Confidentiality Requested:
☑ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1235946

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 # 4767
Name: Ritchie Exploration, Inc.
Address 1: 8100 E 22ND ST N # 700
Address 2: BOX 783188
City: WICHITA State: KS Zip: 67278 + 3188
Contact Person: Peter Fiorini
Phone: (316) 691-9500
CONTRACTOR: License # 33575
Name: WW Drilling, LLC
Wellsite Geologist: Dave Williams
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 #:

09/15/2014	09/25/2014	09/25/2014
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-109-21337-00-00
Spot Description: 85'N & 55'E of
_ - SE - NW - NW Sec. 2 Twp. 13 S. R. 34 ☐ East ☑ West
905 Feet from ☑ North / ☐ South Line of Section
1045 Feet from ☐ East / ☑ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☑ NW ☐ SE ☐ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Logan
Lease Name: Bartlett 2B Well #: 1
Field Name:
Producing Formation: none
Elevation: Ground: 3031 Kelly Bushing: 3036
Total Vertical Depth: 4725 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 220 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: 29000 ppm Fluid volume: 725 bbls
Dewatering method used: Evaporated

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: 12/23/2014
☑ **Confidential Release Date:** 12/22/2016
☑ **Wireline Log Received**
☑ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☐ I ☑ II ☐ III **Approved by:** NAOMI JAMES **Date:** 12/23/2014

[redacted] 1235946

Operator Name: Ritchie Exploration, Inc. Lease Name: Bartlett 2B Well #: 1

Sec. 2 Twp. 13 S. R. 34 ☐ East ☑ West County: Logan

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 ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

Dual Induction Log
Compensated Density/Neutron Log

☐ Log Formation (Top), Depth and Datum ☑ Sample

Name	Top	Datum
See Attached		

CASING RECORD ☑ New ☐ 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
Surface	12.25	8.625	23	220	common	165	3% cc, 2% gel

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
___ Perforate ___ Protect Casing ___ Plug Back TD ___ 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 *(Amount and Kind of Material Used)*	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:
☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION:
☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*
☐ Other *(Specify)* _____

PRODUCTION INTERVAL:
_____
_____

Form	ACO1 - Well Completion
Operator	Ritchie Exploration, Inc.
Well Name	Bartlett 2B 1
Doc ID	1235946

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	220	common	165	3% cc, 2% gel

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

Well Name:	**# 1 BARTLETT 2B**
API:	**# 15-109-21,337-00-00**
Location:	**APPROX. 85' N & 56' E of SE - NW - NW of SEC. 2 - 13 S. - 34 W.**
License Number:	**KCC #4767**
Region:	**LOGAN CO., KS.**
Spud Date:	**09/15/2014**
Drilling Completed:	**09/24/2014**
Surface Coordinates:	**SPOT: 905' FNL & 1105' FWL**
Bottom Hole Coordinates:	
Ground Elevation (ft):	**3031'**
K.B. Elevation (ft):	**3036'**
Logged Interval (ft):	**3500'** To: **4725'**
Total Depth (ft):	**4725'**
Formation:	**MISSISSIPPIAN**
Type of Drilling Fluid:	**CHEMICAL/POLYMER/GEL**

OPERATOR

Company: **RITCHIE EXPLORATION, INC.. KCC #4767**
Address: **P.O. BOX 783188**
WICHITA, KANSAS 67278-3188

GEOLOGIST

Name: **David P Williams, P.G., KSBTP # 88**
Company: **DW Energy. LLC (DWE)**
Address: **312 North Broadview Street**
WICHITA, KANSAS 67208

Casing & Survey's

Surface Casing 8 5/8" (23#) set at 220'. Cemented w/ 165 sx Common 3% cc 2% Gel. Allied Cementing Did Service & Cement Did Circulate To Surface.

Deviation Surveys Taken: @ 220 ' = 1/2 degree; @ 4190' = 3/4 degree; @ 4465' = 1 degree; @ 4725' = 1 degree.

DSTs

~~DST # 1~~4101'- 4190'. TIMES: 30"-30"-30"-30".
Blow: IF=Strong Building BOB/5"; ISIP = No BB. FF=Strong Building BOB/6". FSIP= No BB.
Recovery: 1512' TF: 30' DM (100% M); 63' WM (60%M & 40%W);1419' MW (5% M & 95% W). TOOL SPL.(<1% O & 99+% W).
Pressures: IH=1971#; FH=1953#; IF=31-354#; FF=358-574#; ISIP=1237#; FSIP=1221#; Chl=33,000 Ppm; RW=.18 @ 84 degrees F.; Temp.=122 degrees F..

~~DST # 2~~ Interval: 4185'-4270'. Times: 30"-30"-30"-30". Blow: IF= Weak & Died/17". ISIP=No BB. FF=No Blow & Flushed Tool @ 10". Good Surge & No Help. FSIP= No BB.
Recovery: 90' DM (100% M).
Pressures: IH=2036#; FH=2021#; IF=8-32#; FF=35-58#; ISIP= 1190#; FSIP=1117#; Temp.=114 degrees F..

~~DST # 3~~ Interval: 4265'-4349'. Times=30"-30"-30"-30". Blow: IF= Weak & Died/8"; ISIP= No BB. FF = No Blow & Flushed Tool @ 10"/w Good Surge & No Help. FSIP = No BB.
Recovery: 63' DM (100% M).
Pressures: IH=2059#; FH=2044#; IF=8-25#; FF=27-43#;ISIP= 1190#; FSIP=1117#; Temp.=115 degrees F..

~~DST # 4~~ 4436'-4465'. Times: 30"-30"-30"-30".
Blow: IF= Weak & Died/10"; ISIP= No BB. FF = No Blow & Flushed Tool @ 10"/w Good Surge & No Help. FSIP = No BB.
Recovery: 5' DM (100% M).
Pressures: IH=2149#; FH=2128#; IF=6-7#; FF=6--9#; ISIP=14#; FSIP= 18#; Temp.=117 degrees F..

~~DST # 5~~ Interval: 4462'-4535'. Times: 30"-30"-30"-30". Blow: IF= Weak & Died/14"; ISIP= No BB. FF = No Blow & Flushed Tool @ 10"/w Good Surge & No Help. FSIP = No BB.
Recovery: 63' TF: 1' CO & 62' OCM (6% O & 94% M). Tool Sample: (8% Oil & 92% M).
Pressures: IH=2189#; FH =2170#; IF=7-26#; FF=31-49#; ISIP= 1073#; FSIP=1028#; Temp.=117 degrees F..

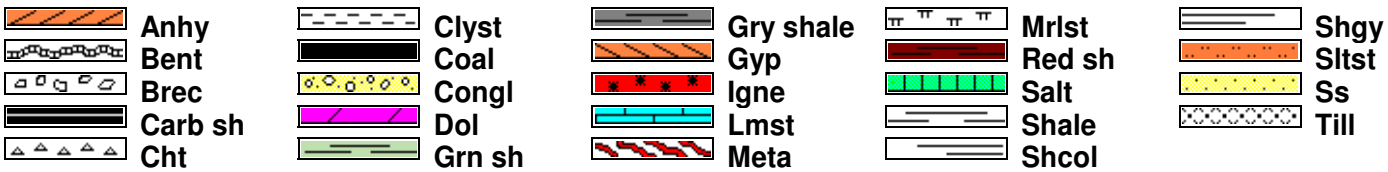
Comments

After review of all geologic samples as examined, combined with the fluid and pressures results from all drill stem tests taken and analysis from the electric logs run, it was determined by all parties that this well appears to be non-commercial and should be plugged and abandoned.

Respectfully submitted,

David P. Williams, P.G

ROCK TYPES



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
- Grysh
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg

TEXTURE
- 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

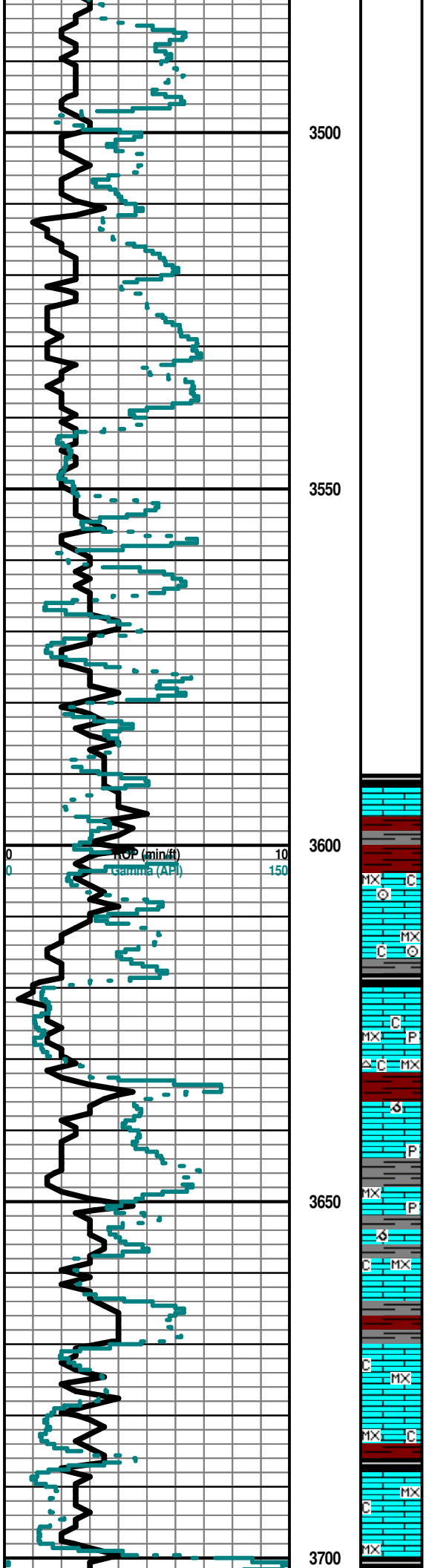
OIL SHOW
- Gas show

- Even
- Spotted
- Ques
- Dead

INTERVAL
- Dst
- Dst_alt

EVENT
- Rft
- Sidewall

Curve Track 1 (ROP (min/ft) 0–10; Gamma (API) 0–150)	Depth	Lithology	Oil Shows	Geological Descriptions	TG, C1-C5
	3400			**RITCHIE EXPLORATION, INC.** **# 1 BARTLETT 2B** **SPOT: 905' FNL & 1105' FWL** **APPROX. 85' N & 56' E of SE - NW - NW** **SEC. 2 - 13 S. - 34 W.** **LOGAN COUNTY, KANSAS** **ELEVATION : 3036' K.B. ; 3031' G.L.** **A.P.I. # 15-109-21,337-00-00** **CONTRACTOR: WW DRILLING-RIG # 8** **Geologist: David P. Williams P. G. KSBTP #88** STONE CORAL ANHYDRITE SPL. TOP = 2474' (+562). STONE CORAL ANHYDRITE SPL. BASE = 2497' (+ 539). STONE CORAL ANHYDRITE E. LOG. TOP = 2474' (+ 562) STONE CORAL ANHYDRITE E. LOG BASE= 2497' (+ 539) Deviation Survey's Taken: @ 220 ' = 1/2 degree; @ 4190' = 3/4 degree; @ 4465' = 1 degree; @ 4725' = 1 degree. Geologist's Call Depth 3450' & Geologist on Location @ 4:15 PM on 9/19/2014.	Mudco Ck @ 3389' @ 7:00 AM 09/18/2014 Vis 44; WT= 8.7#; PV= 18; YP= 13; WL= 6.4; Cake= 1; Chl= 4000; Cal = 10; Sol= 2.3%. LCM= 1#; DMC=$3,727.95 CMC=$ 11,926.45
	3450				



3500

3550

3600

3650

3700

Note: All samples have been lagged to depth by calculated time.

Begin 10' Sample Examination @ 3600'.

Sh Blk Carb-Gry Fissil-Soft V Abd Ls Crm Fxln Poor lGran Por Barren No Flor No Stn No Odor NS

Ls Crm-Tan-Gry Microxln Dns Micrite Poor lxln Por Barren Chalky Fos (Crin) Sh Blk Carb-Gry-Red (Dec) Fissil-Soft No Flor No Stn No Odor NS

Ls Crm-Tan-Gry Microxln Dns Micrite Poor lxln Por Barren Chalky Fos (Crin) Sh Blk Carb-Gry-Red (Dec) Fissil-Soft No Flor No Stn No Odor NS

Ls Crm-Tan-Gry Microxln Dns Micrite Poor lxln Por Barren Chalky Pyr Mass Sh Blk Carb-Gry-Red (Dec) Fissil-Soft No Flor No Stn No Odor NS

Ls Wht-Crm-Tan-Gry Microxln Dns Micrite Poor OOM Por Poor Dissolu Poor Develop Barren Cht Gry-Wht Translu-Op Shp Vit Chalky Sh Gry-Red (Dec) Soft No Flor No Stn No Odor NS

Ls Wht-Crm-Tan-Gry (w/Pyr Inclus) Microxln Dns Micrite Poor OOM Por Poor Dissolu Poor Develop Barren Cht Gry-Wht Translu-Op Shp Vit Chalky Sh Gry-Red-Maroon Soft No Flor No Stn No Odor NS

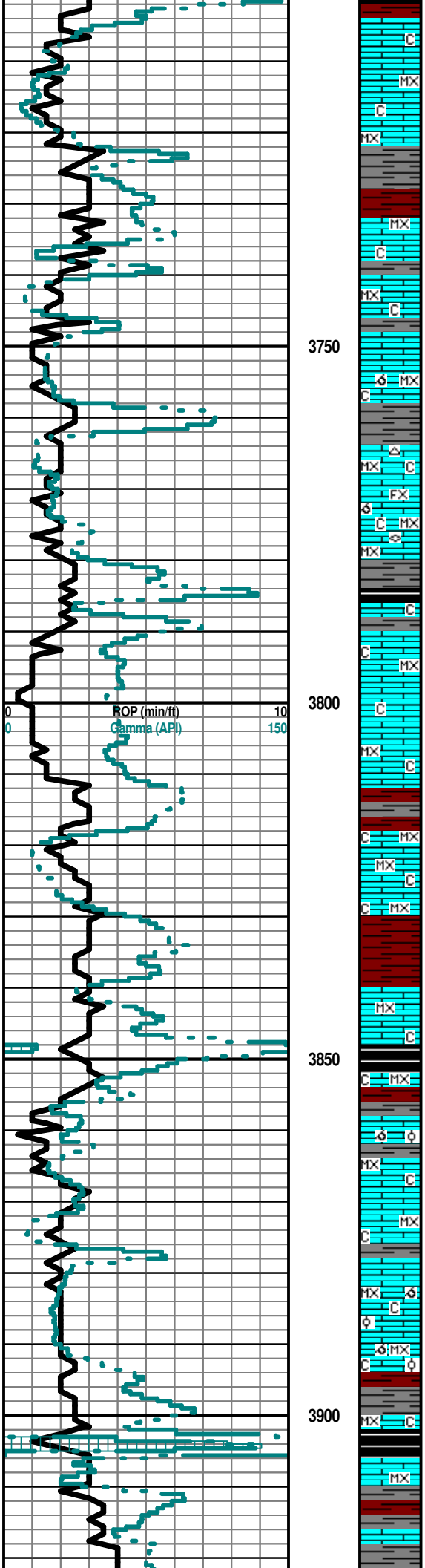
Sh Gry-Red-Maroon Soft Ls Wht-Crm-Tan-Gry (w/Pyr Inclus) Microxln Dns Micrite Poor OOM Por Poor Dissolu Poor Develop Barren Chalky No Flor No Stn No Odor NS

Ls Wht-Crm-Tan-Grn/Gry (w/Pyr Inclus) Microxln Dns Micrite Poor OOM Por Poor Dissolu Poor Develop Barren Cht Gry-Wht Translu-Op Shp Vit Chalky Sh Gry-Red-Maroon-Olive Soft No Flor No Stn No Odor NS

Ls Wht-Crm-Tan-Grn/Gry (w/Pyr Inclus) Microxln Dns Micrite Chalky Sh Char-Gry-Red-Maroon-Olive-Aqua Soft No Flor No Stn No Odor NS

Sh Blk Carb-Gry-Red-Maroon Soft (Wash Red) Ls Wht-Crm Microxln Dns Micrite Barren Chalky No Flor No Stn No Odor NS

Ls Wht-Crm-Tan-Gry Microxln Dns Micrite Chalky Sh Gry-Maroon Soft No Flor No Stn No Odor NS



3750

3800

3850

3900

Ls Wht-Crm-Tan-Gry Microxln Dns Micrite Chalky Sh Gry-Maroon Soft No Flor No Stn No Odor NS

Ls Wht-Crm-Tan-Gry (w/Pyr Inclus) Microxln Dns Micrite Chalky Sh Gry-Maroon Soft No Flor No Stn No Odor NS

Ls Wht-Crm Microxln Dns Micrite V Chalky Sh Char-Blk Carb-Gry- Maroon Soft No Flor No Stn No Odor NS

Sh Char-Gry-Red-Maroon Soft (Wash Red) Ls Wht-Crm Microxln Dns Micrite Barren Chalky No Flor No Stn No Odor NS

Sh Red-Maroon (Abd)-Gry Soft (Wash V Red) Ls Wht-Crm Microxln Dns Micrite Barren Chalky No Flor No Stn No Odor NS

Ls Wht-Crm Fxln Dns Micrite Grad Poor InterOOM PPT Por (w/Small OOids in pl) Poor Dissolu Poor Develop Barren Chalky Sh Gry-Red- Maroon Soft No Flor No Stn No Odor NS

Ls Wht-Crm Microxln-Fxln Dns Micrite Barren Cht Crm Translu-Op Shp Vit Chalky Sh Gry-Red-Maroon Soft No Flor No Stn No Odor NS
Ls Wht-Crm Microxln-Fxln Dns Micrite Grad Poor InterOOM Por Poor Dissolu Poor Develop Barren Cht Org-Wht (1 Pc) (w/Fos (Fuss) Inclus) Op Shp Vit V Chalky Sh Gry-Red-Maroon Soft No Flor No Stn No Odor NS

KING HILL 3780' (-744)

Sh Blk Carb-Gry-Red-Maroon Fissil-Soft Ls Crm-Tan Microxln Dns Micrite Barren Chalky No Flor No Stn No Odor NS

Sh Blk Carb-Gry-Red-Maroon Fissil-Soft Ls Crm-Tan Microxln Dns Micrite Barren Chalky No Flor No Stn No Odor NS

Ls Wht-Crm-Tan-Gry Microxln Dns Micrite Barren Chalky Sh Gry-Red- Maroon Fissil-Soft No Flor No Stn No Odor NS

LeCOMPTON 3818' (-782)

Ls Wht-Crm-Tan-Gry Microxln Dns Micrite Barren Chalky Sh Char-Gry-Red-Maroon Fissil-Soft No Flor No Stn No Odor NS

Sh Red-Maroon V Abd-Gry Soft (Wash Red) Ls Crm-Tan Microxln Dns Micrite Barren Chalky No Flor No Stn No Odor NS

Sh Red-Maroon V Abd-Gry Soft (Wash Red) Ls Crm-Tan Microxln Dns Micrite Barren Chalky No Flor No Stn No Odor NS

QUEEN HILL 3848' (-812)

OREAD 3852' (- 816)

Ls Wht-Crm-Tan-Gry Microxln Dns Micrite Barren Chalky Sh Blk Carb-Char-Gry-Red-Maroon (Tr Only) Fissil-Soft No Flor No Stn No Odor NS

Ls Wht-Crm-Gry Microxln-Fxln Dns Micrite Grad Poor InterOOM Por (w/Small OOids in pl) Poor Dissolu Poor Develop Barren Chalky Sh Blk Carb-Gry-Red (Tr Only) Soft No Flor No Stn No Odor NS

Ls Wht-Crm-Gry Microxln-Fxln Dns Micrite Grad Poor Gran (Red) Siltstn Poor lGran Por (? Sluff) Por Chalky Sh Grn/Gry-Red (Tr Only) Soft No Flor No Stn No Odor NS

Ls Wht-Crm-Gry Microxln-Fxln Dns Micrite Grad Fair-Med OOL/OOM Por (w/Small OOids in pl) Fair-Med Dissolu Med Develop Barren Chalky Sh Char-Gry-Red Fissil-Soft No Flor No Stn No Odor NS

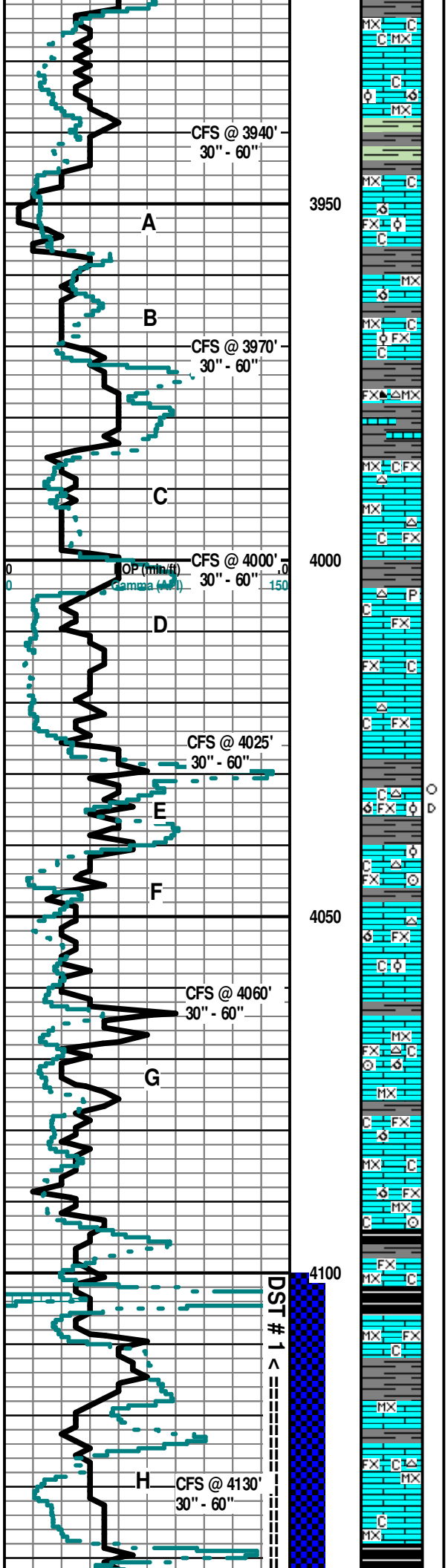
Ls Wht-Crm-Gry Microxln-Fxln Dns Micrite Grad Fair-Med OOL/OOM Por (w/Small OOids in pl) Fair-Med Dissolu Med Develop Barren Chalky Sh Char-Gry-Red Fissil-Soft No Flor No Stn No Odor NS

HEEBNER 3902' (- 866)

Sh Blk Carb (V Abd)-Gry Fissil-Soft Ls Wht-Crm-Tan-Gry Microxln Dns Micrite Barren Chalky No Flor No Stn No Odor NS

Sh Gry-Red-Blk Carb Fissil-Soft Ls Wht-Crm-Tan-Gry Microxln Dns Micrite Barren V Chalky No Flor No Stn No Odor NS

Mudco Ck @ 3940' @ 8:00 AM



TORONTO 3924' (- 888)

30" CFS @ 3940' Ls Wht-Crm Miicroxln Dns Micrite Barren Chalky Sh Char-Gry-Red-Maroon Soft No Flor No Stn No Odor NS

60" CFS @ 3940' Ls Wht-Crm Microxln Dns Micrite Barren Grad Poor OOL/OOM (w/Small OOids in pl) Poor Develop Poor Dissolu Chalky Sh Char-Grn/Gry-Aqua-Maroon Soft No Flor No Stn No Odor NS

LANSING 3946' (- 911)

Ls Crm-Tan Miicroxln Dns Micrite Barren V Chalky Sh Char-Grn/Gry- Aqua-Maroon Soft No Flor No Stn No Odor NS

30" CFS @ 3970' Ls Wht-Crm Microxln-Fxln Dns Micrite Barren Grad Fair OOL/OOM (w/Small OOids in pl) Med-Good Develop Med-Good Vug Dissolu V Chalky Sh Char-Grn/Gry-Aqua Fissil- Soft No Flor No Stn No Odor NS

60" CFS @ 3970' Ls Wht-Crm Microxln-Fxln Dns Micrite Barren Grad Fair OOL/OOM (w/Small OOids in pl) Med-Good Develop Med-Good Vug Dissolu V Chalky Sh Char-Grn/Gry-Aqua Fissil- Soft No Flor No Stn No Odor NS

Ls Wht-Crm Microxln-Fxln Dns Micrite Barren Cht Wht-Amber-Tan- Gry-Sli Org Translu-Op Shp Vit (V Abd) Chalky Sh Gry-Aqua Soft No Flor No Stn No Odor NS

30" CFS @ 4000' Ls Wht-Crm Microxln-Fxln Dns Micrite Barren Cht Wht-Gry Translu-Op Shp Vit Chalky Sh Char-Gry Soft No Flor No Stn No Odor NS

60" CFS @ 4000' Ls Wht-Crm Microxln-Fxln Dns Micrite Grad Poor Ppt Ixln Por Barren Cht Wht-Gry Translu-Op Shp Vit Chalky Sh Maroon-Red (Abd)-(Wash Red) Char-Gry-Aqua Soft-Fissil No Flor No Stn No Odor NS

Ls Wht-Crm Fxln Dns Micrite (w/Pyr Inclus) Grad Poor Ppt Ixln Por Barren Cht Wht-Amber-Gry Translu-Op Shp Vit Chalky Sh Char-Gry- Maroon Soft No Flor No Stn No Odor NS

30" CFS @ 4025' Ls Wht-Crm Fxln Dns Micrite Grad Poor Ppt Ixln Por Barren Chalky Sh Char-Gry-Aqua Fissil-Soft Sli ? Min Flor No Stn No Odor NS

60" CFS @ 4025' Ls Wht-Crm Fxln Dns Micrite Grad Poor Ppt Ixln Por Barren Cht Wht-Gry Translu-Op Shp Vit Chalky Sh Char-Gry-Aqua Fissil-Soft Sli ? Min Flor No Stn No Odor NS

Ls Crm-Tan Fxln Dns Micrite Grad Poor PPt Ixln Por Grad Poor-Fair OOM Por (w/Small OOids in pl) Poor Dissolu Poor Vug Leaching (w/? Drk Blk "Dead" Stn 3 Pcs) Cht Wht Op Shp Vit Sh Char-Gry-Aqua-Red Soft No Odor No Stn No Flor NS

30" CFS @ 4060' Ls Crm-Tan Fxln Dns Micrite Grad Poor PPt Ixln Por Grad Poor-Fair OOL Por (w/Med OOids in pl) Fair Dissolu Med Leaching Cht Wht-Amber Translu-Op Shp Vit Fos (Crin) Sh Char-Gry-Aqua-Red Soft No Odor No Stn No Flor NS

60" CFS @ 4060' Ls Crm-Tan Fxln Dns Micrite Grad Poor PPt Ixln Por Grad Poor OOL/OOM Por (w/Small OOids in pl) Poor Dissolu Poor Leaching Cht Wht Translu-Op Shp Vit Sh Char-Gry-Aqua-Red Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln-Microxln Dns Micrite Grad Poor-Fair PPt Ixln Por Grad Poor OOM Por Poor Vug Leaching Poor Develop Cht-Wht Op Shp Vit V Chalky Sh Char-Gry-Aqua Fissil-Soft No Odor No Stn No Flor NS

Ls Wht-Gry Fxln-Microxln Dns Micrite Grad Poor-Fair PPt Ixln Por Grad Poor OOM Por Poor Vug Leaching Poor Develop Fos (Crin) V Chalky Sh Char-Gry Fissil-Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln-Microxln Dns Micrite Grad Poor-Fair PPt Ixln Por Grad Poor OOM Por Poor Vug Leaching Poor Develop V Chalky Sh Char-Gry-Aqua-Red-Maroon Fissil-Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln-Microxln Dns Micrite Grad Poor-Fair PPt Ixln Por Grad Poor OOM Por Poor Vug Leaching Poor Develop Fos (Crin) V Chalky Sh Char-Gry-Aqua-Red-Tr Blk Carb Fissil-Soft No Odor No Stn No Flor NS

MUNCIE CREEK 4102' (- 1066)

Sh Blk Carb-Gry-Aqua Fissil-Soft Ls Microxln-Fxln Dns Micrite Grad Poor-Fair PPt Ixln Por Grad Poor OOM Por Poor Vug Leaching Poor Develop Fos (Brach) V Chalky No Odor No Stn No Flor NS

30" CFS @ 4130' Ls Microxln-Fxln Dns Micrite Grad Poor-Fair PPt Ixln Por Grad Poor OOM Por Poor Vug Leaching Poor Develop Cht Amber-Wht Translu-Op Shp Vit Fos (Brach) V Chalky Sh Char-Gry Fissil-Soft No Odor No Stn No Flor NS

KANSAS CITY "DRUM" (H) 4125' (-1089)

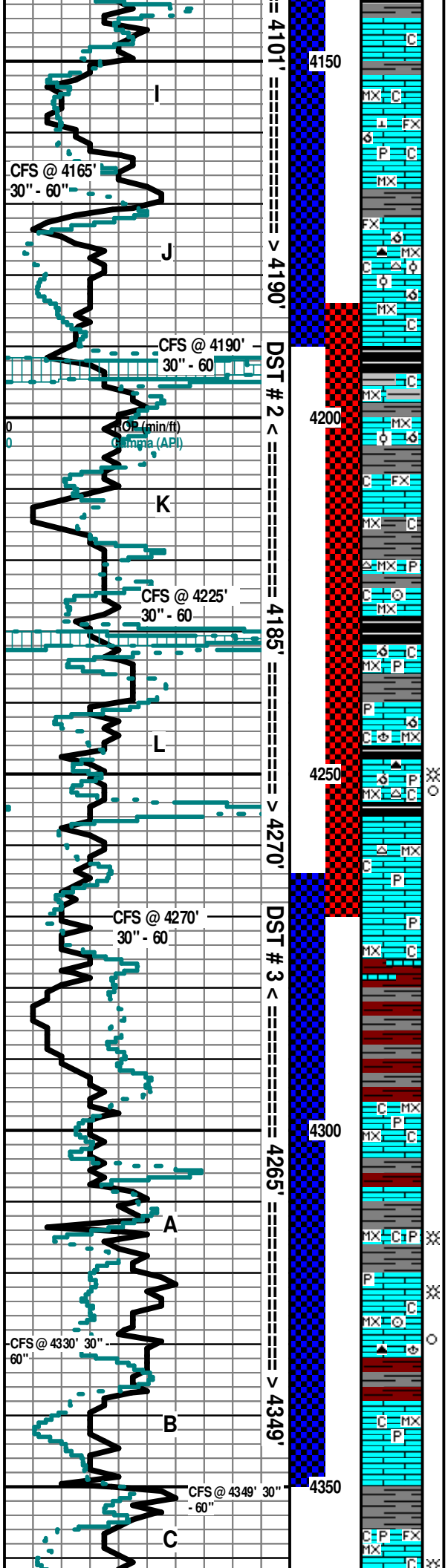
60" CFS @ 4130' Ls Microxln-Fxln Dns Micrite Grad Poor-Fair PPt Ixln Por Grad Poor OOM Por Poor Vug Leaching Poor Develop Cht Wht-Gry Translu-Op Shp Vit V Chalky Sh Char-Gry Fissil-Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Drk Tan-Gry-Brn Microxln Dns Micrite Barren V Poor PPt Ixln Por Cht Wht Op Shp Vit Chalk Sh Char-Grn/Gry-Red-Maroon Fissil-Soft No Flor No Stn No Odor NS

09/19/2014
Vis 56;
WT= 9.1#;
PV = 20;
YP = 15;
WL= 7.6;
Cake= 1;
Chl= 5500;
Cal = 60;
Sol= 5.3%.
LCM= 1#;
DMC=$ 745.45
CMC=$ 12,671.90

~~DST # 1~~
4101'- 4190'.
30"-30"-30"-30".
Blow: IF= Strong Building BOB/5";
ISIP = No BB. FF= Strong Building BOB/6". FSIP= No BB.
Recovery: 1512'
TF: 30' DM (100% M); 63' WM (60%M & 40%W);
1419' MW (5% M & 95% W). TOOL SPL(<1% O & 99+% W).
Pressures:
IH = 1971#;
FH = 1953#;
IF = 31-354#;
FF = 358-574#;
ISIP = 1237#;
FSIP = 1221#;
Chl= 33000 Ppm;
RW = .18 @ 84 degrees F.
Temp = 122 degrees F.

Mudco Ck @ 4155' @ 3:30 AM 09/20/2014
Vis 50;
WT= 9.2#;
PV= 18;
YP= 17;
WL= 9.6;
Cake= 1;
Chl= 6000;



____ KANSAS CITY "BLOCK" (I) 4144' (- 1108) _____

Ls Crm-Tan-Gry Microxln Dns Micrite Barren V Poor PPt Ixln Por Chalk Sh Char-Grn/Gry-Red-Maroon Fissil-Soft Sli ? Scat Min Flor No Stn No Odor NS

30" CFS @ 4165' Sh Blk Carb-Char-Grn/Gry-Red-Maroon Fissil-Soft Ls Wht-Crm-Tan Microxln-Fxln Dns Micrite Barren V Poor PPt Ixln Por Grad Clear Translu Calcite (w/Fair Ixln Rhombic Ixln Por) V Chalky Sli ? Scat Min Flor No Stn No Odor NS

60" CFS @ 4165' Ls Wht-Crm-Tan Microxln-Fxln Dns Micrite Barren V Poor PPt Ixln Por Grad V Poor OOM Por Pyr Mass V Chalky Sh Char-Gry Fissil-Soft Sli ? Scat Min Flor No Stn No Odor NS

____ KANSAS CITY "DENNIS" (J) 4173' (- 1137) _____

30" CFS @ 4190' Ls Wht-Crm Fxln Med-Good OOM Por (w/Small-Med OOids in pl) Poor InterOOM Por Poor Develop Fair-Med Vug Leaching Grad Microxln Dns Micrite (w/No Vis Por) Cht Wht-Wht/Org Banded Op Shp Vit Chalky Sh Gry Soft ? Sli Min Flor No Odor No Stn NS

60" CFS @ 4190' Ls Wht-Crm Microxln Dns Micrite (w/No Vis Por) Grad Fxln Med-Good OOM Por AA Chalky Sh Grv Soft ? Sli Min Flor No Odor No Stn NS

_____ STARK SHALE 4192' (- 1158) _____

Sh Blk Carb-Char-Grn/Gry-Red-Maroon Fissil-Soft Ls Wht-Crm-Tan Microxln Dns Micrite Barren Poor PPt Ixln Por Chalk No Flor No Stn No Odor NS

Ls Wht-Crm Microxln Dns Micrite (w/No Vis Por) Chalky Sh Blk Carb-Gry Soft No Flor No Odor No Stn NS

____ KANSAS CITY "SWOPE" (K) 4207' (- 1171) _____

30" CFS @ 4225' s Wht-Crm Fxln Poor PPt Ixln Por Grad Poor OOM Por (w/Small OOids in pl) Poor InterOOL/OOM Por Poor Develop Poor Leaching Grad Microxln Dns Micrite (w/No Vis Por) Chalky Sh Blk Carb-Gry Soft No Flor No Odor No Stn NS

60" CFS @ 4225' Ls Wht-Crm-Tan Microxln Dns Micrite Barren V Poor PPt Ixln Por Cht Wht-Gry Op Shp Vit Fos (Crin) Pyr Mass Chalky Sh Char-Gry-Blk Carb Fissil-Soft No Flor No Stn No Odor NS

_____ HUSHPUCKNEY SHALE 4228' (- 1192) _____

Ls Wht-Crm Microxln Dns Micrite (w/Pyr Inclus) Barren Grad V Poor OOM Por Poor Dissolu Poor Develop Pyr Mass Chalky Sh Blk Carb-Char-Gry Fissil No Flor No Stn No Odor NS

____ KANSAS CITY "HERTHA" (L) 4241' (- 1205) _____

Ls Wht-Crm Microxln Dns Micrite (w/Pyr Inclus) Barren Grad V Poor OOM Por Poor Dissolu Poor Develop Fos (Brach) Pyr Mass Chalky Sh Char-Gry Fissil No Flor No Stn No Odor NS

30" CFS @ 4270' Ls Wht-Crm Microxln Dns Micrite Barren Grad V Poor Ixln Por Grad Poor Vug OOM Por (w/Small OOids in pl) VSSG (Frac Por) & VS Stn (Lt Brn) (2 Pcs) Poor Dissolu Cht Wht-Org Banded Pyr Mass Chalky Sh Blk Carb-Char-Gry-Aqua Fissil No Flor Sli Lt Brn Stn No Odor VSSG & ? VSSO

60" CFS @ 4270' Ls Wht-Crm Microxln Dns Micrite Barren Grad V Poor Ixln Por Cht Wht Op Shp Vit Pyr Mass (Abd) Chalky Sh Blk Carb-Char-Gry-Aqua (w/Pyr Inclus) Fissil No Flor Sli Lt Brn Stn No Odor

Sh Char-Gry-Aqua-Red-Maroon Soft "Gummy" (V Abd) Ls Wht-Crm- Tan Microxln AA Pyr Mass V Chalky No Odor No Stn No Flor NS

_____ BASE KANSAS CITY 4276' (- 1240) _____

Sh Char-Gry-Aqua-Red-Maroon Soft "Gummy" (V Abd) Ls Wht-Crm- Tan Microxln AA V Chalky No Odor No Stn No Flor NS

Sh Char-Gry-Aqua-Red-Maroon Soft "Gummy" (V Abd) Ls Wht-Crm- Tan Microxln AA V Chalky No Odor No Stn No Flor NS

_____ MARMATON 4294' (- 1258) _____

Ls Wht-Crm-Tan Microxln No Vis Por Pyr Mass Chalk (Dec) Sh Char-Gry-Aqua-Maroon (Wash Red) Fissil- V Soft No Odor No Stn No Flor NS

_____ ALTAMONT "A" 4307' (- 1271) _____

Ls Wht-Crm-Tan Microxln Dns Micrite Barren Pyr Mass Sh Vari- colored Char-Gry-Aqua-Maroon (Wash Red) No Odor No Flor No Stn

30" CFS @ 4330' Ls Wht-Crm-Tan-Lt Red (w/VSG (1 Pc) in Wtr Under Heat) Microxln Dns Micrite Barren Pyr Mass Sh Varicolored Char-Gry-Aqua-Maroon (Wash Red) Faint Odor No Flor No Stn

60" CFS @ 4330' Ls Wht-Crm-Tan Microxln Dns Micrite Barren Pyr Mass Fos (Crin) V Chalky Sh Vari-colored Char-Gry-Aqua-Maroon Faint Odor (Inc) No Flor No Stn ? SSG

30" CFS @ 4349' Sh Vari-colored Char-Gry-Aqua-Maroon Ls Wht-Crm-Tan Microxln Dns Micrite Barren Grad PPt Ixln Por Cht Wht-Red Op Shp Vit Fos (Brach) Pyr Mass No Flor No Stn Faint Dec Odor ? Show

_____ ALTAMONT "B" 4337' (- 1301) _____

60" CFS @ 4349' Ls Wht-Crm Microxln Dns Micrite Barren Grad PPt Ixln Por Pyr Mass Chalk Dec Sh Char-Gry-Maroon-SoftNo Flor No Stn No Odor NS

_____ ALTAMONT "C" 4356' (- 1320) _____

Ls Wht-Crm Microxln Dns Micrite Barren Grad PPt Ixln Por Pyr Mass Chalk Dec Sh Char-Gry-Maroon-Soft No Flor No Stn No Odor NS

Cal = 20;
Sol= 5.8%.
LCM= 1#;
DMC=$0.005
CMC=$ 12,671.90

PIPE STRAP = <0.49'>
LONG TO BOARD.

Mudco Ck @ 4155' @
11:00 AM 09/21/2014
Vis 56;
WT= 9.3#;
PV= 15;
YP= 19;
WL= 10.4;
Cake= 2;
Chl= 6000;
Cal = 60;
Sol = 6.4%.
LCM= 1#;
DMC=$1,092.35
CMC=$13,764.25

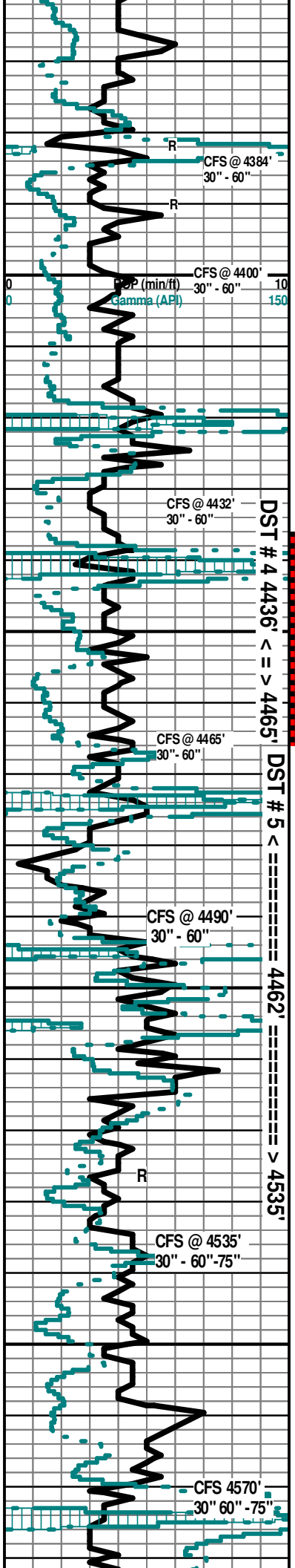
~~DST # 2~~

4185'- 4270'.
30"-30"-30"-30".
Blow: IF= Weak & Died/17"; ISIP= No BB. FF = No Blow & Flushed Tool @ 10"/w Good Surge & No Help. FSIP = No BB.
Recovery: 90' DM (100% M).
Pressures:
IH = 2036#;
FH = 2021#;
IF = 8-32#;
FF = 35-58#;
ISIP = 1190#;
FSIP= 1117#;
Temp. = 114 degrees F..

Mudco Ck @ 4349' @
11:00 AM 09/22/2014
Vis 54;
WT= 9.3#;
PV= 15;
YP= 22;
WL= 10.2;
Cake= 1;
Chl= 7800;
Cal = 80;
Sol = 6.5%.
LCM= 1#;
DMC=$1,030.85
CMC=$14,794.85

~~DST # 3~~

4265'- 4349'.
30"-30"-30"-30".
Blow: IF= Weak & Died/8"; ISIP= No BB. FF = No Blow & Flushed Tool @ 10"/w Good Surge & No Help. FSIP = No BB.
Recovery: 63' DM (100% M).
Pressures:
IH = 2059#;
FH = 2044#;
IF = 8-25#;
FF = 27-43#;
ISIP = 1190#;



30" CFS @ 4384' Ls Wht-Crm Microxln-Fxln Dns Micrite Grad PPt Ixln Por (w/? SSG) Chalky Fos (Crin) Pyr Mass Sh Char-Gry-Maroon-Soft Sli ? V Faint Odor No Flor No Stn NS

60" CFS @ 4384' Sh Blk Carb (V Abd) w/GSG-Gry-Maroon Fissil-Soft Ls Wht-Crm-Tan Microxln-Fxln Dns Micrite Grad PPt Ixln Por (w/? SSG) Fos (Crin) Pyr Mass Chalky Sli ? V Faint Odor No Flor No Stn NS

PAWNEE 4384' (-1348)

30" CFS @ 4400' Ls Wht-Crm Microxln-Fxln Dns Micrite (w/Pyr Inclus) Grad PPt Ixln Por Chalky Cht Wht-Gry (w/OOid Inclus) Barren No Vis Por Op Shp Vit Pyr Mass Sh Char-Gry-Maroon-Soft Sli ? V Faint Odor No Flor No Stn NS

60" CFS @ 4400' Ls Crm-Tan Microxln-Fxln Dns Micrite (w/Pyr Inclus) Grad PPt Ixln Por Chalky Cht Wht-Gry (w/OOid Inclus) Barren No Vis Por Op Shp Vit Pyr Mass Sh Char-Gry-Maroon-Soft Sli ? V Faint Odor No Flor No Stn NS

Ls wht-Crm-Tan-Gry Microxln Dns Micrite (w/Pyr Inclus) Cht Wht-Gry- Drk Gry Op Shp Vit Fos (Brach) Chalky Sh Char-Gry-Blk Carb (Tr Only) Fissil-Soft No Odor No Stn No Flor NS

30" CFS @ 4432' Sh Blk Carb-Gry Fissil Ls wht-Crm-Tan-Gry Microxln Dns Micrite (w/Pyr Inclus) Cht Wht-Gry-Drk Gry Op Shp Vit Fos (Bry) Chalky No Odor No Stn No Flor NS

MYRICK STATION 4422' (- 1386)

60" CFS @ 4432' Ls Wht-Crm-Tan-Drk Tan Microxln-Fxln Dns Micrite Grad Poor PPt Ixln Por Barren Cht Wht-Amber-Tan-Gry (w/OOids in pl) Translu-Op Shp Vit Chalky Sh Char-Gry-Blk Carb AA No Odor No Stn No Flor NS

Ls Wht-Crm-Tan-Drk Tan Microxln-Fxln Dns Micrite Grad Poor PPt Ixln Por Barren Cht Wht-Amber-Tan-Gry (w/OOids in pl) Translu-Op Shp Vit Chalky Sh Char-Gry-Blk Carb AA No Odor No Stn No Flor NS

FORT SCOTT 4444' (- 1408)

Ls Crm-Tan Fxln Dns Micrite Grad Fair PPT InterOOL (w/Small-Med OOids (Rd & Oblong in pl) Fair-Med Vug Leached Por Fair-Med Dissolu Sli Friable Fair-Med Develop (w/Fair-Med SG & SFO) Gas & Oil Do Not Flor Cht Gry Op Shp Vit Fos (Fuss) Sli Chalky Fair Odor No Flor Drk Brn Stn In Vugs FSG & FSFO

30" CFS @ 4465' Crm-Tan Fxln Dns Micrite (w/Pyr Inclus) Grad Fair PPT InterOOL (w/Small-Med OOids (Rd & Oblong) Fair-Med Vug Leached Por Sli Friable Fair Dissolu Fair Develop (w/Poor-Fair (Few Pcs) SG & SFO) Cht Gry Op Shp Vit Sli Chalky Pyr Mass Sh Gry-Aqua-Blk Carb Fissil Sli Dec Odor No Flor Drk Brn Stn In Vugs SSG & SSO

60" CFS @ 4465' Crm-Tan Fxln Dns Micrite AA Grad Poor-Fair PPT InterOOL AA Poor Vug Leached Por Poor Dissolu Poor Develop AA (w/Tr SG & SO) AA Chalky Pyr AA Fos AA Sh AA Sli Dec Odor No Flor Drk Brn Stn AA SG & SFO

CHEROKEE SHALE 4472' (- 1436)

30" CFS @ 4490' Crm-Tan-Gry Microxln-Fxln Dns Micrite Grad Poor Ixln PPT Por Grad Poor InterOOL (w/Small OOids (Rd & Oblong in pl) Poor Vug Leached Por Poor Dissolu Fair Develop (w/Poor SG & Tr SO) Gas & Oil Do Not Flor Cht Gry Op Shp Vit Chalky Fair Odor No Flor Sli (Lt Brn) Stn in Vugs SSG & SSO

60" CFS @ 4490' Crm-Tan-Gry Microxln-Fxln Dns Micrite (w/Pyr Inclus) Grad Poor-Fair Ixln PPT Por Grad Poor-Fair InterOOL (w/Small OOids (Rd & Oblong in pl) Poor-Fair Vug Leached Por Poor Dissolu Poor-Fair Develop (w/SG & SO w/Broken) Gas & Oil Do Not Flor Cht Gry Op Shp Vit Chalky Fair Odor No Flor Sli (Lt Brn) Stn in Vugs SSG & SSO

Ls Crm-Tan Microxln Dns Micrite (w/Pyr Inclu) Cht Tan-Brn Op Shp Vit Chalky Sh Blk Carb-Gry- Aqua Fissil No Odor No Stn No Flor NS

Ls Crm-Tan Microxln Dns Micrite (w/Pyr Inclu) Cht Tan-Brn Op Shp Vit Chalky Sh Blk Carb-Gry- Aqua Fissil No Odor No Stn No Flor NS

JOHNSON 4518'(- 1482)

Ls Crm-Tan-Gry Microxln Dns Micrite (w/Pyr Inclu) Grad Fxln PPt Ixln "Salt & Pepper" Ixln Por (w/SSG & SSO) Gas & Oil Do Not Flor Cht Tan-Brn Op Shp Vit Chalky Sh Char-Gry-Aqua Fissil Faint Odor Sli (Lt Brn) Stn No Flor NS

30" CFS @ 4535' Ls Wht-Crm-Tan Microxln Dns Micrite Grad Fxln (w/Calc Xls Inclus) Fair-Med PPt Ixln Sli Vug Por (w/FSG & FSFO Under Heat in Wtr & On Break) Cht Wht-Tan AA Chalky Sh Blk Carb-Char-Gry-Aqua-Maroon Soft-Fissil Fair Odor Fair (Lt Brn) Stn (15 Pcs) No Flor FSG & FSO

60" & 75" CFS @ 4535' Ls Tan-Crm Microxln Dns Micrite Grad Fxln AA Fair Ixln Sli Vug Por (w/Tr Pyr Inclus) (Dec) (w/SG & SFO AA) Grad Poor OOL Por (w/Small OOids in pl) No Vis Leaching Cht Wht-Tan Translu-Op Shp Vit Chalky Sh Blk Carb-Char-Gry-Aqua Fissil Fair (Dec) Odor Sli (Lt Brn) Stn (10 Pcs) Sh No Flor FSG & FSO

Ls Wht-Crm-Tan Microxln Dns Micrite No Vis Por Grad Poor Ixln Por Chalky Sh Blk Carb-Char-Grn/Gry-Aqua Fissil No Flor No Stn No Odor NS

30" CFS @ 4570' Ls Wht-Crm-Tan Microxln Dns Micrite No Vis Por Chalky Sh Char- Gry-Aqua Fissil No Flor No Stn No Odor NS

60" CFS @ 4570' Ls Wht-Crm-Tan Microxln Dns Micrite No Vis Por Chalky Sh Char- Gry-Aqua Fissil No Flor No Stn No Odor NS

75" CFS @ 4570' Ls Wht-Crm-Tan Microxln Dns Micrite No Vis Por Chalky Sh Char- Gry-Aqua Fissil No Flor No Stn No Odor NS

BASE PENN. LIMESTONE 4570' (- 1534)

Sh Vari-Colored Aqua-Grn/Gry-Char-Blk Carb-Olive Fissil V Abd Ls AA No Odor No Stn No Flor NS

MORROW SAND 4578' (-1542)

30" CFS @ 4592' Sh Vari-Colored Aqua-Grn/Gry-Char-Blk Carb-Olive Fissil V Abd Ls Wht-Crm-Tan

FSIP= 1117#;
Temp. = 115 degrees F..

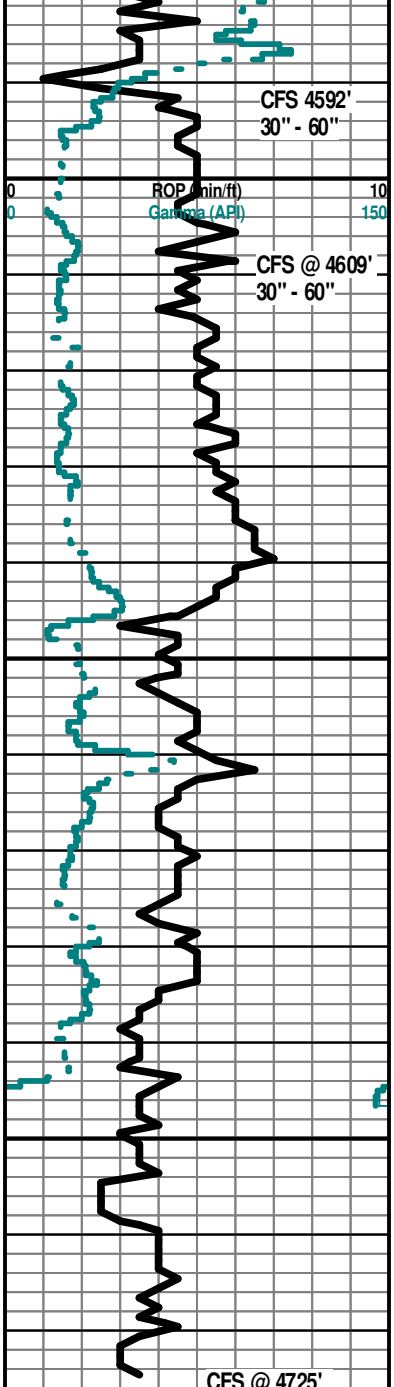
Mudco Ck @ 4349' @ 12:45 PM 09/23/2014
Vis 46;
WT= 9.5#;
PV= 11;
YP= 13;
WL= 11.6;
Cake= 2;
Chl= 6400;
Cal = 20;
Sol = 8.3%.
LCM= 1#;
DMC=$1,581.55
CMC=$16,376.40

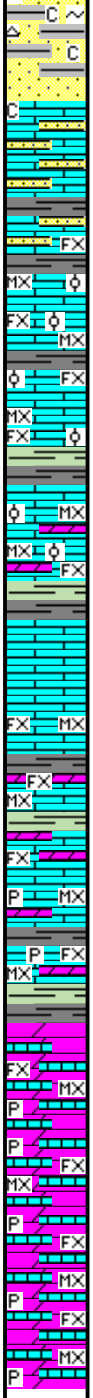
~~DST # 4~~
4436'- 4465'.
30"-30"-30"-30".
Blow: IF= Weak & Died/10"; ISIP= No BB. FF = No Blow & Flushed Tool @ 10"/w Good Surge & No Help. FSIP = No BB.
Recovery: 5' DM (100% M).
Pressures:
IH = 2149#;
FH = 2128#;
IF = 6-7#;
FF = 6--9#;
ISIP = 14#;
FSIP= 18#;
Temp. = 117 degrees F..

~~DST # 5~~
4462'- 4535'.
30"-30"-30"-30".
Blow: IF= Weak & Died/14"; ISIP= No BB. FF = No Blow & Flushed Tool @ 10"/w Good Surge & No Help. FSIP = No BB.
Recovery: 63' TF: 1' CO & 62' OCM (6% O & 94% M).
Pressures:
IH = 2189#;
FH = 2170#;
IF = 7-26#;
FF = 31-49#;
ISIP = 1073#;
FSIP= 1028#;
Temp. = 117 degrees F..

Mudco Ck @ 4564' @ 1:00 PM 09/24/2014
Vis 53;
WT= 9.3#;
PV= 15;
YP= 16;
WL= 10.0;
Cake= 1;
Chl= 6900;
Cal = 20;
Sol = 6.7%.
LCM= 1#;
DMC=$1,866.70
CMC=$18,243.10

Reserve Pit Est. Volume 725 Bbls @ 59,000 Ppm





Microxln Dns Micrite Cht Wht Op Shp Vit Pyr Mass Qtz Ss Gry-Wht FGrn Ang-Sub Ang Well-Sort (w/Hvy CaCo3 Cmt Matrix & Glacu Inclus) Poor lGran Por Barren Grad Wht VFGrn Sub Ang Well Sort (w/Fair lGran Por & Tr Cmt Matrix) V Friable Barren (Chalky Matrix in pt) No Odor No Stn No Flor NS

MISSISSIPPIAN 4594' (- 1558)

60" CFS @ 4592' Ls Wht Microxln Dns Micrite Qtz Ss Wht Lg-Clusters FGrn Sub Ang Well-Sort Hvy CaCo3 & Chalk Matrix) Barren No Odor No Stn No Flor NS

30" CFS @ 4609' Ls Wht Microxln Dns Micrite Qtz Ss Wht Lg-Clusters FGrn Sub Ang Well-Sort Hvy CaCo3 & Chalk Matrix) Barren Ls Wht Microxln Dns Micrite No Odor No Stn No Flor NS

60" CFS @ 4609' Ls Wht Microxln Dns Micrite Qtz Ss Wht Lg-Clusters FGrn Sub Ang Well-Sort Hvy CaCo3 & Chalk Matrix) Barren Ls Wht Microxln Dns Micrite No Odor No Stn No Flor NS

Ls Wnt-Crm-Tan-Gry Microxln-Fxln Dns Micrite (w/Pyr Inclus) Grad "Sandy OOL Por" VFGrn Med-Good Ixln Por Barren Pyr Mass Sh Vari- Colored Aqua-Grn/Gry-Olive Fissil Abd No Odor No Stn No Flor NS

Ls Wnt-Crm-Tan-Gry Microxln-Fxln Dns Micrite (w/Pyr Inclus) Grad "Sandy OOL Por" VFGrn Med-Good Ixln Por Barren Pyr Mass Sh Vari- Colored Aqua-Grn/Gry-Olive Fissil Abd No Odor No Stn No Flor NS

Ls/Dolo Wnt-Crm-Tan-Gry Microxln-Fxln Dns Micrite (w/Pyr Inclus) Grad "Sandy OOL Por" VFGrn Med-Good Ixln Por Barren Pyr Mass Sh Vari- Colored Aqua-Grn/Gry-Olive-Brn-Blk Carb Fissil Abd No Odor No Stn No Flor NS

Ls/Dolo Wnt-Crm-Tan-Gry Microxln-Fxln Dns Micrite Barren Pyr Mass Sh Vari-Colored Aqua-Grn/Gry-Olive-Brn-Blk Carb Fissil Abd No Odor No Stn No Flor NS

Sh Vari-Colored Aqua-Grn/Gry-Olive-Brn-Blk Carb-Maroon Fissil Abd Ls/Dolo Wnt-Crm-Tan-Gry Microxln-Fxln Dns Micrite Barren Pyr Mass No Odor No Stn No Flor NS

Sh Vari- Colored Aqua-Grn/Gry- Olive- Brn-Blk Carb Fissil Abd Ls/Dolo Wnt-Crm-Tan- Gry Microxln-Fxln Dns Micrite Barren Pyr Mass No Odor No Stn No Flor NS

Ls/Dolo Wnt-Crm-Tan-Gry Microxln-Fxln Dns Micrite Por Barren Pyr Mass Sh Vari- Colored Aqua-Grn/Gry- Olive- Brn- Blk Carb Fissil Abd No Odor No Stn No Flor NS

Sh Vari- Colored Aqua-Grn/Gry- Olive- Brn-Blk Carb Fissil Abd Ls/Dolo Wnt-Crm-Tan-Gry Microxln-Fxln Dns Micrite Barren Pyr Mass No Odor No Stn No Flor NS

Sh Vari-Colored Aqua-Grn/Gry-Olive-Brn-Blk Carb-Maroon Fissil Abd Dolo/Ls Gry- Tan Microxln-Fxln Dns Micrite Pyr Mass No Odor No Stn No Flor NS

Sh Vari-Colored Aqua-Grn/Gry-Olive-Brn-Blk Carb-Maroon Fissil Abd Dolo/Ls Gry- Tan Microxln-Fxln Dns Micrite Barren Pyr Mass No Odor No Stn No Flor NS

30" CFS @ 4725' Sh Vari-Colored Aqua-Grn/Gry-Olive-Brn-Blk Carb-Maroon Abd Fissil Dolo/Ls Gry-Wnt-Crm-Tan Microxln-Fxln Dns Micrite Barren Pyr Mass No Odor No Stn No Flor NS

60" CFS @ 4725' Sh Vari-Colored Aqua-Grn/Gry-Olive-Brn-Blk Carb-Maroon Abd Fissil Dolo/Ls Gry-Wnt-Crm-Tan Microxln-Fxln Dns Micrite Barren Pyr Mass No Odor No Stn No Flor NS

Electric Logs Run: By Nabors Logging:
Dual Induction & Compensated Density-Neutron Logs.

Geologist Left Location at: 3:00 PM on 09/24/2014

Chl.

Mudco Ck @ 4725' @ 8:30 AM 09/25/2014
Vis 50;
WT= 9.2#;
PV= 14;
YP= 15;
WL= 10.4;
Cake= 1;
Chl= 6500;
Cal = 48;
Sol = 6.1%.
LCM= 1#;
DMC=$0.00
CMC=$18,243.10

RITCHIE
EXPLORATION, INC.
Wichita, Kansas

#1 Bartlett 2B
905' FNL & 1045' FWL
85' N & 55' E of SE NW NW Section 2-13S-34W
Logan County, Kansas
API# 15-109-21337-0000
Elevation: GL: 3031', KB: 3036'

Sample Tops			Ref. Well
Anhydrite	2474'	+562	+1
B/Anhydrite	2497'	+539	+1
Stotler	3539'	-503	+3
Heebner	3902'	-866	+1
Toronto	3926'	-890	+2
Lansing	3953'	-917	-2
Muncie Shale	4104'	-1068	-1
Stark Shale	4188'	-1152	-1
Hush	4228'	-1192	-3
BKC	4280'	-1244	-11
Marmaton	4292'	-1256	-3
Altamont	4306'	-1270	-2
Pawnee	4382'	-1346	+2
Myrick	4424'	-1388	+3
Fort Scott	4441'	-1405	Flat
Cherokee Shale	4470'	-1434	-1
Johnson	4515'	-1479	+2
BPL	4570'	-1534	-1
Morrow Sand	4576'	-1540	+1
Mississippian	4597'	-1561	+5
RTD	4725'	-1689	

P.O. Box 783188
Wichita, Kansas 67278-3188

(316) 691-9500
Fax (316) 691-9550
rei@ritchie-exp.com

8100 E. 22nd St. N., Bldg. 700
Wichita, Kansas 67226-2328

Barlett 28-1

20640

ALLIED OIL & GAS SERVICES, LLC 063757

Federal Tax I.D. # 20-8651475

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

SERVICE POINT: Oakley, Ks

DATE 9/25/14	SEC. 2	TWP. 13	RANGE 34	CALLED OUT	ON LOCATION	JOB START 8:30pm	JOB FINISH 9:30pm
LEASE Burt Lett	WELL # 1		LOCATION Monument 5 To Seven, 3W			COUNTY Logan	STATE Ks
OLD OR NEW (Circle one)			Sinko				

CONTRACTOR WW 8
TYPE OF JOB PTA - Rotary
HOLE SIZE 7 7/8 T.D.
CASING SIZE 8 5/8 DEPTH
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG.
PERFS.
DISPLACEMENT

OWNER Same

CEMENT
AMOUNT ORDERED 240 60/40 4% gel & ¼# Flosel

EQUIPMENT

PUMP TRUCK CEMENTER Allen Ryan
423-281 HELPER Kevin Ryan
BULK TRUCK
890 DRIVER Juan M (JOS)
BULK TRUCK
DRIVER

REMARKS:

50 sk @ 2490'
100 sk @ 1440'
50 sk @ 270'
10 sk @ 40'
30 sk @ RH Hole

Thank You
Allen Kevin Juan M

CHARGE TO: Ritchie Exp
STREET
CITY STATE ZIP

COMMON	@		
POZMIX	@		
GEL	8 2616	@ .20	413 60
CHLORIDE	@		
60/40 4% gel 240 sk	@	18.25	4540 00
	@		
Flo Seal 60 lb	@	2.97	178 20
	@		
Additional Labor (10 hr 40 / 30 hr)	@		332.80
	@		
	@		
	@		
HANDLING 253.22 cf	@	2.40	629 35
MILEAGE 25 sk/mile 10.233 ton			232 89
		TOTAL	

SERVICE

DEPTH OF JOB			2490 00
PUMP TRUCK CHARGE			2483 33
EXTRA FOOTAGE	@		
MILEAGE 25 mile	@	2.20	192 50
MANIFOLD stellabrik 25 mile	@	4.40	110 00
	@		
(8.3066/30 hr)		TOTAL	4,133.33

PLUG & FLOAT EQUIPMENT

8 5/8 wood plug	@		110 00
	@		
	@		
	@		
	@		
		TOTAL	110.00

SALES TAX (If Any)
TOTAL CHARGES 9,395.33
DISCOUNT 1,857.06 (20%) IF PAID IN 30 DAYS
7,538.26 Net

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 Pentecost

SIGNATURE

271103

CONSOLIDATED
Oil Well Services, LLC

TICKET NUMBER 46623
LOCATION Oakley KS
FOREMAN Kelly Gabel

PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT

CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
9-15-14	7173	Bartlett 2B #1	2	13	34	Logan

CUSTOMER: Ritchie Exploration
MAILING ADDRESS:
CITY / STATE / ZIP CODE:

Movement (RD350) 5 to 0 Seneca Rd 2½ W 5 ½ N

TRUCK #	DRIVER	TRUCK #	DRIVER
399	Michael R		
460	Lee G		

JOB TYPE Surface HOLE SIZE 12¼ HOLE DEPTH 220' CASING SIZE & WEIGHT 8 5/8 24#
CASING DEPTH 217 DRILL PIPE TUBING OTHER
SLURRY WEIGHT 15.2 SLURRY VOL WATER gal/sk CEMENT LEFT in CASING 20'
DISPLACEMENT 12½ DISPLACEMENT PSI MIX PSI RATE

REMARKS: Safety meeting, rigged up, mixed cement, displaced with water, shut in

WDW #8

cement did circulate

Thank You
Kelly & crew

ACCOUNT CODE	QUANITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
54015	1	PUMP CHARGE	1150.00	1150.00
5406	25 mi	MILEAGE	5.25	131.25
5407	7.75 ton	Ton mileage delivery (min)	1.75	430.20
11045	165 SKS	Class A cement	18.55	3060.75
1102	1165 #	calcium chloride	.94	1137.10
1118B	310	gel	.27	83.70
	Sub Total: 5292.85		Sub Total	4142.85
	10% = 529.28		less 10%	529.28
	Total = 4763.57		Total	3728.56
	Sales Tax - 246.54		SALES TAX	246.54
			ESTIMATED TOTAL	5010.11

Ravin 3737

AUTHORIZTION Matthew Bapper TITLE Tool Pusher DATE 9-15-14

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.