



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1184669
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: _____

1184669

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 <i>(Attach Additional Sheets)</i> | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Log | Formation (Top), Depth and Datum | <input type="checkbox"/> Sample |
| Samples Sent to Geological Survey | <input type="checkbox"/> Yes <input type="checkbox"/> No | Name | Top | Datum |
| 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: | | | | |

| 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: Yes No

Date of First, Resumed Production, SWD or ENHR: _____ Producing Method:
 Flowing Pumping Gas Lift Other *(Explain)* _____

| 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: _____ _____ |
|--|--|---|

ALLIED OIL & GAS SERVICES, LLC 061304

Federal Tax I.D. # 20-8651475

REMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

SERVICE POINT:

| | | | | | | | |
|--------------------------------|-----------------|----------------------------------|---------------------|------------|--------------------|---|------------------------------|
| DATE <u>8-12-13</u> | SEC. <u>7</u> | TWP. <u>14S</u> | RANGE <u>3/W</u> | CALLED OUT | ON LOCATION | JOB START <u>8-18-13</u> <u>4:00 AM</u> | JOB FINISH <u>5:00 AM</u> |
| LEASE <u>Rail Road</u> | WELL # <u>4</u> | LOCATION <u>Oakley 205 2E 2N</u> | | | COUNTY <u>Gore</u> | STATE <u>KS</u> | |
| OLD OR <u>NEW</u> (Circle one) | | | <u>3/4 E s into</u> | | | | |

| | |
|----------------------------|-------------------|
| CONTRACTOR <u>W + W 12</u> | OWNER <u>same</u> |
| TYPE OF JOB <u>PTA</u> | |
| HOLE SIZE <u>7 7/8</u> | T.D. <u>4590</u> |
| CASING SIZE | DEPTH |
| TUBING SIZE | DEPTH |
| DRILL PIPE <u>4 1/2</u> | DEPTH <u>2350</u> |
| TOOL | DEPTH |
| PRES. MAX | MINIMUM |
| MEAS. LINE | SHOE JOINT |
| CEMENT LEFT IN CSG. | |
| PERFS. | |
| DISPLACEMENT | |

| | |
|------------------------------|---|
| CEMENT | AMOUNT ORDERED <u>205 sks 4/40 4/80 gel</u> |
| | <u>4 FLO-seal</u> |
| COMMON | <u>123 sks @ 17.90 2201.70</u> |
| POZMIX | <u>82 sks @ 9.25 760.70</u> |
| GEL | <u>7 sks @ 23.40 163.80</u> |
| CHLORIDE | @ |
| ASC | @ |
| | @ |
| <u>FLO-seal 51#</u> | <u>@ 2.97 151.47</u> |
| | @ |
| | @ |
| | @ |
| | @ |
| | @ |
| | @ |
| HANDLING <u>220.16 c/ft</u> | <u>@ 2.48 545.99</u> |
| MILEAGE <u>2.60 700/mile</u> | <u>9.1970 597.35</u> |
| TOTAL <u>4427.01</u> | |

EQUIPMENT

| | |
|--------------|---------------------------------|
| PUMP TRUCK | CEMENTER <u>Andrew Forstund</u> |
| # <u>422</u> | HELPER <u>Tyler Flippe</u> |
| BULK TRUCK | |
| # <u>376</u> | DRIVER <u>David Scariore</u> |
| BULK TRUCK | |
| # | DRIVER |

REMARKS:

25 sks @ 2350'

100 sks @ 1390'

40 sks @ 240'

10 sks @ 40'

20 sks Rat hole

Thank you

CHARGE TO: Pioneer Resources

STREET _____

CITY _____ STATE _____ ZIP _____

SERVICE

| | |
|--------------------------|----------------------|
| DEPTH OF JOB <u>2350</u> | |
| PUMP TRUCK CHARGE | <u>2483.59</u> |
| EXTRA FOOTAGE | @ |
| MILEAGE <u>25 miles</u> | <u>@ 7.20 192.50</u> |
| MANIFOLD | @ |
| <u>Light vehicle</u> | <u>@ 4.40 110.00</u> |
| | @ |
| TOTAL <u>2786.09</u> | |

PLUG & FLOAT EQUIPMENT

| | | |
|------------------------|---|---------------|
| <u>1 Dry hole plug</u> | @ | <u>107.64</u> |
| | @ | |
| | @ | |
| | @ | |
| | @ | |
| TOTAL <u>107.64</u> | | |

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.

PRINTED NAME Calvin Pannerhoff

SIGNATURE Calvin Pannerhoff

SALES TAX (if Any) _____

TOTAL CHARGES 7,320.74

DISCOUNT 1,683.77 IF PAID IN 30 DAYS

5,636.96 Net.

ALLIED OIL & GAS SERVICES, LLC 061304

Federal Tax I.D. # 20-8651475

REMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

SERVICE POINT:

| | | | | | | | |
|--------------------------------|-----------------|----------------------------------|------------------|----------------------|--------------------|--------------------------|---------------------------|
| DATE <u>8-12-13</u> | SEC. <u>7</u> | TWP. <u>14S</u> | RANGE <u>3/W</u> | CALLED OUT | ON LOCATION | JOB START <u>4:00 AM</u> | JOB FINISH <u>5:00 AM</u> |
| LEASE <u>Rail Road</u> | WELL # <u>4</u> | LOCATION <u>Oakley 205 2E 2N</u> | | | COUNTY <u>Gore</u> | STATE <u>KS</u> | |
| OLD OR <u>NEW</u> (Circle one) | | | | <u>3/4 E. S into</u> | | | |

| | |
|--------------------------|-------------------|
| CONTRACTOR <u>WJW 12</u> | OWNER <u>same</u> |
| TYPE OF JOB <u>PTA</u> | |
| HOLE SIZE <u>7 7/8</u> | T.D. <u>4590</u> |
| CASING SIZE | DEPTH |
| TUBING SIZE | DEPTH |
| DRILL PIPE <u>4 1/2</u> | DEPTH <u>2350</u> |
| TOOL | DEPTH |
| PRES. MAX | MINIMUM |
| MEAS. LINE | SHOE JOINT |
| CEMENT LEFT IN CSG. | |
| PERFS. | |
| DISPLACEMENT | |

| | | |
|-------------------------|---------------------------------|--|
| EQUIPMENT | | |
| PUMP TRUCK # <u>422</u> | CEMENTER <u>Andrew Forstund</u> | |
| | HELPER <u>Tyler Elipse</u> | |
| BULK TRUCK # <u>396</u> | DRIVER <u>David Scario</u> | |
| BULK TRUCK # | DRIVER | |

REMARKS:

25 sks @ 2350'

100 sks @ 1390'

40 sks @ 200'

10 sks @ 40'

30 sks Rat hole

Thank you

CHARGE TO: Pioneer Resources

STREET _____

CITY _____ STATE _____ ZIP _____

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.

PRINTED NAME Chela Pannestiel

SIGNATURE [Signature]

| | |
|------------------------------|---|
| CEMENT | AMOUNT ORDERED <u>205 sks 4/40 4/29 gel</u> |
| | <u>4 FLO-seal</u> |
| COMMON <u>123 sks</u> | @ <u>17.90</u> <u>2201.70</u> |
| POZMIX <u>82 sks</u> | @ <u>9.25</u> <u>766.70</u> |
| GEL <u>7 sks</u> | @ <u>23.40</u> <u>163.80</u> |
| CHLORIDE | @ _____ |
| ASC | @ _____ |
| | @ _____ |
| <u>FLO-seal 51#</u> | @ <u>2.97</u> <u>151.47</u> |
| | @ _____ |
| | @ _____ |
| | @ _____ |
| | @ _____ |
| | @ _____ |
| | @ _____ |
| HANDLING <u>220.16 cu/ft</u> | @ <u>2.48</u> <u>545.99</u> |
| MILEAGE <u>2.60 700/mile</u> | @ <u>9.1970</u> <u>597.35</u> |
| TOTAL <u>4422.01</u> | |

| | |
|--------------------------|-----------------------------|
| SERVICE | |
| DEPTH OF JOB <u>2350</u> | |
| PUMP TRUCK CHARGE | <u>2483.59</u> |
| EXTRA FOOTAGE | @ _____ |
| MILEAGE <u>25 miles</u> | @ <u>7.20</u> <u>192.50</u> |
| MANIFOLD | @ _____ |
| <u>Light vehicle</u> | @ <u>4.40</u> <u>110.00</u> |
| | @ _____ |
| TOTAL <u>2786.09</u> | |

| | |
|------------------------|-----------------|
| PLUG & FLOAT EQUIPMENT | |
| <u>1 Dry hole plug</u> | @ <u>107.64</u> |
| | @ _____ |
| | @ _____ |
| | @ _____ |
| | @ _____ |
| TOTAL <u>107.64</u> | |

SALES TAX (If Any) _____

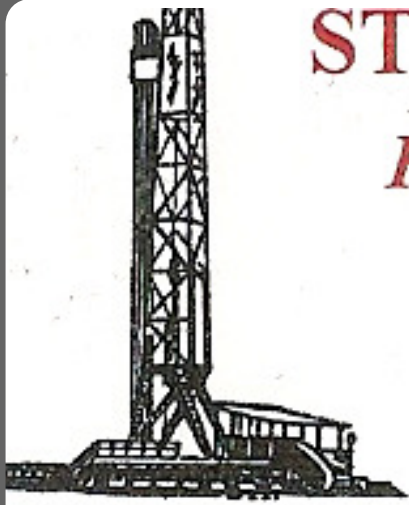
TOTAL CHARGES 7,320.74

DISCOUNT 1,683.77 IF PAID IN 30 DAYS

5,636.96 Net.

STEVEN P. MURPHY, P.G.

Petroleum Geologist (KS #228)



Cell 620.639.3030

Fax 785.387.2400

RR#1, Box 69

Otis, Kansas 67565

geomurphy@gbta.net

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

Well Name: Railroad #4

Location: Gove County

License Number: API # 15-109-22119-00-00

Spud Date: 8/10/13

Surface Coordinates: 1800' FSL & 745' FEL (NE SW E SE)
Section 7-T14S-R31W

Bottom Hole Coordinates: Vertical well w/minimal deviation

Ground Elevation (ft): 2864'

K.B. Elevation (ft): 2872'

Logged Interval (ft): 3500'

To: TD

Total Depth (ft): 4590'

Formation: Topeka through Mississippian

Type of Drilling Fluid: Chemical (Mudco, Inc)

Region: Kansas

Drilling Completed: 8/18/13

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

OPERATOR

Company: Pioneer Resources

Address: 80 Windmill Drive

Phillipsburg, KS 67661-9622

GEOLOGIST

Name: Steven P. Murphy, PG (Ks License #339)

Company: Consulting Petroleum Geologist

Address: 3365 CR 390

Otis, KS 67565

LogTops (Datum)

The open-hole logging was performed by Gemini Wireline (Hays, KS shop). Logs included Compensated Neutron/Compensated Density, Dual Induction & Microlog.

Formation tops and datums from the open-hole logs include the following:

Anhydrite Top - 2342 (+530)

Anhydrite Base - 2364 (+508)

Heebner - 3869 (-997)

Toronto - 3890 (-1018)

Lansing - 3910 (-1038)

Muncie Creek Sh - 4070 (-1198)

Stark Sh - 4158 (-1286)

Hushpuckney Sh - 4194 (-1322)

Base KC - 4235 (-1363)

Pawnee 4358 (-1486)

Ft. Scott - 4414 (-1542)

Cherokee Sh - 4442 (-1570)

Johnson Zone - 4486 (-1614)

Morrow Sh - 4507 (-1635)

Mississippian - 4546 (-1674)

DSTs

Drillstem testing was performed by Trilobite Testing (Scott City shop). The following are the results of DSTs:

DST #1 3934-3970 (LKC C-D)
 45:45:45:45
 IF: 1" blow, no return
 FF: No blow, no return
 Recovery: 70' WM (95% M, 5%W)
 IHP: 1890 FHP: 1817
 IFP: 19-36 ISIP: 885
 FFP: 39-50 FSIP: 858
 BHT - 114 F
 Chlorides - 6,100 ppm

DST #2 4500-4540 (Morrow Sst)
 19:30:15:30
 IF: Surf blow died in 16 min, no return
 FF: No blow, no return
 Recovery: 5' Mud
 IHP: 2266 FHP: 2200
 IFP: 20-23 ISIP: 775
 FFP: 25-27 FSIP: 622
 BHT - 122 F


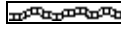
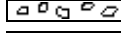
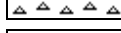
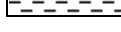







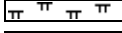

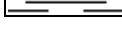
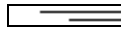
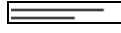

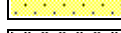
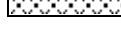
COMMENTS

Based the negative results of drillstem tests, and sample & log analysis, it was recommended that this test be plugged at a RTD of 4590'.

Respectfully submitted,

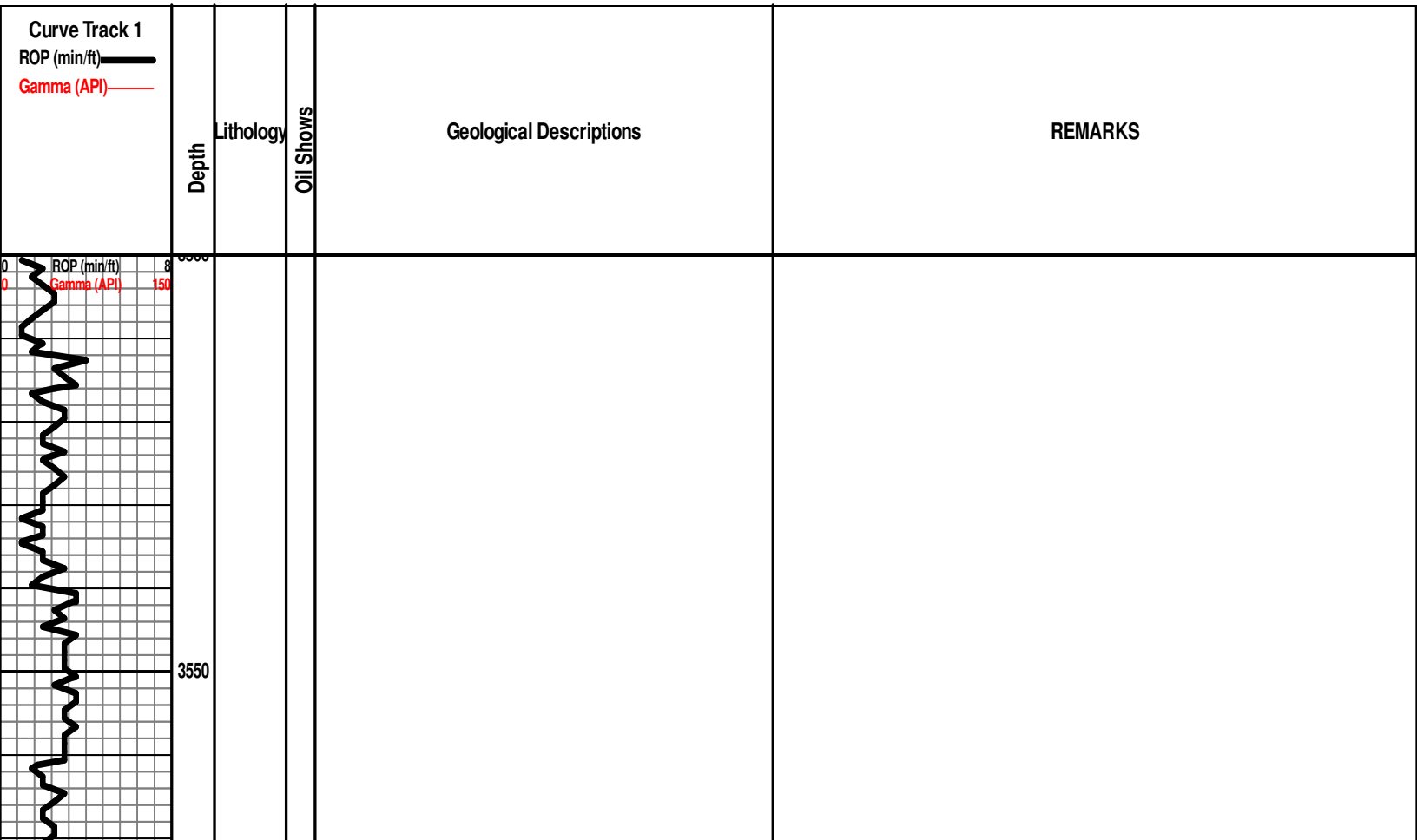
Steven P. Murphy, PG (KS License #228)
 Consulting Petroleum Geologist

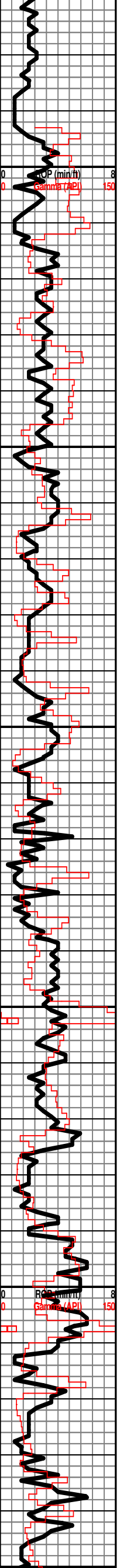
ROCK TYPES

| | | | |
|---|---|--|---|
|  Anhy  Bent  Brec  Cht  Clyst |  Coal  Congl  Dol  Gyp  Igne |  Lmst  Meta  Mrlst  Salt  Shale |  Shcol  Shgy  Slst  Ss  Till |
|---|---|--|---|

OTHER SYMBOLS

| | | | |
|--|---|--|---|
| OIL SHOW  Even  Spotted  Ques |  Dead  Gas | INTERVAL  Core  Dst | EVENT  Conn  Rft  Sidewall |
|--|---|--|---|





3600

3650

3700

3750

3800

3850

ROP (min/ft)
0 8

ROP (min/ft)
0 8

ROP (min/ft)
0 8

ROP (min/ft)
0 8

ROP (min/ft)
0 8

ROP (min/ft)
0 8

Gamma Ray (API)
0 150

Gamma Ray (API)
0 150

Gamma Ray (API)
0 150

Gamma Ray (API)
0 150

Gamma Ray (API)
0 150

Gamma Ray (API)
0 150

LS: crm-tan-brn, fxl, oolitic, sl foss, minor chert, tight, NS

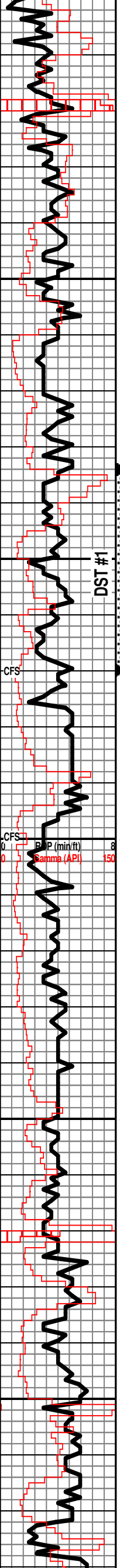
SH: blk, carb

LS: crm-tan, fxl, foss, chalky, dense, NS

LS: crm-tan, vxl, dense, sl foss, sl chalky, NS

LS: crm-tan, vxl, dense, sl foss, oolitic, NS

LS: crm-tan, fxl, sl foss, oolitic in pt, minor chert, fr inxl por, NS
(w/assoc gry-grn-brn shales)



LS: crm-tan-gry, fxl n, sl foss, oolitic, fr-gd inter-ool por, NS

HEEBNER 3870 (-998)

SH: blk, carb

SH: gry-grn-blk-rust

TORONTO 3891 (-1019)

LS: wht-tan-gry, vfxln, sl foss, ool in part, dense, NS

SH: gry-grn-brn

LANSING 3911 (-1039)

LS: wht-crm, f-vfxln, oolitic, sl foss, dense, sl chalky, NS

LS: crm-gry, fxl n, oolitic, dense, minor chert, NS

LS: as above

SH: gry-brn-blk-red

Strap @ 3970' - 1.64' short to board
Survey @ 3970' - 3/4 deg

LS: crm-tan, fxl n, oolic in pt, much dense, vssfo, spotty stn, sl odor

DST #1 3934-3970 (LKC C-D)
45:45:45
IF: 1" blow, no return
FF: No blow, no return
Recovery: 70' WM (95% M, 5%W)
IHP: 1890 FHP: 1817
IFP: 19-36 ISIP: 885
FFP: 39-50 FSIP: 858
BHT - 114 F
Chlorides - 6,100 ppm

LS: wht-tan, fxl n, oolic, sl foss, f-gd vug por, ssfo, spotty stn, fr odor

LS: crm-tan, vfxln, dense, w/abund red-gry-grn shales

LS: crm-gry, vfxln, dense, sl chalky, NS

LS: crm-brn, vxl n, dense, sl foss, cherty, NS (sl odor)

SH: gry-brn-grn-red

LS: crm-gry, f-vfxln, mostly dense, rare pr inxln por, vssfo, sl stn, sl odor

LS: crm-tan-gry, vfxln, dense, sl chalky, NS

NOTE: Multicolored shale caving

LS: crm-tan-gry, vfxln, dense, sl chalky, NS

LS: crm-tan-gry, vfxln, dense, sl chalky, NS

Shale caving

LS: as above

Shale caving

LS: as above

Shale caving

MUNCIE CRK 4074 (-1202)

Jet pit

LS: crm-gry, vfxln, dense, sl oolitic, cherty, tr fo, sl to spotty stn, sl odor

Shale caving

good samples again

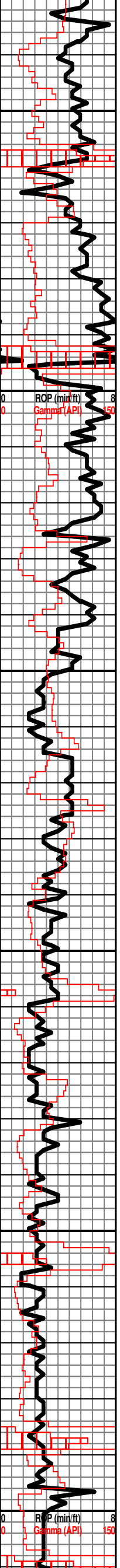
LS: crm-gry, vfxln, dense, minor chert, NS

SH: gry-blk-brn

LS: crm-tan-gry, vfxln, dense, sl chalky, NS

LS: as above

SH: grn-brn-blk-rust



LS: crm-gry, vfxln, dense, NS

Red shale cavings

LS: as above

Shale cavings

STARK 4159 (-1287)
SH: blk, carb

LS: crm-tan-gry, vfxln, v. dense, NS

LS: as above

HUSHPUCKNEY 4195 (-1323)
SH: blk, carb

LS: crm-brn-gry, vfxln, v. dense, NS

LS: as above

BKC 4233 (-1361)
SH: gry-brn-blk-grn-red

LS: crm-gry, vfxln, dense, NS

SH: gry-grn-brn-red

SH: as above

LS: crm-gry, vfxln, dense, sl chalky, NS

SH: gry-blk-grn-red-rust (sl sandy)

SH: as above

SH: as above

SH: as above

SH: as above

LS: crm-gry, vfxln, dense, minor chert, NS

Shale flood: red-grn-blk-gry

LS: crm-tan, vfxln, dense, NS (shale flood)

Shale flood: as above

PAWNEE

Shale flood: as above

LS: as above (shale flood)

Shale flood: as above

LS: crm-tan, vfxln, dense, NS (shale flood)

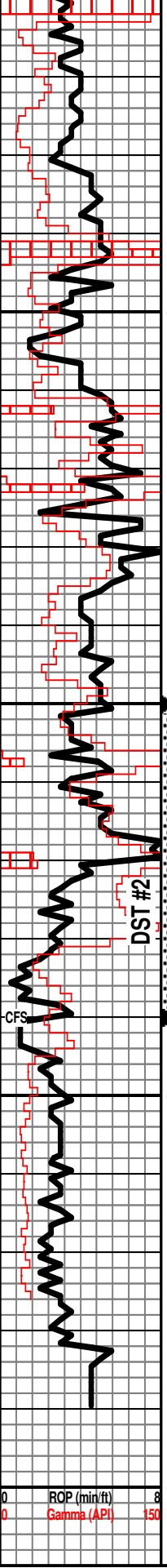
LS: as above (shale flood)

Add Mud

MYRICK STATION

SH: blk-gry-grn-red

Shale flood: as above



FT SCOTT 4420 (-1548)

Shale flood: as above

LS: wht-brn, vfxln, dense, NS (shale flood)

LS: crm-tan-brn, vfxln, oolitic, dense, NS

LS: as above

CHEROKEE 4444 (-1572)
SH: blk, carb

LS: tan-brn, f-vfxln, mostly dense, rare fr inxln por, nsfo, spotty dead stn, sl odor

LS: tan-brn, vfxln, dense, NVP, NS

SH: blk-gry

SH: as above

JOHNSON 4485 (-1613)

LS: crm-tan-brn, vfxln, oolitic, nsfo, tr dead stn, no odor

LS: crm-brn-gry, vfxln, sl oolitic, sl foss, dense, NVP, NS w/abund gry-blk shale

MORROW SHALE

SH: grn-brn-gry-blk-yel

SH: as above

Sst: clr clusters, f-mgr, prly std, sub-ang, friable-firm, gd inter-gran por, lsf, even sat stn (some dead stn), fr odor

DST #2 4500-4540 (Morrow Sst)
19:30:15:30
IF: Surf blow died in 16 min, no return
FF: No blow, no return
Recovery: 5' Mud
IHP: 2266 FHP: 2200
IFP: 20-23 ISIP: 775
FFP: 25-27 FSIP: 622
BHT - 122 F

MISSISSIPPIAN

LS: wht-tan, vfxln, dense, chalky, grainy text, cherty, NS

LS: crm-tan-gry, vfxln, dense, chalky, minor chert, NS

LS: as above

SH: blk-gry

LS: wht-tan, vfxln, sl chalky, pelletal, dense, NS

RTD - 4590'

ROP (min/ft) 8
Gamma (API) 150