



KANSAS CORPORATION COMMISSION 1151213
OIL & GAS CONSERVATION DIVISION

Form ACO-1

June 2009

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
- Conv. to GSW
- Plug Back: _____ Plug Back Total Depth _____
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date Date Reached TD Completion Date or Recompletion Date

API No. 15 - _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total 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

- Letter of Confidentiality Received
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____



Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops and base 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. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

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 Electric Log Submitted Electronically <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i> 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
_____ Perforate _____ Protect Casing _____ Plug Back TD _____ Plug Off Zone				

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
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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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HERTEL OIL Company, L.L.C. Hays, Kansas

Scale 1:240 Imperial

Well Name: PAIGE #1
Surface Location: E2 SW NE NE 27 - 14S - 18W
Bottom Location:
API: 15-051-26477-00-00
License Number: 33625
Spud Date: 2/28/2013 Time: 11:00 PM
Region: ELLIS COUNTY
Drilling Completed: 3/5/2013 Time: 5:15 AM
Surface Coordinates: 990' FNL & 870' FEL
Bottom Hole Coordinates:
Ground Elevation: 2009.00ft
K.B. Elevation: 2017.00ft
Logged Interval: 2800.00ft To: 3700.00ft
Total Depth: 3700.00ft
Formation: LANSING-KANSAS CITY
Drilling Fluid Type: FRESH WATER / CHEMICAL GEL

OPERATOR

Company: HERTEL OIL COMPANY, LLC
Address: 704 E 12TH STREET
HAYS, KS 67601

Contact Geologist: DAVE HERTEL
Contact Phone Nbr: (785) 628-2445
Well Name: PAIGE #1
Location: E2 SW NE NE 27 - 14S - 18W
Pool: API: 15-051-26477-00-00
State: KANSAS Field: UNNAMED
Country: USA

SURFACE CO-ORDINATES

Well Type: Vertical
Longitude: -99.3026701 Latitude: 38.8103247
N/S Co-ord: 990' FNL
E/W Co-ord: 870' FEL

LOGGED BY



Company: SOLUTIONS CONSULTING, INC.

Address: 108 W 351H
HAYS, KS 67601

Phone Nbr: (785)259-3737
Logged By: Geologist

Name: JEFF LAWLER

CONTRACTOR

Contractor: DISCOVERY DRILLING
Rig #: 1
Rig Type: MUD ROTARY
Spud Date: 2/28/2013
TD Date: 3/5/2013
Rig Release: 3/6/2013
Time: 11:00 PM
Time: 5:15 AM
Time: 5:00 PM

ELEVATIONS

K.B. Elevation: 2017.00ft
K.B. to Ground: 8.00ft
Ground Elevation: 2009.00ft

NOTES


DUE TO LACK OF RECOVERY ON DRILL STEM TEST AND RESERVIOR DEVELOPMENT DECISION WAS MADE TO PLUG & ABANDON THE PAIGE #1.

RESPECTFULLY SUBMITTED,
JEFF LAWLER

WELL COMPARISON SHEET

FORMATION	PAIGE #1				NENE NE 24-14-18				NW NW SW 26-14-18				S2 SW SW SW 27-14-18				SE SE NW 27-14-18									
	2017		2008		2008		2031		2073		2055															
	LOGTOPS	SAMPLETOPS	COMP. CARD	LOG	SMPL.	COMP. CARD	LOG	SMPL.	COMP. CARD	LOG	SMPL.	COMP. CARD	LOG	SMPL.												
	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM												
ANHYDRITE TOP	1218	799	1218	799					1226	805	-	6	-	6	1257	816	-	17	-	17						
BASE	1254	763	1254	763					1267	764	-	1	-	1	1293	780	-	17	-	17						
TOPEKA	2993	-976	2994	-977	3001	-993	+ 17	+ 16	2997	-966	-	10	-	11	3040	-967	-	9	-	10						
HEEBNER SHALE	3260	-1243	3264	-1247	3250	-1242	-	1	-	5	3271	-1240	-	3	-	7	3297	-1224	-	19	-	23	3305	-1250	+ 7	+ 3
TORONTO	3279	-1262	3284	-1267	3270	-1262	+ 0	-	5	3291	-1260	-	2	-	7	3318	-1245	-	17	-	22	3326	-1271	+ 9	+ 4	
LKC	3306	-1289	3308	-1291	3296	-1288	-	1	-	3	3317	-1286	-	3	-	5	3343	-1270	-	19	-	21	3351	-1296	+ 7	+ 5
BKC	3539	-1522	3552	-1535	3538	-1530	+ 8	-	5	3556	-1525	+ 3	-	10	3582	-1509	-	13	-	26						
CHERTY CONGL.					3583	-1575																				
ARBUCKLE	3628	-1611	3638	-1621	3654	-1646	+ 35	+ 25	3654	-1623	+ 12	+ 2	3668	-1595	-	16	-	26	3684	-1629	+ 18	+ 8				
RTD			3700	-1683	3690	-1682		-	1	3865	-1834		+ 151	3780	-1707		+ 24									
LTD	3700	-1683												3779	-1706	+ 23							3760	-1705	+ 22	

DST #1 LKC J-K 3468' - 3515' (STRADDLE)



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Hertal Oil Company LLC **27-14s-18w**

704 E 12 th St
Hays Ks 67601 + 3440

ATTN: Dave Hertal

Paige #1
Job Ticket: 50400 **DST# 1**
Test Start: 2013.03.05 @ 13:44:19

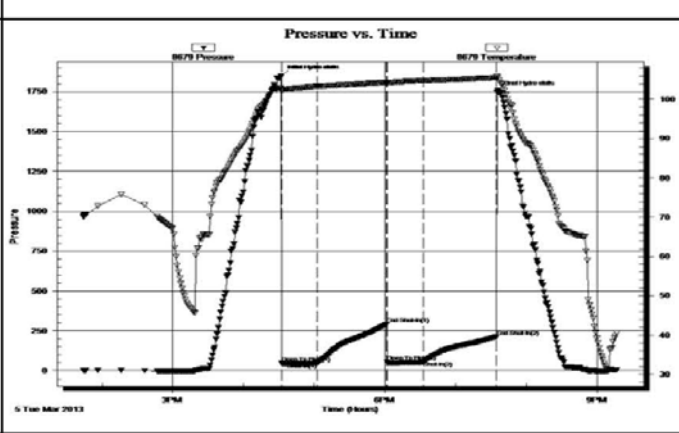
GENERAL INFORMATION:

Formation: LKC J - K
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 16:32:19
Time Test Ended: 21:21:49
Interval: 3468.00 ft (KB) To 3515.00 ft (KB) (TVD)
Total Depth: 3700.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Reference Elevations: 2019.00 ft (KB)
2011.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8679 Inside

Press@RunDepth: 57.65 psig @ 3506.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.03.05 End Date: 2013.03.05 Last Calib.: 2013.03.05
Start Time: 13:44:20 End Time: 21:16:49 Time On Btm: 2013.03.05 @ 16:31:49
Time Off Btm: 2013.03.05 @ 19:35:19

TEST COMMENT: IFP=Fair blow built to 9 in
ISI=Weak surface blow back died out in 2 min
FFP=Fair blow built to 5 3/4 in
FSI=Dead no blow back



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1845.06	102.85	Initial Hydro-static
1	48.34	102.30	Open To Flow(1)
31	48.32	103.27	Shut-In(1)
90	291.10	104.31	End Shut-In(1)
90	55.29	104.20	Open To Flow(2)
121	57.65	104.71	Shut-In(2)
183	213.52	105.48	End Shut-In(2)
184	1746.18	105.80	Final Hydro-static

Recovery		
Length(ft)	Description	Volume(bbl)
55.00	MCGO 10%G 55%O 35%M	0.51
0.00	100-Glp	0.00

Gas Rates			
	Choke(inches)	Pressure (psig)	Gas Rate(Mcf/d)

Trilobite Testing, Inc

Ref. No: 50400

Printed: 2013.03.06 @ 04:24:41

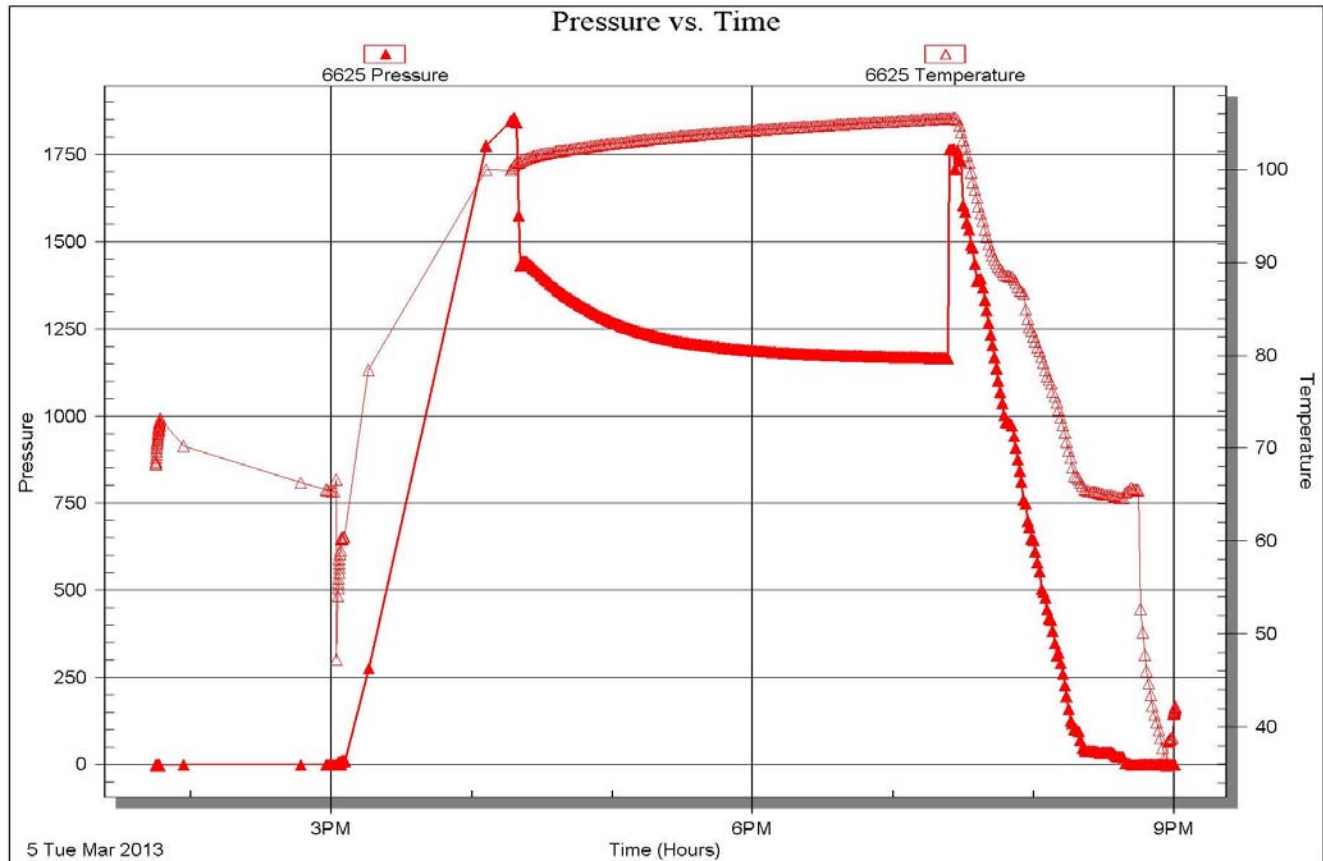
DST #1 LKC J-K 3468' - 3515' (STRADDLE) BOTTOM PACKER CHART

Serial #: 6625

Below (Straddle) Oil Company LLC

Page #1

DST Test Number: 1

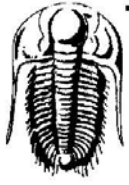


Trilobite Testing, Inc

Ref. No: 50400

Printed: 2013.03.06 @ 08:18:33

DST #2 LKC CD 3313' - 3364' (STRADDLE)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Hertal Oil Company LLC
704 E 12 th St
Hays Ks 67601 + 3440

ATTN: Dave Hertal

27-14s-18w
Paige #1
Job Ticket: 48501 **DST# 2**
Test Start: 2013.03.05 @ 21:58:11

GENERAL INFORMATION:

Formation: **LKC- C & D**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 23:56:41
Time Test Ended: 03:45:11

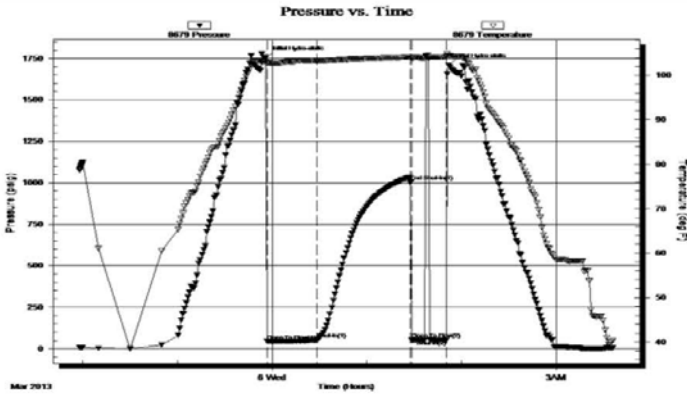
Interval: **3313.00 ft (KB) To 3364.00 ft (KB) (TVD)**
Total Depth: 3700.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Straddle (Reset)
Tester: Jeff Brown
Unit No: 67

Reference Elevations: 2019.00 ft (KB)
2011.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8679 Inside
Press@RunDepth: 53.92 psig @ 3355.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.03.05 End Date: 2013.03.06 Last Calib.: 2013.03.06
Start Time: 21:58:12 End Time: 03:36:11 Time On Btm: 2013.03.05 @ 23:56:11
Time Off Btm: 2013.03.06 @ 01:51:41

TEST COMMENT: IFP=Weak blow built to 1/2 in died out in 15 min
ISI=Dead no blow back
FFP=Surged then died -Flush tool surged then died



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1753.00	102.98	Initial Hydro-static
1	45.65	102.76	Open To Flow(1)
32	53.92	103.28	Shut-In(1)
92	1003.72	104.05	End Shut-In(1)
92	53.66	103.79	Open To Flow(2)
114	53.27	104.20	Shut-In(2)
116	1710.63	104.44	Final Hydro-static

Recovery

Length(ft)	Description	Volume(bbl)
10.00	Mud with a scum of oil	0.05

Gas Rates

	Choke(inches)	Pressure (psig)	Gas Rate(Mcf/d)

* Recovery from multiple tests

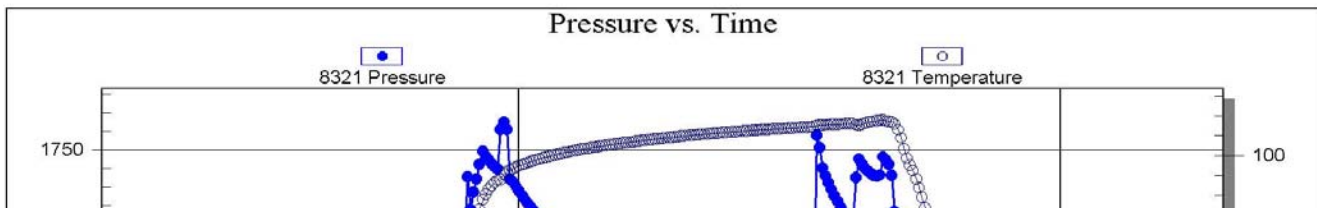
DST #2 LKC CD 3313' - 3364' (STRADDLE) BOTTOM PACKER CHART

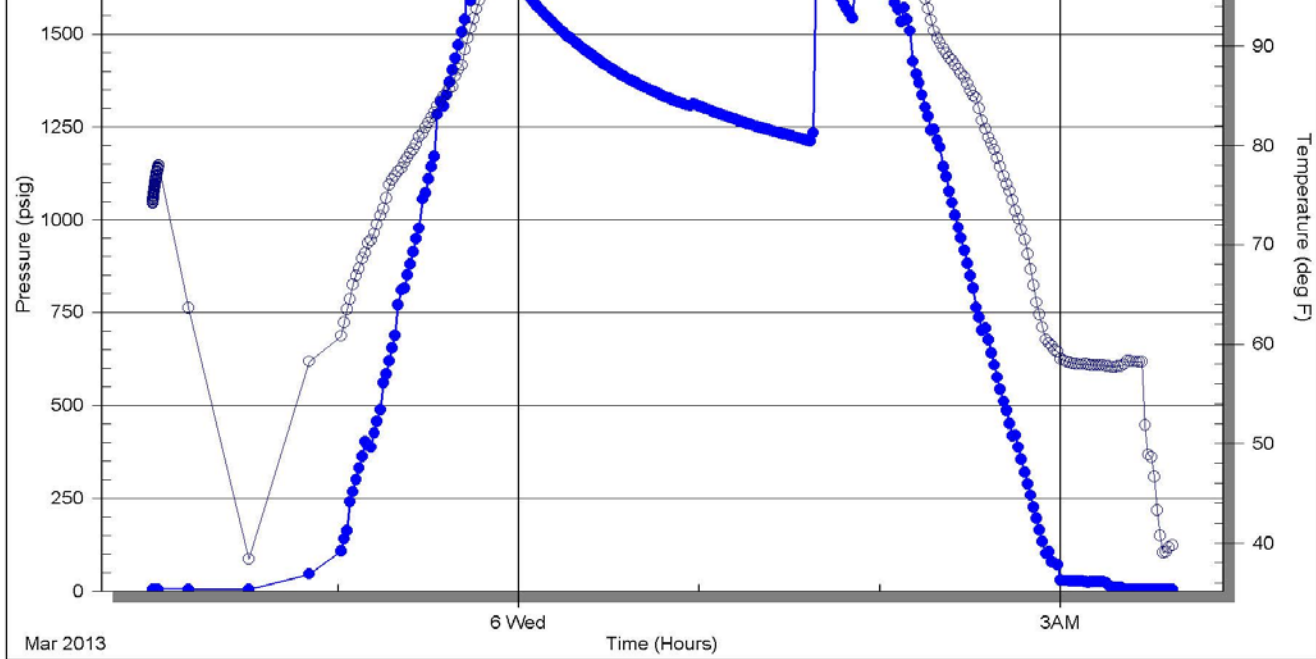
Serial #: 8321

Below (Straddle) Oil Company LLC

Paige #1

DST Test Number: 2



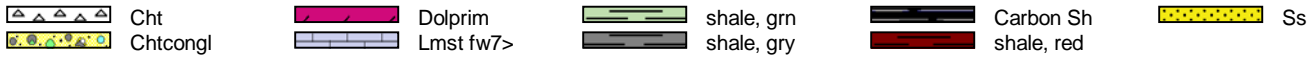


Trilobite Testing, Inc

Ref. No: 48501

Printed: 2013.03.06 @ 08:16:57

ROCK TYPES



ACCESSORIES

MINERAL

* Sandy

STRINGER

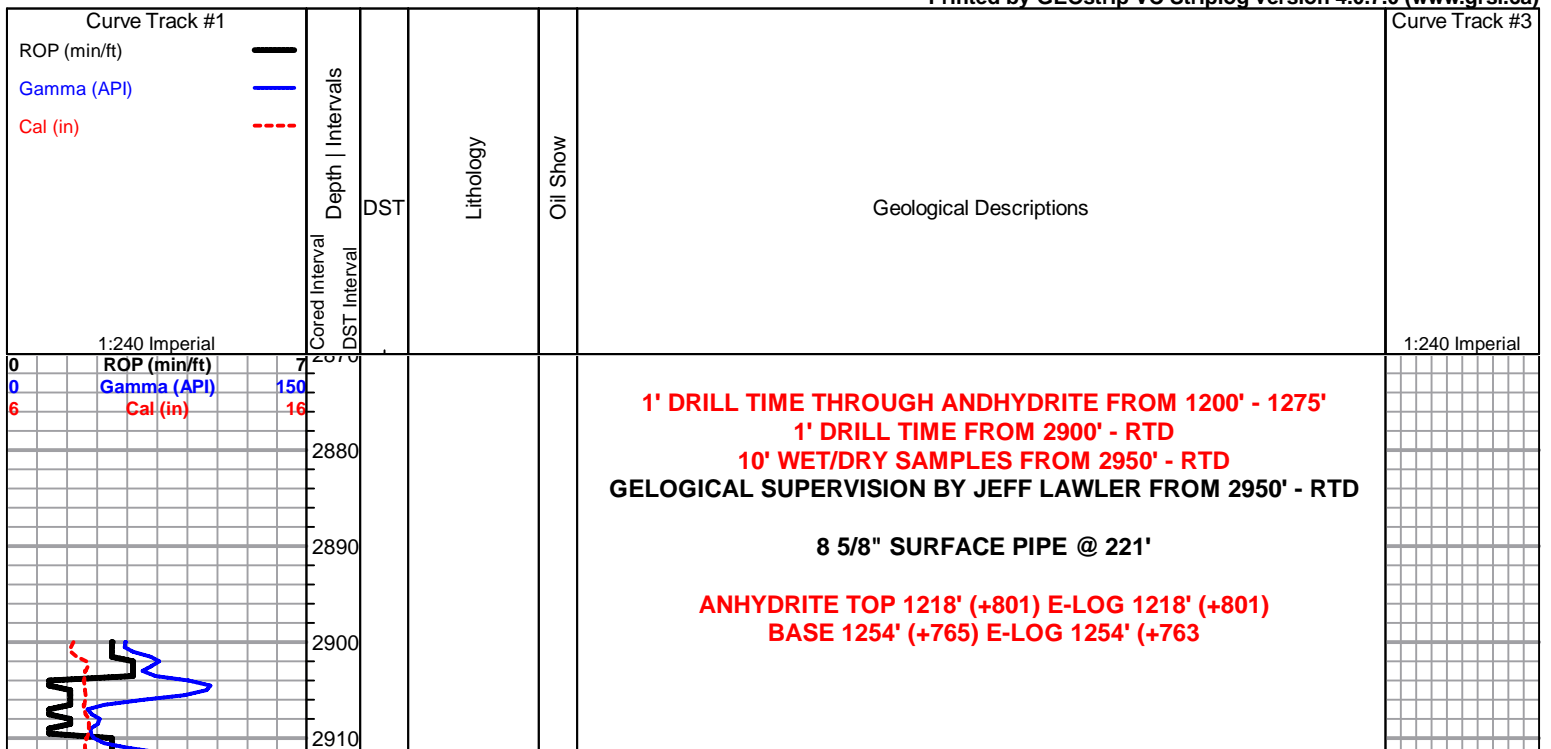
~~~~ Chert

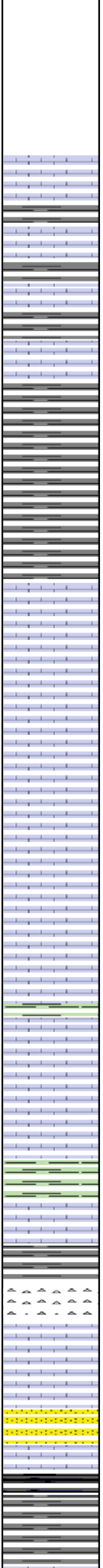
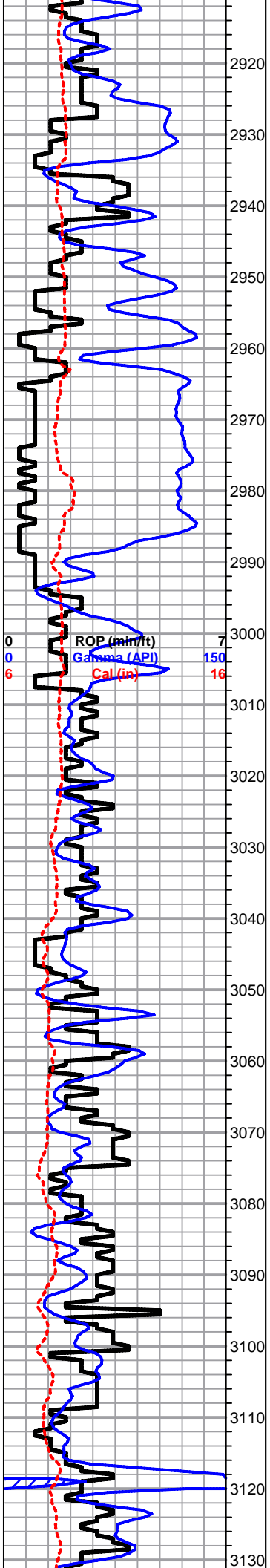
### OTHER SYMBOLS

#### DST

■ DST Int  
■ DST alt

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





Lm- Tan, FXLN, dense, well cemented, fsl, tight w/ minimal vis. porosity

Sh- Gray Lm Green, gummy argillaceous clumps, sl waxy thin chips, some soft white chalk,  
Ss- Lt Gray, vf grn, calcareous & shaley

Sh- A/A w/ more white wash chalk & sandy shale

Sh- Gray Lm Green, soft, silty, sandy, calcareous

**TOPEKA 2994' (-975) E-LOG 2993' (-976)** Lm- Cream Off White, Vf Grn & FXLN, dense, massive, mix of lithofied mud matrix w/o vis. porosity & sl fsl, well cemented, tight w/ sctrd micro XLN porosity

Lm- Tan Buff, Crypto XLN, dense, well cemented w/o vis. grains/porosity

Lm- Tan Gray, A/A, sl fsl, tight w/ no vis. porosity

Lm- Tan Cream, FXLn, sl fsl, dense, well cemented, minimal vis. porosity, sctrd interbedded recrystallization

Sh- Lm Green Brick Red Yellow, soft, silty, some sl sandy, gummy white chalk

Lm- Tan, VFXLN, dense, sl fsl, sctrd micro XLN porosity, tight

Lm- Tan, VFXLN, sub-sucrosic dolomitic Ls, gritty, well cemented, mostly consistant XLN porosity, NS

Sh- Mint Green White, soft, sl sandy

Sh- Gray, soft silty & calcareous

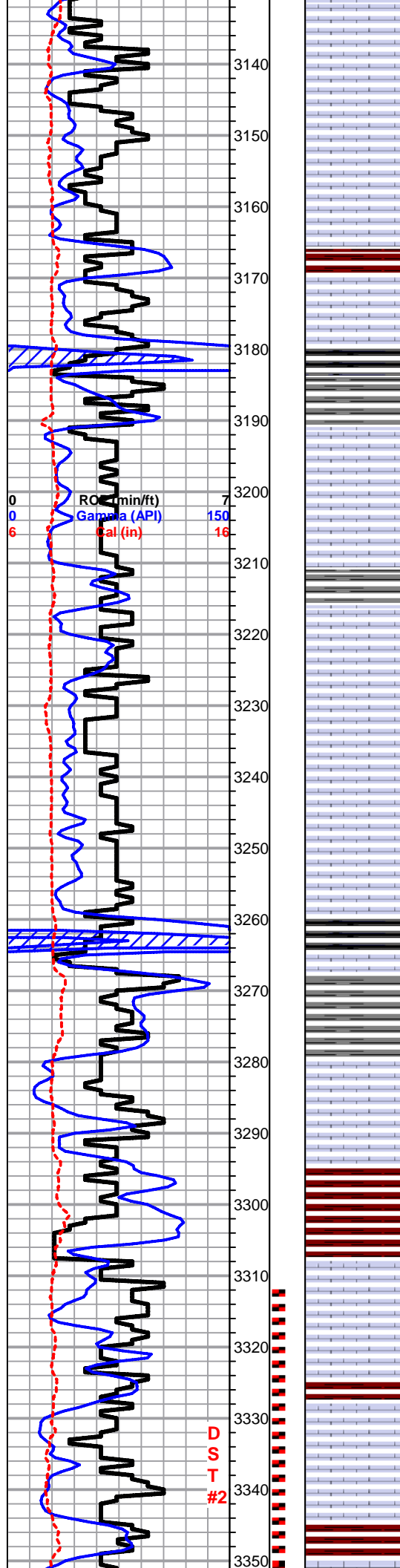
Chert- Lt Gray White, fresh bedded angular sharp chert

Lm- Fn-Med Grn, mud supported matrix, sl sandy, loosely cemented, chalky

Ss- Dove Gray, Fn Grn, well cemented, sl unconsolidated, shaley

Sh- Black Gray, fissile, well compacted, gritty & grainy, carbonaceous, soft & silty, calcareous





Lm- Cream Off White, Crypto XLN, dense, well cemented & brittle, cherty Ls w/o vis. grains/porosity

Lm- White Off White, Crypto XLN, A/A

Lm- Buff Cream, FXLN, fsl, sl developed, dense, fenestral & XLN porosity, clean & barren

Sh- Black Gray, fissile, carbonaceous, soft & sl silty

Sh- Gray Maroon, soft, silty, gritty & earthy

Lm- Cream Off White, VF-FXLN, dense, some sl fsl, sctrd XLN & secondary recrystallization porosity, vry clean

Lm- Cream Lt Gray, FXLN, dense, fsl, high-energy trashy mix, sctrd XLN porosity

Sh- Lt Gray White, silty, soft, gummy white chalk

Lm/Chert- Buff Smokey Gray, dense, well cemented, sctrd mottling, few chips of fsl bedded chert

Lm- Lt Gray, Fn Grn, gritty sl sandy Ls, sl chalky in part, minimal vis. porosity, soft

Lm- Cream Off White, FXLN, dense, well cemented, sl cherty Ls, minimal vis. porosity, vry clean & barren

**HEEBNER 3264' (-1247) E-LOG 3260' (-1243)** Sh- Black Gray White, fissile, carbonaceous, soft & silty, sl unconsolidated, gummy white clumps

Sh- Lt Gray Lm Green, gummy argillaceous clumps & lm grn wash

**TORONTO 3284' (-1267) E-LOG 3279' (-1262)** Lm- White Off White, Crypto - VFXLN, dense, vry well cemented, tight, vry clean, barren

Sh- Maroon Lt Gray Lm Green, soft, gummy sandy lime, few clumps of white chalk

**LKC 3308' (-1291) E-LOG 3306' (-1289)** Lm- Cream Off White, FXLN, dense, well cemented, some sl fsl, poorly developed w/ micro XLN & sctrd XLN porosity, vry clean

Lm- A/A, sl chalky in part w/ sctrd light mottling

Sh- Maroon Purple, gritty & earthy, few clumps of red wash

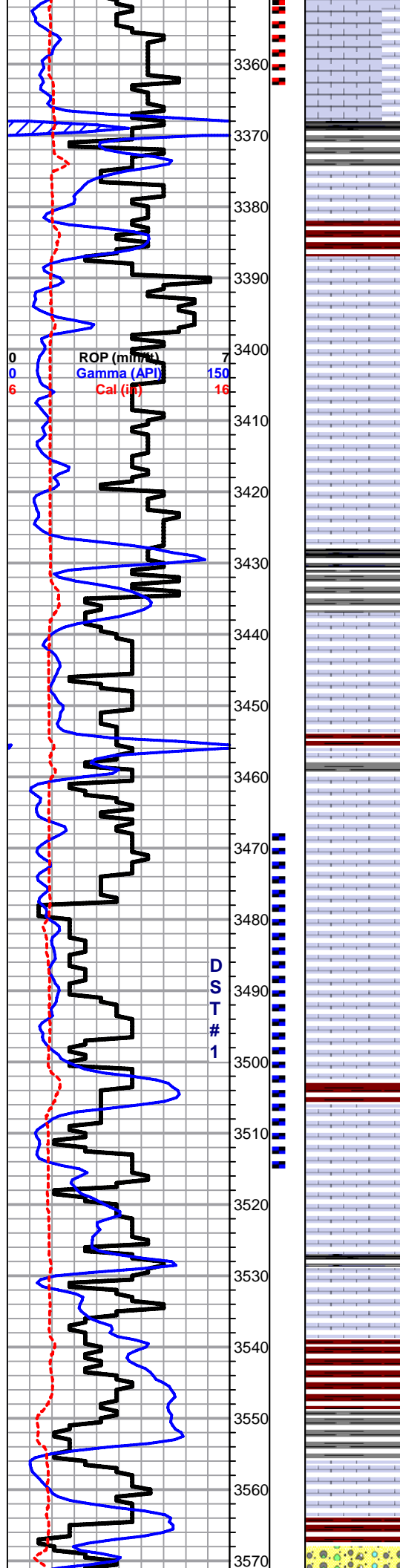
Lm- Buff Tan, VFXLN, dense, well cemented cherty Ls, no vis. porosity

Lm- Cream Off White, FXLN, few chips sl oolitic, moderately well developed w/ sctrd ppt porosity, massive, well cemented, SCTRD DRK BRWN STN, GD SFO, GD GSY SHN IN CUP & FLOATING FREE OIL, PR-FR ODR

**DST #2  
STRADDLE**

**LKC C&D  
3313' - 3364'**

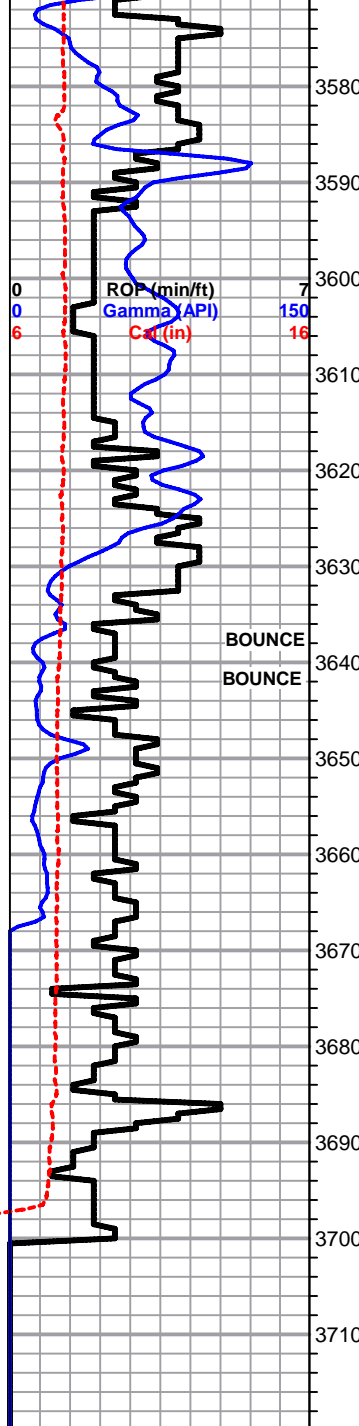
**CHARTS  
ABOVE  
CONFIRM  
VALID  
STRADDLE**



- Lm- White Off White, FXLN, fsl & oolitic, moderately developed, loosely cemented, mostly sctrd ppt interoolite porosity, SCTRDR STN, FR SFO, FNT ODR, GD GSY SHN IN CUP & FLOATING FREE OIL
- Lm- White Off White, VF-FXLN, dense, some loosely cemented & crumbly, most well cemented w/ minimal vis. porosity
- Lm- Tan Off White, VFXLN, densely packed oolitic biomicrite w/ clear siliceous cementation, tight & vry well cemented, no porosity
- Lm- White Off White, Crypto XLN, lithographic, no vis. grains/porosity
- Lm- White Off White, A/A, VFXLN, tight w/ no vis. porosity, vry clean
- Lm- Tan, VFXLN, dense, cherty Ls w/ rare micro XLN porosity
- Sh- Black Gray Lm Green, slick, vry well compacted, slaty, carbonaceous, silty & calcareous
- Lm- Cream Off White, VF-FXLN, dense, poorly developed, well cemented, tight w/ minimal vis. porosity
- Lm- A/A w/ few chips of dark gray fresh bedded chert
- Lm- White Off White, VF-FXLN, dense, well cemented, sctrd XLN porosity, clean
- Lm- White Off White, F-Med XLN, fsl & sl oolitic, moderately developed, some w/ consistant vry fn ppt porosity throughout, few have sctrd ppt interoolitic porosity, LT SCTRDR STN, NO SFO, FNT ODR
- Lm- Tan Semi-Translucent, FXLN, dense, fsl, oolitic & sl oomoldic, sctrd partial skeletal dissolution w/ associated sctrd vuggy porosity, DRK BRWN STN, FR SFO, FR ODR, GD OIL SCUM ON TOP OF WET CUP
- Sh- Maroon White, gummy argillaceous clumps
- Lm- White Off White, FXLN, dense, some sl chalky in part, poorly developed, minimal vis. porosity, vry clean
- Lm- Cream Off White Tan, VF-FXLN, mostly dense & poorly developed w/ minimal vis. porosity, few tan VFXLN, massive, vry well cemented, sctrd development w/ sctrd ppt porosity, SCTRDR DRK BRWN STN, NO SFO, NO ODR
- Lm- White Off White Cream, mix of sl chalky, mud supported, crumbly, sctrd vry fn interstitial porosity, WK SPOTTY STN, NO SFO, NO ODR, & FXLN, sl fsl, sctrd XLN porosity, WK SPOTTY STN A/A
- BKC 3552' (-1535) E-LOG 3539' (-1522)** Sh- Maroon White Gray, much gummy white chalk & argillaceous clumps
- Sh- Gray Maroon, fissile, gritty & earthy
- Lm- Tan, VFXLN, dense, vry well cemented, sl lithographic, no vis. porosity
- Sh-Red, many gummy argillaceous clumps
- Cherty Conglomerate, White, graded & BW cherty conglomerate, some w/ clear dr

BIT TRIP @  
3400'  
SURVEY 1 1/4  
STRAP -0.27'

DST #1  
(STRADDLE)  
LKC J-K  
3468' - 3515'  
CHARTS  
ABOVE  
CONFIRM  
VALID  
STRADDLE



Cherty Conglomerate- white, eroded & R/W cherty conglomerate, some w/ clear qtz. inclusions, soft white chalky matrix in some

D

Ss- Clear to Frosted, mature, sl unconsolidated, sub-rounded to sub-angular, friable to loosely cemented clusters, some w/ lt sctrd white siliceous cementation, DRK SAT STN, SOME BLEEDING FO, FNT ODR, GD SCUM ON TOP OF WET CUP

Shale/Chert- abundant gummy red argillaceous clumps & red wash, various colors of sl conglomerate chert, some fresh bedded

Chert- Semi-Translucent Clear Salmon, fresh bedded sharp angular chert, some oolitic, no vis. porosity

**ARBUCKLE 3638' (-1621) E-LOG 3628' (-1611)** Dolomite- White, Med XLN, mostly vry loosely cemented, some euhedral rhombs, mostly consistant fn ppt porosity, SCTRD DRK BRWN STN, FR SFO, GOOD SCUM ON TOP OF WET CUP

D

Dolomite- Snow White, VF-Med XLN, some massive & vry well cemented, sctrd development, some w/ ppt porosity, much barren porosity, SCTRD BLK GILSONITE, NO SFO, NO ODR

D

Dolomite- Snow White, Crs XLN, well developed euhedral rhombs, GD ppt porosity, BLK GILSONITE, few chips of white oolitic fresh bedded chert

Dolomite- A/A w/ gummy white chalk

Dolomite- Snow White, F-Med XLN, A/A, barren

Dolomite- Snow White, A/A w/ various colored chert, cherty dolomite, & red shale

Dolomite- Cream Off White, eroded & R/W, qtz inclusions w/ dolomite cementation, fused w/ micro XLN porosity, barren

**RTD 3700' (-1683) LTD 3700' (-1683) @ 05:15 3/5/2013**

**MINI TRIP  
CTCH  
TOH LOG**

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025

Home Office P.O. Box 32 Russell, KS 67665

No. 8478

Cell 785-324-1041

|      |        |      |    |      |    |       |     |        |        |       |        |             |  |        |          |
|------|--------|------|----|------|----|-------|-----|--------|--------|-------|--------|-------------|--|--------|----------|
| Date | 3-6-13 | Sec. | 27 | Twp. | 14 | Range | 110 | County | ELIOTS | State | KANSAS | On Location |  | Finish | 11:45 AM |
|------|--------|------|----|------|----|-------|-----|--------|--------|-------|--------|-------------|--|--------|----------|

Location Hays 4S - 1 1/2 E - 1/2 S - W/TINTO

Lease PAIGE Well No. #1 Owner HEITEL OIL

Contractor Discovery #1 To Quality Oilwell Cementing, Inc.  
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Type Job P.T.A Charge To HEITEL OIL

Hole Size 7 7/8" T.D. 3,700' Street 704 E 12ST

Csg. 4 1/2" Depth City Hays State KS, 67601

Tbg. Size Depth The above was done to satisfaction and supervision of owner agent or contractor.

Tool Depth Cement Amount Ordered 250 40 202 4 1/2 1/4 FLO-SEAL

Cement Left in Csg. Shoe Joint

Meas Line Displace

| EQUIPMENT   |     |                              | Common   |
|-------------|-----|------------------------------|----------|
| Pumptrk #15 | No. | Cement Helper <u>NTCK W.</u> | Poz. Mix |
| Bulktrk #10 | No. | Driver <u>DAUG H.</u>        | Gel.     |
| Bulktrk #14 | No. | Driver <u>CYSCOA.</u>        | Calcium  |

**JOB SERVICES & REMARKS**

|                          |                         |
|--------------------------|-------------------------|
| Remarks:                 | Salt                    |
| Rat Hole <u>30 SKS</u>   | Flowseal                |
| Mouse Hole <u>15 SKS</u> | Kol-Seal                |
| Centralizers             | Mud CLR 48              |
| Baskets                  | CFL-117 or CD110 CAF 38 |
| D/V or Port Collar       | Sand                    |
| <u>1st @ 3,600'</u>      | Handling                |
| <u>2nd @ 1,220'</u>      | Mileage                 |

| FLOAT EQUIPMENT        |                              |
|------------------------|------------------------------|
| <u>3rd @ 5,600'</u>    | Guide Shoe                   |
| <u>4th @ 270'</u>      | Centralizer                  |
| <u>5th @ 40'</u>       | Baskets                      |
| <u>RAT HOLE</u>        | AFU Inserts                  |
| <u>MOUSE HOLE</u>      | Float Shoe                   |
| <u>TOTAL = 250 SKS</u> | Latch Down                   |
|                        | <u>1- 8 5/8" WOODEN PLUG</u> |

THANK YOU!

|  |                |              |
|--|----------------|--------------|
|  | Pumptrk Charge | Tax          |
|  | Mileage        | Discount     |
|  |                | Total Charge |

X Signature Chf Mayfield