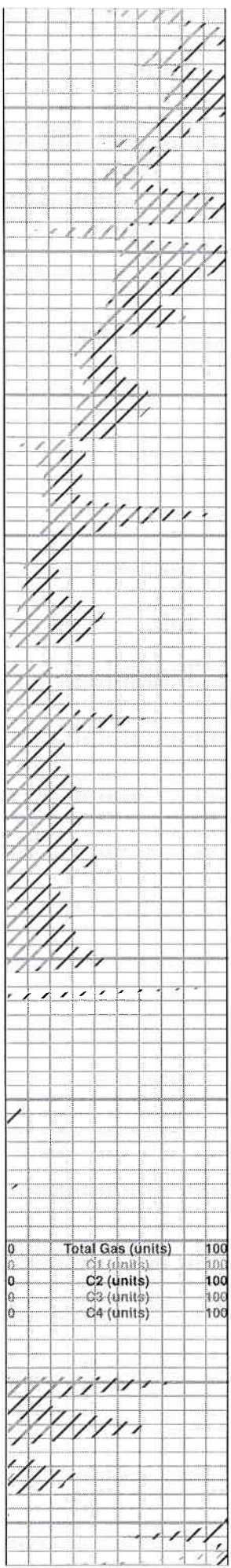
black carboniferous shale

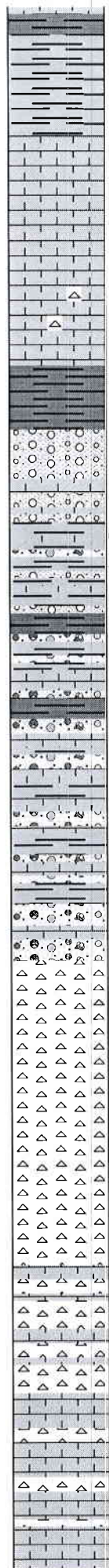
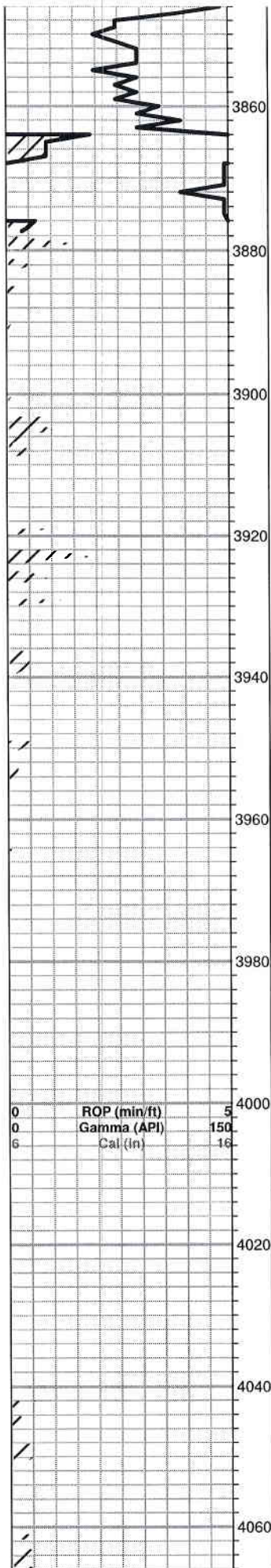
Limestone; cream-grey-buff, fine-medium xln, slightly fossiliferous, fair porosity, brown stain, SFO, few SAT pieces, fair odor

black carboniferous shale

Limestone; tan-buff, fine xln, dense, cherty

BASE KANSAS CITY 3842 (-1942)





Shale; black carboniferous plus dark grey-green, slightly silty in part

MARMATON 3863 (-1963)

Limestone; cream-white, fine xln, chalky, dense, slightly fossiliferous, poorly developed porosity, no shows

Limestone; as above, glauconitic in part, trace Chert; orange-cream, boney/fresh

grey-green Shale

CONGLOMERATE 3905 (-2005)

Shale; variety of colors, gummy/soft, plus Chert; multi colors

Trace Limestone; buff, fine xln, dense, dolomitic, brown stain, spotty SFO, faint odor

Shale; grey-green, plus Limestone; cream-white, fine xln, slightly fossiliferous, chalky, trace Chert; orange-yellow

Shale; grey-green-maroon, soft/gummy, plus Chert, yellow, cream, orange, plus Limestone; cream, fine xln, chalky

VIOLA 3977 (-2077)

Chert; grey-white-translucent, boney, semi tripolitic, few black edge staining, NSFO, "gassy" odor

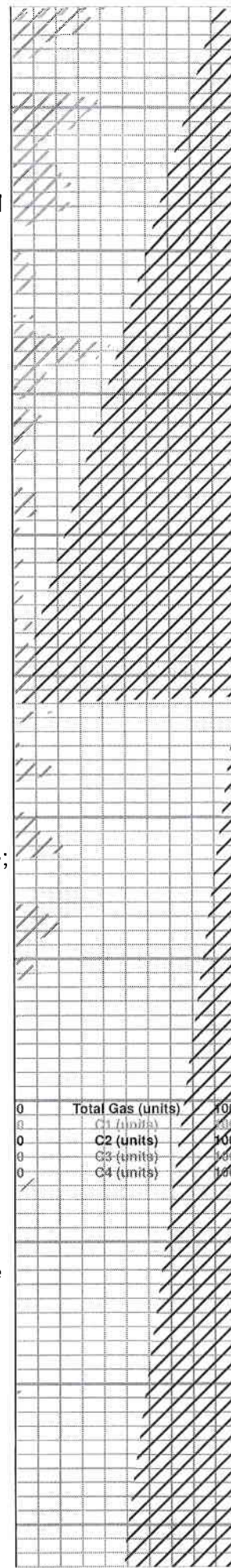
Chert; cream-white, boney, semi tripolitic, scattered porosity, brown-black stain, trace free oil, good "gassy" odor

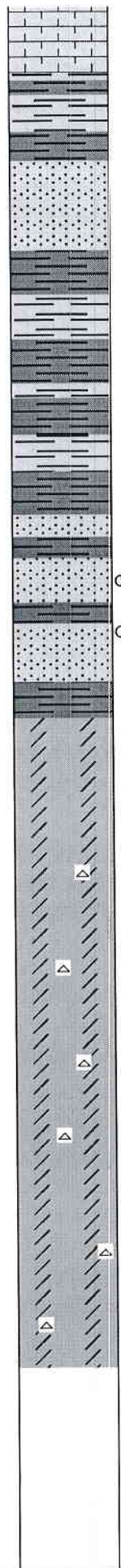
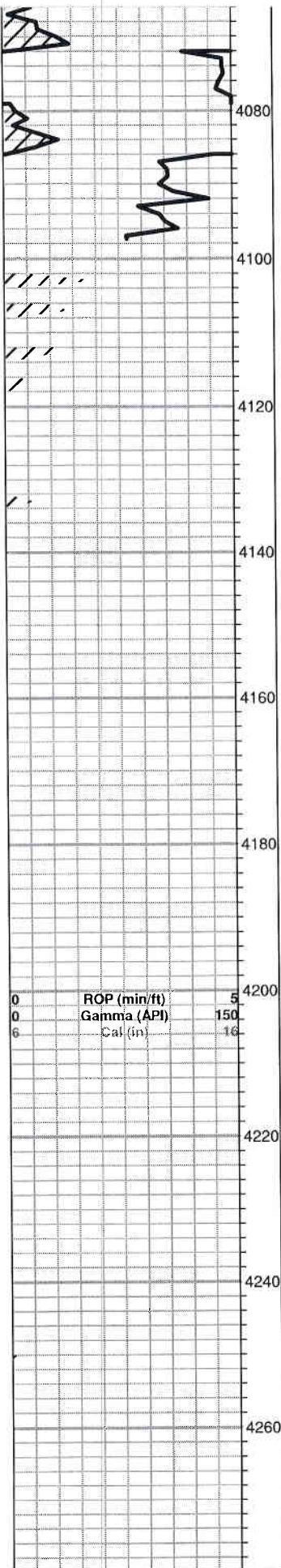
Chert as above, grey-cream-white, boney/fresh plus Limestone; grey-cream, fine xln, dense, chalky in part, slightly cherty

As above

Limestone; grey-buff-cream, fine xln, dense, cherty, plus Chert; grey-white-cream, boney

as above





SIMPSON SHALE 4079 (-2179)

Shale; green-grey, silty, micaceous

SIMPSON SAND

Sand; grey-clear, sub rounded, sub angular, dense, micaceous in part, trace black-dark brown stain, NSFO, no odor

Shale; grey-green, maroon, soft, gummy in part

Shale; as above, few silty, micaceous

Sand; cream-tan, medium grained, angular, sub rounded, dolomitic in part, friable in part, fair inter granular porosity, few brown stain, trace SFO/SAT, good odor

Sand; as above

ARBUCKLE 4164 (-2264)

Dolomite; buff-grey, fine xln, scattered vuggy porosity, no shows

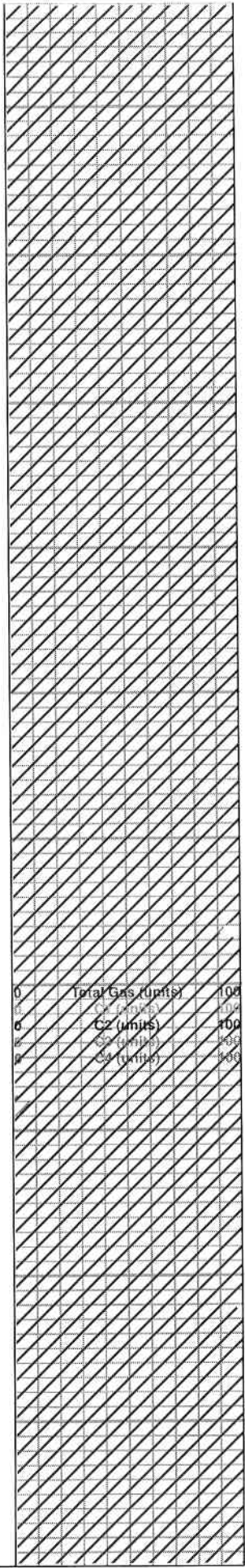
Dolomite; grey-cream-buff, fine xln, slightly sucrosic, sandy/granular in part, few scattered porosity, no shows, trace white Chert

Dolomite; tan-grey, fine xln, dense, cherty, poor visible porosity, no show plus Chert; grey-smokey grey-white, boney

Dolomite and Chert as above

Dolomite; cream-grey, fine-medium xln, dense, cherty, few inter xln type porosity, no shows, Chert; as above

ROTARY TOTAL DEPTH 4250 (-2350)



BASIC

energy services, L.P.

TREATMENT REPORT

| | | | | | | | | |
|---------------|---------------------|--------|-----------|----------|-------|-------------------|----------|--|
| Customer | AED EXPLORATION LLC | | Lease No. | | | Date | 12-17-13 | |
| Lease | DUOREY | | Well # | 1 | | | | |
| Field Order # | Station | Casing | Depth | County | State | | | |
| 8887 | PRATT, KS | 5 1/2 | 4242 | STAFFORD | KS | | | |
| Type Job | CWN - LONG STRENG | | Formation | TS-4250 | | Legal Description | 32-24-12 | |

| PIPE DATA | | PERFORATING DATA | | FLUID USED | | TREATMENT RESUME | | |
|-----------------|--------------|------------------|----|------------|------------|------------------|-------|------------------|
| Casing Size | Tubing Size | Shots/Ft | | Acid | | RATE | PRESS | ISIP |
| 5 1/2 | | | | | | | | 5 Min. |
| Depth | Depth | From | To | Pre Pad | Max | | | |
| 4242 | | | | | | | | 10 Min. |
| Volume | Volume | From | To | Pad | Min | | | 15 Min. |
| Max Press | Max Press | From | To | Frac | Avg | | | |
| Well Connection | Annulus Vol. | From | To | | HHP Used | | | Annulus Pressure |
| Plug Depth | Packer Depth | From | To | Flush | Gas Volume | | | Total Load |
| 4253 | | | | | | | | |

| | | | | | | | | |
|-------------------------|-------|-------------|-----------------|-------|--------------|---------|---------|--|
| Customer Representative | RANDY | | Station Manager | KEVIN | | Treater | CORDLEY | |
| Service Units | 19907 | 78982-78983 | | | 19831-19862 | | | |
| Driver Names | KG | JA | | | JESSE - JOSH | | | |

| Time | Casing Pressure | Tubing Pressure | Bbls. Pumped | Rate | Service Log |
|------|-----------------|-----------------|--------------|------|---|
| 2230 | | | | | ON LOCATION 12/16/13 RUN 4242' 5 1/2" CSG. FRONT SHOE LATCH BATTRE FWI COLLAR CONT-1-4-7-10-13-16-19 BATTRE ON BOTTOM #2 THE BOTTOM - DROP BATTRE - CORRECTIVE |
| 0230 | 300 | | 20 | 6 | PLUMP 20 bbl 2% HCL H2O |
| | 300 | | 12 | 6 | PLUMP 12 bbl. MUD FLUSH |
| | 300 | | 3 | 4 | PLUMP 3 bbl H2O |
| | 200 | | 42 | 6 | MIX 200 SK 60/40 P02 18% SALT, 34% OIL, 14% DEFORTH 5% HCL CARBONATE 15.2 gal 1.18 WT% STOP - WASH LINE - DROP PLUG |
| | 0 | | 0 | 6 | START DREP. |
| | 300 | | 70 | 6 | LEFT CEMENTS |
| | 800 | | 95 | 4 | SLOW RATE |
| 0315 | 1500 | | 100.7 | 4 | PLUG DOWN - HOLD |
| | | | | | PLUG RAT HOLE - 30 SK 60/40 P02 |
| | | | | | PLUG MUD HOLE - 20 SK 60/40 P02 |
| 0400 | | | | | JOB COMPLETE - KEVIN |