



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1171265
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
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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: _____



1171265

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
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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> _____ <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: _____ _____
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#1 Gibson Trust Unit
390' FSL & 150' FWL
60' N & 180' W of SW SW SW Section 28-2S-33W
Rawlins County, Kansas
API# 15-153-20940-0000
Elevation: 2936' GL, 2941' KB

Sample Tops			Ref. Well
Anhydrite	2725'	+216	-13
B/Anhydrite	2760'	+181	-9
Deer Creek	3712'	-771	+20
Oread	3816'	-875	+13
Heebner	3837'	-897	+15
Lansing	3873'	-932	+12
Muncie Shale	3988'	-1047	+17
Stark	4062'	-1121	+22
Hush	4096'	-1155	+19
BKC	4118'	-1177	+11
Pawnee	4252'	-1311	-1
Cherokee Shale	4310'	-1369	-6
Mississippian	4488'	-1547	-9
RTD	4525'	-1584	

ALLIED OIL & GAS SERVICES, LLC 060218

Federal Tax I.D. # 20-8651475

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

SERVICE POINT: Dakley, KS

DATE <u>8-19-13</u>	SEC <u>28</u>	TWP. <u>2</u>	RANGE <u>33</u>	CALLED OUT	ON LOCATION <u>7:30 pm</u>	JOB START <u>8:30 pm</u>	JOB FINISH <u>9:00 pm</u>
LEASE <u>Unit</u>		WELL # <u>1</u>	LOCATION <u>Atwood 2 1/2 N 1/2 E</u>		COUNTY <u>Rauvin</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one)			<u>Start</u>				

CONTRACTOR WV6
 TYPE OF JOB Surface
 HOLE SIZE 12 1/4 T.D. 232'
 CASING SIZE 8 3/8 DEPTH 236.70
 TUBING SIZE DEPTH
 DRILL PIPE DEPTH
 TOOL DEPTH
 PRES. MAX MINIMUM
 MEAS. LINE SHOE JOINT
 CEMENT LEFT IN CSG. 151
 PERFS.
 DISPLACEMENT 14.19 bbl

OWNER same
 CEMENT
 AMOUNT ORDERED 165 sks cement 375.00
22.90

EQUIPMENT
 PUMP TRUCK CEMENTER Karane & Wank
 # 423/281 HELPER Paul Beaver
 BULK TRUCK
 # 347 DRIVER David Scario
 BULK TRUCK
 # DRIVER

COMMON	<u>165 sks @ 17.90</u>	<u>2953.50</u>
POZMIX	@	
GEL	<u>35 sks @ 23.90</u>	<u>70.20</u>
CHLORIDE	<u>6 sks @ 64.00</u>	<u>384.00</u>
ASC	@	
HANDLING	<u>178.42 sks @ 2.48</u>	<u>442.88</u>
MILEAGE	<u>3.14 ton x 3.5 x 2.60</u>	<u>1164.02</u>
TOTAL		<u>5014.20</u>

REMARKS:
Mix 165 sks cement
Displace with water
Cement did circulate

SERVICE
 DEPTH OF JOB 236.70'
 PUMP TRUCK CHARGE 1512.25
 EXTRA FOOTAGE @
 MILEAGE NDH @ 53 @ 2.70 423.50
 MANIFOLD @ 275.00
MLV @ 53 @ 4.40 242.00

CHARGE TO: Rothie Exploration
 STREET _____
 CITY _____ STATE _____ ZIP _____

TOTAL 2452.75

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 7,466.95
 DISCOUNT 1,717.39 IF PAID IN 30 DAYS
5,749.55 Net.

PRINTED NAME Jason Rocheson
 SIGNATURE J. Rocheson

ALLIED OIL & GAS SERVICES, LLC 054777

Federal Tax I.D.# 20-5975804

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

SERVICE POINT:
Russell KS

DATE <u>8-29-13</u>	SEC. <u>28</u>	TWP. <u>2</u>	RANGE <u>33</u>	CALLED OUT	ON LOCATION	JOB START <u>11:30 pm</u>	JOB FINISH <u>2:00 pm</u>
Gibson Trust LEASE <u>Unip</u>	WELL# <u>1</u>	LOCATION <u>Atwood KS 2 1/2 N 1/4 E Sinto</u>			COUNTY <u>Rawlins</u>	STATE <u>KS</u>	
OLD OR <u>NEW</u> (Circle one)							

CONTRACTOR W/W 6
 TYPE OF JOB P-T-A
 HOLE SIZE 7 7/8 T.D. 4525
 CASING SIZE DEPTH
 TUBING SIZE 4 1/2 16.6 DEPTH 2755
 DRILL PIPE DEPTH
 TOOL DEPTH
 PRES. MAX MINIMUM
 MEAS. LINE SHOE JOINT
 CEMENT LEFT IN CSG.
 PERFS.
 DISPLACEMENT

OWNER
 CEMENT AMOUNT ORDERED 205 6 9/10 49 gal 1/4 #10
 COMMON 123 @ 17.90 2201.70
 POZMIX 82 @ 9.35 766.70
 GEL 7.05 @ 23.40 164.97
 CHLORIDE @
 ASC @
5 1/2 50# 2sk @ 2.97 148.50
 @
 @
 @
 @
 @
 @
 HANDLING 220.08 @ 2.48 545.80
 MILEAGE 505.5875 @ 2.60 1314.53
 TOTAL 5142.20

EQUIPMENT

PUMP TRUCK CEMENTER Robert Y
 # 417 HELPER Glenn G
 BULK TRUCK
 # 410 DRIVER Joe G
 BULK TRUCK
 # DRIVER

REMARKS:

p1 25sk @ 2755
p2 100sk @ 1985
p3 40sk @ 280
p4 10sk @ 40'
30sk in Rat hole

SERVICE

DEPTH OF JOB 2755
 PUMP TRUCK CHARGE 2483.59
 EXTRA FOOTAGE @
 MILEAGE 55 H.V.M.T. @ 7.70 423.5
 MANIFOLD @
5.5 H.V.M.T. @ 4.40 242.00
 @

CHARGE TO: Ritchie Exploration
 STREET _____
 CITY _____ STATE _____ ZIP _____

TOTAL 3149.09

PLUG & FLOAT EQUIPMENT

8 7/8 Wooden plug @ 64.80 64.80
 @
 @
 @
 @

TOTAL 64.80

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 ~~8356.09~~ 8356.09
 DISCOUNT 1243.69 IR PAID IN 30 DAYS
Net 7112.40

PRINTED NAME Jason Prochason
 SIGNATURE [Signature]

Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802



Phone: 316-337-6200
Fax: 316-337-6211
<http://kcc.ks.gov/>

Mark Sievers, Chairman
Thomas E. Wright, Commissioner
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

December 03, 2013

Peter Fiorini
Ritchie Exploration, Inc.
8100 E 22ND ST N # 700
BOX 783188
WICHITA, KS 67278-3188

Re: ACO1
API 15-153-20940-00-00
Gibson Trust Unit 1
SW/4 Sec.28-02S-33W
Rawlins County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,
Peter Fiorini

Adam Eldani Geo-Log/Report

WellSight Systems

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

Measured Depth Log

Well Name: #1 Gibson Trust Unit
Location: SEC 28 -TOWNSHIP 2S- RANGE 33W RAWLINS COUNTY
License Number: API 15-153-20940 Region: KANSAS
Spud Date: 08/20/2013 Drilling Completed: 08/30/2013
Surface Coordinates: 60' N & 180'W OF SW SW SW
390'FSL 150'FWL
Bottom Hole Deviation Surveys are detailed through out the Geo-Report.
Coordinates:
Ground Elevation (ft): 2936' K.B. Elevation (ft): 2941'
Logged Interval (ft): 3400' To: 4525' Total Depth (ft): 4526'
Formation: Mississippian
Type of Drilling Fluid: Mud-Co Chemical

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

OPERATOR

Company: Ritchie Exploration Inc. (drilled by WW RIG: #6)
Address: 8100 E. 22nd ST. N. #700
Wichita, KS, 67278-3188

GEOLOGIST

Name: Adam M.A. Eldani
Company: Ritchie Exploration Inc.
Address: 8100 E. 22nd ST. N. #700
Wichita, KS, 67278-3188

Tops & Drill Report

TOPS: DRILLING REPORT

Sample Tops:

Anhydrite: 2725'+216	Anhydrite: 2724'+217
B/Anhydrite: 2760'+181	B/Anhydrite: 2759'+182
Deer Creek: 3734'-793	Deer Creek: 3736'-795
Oread: 3836'-895	Oread: 3838'-897
Heebner: 3848'-907	Heebner: 3852'-911
Lansing: 3894'-953	Lansing: 3896'-955
Muncie Sh: 4011'-1069	Muncie Sh: 4013'-1072
Stark: 4088'-1148	Stark: 4091'-1150
Hush: 4121'-1180	Hush: 4121'-1180
BKC: 4135'-1194	BKC: 4137'-1196
Pawnee: 4252'-1311	Pawnee: 4254'-1313
Cherokee Sh: 4310'-1369	Cherokee Sh: 4312'-1371
Mississippian: 4488'-1547	Mississippian: 4490'-1549
RTD: 4525'-1584	LTD: 4526'-1585

DAILY DRILLING REPORT:

DATE DEPTH:

8/19	Spud
8/20	498'
8/21	2604'
8/22	3517'
8/23	3837'
8/24	3862'
8/25	3924'
8/26	3957'
8/27	4006'
8/28	4052'
8/29	4114'
8/30	4525'

Misc.

All DST's info. are NEAR the correct log depth.

RIG: WW RIG: #6
TOOL PUSHER: JASON RICHESON
MUD: MUD CO. (Reid Atkins)
GAS DETECTOR: N/A

DRILL STEM TEST'S: Superior Testing, Inc.

LOGS: NABORS (Ian Mabb)

OFFICE: PETER FIORINI

Comments

Moved in and rigged up. Spud at 4:15 p.m. Ran 5 jts new 23# 8-5/8" surface casing. Tally at 224.70', set at 231'. Cemented with 165 sacks common, 2% gel, 3% cc. Cement circulated. Plug down at 9:00 p.m. Drilled out plug at 5:00 a.m. on 8/20/13.

AFTER THE RESULTS OF SAMPLE LOGGING, ELECTRIC LOGGING, AND ALL DST TESTS ANALYSIS & CALCULATIONS; IT WAS ELECTED TO PLUG & ABANDON THE #1 GABSON UNIT TRUST.

Plug and Abandon. 1st plug set at 2755' with 25 sacks 60/40 Poz, 4% gel, 1/4# flocele; 2nd plug set at 1985' with 100 sacks; 3rd plug set at 280' with 40 sacks; 4th plug set at 40' with 10 sacks and 30 sacks in the rat hole 175 total sacks. Job complete at 1:30 p.m. Plugging orders by Marvin Mills with the KCC.


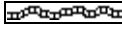
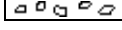
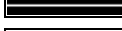
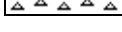
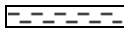







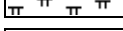

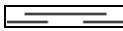
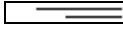
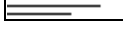

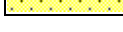


Well Log Surveys BY: NABORS. Compensated Denisty/ Neutron Log, Dual Induction.

SAMPLES WILL BE DEPOSITED WITH KANSAS GEOLOGICAL SURVEY.










































































RESPECTFULLY SUBMITTED

Adam M. A. Eldani

ROCK TYPES

 Anhy  Bent  Brec  Carb sh  Cht	 Clyst  Coal  Congl  Dol  Gyp	 Igne  Lmst  Meta  Mrlst  Salt	 Shale  Shcol  Shgy  Sltst  Ss	 Till  Red shale
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ACCESSORIES

MINERAL  Anhy  Arggrn  Arg  Bent  Bit  Brecfrag  Calc  Carb  Chtdk  Chtlt  Dol  Feldspar  Ferrpel  Ferr  Glau  Gyp	 Hvymin  Kaol  Marl  Minxl  Nodule  Phos  Pyr  Salt  Sandy  Silt  Sil  Sulphur  Tuff FOSSIL  Algae  Amph	 Belm  Bioclst  Brach  Bryozoa  Cephal  Coral  Crin  Echin  Fish  Foram  Fossil  Fuss  Gastro  Oolite  Oomold  Ostra  Pelec	 Pellet  Pisolite  Plant  Strom STRINGER  Anhy  Arg  Bent  Coal  Dol  Gyp  Ls  Mrst  Sltstrg  Ssstrg	TEXTURE  Boundst  Chalky  Cryxln  Earthy  Finexln  Grainst  Lithogr  Microxln  Mudst  Packst  Wackest
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OTHER SYMBOLS

- POROSITY**
- Earthy
 - Fenest
 - Fracture
 - Inter
 - Moldic
 - Organic
 - Pinpoint

- Vuggy
- SORTING**
- Well
 - Moderate
 - Poor

- ROUNDING**
- Rounded
 - Subrnd
 - Subang
 - Angular

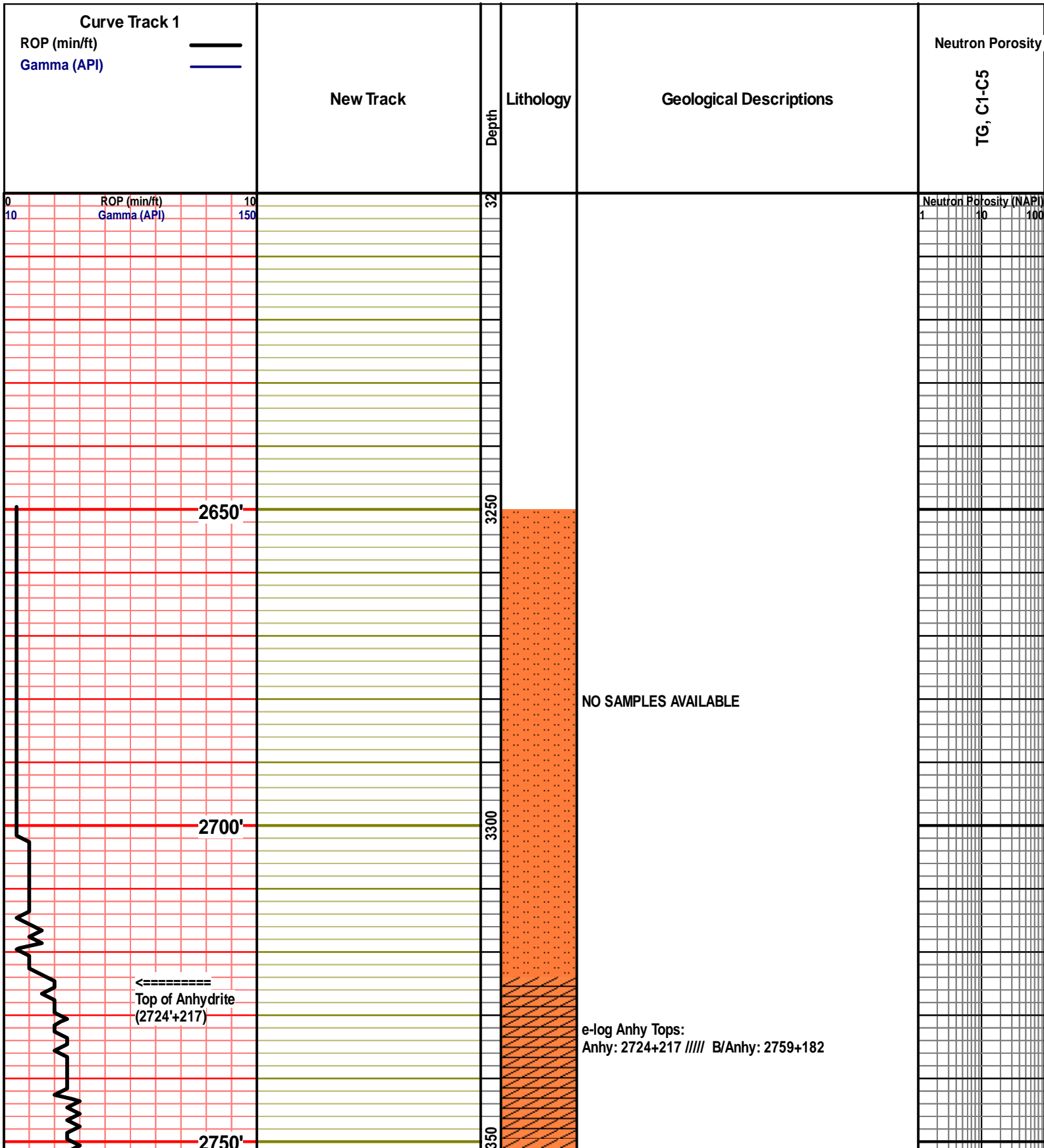
- Even
- Spotted
- Ques
- Dead

- Dst_alt
- Dst

- EVENT**
- Rft
 - Sidewall

- OIL SHOW**
- aiming_1

- INTERVAL**
- Core
 - Dst



(2759'+182)
B/ Anhydrite

2780'

NO SAMPLES AVAILABLE

ROP (min/ft)
Gamma (API)

Location is dry, semi sandy, lots
of horses & sunflower Farms.
8/21/2013

MUD DISPLACMENT @
3500

GEOLOGIST ON
LOCATION @ 3473'

PUMP PRESSURE 950+

Neutron Porosity (NAPI)

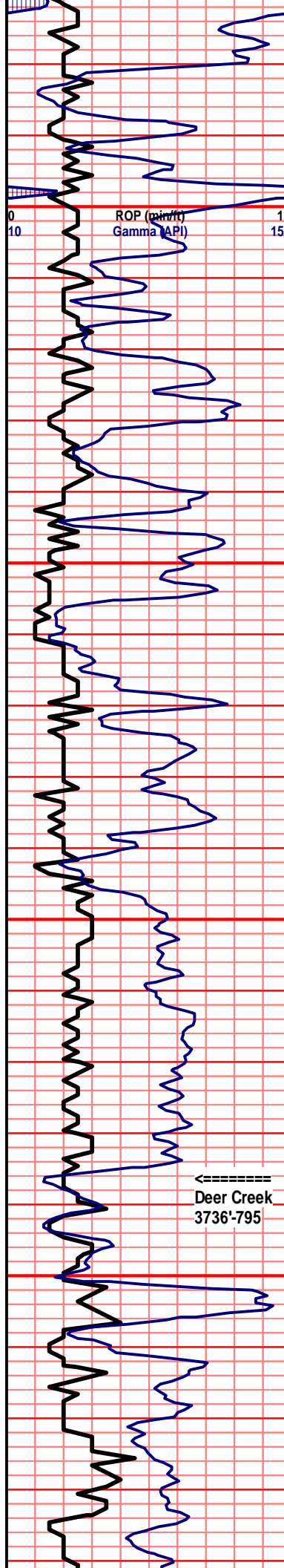
3550: crm-tan fn grn pack stn lm, fair intr prtcl por,
mod cemntd, no odr, ns.

3560: aa, incrs in crm inxln lm, ns, incrs in maroon
sh.

3570: grysh/brwn dolo, fn grn, poor por, lots of
maroon sh, few lght tan foss lm, no odr, ns.

3580: aa, incrs in gry slt stn, no odr, ns.

3590: mstlv arv. maroon & purp sh.



PUMP PRESSURE 950+

8/23/2013
mud info.
wt: 9.0
Funnel Vis. 51
Filtrate API: 10.4
Chloride 1,500
LCM # 1

PUMP PRESSURE 950+

8/24/2013
mud info.
wt: 9.1
Funnel Vis. 48
Filtrate API: 7.6
Chloride 2,000
LCM # 3

←=====
Deer Creek
3736'-795'

After Dst #1, LCM increased to 3
due to mud loss during DST.

**Strait Hole Survey: 1.25
degree**

DST #1: 3776' - 3837' (Oread)
Recovered 15' heavy oil, and 120'
thick oil cut mud (45% oil, 55%
mud).
Total Fluid 135' (51% oil, 49%



3600: mstly sh aa, crm corc xln lm, fair por, no odr, ns.

3610: mstly gry xln lm, dense, poor-no por, no odr, ns.

3620: crm inxln lm, sli foss, poor inxln por, non odr, ns.

3630: crm-gry, pack-grn stn lm, fn-med grn, poor por, well cmntd no odr, ns.

3640: gry inxln lm, v. dense, mstly maroon-brwn sh.

3650: mstly crm xln lm, semi dense, well cmentd, no odr, ns.

3660: aa w/ a reddish/pinkish tent to xln lm, incrs in maroon sh.

3670: aa, slght incrs in crm inxln lm, sig incrs in gry sh.

3680: mstly crm xln lm, poor-no por, slght incrs in wht chlk, no odr, ns.

3690: incrs in maroon & gry sh.

3700: aa, slght in incrs in crm semi foss xln lm, porr-no por, no sig change, no odr, ns.

3710: mstly crm pack stn lm xln in prt, poor por, lots of maroon sh, no odr, ns.

3720: peachy gummy sample, lots of gry dolo, v. fn grn, poor por, well cemntd, lots of chlk, no odr, ns.

3730: crm fn grn pack lstrn poor por, well cmntd, sig incrs in gry & purp sh, no odr, ns.

3740: 90+% maroon sh.

3750: mstly crm inxln lm, dense, poor-no por, wht chlk, no odr, ns.

3760: ingcrs in gry sh, mstly crm xln lm, foss in prt, poor-no por, dense, no odr, ns.

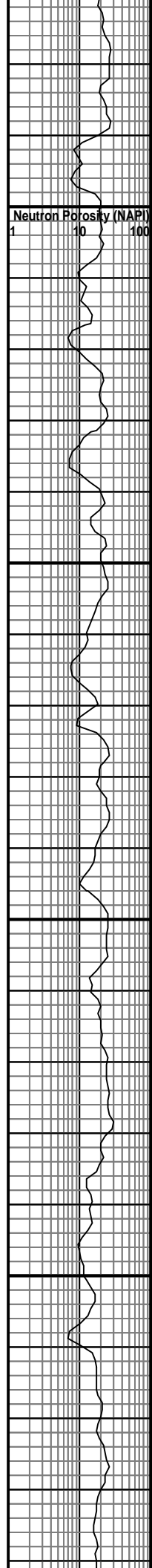
3770: tan-drk inxln lm, cemnt flooded pors, v. dense, incrs in clr-crm slt stn, mod cmnt, no odmr, ns.

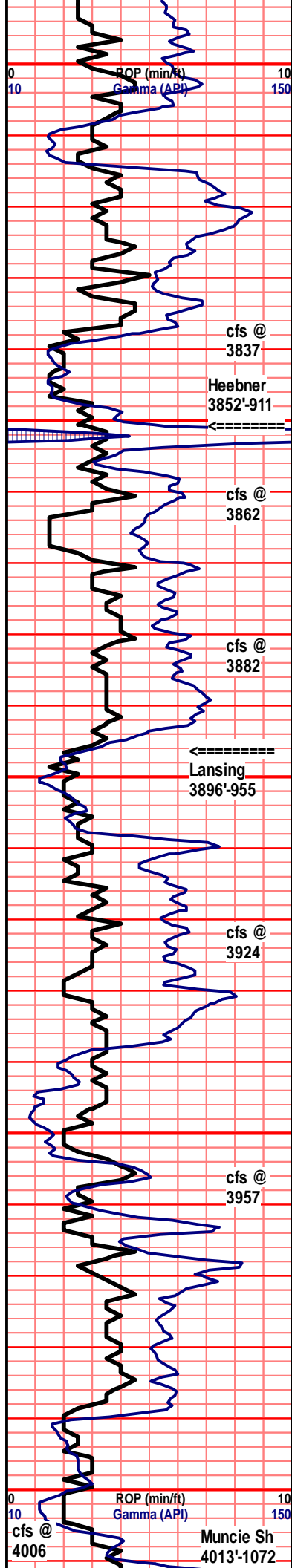
3780: 90% maroon sh, fekw lght gry fn xln lm, no vis por, no odr, ns.

3790: aa, crm fn grn pack stn lm, sli xln, no odr, ns.

3800: lm aa, mstly maroon slt stn & sh

Neutron Porosity (NAPI)
1 10 100





mud).
IFP: 70-93#/30" ISIP: 938#/45"
FFP: 99-113#/45" FSIP: 809#/60"

DST #2: 3835' - 3862' (Toronto) Mis-run
DST #3: 3826' - 3862' (Toronto)
Recovered 205' mud with a show of oil.
IFP: 74-104#/30" ISIP: 1269#/45"
FFP: 106-144#/45" FSIP: 1256#/60"

30MIN: mstly marron slt stn & sh, lots of gry slt & sh, one chp crm lm, fn xln w/ poor por, weak tary oil stn, no odr, ns. 60MIN: same as thirty min sample, slight incrs in shw rocks, sig incrs in tan inxln lm, poor inxln por, no odr, ns.

cfs @ 3837

Heebner 3852'-911

DST #4: 3853' - 3924' (LKC "A")
Recovered 30' mud. Flushed tool on FFP.
IFP: 62-67#/30" ISIP: 670#/30" FFP: 69-76#/30" FSIP: 642#/30"

30MIN: mstly wht pack stn lm, xln in prt, w/ fair-poor intr prtcl por, abundnt shw of blkck tary free oil, v. slight odr. 60MIN: shw rock; same as thirty, incrs in crm fn xln lm v. highly pyrtzd, dense, ns, no odr,

30MIN: 90% + maroon sh, few aqua & gry sh, few crm micrtic lm, sli xln dense, no vis por, no odr, ns. 60MIN: same as thirty min sample, slight incrs in lm, no odr, ns.

8/26/2013 mud info.
wt: 9.2
Funnel Vis. 52
Filtrate API: 8.6
Chloride 2,000
LCM # 3

Lansing 3896'-955

30MIN: lots of maroon, gry & aqua sh, few wht v. fn grn, grn stn lm, poor-fair intr prtcl por, w/ slight shw of free oil, few tan-crm inxln lm, w/ vuggy por w/ a shw of free oil, no odr. 60MIN: shw rock same as thirty sample, mstly crm-tan fn xln lm, lots of loose pyrt, no odr, ns.

cfs @ 3924

DST #5: 3892' - 3957' (LKC "F")
Recovered 220' watery mud with a show of oil.
IFP: 70-125#/30" ISIP: 1254#/45"
FFP: 126-158#/45" FSIP: 1229#/60"

30MIN: mstly wht-lght crm inxln lm, some pyrtzd, w/ poor-fair inxln por, semi abundt shw of brwn oil, lght-fair odr. 60MIN: decrse in shw rock, incrs in maroon & aqua sh, mstly crm inxln lm, poor-no por, no odr.

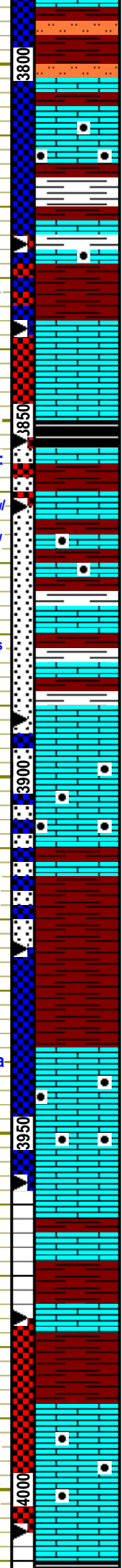
cfs @ 3957

DST #6: 3976' - 4006' (LKC "H")
Recovered 1' oil and 125' oil cut mud (5% oil, 95% mud). Flushed tool on FFP.
Total fluid: 126'. IFP: 51-80#/30" ISIP: 1346#/45" FFP: 83-102#/30" FSIP: 1337#/45"

30MIN: mstly lght crm-wht xln lm, dense, no vis por, highly pyrtzd chlk, few chps w/ stns & shw, wht xln lm, w/ vuggy por, shw of drk brwn oil, no odr. 60MIN: same as thirty min sample, no sig change.

cfs @ 4006

Muncie Sh 4013'-1072



3800: m. aa, incrs in aqua and gry sh.

3810: aa, incrs in aqua and gry sh.

3820: wht med grn grn stn lm, poor-fair intr prtcl por, some chps xln lm w/ poor inxln por, w/ shw of free tary blk oil.

3830: aa, incrs in shw barnng rocks, incrs in aqua and purp sh, slight-no odr.

3840: mstly maroon sh, two chps crm fn xln lm, w/ poor xln por, slight shw of free oil, no odr.

3850: mstly v. big chunks of maroon & gry sh, few fn grn pack stn lm, sli foss, no odr, ns.

3860: mstly lght crm micrtic lm, well cemntd, loose wht chlk, ten plus chps of wht pack stn- xln in prt w/ drk tary oil shw, poor-fair por, v. slight odr.

3870: mstly big chunks of maroon & gry sh.

3880: 95% + try maroon sh, few wht xln lm, w/ a shw of oil (uphole) no odr, ns.

3890: sh as above.

3900: sig incrs in green sh, tan inxln lm, dense, no vis por, no odr, ns.

3910: mstly wht fn xln lm, no vis por, no odr, ns.

3920: wht v. fn grn, grn stn lm, poor-fair intr prtcl por, abundnt blk tary stn, few chps w/ a weak show of free oil, no odr.

3930: mstly maroon sh, crm fn xln lm, no vis por, no odr, ns.

3940: incrs in maroon & aqua sh, lm aa, no odr, ns.

3950: v. gummy peachy sample, mstly maroon & gummy carb mud, incrs in crm inxln lm, dense, poor inxln por, no odr, ns.

3960: shw of gry sh, wht inxln lm, some w/ fair-poor inxln por, w/ a shw of drk brwn oil, lght odr.

3970: mstly crm inxln lm, cemnt flooded, no vis por, few orange chrt chps, lots of maroon sh, no odr, ns.

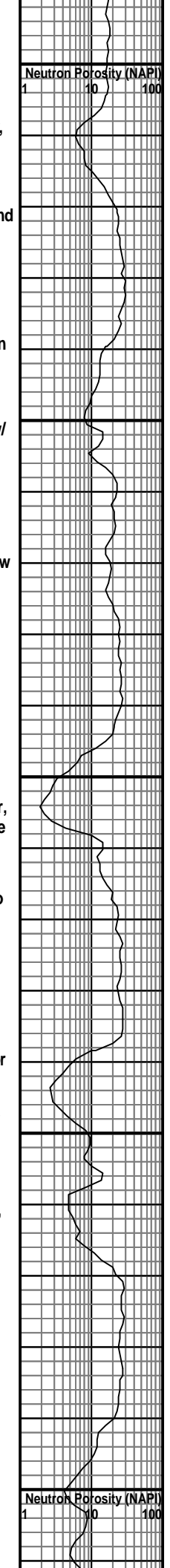
3980: aa, lght gry foss lm, cemnt flooded, v. dense, no vis por, no odr, ns.

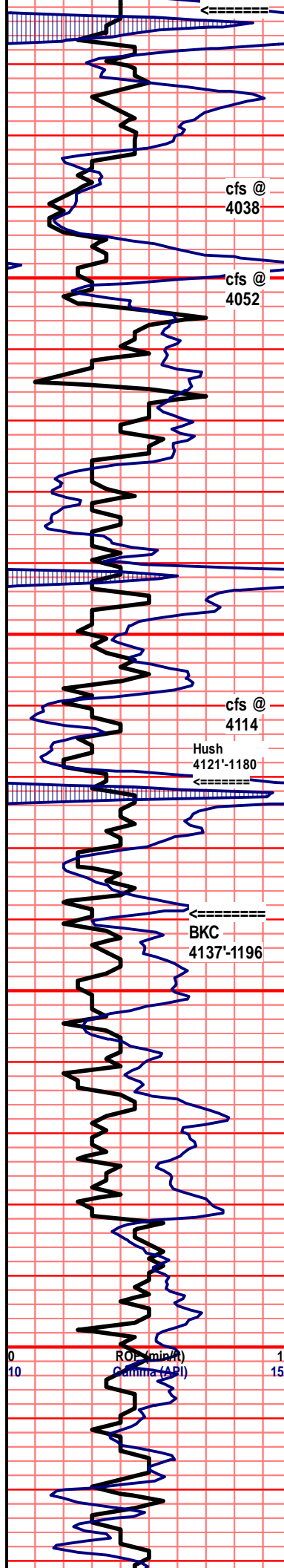
3990: aa, slight incrs in maroon sh.

4000: sig incrs in drk gry sh, wht xln lm, w/ vuggy por, shw of drk brwn oil, lght-fair odr.

4010: mstly maroon & gry sh, crm inxln lm, highly pyrtzd, semi dense, poor por, ns, few chps w/ shw (uphole), no odr.

4020: incrs in v. drk gry-blksh. mstly lght gry-crm





DST #7: 4023' - 4052' (LKC "J")
 Recovered 190' muddy water (20% mud, 80%, water). IFP:
 48-103#/30" ISIP: 1287#/45" FFP:
 104-132#/45" FSIP: 1251#/60"

30MIN: wht-lght crm ool lm, med-large grn, prtly xln, fair intr prtcl/frac por, lots of drk tary oil stn, nsfo, v. lght odr. 60MIN: same as thirty sample, incrs in fn xln lm, incrs in xln lm w/ frac por, ssfo, no odr.

30MIN: crm-wht ool lm, fair-poor intr prtcl por, sli xln, tary oil stn, mstly crm-lght gry inxln lm, fair inxln por, no odr, ns. 60MIN: same as thirty, incrs in drk gry sh, gry slt stn, no odr.

Strait Hole Survey: 1 degree

DST #8: 4057' - 4114' (LKC "K & L")
 Recovered 50' oil spotted mud (1% oil, 99% mud). IFP:
 70-76#/30" ISIP:
 702#/30" FFP:
 77-80#/30" FSIP:
 600#/30"

30MIN: mstly crm inxln lm, poor inxln por, lots of crm micrtic lm, poor-fair intr prtcl por, few crm xln lm, w/ pin point vuggy por, w/a ssfo, no odr. 60MIN: decrse in shw rock, same as thirty no sig change.

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micrtic lm, no odr, ns.

4030: sh aa, mstly gry-drk tan foss xln lm, v. dense, no vis por, no odr, ns.

4040: aa, v. gummy/ chlky sample, sig incrs in gry slt stn, no odr, ns.

4050: ool lm, sli xln, lots of drk tary oil stns, few chps w/ ssfo, no odr.

4060: mstly maroon & gry sh, lots of wht chlk, lght crm foss lm, poor por, no odr, ns.

4070: aa, incrs in gry sh, no sig change.

4080: mstly maroon sh, crm- drk crm inxln lm, dense, no vis por, no odr, ns.

4090: mstly wht-cerm xln lm, w/ pin point vuggy por, slght shw of free brwn oil, fair odr.

4100: mstly lght crm fn xln lm w/ frac & pin point vuggy por, ssfo, abundnt shw & stn, fair odr.

4110: sig incrs in fn xln lm, no vis por, ns, show aa, lght odr.

4120: mstly gry, aqua & maroon sh, crm inxln lm, poor-no por, no odr, ns.

4130: aa, sig incrs in lght crm sub-chlky lm, sli xln, no odr, ns.

4140: crm-lght gry inxln lm, dense, poor-no por, no odr, ns.

4150: aa, incrs in gry sh & incrs in chlk, few loose crinoid disks, no odr, ns.

4160: mstly maroon & gry sh, drk crm cors xln lm, poor frac por, one chp w/ tary oil stn (uphole) no odor, ns.

4170: sig incrs in lght purp sh, crm micrtic lm, sli xln, poor por, no odr, ns.

4180: aa, slght incrs in crm micrtic lm, sli/prtly xln, poor por, no odr, ns.

4190: crm-tan inxln lm, v. dense, sli foss, cemnt flooded, no vis por, no odr, ns.

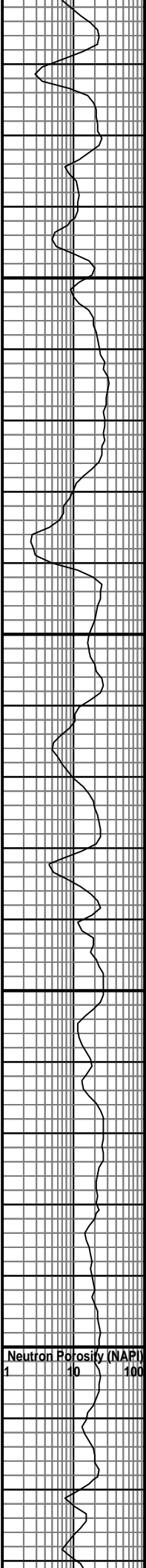
4200: aa, incrs in maroon & purp sh, no odr, ns.

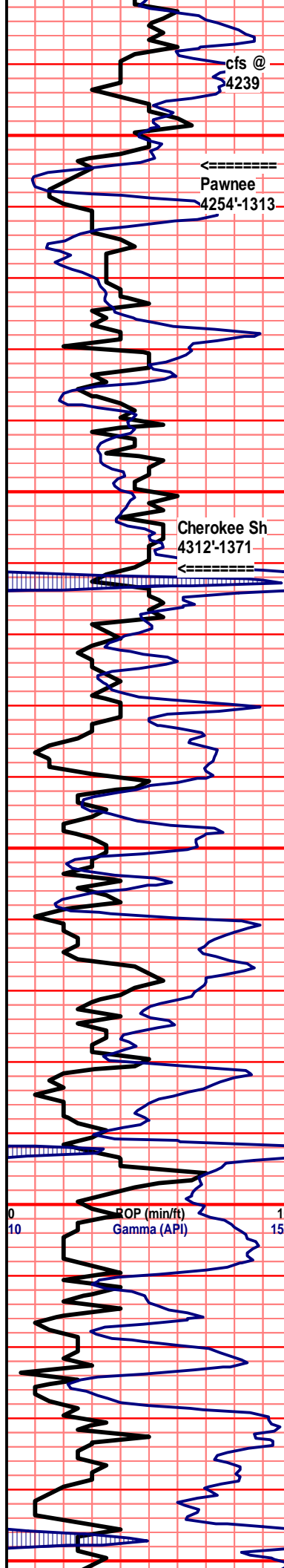
4210: sig incrs in gry sh, incrs in clr & gry slt stn, no odr, ns.

4220: mstly sh aa, gry fn xln lm, v. dense, no vis por, no odr, ns.

4230: crm inxln lm, w/ frac & vuggy por, abundnt frac tary dead oil stn, two chps w/ ssfo pin point vuggy por, no odr.

4240: gry cors xln lm, poor frac por, no odr, ns.





20MIN: gry inxln lm, poor-fair inxln por, lots of gry sh & slt stn, 45MIN: aa, incrs in wht & gry chlk, no odr, ns.

← Pawnee
4254'-1313

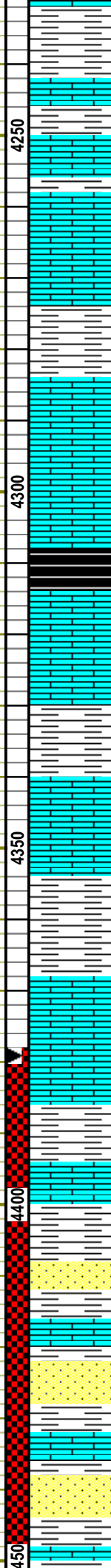
Cherokee Sh
4312'-1371
←

8/28/2013
mud info.
wt: 9.4
Funnel Vis. 70+
Filtrate API: 9.0
Chloride 1,800
LCM # 2

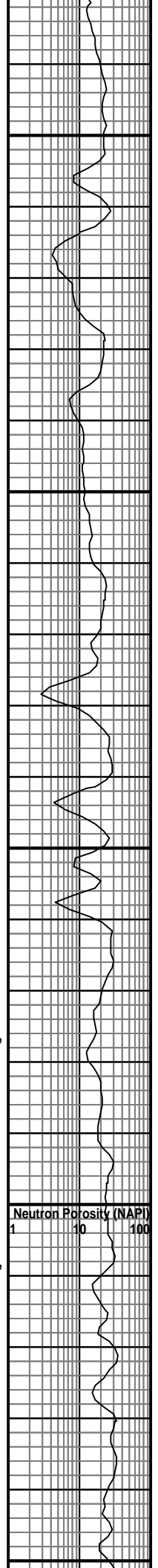
PUMP PRESSURE 950+

mud was mixed back into shape ,
upon Mud co. recommendation.

DST #9: 4379' - 4482'
(Cherokee) STRADDLE TEST, Recovered 2294'
gas cut muddy water
(5% gas, 10% mud, 85% water).
IFP: 812-1135#/30" ISIP:
1164#/45" FFP:
1144-1161#/30"



4250: sig incrs in gry & aqua sh, lots of gry chlk.
4260: aa, no sig change.
4270: tansh-crm micrtic lm, xln in prt, sli foss, poor-fair por, no odr, ns.
4280: aa, tan-gry xln lm, poor-fair inxln por, lots of loode pyrt, no odr, ns.
4290: tan-lght gry inxln lm, poor inxln por, no odr, ns.
4300: crm pack stn lm, well cemntd, poor intr prtcl por, no odr, ns.
4310: gry dense inxln lm, poor-no por, lots of wht chlk, gummy sample, no odr, ns.
4320: gry inxln lm, v/ dense, poor-no por, lots of gry sh, no odr, ns.
4330: sig incrs in chlk, gummy sample, incrs in crm inxln lm, poor inxln por, no odr, ns.
4340: incrs in gry & maron sh, incrs in gry inxln lm, poor-no inxln por, no odr, ns.
4350: aa, incrs in crm chlk & inxln lm, no odr, ns.
4360: lots of chlk, semi-gummy sample, gry-tan inxln lm, poor por, few crm pack stn lm, well cemntd, no odr, ns.
4370: aa, sig incrs in chlk.
4380: gry-crm inxln lm, poor-no por, mstly wht chlk.
4390: incrs in aqua sh, crm-tan inxln lm, poor-fair por, no odr, ns.
4400: incrs in yellow & purp sh, few qtz sand clusters, med grns, sub-anglur, well sortd, well cemntd, no odr, ns.
4410: lots, of purp, yellow, maroon, & gry sh, crm inxln lm, fair inxln por, no odr, ns.
4420: aa, few qtz sand clusters, fn grns, sub-rounded, well sortd, fairly cemntd, no odr, ns.
4430: aa, incrs in purp sh & chlkly lm.
4440: few qtz sand clusters, fn grns, sub-rounded, well sortd, well cemntd, lots of chlk-chlky lm, no odr, ns.
4450: incrs in tan-drk crm inxln lm, sli chrtly, poor-no por, no odr, ns.
4460: aa, msig incrs in qtz sand clusters, v. fn grns, sub-rounded, well sortd, fairly cemntd, w/ an intrusn



Neutron Porosity (NAPI)
1 10 100

FSIP: 1168#/60"

of heavy minrls, no odr, ns.

4470: aa, incrs in purp & yellow sh, incrs in clr, purp & yellow slit stn, no odr, ns.

4480: aa, no sig change.

4490: drk dirty sand w/ what appears to be heavy metals like copper/ calco pyrt, sub-rounded, fn-med grn, no odr, ns.

4500: incrs in maroon and gry sh.

4510: aa, incrs in yellow slit stn, incrs in clr chrt.

4520: incrs in qtz ss aa, incrs in gold & wht chrt, no odr, ns.

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Strait Hole Survey: 1.25 degree

30MIN: mstly gold, yellow, orange & wht chrt, no vis por, sli foss, no odr, ns, no flour. 60MIN: lots of multi color chrt aa, lght crm grain stn lm, fair intr prtcl por, no odr, ns.

Mississippian
4490'-1549'

RTD 4525'

