



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1224078  
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: \_\_\_\_\_

1224078

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: <input type="checkbox"/> Yes <input type="checkbox"/> No
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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 _____

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <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> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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**#1 York 31AB**

1015' FNL & 431' FWL

25'S & 101'E of SW NW NW Section 31-15S-30W

Gove County, Kansas

API# 15-063-22205-0000

Elevation: 2760' GL, 2765' KB

Sample Tops			Ref. Well
Anhydrite	2200'	+565	+2
B/Anhydrite	2222'	+543	+2
Stotler	3422'	-657	+2
Heebner	3798'	-1033	Flat
Toronto	3819'	-1054	-1
Lansing	3840'	-1075	-5
Muncie Shale	4003'	-1238	+3
Stark Shale	4097'	-1332	+2
Hush	4135'	-1370	Flat
BKC	4180'	-1415	-2
Marmaton	4209'	-1444	+4
Altamont	4236'	-1471	+1
Pawnee	4303'	-1538	Flat
Myrick	4336'	-1571	-1
Fort Scott	4358'	-1593	-1
Cherokee	4382'	-1617	-5
Johnson	4422'	-1657	-3
Morrow	4442'	-1677	NA
Mississippian	4462'	-1697	-6
RTD	4600'	-1835	

# ALLIED OIL & GAS SERVICES, LLC 063442

Federal Tax I.D. # 20-8651475

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

SERVICE POINT:  
Oakley, KS

DATE <u>6-22-14</u>	SEC. <u>31</u>	TWP. <u>7S</u>	RANGE <u>30W</u>	CALLED OUT	ON LOCATION <u>W: 00 AM</u>	JOB START <u>3:00 PM</u>	JOB FINISH <u>5:30 PM</u>
LEASE <u>YON 31 AB</u> WELL# <u>#1</u>			LOCATION <u>Healy W to Twp Rd N Ford</u>		COUNTY <u>Goove</u>	STATE <u>KS</u>	
OLD OR <u>(NEW)</u> (Circle one)			<u>280 E 40 Willow Rd 2 N 1 W 20</u>				

CONTRACTOR <u>Indio #8</u>	OWNER <u>same</u>
TYPE OF JOB <u>PTA</u>	
HOLE SIZE <u>2 7/8</u>	T.D. <u>4600'</u>
CASING SIZE	DEPTH
TUBING SIZE	DEPTH
DRILL PIPE	DEPTH
TOOL	DEPTH
PRES. MAX	MINIMUM
MEAS. LINE	SHOE JOINT
CEMENT LEFT IN CSG.	
PERFS.	
DISPLACEMENT	

CEMENT	
AMOUNT ORDERED <u>240 SKS 60/40 Poz</u>	
<u>1/2 gal 1/4 # 150-seal</u>	
COMMON	@
POZMIX	@
GEL	@
CHLORIDE	@
ASC	@
<u>60/40 Poz 240 SKS @ 18.90</u>	<u>4536.00</u>
<u>Flt-seal 67# @ 2.97</u>	<u>199.59</u>
material total	@ <u>4735.59</u>
<u>(944 / 20%)</u>	@
HANDLING <u>245 cu ft</u>	@ <u>2.78</u> <u>679.50</u>
MILEAGE <u>10.32 ton x 50 x 2.75</u>	<u>1419.00</u>

EQUIPMENT	
PUMP TRUCK # <u>422</u>	CEMENTER <u>Kelly Gable</u>
BULK TRUCK # <u>386241</u>	DRIVER <u>John P (Crew)</u>
BULK TRUCK #	DRIVER
	HELPER <u>Wayne Mcghy</u>

REMARKS:

rigged up

50 @ 2215

100 @ 1100

50 @ 270

10 @ 40/w wiper plug

30 RH

Thank you Kelly & crew

TOTAL	
SERVICE	
DEPTH OF JOB	<u>2215'</u>
PUMP TRUCK CHARGE	<u>1250.00</u>
EXTRA FOOTAGE	@
MILEAGE <u>MIL HV 50</u>	@ <u>7.70</u> <u>385.00</u>
MANIFOLD	@
<u>MIL V 50</u>	@ <u>4.40</u> <u>220.00</u>
<u>(776.30 20%)</u>	@
TOTAL <u>3881.60</u>	

CHARGE TO: Ritchie Exploration

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

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.

PRINTED NAME Sid Dortscha

SIGNATURE Sid Dortscha

SALES TAX (If Any) \_\_\_\_\_

TOTAL CHARGES 8616.60

DISCOUNT 1133.30 (20%) IF PAID IN 30 DAYS

6893.38 net

# ALLIED OIL & GAS SERVICES, LLC 064031

Federal Tax I.D. # 20-8651475

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

SERVICE POINT: Oakley, TX

DATE <u>6-13-14</u>	SEC <u>31</u>	TWP. <u>15</u>	RANGE <u>30</u>	CALLED OUT	ON LOCATION <u>10:30 pm</u>	JOB START <u>2:30 p</u>	JOB FINISH <u>3:00 pm</u>
LEASE <u>31118</u>	WELL # <u>1</u>	LOCATION <u>Healy W to Taos Rd 2N</u>			COUNTY <u>Gove</u>	STATE <u>Ks</u>	
OLD OR NEW (Circle one) <u>NEW</u>				to 280, 382 E Hwy to Willow, 2N to rig			

CONTRACTOR <u>UW 8</u>	OWNER <u>Same</u>
TYPE OF JOB <u>Surface</u>	
HOLE SIZE <u>12 1/4</u> T.D. <u>221'</u>	CEMENT
CASING SIZE <u>8 7/8</u> DEPTH <u>221.12'</u>	AMOUNT ORDERED <u>175 sks com 386cc</u>
TUBING SIZE	<u>280 gal</u>
DRILL PIPE	
TOOL	
PRES. MAX	COMMON <u>175 sks @ 17.90 3132.50</u>
MEAS. LINE	POZMIX
CEMENT LEFT IN CSG. <u>151</u>	GEL <u>329 # @ 1.05 345.95</u>
PERFS.	CHLORIDE <u>494 # @ 1.10 543.40</u>
DISPLACEMENT <u>13.19 661</u>	ASC

EQUIPMENT		
PUMP TRUCK # <u>422</u>	CEMENTER <u>Lakone E. Clark</u>	<u>Material Total @ 1188.00</u>
BULK TRUCK # <u>871/310</u>	HELPER <u>Wayne McGloughy</u>	<u>(804.27/20%)</u>
BULK TRUCK #	DRIVER <u>Joel Martinez (Gas)</u>	
BULK TRUCK #	DRIVER	

**REMARKS:**  
Mix 175 sks cement  
Displace with water  
Cement did circulate  
10 sks to pit

CHARGE TO: Ritchie Exploration  
 STREET \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

HANDLING <u>189.23 873 @ 2.48 469.29</u>	
MILEAGE <u>8.64 hrs 50 x 2.25 1188.00</u>	
TOTAL _____	
SERVICE	
DEPTH OF JOB _____	
PUMP TRUCK CHARGE <u>1512.25</u>	
EXTRA FOOTAGE _____	
MILEAGE <u>MIFU 50 @ 7.70 385.00</u>	
MANIFOLD <u>savage @ 275.00</u>	
<u>MFCU 50 @ 4.40 220.00</u>	
TOTAL <u>4,049.54</u>	
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.

PRINTED NAME Sid Dantscher  
 SIGNATURE [Signature]

SALES TAX (if Any) \_\_\_\_\_  
 TOTAL CHARGES 8,070.89  
 DISCOUNT 1614.17 (20%) IF PAID IN 30 DAYS  
6456.71 Net.

# Adam Eldani Geo-Log/Report

## WellSight Systems

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

Measured Depth Log

Well Name: #1 YORK 31AB

Location: SEC 31-TOWNSHIP 15S- RANGE 30W GOVE COUNTY

License Number: API 15-063-22205

Region: KANSAS

Spud Date: 6/13/2014

Drilling Completed: 6/22/2014

Surface Coordinates: 1015' FNL 431' FWL

SW NW NW

Bottom Hole Deviation Surveys are detailed through out the Geo-Report.

Coordinates:

Ground Elevation (ft): 2760'

K.B. Elevation (ft): 2765'

Logged Interval (ft): 3600' To: 4600'

Total Depth (ft): 4602'

Formation: Mississippian

Type of Drilling Fluid: Mud-Co Chemical

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

### OPERATOR

Company: Ritchie Exploration Inc. (drilled by WW RIG 8)

Address: 8100 E. 22nd ST. N. #700

Wichita, KS, 67278-3188

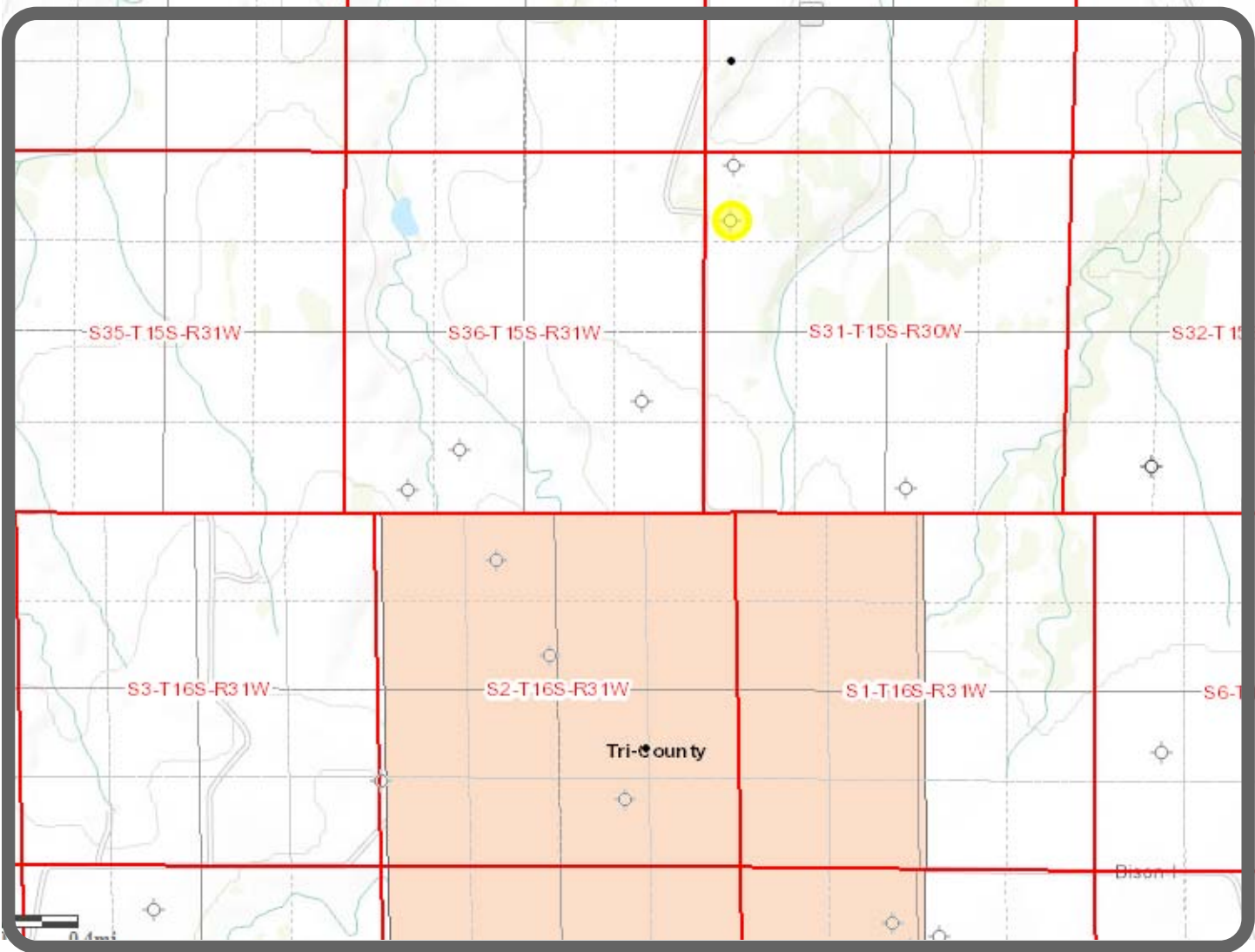
### GEOLOGIST

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: 2200'+565	Anhydrite: 2196'+569
B/Anhydrite: 2222'+543	B/Anhydrite: 2219'+546
Stotler: 3422'-657	Stotler: 3424'-659
Heebner: 3798'-1033	Heebner: 3799'-1034
Toronto: 3819'-1054	Toronto: 3819'-1054
Lansing: 3840'-1075	Lansing: 3838'-1073
Muncie Sh: 4003'-1238	Muncie Sh: 4003'-1238
Stark Sh: 4097'-1332	Stark Sh: 4097'-1332
Hush: 4135'-1370	Hush: 4135'-1370
BKC: 4180'-1415	BKC: 4178'-1413
Marmaton: 4209'-1444	Marmaton: 4210'-1445
Altamont: 4236'-1471	Altamont: 4236'-1471
Pawnee: 4303'-1538	Pawnee: 4304'-1539
Myrick: 4336'-1571	Myrick: 4339'-1574
Fort Scott: 4358'-1593	Fort Scott: 4356'-1591
Cherokee: 4382'-1617	Cherokee: 4382'-1617
Johnson: 4422'-1657	Johnson: 4423'-1658
Morrow: 4442'-1677	Morrow: 4462'-1697
Miss: 4462'-1697	Miss: 4482'-1717
RTD4600'-1835	LTD: 4602'-1837

#### DAILY DRILLING REPORT:

##### DATE DEPTH:

6/13	Spud
6/14	1005'
6/15	2650'
6/16	3350'
6/17	3840'
6/18	3926'
6/19	4069'
6/20	4322'
6/21	4444'
6/22	4600'

#### Misc.

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

RIG: WW RIG #8  
TOOL PUSHER: Sid Deutscher  
MUD: MUD CO. (Tyler Lang)  
GAS DETECTOR: N/A

DRILL STEM TEST'S: Superior Testers Enterprises

LOGS: NABORS (Jason Cappiucci)

OFFICE: PETER FIORINI

## Comments

Moved in and rigged up. Spud at 10:30 a.m. Ran 5 jts new 23# 8-5/8" surface casing. Tally at 214.12', set at 220'. Cemented with 175 sacks common, 3% cc, 2% gel. Cement did circulate. Plug down at 2:45 p.m. Drilled out plug at 10:45 p.m.

**AFTER THE RESULTS OF SAMPLE LOGGING, ELECTRIC LOGGING, AND ALL DST'S ANALYSIS & CALCULATIONS; IT WAS ELECTED TO PLUG & ABANDON #1 YORK 31AB.**

RTD 4600'. Ran Electric Log. LTD 4602'. Plug and Abandon. 1st plug set at 2215' with 50 sacks of 60/40 Poz, 4% gel, 1/4# Flocele per sack; 2nd plug set at 1190' with 100 sacks; 3rd plug set at 270' with 50 sacks; 4th plug set at 40' with 10 sacks. 210 total sacks. Plugged rat hole with 30 sacks. Job complete at 3:30 p.m. Plugging orders by Rich Williams with the KCC.


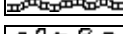



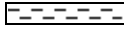






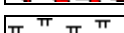
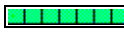

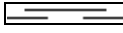





Well Log Surveys BY: NABORS. Compensated Denisty/ Neutron Log, Dual Induction.

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
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## ACCESSORIES

<b>MINERAL</b>  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  <b>FOSSIL</b>  Algae  Amph	 Belm  Bioclst  Brach  Bryozoa  Cephal  Coral  Crin  Echin  Fish  Foram  Fossil  Fuss  Gastro  Oolite  Oomold  Ostra  Pelec	 Pellet  Pisolite  Plant  Strom  <b>STRINGER</b>  Anhy  Arg  Bent  Coal  Dol  Gyp  Ls  Mrst  Sltstrg  Ssstrg	<b>TEXTURE</b>  Boundst  Chalky  Cryxln  Earthy  Finexln  Grainst  Lithogr  Microxln  Mudst  Packst  Wackest
---	---	--	---	--

OTHER SYMBOLS

POROSITY

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

Vuggy

- SORTING**
- Well
  - Moderate
  - Poor

ROUNDING

- Rounded
- Subrnd
- Subang
- Angular

**OIL SHOW**  
aimimg\_1

- Even
- Spotted
- Ques
- Dead

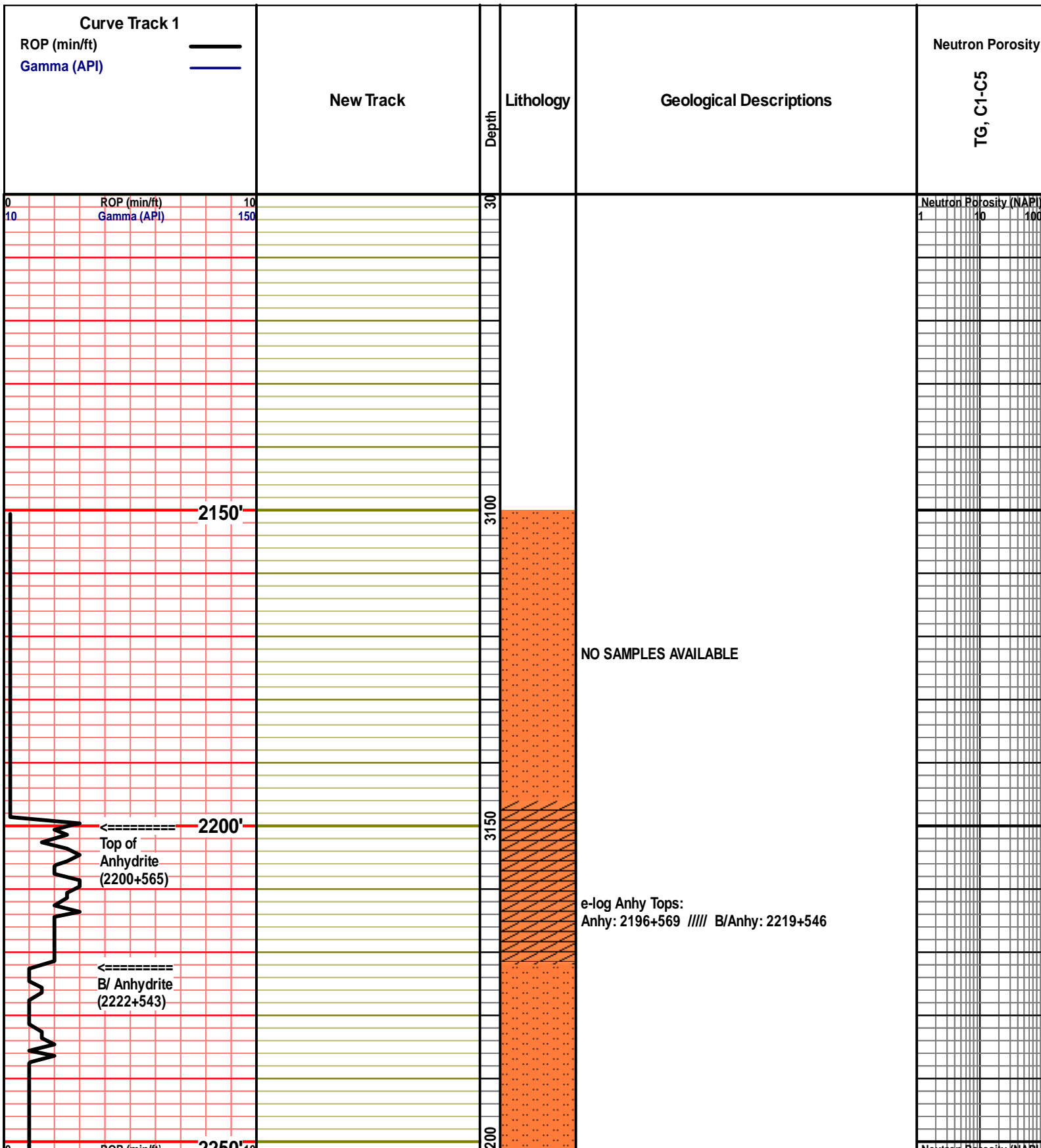
**INTERVAL**

- Core
- Dst

Dst\_alt  
 Dst

**EVENT**

- Rft
- Sidewall



ROP (min/ft)  
Gamma (API)

2250 10  
150

NO SAMPLES AVAILABLE

2300'

3250

3300

3350

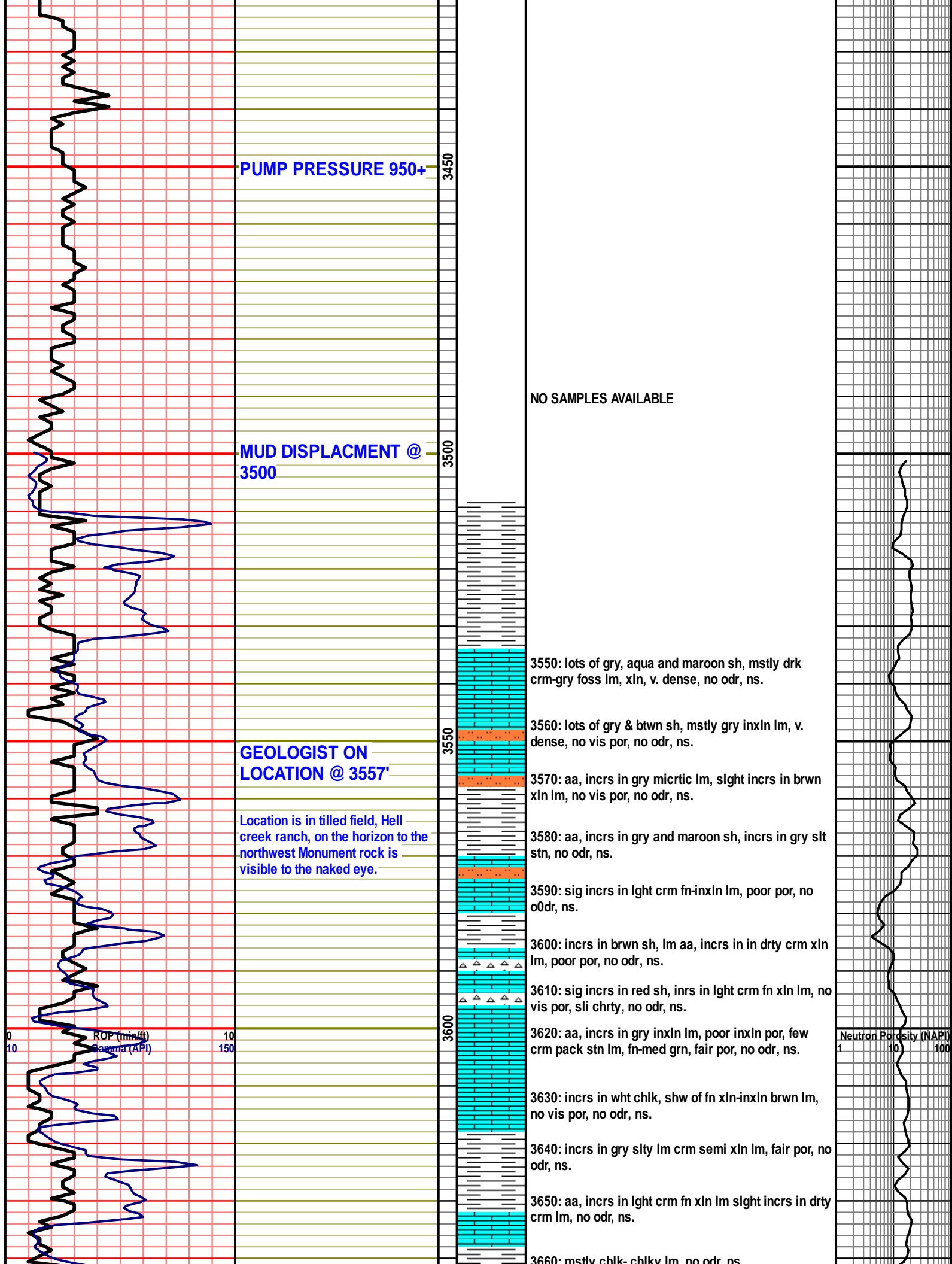
3400

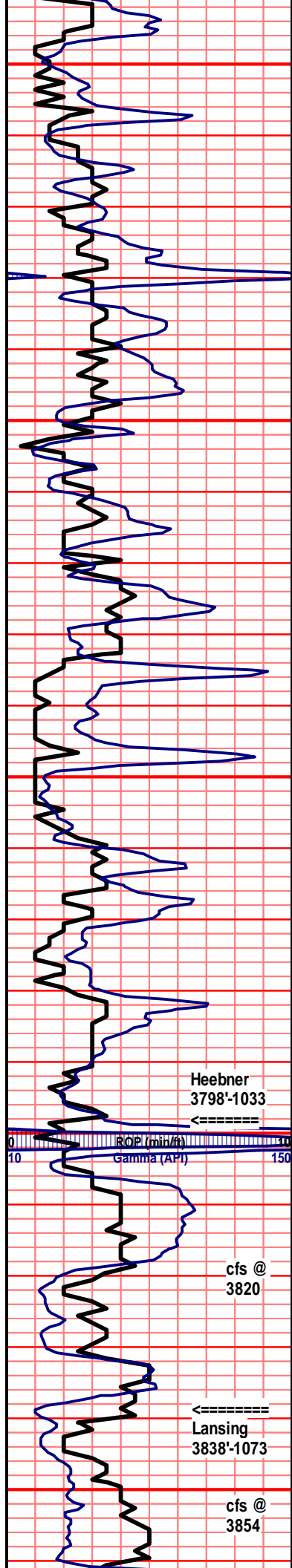
6/16/2014  
mud info.  
wt: 9.5  
Funnel Vis. 29  
Filtrate API: N/C  
Chloride 21,000  
LCM # 0

ROP (min/ft)  
Gamma (API)

10  
150

Neutron Porosity (NAP)  
1 10 100





**PUMP PRESSURE 950+**

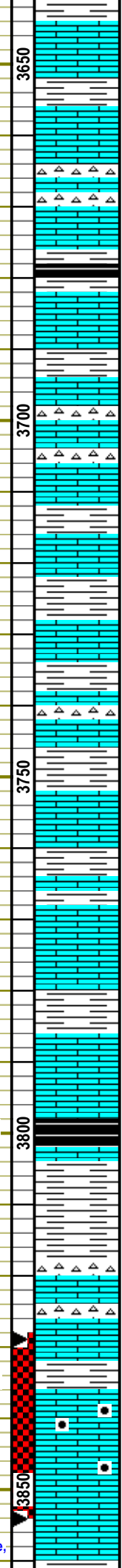
6/17/2014  
mud info.  
wt: 8.9  
Funnel Vis. 52  
Filtrate API: 6.8  
Chloride 1,400  
LCM # 2

**Straight Hole Survey: 1 degree**

30MIN: lots of blk sh, lots of chlk, mstly crm-drty crm xln lm, no odr, ns. 60MIN: incrs in red sh, mstly crm-tan inxln lm, v. dense, no nvis por, no odr, ns.

**DST #1: 3829' - 3854' (LKC "A")**  
Recovered 150' watery mud (40% water, 60% mud). Chlorides 49,000.  
IFP:81-93#/30"ISIP:1070#/45"  
FFP:118-123#/45"FSIP:1032#/60"

30MIN: mstly lght crm chrt, lght crm inxln lm, poor-no xln por, lots of chky lm, few chps tan lm w/ edge frac por, w/ a rich oil stn, poor-no odr. 60MIN: aa, no sig change, same show, no odr.



3670: mstly crm-drty crm xln-pack stn lm, fn grn, fair intr prtcl por, no odr, ns.

3680: aa. incrs in tan-gry inxln lm, dense, no vis por, no odr, ns.

3690: crm-tan inxln lm, dense, poor inxln por, few pack stn lm w/ chrt nod, no odr, ns.

3700: incrs in crm-gry inxln lm, foss in prt, dense, no vis por, no odr, ns.

3710: incrs in red & gry sh, mstly crm inxln lm, poor por, no odr, ns.

3720: aa, sig incrs in chlk, incrs in crm pack stn lm, fair intr prtcl por, no odr, ns.

3730: shw of v. lght crm chrt, tan foss lm, semi chrt, crm inxln lm, dense, no odr, ns.

3740: aa, incrs in crm inxln lm, poor-no por, no odr, ns.

3750: slight incrs in red sh, mstly crm-tan inxln lm, no vis por, no odr, ns.

3760: crm-tan inxln lm, poor-no por, slight incrs in chlk, no odr, ns.

3770: sig incrs in wht chrt, lm aa, no odr, ns.

3780: incrs in drty crm inxln lm, foss, poor-no por, no odr, ns.

3790: aa, sig incrs in wht chlk, no odr, ns.

3800: lots of chlk, brwn slty sh, drty crm xln lm, no odr, ns.

3810: brwn inxln lm, dense, poor-no por, shw of drk brwn sh, no odr, ns.

3820: shw of blk carb sh, lots of chlk, drty crm xln lm, poor-no por, no odr, ns.

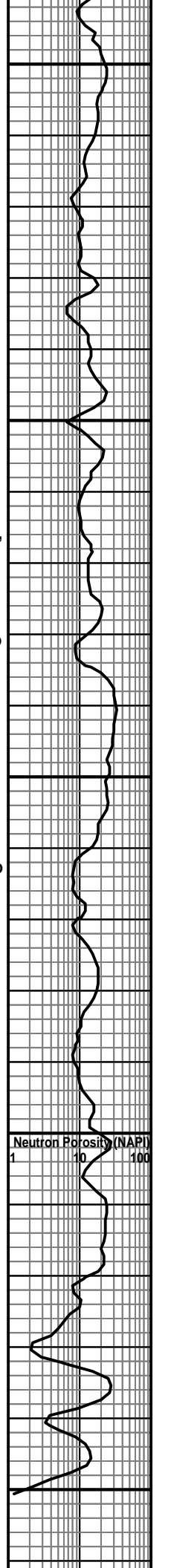
3830: incrs in red sh, mstly tan inxln lm, dense, no vis por, no odr, ns.

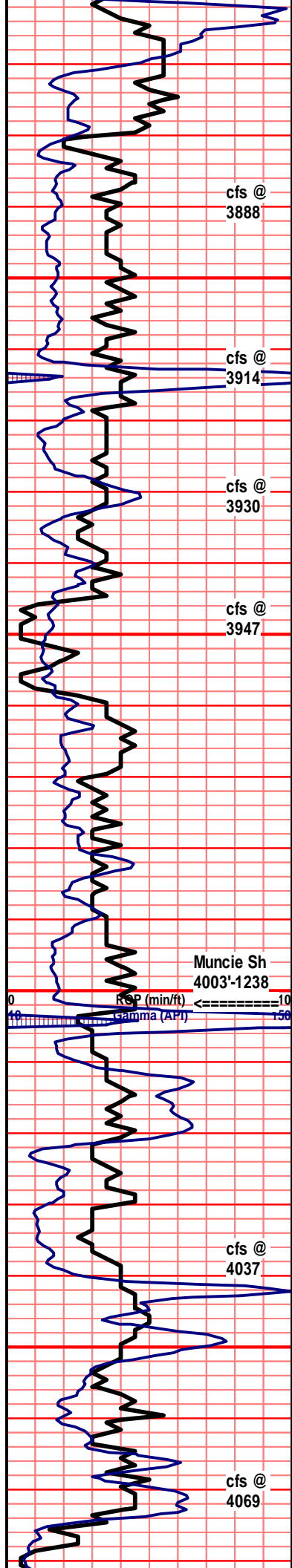
3840: lots of lght crm chert, mstly lght crm xln lm, dense, no odr, ns.

3850: mstly crm-tan lm, aprox ten chps w/ edge frac por, w/ a rich oil stn, slight odr.

3860: mstly red, aqua & gry slty sh, crm fn xln lm, no vis por, one chp w/ tary oil stns, no odr.

3870: sig incrs in gry fsso-xln lm, dense, no vis por,





6/18/2014  
mud info.  
wt: 9.1  
Funnel Vis. 63  
Filtrate API: 6.8  
Chloride 2,200  
LCM # 2

cfs @  
3888  
30MIN: lots of wht chlk, crm inxln -fn xln lm, no vis por, lght tan ool-ool cast lm, fair-poor ool cast por, no odr, ns. 60MIN: same as thirty min sample, decrete in ool-ool cast lm, no odr, ns.

cfs @  
3914  
30MIN: lots of crm chlk-chlky lm, mstly clght crm inxln lm, cemnt flooded, no odr, ns. 60MIN: same as thirty min sample, nosig change, no no odr, ns.

cfs @  
3930  
30MIN: lots of tan inxln lm, fair-poor inxln por, lots of ool lm, poor intr prtcl por, abundant shw of brwn free oil, v. strng odr. 60MIN: same as thirty min sample, incrs in crm ool lm, w/ poor intr prtcl por, some shw of brwn oil.

cfs @  
3947  
30MIN: incrs in gry sh, crm inxln lm, dense, no vis por, lots of tan ool cast lm, no odr, ns. 60MIN: incrs in chlk, same as thirty min sample, no odr, ns.

**DST #2: 3908' - 3947'**  
**(LKC "E & F")**  
**Recovered 315' watery mud (40% water, 60% mud) and 504' water.**  
**Total fluid 819'.**  
**Chlorides 39,000.**  
**IFP:96-217#/30"ISIP: 1062#/45"**  
**FFP:244-404#/45"FSIP: 1058#/60"**

Muncie Sh  
4003'-1238'

**PUMP PRESSURE 950+**

cfs @  
4037  
30MIN: mstly wht chlk-chlky lm, crm inxln lm, poor inxln por, no odr, ns. 60MIN: slght incrs in maroon sh, chlky lm, crm-lght gry inxln lm, poor por, no odr, ns.

6/19/2014  
mud info.  
wt: 9.1  
Funnel Vis. 49  
Filtrate API: 6.0  
Chloride 3,300  
LCM # 1

cfs @  
4069  
30MIN: sig incrs in blk, gry & aqua sh, lots of chlky lm, crm inxln lm, poor-no xln por, no odr, ns. 60MIN: incrs in sh, lm same as thirty min sample, no odr, ns.



lots of crm inxln-fn xln lm, poor por, no odr, ns.

3880: incrs in wht chlk-chlky lm, mstly crm xln lm, poor-no por, no odr, ns.

3890: aa, slght incrs in lght crm foss lm, poor-fair foss por, no odr, ns.

3900: incrs in brwn sh, lots of wht chlk, mstly crm inxln lm, no odr, ns.

3910: greater incrs in gry & brwn sh, chlk, crm foss-xln lm, no odr, ns.

3920: lots of aqua & gry sh, chlk, tan -crm xln lm, two w/ questionable stns, flash odr.

3930: mstly tan inxln lm, fair-poor inxln por, abundant shw of brwn free oil, v. strng odr.

3940: tan xln lm, w/ poor xln por, shw of brwn oil, lots of crm ool lm, poor intr prtcl por ssfo, fair odr.

3950: incrs in chlky lm, crm chert, lots of crm xln lm, nsfo, shw rocks aa, fair odr.

3960: mstly gry & red sh, lots of crm xln lm, tan ool cast lm, super por, no odr, ns.

3970: lots of crm xln lm, mstly tan ool cast lm, super por, no odr, ns.

3980: aa, incrs in gry xln lm, sig incrs in wht chlk-chlky lm, lno odr, ns.

3990: mstly lght gry-crm inxln lm, cemnt flooded, lots of loose wht chlk, no odr, ns.

4000: aa, incrs in wht chlk, no odr, ns.

4010: slght incrs in gry sh, mstly crm inxln lm, no odr, ns.

4020: shw of blk carb sh, incrs in brwn foss chrt, mstly brwn foss-xln lm, poor-no por, no odr, ns.

4030: sig incrs in gry and aqua sh, mstly tan-brwn inxln lm, foss, cemnt flooded fracs, poor-no por, no odr, ns.

4040: shw of wht chrt, incrs in wht chlk, mstly crm inxln lm, poor-no inxln por, no odr, ns.

4050: mstly drty crm xln-cors xln lm, poor-no por, no odr, ns.

4060: crm-tan inxln lm, cemnt flooded fracs, poor-no por, no odr, ns.

4070: sig incrs in aqua shly-lm, sli incrs in chlk, lm aa, no odr, ns.

4080: gry & aqua sh, crm fn-inxln lm, poor por, no odr, ns.

4090: aa, incrs in lght crm micrtic-v. fn pack stn lm, fair intr prtcl por, no odr, ns.

