

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

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

Gas DH EOR

OG GSW

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 EOR Conv. to SWD

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

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 Drill Stem Tests Received

Geologist Report / Mud Logs 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 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 Geologist Report / Mud Logs <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				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
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)*

Date of first Production/Injection or Resumed Production/Injection:	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

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> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Hertel Oil Company LLC
Well Name	SCHMEIDLER E 2
Doc ID	1410222

All Electric Logs Run

Micro Resistivity
Dual Induction
Compensated Density Neutron
Sonic Cement Bond



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

TICKET 30885

PAGE 1 OF 1

SERVICE LOCATIONS: 1. Hayes Ws WEL/PROJECT NO. _____ LEASE: Schneider E1 COUNTY/PARISH: Ellis STATE: Ks CITY: _____ DATE: 4-9-18 OWNER: _____
 2. Abess City Ws # 2 CONTRACTOR: Discovery Drilling RIG NAME NO. Rig # 1 SHIPPED VIA: _____ DELIVERED TO: Location ORDER NO. _____
 3. _____ WEL TYPE: _____ WEL CATEGORY: _____ JOB PURPOSE: development two stage long string WEL PERMIT NO. _____ WEL LOCATION: _____
 4. _____ INVOICE INSTRUCTIONS: _____

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	MILEAGE TRK #	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT
		LOC	ACCT	DF								
575					1	111	10	mi			5.00	50.00
579					1		1	ea			1800.00	1800.00
290					1		5	can			42.00	210.00
281					1		500	can			1.50	750.00
221					1		4	can			25.00	100.00
402					1		8	ea		5 1/2	70.00	560.00
403					1		3	ea			275.00	825.00
402					1		1	ea			325.00	325.00
408					1		1	ea			3325.00	3325.00
417					1		1	ea			200.00	200.00
					1		1	ea			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.

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

DATE SIGNED: _____ TIME SIGNED: _____
 DATE SIGNED: _____ TIME SIGNED: _____
 DATE SIGNED: _____ TIME SIGNED: _____

SWIFT OPERATOR: David Edgerston APPROVAL: _____
 CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES: _____
 CUSTOMER DID NOT WISH TO RESPOND:

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

TAX: 918.40
 TOTAL: 17244.85

THANK YOU!



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

TICKET CONTINUATION

TICKET No. 30885

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	WELL				DATE	UNIT PRICE	AMOUNT
		LOG	ACCT	DF			QTY	U/M	QTY	U/M			
330		2				Swift Milk: Density	180	sts			4-9-18	16.25	2925.00
325		2				Standard Cement	180	sts				13.00	2340.00
284		2				Calsol	9	sts				35.00	315.00
283		2				Salt	950	lbs				20.00	190.00
276		2				Halad 332	85	lbs				8.00	680.00
		2				Flarels	90	lbs				2.50	225.00
581						SERVICE CHARGE MILEAGE CHARGE TOTAL WEIGHT CEMENT LOADED MILLS 360 STS 737 32831 46	CUBIC FEET 360 STS 737					1.25 95	630.00 626.45
CONTINUATION TOTAL													7931.45

JOB LOG

SWIFT Services, Inc.

DATE 4-9-18

PAGE NO.

CUSTOMER		WELL NO.		LEASE		JOB TYPE		TICKET NO.	
Hertel		#2		Schmeidler 'K'		Two Stage		30885	
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS	
				T	C	TUBING	CASING		
	100								On location
									Rtd - 3685
									Pipe - 3684.29
									Insert - 3654.01
									O.V. TOOL - 1277.39
									Centralizers - 1, 3, 5, 7, 9, 11, 13, 59
									Baskets - 1, 2, 60
									D.V. TOOL - 60
	145								Start running csg -
	315								Break Circ on Bottom
	345	5.5	12			300			pump mud flush 500 gal
	350	5.5	20			300			pump key spacer
	355	5	43			100			pump cmt - 180 sts EA2 @ 15.5 ppg
									Drop plug - wash p&L
	410	7	0			100			Start Disp
	430	5	87.5			900			land plug - lift psi - 900 psi
									land psi - 1600 psi
	435								Release psi - Dry
	435								Drop D.V. opening tool
	440	2.5	16			0			plug rat hole - 30 sts - SMD
	445					1100			Open D.V. tool
	445	6	0			200			Start cmt - 135 sts smd @ 11.2 ppg
		6	75			400			Raise weight to 13 ppg - 15 sts
	505	5	80			0			End cmt
									Drop plug
	505	4.5	0			100			Start Disp
		4.5	3			100			circ cmt
	575	4.5	30			400			land plug - lift psi - 400
									land psi - 1200
									Release psi - Dry
									1st stage - 180 EA-2
									2nd stage - 150 SMD
									Rat hole - 30 SMD

QUALITY OILWELL CEMENTING, INC.

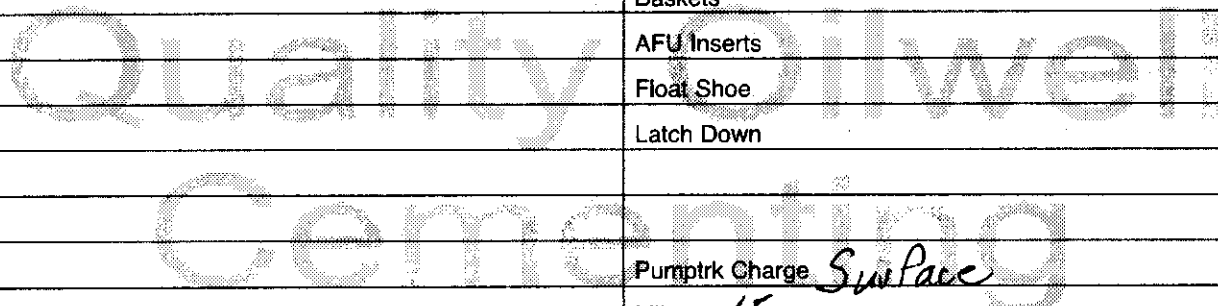
Federal Tax I.D.# 20-2886107

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

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

No. 736

Date	4-3-18	Sec.	5	Twp.	13	Range	17	County	Ellis	State	KS	On Location		Finish	10:30 am
Lease								Schmeidler E		Well No.		2			
Contractor								Discovery #1		Owner					
Type Job								Surface		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.					
Hole Size				12 1/4				T.D.		221					
Csg.				8 5/8				Depth		220					
Tbg. Size								Depth							
Tool								Depth							
Cement Left in Csg.				10'				Shoe Joint		The above was done to satisfaction and supervision of owner agent or contractor.					
Meas Line								Displace		13BL					
EQUIPMENT								Common							
Pumptrk 5				No. Cementer				mig				120			
				No. Helper				David				30			
Bulktrk				No. Driver				Tim				3			
Bulktrk 21				No. Driver								6			
JOB SERVICES & REMARKS								Hulls							
Remarks:								Salt							
Rat Hole								Flowseal							
Mouse Hole								Kol-Seal							
Centralizers								Mud CLR 48							
Baskets								CFL-117 or CD110 CAF 38							
D/V or Port Collar								Sand							
8 5/8 on bottom - Est. Circulation								Handling				159			
Mit 150SK + Displace.								Mileage							
Cement Circulated:								FLOAT EQUIPMENT							
								Guide Shoe							
								Centralizer							
								Baskets							
								AFU Inserts							
								Float Shoe							
								Latch Down							
								Pumptrk Charge							
								Surface							
								Mileage							
								15							
								Tax							
								Discount							
								Total Charge							
Signature								[Signature]							



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: SCHMEIDLER E # 2
 Location: N2 SW SW NW SEC. 5-TWP 13S-RGE 17W
 API: 15-051-26,907-00-00
 Pool: IN FIELD
 State: KANSAS
 Field: REED
 Country: USA

Scale 1:240 Imperial

Well Name: SCHMEIDLER E # 2
 Surface Location: N2 SW SW NW SEC. 5-TWP 13S-RGE 17W
 Bottom Location:
 API: 15-051-26,907-00-00
 License Number: 33625
 Spud Date: 4/3/2018 Time: 4:30 PM
 Region: ELLIS COUNTY
 Drilling Completed: 4/8/2018 Time: 12:20 PM
 Surface Coordinates: 2290' FNL & 330' FWL
 Bottom Hole Coordinates:
 Ground Elevation: 2055.00ft
 K.B. Elevation: 2063.00ft
 Logged Interval: 2900.00ft To: 3685.00ft
 Total Depth: 3685.00ft
 Formation: ARBUCKLE
 Drilling Fluid Type: CHEMICAL/FRESH WATER GEL

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: -99.2412994
 Latitude: 38.9518313
 N/S Co-ord: 2290' FNL
 E/W Co-ord: 330' FWL

LOGGED BY

Company: SOLUTIONS CONSULTING, INC.
 Address: 108 W 35TH
 HAYS, KS 67601

Phone Nbr: (785) 639-1337
 Logged By: GEOLOGIST Name: HERB DEINES

CONTRACTOR

Contractor: DISCOVERY DRILLING INC.
 Rig #: 1
 Rig Type: MED ROTARY
 Spud Date: 4/3/2018 Time: 4:30 PM
 TD Date: 4/8/2018 Time: 12:20 PM
 Rig Release: 4/9/2018 Time: 5:45 AM

ELEVATIONS

K.B. Elevation: 2063.00ft Ground Elevation: 2055.00ft
 K.B. to Ground: 8.00ft

NOTES

DECISION TO RUN PRODUCTION CASING TO FURTHER TEST THE ARBUCKLE BASED ON RESULTS OF DST # 1

SCHMEIDLER E # 2	BRUNGARDT #5	SCHMEIDLER E # 1
N2 SW SW NW	S2 N2 NW SW	75' S W2 NW NW
SEC.5-13S-17W	SEC.5-13-17W	SEC.5-13-17W
2063'KB	KB 2054'	KB 2039'

Anhydrite top	1292 +771	+ 758	+ 776
Anhydrite base	1332 +731	+ 723	+ 732
Topeka	3074-1011	-1010	-1007
Heebner Sh.	3315-1252	-1245	-1245
Toronto	3337-1274	-1265	-1265
LKC	3363-1300	-1291	-1291
BKC	3590-1527	-1520	-1520
Arbuckle	3621-1558	-1544	-1551
RTD	3685-1622	-1630	-1622

SUMMARY OF DAILY ACTIVITY

- 4-03-18** RU, spud 4:30 PM, set 8 5/8" surface casing to 220' w/ 150 sxs
80/20 pos 2%gel 3%CC, slope 0 degrees
- 4-04-18** 240', drill plug 6:30 AM
- 4-05-18** 1955', drilling
- 4-06-18** 2720', drilling
- 4-07-18** 3355', drilling, CFS 3390', Short trip-20 stands, CFS 3630', DST # 1
3568' to 3630' Arbuckle
- 4-08-18** 3630', finish DST # 1, TIWB, RTD 3685' @12:20PM TOWB, logs, LDDP
- 4-09-18** 3630', finish running casing and cement bottom and top stages



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Hertel Oil Co, LLC
 704 E 12th St.
 Hays KS 67601+3440
 ATTN: Herb Deines

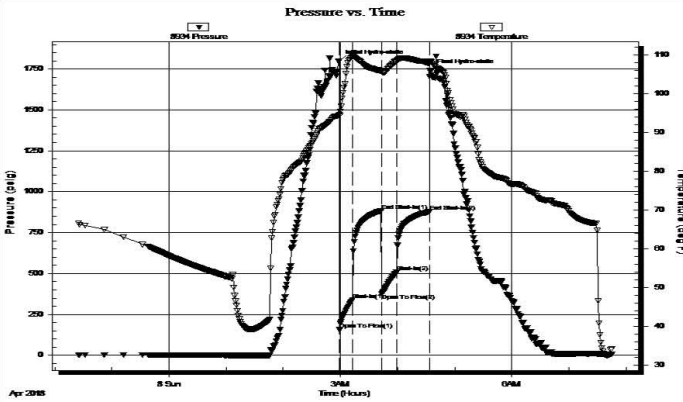
5-13S-17W Ellis KS
Schmeidler 'E' #2
 Job Ticket: 63772 **DST#: 1**
 Test Start: 2018.04.07 @ 22:25:00

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 02:59:15 Tester: Spencer J. Staab
 Time Test Ended: 07:44:45 Unit No: 84
 Interval: **3568.00 ft (KB) To 3630.00 ft (KB) (TVD)** Reference Elevations: 2063.00 ft (KB)
 Total Depth: 3630.00 ft (KB) (TVD) 2056.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 7.00 ft

Serial #: 8934 Inside
 Press@RunDepth: 508.13 psig @ 3571.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.04.07 End Date: 2018.04.08 Last Calib.: 2018.04.08
 Start Time: 22:25:15 End Time: 07:44:45 Time On Btm: 2018.04.08 @ 02:58:45
 Time Off Btm: 2018.04.08 @ 04:34:30

TEST COMMENT: 15-IF-Strong Blow ; BOB in 1 min
 30-ISI-Weak Surface Blow ; Built to 1/4"
 15-FF-Strong Blow ; BOB in 2 mins
 30-FSH-No Return



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1797.80	94.49	Initial Hydro-static
1	156.08	94.33	Open To Flow (1)
14	338.66	109.45	Shut-In(1)
45	883.73	105.77	End Shut-In(1)
45	376.20	105.57	Open To Flow (2)
61	508.13	108.37	Shut-In(2)
95	878.34	107.81	End Shut-In(2)
96	1741.89	108.26	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbt)
600.00	SOCMV 2%O 18%M 80%W	6.33
415.00	OCMV 15%O 40%M 45%W	5.82
120.00	SOCM 2%O 98%M	1.68
120.00	OCM 15%O 85%M	1.68
5.00	Clean Oil 100%O	0.07

Gas Rates

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

Trilobite Testing, Inc

Ref. No: 63772

Printed: 2018.04.08 @ 12:45:02

ROCK TYPES

Clystool
 Lmst fw<7
 shale, grn
 Carbon Sh
 Shcol

Dolprim

Lmst fw7>

shale, gry

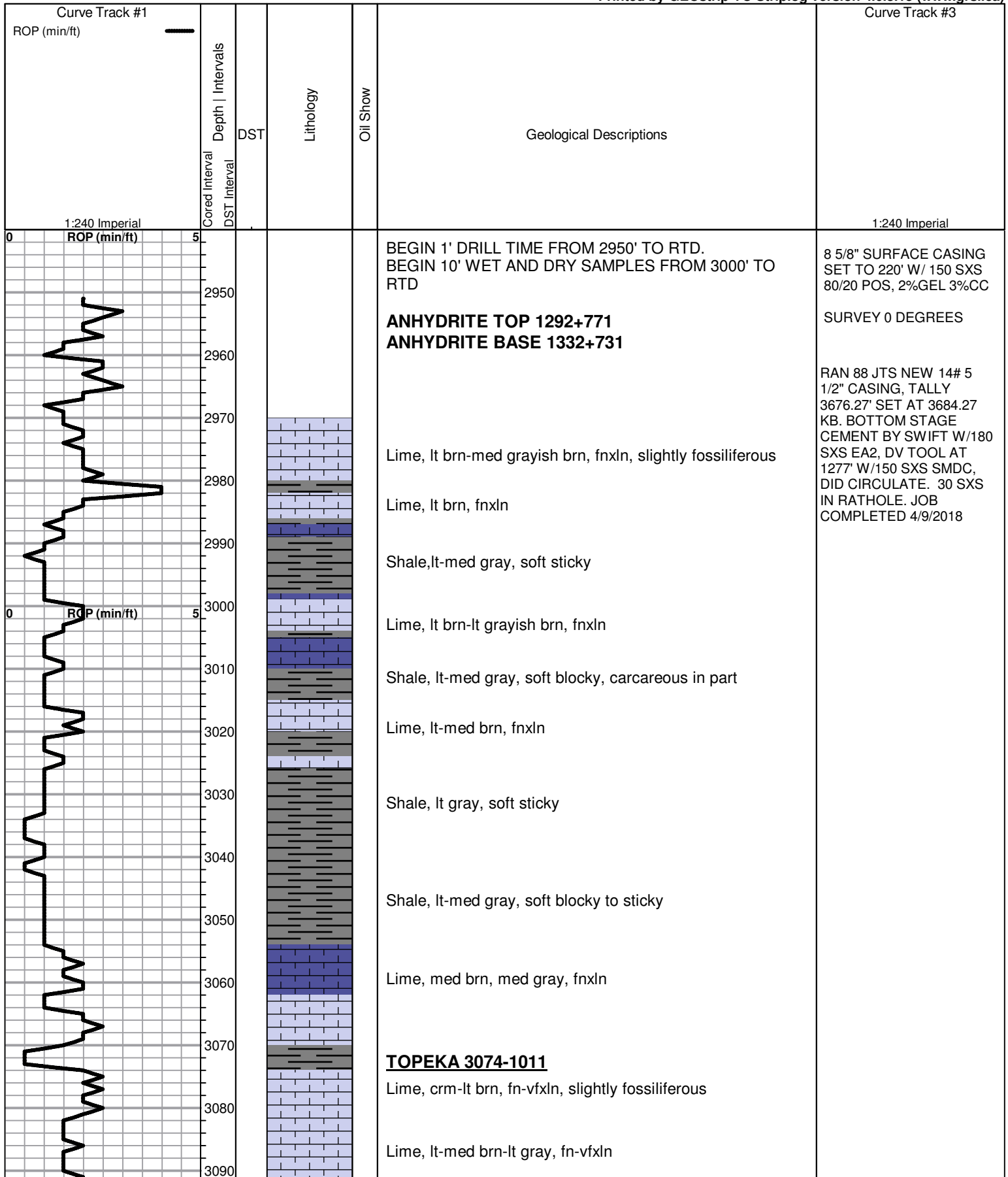
shale, red

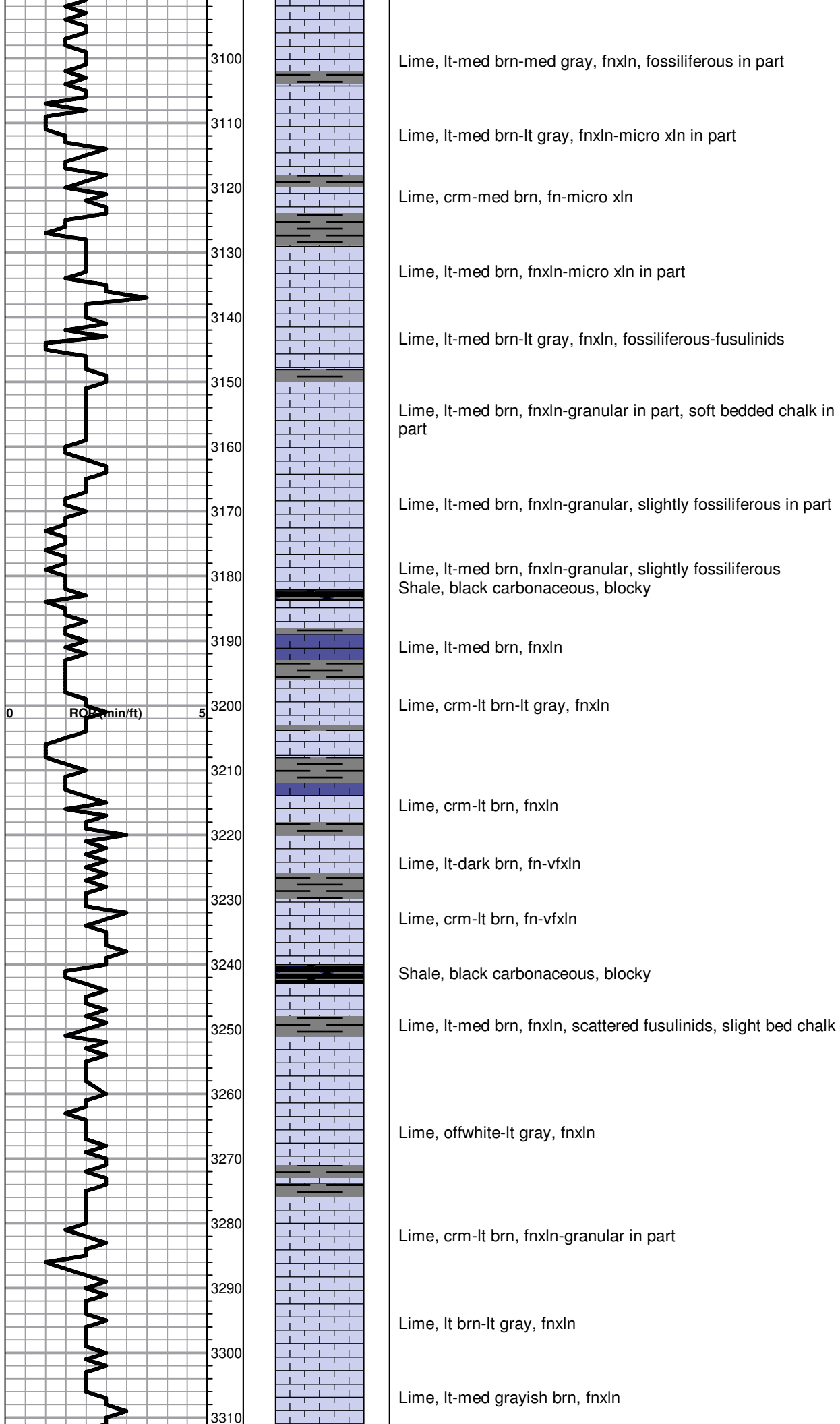
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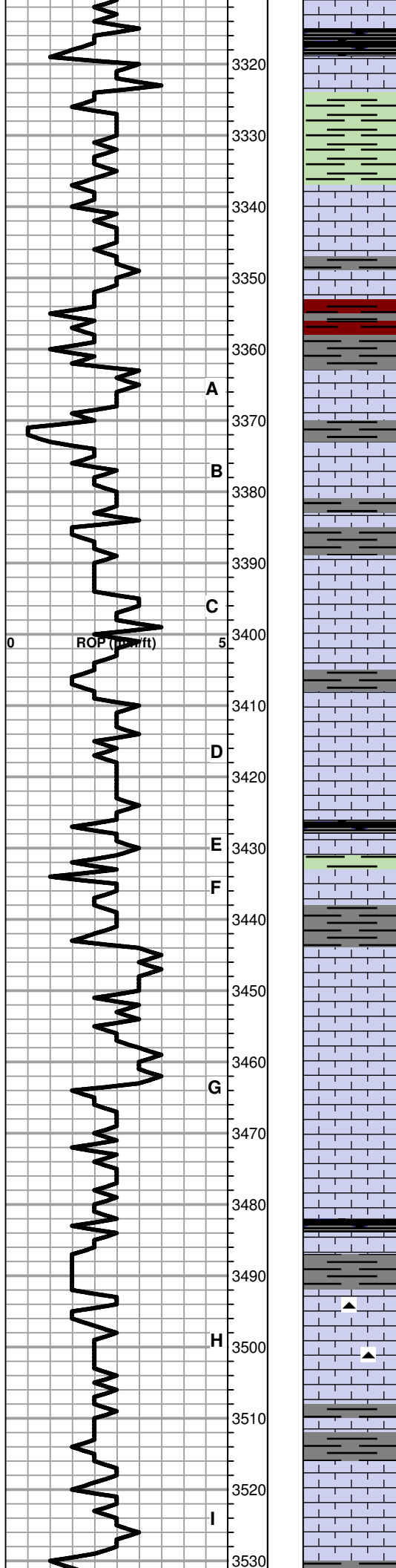
MINERAL

- ▲ Chert, dark
- △ Chert White

Printed by GEOstrip VC Striplog version 4.0.8.15 (www.grsi.ca)







HEEBNER SHALE 3315-1252

Shale, black carbonaceous, fissile, blocky
Lime, lt brn, fn-vfxln

Shale, lime green, soft sticky mud

TORONTO 3337-1274

Lime, lt-med brn, fn-vfxln, NS

Lime, crm-lt brn, fnxln

Lime, crm-lt brn, fnxln
Shale, reddish tan, soft mud

LKC 3363-1300

Lime, crm, fnxln, NS

Lime, lt-med brn, fn-micro xln

Shale, red-gray, soft blocky

Lime, crm-lt brn, mostly fnxln, NFO, no odor, one chips with trace of spotty stain

Lime, crm-lt brn, fnxln, one chips with spotty staining, NFO, no odor

Lime, crm-lt brn, fn-vfxln

Shale, black carbonaceous, blocky
Lime, crm-lt brn-offwhite, fn-vfxln

Lime, crm-lt brn, mostly fnxln, slight bedded chalk

Lime, crm-lt brn, fn-vfxln

Lime, crm-tan, fn-vfxln, slightly chalky

Lime, crm-lt brn, fnxln

Lime, crm-tan, fnxln, darker brown lime near shale boundary

Shale, gray-black carbonaceous

Lime, crm-tan, fn-vfxln, tan chert, fresh, sharp

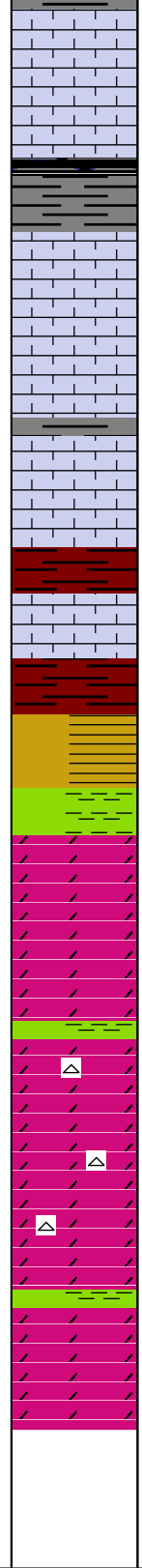
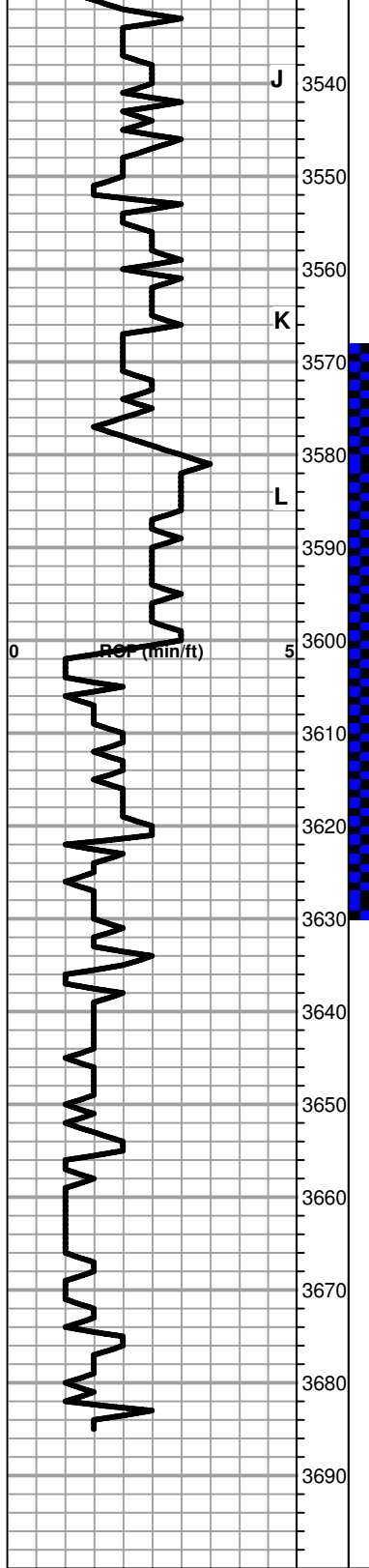
Lime, crm-lt brn, fn-vfxln

Lime, med grayish brn, fnxln

Lime, white-crm, fn-vfxln, slight bedded chalk, NS

Lime, crm-lt brn, fnxln

CFS 3340', SHORT TRIP-
PULLED 20 STANDS



Lime, crm-lt brn, fnxln, NS

Lime, crm-lt brn, fn-vfxln

Lime, crm-lt brn, fn-micro xln in part

Lime, crm-lt brn-med brn in part, fn-vfxln

Lime, lt brn, fn-vfxln

BKC 3590-1527

Shale, red-reddish brn, soft mud

Lime, lt-med brn, fn-micro xln

Shale, red soft mud grading into vari colored shales

Shale, blue green, simpson shale, waxy, blocky

ARBUCKLE 3621-1558

- Dolomite, lt brn, fnxln-granular, interxln porosity with scattered to sat staining, lt odor, NFO

- Dolomite, lt brn, fnxln-granular, dark spotty to saturated staining, lt odor

Dolomite, lt brn, fnlxn-granular, sucrosic in part

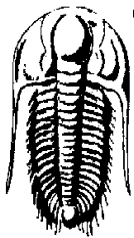
Dolomite, crm-lt brn, fnxln-slightly granular, chert white to lt tan, fresh, sharp.

Dolomite, crm-lt brn, fnxln-granular

RTD 3685-1622 LTD 3686-1623

DST # 1 3568' - 3630' SEE
HEADER FOR TEST
SUMMARY

SLOPE SURVEY 1
DEGREE



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Hertel Oil Co, LLC
704 E 12th St.
Hays KS 67601+3440
ATTN: Herb Deines

5-13S-17W Ellis KS

Schmeidler 'E' #2

Job Ticket: 63772

DST#: 1

Test Start: 2018.04.07 @ 22:25:00

GENERAL INFORMATION:

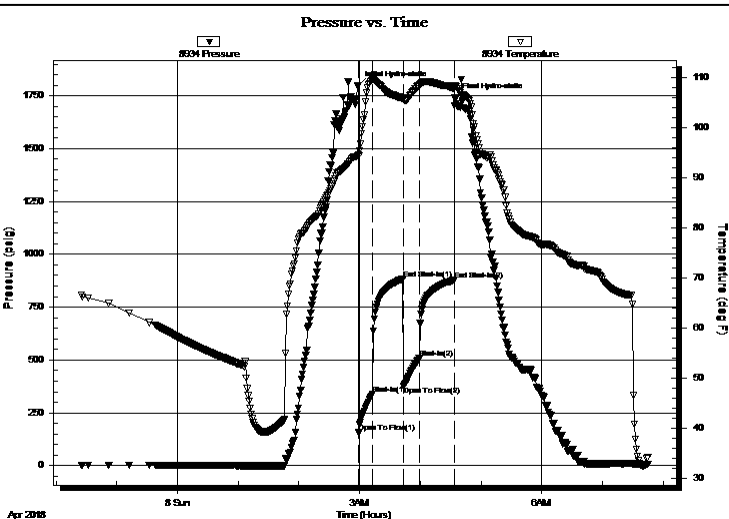
Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:59:15
Time Test Ended: 07:44:45
Interval: **3568.00 ft (KB) To 3630.00 ft (KB) (TVD)**
Total Depth: 3630.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Initial)
Tester: Spencer J. Staab
Unit No: 84
Reference Elevations: 2063.00 ft (KB)
2056.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8934

Inside

Press@RunDepth: 508.13 psig @ 3571.00 ft (KB)
Start Date: 2018.04.07 End Date: 2018.04.08
Start Time: 22:25:15 End Time: 07:44:45
Capacity: 8000.00 psig
Last Calib.: 2018.04.08
Time On Btm: 2018.04.08 @ 02:58:45
Time Off Btm: 2018.04.08 @ 04:34:30

TEST COMMENT: 15-IF-Strong Blow ; BOB in 1 min
30-ISI-Weak Surface Blow ; Built to 1/4"
15-FF-Strong Blow ; BOB in 2 mins
30-FSI-No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1797.80	94.49	Initial Hydro-static
1	156.08	94.33	Open To Flow (1)
14	338.66	109.45	Shut-In(1)
45	883.73	105.77	End Shut-In(1)
45	376.20	105.57	Open To Flow (2)
61	508.13	108.37	Shut-In(2)
95	878.34	107.81	End Shut-In(2)
96	1741.89	108.26	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
600.00	SOCMW 2%O 18%M 80%W	6.33
415.00	OCMW 15%O 40%M 45%W	5.82
120.00	SOCM 2%O 98%M	1.68
120.00	OCM 15%O 85%M	1.68
5.00	Clean Oil 100%O	0.07

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Hertel Oil Co, LLC
704 E 12th St.
Hays KS 67601+3440
ATTN: Herb Deines

5-13S-17W Ellis KS
Schmeidler 'E' #2
Job Ticket: 63772 **DST#: 1**
Test Start: 2018.04.07 @ 22:25:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 23 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 51.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.99 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 4000.00 ppm		
Filter Cake: inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
600.00	SOCMW 2%O 18%M 80%W	6.332
415.00	OCMW 15%O 40%M 45%W	5.821
120.00	SOCM 2%O 98%M	1.683
120.00	OCM 15%O 85%M	1.683
5.00	Clean Oil 100%O	0.070

Total Length: 1260.00 ft Total Volume: 15.589 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: 1&1/2#LCM

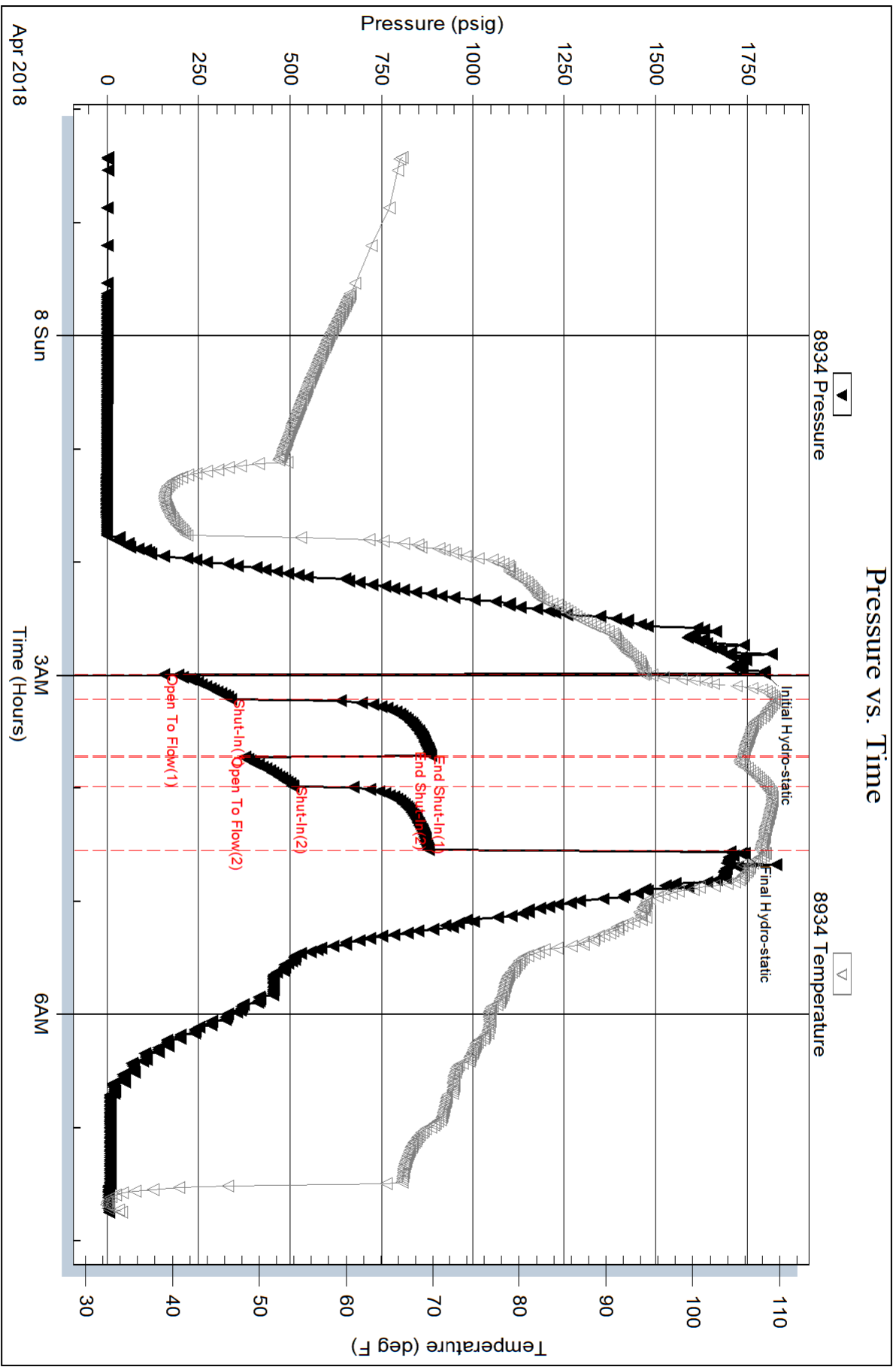
Serial #: 8934

Inside

Hertel Oil Co. LLC

Schmedler 'E #2

DST Test Number: 1



Serial #: 8368

Inside

Hertel Oil Co. LLC

Schmedler 'E #2

DST Test Number: 1

