

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 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
--	---

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	Palomino Petroleum, Inc.
Well Name	FAY 2
Doc ID	1434307

All Electric Logs Run

Compensated Density/Neutron PE Log
Dual Receiver Cement Bond
Micro
Dual Induction

Form	ACO1 - Well Completion
Operator	Palomino Petroleum, Inc.
Well Name	FAY 2
Doc ID	1434307

Tops

Name	Top	Datum
Anhy.	1992	(+ 584)
Base Anhy.	2023	(+ 553)
Topeka	3555	(- 979)
Heebner	3796	(-1220)
Toronto	3817	(-1241)
Lansing	3836	(-1260)
Muncie Creek	3986	(-1410)
Stark Shale	4077	(-1501)
BKC	4138	(-1562)
Marmaton	4167	(-1591)
Pawnee	4270	(-1694)
Ft. Scott	4328	(-1752)
Cherokee Sh.	4353	(-1777)
Miss.	4430	(-1854)
LTD	4578	(-2002)

Form	ACO1 - Well Completion
Operator	Palomino Petroleum, Inc.
Well Name	FAY 2
Doc ID	1434307

#### Perforations

Shots Per Foot	Perforation Top	Perforation Bottom	BridgePlugType	BridgePlugSet At	Material Record
4	4431	4435			500 gal. 15% MOD-202
4	4440	4450			
4	4328	4331			250 gal. 15% MCA, retreated 750 gal. 15% NE w/ 2% m.s. & DMO acid
4	4116	4118			300 gal. 15% MCA
4	4120	4128			
4	4086	4091			250 gal. 15% MC, retreated 1000 gal. 15% NE w/ 2% m.s. & DMO acid
4	4061	4064			250 gal. 15% MCA
			CIBP Cast Iron Bridge Plug	4294	





P. O. Box 466  
Ness City, KS 67560  
Off: 785-798-2300

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NOV 10 2018

# Invoice

DATE	INVOICE #
11/5/2018	27707

BILL TO
Palomino Petroleum Inc. 4924 S E 84th Street Newton, KS 67114-8827

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#2	Fay	Lane	Express Well Serv	Oil	Development	Cement Port Collar	Jonathan
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				45	Miles	5.00	225.00
576D-D	Pump Charge - Deep Surface (> 500 Ft.) & Port Collars				1	Job	1,300.00	1,300.00
290	D-Air				2	Gallon(s)	42.00	84.00T
104	Port Collar Tool Rental				1	Each	200.00	200.00T
330	Swift Multi-Density Standard (MIDCON II)				125	Sacks	16.25	2,031.25T
276	Flocele				32	Lb(s)	2.50	80.00T
581D	Service Charge Cement				200	Sacks	1.75	350.00
582D	Minimum Drayage Charge				1	Each	250.00	250.00
	Subtotal							4,520.25
	Sales Tax Lane County						7.50%	179.64
<b>We Appreciate Your Business!</b>							<b>Total</b>	\$4,699.89





JOB LOG

SWIFT Services, Inc.

DATE 11/05/18 PAGE NO. 1

CUSTOMER Palomino Petroleum		WELL NO. #2		LEASE Fay		JOB TYPE Port Collar		TICKET NO. 27707
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CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1300							On location, set up trucks.
								2 7/8 x 5 1/2 A.C. - 1968'
	1315						1200	Load Hole Test P.C., Held.
	1320							Open P.C., Test
		3	3				500	Inj Rate
	1325	3 1/4					500	Start Cmt
		3 1/4	9				600	Catch Circulation
		3 1/4	68 1/2				600	Cmt Circulating - Raise wt
	1345	3 1/4	75				700	Fin Cmt, Start Displacement
		3 1/4	10 1/2				700	Fin Displacement
	1355						1200	Close Port Collar, Test
	1400							Run 4-Its
	1405	3	30				300	Reverse Out, 2 Flags
	1415							Wash up truck Rack up
	1430							Job Complete
								Thanks Jon, Austin, Blaine



P. O. Box 466  
 Ness City, KS 67560  
 Off: 785-798-2300



# Invoice

DATE	INVOICE #
10/27/2018	31747

BILL TO
Palomino Petroleum Inc. 4924 S E 84th Street Newton, KS 67114-8827

**RECEIVED**

NOV 01 2018

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#2	Fay	Lane	WW Drilling Rig #4	Oil	Development	Cement Long Str...	Blaine
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				40	Miles	5.00	200.00
578D-L	Pump Charge - Long String				1	Job	1,300.00	1,300.00
403-5	5 1/2" Cement Basket				1	Each	275.00	275.00T
404-5	5 1/2" Port Collar				1	Each	2,500.00	2,500.00T
406-5	5 1/2" Latch Down Plug & Baffle				1	Each	250.00	250.00T
407-5	5 1/2" Insert Float Shoe With Auto Fill				1	Each	325.00	325.00T
409-5	5 1/2" Turbolizer				11	Each	85.00	935.00T
419-5	5 1/2" Rotating Head Rental				1	Each	200.00	200.00T
330	Swift Multi-Density Standard (MIDCON II)				125	Sacks	16.25	2,031.25T
325	Standard Cement				100	Sacks	13.00	1,300.00T
284	Calseal				5	Sack(s)	35.00	175.00T
283	Salt				500	Lb(s)	0.20	100.00T
285	CFR-1				50	Lb(s)	4.50	225.00T
276	Flocele				50	Lb(s)	2.50	125.00T
281	Mud Flush				500	Gallon(s)	1.50	750.00T
221	Liquid KCL (Clayfix)				4	Gallon(s)	25.00	100.00T
290	D-Air				1	Gallon(s)	42.00	42.00T
581D	Service Charge Cement				225	Sacks	1.75	393.75
583D	Drayage				457	Ton Miles	0.85	388.45
	Subtotal							11,615.45
	Sales Tax Lane County						7.50%	699.99

<b>We Appreciate Your Business!</b>	<b>Total</b>	\$12,315.44
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Services, Inc.

TICKET 031747

PAGE 1 OF 1

CHARGE TO: Palomares Petroleum  
 ADDRESS  
 CITY, STATE, ZIP CODE

1. SERVICE LOCATIONS <u>Palomares YS</u>	WELL/PROJECT NO. <u>#2</u>	LEASE <u>Fog</u>	COUNTY/PARISH <u>Lane</u>	STATE <u>KS</u>	CITY <u>Perdunnis</u>	DATE <u>8-10-18</u>	OWNER
2. TICKET TYPE <input type="checkbox"/> SERVICE <input type="checkbox"/> SALES	CONTRACTOR	RIG NAME NO. <u>4</u>	SHIPPED VIA CT	DELIVERED TO <u>location</u>	ORDER NO.		
3. WELL TYPE <u>oil</u>	WELL CATEGORY <u>Development</u>	JOB PURPOSE <u>connect long string</u>	WELL PERMIT NO.	WELL LOCATION <u>18-16-27</u>			
4. REFERRAL LOCATION	INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	MILEAGE	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
		LOC	ACCT	DF								
575					TRX 114	40	in				5.00	200.00
578					Pump Charge	1	ea				1300.00	1300.00
403					Connect Bashed	52	in	1	ea		275.00	275.00
404					Port Collar	52	in	1	ea		2500.00	2500.00
406					Latch down plug 5' buffer	52	in	1	ea		250.00	250.00
407					Insert float sleeve w/ Auto fill	52	in	1	ea		385.00	385.00
409					Truss 222	52	in	11	ea		85.00	935.00
419					Rotating head stacked	52	in	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.  
 DATE SIGNED: [Signature] TIME SIGNED:  A.M.  P.M.

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

SURVEY	AGREE	UNDECIDED	DISAGREE	PAGE TOTAL	5985.00
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?				TAX	5630.45
WE UNDERSTOOD AND MET YOUR NEEDS?				TOTAL	11613.45
OUR SERVICE WAS PERFORMED WITHOUT DELAY?					
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?					
ARE YOU SATISFIED WITH OUR SERVICE?	<input type="checkbox"/> YES	<input type="checkbox"/> NO			
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND					

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. 31747

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	WELL				DATE	UNIT PRICE	AMOUNT
		LOC	ACCT	DE			QTY	U/M	QTY	U/M			

330		1				SMD cement	125	sk			16.85	2031.25
325		1				Standard cement (For 22-2)	100	sk			13.00	1300.00
284		1				Calsol	500	lb	5	sk	35.00	175.00
283		1				Sulf	500	lb			0.20	100.00
285		1				CFR	50	lb			4.50	225.00
276		1				Fluoride	50	lb			2.50	125.00
281		1				mud flush	500	gal			1.50	750.00
281		1				KCL Liquid	4	gal			25.00	100.00
290		1				D-4R	1	gal			42.00	42.00
581		1				SERVICE CHARGE					1.75	393.75
583		1				MILEAGE CHARGE					0.85	388.45
							TOTAL MILEAGE	225				
							LOADED MILES	40				
							CUBIC FEET					
							TON MILES					
CONTINUATION TOTAL												5630.45

CUSTOMER: Polaris Petroleum

WELL: Fzg #2

DATE: 21 Oct 18 PAGE: 2 OF 2

JOB LOG

SWIFT Services, Inc.

DATE **27 OCT 18** PAGE NO. **1**

CUSTOMER **Palomares Petroleum** WELL NO. **#2** LEASE **Fay** JOB TYPE **comnt long string** TICKET NO. **31797**

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								125sk SMD cement w/ 1/4# flocc 100sk EA-2 cement w/ 1/4# flocc 5 1/2 x 14# casing 109 jts TOTAL PIPE 958l shoejt 4335' Port collar *62 1869' Centralizer 1,3,5,7,9,11,13,15,17,19,61 Picket #62
	1845							mloc TRK 114
	1900							start 5 1/2 x 14# casing in well tag bottom 4577'
	2100	3 1/2	32				150	Drop ball - circulate - <del>ROTATE</del> Pump 500gal mud flush - 200bbl KCL flush Plug RT - 305k
		3 1/2	36				150	MIX SMD cement 958sk @ 12.5 ppg
		3 1/2	21				158	MIX EA-2 cement 1005sk @ 15.3 ppg
								Drop latch down plug wash out pump & line
	2245	6 1/2					200	Displace plug
		6 1/2	100				300	
	2300	6 1/2	111				1500	Land plug
								Release pressure to truck - dried up
	2310							wash truck
								Rack up
	2345							job complete back Blane, Flit & Russ



RECEIVED

OCT 22 2018

**QUALITY OILWELL CEMENTING, INC.**  
 PO Box 32 - 740 WEST WICHITA AVE, RUSSELL KS 67665  
 PHONE:785-324-1041 FAX:785-483-1087  
 EMAIL: cementing@ruraltel.net

Date: 10/18/2018  
 Invoice # 1036

P.O.#:  
 Due Date: 11/17/2018  
 Division: Russell

# Invoice

**Contact:**  
 Palomino Petroleum Inc  
**Address/Job Location:**

4924 SE 84th  
 Newton Ks 67114

**Reference:**  
**FAY 2** SEC 10-16-27

**Description of Work:**  
 SURFACE JOB

Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 657.71	No				
Common-Class A	120	\$ 1,822.31	Yes				
Calcium Chloride	6	\$ 247.69	Yes				
POZ Mix-Standard	30	\$ 154.81	Yes				
Pump Truck Mileage-Job to Nearest Camp	43	\$ 142.64	No				
Bulk Truck Matl-Material Service Charge	159	\$ 117.21	No				
Bulk Truck Mileage-Job to Nearest Bulk Plant	43	\$ 110.95	No				
Premium Gel (Bentonite)	3	\$ 64.13	Yes				

**Invoice Terms:**

Net 30

	SubTotal:	\$	3,317.46
	<i>Discount Available <u>ONLY</u> if Invoice is Paid &amp; Received within listed terms of invoice:</i>		\$ (82.94)
		SubTotal for Taxable Items:	\$ 2,231.72
		SubTotal for Non-Taxable Items:	\$ 1,002.80
		Total:	\$ 3,234.52
		Tax:	\$ 167.38

7.50% Lane County Sales Tax

**Thank You For Your Business!**

<b>Amount Due:</b>	<b>\$ 3,401.90</b>
<b>Applied Payments:</b>	
<b>Balance Due:</b>	<b>\$ 3,401.90</b>

Past Due Invoices are subject to a service charge (annual rate of 24%)  
 This does not include any applicable taxes unless it is listed.  
 ©2008-2013 Straker Investments, LLC. All rights reserved.

# 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. 1036

Date	10-18-18	Sec.	10	Twp.	16	Range	27	County	Lane	State	KS	On Location		Finish	10:30
Lease								Well No.		Owner					
Fay								2		Palomino Petroleum					
Contractor								To Quality Oilwell Cementing, Inc.							
WJW 44								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								Charge To							
Surface								Palomino petroleum							
Hole Size				T.D.				Street				City			
12 1/4				217											
Csg.				Depth				Street				City			
8 5/8				216											
Tbg. Size				Depth				City				State			
Tool				Depth				The above was done to satisfaction and supervision of owner agent or contractor.							
Cement Left in Csg.				Shoe Joint				Cement Amount Ordered				150 8/20 3 1/4 2 1/2 CLR			
10'															
Meas Line				Displace											
				133L											
EQUIPMENT								Common							
Pumptrk								120							
20 No. Cementer								30							
Helper								3							
Bulktrk								Gel.							
9 No. Driver								6							
Driver															
Driver															
Driver															
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							
Mix 150sca Displace								Mileage							
Cement Circulated								FLOAT EQUIPMENT 8 5/8 Swage							
								Guide Shoe							
								Centralizer							
								Baskets							
								AFU Inserts							
								Float Shoe							
								Latch Down							
								Pumptrk Charge Surface							
								Mileage 43							
								Tax							
								Discount							
								Total Charge							
X Signature															



# Company: Palomino Petroleum, Inc.

## Lease: Fay #2

SEC: 10 TWN: 16S RNG: 27W  
County: LANE  
State: Kansas  
Drilling Contractor: WW Drilling, LLC - Rig 4  
Elevation: 2570 GL  
Field Name: Broughton NE  
Pool: Pool Ext  
Job Number: 260

**Operation:**  
Test Complete

**DATE**  
October  
**23**  
2018

**DST #1 Formation: Lans "E" Test Interval: 3911 - Total Depth: 3935'**  
**3935'**

Time On: 01:39 10/23      Time Off: 06:35 10/23  
Time On Bottom: 01:39 10/23      Time Off Bottom: 03:39 10/23

Electronic Volume Estimate:  
207'

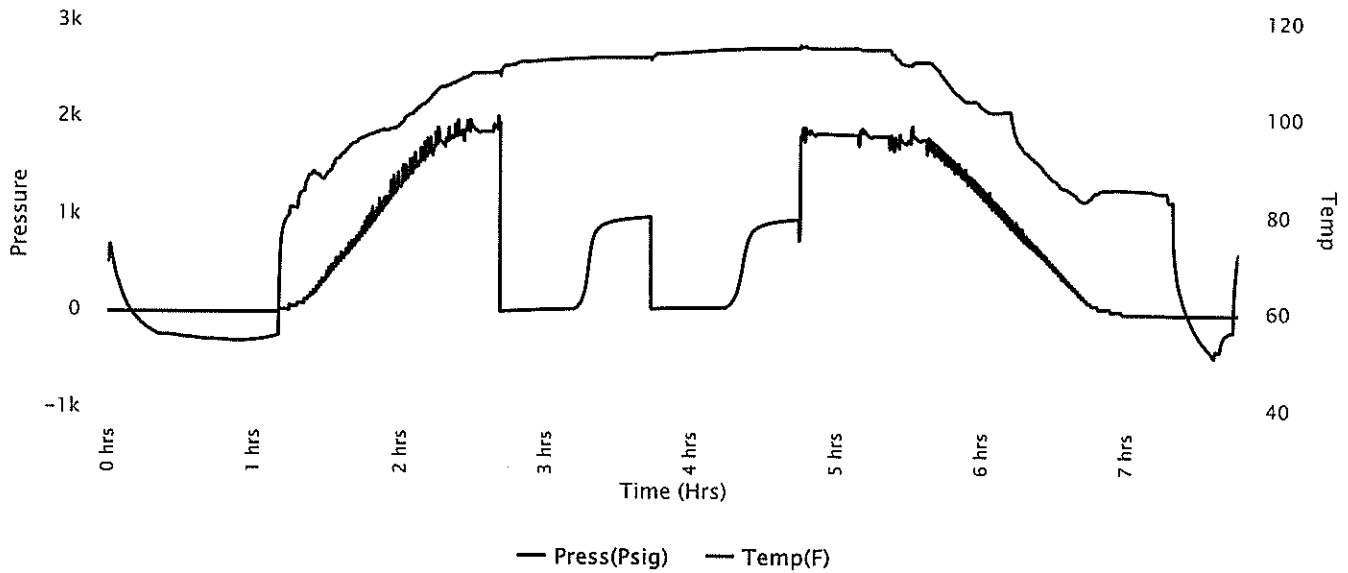
1st Open  
Minutes: 30  
Current Reading:  
7" at 30 min  
Max Reading: 7"

1st Close  
Minutes: 30  
Current Reading:  
0" at 30 min  
Max Reading: 0"

2nd Open  
Minutes: 30  
Current Reading:  
5.8" at 30 min  
Max Reading: 5.8"

2nd Close  
Minutes: 30  
Current Reading:  
0" at 30 min  
Max Reading: 0"

Inside Recorder







**Company: Palomino Petroleum, Inc.**

**Lease: Fay #2**

SEC: 10 TWN: 16S RNG: 27W  
 County: LANE  
 State: Kansas  
 Drilling Contractor: WW Drilling, LLC - Rig 4  
 Elevation: 2570 GL  
 Field Name: Broughton NE  
 Pool: Pool Ext  
 Job Number: 260

**Operation:**  
 Test Complete

**DATE**  
 October  
**23**  
 2018

**DST #1**    **Formation: Lans "E"**    **Test Interval: 3911 - 3935'**    **Total Depth: 3935'**

Time On: 01:39 10/23    Time Off: 06:35 10/23  
 Time On Bottom: 01:39 10/23    Time Off Bottom: 03:39 10/23

Recovered

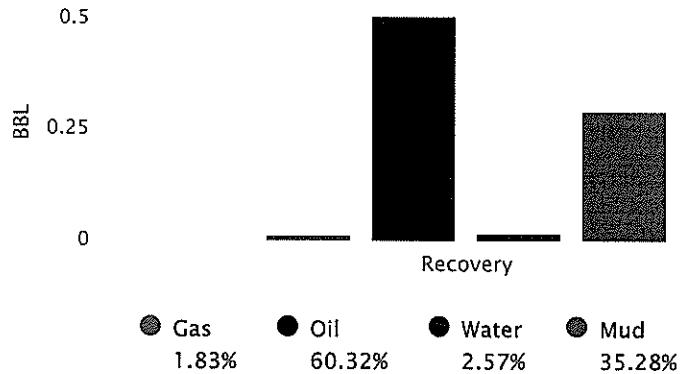
Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
35	0.3489038	O	0	100	0	0
38	0.18696	SLOCM	0	15	0	85
63	0.30996	SLGC SLWCHOCM	5	43	7	45

Total Recovered: 136 ft  
 Total Barrels Recovered: 0.8458238

**Reversed Out**  
 NO

Initial Hydrostatic Pressure	1870	PSI
Initial Flow	16 to 46	PSI
<b>Initial Closed in Pressure</b>	<b>1000</b>	<b>PSI</b>
Final Flow Pressure	53 to 65	PSI
<b>Final Closed in Pressure</b>	<b>977</b>	<b>PSI</b>
Final Hydrostatic Pressure	1858	PSI
Temperature	115	°F
Pressure Change Initial Close / Final Close	2.3	%

**Recovery at a glance**





**Company: Palomino Petroleum, Inc.**

**Lease: Fay #2**

SEC: 10 TWN: 16S RNG: 27W  
County: LANE  
State: Kansas  
Drilling Contractor: WW Drilling, LLC - Rig 4  
Elevation: 2570 GL  
Field Name: Broughton NE  
Pool: Pool Ext  
Job Number: 260

**Operation:**  
Test Complete

**DATE**  
October  
**23**  
2018

DST #1      Formation: Lans "E"      Test Interval: 3911 - 3935'      Total Depth: 3935'  
Time On: 01:39 10/23      Time Off: 06:35 10/23  
Time On Bottom: 01:39 10/23      Time Off Bottom: 03:39 10/23

**BUCKET MEASUREMENT:**

1st Open: 1/4 in. blow building to 7 ins.  
1st Close: No blow back.  
2nd Open: Weak, surface blow building to 5.8 ins.  
2nd Close: No blow back.

**REMARKS:**

Tool slid 1 ft. to bottom.  
Did not get enough water to test.  
  
Tool Sample: 0% Gas 100% Oil 0% Water 0% Mud  
  
Gravity: 33.3 @ 60 °F



# Company: Palomino Petroleum, Inc.

## Lease: Fay #2

SEC: 10 TWN: 16S RNG: 27W  
County: LANE  
State: Kansas  
Drilling Contractor: WW Drilling, LLC - Rig 4  
Elevation: 2570 GL  
Field Name: Broughton NE  
Pool: Pool Ext  
Job Number: 260

**Operation:**  
Test Complete

**DATE**  
October  
**23**  
2018

**DST #1**      **Formation: Lans "E"**      **Test Interval: 3911 - 3935'**      **Total Depth: 3935'**  
Time On: 01:39 10/23      Time Off: 06:35 10/23  
Time On Bottom: 01:39 10/23      Time Off Bottom: 03:39 10/23

### Down Hole Makeup

<b>Heads Up:</b> 7.41 FT	<b>Packer 1:</b> 3906 FT
<b>Drill Pipe:</b> 3768.82 FT <i>ID-3 1/2</i>	<b>Packer 2:</b> 3911 FT
<b>Weight Pipe:</b> FT <i>ID-2 7/8</i>	<b>Top Recorder:</b> 3895.42 FT
<b>Collars:</b> 117.02 FT <i>ID-2 1/4</i>	<b>Bottom Recorder:</b> 3913 FT
<b>Test Tool:</b> 33.57 FT <i>ID-3 1/2-FH</i> <i>Jars</i> <i>Safety Joint</i>	<b>Well Bore Size:</b> 7 7/8
<b>Total Anchor:</b> 24	<b>Surface Choke:</b> 1"
<u><b>Anchor Makeup</b></u>	<b>Bottom Choke:</b> 5/8"
<b>Packer Sub:</b> 1 FT	
<b>Perforations: (top):</b> FT <i>4 1/2-FH</i>	
<b>Change Over:</b> FT	
<b>Drill Pipe: (in anchor):</b> FT <i>ID-3 1/2</i>	
<b>Change Over:</b> FT	
<b>Perforations: (below):</b> 23 FT <i>4 1/2-FH</i>	





# Company: Palomino Petroleum, Inc.

## Lease: Fay #2

SEC: 10 TWN: 16S RNG: 27W  
County: LANE  
State: Kansas  
Drilling Contractor: WW Drilling, LLC - Rig 4  
Elevation: 2570 GL  
Field Name: Broughton NE  
Pool: Pool Ext  
Job Number: 260

**Operation:**  
Test Complete

**DATE**  
October  
**25**  
2018

**DST #5**      **Formation: Pleasanton/Marmaton**      **Test Interval: 4141 - 4260'**      **Total Depth: 4260'**  
Time On: 21:59 10/25      Time Off: 05:21 10/26  
Time On Bottom: 00:52 10/26      Time Off Bottom: 02:52 10/26

Electronic Volume Estimate:  
25'

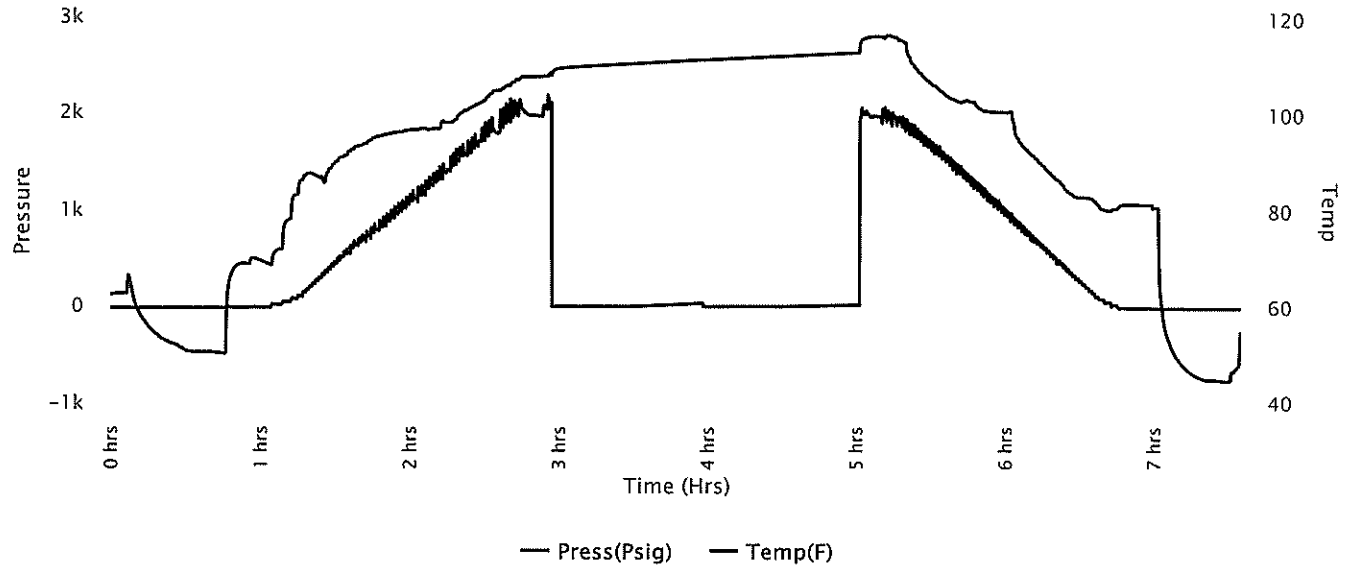
1st Open  
Minutes: 30  
Current Reading: .7" at 30 min  
Max Reading: .8"

1st Close  
Minutes: 30  
Current Reading: 0" at 30 min  
Max Reading: 0"

2nd Open  
Minutes: 30  
Current Reading: 0" at 30 min  
Max Reading: 0"

2nd Close  
Minutes: 30  
Current Reading: 0" at 30 min  
Max Reading: 0"

Inside Recorder





# Company: Palomino Petroleum, Inc.

## Lease: Fay #2

SEC: 10 TWN: 16S RNG: 27W  
County: LANE  
State: Kansas  
Drilling Contractor: WW Drilling, LLC - Rig 4  
Elevation: 2570 GL  
Field Name: Broughton NE  
Pool: Pool Ext  
Job Number: 260

**Operation:**  
Test Complete

**DATE**  
October  
**25**  
2018

**DST #5**      **Formation:** Pleasanton/Marmaton      **Test Interval:** 4141 - 4260'      **Total Depth:** 4260'  
Time On: 21:59 10/25      Time Off: 05:21 10/26  
Time On Bottom: 00:52 10/26      Time Off Bottom: 02:52 10/26

Recovered

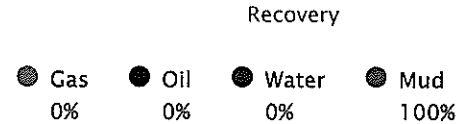
Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
15	0.0738	M	0	0	0	100

Total Recovered: 15 ft  
Total Barrels Recovered: 0.0738

**Reversed Out**  
NO

### Recovery at a glance

Initial Hydrostatic Pressure	1988	PSI	0.05
Initial Flow	14 to 18	PSI	BBL
<b>Initial Closed in Pressure</b>	<b>53</b>	<b>PSI</b>	
Final Flow Pressure	17 to 19	PSI	
<b>Final Closed in Pressure</b>	<b>36</b>	<b>PSI</b>	0
Final Hydrostatic Pressure	1986	PSI	
Temperature	114	°F	
Pressure Change Initial Close / Final Close	32.9	%	





**Company: Palomino Petroleum, Inc.**

**Lease: Fay #2**

SEC: 10 TWN: 16S RNG: 27W  
County: LANE  
State: Kansas  
Drilling Contractor: WW Drilling, LLC - Rig 4  
Elevation: 2570 GL  
Field Name: Broughton NE  
Pool: Pool Ext  
Job Number: 260

**Operation:**

Test Complete

**DATE**

October

**25**

2018

DST #5	Formation:	Test Interval: 4141 -	Total Depth: 4260'
	Pleasanton/Marmaton	4260'	
	Time On: 21:59 10/25	Time Off: 05:21 10/26	
	Time On Bottom: 00:52 10/26	Time Off Bottom: 02:52 10/26	

**BUCKET MEASUREMENT:**

1st Open: Weak, surface blow building to .8 in.

1st Close: No blow back.

2nd Open: No blow. No build.

2nd Close: No blow back.

**REMARKS:**

Tool sample had oil specks.

Tool Sample: 0% Gas 0% Oil 0% Water 100% Mud



# Company: Palomino Petroleum, Inc.

## Lease: Fay #2

SEC: 10 TWN: 16S RNG: 27W  
County: LANE  
State: Kansas  
Drilling Contractor: WW Drilling, LLC - Rig 4  
Elevation: 2570 GL  
Field Name: Broughton NE  
Pool: Pool Ext  
Job Number: 260

**Operation:**  
Test Complete

**DATE**  
October  
**25**  
2018

**DST #5**      **Formation:**      **Test Interval:** 4141 -      **Total Depth:** 4260'  
   **Pleasanton/Marmaton**      **4260'**  
Time On: 21:59 10/25      Time Off: 05:21 10/26  
Time On Bottom: 00:52 10/26      Time Off Bottom: 02:52 10/26

### Down Hole Makeup

<b>Heads Up:</b> 1.20000000000004 FT	<b>Packer 1:</b> 4136 FT
<b>Drill Pipe:</b> 3992.61 FT <i>ID-3 1/2</i>	<b>Packer 2:</b> 4141 FT
<b>Weight Pipe:</b> FT <i>ID-2 7/8</i>	<b>Top Recorder:</b> 4125.42 FT
<b>Collars:</b> 117.02 FT <i>ID-2 1/4</i>	<b>Bottom Recorder:</b> 4243 FT
<b>Test Tool:</b> 33.57 FT <i>ID-3 1/2-FH</i> <i>Jars</i> <i>Safety Joint</i>	<b>Well Bore Size:</b> 7 7/8
	<b>Surface Choke:</b> 1"
	<b>Bottom Choke:</b> 5/8"

**Total Anchor:** 119

#### Anchor Makeup

**Packer Sub:** 1 FT

**Perforations: (top):** 2 FT  
*4 1/2-FH*

**Change Over:** 1 FT

**Drill Pipe: (in anchor):** 96 FT  
*ID-3 1/2*

**Change Over:** 1 FT

**Perforations: (below):** 18 FT  
*4 1/2-FH*





**Company: Palomino Petroleum,  
Inc.**

**Lease: Fay #2**

SEC: 10 TWN: 16S RNG: 27W  
County: LANE  
State: Kansas  
Drilling Contractor: WW Drilling, LLC -  
Rig 4  
Elevation: 2570 GL  
Field Name: Broughton NE  
Pool: Pool Ext  
Job Number: 260

**Operation:**

Test Complete

**DATE**

October

**25**

2018

<b>DST #5</b>	<b>Formation:</b> Pleasanton/Marmaton	<b>Test Interval: 4141 - 4260'</b>	<b>Total Depth: 4260'</b>
	Time On: 21:59 10/25	Time Off: 05:21 10/26	
	Time On Bottom: 00:52 10/26	Time Off Bottom: 02:52 10/26	

**Mud Properties**

**Mud Type:** Chemical

**Weight:** 9.4

**Viscosity:** 40

**Filtrate:** 7.2

**Chlorides:** 6,400 ppm



# Company: Palomino Petroleum, Inc.

## Lease: Fay #2

SEC: 10 TWN: 16S RNG: 27W  
 County: LANE  
 State: Kansas  
 Drilling Contractor: WW Drilling, LLC - Rig 4  
 Elevation: 2570 GL  
 Field Name: Broughton NE  
 Pool: Pool Ext  
 Job Number: 260

**Operation:**  
 Test Complete

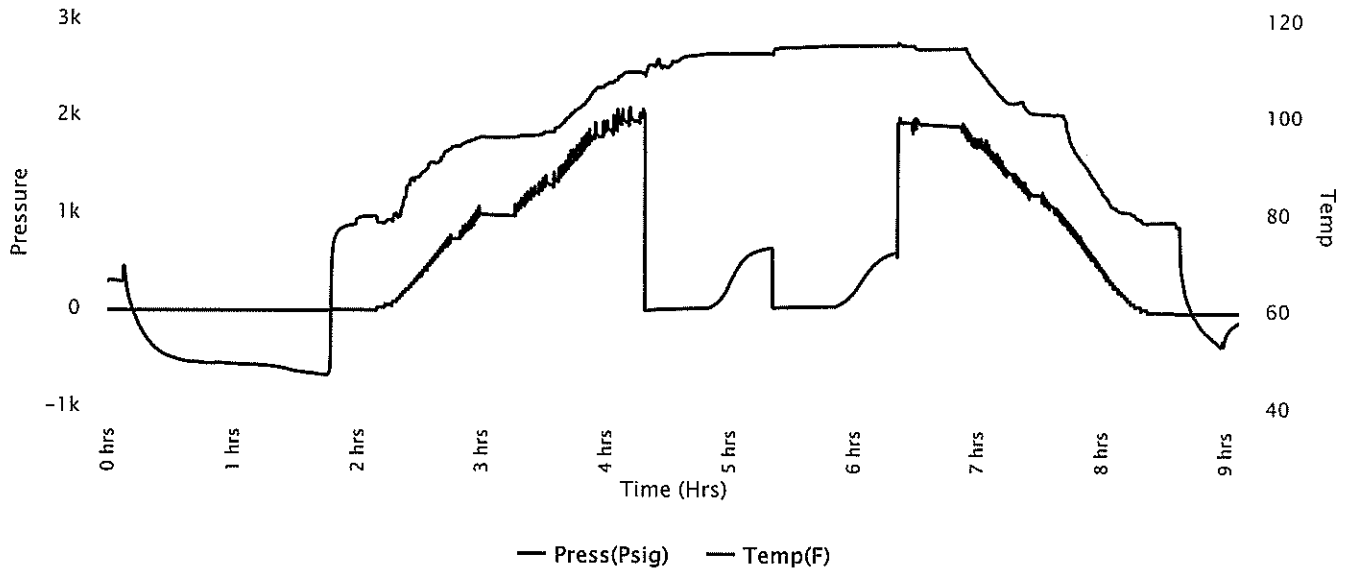
**DATE**  
 October  
**25**  
 2018

**DST #4**      **Formation: Lans "K&L"**      **Test Interval: 4089 - 4150'**      **Total Depth: 4150'**  
 Time On: 02:21 10/25      Time Off: 11:16 10/25  
 Time On Bottom: 06:33 10/25      Time Off Bottom: 08:33 10/25

Electronic Volume Estimate:  
 184'

<u>1st Open</u>	<u>1st Close</u>	<u>2nd Open</u>	<u>2nd Close</u>
Minutes: 30	Minutes: 30	Minutes: 30	Minutes: 30
Current Reading: 5.1" at 30 min	Current Reading: 0" at 30 min	Current Reading: 4.9" at 30 min	Current Reading: 0" at 30 min
Max Reading: 5.1"	Max Reading: 0"	Max Reading: 4.9"	Max Reading: 0"

Inside Recorder





**Company: Palomino Petroleum, Inc.**  
**Lease: Fay #2**

SEC: 10 TWN: 16S RNG: 27W  
 County: LANE  
 State: Kansas  
 Drilling Contractor: WW Drilling, LLC - Rig 4  
 Elevation: 2570 GL  
 Field Name: Broughton NE  
 Pool: Pool Ext  
 Job Number: 260

**Operation:**  
 Test Complete

**DATE**  
 October  
**25**  
 2018

**DST #4**      **Formation: Lans "K&L"**      **Test Interval: 4089 - 4150'**      **Total Depth: 4150'**  
 Time On: 02:21 10/25      Time Off: 11:16 10/25  
 Time On Bottom: 06:33 10/25      Time Off Bottom: 08:33 10/25

Recovered

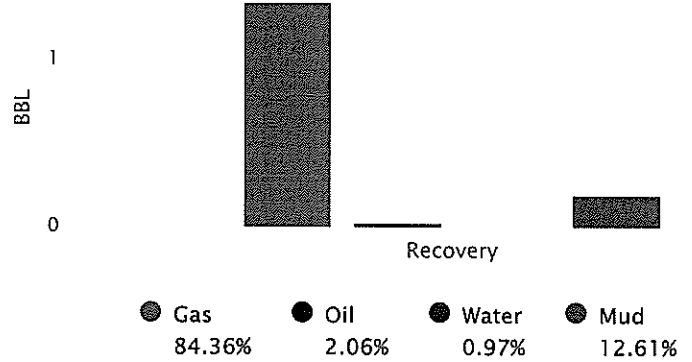
Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
116	1.2408538	G	100	0	0	0
10	0.0492	SLGCSLOCM	1	4	0	95
63	0.30996	SLWCSLOCHGCM	35	10	5	50

Total Recovered: 189 ft  
 Total Barrels Recovered: 1.6000138

**Reversed Out**  
 NO

Initial Hydrostatic Pressure	1974	PSI
Initial Flow	13 to 39	PSI
<b>Initial Closed in Pressure</b>	<b>660</b>	<b>PSI</b>
Final Flow Pressure	43 to 58	PSI
<b>Final Closed in Pressure</b>	<b>617</b>	<b>PSI</b>
Final Hydrostatic Pressure	1971	PSI
Temperature	116	°F
Pressure Change Initial Close / Final Close	6.5	%

**Recovery at a glance**





**Company: Palomino Petroleum,  
Inc.**

**Lease: Fay #2**

SEC: 10 TWN: 16S RNG: 27W  
County: LANE  
State: Kansas  
Drilling Contractor: WW Drilling, LLC -  
Rig 4  
Elevation: 2570 GL  
Field Name: Broughton NE  
Pool: Pool Ext  
Job Number: 260

**Operation:**  
Test Complete

**DATE**  
October  
**25**  
2018

<b>DST #4</b>	<b>Formation: Lans "K&amp;L"</b>	<b>Test Interval: 4089 - 4150'</b>	<b>Total Depth: 4150'</b>
	Time On: 02:21 10/25	Time Off: 11:16 10/25	
	Time On Bottom: 06:33 10/25	Time Off Bottom: 08:33 10/25	

**BUCKET MEASUREMENT:**

1st Open: Weak, surface blow building to 5.1 ins.

1st Close: No blow back.

2nd Open: Weak, surface blow building to 4.9 ins.

2nd Close: No blow back.

**REMARKS:**

Tool slid 1 ft. to bottom.

Tool Sample: 0% Gas 15% Oil 5% Water 80% Mud



# Company: Palomino Petroleum, Inc.

## Lease: Fay #2

SEC: 10 TWN: 16S RNG: 27W  
County: LANE  
State: Kansas  
Drilling Contractor: WW Drilling, LLC - Rig 4  
Elevation: 2570 GL  
Field Name: Broughton NE  
Pool: Pool Ext  
Job Number: 260

**Operation:**  
Test Complete

**DATE**  
October  
**25**  
2018

**DST #4**      **Formation: Lans "K&L"**      **Test Interval: 4089 - 4150'**      **Total Depth: 4150'**  
Time On: 02:21 10/25      Time Off: 11:16 10/25  
Time On Bottom: 06:33 10/25      Time Off Bottom: 08:33 10/25

### Down Hole Makeup

<b>Heads Up:</b> 21.02 FT	<b>Packer 1:</b> 4084 FT
<b>Drill Pipe:</b> 3960.43 FT <i>ID-3 1/2</i>	<b>Packer 2:</b> 4089 FT
<b>Weight Pipe:</b> FT <i>ID-2 7/8</i>	<b>Top Recorder:</b> 4073.42 FT
<b>Collars:</b> 117.02 FT <i>ID-2 1/4</i>	<b>Bottom Recorder:</b> 4127 FT
<b>Test Tool:</b> 33.57 FT <i>ID-3 1/2-FH</i> <i>Jars</i> <i>Safety Joint</i>	<b>Well Bore Size:</b> 7 7/8
	<b>Surface Choke:</b> 1"
	<b>Bottom Choke:</b> 5/8"

**Total Anchor:** 61

Anchor Makeup

**Packer Sub:** 1 FT

**Perforations: (top):** 2 FT  
*4 1/2-FH*

**Change Over:** 1 FT

**Drill Pipe: (in anchor):** 32 FT  
*ID-3 1/2*

**Change Over:** 1 FT

**Perforations: (below):** 24 FT  
*4 1/2-FH*



**Company: Palomino Petroleum,  
Inc.**

**Lease: Fay #2**

SEC: 10 TWN: 16S RNG: 27W  
County: LANE  
State: Kansas  
Drilling Contractor: WW Drilling, LLC -  
Rig 4  
Elevation: 2570 GL  
Field Name: Broughton NE  
Pool: Pool Ext  
Job Number: 260

**Operation:**

Test Complete

**DATE**

October

**25**

2018

<b>DST #4</b>	<b>Formation: Lans "K&amp;L"</b>	<b>Test Interval: 4089 - 4150'</b>	<b>Total Depth: 4150'</b>
	Time On: 02:21 10/25	Time Off: 11:16 10/25	
	Time On Bottom: 06:33 10/25	Time Off Bottom: 08:33 10/25	

### **Mud Properties**

**Mud Type:** Chemical

**Weight:** 9.0

**Viscosity:** 53

**Filtrate:** 7.2

**Chlorides:** 6,600 ppm



# Company: Palomino Petroleum, Inc.

## Lease: Fay #2

SEC: 10 TWN: 16S RNG: 27W  
County: LANE  
State: Kansas  
Drilling Contractor: WW Drilling, LLC - Rig 4  
Elevation: 2570 GL  
Field Name: Broughton NE  
Pool: Pool Ext  
Job Number: 260

**Operation:**  
Test Complete

**DATE**  
October  
**24**  
2018

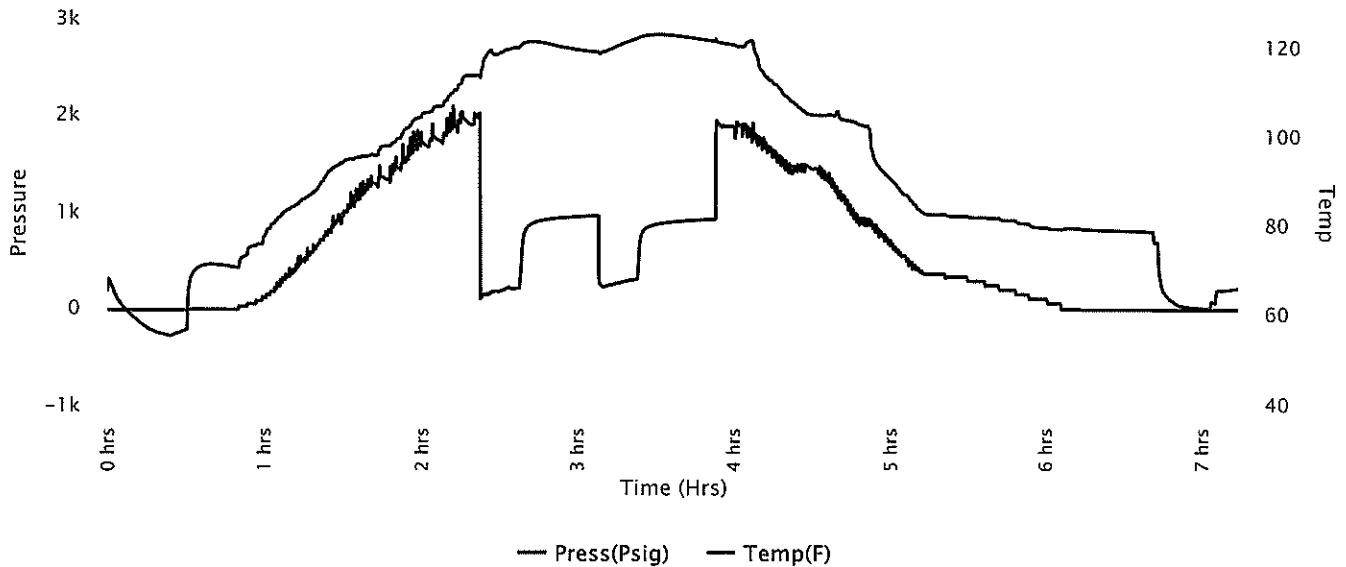
DST #3    Formation: Lans "H-J"    Test Interval: 3995 - 4085'    Total Depth: 4085'

Time On: 08:53 10/24    Time Off: 15:55 10/24  
Time On Bottom: 11:13 10/24    Time Off Bottom: 12:43 10/24

Electronic Volume Estimate:  
3049'

<u>1st Open</u>	<u>1st Close</u>	<u>2nd Open</u>	<u>2nd Close</u>
Minutes: 15	Minutes: 30	Minutes: 15	Minutes: 30
Current Reading: 149.5" at 15 min	Current Reading: 2.8" at 30 min	Current Reading: 139" at 15 min	Current Reading: 131" at 30 min
Max Reading: 149.5"	Max Reading: 3"	Max Reading: 139"	Max Reading: 131"

Inside Recorder





**Company: Palomino Petroleum, Inc.**

**Lease: Fay #2**

SEC: 10 TWN: 16S RNG: 27W  
 County: LANE  
 State: Kansas  
 Drilling Contractor: WW Drilling, LLC - Rig 4  
 Elevation: 2570 GL  
 Field Name: Broughton NE  
 Pool: Pool Ext  
 Job Number: 260

**Operation:**  
 Test Complete

**DATE**  
 October  
**24**  
 2018

**DST #3 Formation: Lans "H-J" Test Interval: 3995 - 4085' Total Depth: 4085'**  
 Time On: 08:53 10/24 Time Off: 15:55 10/24  
 Time On Bottom: 11:13 10/24 Time Off Bottom: 12:43 10/24

<u>Recovered</u>						
<u>Foot</u>	<u>BBLs</u>	<u>Description of Fluid</u>	<u>Gas %</u>	<u>Oil %</u>	<u>Water %</u>	<u>Mud %</u>
2709	38.54907	G	100	0	0	0
40	0.5692	SLGCSLOCM	5	15	0	80
63	0.89649	HOCHMCG	40	30	0	30
378	5.37894	SLWCSLMCO	0	88	2	10
120	1.7076	G	100	0	0	0
126	0.7035238	SLWCSLGCSLMCO	5	83	2	10

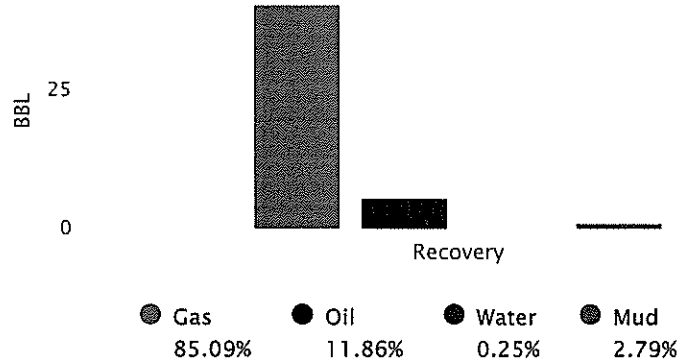
Total Recovered: 3436 ft

Total Barrels Recovered: 47.8048238

**Reversed Out**  
 NO

Initial Hydrostatic Pressure	1926	PSI
Initial Flow	115 to 228	PSI
<b>Initial Closed in Pressure</b>	<b>973</b>	<b>PSI</b>
Final Flow Pressure	243 to 323	PSI
<b>Final Closed in Pressure</b>	<b>939</b>	<b>PSI</b>
Final Hydrostatic Pressure	1925	PSI
Temperature	124	°F
Pressure Change Initial Close / Final Close	3.5	%

**Recovery at a glance**







**Company: Palomino Petroleum,  
Inc.**

**Lease: Fay #2**

SEC: 10 TWN: 16S RNG: 27W  
County: LANE  
State: Kansas  
Drilling Contractor: WW Drilling, LLC -  
Rig 4  
Elevation: 2570 GL  
Field Name: Broughton NE  
Pool: Pool Ext  
Job Number: 260

**Operation:**

Test Complete

**DATE**

October

**24**

2018

<b>DST #3</b>	<b>Formation: Lans "H- J"</b>	<b>Test Interval: 3995 - 4085'</b>	<b>Total Depth: 4085'</b>
	Time On: 08:53 10/24	Time Off: 15:55 10/24	
	Time On Bottom: 11:13 10/24	Time Off Bottom: 12:43 10/24	

**BUCKET MEASUREMENT:**

1st Open: 1 in. blow building. BOB in 1 1/2 mins.

1st Close: 3 in. blow back.

2nd Open: 1 1/2 in. blow building. BOB in 1 1/2 mins.

2nd Close: BOB blow back in 2 1/4 mins.

**REMARKS:**

Tool Sample: 0% Gas 89% Oil 1% Water 10% Mud



**Company: Palomino Petroleum, Inc.**

**Lease: Fay #2**

SEC: 10 TWN: 16S RNG: 27W  
County: LANE  
State: Kansas  
Drilling Contractor: WW Drilling, LLC - Rig 4  
Elevation: 2570 GL  
Field Name: Broughton NE  
Pool: Pool Ext  
Job Number: 260

**Operation:**  
Test Complete

**DATE**  
October  
**24**  
2018

**DST #3      Formation: Lans "H-J"      Test Interval: 3995 - 4085'      Total Depth: 4085'**  
Time On: 08:53 10/24      Time Off: 15:55 10/24  
Time On Bottom: 11:13 10/24      Time Off Bottom: 12:43 10/24

**Down Hole Makeup**

<b>Heads Up:</b> 18.67 FT	<b>Packer 1:</b> 3990 FT
<b>Drill Pipe:</b> 3864.08 FT <i>ID-3 1/2</i>	<b>Packer 2:</b> 3995 FT
<b>Weight Pipe:</b> FT <i>ID-2 7/8</i>	<b>Top Recorder:</b> 3979.42 FT
<b>Collars:</b> 117.02 FT <i>ID-2 1/4</i>	<b>Bottom Recorder:</b> 4065 FT
<b>Test Tool:</b> 33.57 FT <i>ID-3 1/2-FH</i> <i>Jars</i> <i>Safety Joint</i>	<b>Well Bore Size:</b> 7 7/8
<b>Total Anchor:</b> 90	<b>Surface Choke:</b> 1"
	<b>Bottom Choke:</b> 5/8"

**Anchor Makeup**

**Packer Sub:** 1 FT

**Perforations: (top):** 2 FT  
*4 1/2-FH*

**Change Over:** 1 FT

**Drill Pipe: (in anchor):** 64 FT  
*ID-3 1/2*

**Change Over:** 1 FT

**Perforations: (below):** 21 FT  
*4 1/2-FH*



**Company: Palomino Petroleum,  
Inc.**

**Lease: Fay #2**

SEC: 10 TWN: 16S RNG: 27W  
County: LANE  
State: Kansas  
Drilling Contractor: WW Drilling, LLC -  
Rig 4  
Elevation: 2570 GL  
Field Name: Broughton NE  
Pool: Pool Ext  
Job Number: 260

**Operation:**  
Test Complete

**DATE**  
October  
**24**  
2018

**DST #3**      **Formation: Lans "H-  
J"**      **Test Interval: 3995 -  
4085'**      **Total Depth: 4085'**  
Time On: 08:53 10/24      Time Off: 15:55 10/24  
Time On Bottom: 11:13 10/24      Time Off Bottom: 12:43 10/24

**Mud Properties**

**Mud Type:** Chemical      **Weight:** 9.0      **Viscosity:** 59      **Filtrate:** 6.4      **Chlorides:** 2,600 ppm



# Company: Palomino Petroleum, Inc.

## Lease: Fay #2

SEC: 10 TWN: 16S RNG: 27W  
County: LANE  
State: Kansas  
Drilling Contractor: WW Drilling, LLC - Rig 4  
Elevation: 2570 GL  
Field Name: Broughton NE  
Pool: Pool Ext  
Job Number: 260

**Operation:**  
Test Complete

**DATE**  
October  
**24**  
2018

**DST #2**      **Formation: Lans "H-J"**      **Test Interval: 3987 - 4085'**      **Total Depth: 4085'**  
Time On: 00:59 10/24      Time Off: 08:23 10/24  
Time On Bottom: 00:00 01/01      Time Off Bottom: 00:00 01/01

Electronic Volume Estimate:  
0'

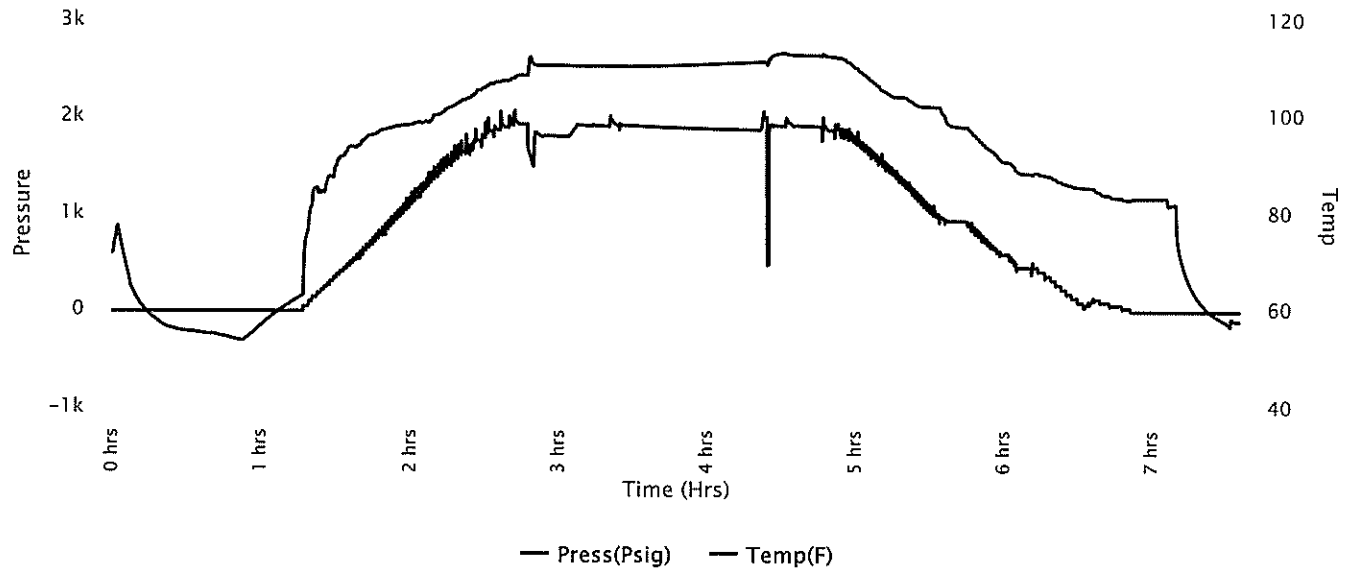
1st Open  
N/A

1st Close  
N/A

2nd Open  
N/A

2nd Close  
N/A

Inside Recorder





**Company: Palomino Petroleum, Inc.**

**Lease: Fay #2**

SEC: 10 TWN: 16S RNG: 27W  
 County: LANE  
 State: Kansas  
 Drilling Contractor: WW Drilling, LLC - Rig 4  
 Elevation: 2570 GL  
 Field Name: Broughton NE  
 Pool: Pool Ext  
 Job Number: 260

**Operation:**  
 Test Complete

**DATE**  
 October  
**24**  
 2018

**DST #2**      **Formation: Lans "H-J"**      **Test Interval: 3987 - 4085'**      **Total Depth: 4085'**  
 Time On: 00:59 10/24      Time Off: 08:23 10/24  
 Time On Bottom: 00:00 01/01      Time Off Bottom: 00:00 01/01

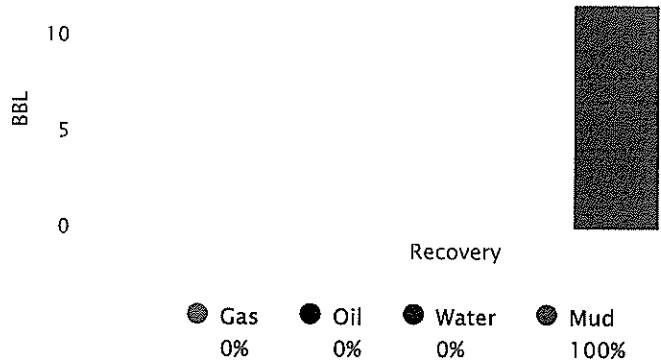
Recovered

Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
902	11.7460038	M	0	0	0	100

Total Recovered: 902 ft  
 Total Barrels Recovered: 11.7460038

**Reversed Out**  
 NO

**Recovery at a glance**



Initial Hydrostatic Pressure	1934	PSI
Initial Flow	0	PSI
<b>Initial Closed in Pressure</b>	<b>0</b>	<b>PSI</b>
Final Flow Pressure	0	PSI
<b>Final Closed in Pressure</b>	<b>0</b>	<b>PSI</b>
Final Hydrostatic Pressure	1923	PSI
Temperature	112	°F
Pressure Change Initial Close / Final Close	0.0	%



**Company: Palomino Petroleum, Inc.**

**Lease: Fay #2**

SEC: 10 TWN: 16S RNG: 27W  
County: LANE  
State: Kansas  
Drilling Contractor: WW Drilling, LLC - Rig 4  
Elevation: 2570 GL  
Field Name: Broughton NE  
Pool: Pool Ext  
Job Number: 260

**Operation:**

Test Complete

**DATE**

October

**24**

2018

<b>DST #2</b>	<b>Formation: Lans "H-J"</b>	<b>Test Interval: 3987 - 4085'</b>	<b>Total Depth: 4085'</b>
	Time On: 00:59 10/24	Time Off: 08:23 10/24	
	Time On Bottom: 00:00 01/01	Time Off Bottom: 00:00 01/01	

**BUCKET MEASUREMENT:**

**REMARKS:**

MISRUN! PACKER FAILURE!

Tool Sample: 0% Gas 0% Oil 0% Water 100% Mud



**Company: Palomino Petroleum, Inc.**

**Lease: Fay #2**

SEC: 10 TWN: 16S RNG: 27W  
County: LANE  
State: Kansas  
Drilling Contractor: WW Drilling, LLC - Rig 4  
Elevation: 2570 GL  
Field Name: Broughton NE  
Pool: Pool Ext  
Job Number: 260

**Operation:**  
Test Complete

**DATE**  
October  
**24**  
2018

**DST #2**      **Formation: Lans "H-J"**      **Test Interval: 3987 - 4085'**      **Total Depth: 4085'**  
Time On: 00:59 10/24      Time Off: 08:23 10/24  
Time On Bottom: 00:00 01/01      Time Off Bottom: 00:00 01/01

**Down Hole Makeup**

<b>Heads Up:</b> 26.67 FT	<b>Packer 1:</b> 3982 FT
<b>Drill Pipe:</b> 3864.08 FT <i>ID-3 1/2</i>	<b>Packer 2:</b> 3987 FT
<b>Weight Pipe:</b> FT <i>ID-2 7/8</i>	<b>Top Recorder:</b> 3971.42 FT
<b>Collars:</b> 117.02 FT <i>ID-2 1/4</i>	<b>Bottom Recorder:</b> 4057 FT
<b>Test Tool:</b> 33.57 FT <i>ID-3 1/2-FH</i> <i>Jars</i> <i>Safety Joint</i>	<b>Well Bore Size:</b> 7 7/8
<b>Total Anchor:</b> 98	<b>Surface Choke:</b> 1"
	<b>Bottom Choke:</b> 5/8"

Anchor Makeup

**Packer Sub:** 1 FT

**Perforations: (top):** 2 FT  
*4 1/2-FH*

**Change Over:** 1 FT

**Drill Pipe: (in anchor):** 64 FT  
*ID-3 1/2*

**Change Over:** 1 FT

**Perforations: (below):** 29 FT  
*4 1/2-FH*



**Company: Palomino Petroleum, Inc.**

**Lease: Fay #2**

SEC: 10 TWN: 16S RNG: 27W  
County: LANE  
State: Kansas  
Drilling Contractor: WW Drilling, LLC - Rig 4  
Elevation: 2570 GL  
Field Name: Broughton NE  
Pool: Pool Ext  
Job Number: 260

**Operation:**

Test Complete

**DATE**

October

**24**

2018

**DST #2      Formation: Lans "H-J"      Test Interval: 3987 - 4085'      Total Depth: 4085'**

Time On: 00:59 10/24

Time Off: 08:23 10/24

Time On Bottom: 00:00 01/01      Time Off Bottom: 00:00 01/01

### Mud Properties

**Mud Type:** Chemical

**Weight:** 9.0

**Viscosity:** 59

**Filtrate:** 6.4

**Chlorides:** 2,600 ppm





Home  
(785) 798-3400

# Andrew Stenzel Geologist

Ness City, Kansas



Cell  
(785) 798-5977

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

Well Name: Fay #2  
API: 15-101-22612-00-00  
Location: SW-NW-SW-NE Sec. 10-16S-27W (Lane County)  
License Number: 30742  
Spud Date: 10/18/18  
Surface Coordinates: 1873' FN & 2446' FEL  
Region: KANSAS  
Drilling Completed: 10/27/18

Bottom Hole  
Coordinates:  
Ground Elevation (ft): 2571  
Logged Interval (ft): 3500 To: TD  
Formation: MISSISSIPPIAN  
Type of Drilling Fluid: Mud-Co Chemical  
K.B. Elevation (ft): 2576  
Total Depth (ft): 4580

Printed by MudLog from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

### OPERATOR

Company: Palomino Petroleum, Inc.  
Address: 4924 SE 84th St  
Newton, KS 67114

### GEOLOGIST

Name: Andrew Stenzel  
Company: Petroleum Geologist  
Address: 501 S. Franklin  
Ness City, KS 67560

### Drilling Report

#### DAILY DRILLING REPORT:

10/18/18 MIRU, ran surface casing  
10/19/18 Drilling @ 240'  
10/20/18 Drilling @ 1981'  
10/21/18 Drilling @ 3069'  
10/22/18 Drilling @ 3770', DST 1  
10/23/18 Tripping in w bit after DST 1  
10/24/18 Tripping out w tool after DST 2, DST 3  
10/25/18 DST 4  
10/26/18 DST 5  
10/27/18 Tripping out for logs at 4580', ran electric logs, ran production casing

### Services

RIG: WW Drilling, Rig #4

MUD: MUDCO

LOGS: ELI Wireline: CNDL, PE, DIL, ML

### Casing Record

SURFACE Casing: Ran 5 jts new 8 5/8", 23# casing @ 217'.

PRODUCTION Casing: Ran 109 jts new 5 1/2", 14# casing set at 4576'.

### Formation Tops

Sample Tops		LogTops	
Anhy.	1996 (+580)	Anhy.	1992 (+584)
Base Anhy.	2029 (+547)	Base Anhy.	2023 (+553)
Topeka	3558 (-982)	Topeka	3555 (-979)
Heebner	3799 (-1223)	Heebner	3796 (-1220)
Toronto	3819 (-1243)	Toronto	3817 (-1241)
Lansing	3841 (-1265)	Lansing	3836 (-1260)
Muncie Cr	3988 (-1412)	Muncie Cr	3986 (-1410)
Stark Sh	4082 (-1506)	Stark Sh	4077 (-1501)
BKC	4147 (-1571)	BKC	4138 (-1562)
Marmaton	4176 (-1600)	Marmaton	4167 (-1591)
Pawnee	4275 (-1699)	Pawnee	4270 (-1694)
Ft. Scott	4333 (-1757)	Ft. Scott	4328 (-1752)
Cher. Sh.	4358 (-1782)	Cher. Sh.	4353 (-1777)
Miss.	4434 (-1858)	Miss.	4430 (-1854)
RTD	4580 (-2004)	LTD	4578 (-2002)



**Company: Palomino Petroleum, Inc.**

**Lease: Fay #2**

SEC: 10 TWN: 16S RNG: 27W  
 County: LANE  
 State: Kansas  
 Drilling Contractor: WW Drilling, LLC - Rig 4  
 Elevation: 2570 Sur  
 Field Name: Broughton Northeast  
 Pool: Pool Ext  
 Job Number: 260

**Operation:**  
 Uploading recovery & pressures

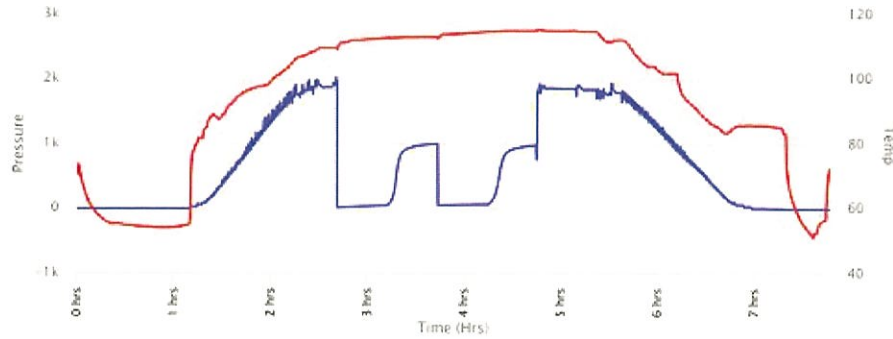
**DATE**  
 October  
**23**  
 2018

**DST #1** Formation: **Lansing E** Test Interval: **3911 - 3935'** Total Depth: **3935'**

Time On: 01:39 10/23 Time Off: 06:35 10/23  
 Time On Bottom: 01:39 10/23 Time Off Bottom: 03:39 10/23

Electronic Volume Estimate: 207'	<b>1st Open</b> Minutes: 30 Current Reading: 7" at 30 min Max Reading: 7"	<b>1st Close</b> Minutes: 30 Current Reading: 0" at 30 min Max Reading: 0"	<b>2nd Open</b> Minutes: 30 Current Reading: 5.8" at 30 min Max Reading: 5.8"	<b>2nd Close</b> Minutes: 30 Current Reading: 0" at 30 min Max Reading: 0"
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Inside Recorder



**Company: Palomino Petroleum, Inc.**

**Lease: Fay #2**

SEC: 10 TWN: 16S RNG: 27W  
 County: LANE  
 State: Kansas  
 Drilling Contractor: WW Drilling, LLC - Rig 4  
 Elevation: 2570 Sur  
 Field Name: Broughton Northeast  
 Pool: Pool Ext  
 Job Number: 260

**Operation:**  
 Uploading recovery & pressures

**DATE**  
 October  
**23**  
 2018

**DST #1** Formation: **Lansing E** Test Interval: **3911 - 3935'** Total Depth: **3935'**

Time On: 01:39 10/23 Time Off: 06:35 10/23  
 Time On Bottom: 01:39 10/23 Time Off Bottom: 03:39 10/23

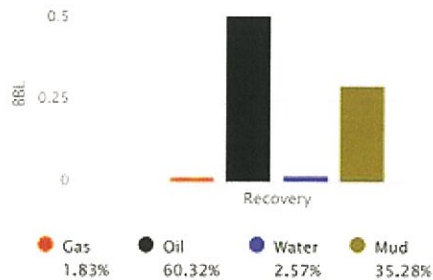
Recovered		Description of Fluid	Gas %	Oil %	Water %	Mud %
Foot	BBLs					
35	0.3489038	O	0	100	0	0
38	0.18696	SLOCM	0	15	0	85
63	0.30996	SLGCSLWCHOCM	5	43	7	45

Total Recovered: 136 ft  
 Total Barrels Recovered: 0.8458238

Reversed Out  
 NO

Initial Hydrostatic Pressure	1870	PSI
Initial Flow	16 to 46	PSI
Initial Closed in Pressure	1000	PSI
Final Flow Pressure	53 to 65	PSI
Final Closed in Pressure	977	PSI
Final Hydrostatic Pressure	1858	PSI
Temperature	115	°F
Pressure Change Initial Close / Final Close	2.3	%

Recovery at a glance





**Company: Palomino Petroleum, Inc.**

**Lease: Fay #2**

SEC: 10 TWN: 16S RNG: 27W  
 County: LANE  
 State: Kansas  
 Drilling Contractor: WW Drilling, LLC - Rig 4  
 Elevation: 2570 GL  
 Field Name: Broughton NE  
 Pool: Pool Ext  
 Job Number: 260

**Operation:**  
 Uploading recovery & pressures

**DATE**  
 October  
 24  
 2018

**DST #2**    **Formation: Lansing H,I,J**    **Test Interval: 3987 - 4085'**    **Total Depth: 4085'**  
 Time On: 00:59 10/24    Time Off: 08:23 10/24  
 Time On Bottom: 00:00 01/01    Time Off Bottom: 00:00 01/01

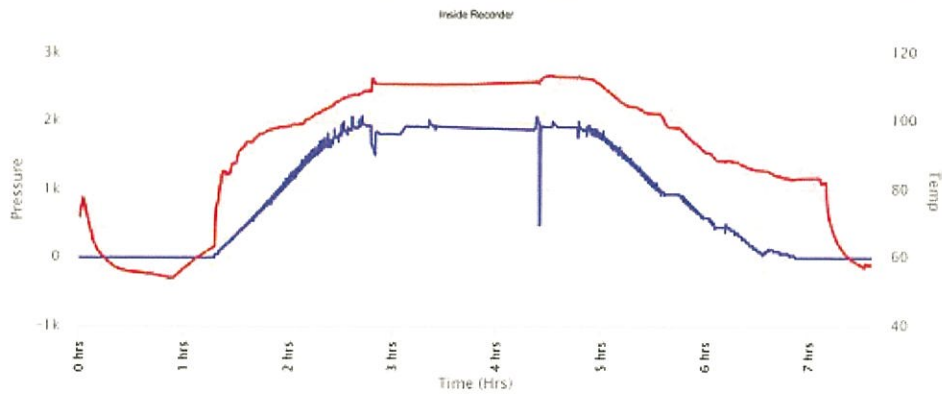
Electronic Volume Estimate:  
 0'

1st Open  
 N/A

1st Close  
 N/A

2nd Open  
 N/A

2nd Close  
 N/A



**Company: Palomino Petroleum, Inc.**

**Lease: Fay #2**

SEC: 10 TWN: 16S RNG: 27W  
 County: LANE  
 State: Kansas  
 Drilling Contractor: WW Drilling, LLC - Rig 4  
 Elevation: 2570 GL  
 Field Name: Broughton NE  
 Pool: Pool Ext  
 Job Number: 260

**Operation:**  
 Uploading recovery & pressures

**DATE**  
 October  
 24  
 2018

**DST #2**    **Formation: Lansing H,I,J**    **Test Interval: 3987 - 4085'**    **Total Depth: 4085'**  
 Time On: 00:59 10/24    Time Off: 08:23 10/24  
 Time On Bottom: 00:00 01/01    Time Off Bottom: 00:00 01/01

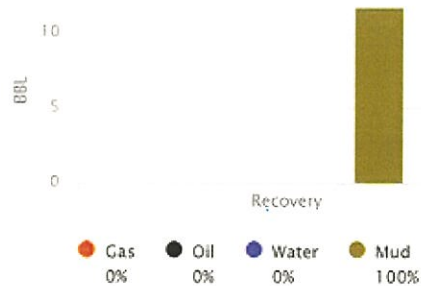
Recovered

Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
902	11.7460038	M	0	0	0	100

Total Recovered: 902 ft  
 Total Barrels Recovered: 11.7460038

Reversed Out  
 NO

**Recovery at a glance**



Initial Hydrostatic Pressure	1934	PSI
Initial Flow	0	PSI
Initial Closed in Pressure	0	PSI
Final Flow Pressure	0	PSI
Final Closed in Pressure	0	PSI
Final Hydrostatic Pressure	1923	PSI
Temperature	112	°F
Pressure Change Initial Close / Final Close	0.0	%



**Company: Palomino Petroleum, Inc.**

**Lease: Fay #2**

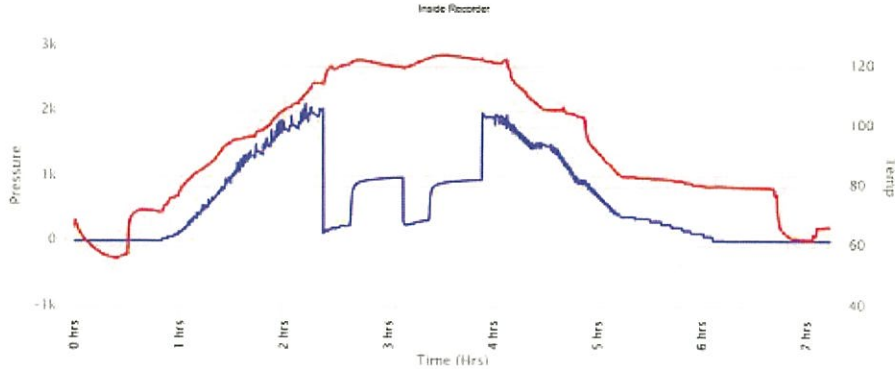
SEC: 10 TWN: 16S RNG: 27W  
 County: LANE  
 State: Kansas  
 Drilling Contractor: WW Drilling, LLC - Rig 4  
 Elevation: 2570 GL  
 Field Name: Broughton NE  
 Pool: Pool Ext  
 Job Number: 260

**Operation:**  
 Uploading recovery & pressures

**DATE**  
 October  
**24**  
 2018

**DST #3** Formation: Lansing H,I,J Test Interval: 3995 - 4085' Total Depth: 4085'  
 Time On: 08:53 10/24 Time Off: 15:55 10/24  
 Time On Bottom: 11:13 10/24 Time Off Bottom: 12:43 10/24

Electronic Volume Estimate: 3049'	<b>1st Open</b> Minutes: 15 Current Reading: 149.5" at 15 min Max Reading: 149.5"	<b>1st Close</b> Minutes: 30 Current Reading: 2.8" at 30 min Max Reading: 3"	<b>2nd Open</b> Minutes: 15 Current Reading: 139" at 15 min Max Reading: 139"	<b>2nd Close</b> Minutes: 30 Current Reading: 131" at 30 min Max Reading: 131"
--------------------------------------	---	--	---	--



**Company: Palomino Petroleum, Inc.**

**Lease: Fay #2**

SEC: 10 TWN: 16S RNG: 27W  
 County: LANE  
 State: Kansas  
 Drilling Contractor: WW Drilling, LLC - Rig 4  
 Elevation: 2570 GL  
 Field Name: Broughton NE  
 Pool: Pool Ext  
 Job Number: 260

**Operation:**  
 Uploading recovery & pressures

**DATE**  
 October  
**24**  
 2018

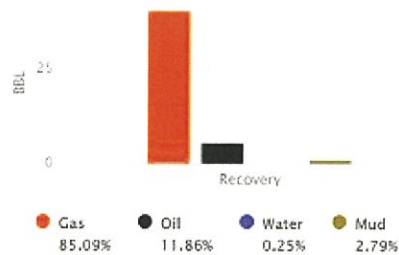
**DST #3** Formation: Lansing H,I,J Test Interval: 3995 - 4085' Total Depth: 4085'  
 Time On: 08:53 10/24 Time Off: 15:55 10/24  
 Time On Bottom: 11:13 10/24 Time Off Bottom: 12:43 10/24

Recovered		Description of Fluid	Gas %	Oil %	Water %	Mud %
Feet	BBLs					
2709	38.54907	G	100	0	0	0
40	0.5692	SLGCSLOCM	5	15	0	80
63	0.89649	HMCHO CG	40	30	0	30
378	5.37894	SLWC SLMCO	0	88	2	10
120	1.7076	G	100	0	0	0
126	0.7035238	SLWC SLGCSLMCO	5	83	2	10

Total Recovered: 3436 ft  
 Total Barrels Recovered: 47.8048238

Reversed Out  
 NO

Recovery at a glance



Initial Hydrostatic Pressure	1926	PSI
Initial Flow	115 to 228	PSI
Initial Closed in Pressure	973	PSI
Final Flow Pressure	243 to 323	PSI
Final Closed in Pressure	939	PSI
Final Hydrostatic Pressure	1925	PSI
Temperature	124	°F
Pressure Change Initial Close / Final Close	3.5	%



**Company: Palomino Petroleum, Inc.**

SEC: 10 TWN: 16S RNG: 27W  
 County: LANE  
 State: Kansas  
 Drilling Contractor: WW Drilling, LLC - Rig 4  
 Elevation: 2570 GL  
 Field Name: Broughton NE  
 Pool: Pool Ext  
 Job Number: 260

**Operation:**

Uploading recovery & pressures

**Lease: Fay #2**

**DATE**

October  
**25**  
 2018

**DST #4 Formation: Lansing K. L Test Interval: 4089 - 4150' Total Depth: 4150'**

Time On: 02:21 10/25 Time Off: 11:16 10/25  
 Time On Bottom: 06:33 10/25 Time Off Bottom: 08:33 10/25

Electronic Volume Estimate:  
 184'

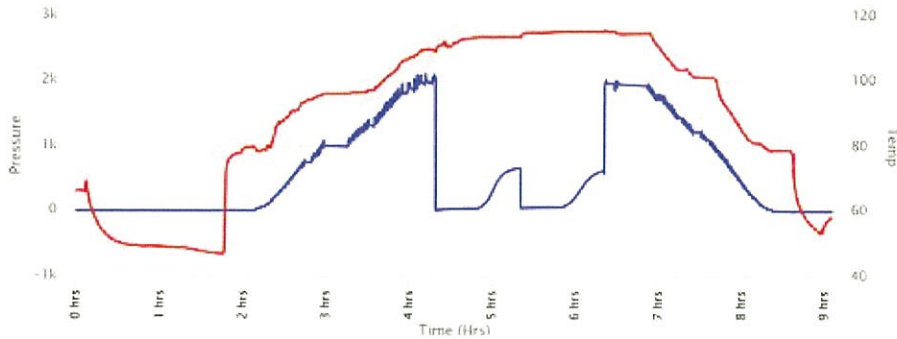
**1st Open**  
 Minutes: 30  
 Current Reading:  
 5.1" at 30 min  
 Max Reading: 5.1"

**1st Close**  
 Minutes: 30  
 Current Reading:  
 0" at 30 min  
 Max Reading: 0"

**2nd Open**  
 Minutes: 30  
 Current Reading:  
 4.9" at 30 min  
 Max Reading: 4.9"

**2nd Close**  
 Minutes: 30  
 Current Reading:  
 0" at 30 min  
 Max Reading: 0"

Inside Recorder



**Company: Palomino Petroleum, Inc.**

SEC: 10 TWN: 16S RNG: 27W  
 County: LANE  
 State: Kansas  
 Drilling Contractor: WW Drilling, LLC - Rig 4  
 Elevation: 2570 GL  
 Field Name: Broughton NE  
 Pool: Pool Ext  
 Job Number: 260

**Operation:**

Uploading recovery & pressures

**Lease: Fay #2**

**DATE**

October  
**25**  
 2018

**DST #4 Formation: Lansing K. L Test Interval: 4089 - 4150' Total Depth: 4150'**

Time On: 02:21 10/25 Time Off: 11:16 10/25  
 Time On Bottom: 06:33 10/25 Time Off Bottom: 08:33 10/25

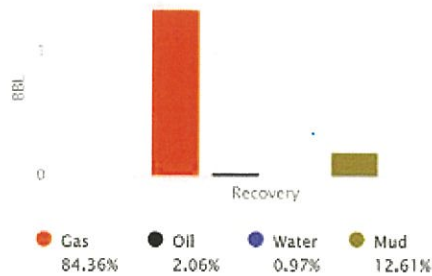
**Recovered**

Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
116	1.2408538	G	100	0	0	0
10	0.0492	SLGCSLOCM	1	4	0	95
63	0.30996	SLWCSLOCHGCM	35	10	5	50

Total Recovered: 189 ft  
 Total Barrels Recovered: 1.6000138

Reversed Out  
 NO

**Recovery at a glance**



Initial Hydrostatic Pressure	1974	PSI
Initial Flow	13 to 39	PSI
Initial Closed in Pressure	660	PSI
Final Flow Pressure	43 to 58	PSI
Final Closed in Pressure	617	PSI
Final Hydrostatic Pressure	1971	PSI
Temperature	116	°F
Pressure Change Initial Close / Final Close	6.5	%



**Company: Palomino Petroleum, Inc.**  
**Lease: Fay #2**

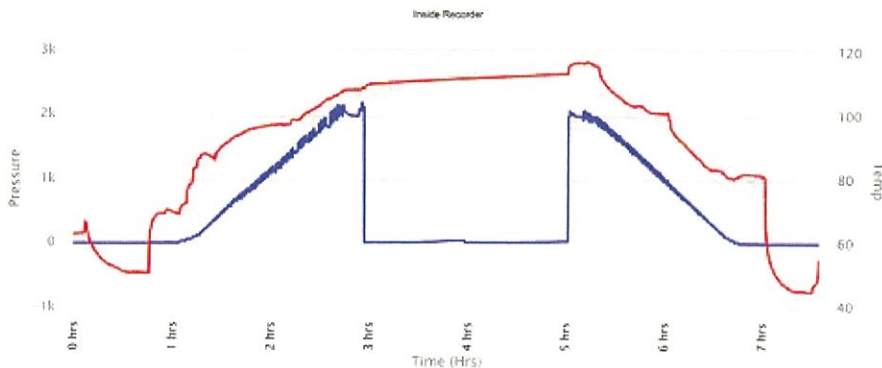
SEC: 10 TWN: 16S RNG: 27W  
 County: LANE  
 State: Kansas  
 Drilling Contractor: WW Drilling, LLC - Rig 4  
 Elevation: 2570 GL  
 Field Name: Broughton NE  
 Pool: Pool Ext  
 Job Number: 260

**Operation:**  
 Uploading recovery & pressures

**DATE**  
 October  
**25**  
 2018

**DST #5**      **Formation: Pleasanton, Marmaton**      **Test Interval: 4141 - 4260'**      **Total Depth: 4260'**  
 Time On: 21:59 10/25      Time Off: 05:21 10/26  
 Time On Bottom: 00:52 10/26      Time Off Bottom: 02:52 10/26

Electronic Volume Estimate: 25'	<b>1st Open</b> Minutes: 30 Current Reading: .7" at 30 min Max Reading: .8"	<b>1st Close</b> Minutes: 30 Current Reading: 0" at 30 min Max Reading: 0"	<b>2nd Open</b> Minutes: 30 Current Reading: 0" at 30 min Max Reading: 0"	<b>2nd Close</b> Minutes: 30 Current Reading: 0" at 30 min Max Reading: 0"
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**Company: Palomino Petroleum, Inc.**  
**Lease: Fay #2**

SEC: 10 TWN: 16S RNG: 27W  
 County: LANE  
 State: Kansas  
 Drilling Contractor: WW Drilling, LLC - Rig 4  
 Elevation: 2570 GL  
 Field Name: Broughton NE  
 Pool: Pool Ext  
 Job Number: 260

**Operation:**  
 Uploading recovery & pressures

**DATE**  
 October  
**25**  
 2018

**DST #5**      **Formation: Pleasanton, Marmaton**      **Test Interval: 4141 - 4260'**      **Total Depth: 4260'**  
 Time On: 21:59 10/25      Time Off: 05:21 10/26  
 Time On Bottom: 00:52 10/26      Time Off Bottom: 02:52 10/26

Recovered

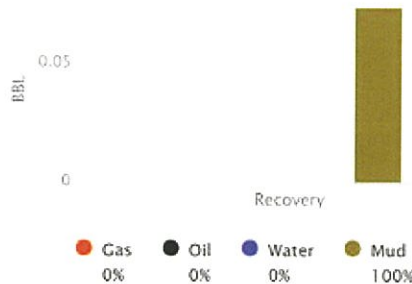
Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
15	0.0738	M	0	0	0	100

Total Recovered: 15 ft  
 Total Barrels Recovered: 0.0738

Reversed Out  
 NO

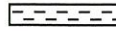



**Recovery at a glance**





Initial Hydrostatic Pressure	1988	PSI
Initial Flow	14 to 18	PSI
<b>Initial Closed in Pressure</b>	<b>53</b>	<b>PSI</b>
Final Flow Pressure	17 to 19	PSI
<b>Final Closed in Pressure</b>	<b>36</b>	<b>PSI</b>
Final Hydrostatic Pressure	1986	PSI
Temperature	114	°F
Pressure Change Initial Close / Final Close	32.9	%



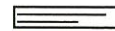

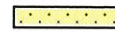
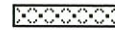
**ROCK TYPES**

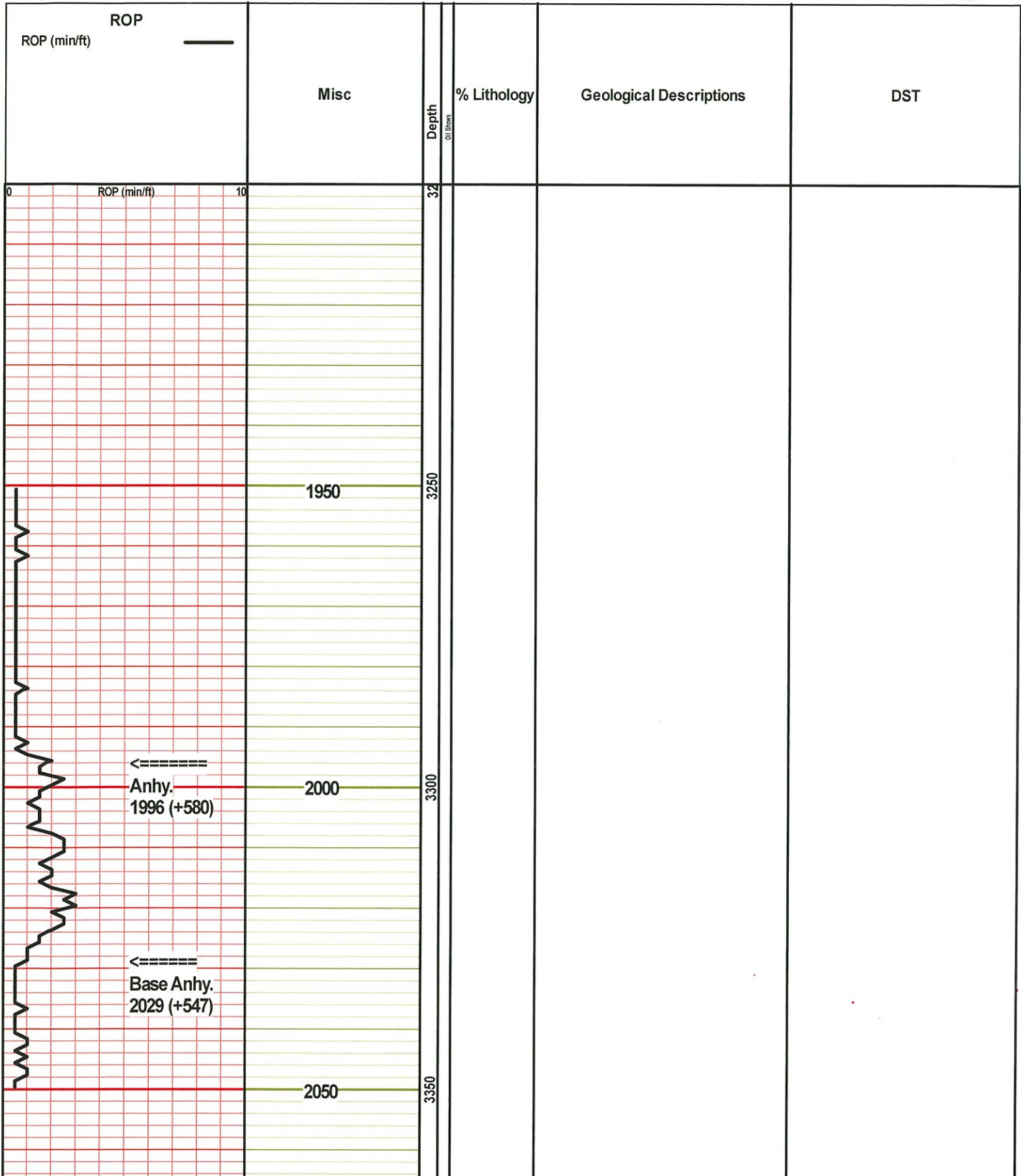
-  Anhy
-  Bent
-  Brec
-  Cht

-  Clyst
-  Carb shale
-  Congl
-  Dol

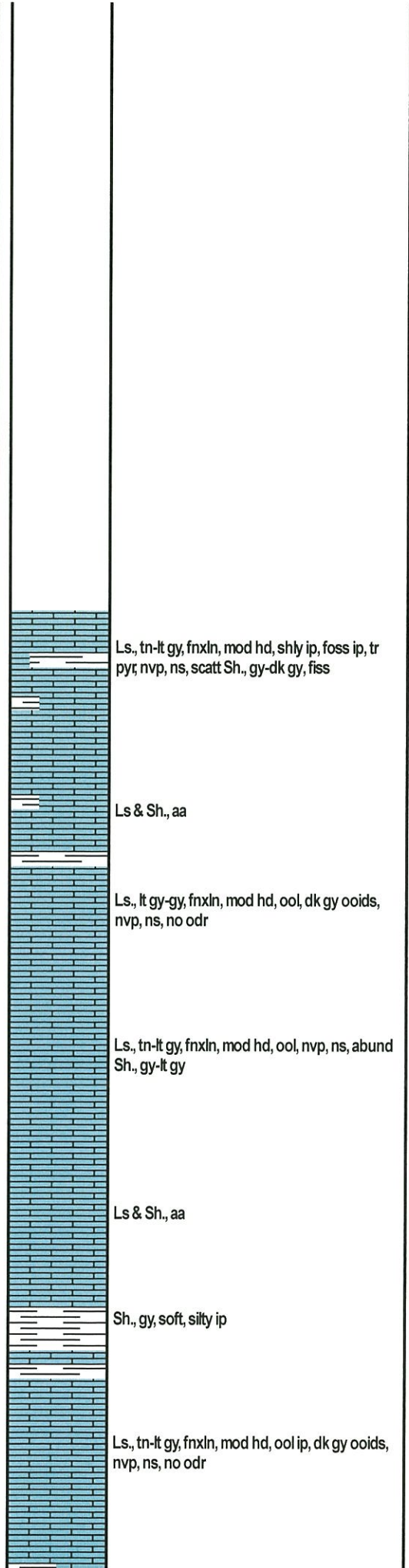
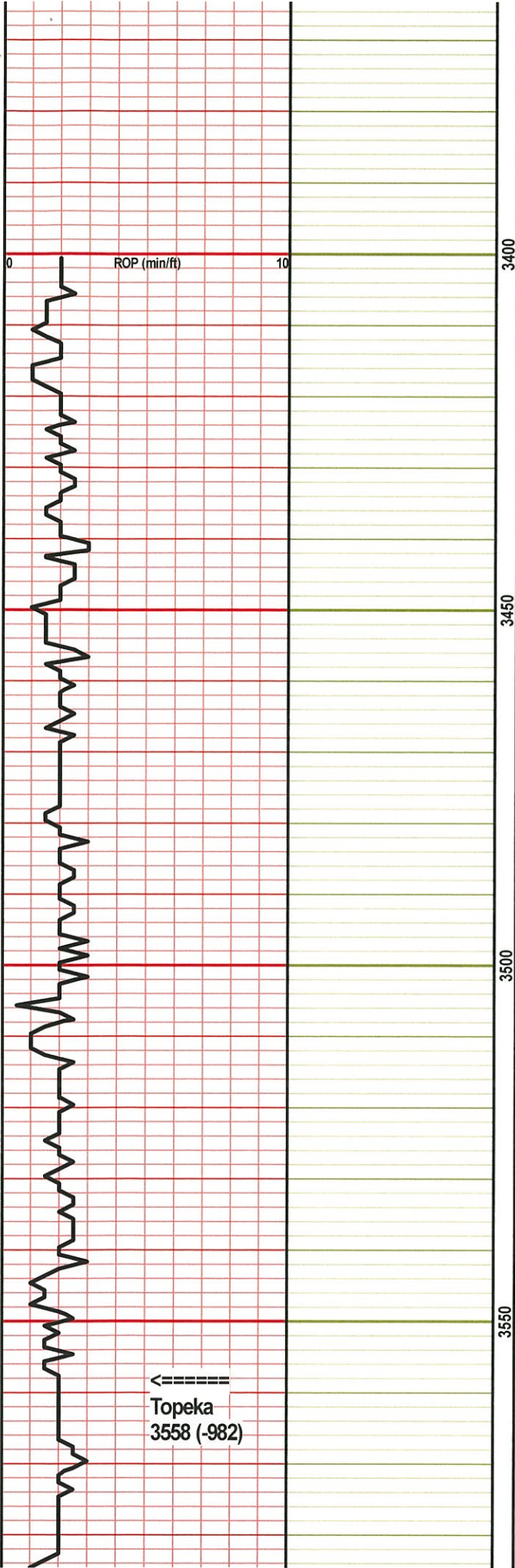
-  Gyp
-  Igne
-  Lmst
-  Meta

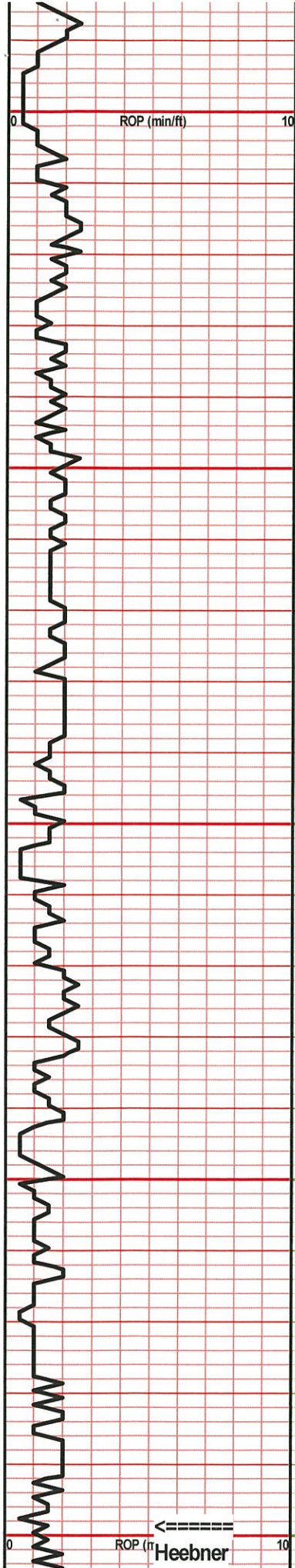
-  Mrlst
-  Salt
-  Shale
-  Shcol

-  Shgy
-  Sltst
-  Ss
-  Till

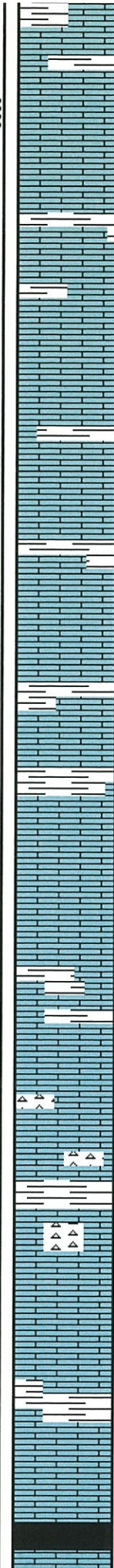








3600  
3650  
3700  
3750  
3800



Ls., cm-tn-gy, fn-vfnxn, mod hd, dns, ool ip, nvp, ns, scatt Sh., gy-bm

Ls., cm-tn, fnxn, sli fri-mod hd, chlky ip, foss, few pcs w prfoss & intrxn por, ns, no odr, scatt Sh., gy

Ls., cm-tn, fnxn, sli fri-soft, most vy chlky, rest foss, nvp, ns, scatt Sh., gy-bm-lt gm

Ls., gy-mottld bm, fnxn, soft, foss, ool, chlky ip, prfoss por, ns, no odr

Ls., aa, Sh., gy-lt gm, soft

Ls., cm, fnxn, soft, vy chlky, foss ip, nvp, ns

Ls., cm-gy, fnxn, soft, chlky ip, few pcs w pr-fr intrxn & rare pr vug por, ns, odr, abund Sh., gy, silty

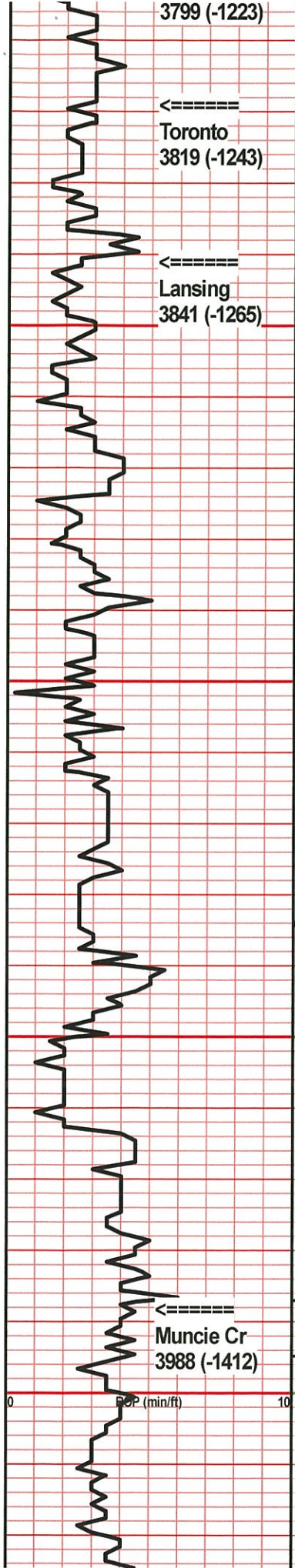
Ls., cm-tn, fnxn, mod hd-sli fri, chlky ip, foss, fr intrxn & rare foss por, ns, no odr, abund Sh., gy-gm, scatt Chrt., cm, sli weath ip, pyr ip, nvp, ns

Ls. tn, fnxn, mod hd-sli fri, ool, foss, some w fr introol & foss por, ns, no odr, scatt Chrt., aa

Ls., cm-tn, fnxn, soft-mod hd ip, most vy chlky, rest foss/ool, prfoss por ip, ns, no odr, scatt Sh., gy

Sh., blk, carb

Heebner



3799 (-1223)

← Toronto 3819 (-1243)

← Lansing 3841 (-1265)

Mud @ 3877  
Wt. 9.0  
Vis. 60+  
Filtrate 6.0  
Chlor 2000  
LCM 2#

DST 1

Pipe Strap:  
4.82' short, no  
correction  
Dev. Survey:  
3/4

cfs 3935

Mud @ 3892'  
Wt. 9.0  
Vis. 59  
Filtrate 6.4  
Chlor 2600  
LCM 2#

DST 2

DST 3

cfs 3985

← Muncie Cr 3988 (-1412)

3850

3900

3950

4000

Ls., cm-tn, fnxn, mod hd, foss ip, chky ip, nvp, ns, abund Sh., bm-lt gm

Ls., cm, fn-vfnxn, mod hd, few pcs w priso vug por, ns, no odr, scatt Sh., gy

Ls., cm, fnxn, mod hd, dns, foss ip, tr rexln, nvp, ns, scatt Chrt, wht, shp

Sh., gy-dk gy, Ls., aa

Ls., cm-lt gy, fn-vfnxn, mod hd, foss ip, chky ip, nvp, ns, scatt Chrt, tn, sli weath ip

Ls., tn-lt gy, fn-vfnxn, mod hd, dns, nvp, ns, scatt Chrt., aa

Ls., cm-tn, fnxn, mod hd, tr rexln, foss ip, few pcs w pr intrxn & iso vug por, VSSFO, couple oil drops, tr bm stn, vy wk cup odr, scatt Sh., gy

Ls., cm, fnxn, mod hd-sli fri, ool ip, some w pr-rare fr introol por, some rexln in por, S-FSFO, vy lt bm spot stn, wk cup odr

Ls., cm, fnxn, mod hd, sli chky ip, tr pr vug por, shly infill, tr quest bm stn, NSFO, no det odr, scatt Sh., gy, pyr ip

Ls., tn, fnxn, mod hd, vy chky ip, ool, occ pr ooc por, ns, no stn or odr

Ls., tn-lt gy, vfnxn, mod hd-hd, brittle, tr frags w shly infill, nvp, ns, no odr, scatt Sh., gy-bm

Sh., blk, carb

Ls., tn, fnxn, sli fri-mod hd ip, ool ip, vy pr-pr intrxn & occ pr introol por, SSFO, lt bm spot-rare sub sat stn, wk cup odr

Ls., cm-tn, fnxn, sli fri-mod hd, many pcs dns w nvp, some ool w pr introol por, fr amt rexln, SSFO, vy lt bm spot stn, wk cup odr, scatt Sh., lt gy-bm

Ls., cm-lt gy, vfnxn mod hd-hd, brittle, dns, couple pcs wvy priso vug por, VSSFO, tr vy lt bm stn. no det odr, scatt Sh., aa

**DST #1 3911-3935 (LKC E)**  
30-30-30-30  
IF: Built to 7"  
IS: No blow  
FF: Built to 5.8"  
FS: No blow

Recovery:  
35' CO (100%O)  
38' SOCM (15%O, 85%M)  
63' SGWHOCM (5%G, 43%O, 7%W, 45%M)

136' TF

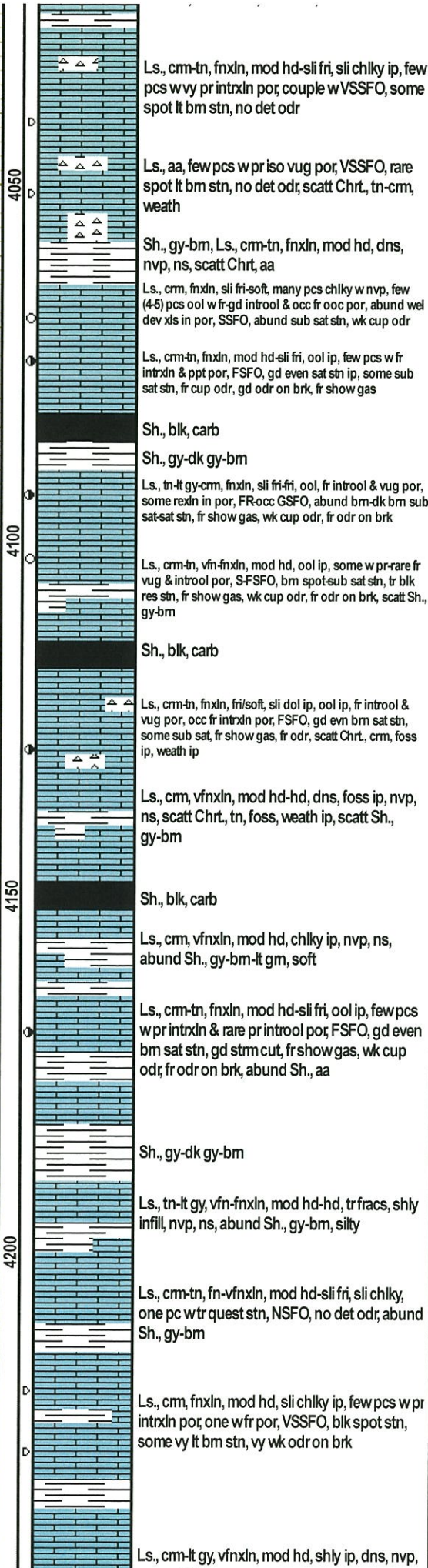
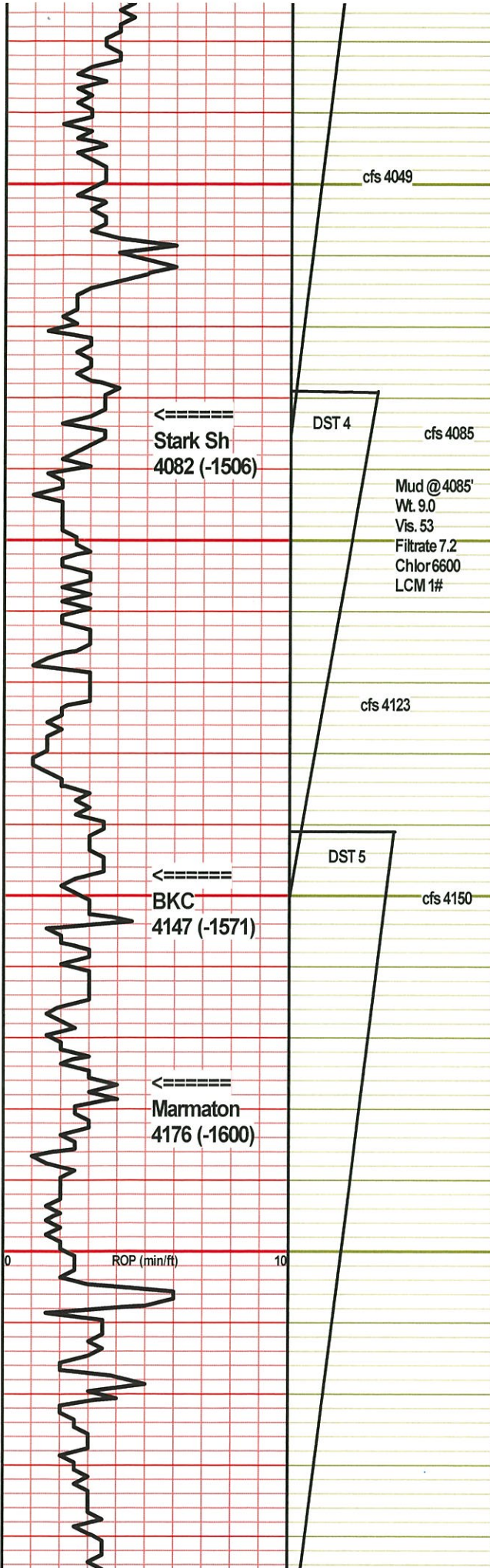
FP: 16-46; 53-65  
SIP: 1000-977  
HP: 1870-1858

BHT: 115  
Gravity: 33  
Chlor: —

**DST #2 3987-4085**  
**Misrun, packer failure**

**DST #3 3995-4085 (LKC H, I, J)**  
15-30-15-30  
IF: BOB in 1 1/2 min, built to 149.5"  
IS: Built to 3", died back to 2.8"  
FF: BOB in 1 1/2 min, built to 139"  
FS: BOB in 6 min, built to 131"

Recovery:  
2709' GIP  
40' SGOCM (5%G, 15%O, 80%M)  
63' HMOCG (40%G, 30%O, 30%M)



378' SWMCO (88%O, 2%W, 10%M)  
120' GIP  
126' SWGMCO (5%G, 83%O, 2%W, 10%M)  
607' TF

FP: 115-228; 243-323  
SIP: 973-939  
HP: 1926-1925

BHT: 124  
Gravity:  
Chlor: ---

**DST #4 4079-4150 (LKC K, L)**

30-30-30-30  
IF: Built to 5.1"  
IS: No blow  
FF: Built to 4.9"  
FS: No blow

Recovery:  
116' GIP  
10' SGOCM (1%G, 4%O, 95%M)  
63' SWOHGCM (35%G, 10%O, 5%W, 50%M)  
73' TF

FP: 13-39; 43-58  
SIP: 660-617  
HP: 1974-1971

BHT: 116  
Gravity: -  
Chlor: ---

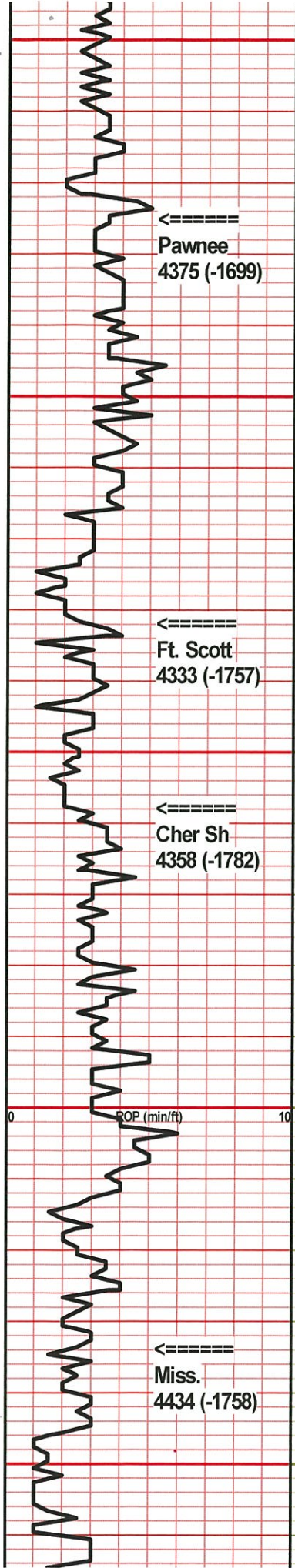
**DST #5 4141-4260 (Pleasanton, Marmaton)**

30-30-30-30  
IF: Built to .7"  
IS: No blow  
FF: No blow  
FS: No blow

Recovery:  
15' Mud (100%M)

FP: 14-18; 17-19  
SIP: 53-36  
HP: 1988-1986

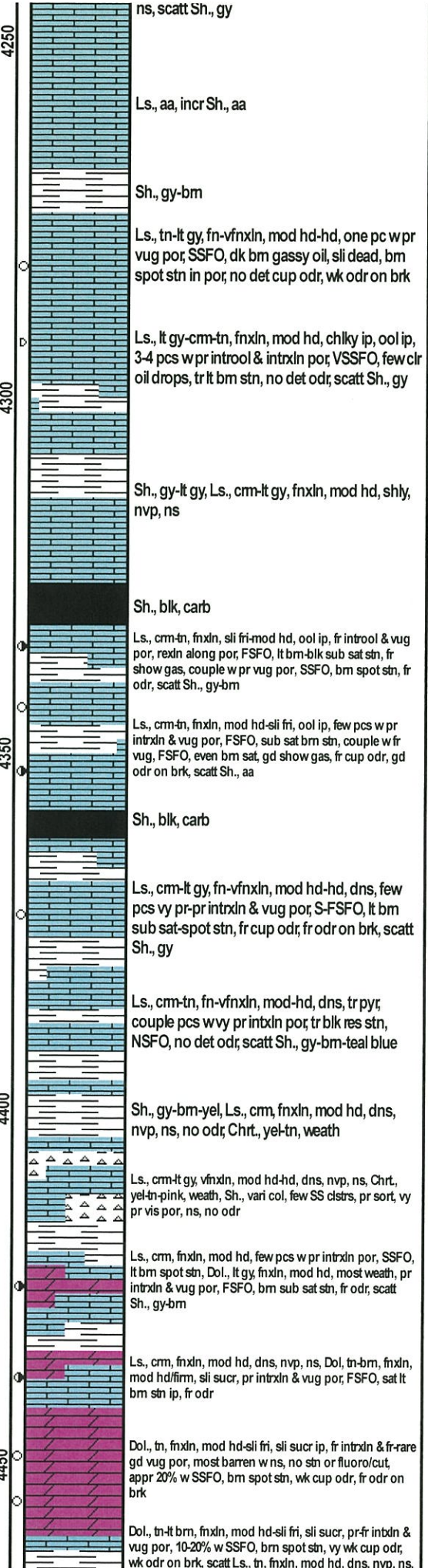
BHT:  
Gravity: -  
Chlor: ---

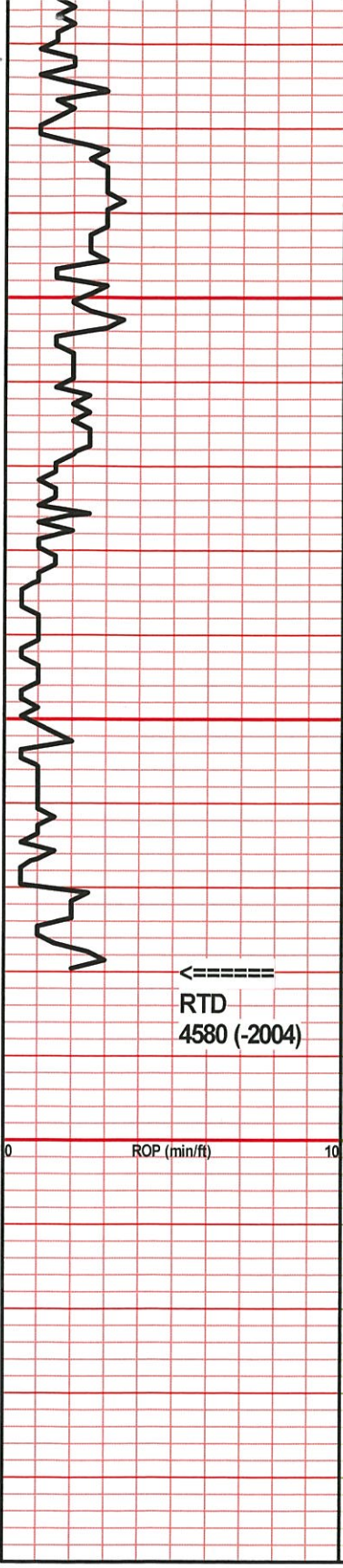


cfs 4260

Mud @ 4318'  
Wt. 9.2  
Vis. 52  
Filtrate 6.4  
Chlor 6000  
LCM 1#

cfs 4462





cfs 4474

4500  
4550  
4600  
50

←  
RTD  
4580 (-2004)

ROP (min/ft)

0 10



scatt Sh., gy-bm  
 Dol., tn, fnxn, mod hd-hd, pr-occ fr vug & pr intrxn por, few pcs w SSFO, spot bm stn, vy wk odr, scatt Sh., gy  
 Dol., tn, fn-vfnxn, hd, vy pr intrxn & occ pr vug por, ns, no odr, abund Ls., cm, fnxn, mod hd, ool ip, chiky ip, nvp, ns  
 Dol., lt gy, fnxn, mod hd/fim, pr vug por, tr blk stn in a couple pcs, NSFO, no det odr, abund Ls., aa  
 Dol., tn-lt gy, fnxn, mod hd-hd, pr intrxn por, ns, no odr, scatt Ls., cm, fnxn, mod hd-sli fri, chiky ip, nvp, ns  
 Dol., aa, scatt Chrt, wht-clr, weath ip, scatt Sh., gy-bm  
 Sh., gy-bm-lt gm, Dol., aa