KOLAR Document ID: 1591483

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 # 32705
Name: Raney Oil Company, LLC
Address 1: 4665 BAUER BROOK CT.
Address 2:
City: LAWRENCE State: KS Zip: 66049 + 9013
Contact Person: Thomas Raney
Phone: (785) 749-0672
CONTRACTOR: License # 32701
Name: C & G Drilling, Inc.
Wellsite Geologist: Roger Martin
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 #:

07/12/2021	07/19/2021	08/05/2021
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No.: 15-035-24740-00-00
Spot Description:
NE - NW - SE - NE Sec. 31 Twp. 33 S. R. 6 ☑ East ☐ West
1410 Feet from ☑ North / ☐ South Line of Section
725 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: Cowley
Lease Name: HOUSE Well #: 1C
Field Name:
Producing Formation: Mississippi
Elevation: Ground: 1172 Kelly Bushing: 1181
Total Vertical Depth: 3246 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 332 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: 5000 ppm Fluid volume: 500 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: 09/20/2021
☐ **Confidential Release Date:** 09/20/2023
☑ **Wireline Log Received** ☑ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** Karen Ritter **Date:** 09/20/2021

Operator Name: Raney Oil Company, LLC Lease Name: HOUSE Well #: 1C

Sec. 31 Twp. 33 S. R. 6 ☑ East ☐ West County: Cowley

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 *(Attach Additional Sheets)*	☑ Yes	☐ No
Samples Sent to Geological Survey	☑ Yes	☐ No
Cores Taken	☐ Yes	☑ No
Electric Log Run	☑ Yes	☐ No
Geologist Report / Mud Logs	☑ Yes	☐ No

List All E. Logs Run:

Micro
DIL
Sonic

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

Name	Top	Datum
Heeb	1409	-228
Stal	1769	-588
LKC	2345	-959
Miss	2974	-1793
RTD	3246	-2065

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	25	332	Class A	200	3%cal2%Gel
Production	7.875	5.5	17	3244	Thick set	250	6%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	-			
	-			

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: 08/17/2021	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:	METHOD OF COMPLETION:	PRODUCTION INTERVAL:	
		Top	Bottom
☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*	☐ Open Hole ☑ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*	2974	3002

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)*
2	2974	3002			

TUBING RECORD: Size: Set At: Packer At:

Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Raney Oil Company, LLC
Well Name	HOUSE 1C
Doc ID	1591483

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	25	332	Class A	200	3%cal2% Gel
Production	7.875	5.5	17	3244	Thick set	250	6%Gel

810 E 7TH
PO Box 92
EUREKA, KS 67045
(620) 583-5561

ELITE
CEMENTING & ACID SERVICE, LLC

Cement or Acid Field Report
Ticket No. **5748**
Foreman Steve Mead
Camp Eureka

API # 15-035-24740

Date	Cust. ID #	Lease & Well Number	Section	Township	Range	County	State
7-13-21	1375	House 1C	31	33	6	Cowley	KS

Customer: RA Energy LLC
Mailing Address: 11615 Rosewood St, Suite 100
City: Leawood | State: KS | Zip Code: 66211
Safety Meeting

Unit #	Driver	Unit #	Driver
104	Alan		
114	Shannon		

Job Type Surface | Hole Depth 348' | Slurry Vol. 49 3/4 bbls | Tubing
Casing Depth 332' GL | Hole Size 12 1/4 | Slurry Wt. | Drill Pipe
Casing Size & Wt. 8 5/8 23# | Cement Left in Casing 21' | Water Gal/SK | Other
Displacement 21 bbl | Displacement PSI | Bump Plug to | BPM

Remarks: Safty Meeting. Rig up To 8 5/8 casing. Break Circulation w/ 10 bbls Fresh water Mix 200 sks Class A Cement w/ 3% CaCl2, 2% Gel, 1/4 # Flo Seal Displace w/ 21 bbls Freshwater. Shut down. Close casing in. Good Cement To Surface. 15 bbl Slurry To Pit. Job Complete Rig down

Thank you

Code	Qty or Units	Description of Product or Services	Unit Price	Total
C101	1	Pump Charge	890.00	890.00
C107	60	Mileage	4.20	252.00
C200	200 sks	Class A Cement	17.35	3470.00
C205	565 #	CaCl2 3%	.69	389.85
C206	375 #	Gel 2%	.28	105.00
C209	50 #	Flosal 1/4 # per/sk	2.60	130.00
C108B	9.4 Tons	Ton Mileage: Bulk Truck	1.40	789.60
			SubTotal	6026.45
			5%	(314.63)
			Sales Tax	266.16
			Total	5977.98

Authorization witnessed by Judd Gulick Title C&G Drilling Tool Pusher.

I agree to the payment terms and conditions of services provided on the back of this job ticket. Any amendments to payment terms must be in writing on the front of this job ticket or in the Customer's records at ELITE's office.

810 E 7TH
PO Box 92
EUREKA, KS 67045
(620) 583-5561

ELITE
CEMENTING & ACID SERVICE, LLC

Cement or Acid Field Report
Ticket No. **5684**
Foreman Kevin McCoy
Camp Eureka

API # 15-035-24740

Date	Cust. ID #	Lease & Well Number	Section	Township	Range	County	State
7-19-21	1375	House 1 C	31	33S	6E	Cowley	KS

Customer: R A Energy, LLC
Mailing Address: 11615 Rosewood ST. Ste 100
City: Leawood | State: KS | Zip Code: 66211

Safety Meeting: KM AB BW SF

Unit #	Driver	Unit #	Driver
104	Allen B.		
112	Shannon F.		
113	Broker W.		

Job Type Longstring
Casing Depth 3244.20'
Casing Size & Wt. 5½" 17#
Displacement 76.2 BBL
Hole Depth 3248 K.B.
Hole Size 7⅞
Cement Left in Casing SJ 36.71
Displacement PSI 1200
Slurry Vol. 21 BBL Lead 47 BBL TAIL
Slurry Wt. 13.3# - 13.8#
Water Gal/SK
Bump Plug to 1800 PSI
Tubing
Drill Pipe
Other
BPM

Remarks: Safety Meeting: 5½" 17# Casing Set @ 3244.20'. Circulate w/ Mud Pump for 1 Hr to bring down Viscosity of Mud. Rig up to 5½ Casing. Break Circulation w/ 8 BBL fresh water. Mixed 75 SKS 60/40 Pozmix Cement w/ 6% Gel, 2# PhenoSeal/SK @ 13.3#/gal, yield 1.57 = 21 BBL Slurry. Tail in w/ 150 SKS Thick Set Cement w/ 5# Kol-Seal/SK, 1# PhenoSeal/SK @ 13.8#/gal, ~~13.8~~ 1/3% CFL-115, yield 1.75 = 47 BBL Slurry. Wash out Pump & Lines. Shut down, Release Latch down Plug. Displace Plug to Seat w/ 76.2 BBL fresh water. (KCL in First 40 BBL) Final Pumping Pressure 1200 PSI. Bump Plug to 1800 PSI. Wait 2 mins. Release Pressure. Float & Plug Held. Good Circulation @ All times while Cementing. Job Complete. Rig down.

Plug RAT Hole & M.H.
Centralizers on # 2, 4, 6, 13, 15, 21, 24, 30 Baskets on Top of # 3, 7, 26

Code	Qty or Units	Description of Product or Services	Unit Price	Total
C 102	1	Pump Charge	1100.00	1100.00
C 107	60	Mileage	4.20	252.00
C 203	100 SKS	60/40 Pozmix Cement (75 sks Lead Cement)	14.75	1475.00
C 206	515#	Gel 6% (75 sks Lead Cement)	.28#	144.20
C 208	200#	PhenoSeal 2#/SK (75 sks Lead Cement)	1.45#	290.00
C 201	150 SKS	Thick Set Cement (Tail Cement)	22.55	3382.50
C 207	750#	Kol-Seal 5#/SK (Tail Cement)	.52#	390.00
C 208	150#	PhenoSeal 1#/SK (Tail Cement)	1.45#	217.50
C 211	50#	CFL-115 1/3% (Tail Cement)	12.10#	605.00
C 691	1	5½ Guide Shoe	193.00	193.00
C 674	1	5½ AFU Float Collar w/ Latch down insert	395.00	395.00
C 604	3	5½ Cement Baskets	260.00	780.00
C 504	8	5½ x 7⅞ Centralizers	55.00	440.00
C 421	1	5½ Latch down Plug	266.00	266.00
C 108 B	12.55 TONS	Ton Mileage 60 miles	1.40	1054.20
C 222	2½ gals	KCL (in First 40 BBL Displacement water)	30.00	75.00
C 781	1	5½ Stop Ring	35.00	35.00
		THANK You	Sub Total	11,094.40
			Less 5%	582.96
		6.5%	Sales Tax	564.73
			Total	11,076.17

Authorization Roger Martin Title Geologist

I agree to the payment terms and conditions of services provided on the back of this job ticket. Any amendments to payment terms must be in writing on the front of this job ticket or in the Customer's records at ELITE's office.

ROGER L. MARTIN

INDEPENDENT PETROLEUM GEOLOGIST 316-250-6970

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY: RA ENERGY, LLC/ RANEY OIL COMPANY, LLC

LEASE: HOUSE 1C

FIELD: CABIN VALLEY

LOCATION: 1410' FNL& 725' FEL

SECTION: 31 TOWNSHIP: 33S RANGE: 06E

COUNTY: COWLEY STATE: KANSAS

ELEVATIONS

KB: 1181' GL: 1172'

Measurements Are All From: KB

API #: 15-035-24740-00-00

CONTRACTOR: C&G DRILLING, Rig #2

SPUD: 07/12/2021 COMP: 07/19/2021

RTD: 3248' (-2067) LTD: 3246' (-2065)

ELECTRICAL SURVEYS

ELI: DIL, CNL/CDL/PE, MEL/SONIC

CASING

SURFACE: 8 5/8" set @ 342' KB.

PRODUCTION: 76 jts 5 1/2" set @ 3244.2'

w/ 75 sks 60/40 Poz, 150 sks Thick Set.

FORMATION TOPS	LOG	SAMPLES
HEEBNER	1409' (-228)	1414' (-233)
IATAN	1705' (-524)	1707' (-526)
STALNAKER SS	1769' (-588)	1768' (-587)
LANSING	2140' (-959)	2143' (-962)
UPPER LAYTON SS	2177' (-966)	2177' (-966)
B/LAYTON	2294' (-1113)	2296' (-1115)
KANSAS CITY	2345' (-1164)	2347' (-1166)
DODDS CREEK SS	--	2356' (-1175)
DENNIS	2401' (-1220)	2403' (-1222)
SWOPE	2422' (-1241)	2424' (-1243)
HERTHA	2478' (-1297)	2480' (-1299)
MARMATON	2580' (-1399)	2583' (-1402)
ALTAMONT POROSITY	2599' (-1418)	2606' (-1425)
PAWNEE	2641' (-1460)	2641' (-1460)
FORT SCOTT	2678' (-1497)	2679' (-1498)
CHEROKEE	2713' (-1532)	2713' (-1532)
EROS MISSISSIPPIAN	2962' (-1781)	2963' (-1782)
MISSISSIPPIAN CHERT	2974' (-1793)	2976' (-1795)
MISSISSIPPIAN LS	2983' (-1802)	2986' (-1805)
COWLEY FACIES	3151' (-1970)	3153' (-1972)
RTD/LTD	3246' (-2065)	3248' (-2067)

CHRONOLOGY

07/12/2021- MIRU C&G Drilling, Rig #2. SPUD 12 1/4" hole. DTD 346'. Run 8 5/8" surface casing, set @ 342'.

07/13/2021- WOC @ 346' @ 8:30 AM.

07/14/2021- Drilling @ 1447' @ 8:25 AM.

07/15/2021- TOH/DST #1 @ 2187' @ 9AM. Run DST #1. SHS @ 2187' = 1 1/4 deg.

07/16/2021- Wiper trip @ 2933' @ 8:50 AM.

07/17/2021- Run DST #2 @ 3108'

07/18/2021- RTD 3248' @ 6AM. Run E-logs: ELI: DIL, CDL/CNL/PE, MEL/Sonic

07/19/2021- Run 76 jts 5 1/2" 17#/ft production casing. Plug down @ 5:45 AM.

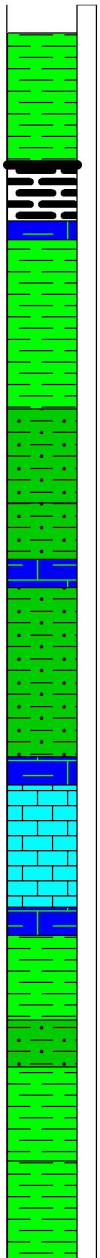
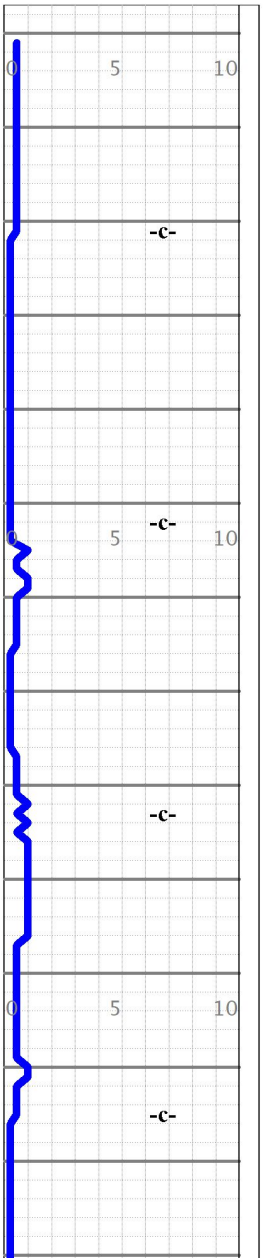
REMARKS:

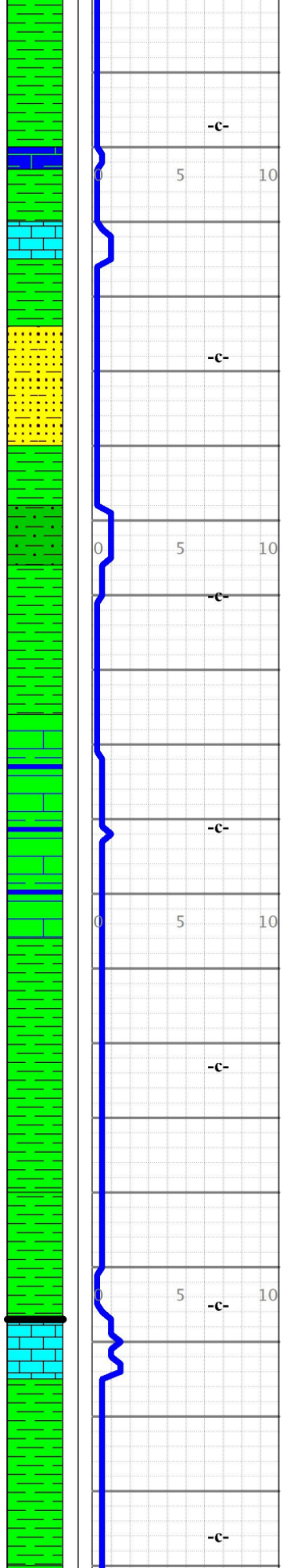
Elite Cementing, Ticket # 5684:

Safety Meeting: 5 1/2" 17# casing set @ 3244.20'. Circulate w/ mud pump for 1 hr to bring down viscosity of mud. RU to 5 1/2" casing. Break circulation w/ 8 bbl fresh water. Mixed 75 sks 60/40 Pozmix Cement w/ 6% Gel, 2# Phenoseal/ sk @ 13.3#/gal, yield 1.57 = 21 bbl slurry. Tail in w/ 150 sks Thick Set Cement w/ 5#/sk Kolseal, 1#/sk Phenoseal @ 13.8#/gal, 1/3% CFL- 115, Yield 1.75= 47 bbl slurry. Wash out pump and lines. Shut down, release latch down plug. Displace plug to seat w/ 76.2 bbl fresh water. (KCl in first 40 bbl) Final pumping pressure 1200 psi. Bump plug to 1800 psi. Wait 2 min. Release Pressure. Float & Plug held. Good circulation @ all times while cementing. Job complete. Rig down.

Plug RH & MH, Centralizers on #2, 4, 6, 13, 15, 21, 24, 30. Baskets on top of #3, 7, 26.

Respectfully submitted,
Roger L. Martin, Geologist

LITH	POROSITY	DRILLING TIME MIN/FT	DST	SAMPLE DESCRIPTION	0 TGV 300	
			1400	VRr LS: cm-gy, dn ux & chlky, Trc Pkst w/ Poro, NSO. {HEEBNER} VAbndt SH: Pred blk carb- V carb. sm LS: gy-bn, ux- fnxln, sm argil- shly w/ VPr- NV Poro, NSO. Abndt blk carb SH & sm gy SH. SH- SILTS: Vgt'd, dk mrn-rd, gy-blk & blk carb.		1414' (-233) HEEBNER
			1450	SILTS: lt gy, sm calc & lmy. & LS: cm-gy, ux- Vfnxln, sm silty w/ VPr- Pr visbl Poro, NSO. VRr Sd Clust: lt gy, Vfn Gr'd, silty w/ VPr- Fr Poro, NSO. Abndt SH: AA. VRr LS: cm-gy-bf, mot, ux- fnxln, VRr md- crsX's, Trc Fr Poro, NSO. VAbndt SH: mrn-rd & sm gy.		Mud Checks by Fud Mud: Drlg @ 1447' wt 8.7, vis 34 PV 4 YP 9 pH `0.0, WL 12.4 Cl 1100, LCM 0# ECD 9.52
			1500	SILTS: gy. Pred SH: Vgt'd, dk- md gy & mrn & blk carb.		



1550

sm LS; cm-gy, ux- Vfnxln & Mdst- argil, Pred Pr- NV Poro, NSO.

Pred SH: dk gy- blk, sm mrn.

VRr Sndy SILTS & Silty Sd Clust: lt gy, Vfn Gr'd, Pr- Fr Poro, NSO.

1600

SILTS: gy, sm sndy, Pr visbl Poro, NSO.

VAbndt SH: Pred dk gy- blk.

SH: AA, sm calc & lmy & sm LS: gy-bn-blk, ux & argil Mdst w/ VPr- NV Poro, NSO.

1650

Pred SH: dk gy- blk, AA.

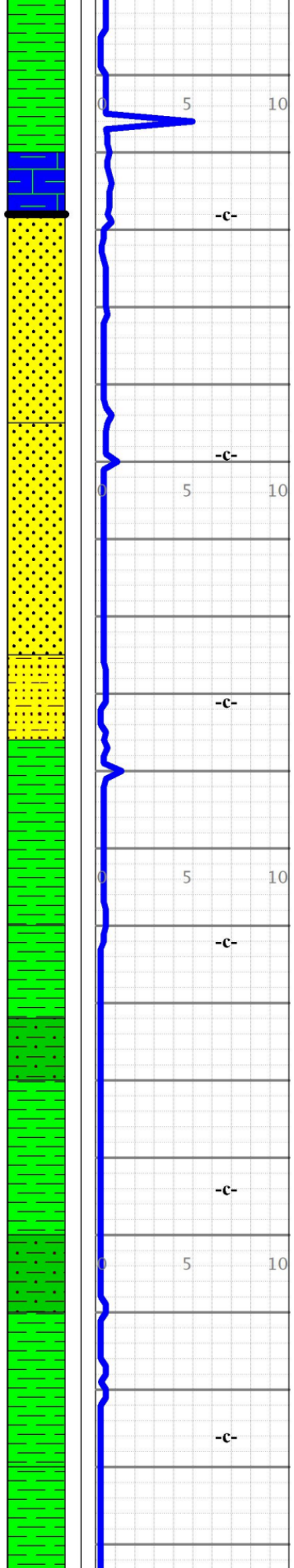
SH: Pred dk gy-blk, sm carb.

1700

{IATAN} VRr LS: gy-tn, ux- dn & Mdst- argil, Trc Wkst- Pkst, VPr- NV Poro.

SH: Vgt'd, dk-lt gy & blk carb & dk mrn.

1707' (-526)
IATAN



1750

1800

1850

1900

SH- SILTS: gn-gy & mrn-rd & gy-blk.

{STALNAKER} SS- Rr Sd Clust & Sd Gr's: gy-wh & bf-tn & transl, Vfn- md Gr'd, Trc crs- Vcrs Gr's, well cmt'd- fribl, Pr- Gd Poro. NS. NF. NC. sm silty.

SS: lt gy, Pred Vfn- fn Gr'd, Rnd'd- anglr, Pred fribl w/ Fr- Gd Poro, NSO. NC. NF.
(Pred SH: AA)

VRr Sd Clust: AA. NSO. NF. NC.

Pred Vgt'd SH: gy-blk & gn-gy & dk mrn.

SH: AA, sm Silts.

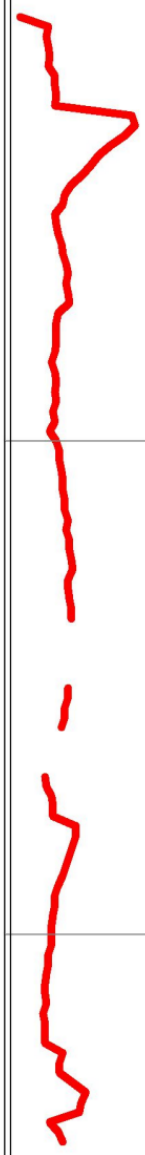
SILTS: dk-lt gy, sm micac.

& SH: Pred dk gy to blk.

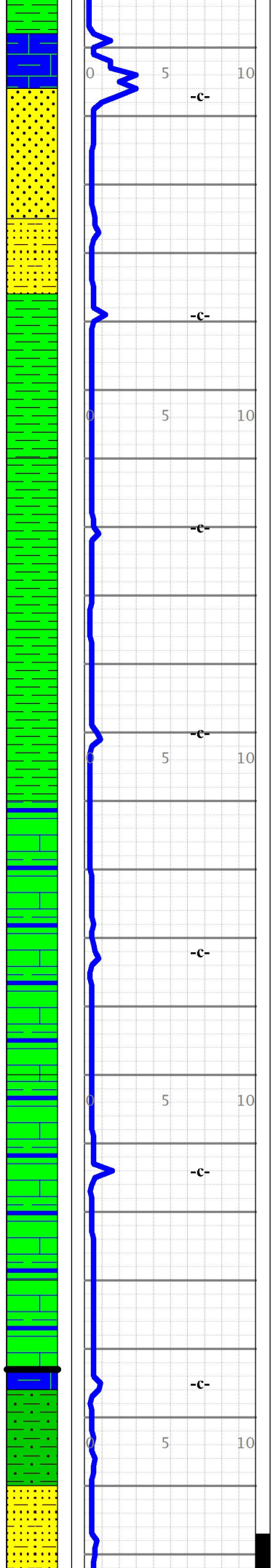
SILTS: AA.

& SH: Pred dk gy- blk, subcarb- Rr carb.

SH: Vgt'd, AA.



1768' (-587)
STALNAKER



1950

sm LS: cm-gy-bn, ux- fnxln & Pkst w/ VPr- NV Poro, NSO.

SS- Sd Clust: lt gy-wh-trnsl, Vfn- fn Gr'd, Rnd'd- subanglr Gr's, sm clust well cmt'd & calc, sm fribl w/ Fr- Gd Poro. NSO. NF. NC. NO. VRr prt md Gr'd, sm ambr SH & shly Sd Clust.

Rr Sd Clust: AA & Vfn- md Gr'd Sd Clust w/ Fr- VGd Poro. NS. NF. NC. NO. sm Sdy Silts.

VAbndt dk gy- blk SH.

2000

Pred SH: dk gy- blk, sm calc.
(Trc Sd Clust, AA w/ Poro, NSO)

SH: AA & blk carb & pyrtc.

2050

SH: dk gy-blk, sm calc & lmy.

2100

SH: dk gy-blk, sm calc & lmy.

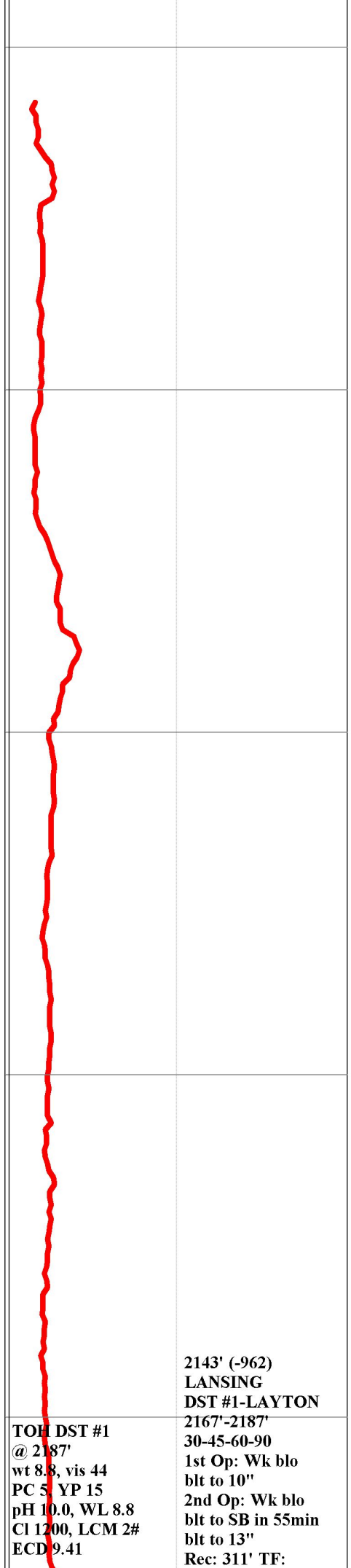
SH: AA, calc & lmy & Silts.

{LANSING} Trc LS: dk gy- argil Mdst.

VRr Sndy Silts & Silty Sd Clust: Trc gy- wh, Vfn- fn Gr'd Sd Clust w/ Pr Poro, NSO. sm calc.

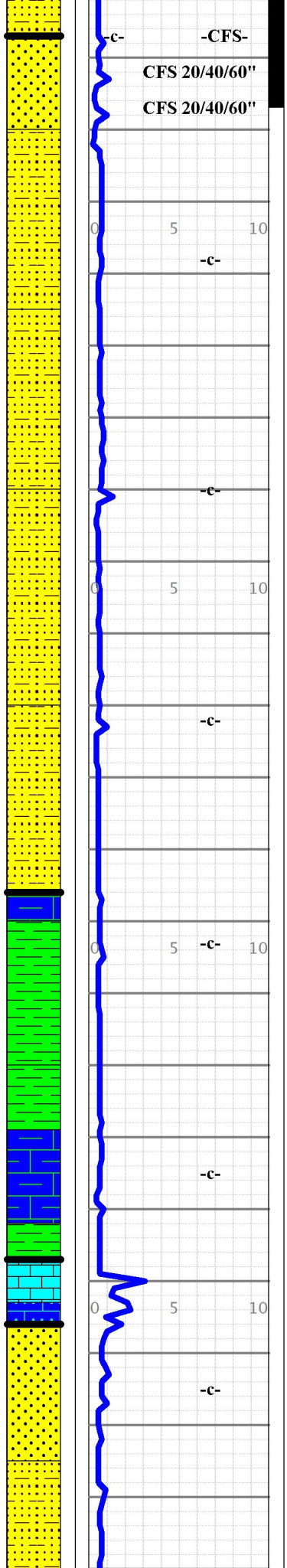
2150

VAbndt SILTS- Mdst: lt- md gy, micac, sm sndy: Vfn Gr'd, sm calc, VRr Silty Sd Clust: Vfn Gr'd, micac & well cmt'd.



TOH DST #1
@ 2187'
wt 8.8, vis 44
PC 5, YP 15
pH 10.0, WL 8.8
Cl 1200, LCM 2#
ECD 9.41

2143' (-962)
LANSING
DST #1-LAYTON
2167'-2187'
30-45-60-90
1st Op: Wk blo
blt to 10"
2nd Op: Wk blo
blt to SB in 55min
blt to 13"
Rec: 311' TF:



2200

2250

2300

2350

{UPPER LAYTON} Rr SS- Sd Clust: gy-**bf-Tn-STN**, Vfn- fn Gr'd, rnd'd- anglr, fribl. VRr Sd Clust w/ **Fr- Gd SFO- FLR**. Abndt Sd Clust: w/**FLR- Fr- Gd S Gsy Free Oil- Odor**. VRr prt Md Gr'd.

SS- Sd Clust: gy-wh & **bf-Tn OSTN**, Vfn- fn Gr'd, Abndt Vfn Gr'd- silty, Pred fribl w/Fr- Gd IGr Poro, **30% w/ brt sat FLR, Fr- Gd SFO, Frly Strng Odor**.

SS- Sd Clust: lt gy-wh & bf, Pred Vfn Gr'd, Vfn- fn Gr'd, sm silty, Pred Vfn Gr'd, silty & micac & barren. **<10% w/ FLR- SFO- STN- Cut, SL Odor**, Fr- Gd Poro, Pred barren.

SS- Sd Clust: lt gy-wh, Pred Vfn- fn Gr'd, silty, micac, sm shly. sm Vfn- md Gr'd, Rnd'd- subanglr, well cmt'd to fribl, sm calc cmt'd, Fr- Gd IGr Poro, **<5% w/ SFO- FLR- STN & Cut, VSl Odor**.

SS- Abndt Sd Clust: gy-wh, bf, Vfn- md Gr'd, rnd'd- subanglr, Pred fribl w/ Fr- Gd Poro. NSO. sm Sl calc cmt. Rr Vcalc- lmy & well cmt'd Sd Clust w/ NSO.

{B/LAYTON} Trc LS: tn-bn, ux- cryptox & Mdst.

Abndt SH: md-dk gy & blk.

SH & SILTS: gy-blk & gn-bn, sm calc & lmy.

LS: gy-bn, ux- dn & argil & Mdst, sm Vargil & shly- silty w/ VPr- NV Poro.

{KANSAS CITY} LS: cm-tn-gy-bn, ux, dn & sbchlky & argil Mdst w/ VPr- NV Poro w/ NSO.
VRr Sndy LS: Vfn- crs Gr'd w/ Pr- Fr Poro, NS.

{DODDS CREEK} SS- Sd Clust: wh-gy, Vfn- md Gr'd, VRr prt crs Gr'd, mod- Pr sort'd, rnd'd- subanglr Gr's, sm calc & lmy & Silty, Pr- Fr Poro w/ NSO. NC. NO.

Sndy SILTS- Silty SS- Sd Clust: lt gy-wh & bf, Pred Vfn- fn Gr'd, silty, Sl calc & micac, Pred VPr- Pr visbl Poro. NSO. Rr Pr- Fr Poro w/ NSO. sm shly Siltst & Sd Clust.

2177' (-996)
UPPER LAYTON
{Fr-Gd SFO)
{Fr-Gd SFO)
{200 UGK)

{Fr- Gd SFO)

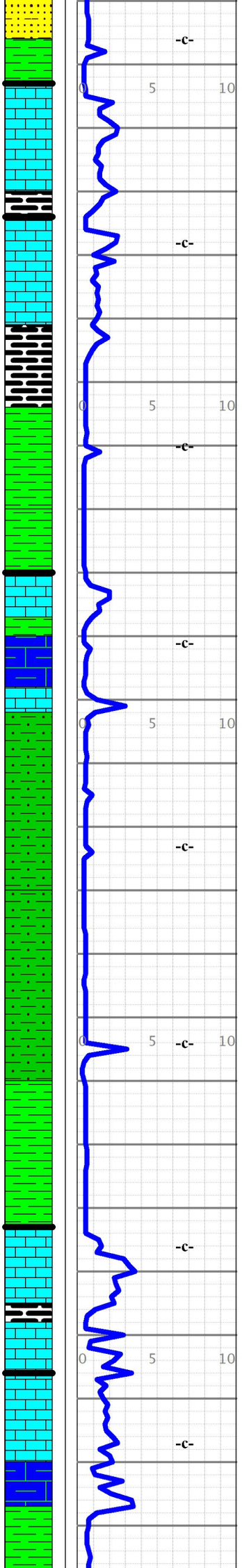
{VSl SFO)

1' CO
130' HWCM, Trc O (49%W, 51%M)
180' MCW (80%W,20%M)
TOOL SPL: 1%O,87%W 12%M
IHP: 1049
IFP: 22-80
ISIP: 796
FFP: 84-164
FSIP: 808
FHP: 1021
BHT: 105 F

{Trc SFO)

2347' (-1166)
KANSAS CITY

2356' (-1175)
DODDS CREEK



2400

SH: gy-blk SH.

{DENNIS} LS: cm-tn-gy-bn, Pred dn Mdst & ux- Vfnxln, sm cm-wh subchlky- chlky, VPr- NV Poro, NSO.

SH: dk gy & blk carb.

{SWOPE} LS: tn-gy-wh, Pred dn- ux & prt chlky & dn Mdst w/ VPr- NV Poro. NSO.

SH: dk gy-blk, sm calc & lmy & sm blk carb.

2450

SH: gy-blk, calc & lmy w/ argil LS. sm blk Vcarb SH, Trc Coal.

SH: AA.

{HERTHA} LS: tn-gy-bn-blk, motl'd Pkst & Wkst & ux- fnxln w/ VPr- NV Poro. NSO. sm argil- shly.

2500

LS: AA & tn-cm-wh, prt chlky Pkst- Wkst w/ Pr- NV Poro, NSO.

SILTS: lt-md gy & gn-gy, Vfnly sndy, calc,

SH- SILTS: lt-dk gn-gy.

2550

SH: Pred dk gy- blk.

{MARMATON} LS: gy-tn-wh, Pred dn- ux & Mdst w/ VPr- NV Poro.

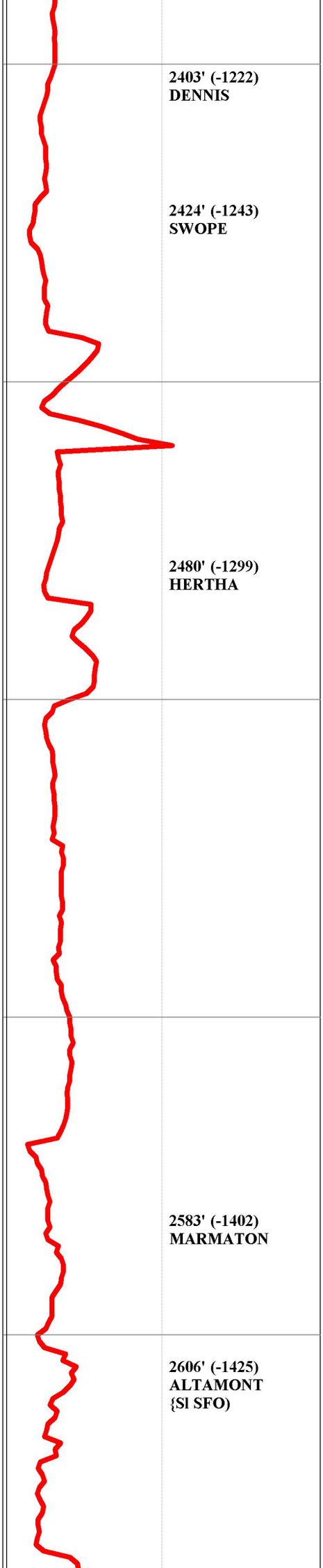
SH: blk carb.

2600

{ALTAMONT} LS: gy-bn & tn-wh, motl'd Pkst & Wkst & ux- fnxln, Rr pp Poro, IGr Poro w/ **FLR- SFO- STN- Cut** & IX Poro- 2RX w/ **FLR- SFO- STN & Cut, VSl Odor on brk. <10% Sl- SFO- FLR- STN- Cut**.

Abndt dn crypto-ux- dn Mdst, sm argil- shly.

SH: dk gy- blk, & blk carb.



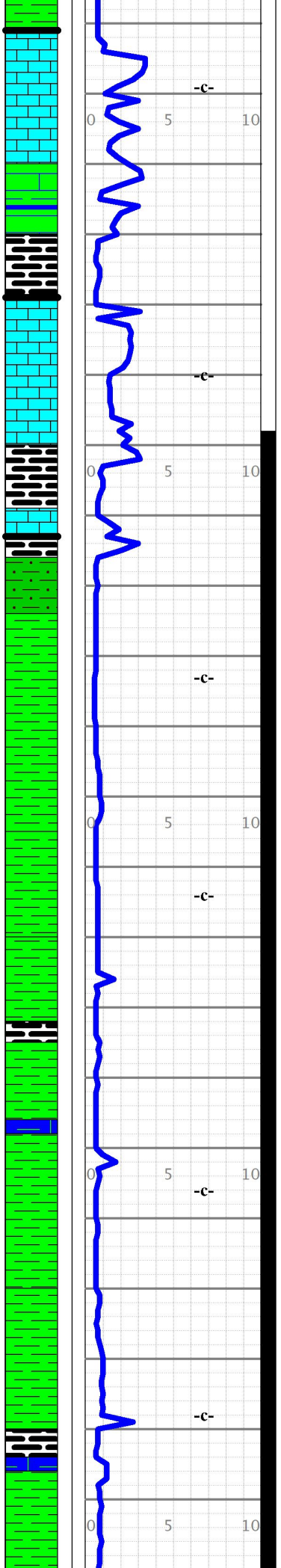
2403' (-1222)
DENNIS

2424' (-1243)
SWOPE

2480' (-1299)
HERTHA

2583' (-1402)
MARMATON

2606' (-1425)
ALTAMONT
{Sl SFO)



{PAWNEE} LS: wh-cm-tn, prt chlky & subchlky Wkst- Pkst, ux-fnxln, Trc md- crs X's- 2RX, **<10% w/ spt'd- subat FLR-STN & Sl SFO- Cut**.

LS: argil shly & calc- lmy SH.

SH: blk carb- Vcarb, VRr Coal.

{FORT SCOTT} LS: tn-gy-wh, Pred dn- ux- fnx, sm Sl 2RX, VSl fos, Rr VPr- Pr visbl Poro: pp Poro, uIX Poro, uIGr Poro, **<5% w/ FLR- VSl SFO- STN & Cut, Trc Odor on brk**.

SH: bk carb- Vcarb.

LS: gy-wh, dn- chlky.

{CHEROKEE} SH: blk carb, AA.

SILTS: lt-md gy, micac, pyrtc.

SH & SILTS: md-dk gy, micac, Sl pyrtc.

sm calc & lmy SH.

Rr Coal.

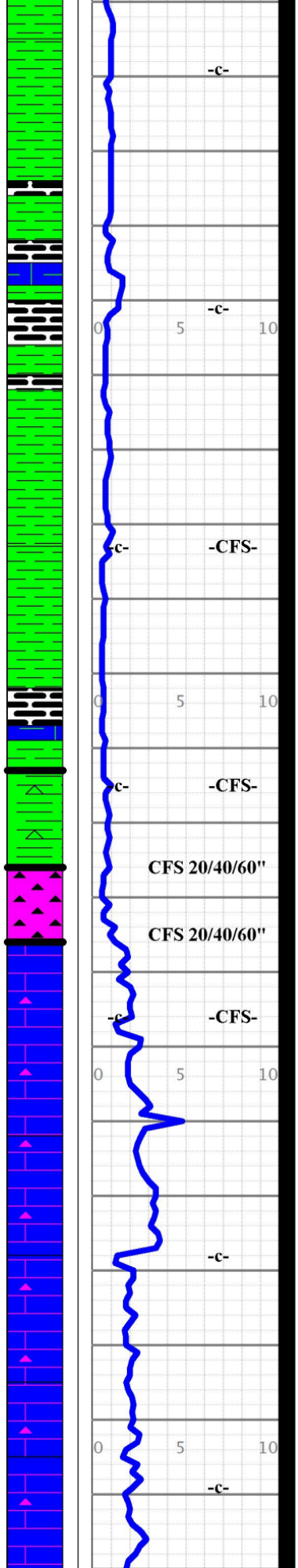
Calc & lmy SH.

& argil LS- Mdst & Coal & sm blk Vcarb SH.

& SILTS: AA, sm calc & lmy.

SILTS & SH: AA.

SH: sm blk carb & dk gy, sm calc & lmy, sm pyrtc.



2900

2950

3000

3050

SILTS: lt- md gy, micac.

SH: blk carb & dk gy.

& SILTS: lt gy & dk gy- blk spk'd.

& SH: lt- dk gn-gy, pyrtc.

Rr coal, sm blk carb SH.

SH- SILTS: lt- dk gy, VRr Sndy, Vfn Gr'd.

SH: AA, Incrs blk carb & subcarb & pyrtc.

SH: Vgt'd, mrn-rd & gn-gy, sm waxy & blk carb SH.

VRr dn & argil LS: Mdst.

{Eros. MISSISSIPPIAN} Shly CHERT: wh-cm-gy, wthr'd- subTripolc w/ Pred VPr- Pr visbl Poro. **Trc FLR- SFO- STN- Cut.**

{MISSISSIPPIAN} CHERT: cm-bf-gy & wh, wthr'd, sm Tripolc w/ Fr- VGd Poro: pp, IGr, Tripolc Poro, **spt'd- subsat STN- FLR, Fr- Gd SFO, Frly Strng Odor** .

{MISSISSIPPIAN} LS: wh-bf-gy, mot'd fos Wkst- Pkst & ux- fnx w/ Pr- Fr Ifos & aprtn uFrc Poro w/ **Rr FLR, Sl- Fr SFO- Cut- STN & Odor**. sm chlky & Cherty, AA. sm prt md- crsxln.

LS: tn-gy-wh, sm dn- ux, sm motl'd Wkst- Pkst, prt chlky w/ Pred VPr- Pr visbl Poro: uIGr Poro, uFrcs & sm uIX Poro, **VRr spt'd FLR- Trc SFO**. Sl Cherty.

LS: wh-gy-Tn, motl'd Wkst- Pkst- fos, prt chlky, Pr- Fr visbl & aprnt Poro, **VRr FLR- SFO- VLt STN & VSl Cut, Sl Odor on brk**. Sl Cherty: AA.

LS: AA, chlky Wkst- Pkst w/ Pr- Fr Poro, **<5% w/ FLR- Sl SFO, Trc STN- Cut, VSl Odor on brk**

LS: wh-gy-tn, motl'd, prt chlky Pkst, fos & sm ux- fnx- 2nd ReX- Trc md- crs X's, sm Pr- Fr visbl Poro: uFrc, uIGr & uIX Poro, < **5% w/ FLR- VSl SFO- Trc STN & Cut, VSl Odor on brk** VSl Cherty: gy, shrp

2963' (-1782)
Eros. MISS
{Trc SFO)

2976' (-1795)
MISS CHERT
{Fr- Gd SFO)

2986' (-1805)
MISS LS
{Sl- Fr SFO)

Wiper trip
@ 2933'
wt 9.4, vis 58
PV 20, YP 15
pH 9.0, WL 10.4
Cl 2500, LCM 4#
ECD 9.96

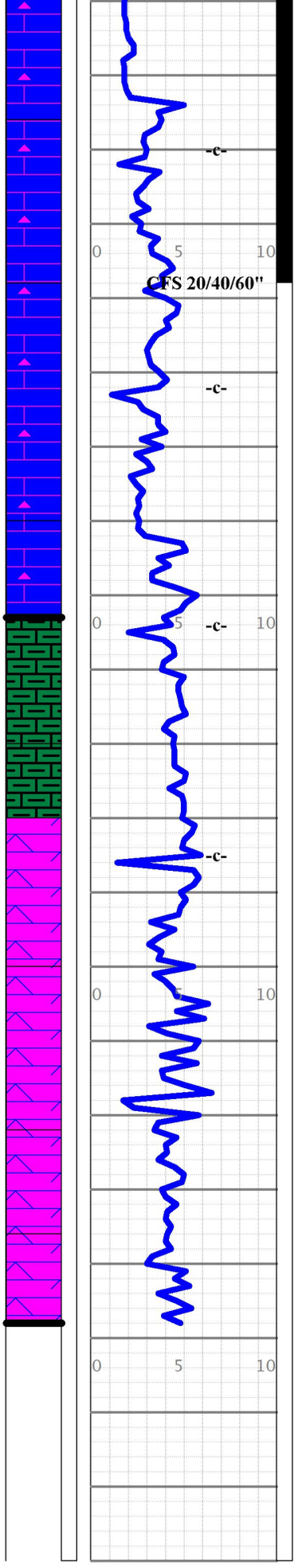
DST #2
UPPER MISS
2698'-3108'
30-45-60-90
1st Op: Wk blo blt to 4"
2nd Op: Wk blo blt to 1.25"
Rec: 180' DM
TOOL SPL: 100%M
IHP: 1319
IFP: 32-66
ISIP: 687
FFP: 74-115
FSIP: 652
FHP: 1297
BHT: 112 F

{Trc SFO)

{Trc SFO)

{Sl SFO)

{VSl SFO)



3100

LS: AA, Incrs wh-chlky & subchlky Pkst, sm uxln- fnxln, Sl dolomc w/ VPr- Pr visbl Poro: IX Poro, **Trc FLR, Trc SFO & Cut**. Incrs gy-cm dolomc- sucro LS, AA. VSl Cherty.

{Trc SFO)

LS: sm AA- dolomc & sm ux- mdxln- Sl fos Pkst, sm chlky, Pred VPr- Pr visbl Poro, sm Pr- Fr IX Poro, uIGr Poro, uFrc Poro, **Trc FLR- SFO- Cut- STN**.

{Trc SFO)

LS: tn-gy-wh, motl'd, sm Wkst- Pkst & ux- fnxln, sm Sl dolomc, VPr- Pr visbl Poro, **Trc SFO- FLR- Cut- STN**.

{Trc SFO)

3150

3153' (-1972)
COWLEY FACIES

{Cowley} LS: dk-lt gy & ux- Vfnxln, Sl dolomc- dolomc & Sl silic & argil w/ VPr- NV Poro, NSFO. **Trc uFrc & Edg FLR & Trc Resid Cut**.

LS; Pred dk gy-bn, ux dn & prt argil & Mdst w/ VPr- NV Poro & dolomc. NSFO.

DLS- LS: gy-bn-tn, ux- Vfnxln, Pred dn hd w/ VPr- NV Poro, NSFO. sm gy- blk, Vargil Mdst & silic LS, VSl Cherty, VPr, NV Poro, NSFO.

3200

LS: cm-tn & gy-bn, dn hd- ux- Vfnxln, sm VSl dolomc, sm silic, dn hd w/ VPr- NV Poro, NSO. sm argil- shly Mdst w/ NV Poro.

LS: Incrs tn-gy-cm, dn-hd- ux- Vfnxln, VSl silic & VSl dolomc w/ VPr- NV Poro. NSO.

LS: AA, sm wh-chlky & subchlky w/ VPr- NV Poro, NSO. Sl Cherty, sm silic, dn & sm argil- shly.

3248' (-2067)/RTD
3246' (-2065)/LTD

3250

RAE/RANEY OIL
HOUSE 'C' #1
1410'FNL&725'FEL
Sec. 31-33S-06E
COWLEY CO., KS
15--035-24740

DRILL STEM TEST REPORT

Raney Oil Company, LLC

4665 Bauer Brook Court
Lawrence, KS 66049-9013

ATTN: Thomas Raney/Roger M

31-33S-6E Cowley,KS

House #1C

Job Ticket: 66747 **DST#: 1**

Test Start: 2021.07.15 @ 01:43:00

GENERAL INFORMATION:

Formation: **Upper Layton**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 03:36:00
Time Test Ended: 09:25:39

Test Type: Conventional Bottom Hole (Initial)
Tester: Jimmy Ricketts
Unit No: 80

Interval: 2167.00 ft (KB) To 2187.00 ft (KB) (TVD)
Total Depth: 2187.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

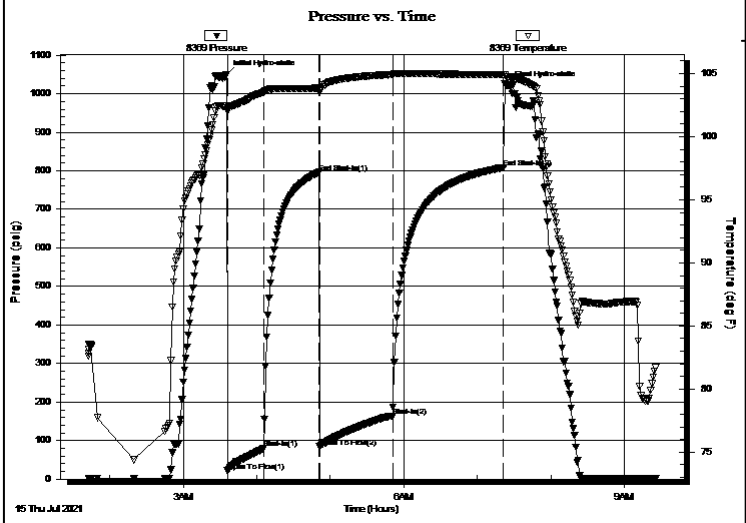
Reference Elevations: 1181.00 ft (KB)
1172.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 8369 **Outside**

Press@RunDepth: 163.74 psig @ 2168.00 ft (KB)
Start Date: 2021.07.15 End Date: 2021.07.15
Start Time: 01:43:01 End Time: 09:25:40

Capacity: 8000.00 psig
Last Calib.: 2021.07.15
Time On Btm: 2021.07.15 @ 03:35:20
Time Off Btm: 2021.07.15 @ 07:24:50

TEST COMMENT: IF - Weak blow building to 10 inches of water during initial flow period.
FF - Weak blow building to strong blow 55 minutes into final flow period. Continuing to build to 13 inches of water.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1049.64	102.43	Initial Hydro-static
1	21.72	102.01	Open To Flow (1)
31	79.58	103.52	Shut-In(1)
76	796.06	103.85	End Shut-In(1)
76	84.01	103.52	Open To Flow (2)
136	163.74	104.94	Shut-In(2)
226	808.49	104.90	End Shut-In(2)
230	1021.02	104.73	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
180.00	MCW 80%W & 20%M	0.89
130.00	Tr Oil HWCM TrO 49%W & 51%M	0.68
1.00	Clean Oil 100%O	0.01
0.00	TS OSMCW 1%O 87%W & 12%M	0.00

Gas Rates

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

DRILL STEM TEST REPORT

Raney Oil Company, LLC

4665 Bauer Brook Court
Lawrence, KS 66049-9013

ATTN: Thomas Raney/Roger M

31-33S-6E Cowley,KS

House #1C

Job Ticket: 66747 **DST#: 1**

Test Start: 2021.07.15 @ 01:43:00

GENERAL INFORMATION:

Formation: **Upper Layton**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 03:36:00
Time Test Ended: 09:25:39

Test Type: Conventional Bottom Hole (Initial)
Tester: Jimmy Ricketts
Unit No: 80

Interval: 2167.00 ft (KB) To 2187.00 ft (KB) (TVD)
Total Depth: 2187.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1181.00 ft (KB)
1172.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 8846 **Inside**
Press@RunDepth: psig @ 2168.00 ft (KB)
Start Date: 2021.07.15 End Date: 2021.07.15
Start Time: 01:43:01 End Time: 09:25:50

Capacity: 8000.00 psig
Last Calib.: 1899.12.30
Time On Btm:
Time Off Btm:

TEST COMMENT: IF - Weak blow building to 10 inches of water during initial flow period.
FF - Weak blow building to strong blow 55 minutes into final flow period. Continuing to build to 13 inches of water.

PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
180.00	MCW 80%W & 20%M	0.89
130.00	Tr Oil HWCM TrO 49%W & 51%M	0.68
1.00	Clean Oil 100%O	0.01
0.00	TS OSMCW 1%O 87%W & 12%M	0.00

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Raney Oil Company, LLC

4665 Bauer Brook Court
Lawrence, KS 66049-9013

ATTN: Thomas Raney/Roger M

31-33S-6E Cowley,KS

House #1C

Job Ticket: 66747 **DST#: 1**

Test Start: 2021.07.15 @ 01:43:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	44.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.79 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1200.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
180.00	MCW 80%W & 20%M	0.885
130.00	Tr Oil HWCM TrO 49%W & 51%M	0.676
1.00	Clean Oil 100%O	0.014
0.00	TS OSMCW 1%O 87%W & 12%M	0.000

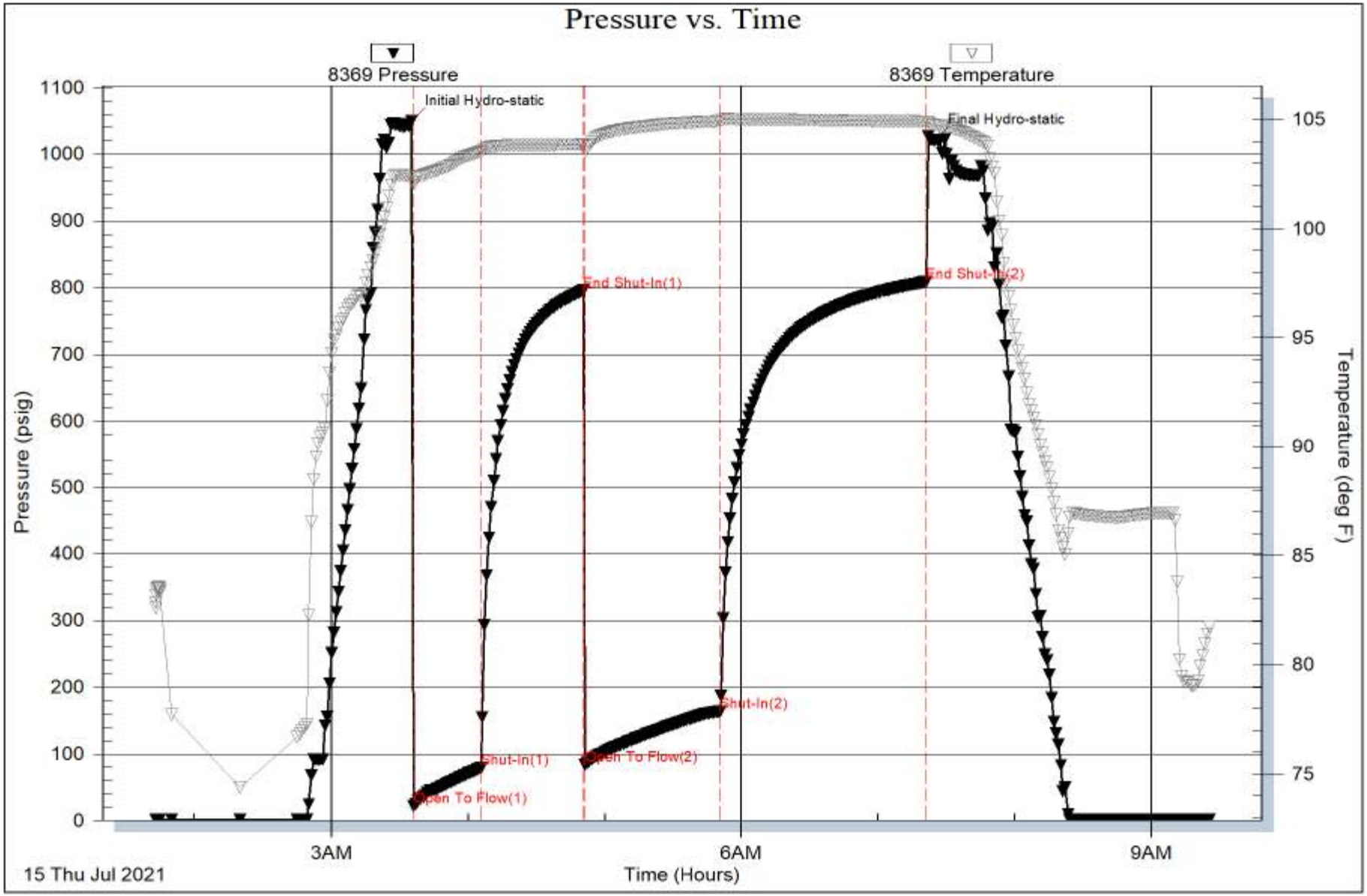
Total Length: 311.00 ft Total Volume: 1.575 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

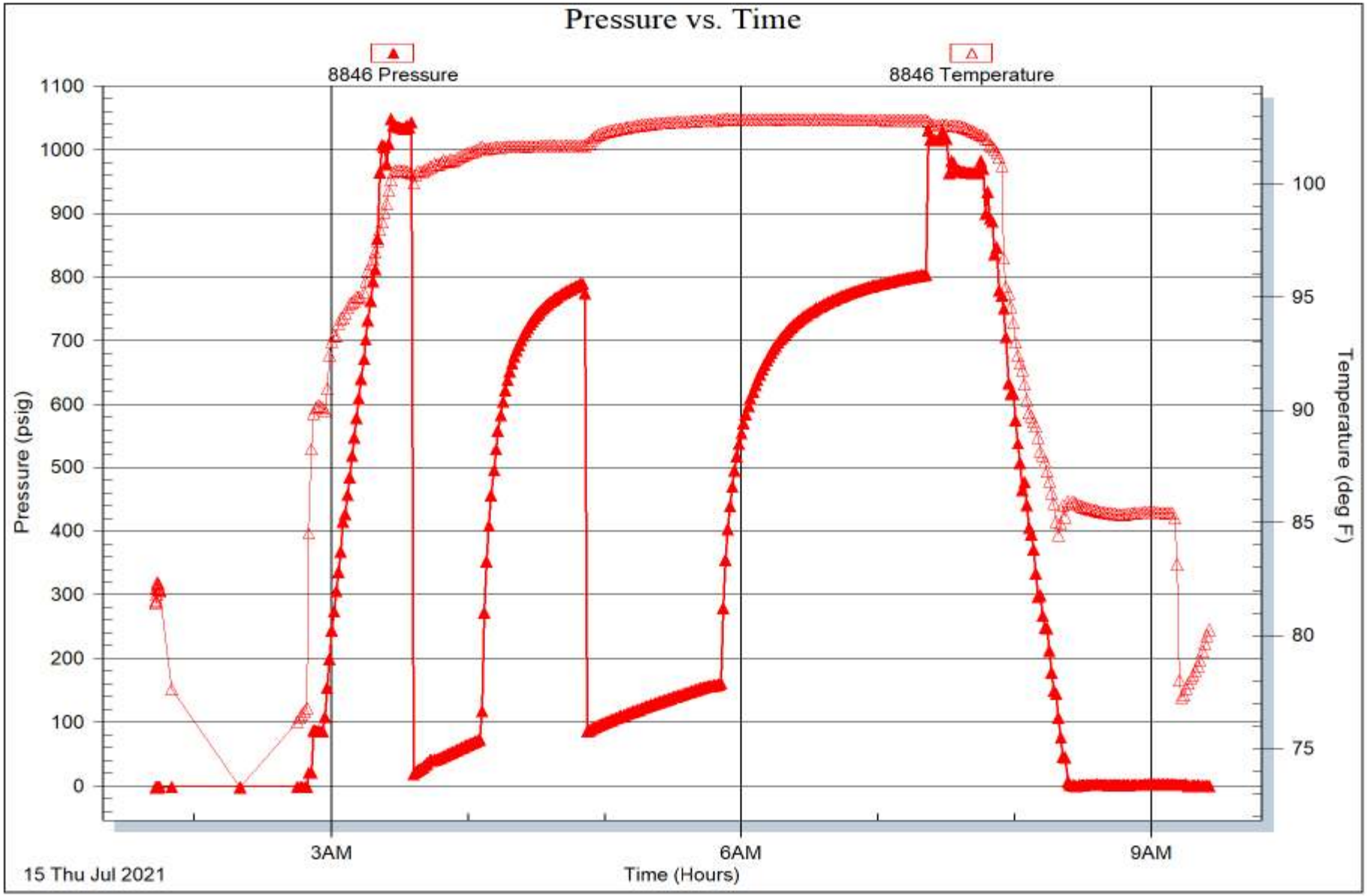
Recovery Comments:

Serial #: 8369 **Outside** Raney Oil Company, LLC House #1C DST Test Number: 1



Trilobite Testing, Inc Ref. No: 66747 Printed: 2021.07.15 @ 10:39:17

Serial #: 8846 **Inside** Raney Oil Company, LLC House #1C DST Test Number: 1



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DRILL STEM TEST REPORT

Raney Oil Company, LLC

4665 Bauer Brook Court
Lawrence, KS
66049-9013
ATTN: Thomas Raney/Roger M

31/33S/6E Cowley, Ks

House #1C

Job Ticket: 66748 **DST#: 2**

Test Start: 2021.07.17 @ 01:33:00

GENERAL INFORMATION:

Formation: **Upper Mississippian**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 03:11:10
Time Test Ended: 09:05:50

Test Type: Conventional Bottom Hole (Initial)
Tester: Jimmy Ricketts
Unit No: 80

Interval: 2698.00 ft (KB) To 3108.00 ft (KB) (TVD)
Total Depth: 3108.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

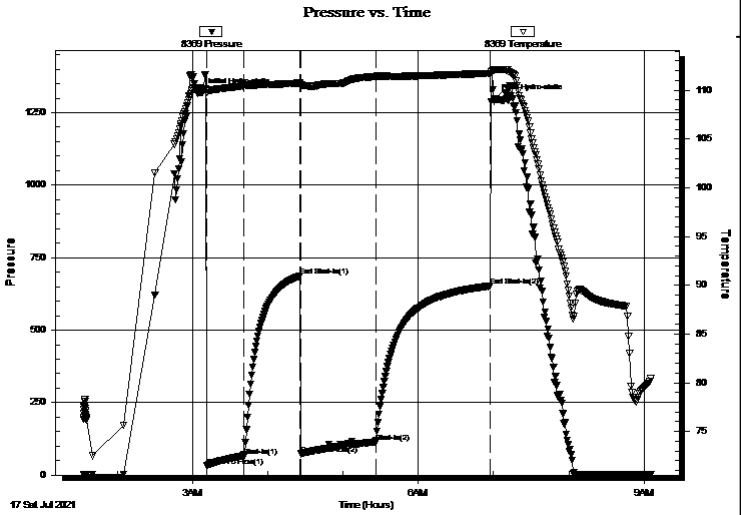
Reference Elevations: 1181.00 ft (KB)
1172.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 8369 **Outside**

Press@RunDepth: 115.10 psig @ 2699.00 ft (KB)
Start Date: 2021.07.17 End Date: 2021.07.17
Start Time: 01:33:01 End Time: 09:05:50

Capacity: 8000.00 psig
Last Calib.: 1899.12.30
Time On Btm: 2021.07.17 @ 03:07:10
Time Off Btm: 2021.07.17 @ 07:01:30

TEST COMMENT: IF - Weak blow building to 4 inches of water during initial flow period.
FF - Weak blow building to 1 1/4 inches of water during final flow period.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1318.73	110.21	Initial Hydro-static
4	31.90	109.76	Open To Flow (1)
34	66.44	110.45	Shut-In(1)
79	686.87	110.74	End Shut-In(1)
79	73.59	110.49	Open To Flow (2)
139	115.10	111.41	Shut-In(2)
230	652.14	111.73	End Shut-In(2)
235	1296.71	112.09	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
180.00	Drilling mud 100% M	0.89
0.00	TS Drilling mud 100% M	0.00

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Raney Oil Company, LLC

4665 Bauer Brook Court
Law rence, KS
66049-9013

ATTN: Thomas Raney/Roger M

31/33S/6E Cowley, Ks

House #1C

Job Ticket: 66748 **DST#: 2**

Test Start: 2021.07.17 @ 01:33:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	48.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	10.39 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2500.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
180.00	Drilling mud 100% M	0.885
0.00	TS Drilling mud 100% M	0.000

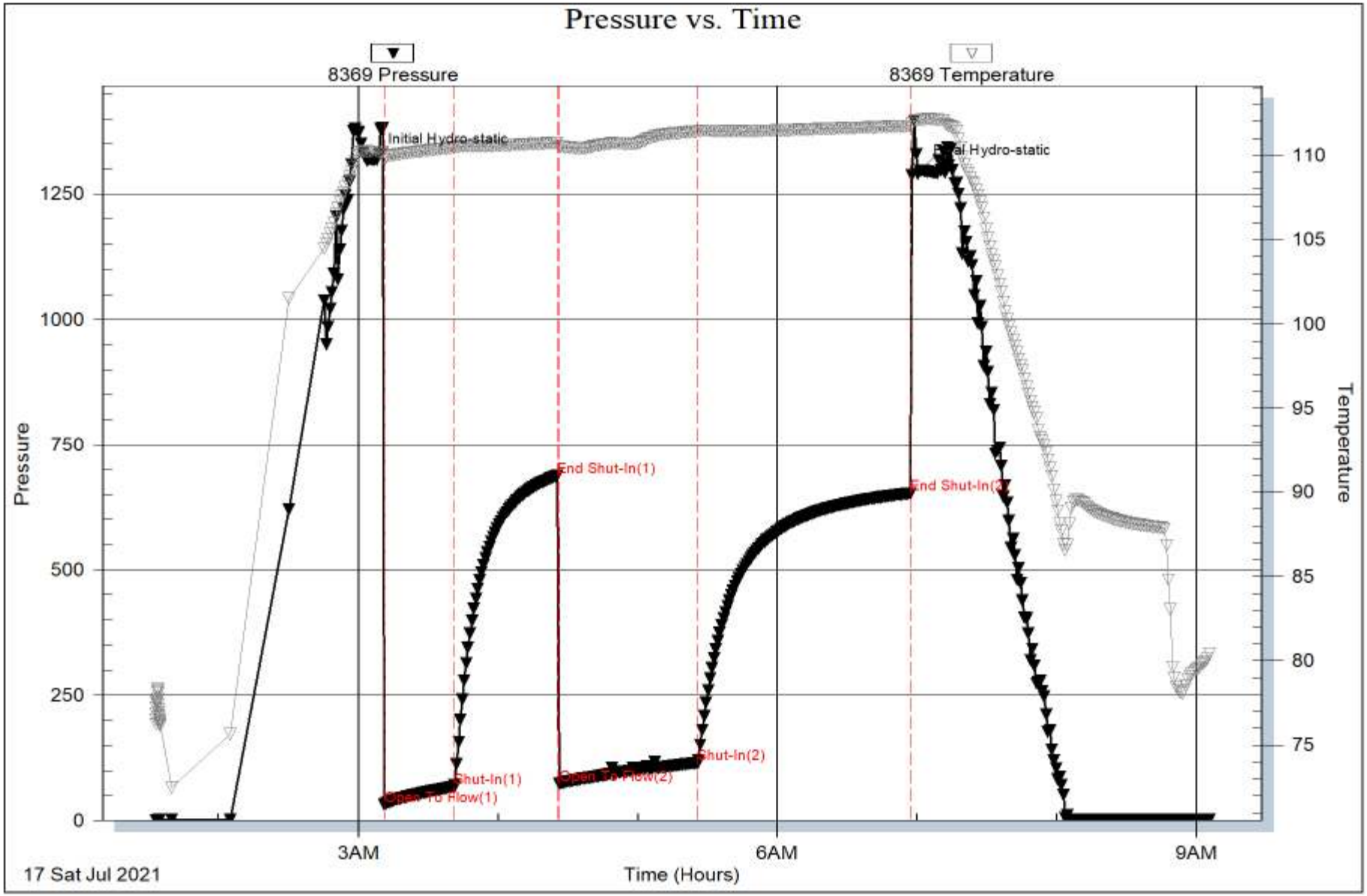
Total Length: 180.00 ft Total Volume: 0.885 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

Serial #: 8369 **Outside** Raney Oil Company, LLC House #1C DST Test Number: 2



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