KOLAR Document ID: 1462228

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 # 30742
Name: Palomino Petroleum, Inc.
Address 1: 4924 SE 84TH ST
Address 2:
City: NEWTON State: KS Zip: 67114 + 8827
Contact Person: Klee Robert Watchous
Phone: (316) 799-1000
CONTRACTOR: License # 33575
Name: WW Drilling, LLC
Wellsite Geologist: Eli J. Felts
Purchaser: CHS McPherson Refinery, Inc.

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 #:

02/23/2019 Spud Date or Recompletion Date
03/02/2019 Date Reached TD
03/18/2019 Completion Date or Recompletion Date

API No.: 15-009-26252-00-00
Spot Description:
NE - NW - SW - SE Sec. 20 Twp. 16 S. R. 12 ☐ East ☑ West
1150 Feet from ☐ North / ☑ South Line of Section
2008 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: Barton
Lease Name: CHRISTIANS Well #: 3
Field Name:
Producing Formation: Arbuckle
Elevation: Ground: 1921 Kelly Bushing: 1932
Total Vertical Depth: 3520 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 413 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: 0 ppm Fluid volume: 0 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: 06/12/2019
☐ **Confidential Release Date:** 06/11/2021
☐ **Wireline Log Received** ☑ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** Karen Ritter **Date:** 06/12/2019

Page Two

Operator Name: Palomino Petroleum, Inc. Lease Name: CHRISTIANS Well #: 3

Sec. 20 Twp. 16 S. R. 12 ☐ East ☑ West County: Barton

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: Attached

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

Name: Attached Top: Attached Datum: Attached

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	20	413	80/20	275	2% gel, 3% c.c.
Production	7.875	5.500	17	3507	SMD/EA-2	195	2% gel, 3% c.c.

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: 03/23/2019

Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	43		0		

DISPOSITION OF GAS: ☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*

METHOD OF COMPLETION: ☐ Open Hole ☑ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*

PRODUCTION INTERVAL:

Top	Bottom
3378	3384

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)*
4	3378	3384			

TUBING RECORD: Size: 2.875 Set At: 3491 Packer At:

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

Form	ACO1 - Well Completion
Operator	Palomino Petroleum, Inc.
Well Name	CHRISTIANS 3
Doc ID	1462228

All Electric Logs Run

Borehole Compensated Sonic
Dual Receiver Cement Bond
Dual Induction
Litho Density Neutron
Micro Resistivity

Form	ACO1 - Well Completion
Operator	Palomino Petroleum, Inc.
Well Name	CHRISTIANS 3
Doc ID	1462228

Tops

Name	Top	Datum
Anhy.	838	(+1094)
Base Anhy.	864	(+1068)
Howard	2707	(- 775)
Topeka	2744	(- 812)
Heebner	3022	(-1090)
Toronto	3038	(-1106)
Douglas	3048	(-1116)
Brown Lime	3108	(-1176)
Lansing	3121	(-1189)
BKC	3370	(-1438)
Arbuckle	3377	(-1445)
LTD	3520	(-1588)

Form	ACO1 - Well Completion
Operator	Palomino Petroleum, Inc.
Well Name	CHRISTIANS 3
Doc ID	1462228

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	20	413	80/20	275	2% gel, 3% c.c.
Production	7.875	5.500	17	3507	SMD/EA-2	195	2% gel, 3% c.c.

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

Invoice

DATE	INVOICE #
3/2/2019	27485

BILL TO

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

RECEIVED
MAR 07 2019

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#3	Christians	Barton	WW Drlg Rig #14	Oil	Development	Cement Long Str...	Jonathan

PRICE REF.	DESCRIPTION	QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way	60	Miles	5.00	300.00
578D-L	Pump Charge - Long String	1	Job	1,300.00	1,300.00
290	D-Air	4	Gallon(s)	42.00	168.00T
281	Mud Flush	500	Gallon(s)	1.50	750.00T
221	Liquid KCL (Clayfix)	4	Gallon(s)	25.00	100.00T
403-5	5 1/2" Cement Basket	2	Each	275.00	550.00T
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	8	Each	85.00	680.00T
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	550	Lb(s)	0.20	110.00T
285	CFR-1	50	Lb(s)	4.50	225.00T
276	Flocele	50	Lb(s)	2.50	125.00T
581D	Service Charge Cement	225	Sacks	1.75	393.75
583D	Drayage	687.75	Ton Miles	0.85	584.59
	Subtotal				9,567.59
	Sales Tax Barton County			7.50%	524.19

We Appreciate Your Business!

Total $10,091.78

SWIFT Services, Inc.

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

TICKET 27485

PAGE 1 OF 2

SERVICE LOCATIONS	WELL/PROJECT NO.	LEASE	COUNTY/PARISH	STATE	CITY	DATE	OWNER
1. Hays, KS	#3	Christians	Barton	KS		03/02/19	
2. Ness City, KS	TICKET TYPE ☑ SERVICE ☐ SALES	CONTRACTOR WW Drilling	RIG NAME/NO. #14	SHIPPED VIA CT	DELIVERED TO Location	ORDER NO.	
3.	WELL TYPE Oil	WELL CATEGORY New	JOB PURPOSE Cement Long String		WELL PERMIT NO.	WELL LOCATION	
4. REFERRAL LOCATION	INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING LOC	ACCT	DF	DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
575		1			MILEAGE #113	60	mi			5 00	300 00
578		1			Pump Charge - Long String	1	EA			1300 00	1300 00
290		1			D-Air	4	gal			42 00	168 00
281		1			Mud Flush	500	gal			1 50	750 00
221		1			Liquid KCL	4	gal			25 ~~00~~ 00	100 00
403		1			Cement Basket	2	EA	5½"		275 00	550 00
406		1			Latch Down Plug & Baffle	1	EA			250 00	250 00
407		1			Insert Float Shoe w/ Auto fill	1	EA			325 00	325 00
409		1			Turbolizer	8	EA			85 00	680 00
419		1			Rotating Head Rental	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

X Rick L Schreiber

DATE SIGNED | 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	UN-DECIDED	DIS-AGREE
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?			
WE UNDERSTOOD AND MET YOUR NEEDS?			
OUR SERVICE WAS PERFORMED WITHOUT DELAY?			
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?			

ARE YOU SATISFIED WITH OUR SERVICE? ☐ YES ☐ NO

☐ CUSTOMER DID NOT WISH TO RESPOND

Page 1 ~~PAGE TOTAL~~	4623 00
Page 2	4944 59
Subtotal	9567 59
Barton TAX 7.5%	524 19
TOTAL	10,091 78

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

SWIFT OPERATOR Tom Hayes | APPROVAL

Thank You!

SWIFT Services, Inc.

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

TICKET CONTINUATION

TICKET No. 27485

CUSTOMER: Palomino Petroleum | WELL: Christians #3 | DATE: 03/02/19 | PAGE 2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING LOC	ACCT	DF	TIME	DESCRIPTION	QTY	U/M	QTY	U/M	UNIT PRICE	AMOUNT
330		2				Swift Multi-Density Standard	125	SKS			16 25	2031 25
325		2				Standard Cement	100	SKS			13 00	1300 00
284		2				Calseal	5	SKS			35 00	175 00
283		2				Salt	550	lbs			0 20	110 00
285		2				CFR-1	50	lbs			4 50	225 00
276		2				Flocele	50	lbs			2 50	125 00
581		2				SERVICE CHARGE Cement	~~CUBIC FEET~~ 225 SKS				1 75	393 75
583		2				MILEAGE CHARGE / TOTAL WEIGHT 22925 / LOADED MILES 60	TON MILES 687.75				0 85	584 59
											CONTINUATION TOTAL	4944 59

JOB LOG

SWIFT Services, Inc.

DATE 03/02/19 | PAGE NO. 1

CUSTOMER: Palomino Petroleum | WELL NO.: #3 | LEASE: Christians | JOB TYPE: Long String | TICKET NO.: 27485

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
	0620							On location w/ Float Equipment
								Rig Changing Over
								5½" x 17#
								RTD - 3520'
								LTD - 3520'
								Total Pipe - 3506.39', 85 Jts
								Shoe Jt - 29.29'
								Baffle Plate - 3477.1'
								Baskets - 3, 6
								Turbos - 1, 2, 3, 5, 8, 11, 15, 19
								Jts out - 85, 87, 88, 89
	0835							Start Casing w/ Float Equipment
	1025							Break Circulation on Bottom
	1200							Hook up to Swift
	1205	2	8					Plug RH
		5	12				300	Pump Mudflush
		5	20				300	Pump KCL Spacer
	1220	4					300	Start SMD Cement
			53					Fin SMD, Start EA-2 Cement
	1235		77					Fin Cmt
							Vac	Drop Plug, Washout Pump & Lines
	1240	8					Vac	Start Displacement
	1245	7	57				500	Catch Pressure
	1250	6	80½				800/1400	Land Plug — Lift PSI 800#, Land PSI 1400#
	1255							Release Truck, Dry
								Wash up
								Rack up
	1310							Job Complete
								Thanks,
								Jon, Austin, Isaac

GLOBAL OIL FIELD SERVICES, LLC
24 S. Lincoln
RUSSELL, KS 67665

RECEIVED
MAR 05 2019

Invoice

Date	Invoice #
3/4/2019	0013390

Bill To
PALOMINO PETROLEUM INC 4924 SE 84TH ST NEWTON,KS 67114

P.O. No.	Terms	Project
CHRISTANS#3	Due on receipt	

Quantity	Description	Rate	Amount
275	COMMON CEMENT	16.50	4,537.50
10	CALCIUM-CHLORIDE	80.00	800.00
5	BENTONITE GEL	30.00	150.00
290	HANDLING	1.90	551.00
	BULK MILEAGE	725.00	725.00
1	TRI-PLEX PUMP CHARGE FOR SURFACE	850.00	850.00
25	HEAVY EQUIPMENT. ONE WAY	6.50	162.50
25	LMV- ONE WAY	2.75	68.75
	15% DISCOUNT IF PAID WITHIN 15 DAYS OF INVOICE		
	GOVE CO SALES TAX	8.50%	0.00

Thank you for your business.

Phone #	Fax #
785-445-3525	785-445-3526

Total $7,844.75

GLOBAL OIL FIELD SERVICES, LLC

0013390

REMIT TO 24 S. Lincoln
Russell, KS 67665

SERVICE POINT: Russell KS

DATE 2-23-19	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION 1:30 pm	JOB START	JOB FINISH 3:00 pm
LEASE Christens	WELL # 3		LOCATION Beaver KS N to Beaver Dr West into			COUNTY Barton	STATE KS
OLD OR NEW (CIRCLE ONE)							

CONTRACTOR WW Drilling Rig #14
TYPE OF JOB Surface
HOLE SIZE 12¼ T.D.
CASING SIZE 8⅝ DEPTH 413'
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG. 25'
PERFS
DISPLACEMENT

EQUIPMENT

PUMP TRUCK CEMENTER Cody
417 HELPER Jason
BULK TRUCK
411 DRIVER Tom
BULK TRUCK
DRIVER

OWNER Palomino Petroleum

CEMENT
AMOUNT ORDERED 275sk com 3%cc 2%gel

COMMON	@		
POZMIX	@		
GEL	@		
CHLORIDE	@		
ASC	@		
	@		
	@		
	@		
	@		
	@		
	@		
	@		
	@		
HANDLING	@		
MILEAGE			
		TOTAL	

REMARKS:

Ran Casing + Cjt Hooked to Rig + Broke Circulation + Hooked to truck + Pumped 275sks of cement + displaced 24⅜ bbls of H2O + shut In.

Cement DID Circulate to Surface

SERVICE

DEPTH OF JOB			
PUMP TRUCK CHARGE			
EXTRA FOOTAGE	@		
MILEAGE	@		
MANIFOLD	@		
	@		
	@		
		TOTAL	

CHARGE TO: Palomino Petroleum
STREET
CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

	@		
	@		
	@		
	@		
	@		
		TOTAL	

Global Oil Field Services, LLC
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Joshua Shaw
SIGNATURE Joshua Shaw

SALES TAX (If Any)
TOTAL CHARGES
DISCOUNT IF PAID IN 30 DAYS

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Palomino Petroleum Inc**

4924 SE 84th St
Newton, KS 67114+8827

ATTN: Eli Feltz

Christians #3

20-16S-12W Barton,KS

Start Date: 2019.02.27 @ 09:11:00
End Date: 2019.02.27 @ 16:13:02
Job Ticket #: 65100 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2019.03.01 @ 09:38:31

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Palomino Petroleum Inc

4924 SE 84th St
Newton, KS 67114+8827

ATTN: Eli Feltz

20-16S-12W Barton,KS

Christians #3

Job Ticket: 65100 **DST#: 1**

Test Start: 2019.02.27 @ 09:11:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:52:32
Time Test Ended: 16:13:02

Test Type: Conventional Bottom Hole (Initial)
Tester: Ken Swinney
Unit No: 72

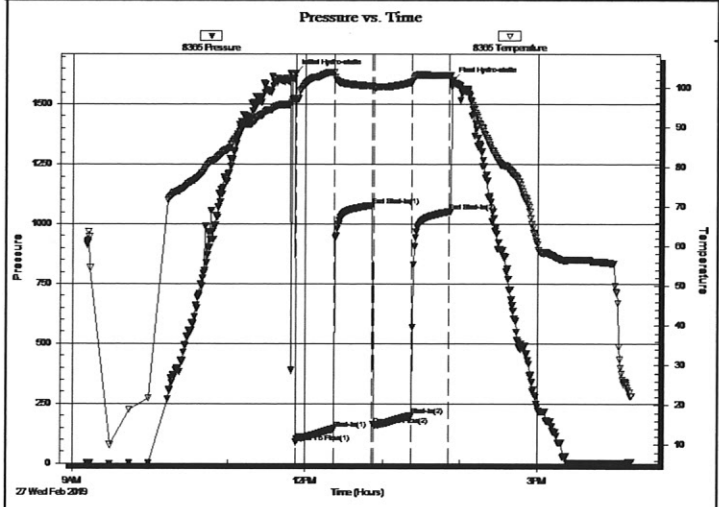
Interval: 3339.00 ft (KB) To 3379.00 ft (KB) (TVD)
Total Depth: 3379.00 ft (KB) (TVD)
Hole Diameter: 7.80 inches Hole Condition: Fair

Reference Elevations: 1932.00 ft (KB)
1921.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 8365 **Inside**
Press@RunDepth: 202.12 psig @ 3340.00 ft (KB)
Start Date: 2019.02.27 End Date: 2019.02.27
Start Time: 09:11:01 End Time: 16:13:02

Capacity: psig
Last Calib.: 2019.02.27
Time On Btm: 2019.02.27 @ 11:52:02
Time Off Btm: 2019.02.27 @ 13:53:32

TEST COMMENT: IF 30 Minutes BOB in 13 minutes
ISI 30 Minutes 2" blow back
FF 30 Minutes BOB in 16 minutes
FSI 30 Minutes 1" blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1628.27	97.26	Initial Hydro-static
1	90.04	96.83	Open To Flow (1)
31	145.78	103.87	Shut-In(1)
60	1078.01	100.36	End Shut-In(1)
61	162.35	100.03	Open To Flow (2)
90	202.12	101.40	Shut-In(2)
120	1051.99	103.19	End Shut-In(2)
122	1597.88	101.27	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
155.00	VSOCM O 2% M 98%	2.17
232.00	GO G 5% O 95%	3.25

Gas Rates

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

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Palomino Petroleum Inc

4924 SE 84th St
New ton, KS 67114+8827

ATTN: Eli Feltz

20-16S-12W Barton,KS

Christians #3

Job Ticket: 65100 **DST#: 1**

Test Start: 2019.02.27 @ 09:11:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:52:32
Time Test Ended: 16:13:02

Test Type: Conventional Bottom Hole (Initial)
Tester: Ken Sw inney
Unit No: 72

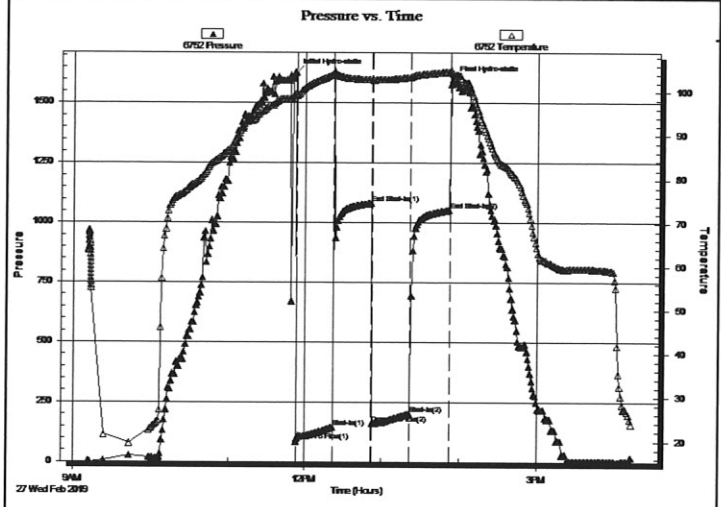
Interval: 3339.00 ft (KB) To 3379.00 ft (KB) (TVD)
Total Depth: 3379.00 ft (KB) (TVD)
Hole Diameter: 7.80 inches Hole Condition: Fair

Reference Elevations: 1932.00 ft (KB)
1921.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 6752 **Outside**
Press@RunDepth: 1053.21 psig @ 3341.00 ft (KB)
Start Date: 2019.02.27 End Date: 2019.02.27
Start Time: 09:11:01 End Time: 16:14:02

Capacity: psig
Last Calib.: 2019.02.27
Time On Btm: 2019.02.27 @ 11:52:02
Time Off Btm: 2019.02.27 @ 13:54:02

TEST COMMENT: IF 30 Minutes BOB in 13 minutes
ISI 30 Minutes 2" blow back
FF 30 Minutes BOB in 16 minutes
FSI 30 Minutes 1" blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1628.04	99.50	Initial Hydro-static
1	86.29	99.28	Open To Flow (1)
30	145.90	104.05	Shut-In(1)
60	1080.87	102.85	End Shut-In(1)
61	160.54	102.69	Open To Flow (2)
90	202.62	103.50	Shut-In(2)
120	1053.21	104.69	End Shut-In(2)
122	1598.66	104.36	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
155.00	VSOCM O 2% M 98%	2.17
232.00	GO G 5% O 95%	3.25

Gas Rates

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

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Palomino Petroleum Inc

4924 SE 84th St
Newton, KS 67114+8827

ATTN: Eli Feltz

20-16S-12W Barton,KS

Christians #3

Job Ticket: 65100 **DST#: 1**

Test Start: 2019.02.27 @ 09:11:00

Tool Information

Drill Pipe:	Length:	3320.00 ft	Diameter:	3.80 inches	Volume:	46.57 bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	
Drill Collar:	Length:	0.00 ft	Diameter:	225.00 inches	Volume:	0.00 bbl	
					Total Volume:	46.57 bbl	

Drill Pipe Above KB:	8.00 ft
Depth to Top Packer:	3339.00 ft
Depth to Bottom Packer:	ft
Interval betw een Packers:	40.00 ft
Tool Length:	67.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:	2000.00 lb
Weight set on Packer:	20000.00 lb
Weight to Pull Loose:	60000.00 lb
Tool Chased	20.00 ft
String Weight: Initial	48000.00 lb
Final	49000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut-In Tool	5.00			3317.00		
Hydraulic tool	5.00			3322.00		
Jars	5.00			3327.00		
Safety Joint	2.00			3329.00		
Top Packer	5.00			3334.00		
Packer	5.00			3339.00	27.00	Bottom Of Top Packer
Recorder	1.00	8365	Inside	3340.00		
Recorder	1.00	6752	Outside	3341.00		
Anchor	35.00			3376.00		
Bullnose	3.00			3379.00	40.00	Anchor Tool
Total Tool Length:	**67.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Palomino Petroleum Inc

4924 SE 84th St
Newton, KS 67114+8827

ATTN: Eli Feltz

20-16S-12W Barton,KS

Christians #3

Job Ticket: 65100 **DST#: 1**

Test Start: 2019.02.27 @ 09:11:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	38 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	73.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	9.59 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	6000.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

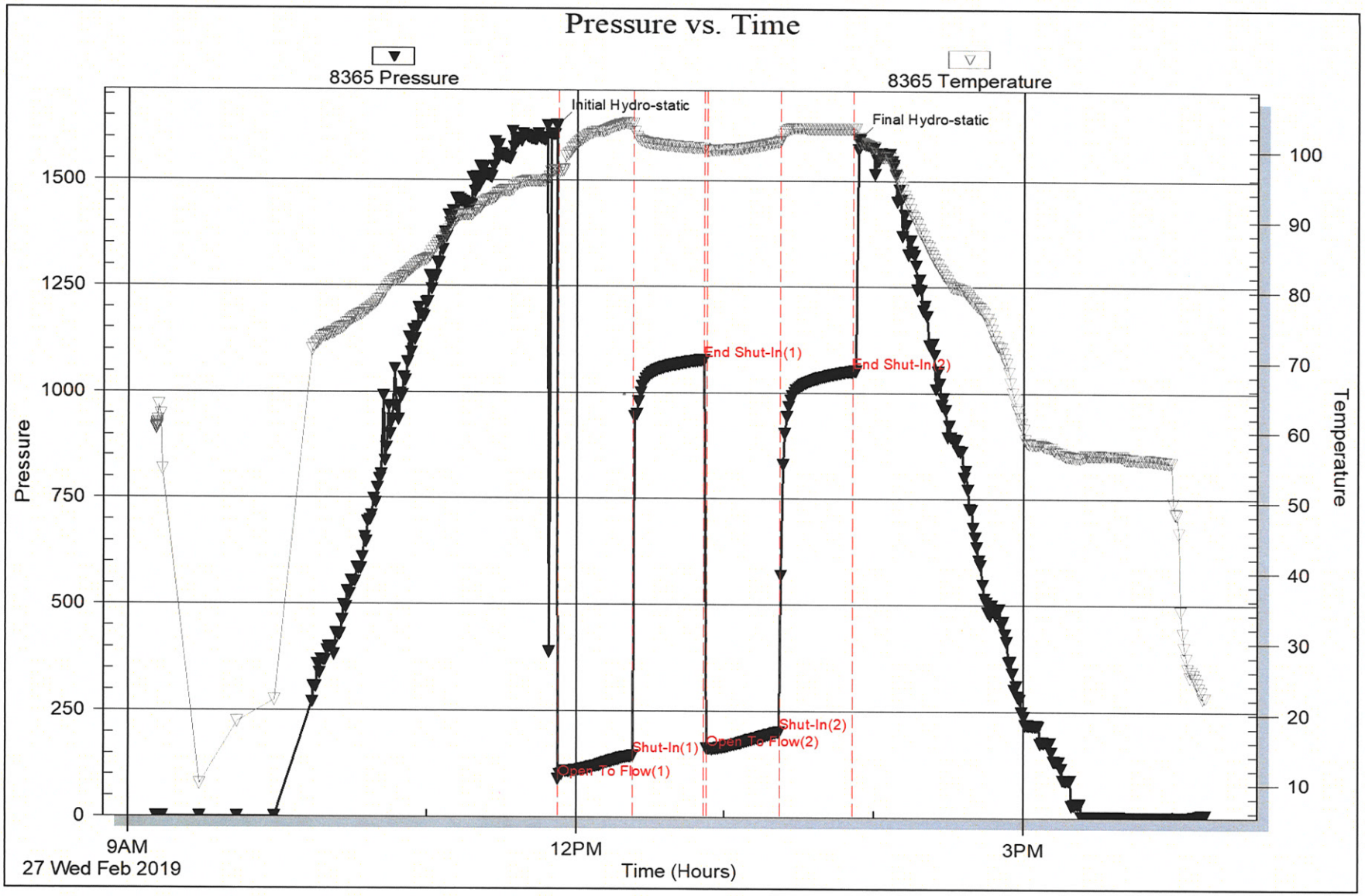
Recovery Table

Length ft	Description	Volume bbl
155.00	VSOCM O 2% M 98%	2.174
232.00	GO G 5% O 95%	3.254

Total Length: 387.00 ft Total Volume: 5.428 bbl

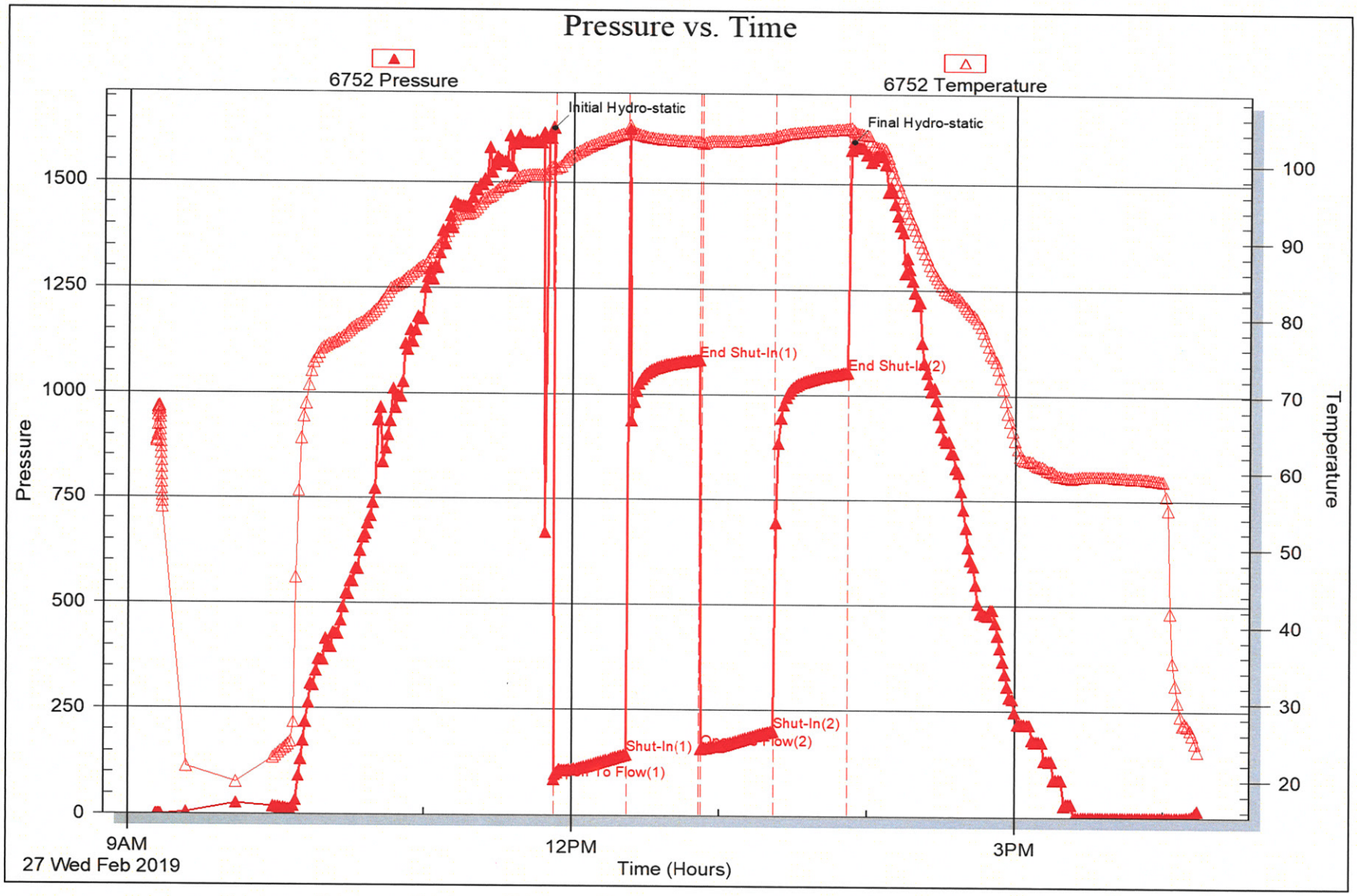
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8365 **Inside** Palomino Petroleum Inc Christians #3 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 65100 Printed: 2019.03.01 @ 09:38:31

Serial #: 6752 **Outside** Palomino Petroleum Inc Christians #3 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 65100 Printed: 2019.03.01 @ 09:38:32

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Palomino Petroleum Inc**

4924 SE 84th St
Newton, KS 67114+8827

ATTN: Eli Feltz

Christians #3

20-16S-12W Barton,KS

Start Date: 2019.02.28 @ 15:18:00
End Date: 2019.03.01 @ 00:10:02
Job Ticket #: 65651 DST #: 2

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2019.03.01 @ 09:38:06

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Palomino Petroleum Inc

4924 SE 84th St
New ton, KS 67114+8827

ATTN: Eli Feltz

20-16S-12W Barton,KS

Christians #3

Job Ticket: 65651 **DST#: 2**

Test Start: 2019.02.28 @ 15:18:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 17:45:02
Time Test Ended: 00:10:02

Test Type: Conventional Bottom Hole (Initial)
Tester: Ken Sw inney
Unit No: 72

Interval: 3334.00 ft (KB) To 3398.00 ft (KB) (TVD)
Total Depth: 3398.00 ft (KB) (TVD)
Hole Diameter: 7.80 inches Hole Condition: Fair

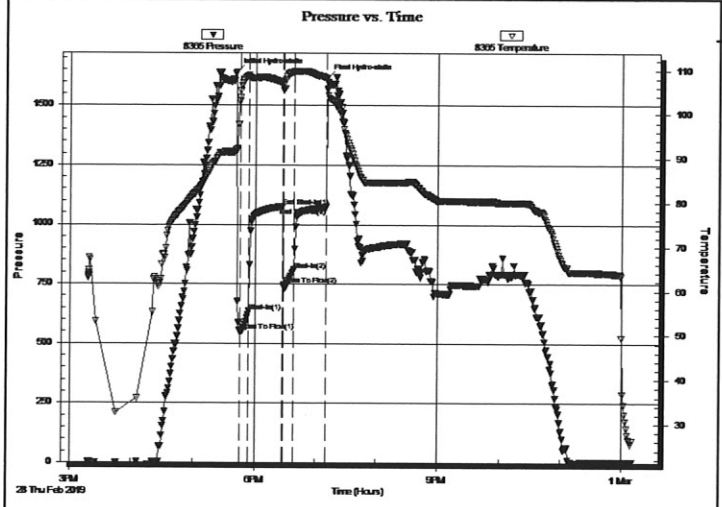
Reference Elevations: 1932.00 ft (KB)
1921.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 8365 **Inside**

Press@RunDepth: 809.06 psig @ 3335.00 ft (KB)
Start Date: 2019.02.28 End Date: 2019.03.01
Start Time: 15:18:01 End Time: 00:10:02

Capacity: psig
Last Calib.: 2019.03.01
Time On Btm: 2019.02.28 @ 17:41:47
Time Off Btm: 2019.02.28 @ 19:11:02

TEST COMMENT: IF 10 Minutes BOB in 22 seconds Total build 240"
ISI 30 Minutes No blow back
FF 10 Minutes Blow to BOB in 35 seconds Total build 76"
FSI 30 Minutes No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1640.03	92.09	Initial Hydro-static
4	551.64	103.68	Open To Flow (1)
12	634.22	108.81	Shut-In(1)
45	1076.04	107.13	End Shut-In(1)
46	744.44	105.77	Open To Flow (2)
57	809.06	109.60	Shut-In(2)
88	1072.48	108.11	End Shut-In(2)
90	1613.70	105.47	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	OCM O 30% M 70%	0.59
1430.00	GMCO M 10% G 15% O 75%	20.06
387.00	HMCO M 40% O 60%	5.43

Gas Rates

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

DRILL STEM TEST REPORT

Palomino Petroleum Inc

4924 SE 84th St
Newton, KS 67114+8827

ATTN: Eli Feltz

20-16S-12W Barton,KS

Christians #3

Job Ticket: 65651 **DST#: 2**

Test Start: 2019.02.28 @ 15:18:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 17:45:02
Time Test Ended: 00:10:02

Test Type: Conventional Bottom Hole (Initial)
Tester: Ken Swinney
Unit No: 72

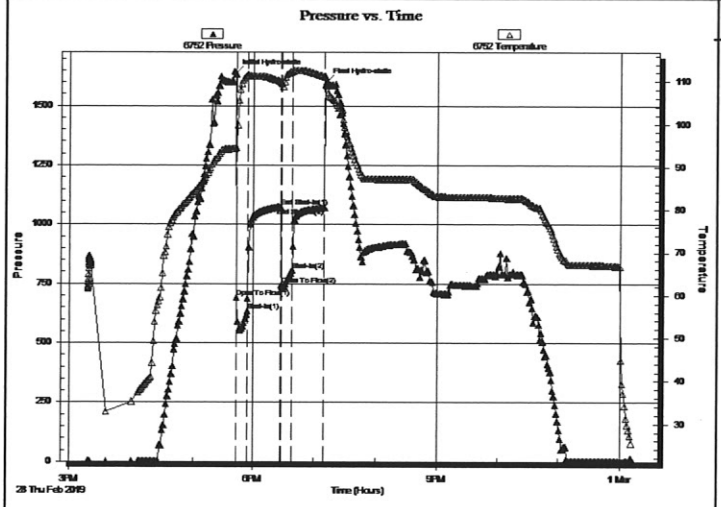
Interval: 3334.00 ft (KB) To 3398.00 ft (KB) (TVD)
Total Depth: 3398.00 ft (KB) (TVD)
Hole Diameter: 7.80 inches Hole Condition: Fair

Reference Elevations: 1932.00 ft (KB)
1921.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 6752 **Outside**
Press@RunDepth: 1071.21 psig @ 3336.00 ft (KB)
Start Date: 2019.02.28 End Date: 2019.03.01
Start Time: 15:18:01 End Time: 00:10:47

Capacity: psig
Last Calib.: 2019.03.01
Time On Btm: 2019.02.28 @ 17:42:02
Time Off Btm: 2019.02.28 @ 19:11:17

TEST COMMENT: IF 10 Minutes BOB in 22 seconds Total build 240"
ISI 30 Minutes No blow back
FF 10 Minutes Blow to BOB in 35 seconds Total build 76"
FSI 30 Minutes No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1635.74	94.49	Initial Hydro-static
1	691.03	94.49	Open To Flow (1)
12	634.03	111.55	Shut-In(1)
45	1074.12	109.96	End Shut-In(1)
46	745.92	109.67	Open To Flow (2)
56	807.63	112.37	Shut-In(2)
88	1071.21	111.05	End Shut-In(2)
90	1601.86	109.72	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	OCM O 30% M 70%	0.59
1430.00	GMCO M 10% G 15% O 75%	20.06
387.00	HMCO M 40% O 60%	5.43

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Palomino Petroleum Inc

4924 SE 84th St
Newton, KS 67114+8827

ATTN: Eli Feltz

20-16S-12W Barton,KS

Christians #3

Job Ticket: 65651 **DST#: 2**

Test Start: 2019.02.28 @ 15:18:00

Tool Information

Drill Pipe:	Length:	3199.00 ft	Diameter:	3.80	inches	Volume:	44.87	bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00	inches	Volume:	0.00	bbl	
Drill Collar:	Length:	120.00 ft	Diameter:	2.25	inches	Volume:	0.59	bbl	
						Total Volume:	45.46	bbl	

Drill Pipe Above KB:	13.00 ft
Depth to Top Packer:	3334.00 ft
Depth to Bottom Packer:	ft
Interval between Packers:	63.78 ft
Tool Length:	91.78 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:	2000.00 lb
Weight set on Packer:	20000.00 lb
Weight to Pull Loose:	65000.00 lb
Tool Chased	5.00 ft
String Weight: Initial	49000.00 lb
Final	54000.00 lb

Tool Comments: Reversed fluid

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut-In Tool	5.00			3311.00		
Hydraulic tool	5.00			3316.00		
Jars	6.00			3322.00		
Safety Joint	2.00			3324.00		
Top Packer	5.00			3329.00		
Packer	5.00			3334.00	28.00	Bottom Of Top Packer
Recorder	1.00	8365	Inside	3335.00		
Recorder	1.00	6752	Outside	3336.00		
Anchor	25.00			3361.00		
Change Over Sub	1.00			3362.00		
Drill Pipe	31.78			3393.78		
Change Over Sub	1.00			3394.78		
Bullnose	3.00			3397.78	63.78	Anchor Tool
Total Tool Length:	**91.78**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Palomino Petroleum Inc

4924 SE 84th St
New ton, KS 67114+8827

ATTN: Eli Feltz

20-16S-12W Barton,KS

Christians #3

Job Ticket: 65651 **DST#: 2**

Test Start: 2019.02.28 @ 15:18:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	39 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	37.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	11.19 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	7300.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

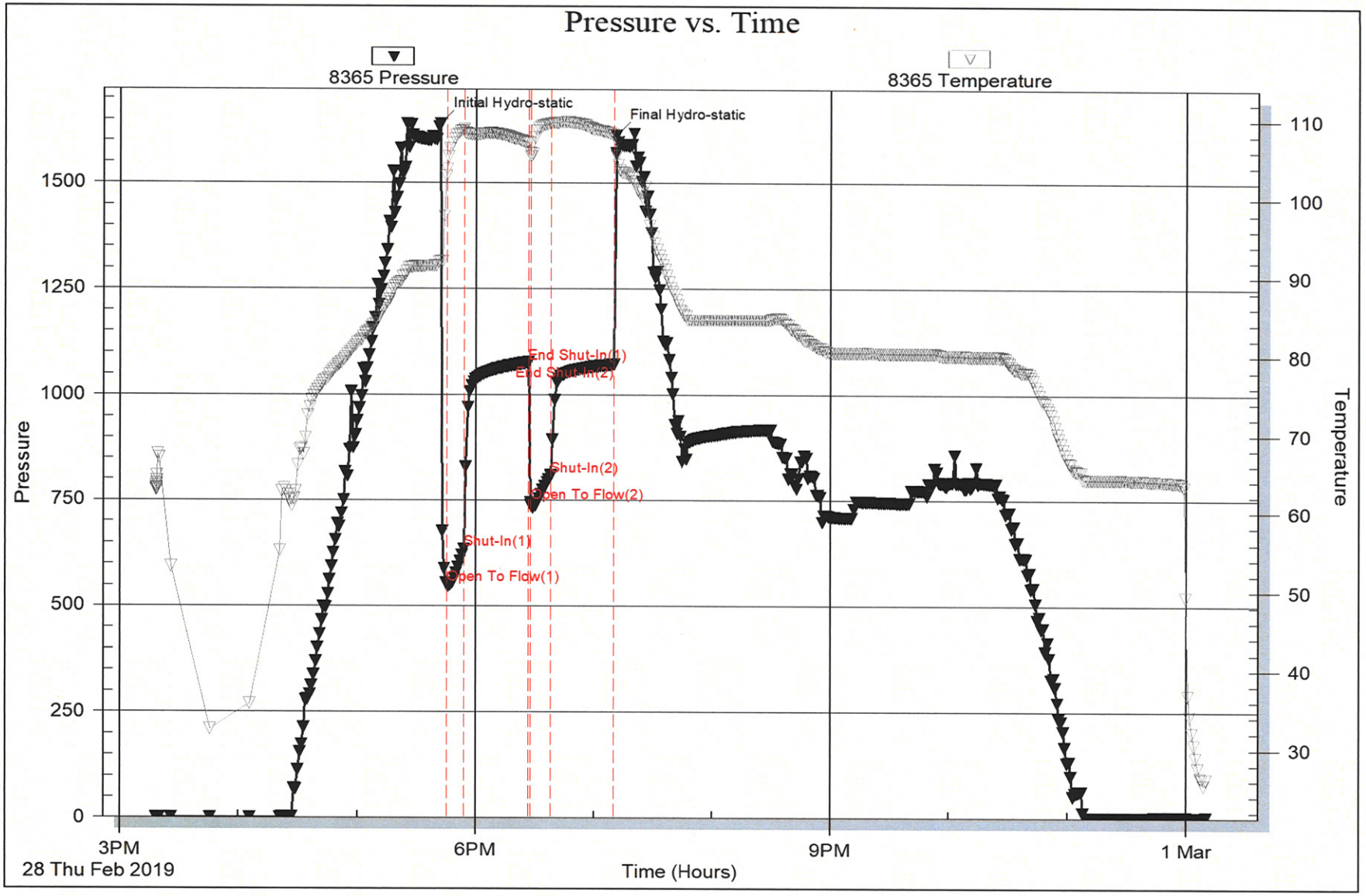
Recovery Table

Length ft	Description	Volume bbl
120.00	OCM O 30% M 70%	0.590
1430.00	GMCO M 10% G 15% O 75%	20.059
387.00	HMCO M 40% O 60%	5.429

Total Length: 1937.00 ft Total Volume: 26.078 bbl

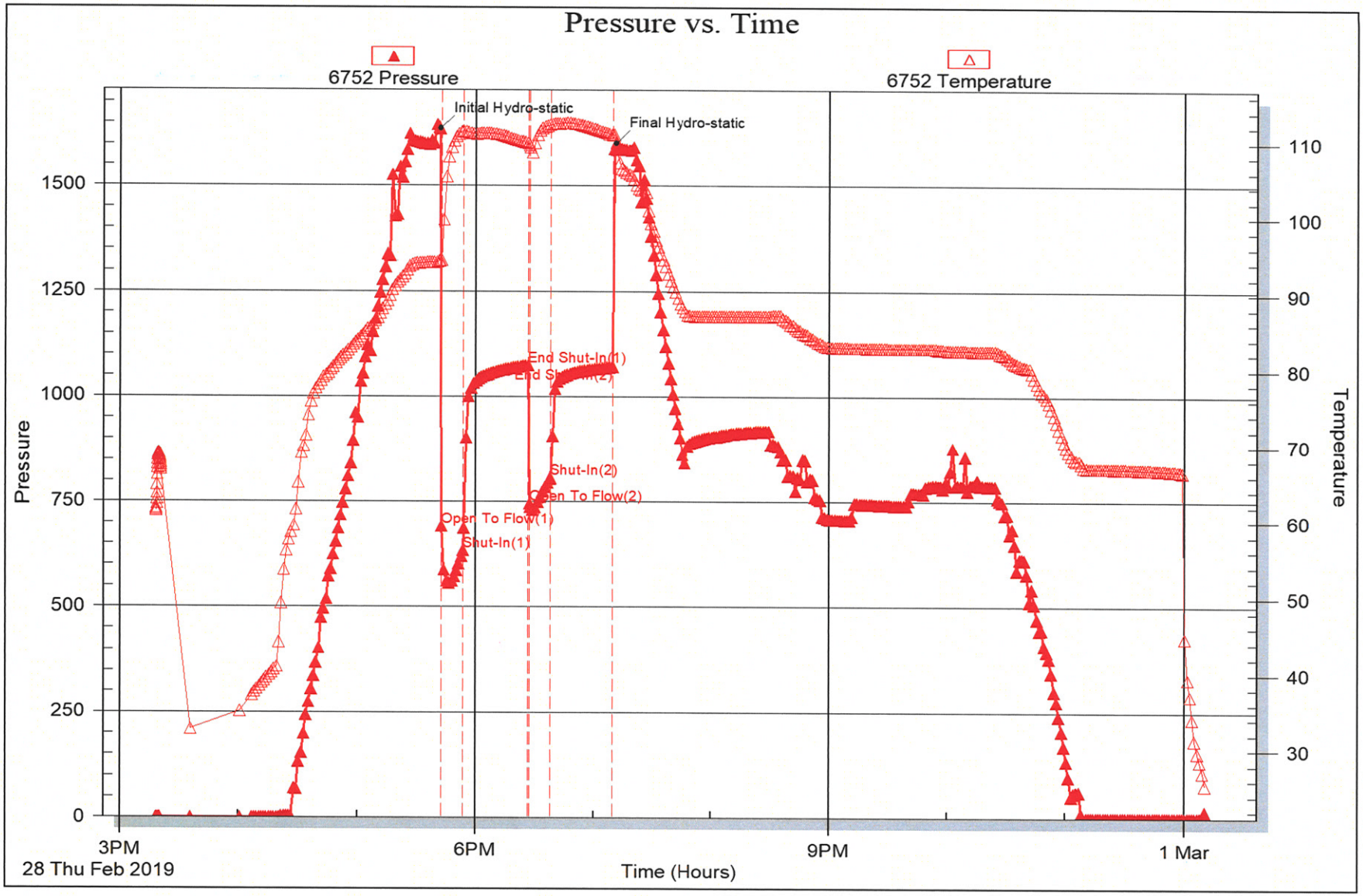
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8365 **Inside** Palomino Petroleum Inc Christians #3 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 65651 Printed: 2019.03.01 @ 09:38:07

Serial #: 6752 **Outside** Palomino Petroleum Inc Christians #3 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 65651 Printed: 2019.03.01 @ 09:38:07

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 65100

Well Name & No. Christians #3 Test No. 1 Date 27 Feb 19

Company Palomino Petroleum Inc Elevation 1932 KB 1921 GL

Address 4924 SE 84th St Newton Kansas 67114+8827

Co. Rep / Geo. Eli Feltz Rig WW Rig 14

Location: Sec. 20 Twp 16S Rge. 12W Co. Barton State KS

Interval Tested 3339-3379 Zone Tested Arbuckle

Anchor Length 40 Drill Pipe Run 3320 Mud Wt. 8.8

Top Packer Depth 3334 Drill Collars Run 120 Vis 73

Bottom Packer Depth 3339 Wt. Pipe Run — WL 9.6

Total Depth 3379 Chlorides 6000 ppm System LCM

Blow Description IF Blow built to BOB in 13 minutes / Total build 19 inch
ISI 2 inch blow back
FF Blow built to BOB 16 min / Total build 17 inch
FSI 1 inch blow back

Rec 232	Feet of Gas cut oil	5 %gas	95 %oil	%water	%mud
Rec 155	Feet of Light oil cut mud	%gas	2 %oil	%water	98 %mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 387 BHT 103 Gravity 38 API RW ____ @ ____ °F Chlorides ____ ppm

(A) Initial Hydrostatic 1628	☒ Test 1200	T-On Location 6:22 am
(B) First Initial Flow 90	☒ Jars 250	T-Started 9:11 am
(C) First Final Flow 145	☒ Safety Joint 75	T-Open 11:52 am
(D) Initial Shut-In 1078	☐ Circ Sub	T-Pulled 2:52 pm
(E) Second Initial Flow 162	☐ Hourly Standby	T-Out 4:13 pm
(F) Second Final Flow 207	☒ Mileage 52 52	Comments
(G) Final Shut-In 1051	☐ Sampler	
(H) Final Hydrostatic 1597	☐ Straddle	☐ EM Tool
	☐ Shale Packer	☐ Ruined Shale Packer
Initial Open 30	☐ Extra Packer	☐ Ruined Packer
Initial Shut-In 30	☐ Extra Recorder	☐ Extra Copies
Final Flow 30	☐ Day Standby	Sub Total 0
Final Shut-In 30	☐ Accessibility	Total 1577
	Sub Total 1577	MP/DST Disc't

Approved By C. J. Feltz Our Representative

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 65651

Well Name & No. Christians #3 Test No. 2 Date 28 Feb 19

Company Palomino Petroleum Inc. Elevation 1932 KB 1921 GL

Address 4924 SE 84th St Newton Kansas 67114+8827

Co. Rep / Geo. Eli Feltz Rig ww Rig 14

Location: Sec. 20 Twp 16S Rge. 12W Co. Barton State KS

Interval Tested 3334-3398 Zone Tested Arbuckle

Anchor Length 64 Drill Pipe Run 3199 Mud Wt. 9.1

Top Packer Depth 3329 Drill Collars Run 120 Vis 37

Bottom Packer Depth 3334 Wt. Pipe Run — WL 11.2

Total Depth 3398 Chlorides 7300 ppm System LCM Trace

Blow Description IF Blow to BOB 27 seconds / Total build 240 inches

ISI No blow back

FF Blow to BOB in 35 seconds / Total build 76 inches

FSI No blow back

Rec 387	Feet of Muddy Oil	%gas	60 %oil	%water	40 %mud
Rec 1430	Feet of Mud cut Gassy Oil	15 %gas	75 %oil	%water	10 %mud
Rec 120	Feet of Oily Mud	%gas	30 %oil	%water	70 %mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 1937 BHT 109 Gravity 39 API RW @ °F Chlorides ppm

(A) Initial Hydrostatic 1640	☒ Test 1200	T-On Location 1:55 pm
(B) First Initial Flow 675	☒ Jars 250	T-Started 3:18 pm
(C) First Final Flow 634	☒ Safety Joint 75	T-Open 5:42 pm
(D) Initial Shut-In 1076	☒ Circ Sub 50	T-Pulled 7:02 pm
(E) Second Initial Flow 744	☐ Hourly Standby	T-Out 12:12 pm
(F) Second Final Flow 809	☒ Mileage 52 52	Comments
(G) Final Shut-In 1072	☐ Sampler	
(H) Final Hydrostatic 1613	☐ Straddle	☐ EM Tool
	☐ Shale Packer	☐ Ruined Shale Packer
Initial Open 10	☐ Extra Packer	☐ Ruined Packer
Initial Shut-In 30	☐ Extra Recorder	☐ Extra Copies
Final Flow 10	☐ Day Standby	Sub Total 0
Final Shut-In 30	☐ Accessibility	Total 1577
	Sub Total 1577	MP/DST Disc't

Approved By Eli Feltz Our Representative

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

PALOMINO PETROLEUM, INC.

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

Well Name:	**Christians #3**
API:	**15-009-26252**
Location:	**NE - NW - SW - SE of Sec. 20 16s 12w**
License Number:	**30742**
Region:	**Barton County, KS**
Spud Date:	**2/23/2019**
Drilling Completed:	**3/1/2019**
Surface Coordinates:	**1150' FSL & 2008' FEL**
Bottom Hole Coordinates:	**Same as surface coordinates**
Ground Elevation (ft):	**1921'**
K.B. Elevation (ft):	**1932'**
Logged Interval (ft):	**2700'** To: **3520'**
Total Depth (ft):	**3520'**
Formation:	**Arbuckle Dolomite @ RTD**
Type of Drilling Fluid:	**Chemical Drispac**

Printed by MudLog from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

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

GEOLOGIST

Name: **Eli J. Felts**
Company: **Gravity Oil, LLC**
Address: **954 Prairie Park Road**
Wichita, KS 67218

E: ejfelts47@gmail.com, C: 316.204.5059

Formation Tops

SAMPLE TOPS			LOG TOPS		
ANHY	844	(+1088)	ANHY	838	(+1094)
BASE ANHY	866	(+1066)	BASE ANHY	864	(+1068)
HOWARD	2703	(-771)	HOWARD	2707	(-775)
TOPEKA	2745	(-813)	TOPEKA	2744	(-812)
HEEBNER	3011	(-1079)	HEEBNER	3022	(-1090)
TORONTO	3027	(-1095)	TORONTO	3038	(-1106)
DOUGLAS	3040	(-1108)	DOUGLAS	3048	(-1116)
BROWN LIME	3101	(-1169)	BROWN LIME	3108	(-1176)
LANSING	3314	(-1382)	LANSING	3121	(-1189)
B/KC	3364	(-1432)	B/KC	3370	(-1438)
ARBUCKLE	3370	(-1438)	ARBUCKLE	3377	(-1445)
RTD	3520	(-1588)	LTD	3520	(-1588)

Drilling Report

2/23/19
(Sat)
Moved in WW Drilling, L.L.C. rotary tools (Rig #14). Spudded at 1:45 a.m.

2/24/19
(Sun)
Drilling at 790'.

2/25/19
(Mon)
Drilling at 2345'. Displaced @ 2695' Geo on location @ 5pm.
Depth on arrival 2715'.

2/26/19
(Tues)
Drilling at 3065'.

2/27/19
(Wed)
DST #1

2/28/19
(Thurs)

Hooking kelly hose back up after clearing ice blockage after DST #1. Drill Down 19' and run DST #2.

3/1/19
(Fri)
Drilling at 3470'.
RTD @ 3520' @ 8:20 a.m.
Gemini Wireline on location to log well. Tag bottom @ 12:08 p.m. Lost communication with tools 12:08-6:00 p.m.
Restart well logging @ 5 p.m.
Finished Logging @ 9 p.m.
TIH w/ bit to condition hole to run casing.

Drill Stem Tests

DST #1 Arbuckle
Interval: 3339'-3379'
(40') Anchor
30-30-30-30
IF: built to BOB in 13"
ISI: built to 2" (sustained)
FF: built to BOB in 16"
FSI: built to 1" (sustained)
SIP: 1078-1051#
IF: 90-145#
FF: 162-202#
Hydrostatic: 1628-1597#
BHT: 103 F
Grav: 38 API @ 60 Degrees

Recovery: 387' TF
232' GCO (5%G) (95%O)
155' light OCM (2%O) (98%M)
*slid 20' to bottom. took in mud on slide (see hydrostatic chart)

DST #2 Arbuckle
Interval: 3334'-3398'
(64') Anchor
10-30-10-30
IF: built to BOB in 22 seconds (240 inches build)
ISI: no blowback
FF: built to BOB in 35 seconds (76 inches build) *1/4 valve broken
FSI: no blowback
SIP: 1076-1072#
IF: 675-634#
FF: 744-809#
Hydrostatic: 1640-1613#
BHT: 109 F
Grav: 39 API @ 60 Degrees

Recovery: 1937' TF
387' MO (60% O) (40% M)
1430' MCGO (75% O) (15% G) (10% M)
120' OM (30%O) (70%)
*slid 5' to bottom

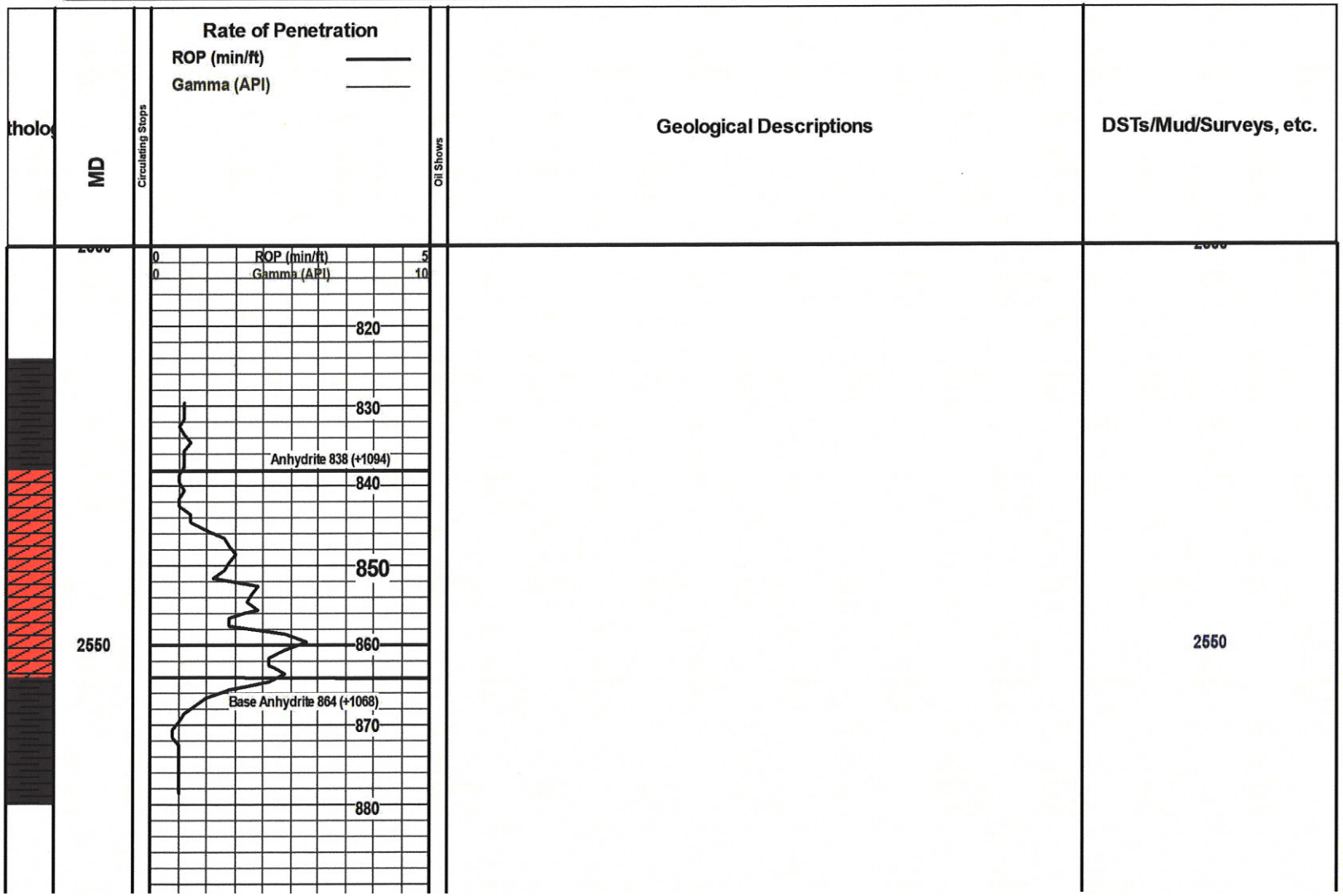
Pipe Setting

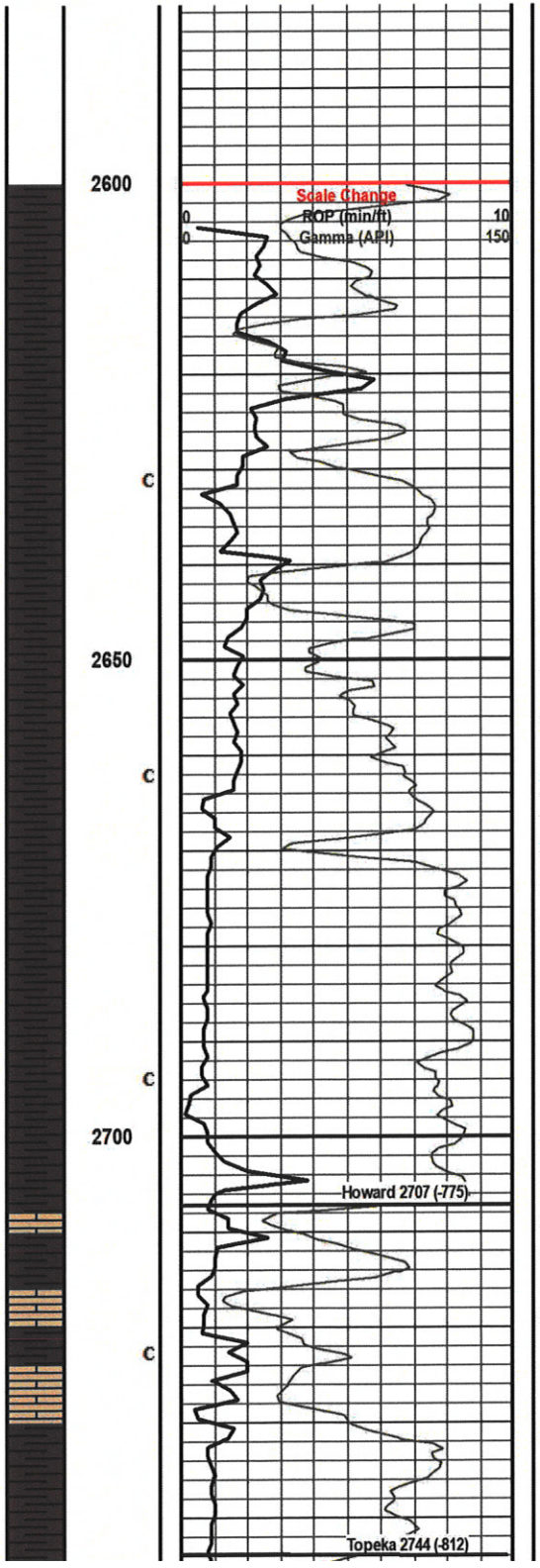
2/23/2019
(Sat)
Ran 9 jts. new 8 5/8" 20# surface pipe set at 413' and cemented with 275 sacks 80/20, 2% gel, 3% c.c. Cement did circulate. Plug down at 11:30 p.m.

3/2/19
(Sat)
5.5" Oil String of casing was set to further evaluate Arbuckle.

ROCK TYPES

Anhy	Congl	Lmst tan	Shale 2	Ss
Bent	Dol	Lmst	Shale gry	Till
Brec	Gyp	Meta	Shale 1	
Cht	Igne	Mrlst	Shcol	
Clyst	Granite 2	Quartz	Shgy	
Coal	Granite	Salt	Sltst	





Tops have been adjusted to Gemini Wireline Logging tools & samples have been lagged.

Ran the following Open Hole Logs:
>CNL/CDL
>Dual Induction
>Micro-Resistivity
>Sonic

Samples requested @ 2700-RTD. No sample caught until 2760' "water lines frozen"

SH - grey, silty, sl firm to soft; slippery ip. Trace LS - cream -gry, brown, fine xln, foss; ylw & grn mineral stn in some pcs

SH - varicolored, grey-green, maroon; silty, few LS aa

Abundant SH - grey, silty & soft; LS - cream, fine xln, foss, few re-xln ip, chalky ip

2600

2650

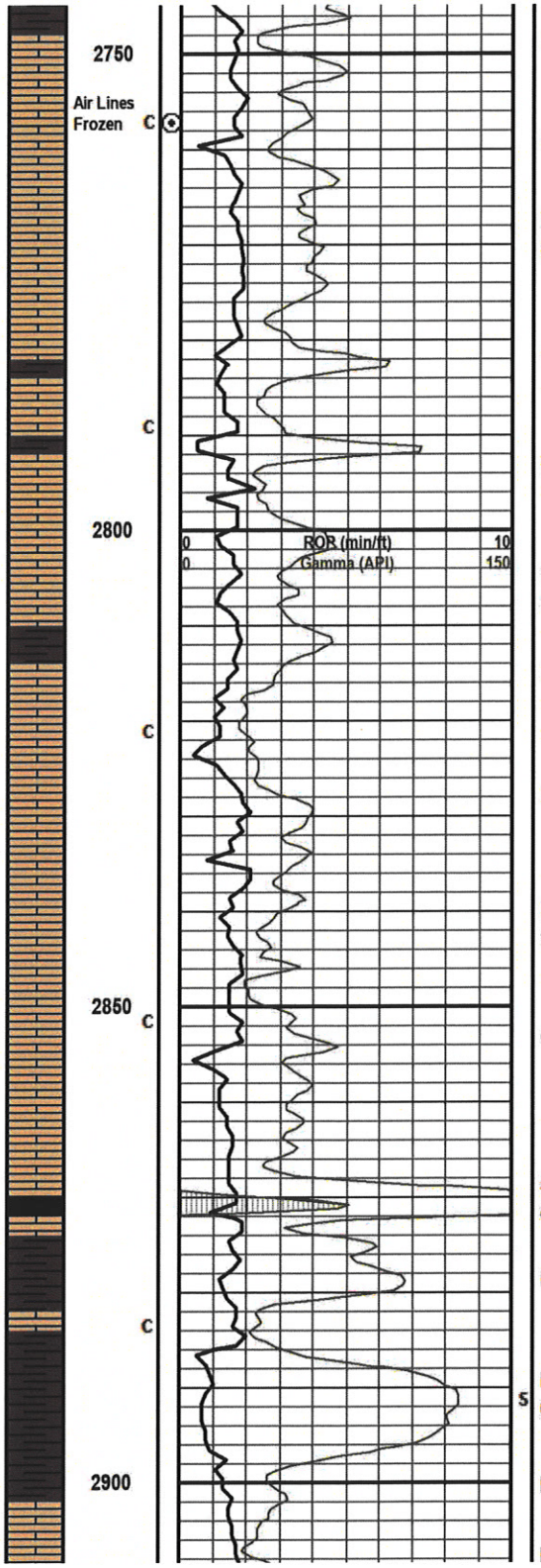
Displacing Mud: 2694' to 2723'

2700

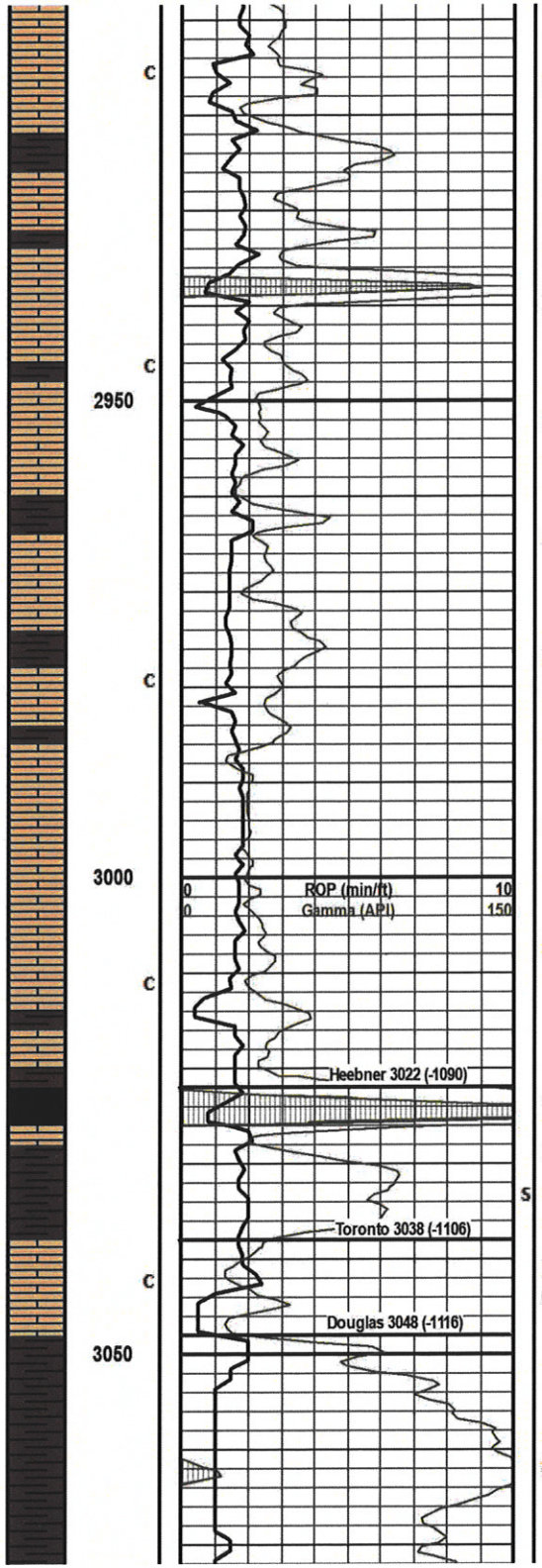
Geo on Location 5pm 2/25/19. DOA 2715'

Samples requested @ 2700-RTD. No sample caught until 2760' "water lines frozen"

Auto-Driller Freezing *drill time erratic



LS - tan to brown, fine to micro xln; heavy foss, blocky to sharp break, dense	**2750** Air Lines Frozen. Lost Clutch. Pull up & circulate. Thawing Lines 6:55-7:15pm
LS - cream to grey, brown, fine xln; sl silty to shaley appearance, argillaceous ip, few foss	
LS - cream, fine to med xln, abdt foss; few glauc staining ip; shaley; (1) cluster SS - clear grains w/ white chalky matrix. Poor vis porosity, gd friab; ns	
No sample caught	
LS - cream to gry, fine to med xln, most lithographic; shaley appearance in some; argill ip	Pump Down - Replace Valve
	2800
LS - cream to grey, fine to med xln; med firm to brittle; foss ip w/ some re-xln, abundant shales	
LS - cream to grey, tan, fine to med xln, foss ip, med firm, chalky; abundant grey shale	
LS - cream, med xln, sandy to sucrosic texture; chalky; flood white & grey sticky chalk & sh	Questionable Sample
LS - med xln, sl sandy txture, few ooids, foss, trace mineral stn ip; some chalky, trace crm-gry CH - vitreous, sharp fresh	Questionable Sample
	2850
CH, aa, & LS - cream to gry, fine to med xln; flood SH - gry, soft & gummy	No Sample Caught @ 2870'
SH - grey to brown, soft & silty; few LS, mst cream to tan, fine to med xln, foss ip; trace pc dark brown earthy SH; chalky edges	
LS - cream, chalky texture, soft; foss in part; sl lt brown stn in few; no odor/no show	
LS - cream to grey, most med xln w/ chalky txture; foss ip, med to soft, few edge stain (mineral?) no odor, ns	
LS - cream to tan, mst fine xln, foss ip; abundant chalk; few micrite, dense	**2900**
LS, aa, trans CH - lt grey to cream, vitreous, sharp & fresh	WT9.1VIS46



LS - cream to brown, fine to microxln, foss ip, blocky & dense

LS - cream to grey, brown, fine to microxln; blocky & dense

LS - cream to grey, brown, fine to med xln, foss in most; few trace SH - dark brown to black, carb, ssg

LS - cream to grey, fine to med xln, argillaceous ip w/ sm interbedded SH - gry

LS - cream w/ grey foss, fine to med xln; trans cherty; few mottled shales - lt to dark grey, soft

LS - cream to grey, som tan to brown, med xln w/ re-xln sparr & pyrite; some argill to chalky lime; pyritic shales

LS - cream, fine to med xln, chalky, foss ip

LS - cream to grey, mst fine xln; abundant foss; platy, chalky ip

SH - dark brown, earthy, organic; bleeds gas; chalky edges

LS - cream to tan, brown, fine xln, foss, blocky & dense, sub-chert ip

LS - cream to lt grey, fine to med xln, chalky texture, firm to hard; prevalent dark staining on edges; no odor, ns

SH - grey to green, mostly soft & gummy

2950

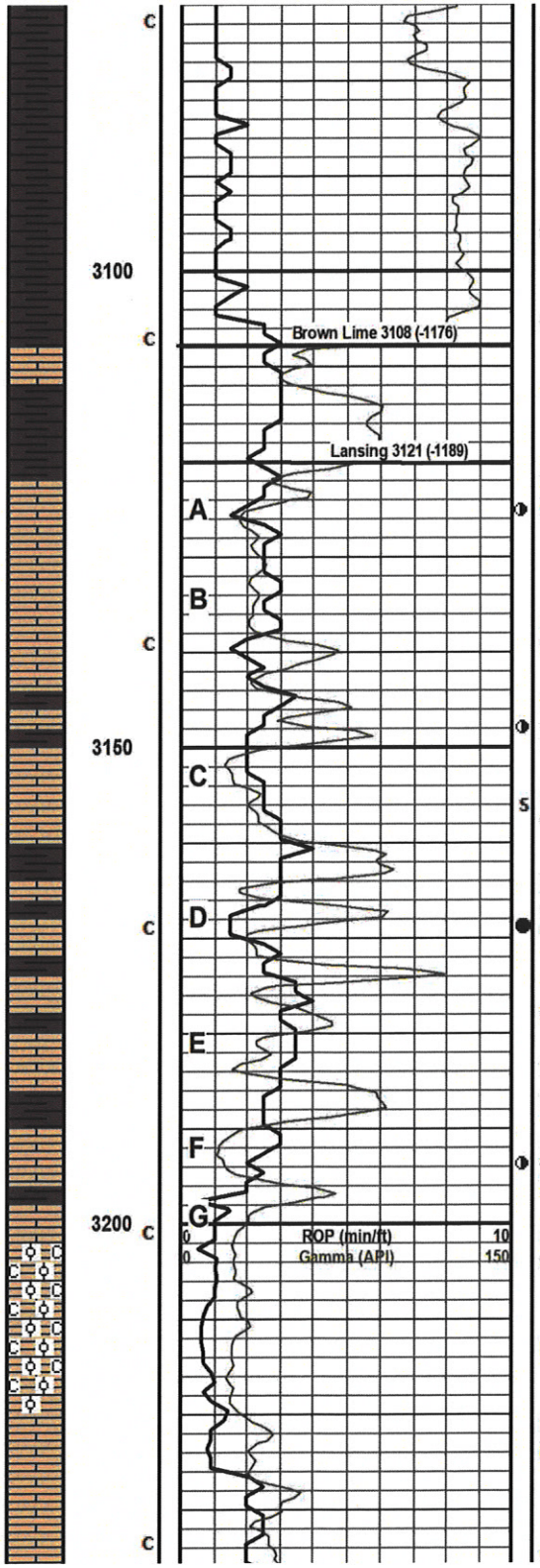
WT- 8.8 / VIS-70 / LCM-1#

3000

Changed Depth
Had (1) extra joint of pipe (~32 feet) on tally, but still on racks. Drill Time has been corrected but may not be exact.

3050

Mud-Co
Depth: 3051'
Wt. 8.8
Vis. 73
Filtrate 9.6
Chl 6,000
LCM 1#



SH - flood grey to brick red, wont wash clean, sticky

SH

SH - grey to green, soft to firm, some silty; abundant grey gummy shale

3100

90% SH, aa; LS - tan to brown, micro xln, foss, blocky & dense

LS - tan to brown, fine to micro xln; abundant foss, blocky & dense; scratches tray

LS - cream to white, fine to med xln, abundant foss, sm intra foss & dissolution porosity; trace ooc w/ fair interconnectability; fair cup odor w/ ssfo on break; v. chalky

LS - cream to white, fine to med xln, ool to ooc in some, trace odor, abundant chalky; med firm; trans fine xln w/ re-xln foss, dense

WT-9.0 / VIS-72 / LCM-1

LS - cream, med xln, sm chalky texture, foss ip w/ poorly dev intra foss & ooc porosity; few pcs w/ edge staining & ssfo; (1) pc w/ bleeding oil & gas w/ lively show med brown oil; increase on break, sm clingy, few loose chalk

3150
working on mud-pump

LS - cream to lt grey, fine xln; foss ip; platy & lithographic; sl chalky break; prevalent brown staining on edges & few fracs

LS - cream, med xln w/ sl granular to sucrosic texture; dissolution pp to sm vuggy porosity w/ partial re-xln to intrafoss; moderate visible porosity w/ ssfo in few pcs; ss gassy oil w/ increase on break; faint cup odor

WT-9.1 / VIS-71 / LCM-1#

SH - flood grey gummy shale

LS - cream to white, ap fine xln; soft & chalky; sl brittle ip; flood gummy grey shale; few trace pcs dark grey to black shales

LS - cream to lt grey, med xln, foss w/ small ool, poor to moderate dissol porosity w/ small vgs & partial re-xln, fair odor w/ sso&g on (2) edge pcs, bleeds gas & oil, good show fo on break w/ med-dark brwn show, poor interconn on break

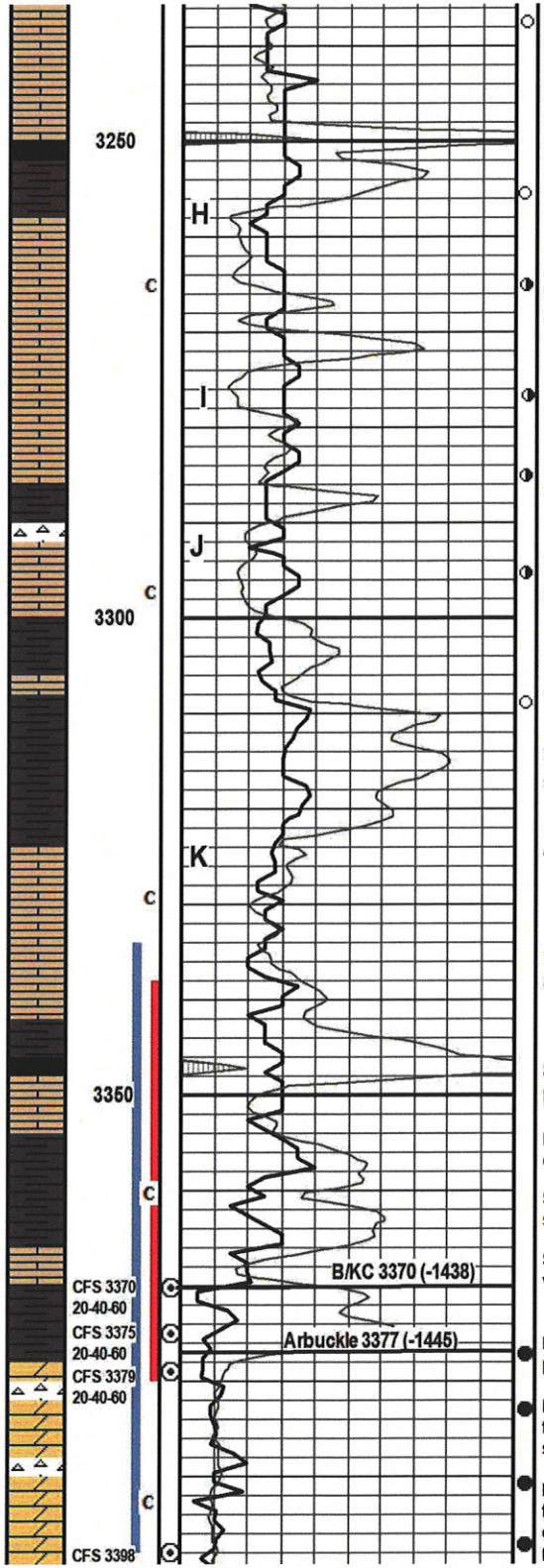
3200

LS - cream, med xln w/ sl granular to sucrosic texture; med to lg ooc w/ good vis interconn; v. fraible w/v. good apparent porosity & perm; barren; soft crush; flood chalk, sticky in some

Flood Chalk. Ooc LS, barren

LS - cream to lt tan, med xln; as above, sl sucrosic appearance; barren ooc porosity & chalk. No trace odor

LS - cream to lt tan, mostly aa w/ increase chalk, (1-2) pcs w/ ssfo (cavings?) few pcs LS -



grey, fine xln, blocky & dense, lithographic, trace dark fossiliferous CH, vitreous

LS - tan to brwn, fine to micro xln, blocky & dense; sharp break in some, trace CH

LS - cream to tan, fine to microxln, blocky & dense, few foss, mostly lithographic; trace cherty. (1) pc re-xln w/ vsso (caving likely - non representative)

LS; most pcs aa,fairly prev dark staining (appears mineral), (2) pcs w/ fair ooc, intrafoss & re-xln porosity w/ fsfo; increase on break w/ poor visible interconnected porosity; lt to med brown free oil w/ v slight odor; oa weak show

LS - cream to lt tan, grey, most fine xln w/ chalky texture in most; few pcs foss w/ poorly dev intrafoss porosity; chalky on break; (1) pcs w/ sl edge stn w/ trace fo on break; oa poor show

LS - cream, med xln w/ sl granular txture; appears tite; fsfo on crush; poor to no vis porosity; sl re-xln vis on break; trans LS - lt grn, argill ip & flood gummy shales, grey to pale green; fair sharp gassy cup odor

LS - cream, med xln, foss; (1) pc w/ show identical as above *sharp gassy odor; trans SH - grey to green, blocky & med firm to slippery, silty

LS - crm, micro xln w/ partial re-xln; trans argillaceous w/ sm interbedded shales; few pcs dark brown to black SH - very dense (wont crush) laminated & bleeding gas

SH - big clumps mushy pale grey shale, sticky & gummy; few trace black carb SH - v. dense; visible laminations

LS - cream to tan, brown, fine to microxln, blocky & dense & sticky shales; grey to brick, white, maroon; few pcs SH - green, med soft to firm, dark foss incl.

LS - cream to tan, brown, fine to microxln, cherty ip, blocky & dense; few white chalky; some SH - black to green mottled; few dark

SH - dark grey to black, green, blocky & dense; slippery/ few LS - cream to brown, v. fine xln; blocky & dense

Red SH - gummy, sample washes red; few med SH - mottled red & green, LS - grey, foss & argillaceous, v. dense

SH - mostly red, gummy, few red to brick, silty & sl firm; few LS cream to tan, fine to micro xln, foss, argill ip w/ sm interbedded grey SH

SH - red, gummy, SH - maroon & mottled ylw-grn, med soft & dark colored shale, v. few pcs CH - cream to grey, vitreous; trace SS - poorly consolidated, sub-rnd, tied up in SH

Dol - lt grey & cream, med to coarse xln rhomb; sm white chalky app material in matrix, trc. Show oil in few pcs; good show lt gold fo on break w/ fair odor; dull yellow fluor; inst streaming cut

Dol - cream to lt grey, app med to large xln w/ varying sm to lg xln growth throughout; good vis porosity & friability w/ vis white material in matrix (chalk?) FSFO in wet samples w/ poor to no saturated stain, good show on break, lt brown to gld; lively oil; oa gd show; fair to gd odor

Dol - mst cream, med to coarse xln, vis rhomb, mst friable, some sl dense; good vis intraxln & vgg porosity; fair show w/ increase good show on break. CH - cream to white, vitr to tripp in part; trip pcs carry show; good odor

Dol - ~50% aa; trans to cream, mostly fine to med xln; dense ip w/ less vis porosity & friability; still carries fair

3250
Mud-Co
Depth: 3379'
Wt. 9.1
Vis. 37
Filtrate 11.2
Chl 7,300
LCM TRC

3300

MUD WT 9.3 VIS 62 LCM # 1

DST #1 Arbuckle
Interval: 3339'-3379'
(40') Anchor
30-30-30-30
IF: built to BOB in 13"
ISI: built to 2" (sustained)
FF: built to BOB in 16"
FSI: built to 1" (sustained)
SIP: 1078-1051#
IF: 90-145#
FF: 162-202#
3350
Hydrostatic: 1628-1597#
BHT: 103 F
Grav: 38 API @ 60 Degrees

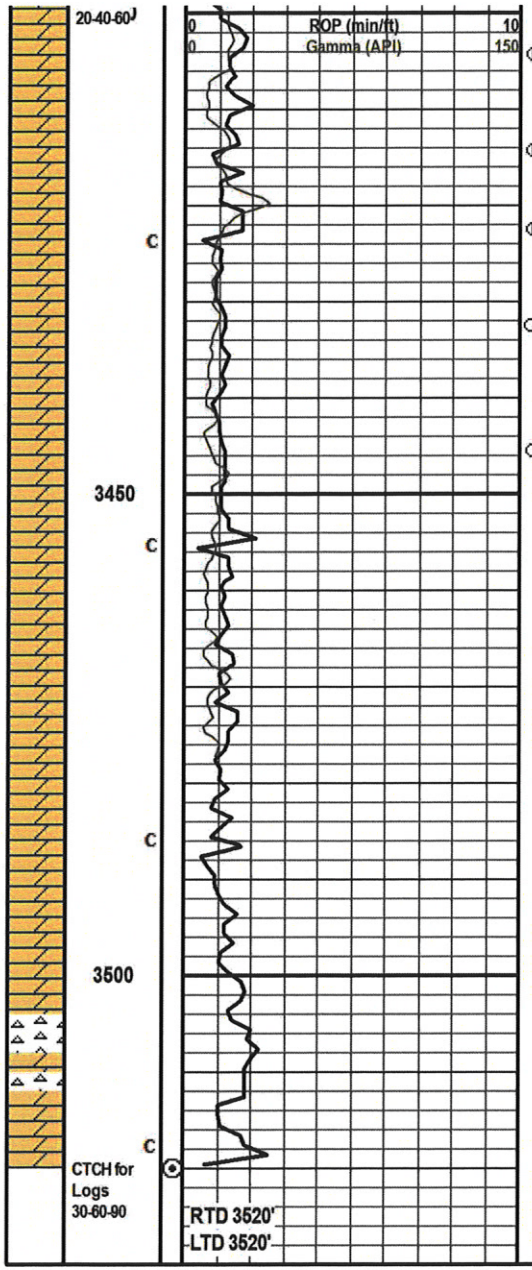
Recovery: 387' TF
232' GCO (5% G) (95% O)
155' light OCM (2% O) (98% M)
*slid 20' to bottom. took in mud on slide (see hydrostatic chart)

Pipe Strap: NA - strap broke in wind
Sure Shot: 2.25 degrees

WT-9.1 / VIS-45 / LCM-1#

After DST #1 we TIH w/ bit. Ice plug. Down ~13 hours thawing out lines.

DST #2 Arbuckle
Interval: 3334'-3398'
(64') Anchor



show w/ incr. on break; good odor

Dol - cream to buff, med to coarse xln, vis rhomb; clust w/ vary xln size w/ gd intra xln & vgy por; good friability w/ increase in show from 20" sample, good odor

Dol - cream, most fine to med xln; few pcs w/ med to coarse xln; fair to gd friability in most w/ ~30% barren; gd odor persisits & oa show remains good

Dol - cream to lt grey, med to coarse xln in some; good friab in part, few sl dense; mst pcs w/ fair to good show & odor remain; incr on break; decrease in oa fluor

Dol - cream, med to coarse xln in most; fair friability & vis porosity; few pcs sl dense, 25% sample w/ shows; primarily barren, sm pcs w/ sl lt grn hue (glauc stn) & few pcs chalky

Dol - white to cream, mst med xln; abdt chalk in tray, fr - gd fraib to partly dense; good vis por in most, 90% barren, few pcs w/ show appear to be cavings

Dol - cream to lt grey, mst fine to med xln; few edge pcs w/ lg-coarse xln rhomb dev; mst sl dense to partly friable; nsfo in tray; (1) pc w/ fsfo on break

Dol - cream to lt grey to buff,sm white chalky & green glauc stn ip; mst med xln, med dns to partly friable; few lg, transparent xln; barren w/ trc odor

no sample caught

Dol -cream - lt grey, mst med xln, fair friablility; chaly barren; trc odor

Dol - cream, mst med to coarse xln; fair to good friability in most w/ fair to good vis porosity; sl chalky ip w/ scatt green glauc stn, barren; no odor, ns , no fluor

Dol - cream, med to coarse xln in most; good friability, gd intraxln porosity dev w/ sm translucent xln rhombs in few; barren porosity; no odor/fluor; trace chalky

Dol - cream, mst aa, ns; trans to lt grey, fine xln; dense w/ poor to fair vis porosity & decr fraibility; pyrtic xln dev in sm pcs; barren

Dol - cream to buff, lt tan in sm w/ orng hue; fine to med xln; some pcs dol w/ comp transluc xln dev; dense in most & transition to CH - clear to cream, sm orange; vitreous

10-30-10-30

3400

IF: built to BOB in 22 seconds
ISI: no blowback
FF: built to BOB in 35 seconds
FSI: no blowback
SIP: 1076-1072#
IF: 675-634#
FF: 744-809#
Hydrostatic: 1640-1613#
BHT: 109 F
Grav: 39 API @ 60 Degrees

Recovery: 1937' TF

387' MO (60% O) (40% M)
1430' MCGO (75% O) (15% G) (10% M)
120' OM (30% O) (70%)

3450
Mud-Co
Depth: 3476'
Wt. 9.1
Vis. 48
Filtrate 8.8
Chl 6,000
LCM 2#

WT-9.0 / VIS-53 / LCM-2#

3500

Sure Shot: 2.5 degrees
BHS - Log 4 degrees

RTD @ 8:20 a.m.
LTD @ 12:08 p.m.
Logging Tools Failed. Restart Logging @ 5 p.m.
Done Logging ~9 p.m.