



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1233760
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: _____

1233760

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> _____	PRODUCTION INTERVAL: _____ _____
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OPERATOR

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

Contact Geologist: MIKE HERTEL
 Contact Phone Nbr: 785-628-2445
 Well Name: JACOBS - WERTH UNIT # 1
 Location: SE NE SE NW, SEC 4-T15S-R18W
 API: 15-051-26,741-00-00
 Pool:
 State: KANSAS

Field: RUDER NORTH
 Country: USA

Scale 1:240 Imperial

Well Name: JACOBS - WERTH UNIT # 1
 Surface Location: SE NE SE NW, SEC 4-T15S-R18W
 Bottom Location:
 API: 15-051-26,741-00-00
 License Number: 33625
 Spud Date: 10/3/2014 Time: 8:41 AM
 Region: ELLIS COUNTY
 Drilling Completed: 10/7/2014 Time: 11:45 PM
 Surface Coordinates: 1865' FNL & 2510' FWL
 Bottom Hole Coordinates:
 Ground Elevation: 2019.00ft
 K.B. Elevation: 2027.00ft
 Logged Interval: 2900.00ft To: 3750.00ft
 Total Depth: 3750.00ft
 Formation: ARBUCKLE
 Drilling Fluid Type: CHEMICAL/FRESH WATER GEL

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: -99.328273
 Latitude: 38.7788799
 N/S Co-ord: 1865' FNL
 E/W Co-ord: 2510' FWL

LOGGED BY

Company: SOLUTIONS CONSULTING, INC.
 Address: 108 WEST 35TH STREET
 HAYS, KANSAS 67601

Phone Nbr: 785-625-3380
 Logged By: GEOLOGIST

Name: HERB DEINES/SPENCER STAAB

CONTRACTOR

Contractor: DISCOVERY DRILLING INC.
 Rig #: 3
 Rig Type: MUD ROTARY
 Spud Date: 10/3/2014 Time: 8:41 AM
 TD Date: 10/7/2014 Time: 11:45 PM
 Rig Release: 10/8/2014 Time: 9:00 PM

ELEVATIONS

K.B. Elevation: 2027.00ft Ground Elevation: 2019.00ft
 K.B. to Ground: 8.00ft

NOTES

RECOMMENDATION TO RUN PRODUCTION CASING TO FURTHER TEST THE ARBUCKLE BASED ON FAVORABLE STRUCTURE AND LOG ANALYSIS

NO DRILL STEM TESTS WERE RAN ON THIS WELL

FORMATION TOPS SUMMARY

	JACOBS-WERTH UNIT 1 SE NE SE NW SEC.4-15S-18W 2019'GL 2027'KB	RUDER #A-1 NW SE NW SEC.4-15-18W KB 2021'	OLDHAM # 2 NW NE NW SEC.4-15-18W KB 2024
<u>FORMATION</u>	<u>LOG TOPS</u>	<u>LOG TOPS</u>	<u>LOG TOPS</u>
Anhydrite	1208+ 819	+ 824	+ 825
B-Anhydrite	1246+ 781	+ 787	+ 786
Topeka	3018 - 991	- 982	- 976
Heebner Sh.	3277-1250	-1247	-1234
Toronto	3297-1270	-1269	-1254
LKC	3331-1304	-1302	-1284
BKC	3557-1530	-1537	-1528
Marmaton	3597-1570	-1571	-1558
Congl. Sand	None	-1597	-1600
Arbuckle	3627-1600	-1643	-1609
RTD	3750-1723	-1653	-1610

SUMMARY OF DAILY ACTIVITY

10-03-14	RU, spud, set 8 5/8" surface casing to 222' w/ 150 sxs common 2%gel 3%CC, plug down 7:15PM, WOC 8 hrs
10-04-14	623', drill plug 3:15 AM
10-05-14	2160', drilling
10-06-14	2885', drilling, displaced 2566'-2592'
10-07-14	3260', drilling, RTD 3750' @11:45 PM
10-08-14	3750', short trip, CCH, TOWB, logs, LDDP, run production casing

ROCK TYPES

Clystcol	Lmst fw7>	Carbon Sh	Lscongl
Dolprim	shale, grn	shale, red	Dol Lime
Lmst fw<7	shale, gry	Shcol	

ACCESSORIES

MINERAL

- ▲ Chert, dark
- △ Chert White

FOSSIL

- ⊕ Oolite
- ⊕ Oomoldic

OTHER SYMBOLS

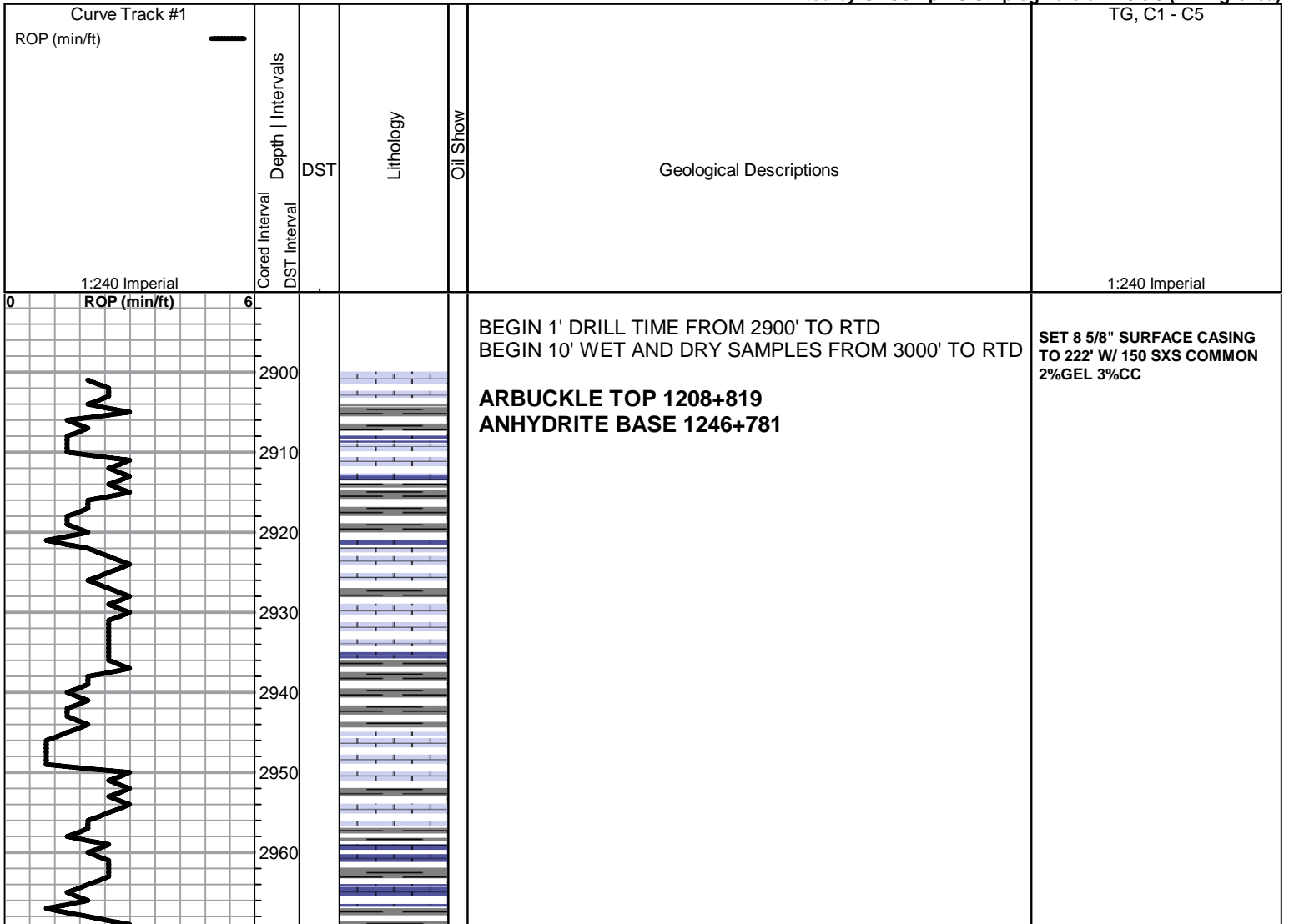
Oil Show

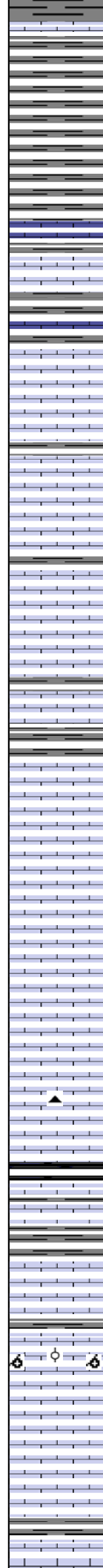
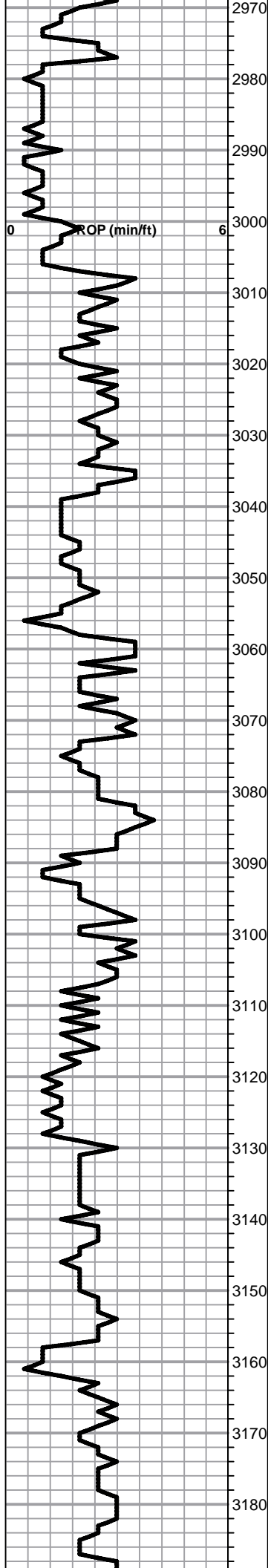
- Good Show
- Fair Show
- Poor Show
- Spotted or Trace
- Questionable Stn
- D Dead Oil Stn
- Fluorescence
- * Gas

DST

- DST Int
- DST alt
- Core
- tail pipe

Printed by GEOstrip VC Striplog version 4.0.8.9 (www.grsi.ca)





Shale, lt-med gray, soft blocky

Lime, lt-med gray, fnxln

TOPEKA 3018-991

Lime, crm, fnxln, slightly fossiliferous, slight bedded chalk

Lime, crm-tan, fn-vfxln, slightly fossiliferous, bed chalk with sticky clumps

Lime, lt-med grayish brn, fnxln

Lime, lt-med gray, fnxln
Shale, lt gray, soft blocky

Lime, lt brn, granular, bedded chalk, NS

Lime, lt-med grayish brn, fnxln

Lime, lt-med gray, fnxln-vfxln
Shale, lt gray, soft sticky, argillaceous

Lime, lt-med grayish brn, fnxln, slightly fossiliferous

Lime, med-dark brn, fnxln-granular, slightly fossiliferous, NS

Lime, med-dark gray, granular-fnxln

Lime, med grayish brn, fn-vfxln

Lime, lt-med brn, fnxln-granular,

Lime, crm, fnxln-granular with increasing chalk matrix with bed chalk

Lime, crm, granular, lot of bedded chalk

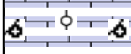
Shale, black carbonaceous, blocky

Lime, lt brn, fnxln-slightly granular

Shale, med gray, soft blocky

Lime, lt brn, fnxln

Lime, crm-tan, fn-vfxln

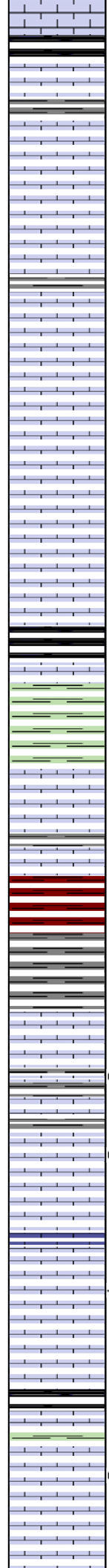
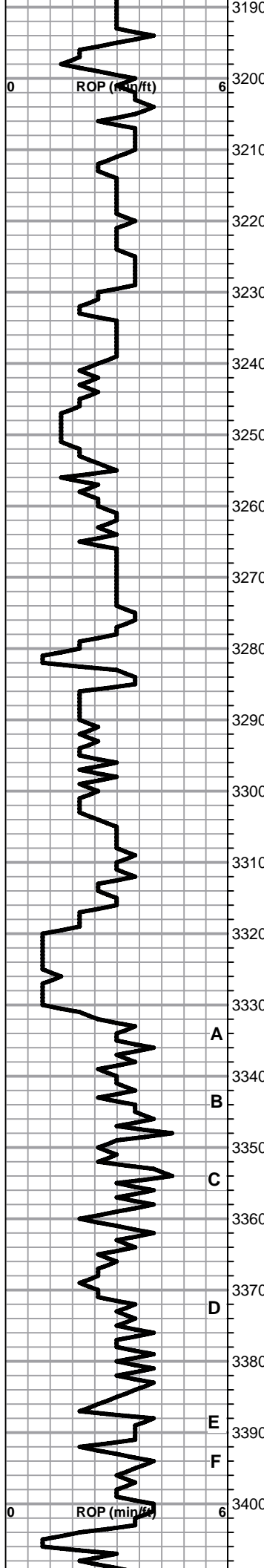


Lime, crm-tan, fnxln, oomoldic in part, NS

Lime, lt-med brn, fnxln

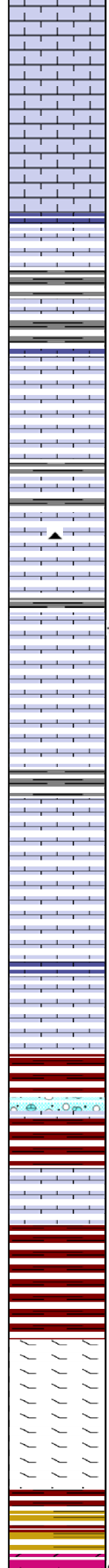
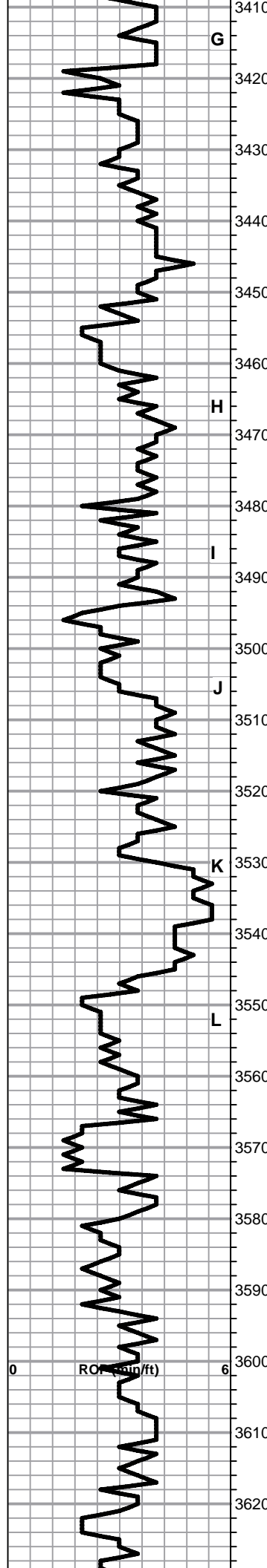
Lime, crm, fnxln

Lime, lt-med brn, fnxln with micro xln in part

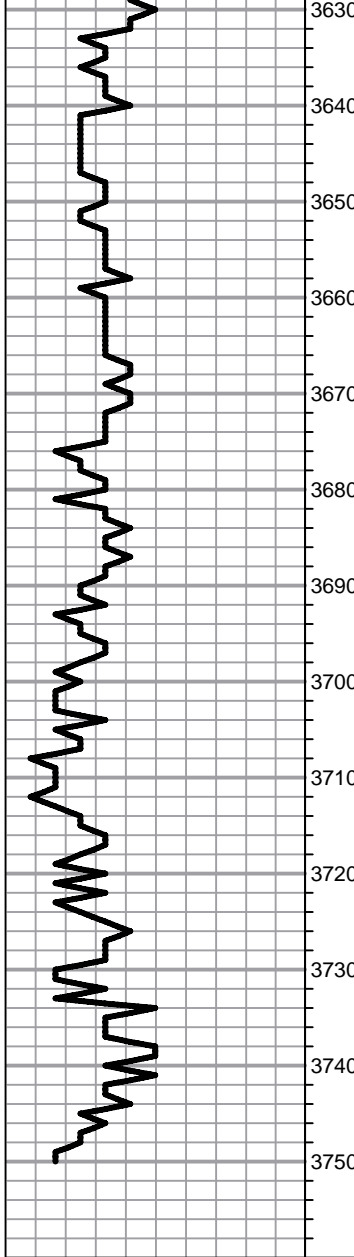


Shale, black carbonaceous, fissile, blocky
 Lime, lt-med gray, fnxln, slightly fossiliferous
 Lime, med brn, fnxln, slightly fossiliferous
 Lime, lt-med brn, fnxln
 Lime, lt-med grayish brn, fnxln
 Lime, med brn-grayish brn, fnxln
 Lime, lt-dark brn, fnxn-granular
 Lime, crm, fnxln
 Lime, lt-med brn, fnxln
 Lime, lt-med brn, fn-vfxln
HEEBNER SHALE 3277-1250
 Shale, black carbonaceous, fissile, blocky
 Lime, lt-med brn, fn-vfxln
 Shale, dove gray-lime green, soft mud-soft blocky
TORONTO 3297-1270
 Lime, white-crm, fnxln-granular, bedded chalk in part, NS
 Lime, lt-med brn, fn-vfxln, NS
 Shale, red, soft with red wash
 Shale, lt gray, soft mud-soft blocky
LKC 3331-1304
 Lime, lt-med brn, fnxln, one chip spotty stain, vlt odor
 Lime, lt-med brn, fn-vfxln
 Lime, lt-med brn, fnxln-oomoldic/oolitic, spotty stain
 Lime, crm-lt brn, fnxln, slightly fossiliferous, NS
 Lime, crm-tan, fnxln, NS
 Lime, lt brn, fnxln, few chips with slight stain and vlt odor.
 Shale, black carbonaceous, blocky
 Lime, crm-lt brn, fnxln, spotty staining in part, NFO
 Lime, crm-lt brn, fnxln, slightly fossiliferous, oomoldic in part, NS

A
 B
 C
 D
 E
 F



- Lime, crm-tan, fn-vfxln
- Lime, crm-tan, fn-vfxln
- Lime, lt brn, fn-vfxln
- Lime, crm-tan, fn-vfxln
- Shale, med-dark gray, soft-firm blocky
- Lime, med-dark, brn, fn-vfxln
- Lime, lt-med brn, fn-vfxln, slight bedded chalk
- Shale, grayish green, soft blocky
- Lime, lt grayish brn, fnxln
- Lime, lt brn, fnxln
- * Lime, crm-tan, fnxln-granular, lt odor, NFO
- Lime, tan-lt brn, fnxln with scattered oomoldic chips
- Lime, tan-lt brn, fn-vfxln
- Lime, lt-med brn-lt grayish brn, fnxln, NS
- Lime, tan-lt brn, fn-vfxln
- Lime, crm-tan, fn-vfxln
- Lime, tan-lt brn, fnxln
- BKC 3557-1530**
- Shale, red, soft with lt red wash
- Lime, crm-tan, fnxln
- Lime, crm-tan, fn-vfxln
- Shale, red, soft with red wash
- MARMATON 3597-1570**
- Lime, crm-tan, fnxln, dolomitic, orange chert fragments
- Lime, crm-tan, fnxln, dolomitic
- Lime, crm-tan-lt brn, fnxln
- Shale, vari color, soft sticky to firm blocky
- ARBUCKLE 3627-1600**



Dolomite, buff, fnxln-granular, fn-med grain, lt staining with
 lt odor improving with depth
 Dolomite, buff, granular, sucrosic, good-strong odor and
 saturated staining
 Dolomite, buff-tan, granular with decreasing stain and odor
 Dolomite, buff-tan, granular-fnxln
 Dolomite, buff-tan, granular-fnxln
 Dolomite, tan-lt brn, granular, fnxln
 Dolomite, tan-lt brn, fnxln-granular
 Dolomite, tan-lt brn, fnxln
 Dolomite, tan-lt brn, fnxln-granular
 Dolomite, tan-lt brn, granular
 Dolomite, tan-lt brn, granular
 Dolomite, tan-lt brn, fnxln
 Dolomite, tan-lt brn, fnxln-granular in part
 Dolomite, tan-lt brn, fnxln
RTD 3750-1723 LTD 3750-1723

HISTORIC OIL/WATER
CONTACT 3644-1617

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

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

No. 811

Date	10-3-2014	Sec.	4	Twp.	15c	Range	18w	County	ELLIS	State	KANSAS	On Location		Finish	9:15 PM
------	-----------	------	---	------	-----	-------	-----	--------	-------	-------	--------	-------------	--	--------	---------

Location Hays, KS S S 9/10 W 1/2 E 1/4 INTD

Lease JACOBS - WORTH UNIT Well No. 1 Owner

Contractor DISCOVERY DRILLING #3 To: Quality Oilwell Cementing, Inc.

Type Job Cement Surface You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Hole Size 12 1/4 T.D. 222' Charge To: HERTEL OIL CO. LLC.

Csg. 8 5/8 NEW Depth 221' Street

Thg. Size 23 # csg Depth City State

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

Cement Left in Csg. 15 Shoe Joint Cement Amount Ordered 150 SX COM.

Meas Line Displace 13.884 3% cc 2% GEL

EQUIPMENT

Pumptrk	18	No.	Cementer		Common
			Helper	<u>GILMAN G.</u>	Poz. Mix
Bulktrk	15	No.	Driver	<u>COOT B</u>	Gel.
			Driver	<u>TYBER</u>	Calcium
Bulktrk		No.	Driver		
			Driver		

JOB SERVICES & REMARKS

Remarks:	Hulls
Rat Hole	Salt
Mouse Hole	Flowseal
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38
	Sand
	Handling
	Mileage

Cement Circulated to Surface

FLOAT EQUIPMENT

	Guide Shoe
	Centralizer
	Baskets
	AFU Inserts
	Float Shoe
	Latch Down

THANK'S

	Pumptrk Charge
	Mileage

	Tax
	Discount
	Total Charge

X Signature D. M. Basher



TICKET 250000

CHARGE TO: Hertel Oil Co.
 ADDRESS:
 CITY, STATE, ZIP CODE:

PAGE 1 OF 2

SERVICE LOCATIONS
 1. Blayne, MO
 2. New City, MO
 3.
 4.

WELL PROJECT NO: # Unit #1
 CONTRACTOR: Tricon Energy, Inc.
 TICKET TYPE: SERVICE SALES
 WELL TYPE: Oil

LEASE: Tachonworth COUNTY/PARISH: Ellis STATE: KS DATE: 10-8-14
 RIG NAME/NO.: #3 DELIVERED TO: SHAWYER, MO
 WELL CATEGORY: in field JOB PURPOSE: Revent 2 Stage L.S. WELL PERMIT NO.:
 INVOICE INSTRUCTIONS:

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING		DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
		LOC	ACCT							
575		1			10.00				600.00	6000.00
577		1		MILEAGE	1.00	3747.94			2000.00	2000.00
321		1		Pump Charge - Two Stage L.S.	1.00				2500.00	2500.00
281		1		Liquid Kcl	510.00				1.25	637.50
390		1		Mud Flush	4.00				41.00	164.00
402		1		D-Air	7.00	5 1/2 in			70.00	490.00
403		1		Centralizers	2.00	5 1/2 in			300.00	600.00
407		1		Convent Baskets	1.00	5 1/2 in			375.00	375.00
408		1		Inspect Ebat Shoe by Auth-Gill	1.00	5 1/2 in			355.00	355.00
414		1		D.V. TEL 1 Phy Set	1.00	5 1/2 in			30.00	30.00
417		1		Limit Chains	1.00	5 1/2 in			300.00	300.00
419		1		Distributors Phos 1 Bottle	1.00	5 1/2 in			200.00	200.00
		1		Rotating Head Rental	1.00	5 1/2 in			200.00	200.00

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY**, and **LIMITED WARRANTY** provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

X [Signature] DATE SIGNED: 10-8-14 TIME SIGNED: 1:50 A.M. P.M.

REMIT PAYMENT TO:
 SWIFT SERVICES, INC.
 P.O. BOX 466
 NESS CITY, KS 67560
 785-798-2300

SURVEY: OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN? YES NO
 WE UNDERSTOOD AND MET YOUR NEEDS? YES NO
 OUR SERVICE WAS PERFORMED WITHOUT DELAY? YES NO
 WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY? YES NO
 ARE YOU SATISFIED WITH OUR SERVICE? YES NO
 CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL: 950482
 TAX: 16902.32
 TOTAL: 967384.32

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

SWIFT OPERATOR: [Signature] APPROVAL: [Signature]

Thank You!



PO Box 466
Ness City, KS 67560
Off: 785-798-2300

TICKET CONTINUATION

TICKET No. 24-14

DATE 10-2-14 PAGE 2 OF 2

CUSTOMER Apple Oil Co
WELL 1st + 2nd / 1000

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING		TIME	DESCRIPTION	QTY		U/M		UNIT PRICE	AMOUNT
		LOC	ACCT			DF	QTY	U/M	QTY		
295		2			PH-2 cement standard	150	25	1400	lbs	1450	217500
276		2			Fluoride	30	14			350	7500
283		2			Salt	750	165			90	15000
284		2			Colloid	705	165	7	sk	2500	39500
276		2			Moloch	71	165			250	10350
290		2			SAND Cement	300	25	1980	lbs	1250	27000
276		2			Fluoride	50	165			27	1250
551		2			SERVICE CHARGE						
553		2			MILEAGE CHARGE						
					CUBIC FEET			350	25		7000
					TON MILES			711.32			711.32
CONTINUATION TOTAL											8504.32

