

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

New Well  Re-Entry  Workover

Oil  WSW  SWD

Gas  DH  EOR

OG  GSW

CM (Coal Bed Methane)

Cathodic  Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

Deepening  Re-perf.  Conv. to EOR  Conv. to SWD  
 Plug Back  Liner  Conv. to GSW  Conv. to Producer

Commingled Permit #: \_\_\_\_\_

Dual Completion Permit #: \_\_\_\_\_

SWD Permit #: \_\_\_\_\_

EOR Permit #: \_\_\_\_\_

GSW Permit #: \_\_\_\_\_

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE  NW  SE  SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27  NAD83  WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite:

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: \_\_\_\_\_

Confidential Release Date: \_\_\_\_\_

Wireline Log Received  Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5) (Submit ACO-4)</i>	<b>PRODUCTION INTERVAL:</b> 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	ALTA 1
Doc ID	1411559

Tops

Name	Top	Datum
Anhy.	2316	(+ 567)
Base Anhy.	2376	(+ 507)
Heebner	3933	(-1050)
Toronto	3953	(-1070)
Lansing	3969	(-1086)
Muncie Creek	4126	(-1243)
Stark	4217	(-1334)
Hushpuckney	4251	(-1368)
BKC	4291	(-1408)
Marmaton	4321	(-1438)
Pawnee	4413	(-1530)
Ft. Scott	4475	(-1592)
Cherokee Sh.	4500	(-1617)
Miss.	4585	(-1702)
LTD	4707	(-1824)



RECEIVED

MAY 25 2018



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

# Invoice

DATE	INVOICE #
5/18/2018	27271

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	#1	Alta	Gove	Cheyenne Well	Oil	Development	Cement Port Collar	Jonathan
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				70	Miles	5.00	350.00
576D-D	Pump Charge - Deep Surface (> 500 Ft.) & Port Collars				1	Job	1,300.00	1,300.00
290	D-Air				3	Gallon(s)	42.00	126.00T
330	Swift Multi-Density Standard (MIDCON II)				200	Sacks	16.25	3,250.00T
276	Flocele				50	Lb(s)	2.50	125.00T
105	Port Collar Tool Rental With Man				1	Each	275.00	275.00T
581D	Service Charge Cement				275	Sacks	1.75	481.25
583D	Drayage				958	Ton Miles	0.85	814.30
	Subtotal							6,721.55
	Sales Tax Gove County						8.50%	320.96

<b>We Appreciate Your Business!</b>	<b>Total</b>	\$7,042.51
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Services, Inc.

CHARGE TO: Palomine Petroleum  
 ADDRESS: \_\_\_\_\_  
 CITY, STATE, ZIP CODE: \_\_\_\_\_

TICKET 27271

PAGE 1 OF 1

SERVICE LOCATIONS		WELL/PROJECT NO		LEASE		COUNTY/PARISH		STATE		CITY		DATE	
1. <u>Boys, KS</u>		#1		<u>Alfa</u>		<u>Boone</u>		<u>KS</u>				<u>05/18/18</u>	
2. <u>Ness City, KS</u>		CONTRACTOR		RIG NAME/NO.		SHIPPED VIA		DELIVERED TO		WELL PERMIT NO.		WELL LOCATION	
		<u>Cheyenne Well Service</u>				<u>CT</u>		<u>Location</u>					
3.		TICKET TYPE		WELL TYPE		JOB PURPOSE							
		<input checked="" type="checkbox"/> SERVICE		<u>D-1</u>		<u>Development</u>							
4.		SALES		WELL CATEGORY									
				<u>Development</u>									
REFERRAL LOCATION		INVOICE INSTRUCTIONS											

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	MILEAGE #	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT
		LOC	ACCT	DF								
575		1			#113	70	mi				5.00	350.00
576D		1			Pump Charge - Port Collar	1	EA				1300.00	1300.00
230		1			D-Air	3	gal				42.00	126.00
330		2			Swift Mult. Density Standard	200	SKS				16.25	3250.00
276		2			Flacke	50	lbs				2.50	125.00
105		2			Port Collar Tool w/Man	1	EA				275.00	275.00
581		2			Service Charge Consent	275	SKS				27306.165	7500.00
583						70	wt				958.771	6721.55

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: \_\_\_\_\_ 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		PAGE TOTAL	
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?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO							
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND								TOTAL	
								7042.51	

SWIFT OPERATOR: John Smith APPROVAL: \_\_\_\_\_

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

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE	PAGE NO.
05/18/18	1
TICKET NO.	
27271	

CUSTOMER		WELL NO.		LEASE		JOB TYPE		DESCRIPTION OF OPERATION AND MATERIALS	
Palomino Petroleum		#1		Alta		Port Collar			
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)			
				T	C	TUBING	CASING		
	1030								On location, set up trucks
									2 7/8" x 5 1/2"
									Port Collar - 2282'
	1100						1200		Test P.C.
									Open Tool
		3 bpm	3			300			Test - Blowing
	1110	3				300			Start Cement
		3	12						Catch Circulation
		3 1/2	88			300			Cement Circulating, Raise wt. 74#
	1141	3 1/2	100			200			Fin Cmt, Start Displacement
	1150	3 1/2				650			Fin Displacement
									Run 5 Jt's
	1200	3				350			Reverse Out
	1210		30						Fin Rev Out - Clean
									Wash up truck
									Rack up
									Job Complete
									Thanks
									Jon, Austin, Isaac





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

RECEIVED

MAY 17 2018

# Invoice

DATE	INVOICE #
5/11/2018	31400

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	#1	Alta	Gove	WW Drilling Rig #8	Oil	Development	Cement Long Str...	Blaine
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				80	Miles	5.00	400.00
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				12	Each	85.00	1,020.00T
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
290	D-Air				1	Gallon(s)	42.00	42.00T
281	Mud Flush				500	Gallon(s)	1.50	750.00T
221	Liquid KCL (Clayfix)				4	Gallon(s)	25.00	100.00T
581D	Service Charge Cement				225	Sacks	1.75	393.75
583D	Drayage				916.55	Ton Miles	0.85	779.07
	Subtotal							12,291.07
	Sales Tax Gove County						8.50%	800.55

**We Appreciate Your Business!**

**Total**

\$13,091.62





CHARGE TO: **Palenik Petroleum**  
 ADDRESS  
 CITY, STATE, ZIP CODE

TICKET 031400

PAGE 1 OF 2

SERVICE LOCATIONS 1. <b>Am City KS</b>	WELL/PROJECT NO. <b>1</b>	LEASE <b>Alta</b>	COUNTY/PARISH <b>Gove</b>	STATE <b>KS</b>	CITY <b>Gove</b>	DATE <b>11 May 18</b>	OWNER
2. <input type="checkbox"/> SERVICE <input type="checkbox"/> SALES	CONTRACTOR	RIG NAME/NO. <b>8</b>	SHIPPED VIA <b>ET</b>	DELIVERED TO <b>location</b>	ORDER NO.	WELL PERMIT NO.	WELL LOCATION <b>18 - 14 - 3d</b>
3. WELL TYPE <b>Dil</b>	WELL CATEGORY <b>Development</b>	JOB PURPOSE <b>convert long string</b>	INVOICE INSTRUCTIONS				
4. REFERRAL LOCATION	PRICE REFERENCE						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
515		1			MILEAGE TRK 114	80	mi			5.00	400.00
578		1			Pump Charge long string	1	ea			1300.00	1300.00
403		1			Convert Basket	5 1/2	in	1	ea	275.00	275.00
404		1			Post Collar	5 1/2	in	1	ea	2500.00	2500.00
406		1			Latch down plug & basket	5 1/2	in	1	ea	250.00	250.00
407		1			insert flat shoe w/ auto fill	5 1/2	in	1	ea	325.00	325.00
409		1			Turbolizer	5 1/2	in	1	ea	85.00	85.00
419		1			Rotating head Rooster	5 1/2	in	1	ea	200.00	200.00

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

DATE SIGNED *Alan Handled* TIME SIGNED  AM  PM **8:10**

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

SURVEY	AGREE	UNDECIDED	DISAGREE	PAGE TOTAL
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?				6270.00
WE UNDERSTOOD AND MET YOUR NEEDS?				6071.07
OUR SERVICE WAS PERFORMED WITHOUT DELAY?				12,291.07
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				
ARE YOU SATISFIED WITH OUR SERVICE?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	TOTAL	800.55
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND				13091.62

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

SWIFT OPERATOR *Asyll* APPROVAL

Thank You!



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

TICKET CONTINUATION

TICKET No. 31422

Customer: **Palomino Petroleum**

WELL: **Alta #1**

DATE: **11 MAY 18**

PAGE: **2** OF **2**

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	QTY		UNIT		UNIT PRICE	AMOUNT
		LOG	ACCT	DR			QTY	UNIT	QTY	UNIT		
330					1	SMD cement	125	SK			16.25	2031.25
325					1	Standard Cement	100	SK			13.00	1300.00
284					1	Cal Seal	500	lb	5	SK	35.00	175.00
283					1	SALT	500	lb			0.20	100.00
285					1	CFR-1	50	lb			4.50	225.00
276					1	Flocals	50	lb			2.50	125.00
290					1	D-AIR	1	gal			42.00	42.00
281					1	mud flush	500	gal			1.50	750.00
221					1	KCL Dyeid	4	gal			25.00	100.00
581					1	SERVICE CHARGE					1.75	393.75
583					1	MILEAGE CHARGE					0.85	779.07

CONTINUATION TOTAL **6021.07**

JOB LOG

SWIFT Services, Inc.

DATE 11 MAY 18 PAGE NO. 1

CUSTOMER *Petrochem* WELL NO. *#1* LEASE *Alta* JOB TYPE *Cement long string* TICKET NO. *31400*

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								100sk EA-2 cement w/ $\frac{1}{4}$ " floccs 125sk SMD cement w/ $\frac{1}{4}$ " floccs 5 $\frac{1}{2}$ " x 4" casing 112jts Control valves 1, 3, 5, 7, 9, 11, 12, 13, 15, 17, 19, 56 Basket 57 Birt collar 57 2298"
	1500							on loc 12K 114
	1540							start 5 $\frac{1}{2}$ " x 14" casing in well
	1745							Drop ball - circulate - ROTATE
	1835	4	12				200	Pump 500 gal mud flush
		4	20				200	Pump 20 bbl KCL flush
			5					Plug RH 30sk
			43					
	1850	4	43				200	mix SMD cement 95sk @ 12.5 ppg
		4	24				200	mix EA-2 cement 100sk @ 15.3 ppg
			67 total					
								Drop latch down plug wash out Plug & Line
	1910	6					200	Displace plug
		6	80				500	catch pressure
		6	108				650	
	1930	6	114				1500	Land plug
								Release pressure to truck - diked up
	1935							wash truck
								Rack up
	2010							job complete Thanks Frat, Blaine & Mike



GLOBAL OIL FIELD SERVICES, LLC

24 S. Lincoln  
RUSSELL, KS 67665

RECEIVED

MAY 09 2018

# Invoice

Date	Invoice #
5/7/2018	3329

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

P.O. No.	Terms	Project
ALTA#1	Due on receipt	

Quantity	Description	Rate	Amount
170	COMMON CEMENT	16.50	2,805.00
5	CALCIUM-CHLORIDE	80.00	400.00
3	BENTONITE GEL	30.00	90.00
178	HANDLING	1.90	338.20
	BULK MILEAGE	450.00	450.00
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
	25% DISCOUNT IF PAID WITHIN 15 DAYS OF INVOICE		
	NESS CO SALES TAX	7.50%	0.00

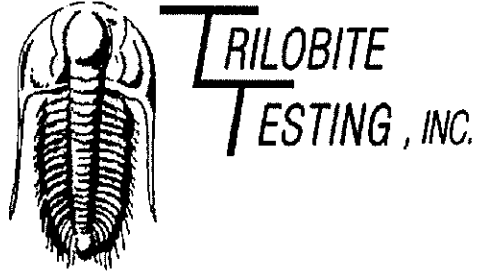
Thank you for your business.

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

**Total** \$5,164.45







## DRILL STEM TEST REPORT

Prepared For: **Palomino Petroleum Inc.**

4824 SE. 84th.St.  
Newton KS 67114

ATTN: Ryan Seib

**Alta #1**

**18-14s-30w Gove,KS**

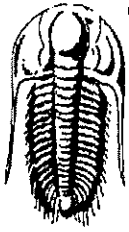
Start Date: 2018.05.06 @ 06:03:15

End Date: 2018.05.06 @ 12:09:45

Job Ticket #: 63589                      DST #: 1

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

Printed: 2018.05.11 @ 11:40:57



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Palomino Petroleum Inc.

**18-14s-30w Gove,KS**

4824 SE. 84th.St.  
New ton KS 67114

**Alta #1**

Job Ticket: 63589

**DST#: 1**

ATTN: Ryan Seib

Test Start: 2018.05.06 @ 06:03:15

## GENERAL INFORMATION:

Formation: **LKC C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:35:00

Time Test Ended: 12:09:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Mike Roberts

Unit No: 81

Interval: **3990.00 ft (KB) To 4023.00 ft (KB) (TVD)**

Reference Elevations: 2883.00 ft (KB)

Total Depth: 4023.00 ft (KB) (TVD)

2878.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8647**

**Inside**

Press@RunDepth: 23.35 psig @ 3991.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.06

End Date:

2018.05.06

Last Calib.: 2018.05.06

Start Time: 06:03:15

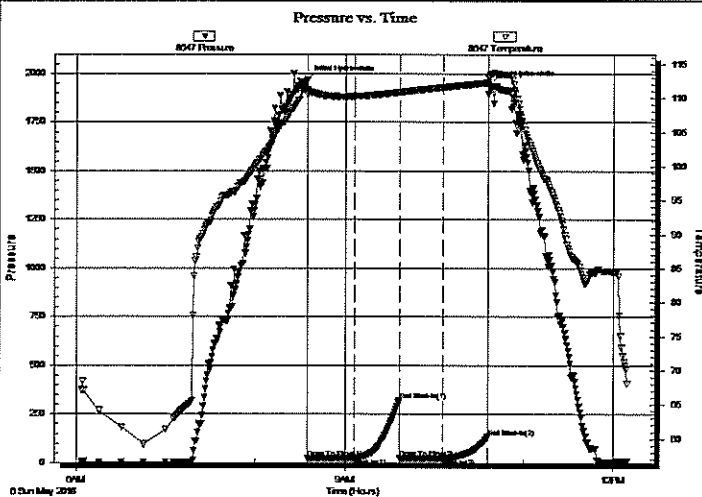
End Time:

12:09:45

Time On Btm: 2018.05.06 @ 08:34:45

Time Off Btm: 2018.05.06 @ 10:36:30

TEST COMMENT: IF:Built to weak surface blow  
IS:No return blow  
FF:No blow  
FS:No return blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1967.44	111.26	Initial Hydro-static
1	21.60	110.40	Open To Flow (1)
32	23.06	110.28	Shut-In(1)
62	322.23	110.88	End Shut-In(1)
62	23.68	110.71	Open To Flow (2)
91	23.35	111.59	Shut-In(2)
122	135.05	112.27	End Shut-In(2)
122	1945.01	113.06	Final Hydro-static

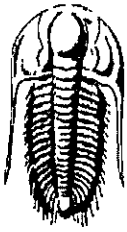
## Recovery

Length (ft)	Description	Volume (bbl)
1.00	mud 100% m	0.00

## Gas Rates

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





**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Palomino Petroleum Inc.

**18-14s-30w Gove, KS**

4824 SE 84th.St.  
New ton KS 67114

**Alta #1**

Job Ticket: 63589

DST#: 1

ATTN: Ryan Seib

Test Start: 2018.05.06 @ 06:03:15

**GENERAL INFORMATION:**

Formation: LKC C

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:35:00

Time Test Ended: 12:09:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Mike Roberts

Unit No: 81

Interval: 3990.00 ft (KB) To 4023.00 ft (KB) (TVD)

Reference Elevations: 2883.00 ft (KB)

Total Depth: 4023.00 ft (KB) (TVD)

2878.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8374 Outside**

Press@RunDepth: psig @ 3991.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.06

End Date:

2018.05.06

Last Calib.: 2018.05.06

Start Time: 06:03:15

End Time:

12:10:15

Time On Btm:

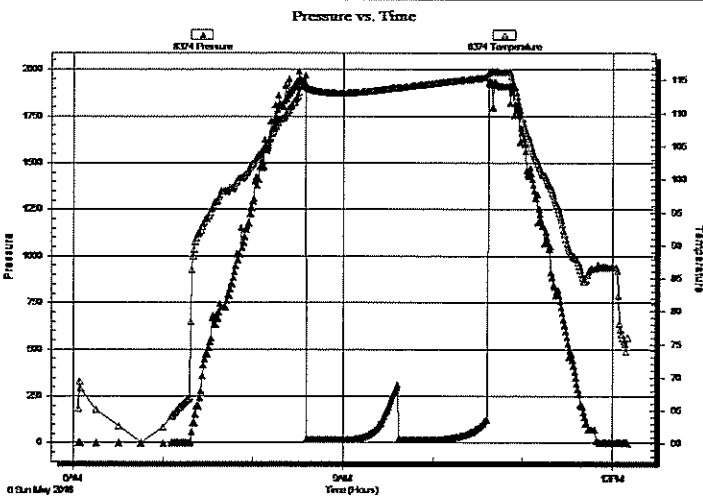
Time Off Btm:

TEST COMMENT: IF: Built to weak surface blow

IS: No return blow

FF: No blow

FS: No return blow



**PRESSURE SUMMARY**

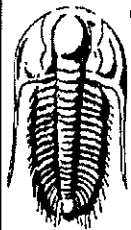
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

**Recovery**

Length (ft)	Description	Volume (bbl)
1.00	mud 100% m	0.00

**Gas Rates**

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Palomino Petroleum Inc.  
4824 SE 84th.St.  
New ton KS 67114  
ATTN: Ryan Seib

**18-14s-30w Gove,KS**  
**Alta #1**  
Job Ticket: 63589      DST#: 1  
Test Start: 2018.05.06 @ 06:03:15

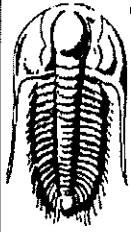
### Tool Information

Drill Pipe:	Length: 3877.00 ft	Diameter: 3.80 inches	Volume: 54.38 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 117.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 54.96 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3990.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	33.00 ft			
Tool Length:	61.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3963.00	
Shut In Tool	5.00			3968.00	
Hydraulic tool	5.00			3973.00	
Jars	5.00			3978.00	
Safety Joint	3.00			3981.00	
Packer	5.00			3986.00	28.00      Bottom Of Top Packer
Packer	4.00			3990.00	
Stubb	1.00			3991.00	
Recorder	0.00	8647	Inside	3991.00	
Recorder	0.00	8374	Outside	3991.00	
Perforations	27.00			4018.00	
Bullnose	5.00			4023.00	33.00      Bottom Packers & Anchor

**Total Tool Length: 61.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Palomino Petroleum Inc.

**18-14s-30w Gove, KS**

4824 SE. 84th. St.  
New ton KS 67114

**Alta #1**

Job Ticket: 63589

DST#: 1

ATTN: Ryan Seib

Test Start: 2018.05.06 @ 06:03:15

## Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 67.00 sec/qt

Water Loss: 6.34 in<sup>3</sup>

Resistivity: 0.00 ohm.m

Salinity: 4800.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API: 0 deg API

Water Salinity: 0 ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	mud 100% <sub>m</sub>	0.005

Total Length: 1.00 ft      Total Volume: 0.005 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments:

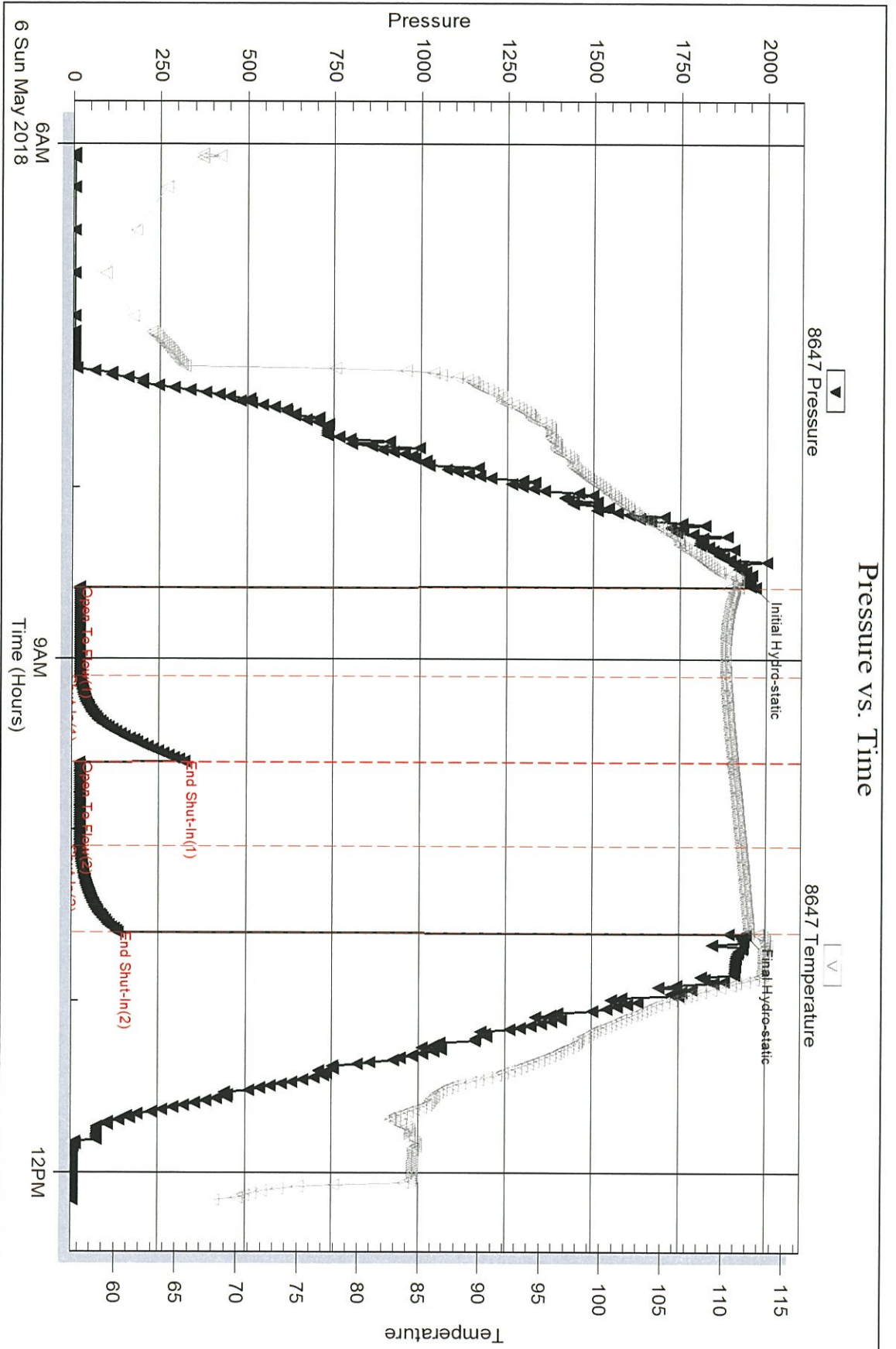
Serial #: 8647

Inside

Palomino Petroleum Inc.

Alta #1

DST Test Number: 1



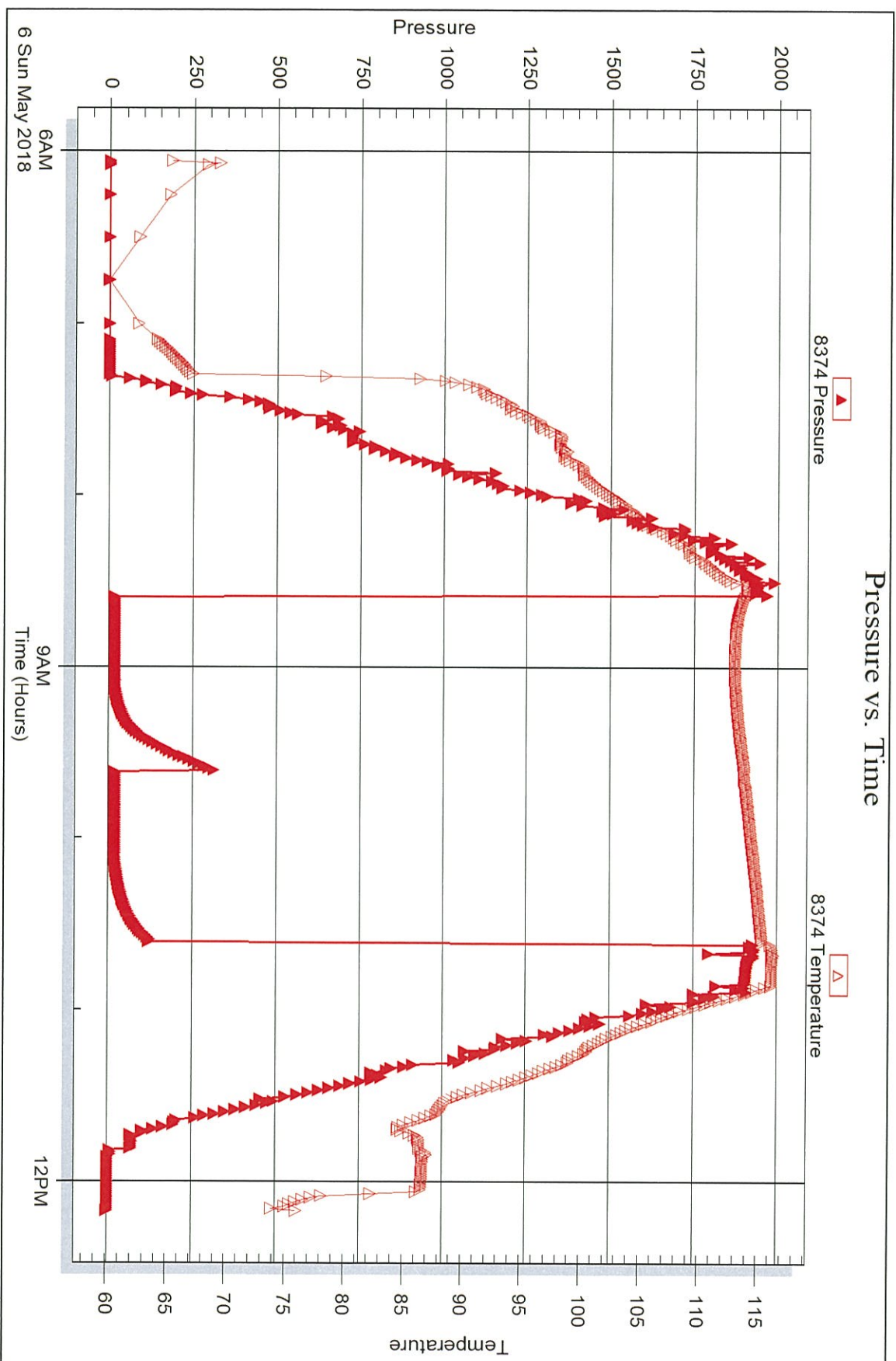
Serial #: 8374

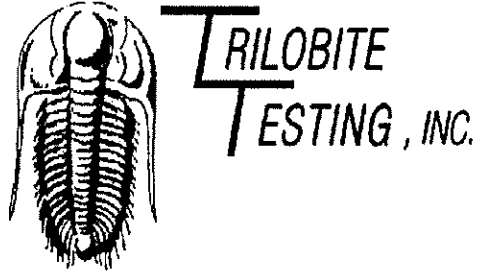
Outside

Palomino Petroleum Inc.

Alta #1

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **Palomino Petroleum Inc.**

4824 SE. 84th.St.  
Newton KS 67114

ATTN: Ryan Seib

**Alta #1**

**18-14s-30w Gove,KS**

Start Date: 2018.05.06 @ 21:51:15

End Date: 2018.05.07 @ 03:10:00

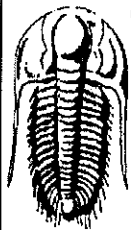
Job Ticket #: 64590                      DST #: 2

Trilobite Testing, Inc

1515 Commerce Parkway Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.05.11 @ 11:40:36



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Palomino Petroleum Inc.

**18-14s-30w Gove, KS**

4824 SE. 84th. St.  
New ton KS 67114

**Alta #1**

Job Ticket: 64590

DST#: 2

ATTN: Ryan Seib

Test Start: 2018.05.06 @ 21:51:15

## GENERAL INFORMATION:

Formation: LKC E - F

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:33:15

Time Test Ended: 03:10:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 81

Interval: 4036.00 ft (KB) To 4074.00 ft (KB) (TVD)

Total Depth: 4074.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2883.00 ft (KB)

2878.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 8647**

Inside

Press@RunDepth: 26.84 psig @ 4037.00 ft (KB)

Start Date: 2018.05.06

End Date: 2018.05.07

Capacity: 8000.00 psig

Last Calib.: 2018.05.07

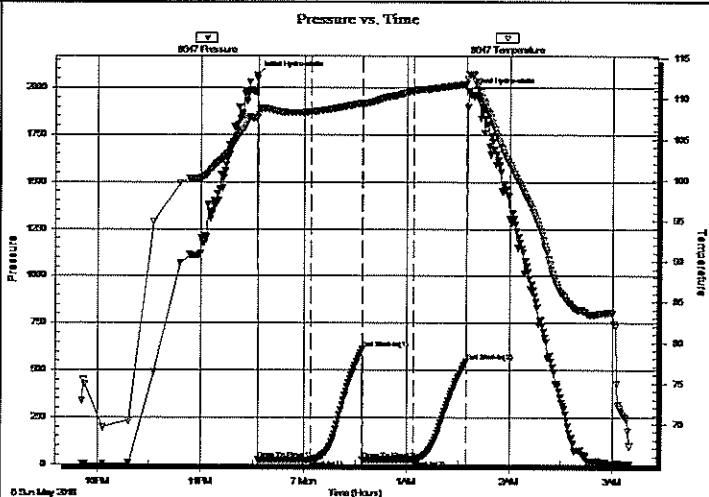
Start Time: 21:51:15

End Time: 03:10:00

Time On Btm: 2018.05.06 @ 23:32:15

Time Off Btm: 2018.05.07 @ 01:36:15

TEST COMMENT: IF: Built to 1" blow  
IS: No return blow  
FF: No blow  
FS: No return blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2068.02	107.60	Initial Hydro-static
1	22.06	108.00	Open To Flow (1)
32	24.35	108.37	Shut-In(1)
62	611.93	109.43	End Shut-In(1)
62	25.42	109.20	Open To Flow (2)
92	26.84	110.94	Shut-In(2)
123	548.13	111.81	End Shut-In(2)
124	1979.65	113.01	Final Hydro-static

## Recovery

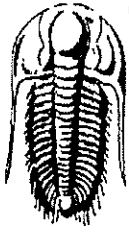
Length (ft)	Description	Volume (bbl)
3.00	mud 100% m	0.01

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE**  
**TESTING, INC.**

# DRILL STEM TEST REPORT

Palomino Petroleum Inc.

**18-14s-30w Gove,KS**

4824 SE 84th.St.  
New ton KS 67114

**Alta #1**

Job Ticket: 64590

**DST#: 2**

ATTN: Ryan Seib

Test Start: 2018.05.06 @ 21:51:15

## GENERAL INFORMATION:

Formation: **LKC E - F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:33:15

Time Test Ended: 03:10:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 81

Interval: **4036.00 ft (KB) To 4074.00 ft (KB) (TVD)**

Reference Elevations: 2883.00 ft (KB)

Total Depth: 4074.00 ft (KB) (TVD)

2878.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8374** Outside

Press@RunDepth: psig @ 4037.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.06 End Date: 2018.05.07

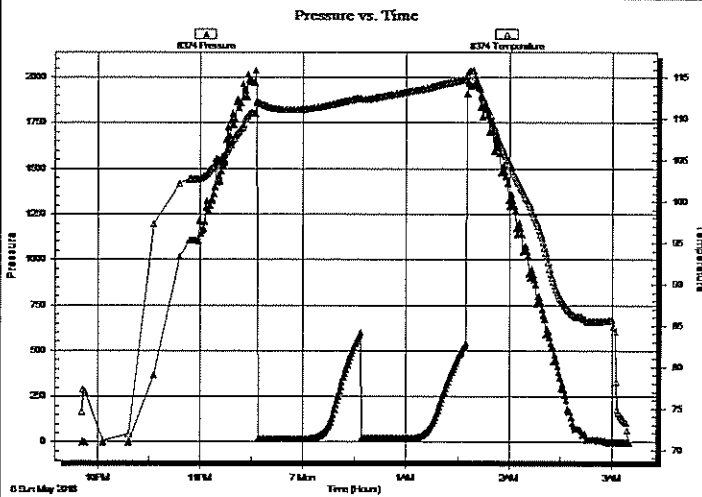
Last Calib.: 2018.05.07

Start Time: 21:51:15 End Time: 03:10:00

Time On Btm:

Time Off Btm:

TEST COMMENT: IF:Built to 1" blow  
IS:No return blow  
FF:No blow  
FS:No return blow



## PRESSURE SUMMARY

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

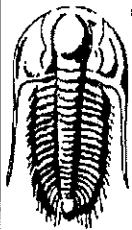
## Recovery

Length (ft)	Description	Volume (bbl)
3.00	mud 100% m	0.01

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Palomino Petroleum Inc.

18-14s-30w Gove, KS

4824 SE. 84th. St.  
New ton KS 67114

Alta #1

Job Ticket: 64590

DST#: 2

ATTN: Ryan Seib

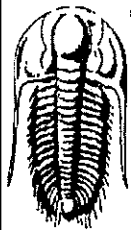
Test Start: 2018.05.06 @ 21:51:15

### Tool Information

Drill Pipe:	Length: 3908.00 ft	Diameter: 3.80 inches	Volume: 54.82 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 117.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 73000.00 lb
			<u>Total Volume: 55.40 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	4036.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	38.00 ft			
Tool Length:	66.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4009.00	
Shut In Tool	5.00			4014.00	
Hydraulic tool	5.00			4019.00	
Jars	5.00			4024.00	
Safety Joint	3.00			4027.00	
Packer	5.00			4032.00	28.00 Bottom Of Top Packer
Packer	4.00			4036.00	
Stubb	1.00			4037.00	
Recorder	0.00	8647	Inside	4037.00	
Recorder	0.00	8374	Outside	4037.00	
Perforations	32.00			4069.00	
Bullnose	5.00			4074.00	38.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>66.00</b>				



**TRILOBITE**  
TESTING, INC.

# DRILL STEM TEST REPORT

FLUID SUMMARY

Palomino Petroleum Inc.

18-14s-30w Gove, KS

4824 SE 84th.St.  
New ton KS 67114

Alta #1

Job Ticket: 64590

DST#: 2

ATTN: Ryan Seib

Test Start: 2018.05.06 @ 21:51:15

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.35 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 5500.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
3.00	mud 100% m	0.015

Total Length: 3.00 ft

Total Volume: 0.015 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial#:

Laboratory Name:

Laboratory Location:

Recovery Comments:

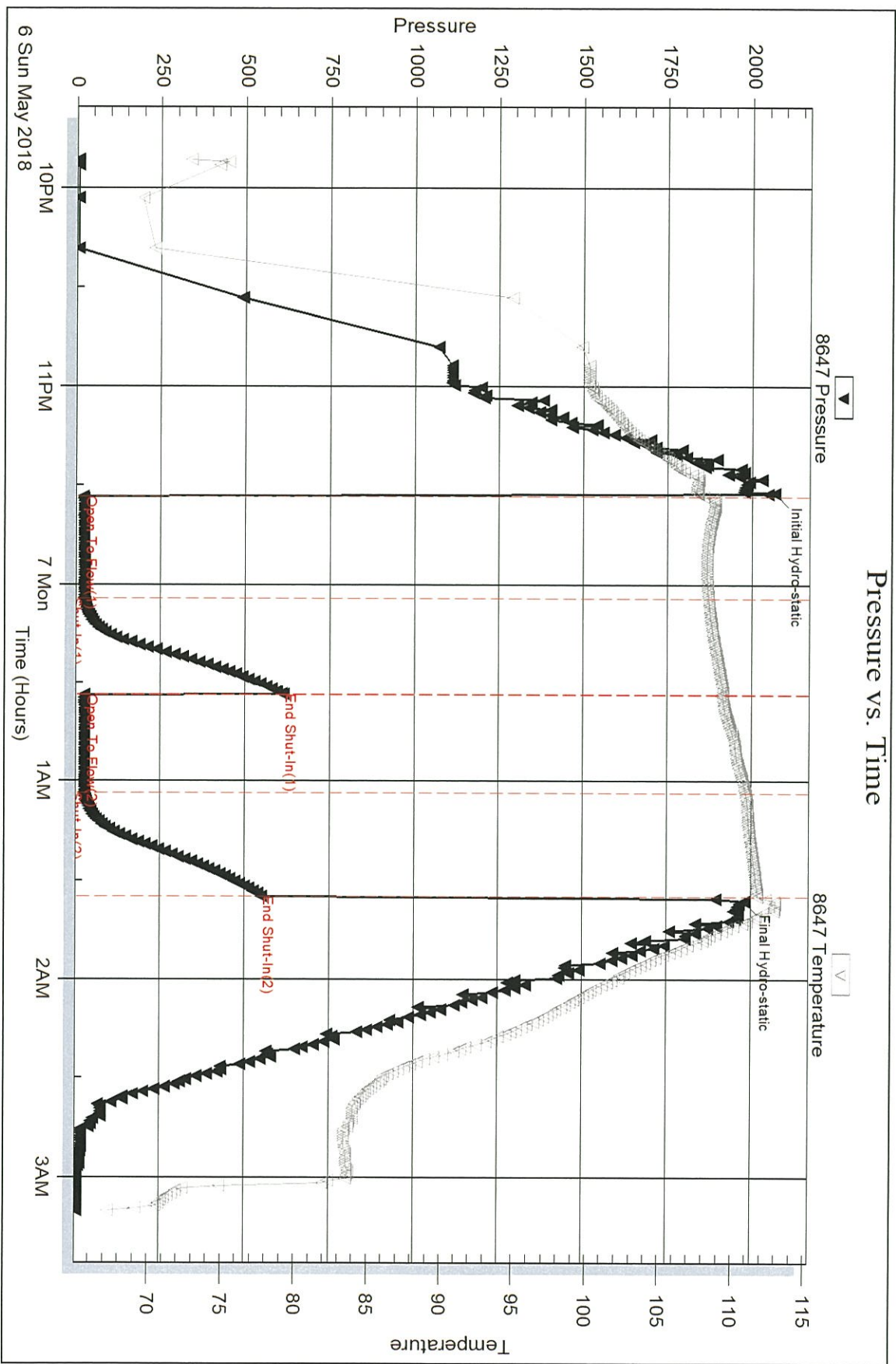
Serial #: 8647

Inside

Palomino Petroleum Inc.

Alta #1

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 64590

Printed: 2018.05.11 @ 11:40:37

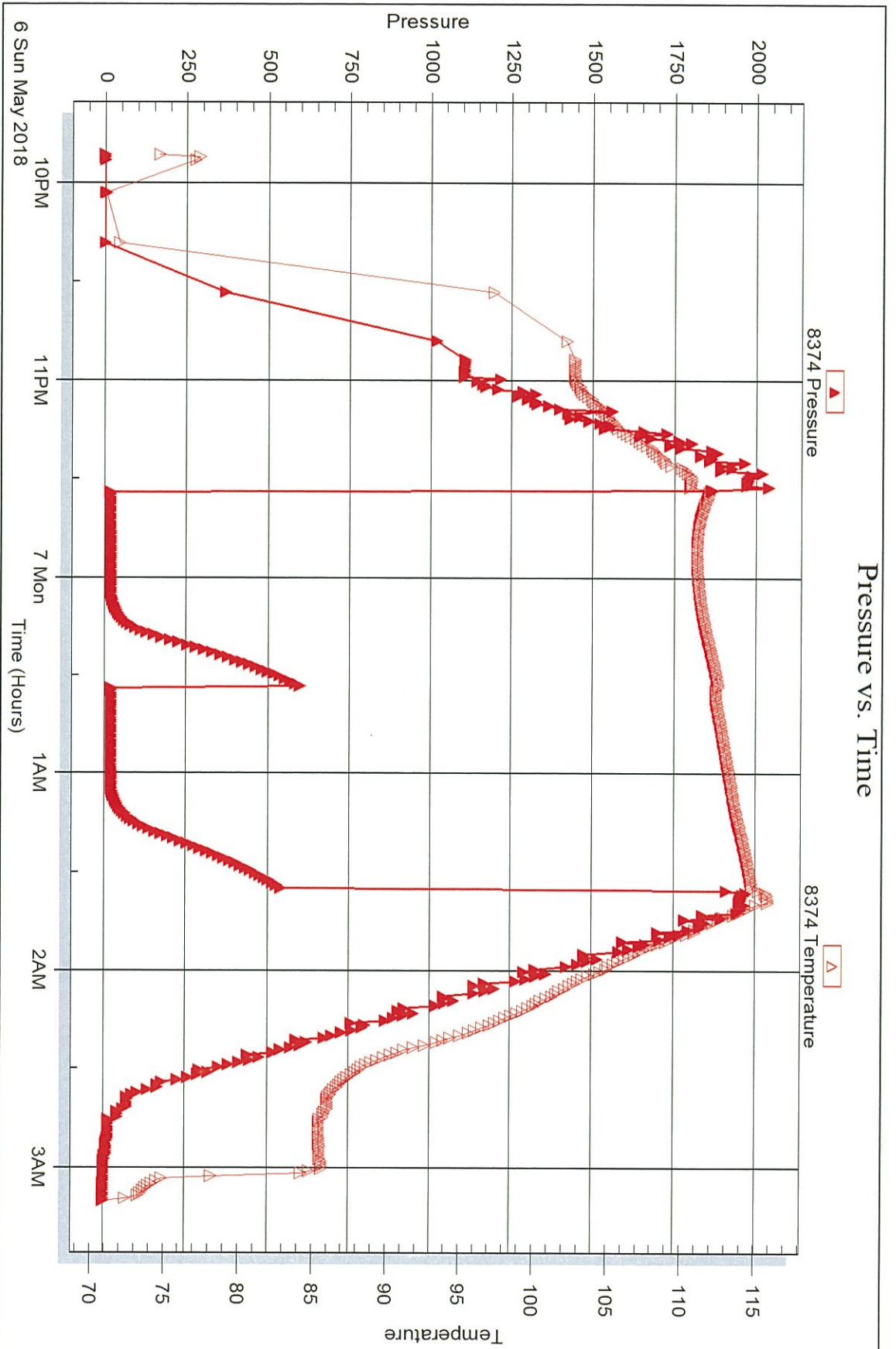
Serial #: 8374

Outside

Palomino Petroleum Inc.

Alta #1

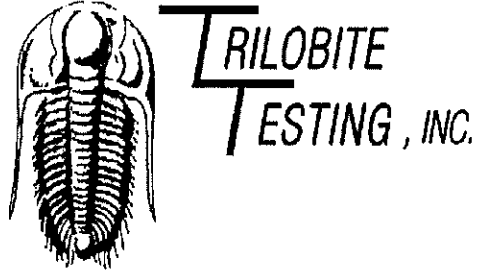
DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 64590

Printed: 2018.05.11 @ 11:40:37



## DRILL STEM TEST REPORT

Prepared For: **Palomino Petroleum Inc.**

4824 SE. 84th.St.  
Newton KS 67114

ATTN: Ryan Seib

**Alta #1**

**18-14s-30w Gove,KS**

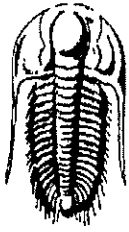
Start Date: 2018.05.07 @ 16:25:15

End Date: 2018.05.07 @ 21:59:00

Job Ticket #: 63591                      DST #: 3

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

Printed: 2018.05.11 @ 11:40:14



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Palomino Petroleum Inc.

18-14s-30w Gove, KS

4824 SE. 84th. St.  
New ton KS 67114

Alta #1

Job Ticket: 63591

DST#: 3

ATTN: Ryan Seib

Test Start: 2018.05.07 @ 16:25:15

## GENERAL INFORMATION:

Formation: LKC H - I

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:09:00

Time Test Ended: 21:59:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 81

Interval: 4116.00 ft (KB) To 4187.00 ft (KB) (TVD)

Reference Elevations: 2883.00 ft (KB)

Total Depth: 4187.00 ft (KB) (TVD)

2878.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8647

Inside

Press@RunDepth: 147.04 psig @ 4153.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.07

End Date: 2018.05.07

Last Calib.: 2018.05.07

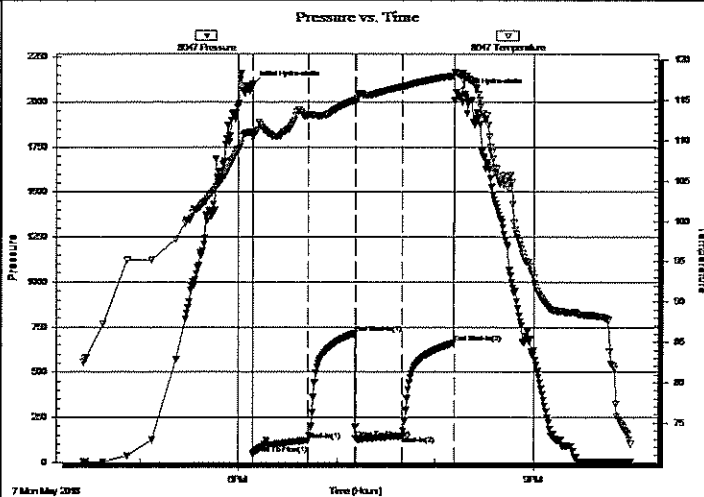
Start Time: 16:25:15

End Time: 21:59:00

Time On Btm: 2018.05.07 @ 18:08:45

Time Off Btm: 2018.05.07 @ 20:12:30

TEST COMMENT: IF: Built to 14" blow  
IS: No return blow  
FF: Built to 12" blow  
FS: No return blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2097.91	111.01	Initial Hydro-static
1	48.95	110.29	Open To Flow (1)
34	123.41	113.15	Shut-In(1)
62	714.05	114.98	End Shut-In(1)
63	132.33	114.89	Open To Flow (2)
91	147.04	116.63	Shut-In(2)
123	660.98	118.00	End Shut-In(2)
124	2053.94	118.36	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
117.00	ocm 5%o 95%m (collars)	0.58
103.00	ocm 10%o 90%m	1.44
10.00	free oil 100%o	0.14

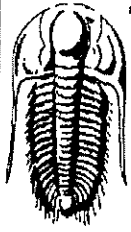
\* Recovery from multiple tests

## Gas Rates

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







**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Palomino Petroleum Inc.

18-14s-30w Gove, KS

4824 SE 84th.St.  
New ton KS 67114

Alta #1

Job Ticket: 63591

DST#: 3

ATTN: Ryan Seib

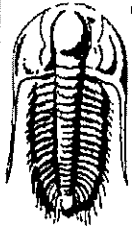
Test Start: 2018.05.07 @ 16:25:15

### Tool Information

Drill Pipe:	Length: 4003.00 ft	Diameter: 3.80 inches	Volume: 56.15 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 117.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 56.73 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	4116.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	71.00 ft			
Tool Length:	99.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4089.00	
Shut In Tool	5.00			4094.00	
Hydraulic tool	5.00			4099.00	
Jars	5.00			4104.00	
Safety Joint	3.00			4107.00	
Packer	5.00			4112.00	28.00 Bottom Of Top Packer
Packer	4.00			4116.00	
Stubb	1.00			4117.00	
Perforations	3.00			4120.00	
Change Over Sub	1.00			4121.00	
Drill Pipe	31.00			4152.00	
Change Over Sub	1.00			4153.00	
Recorder	0.00	8647	Inside	4153.00	
Recorder	0.00	8374	Outside	4153.00	
Perforations	29.00			4182.00	
Bullnose	5.00			4187.00	71.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>99.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Palomino Petroleum Inc.

18-14s-30w Gove, KS

4824 SE 84th.St.  
New ton KS 67114

Alta #1

Job Ticket: 63591

DST#: 3

ATTN: Ryan Seib

Test Start: 2018.05.07 @ 16:25:15

## Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 52.00 sec/qt

Water Loss: 6.36 in<sup>3</sup>

Resistivity: 0.00 ohm.m

Salinity: 4900.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

Water Salinity: 0 ppm

37 deg API

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
117.00	ocm 5%o 95%m (collars)	0.575
103.00	ocm 10%o 90%m	1.445
10.00	free oil 100%o	0.140

Total Length: 230.00 ft      Total Volume: 2.160 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API= 39@80 corrected to 37@ 60

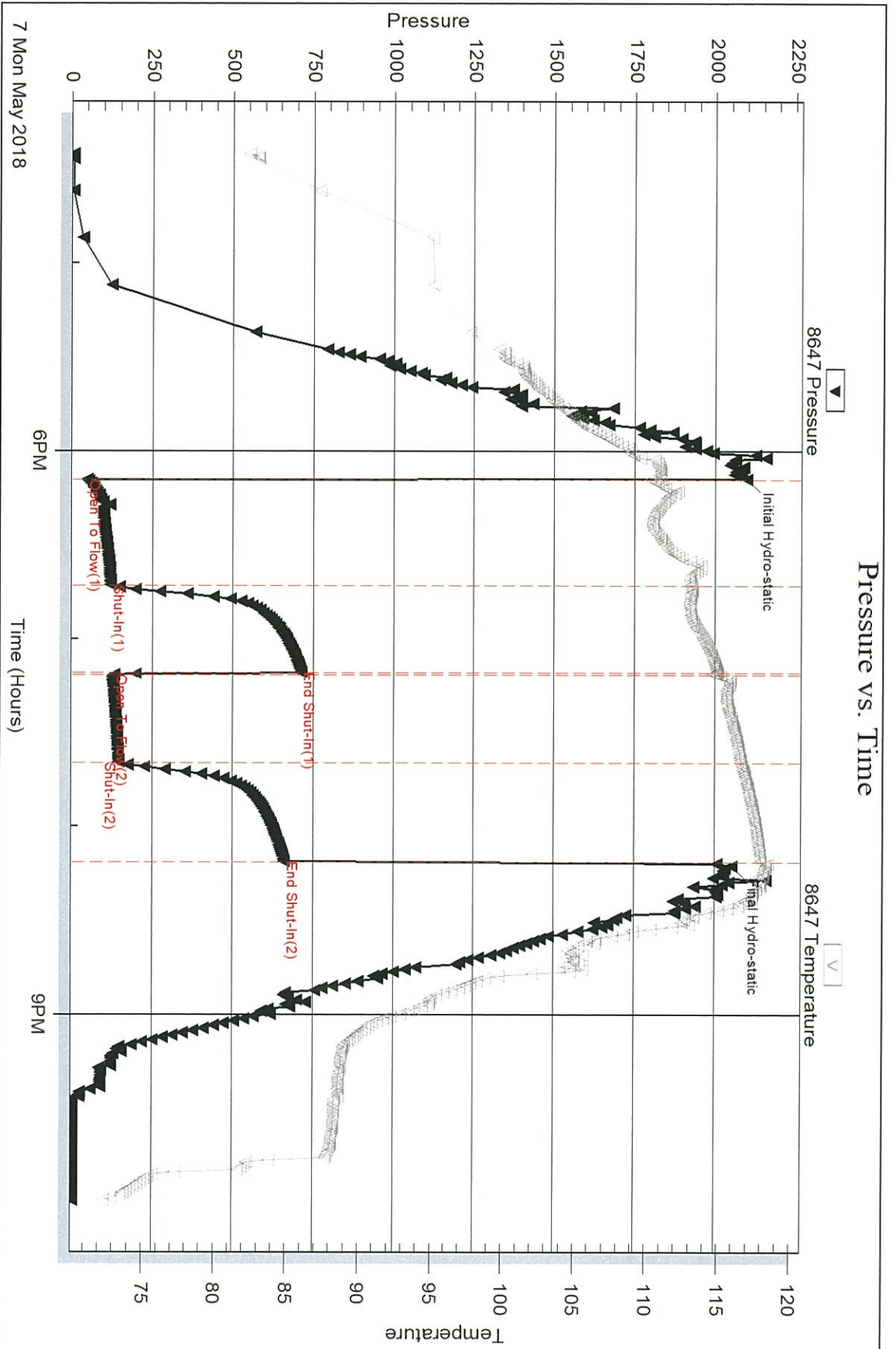
Serial #: 8647

Inside

Palomino Petroleum Inc.

Alta #1

DST Test Number: 3



Trilobe Testing, Inc

Ref. No: 63591

Printed: 2018.05.11 @ 11:40:15

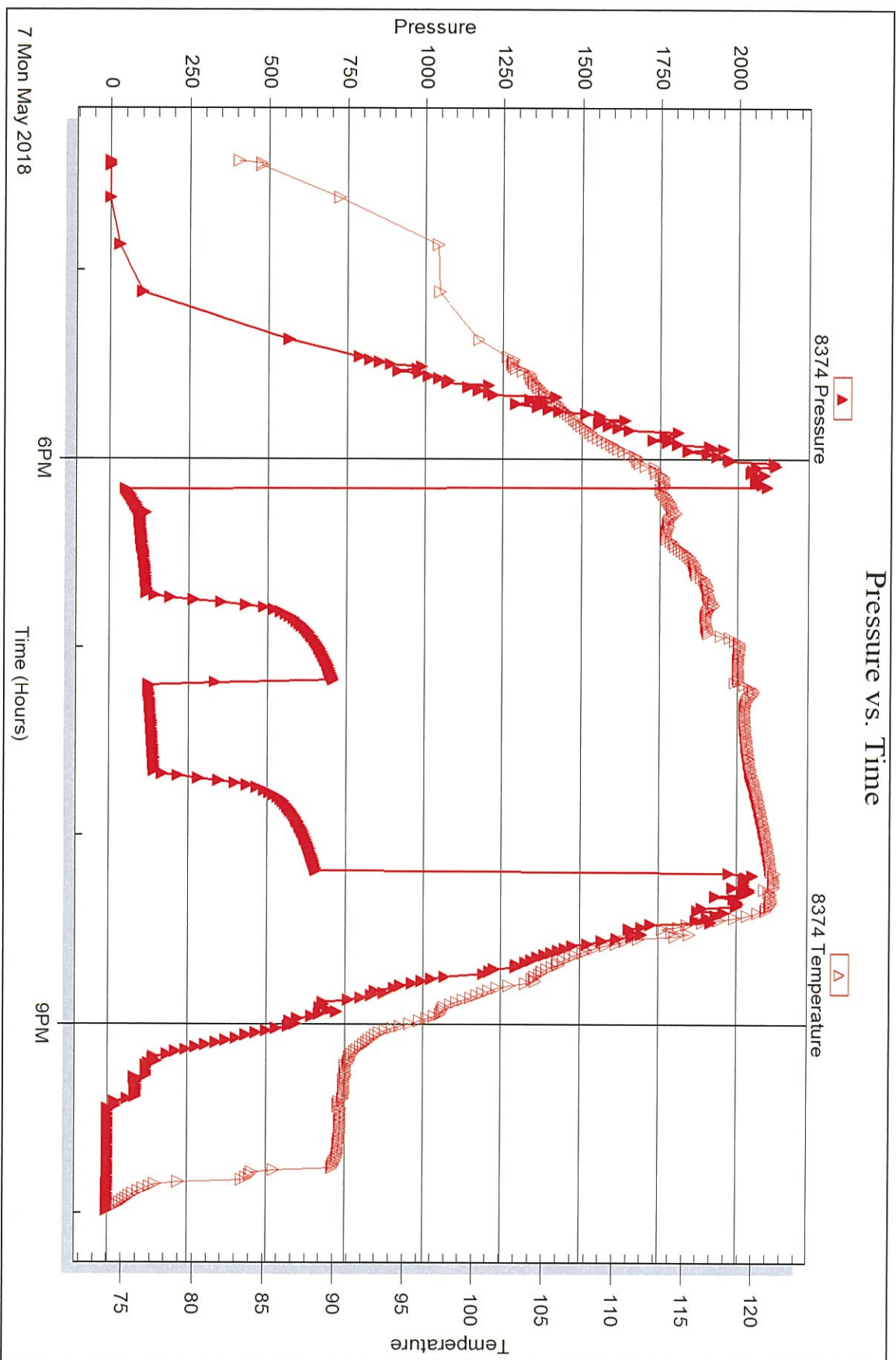
Serial #: 8374

Outside

Palomino Petroleum Inc.

Alta #1

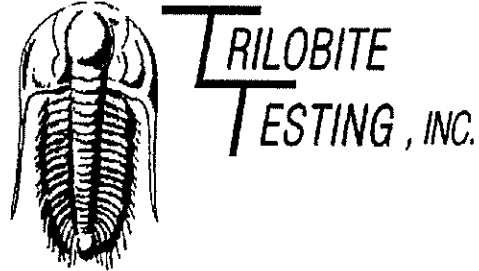
DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 63591

Printed: 2018.05.11 @ 11:40:15



## DRILL STEM TEST REPORT

Prepared For: **Palomino Petroleum Inc.**

4824 SE. 84th.St.  
Newton KS 67114

ATTN: Ryan Seib

**Alta #1**

**18-14s-30w Gove,KS**

Start Date: 2018.05.08 @ 12:02:15

End Date: 2018.05.08 @ 17:40:30

Job Ticket #: 63592                      DST #: 4

Trilobite Testing, Inc

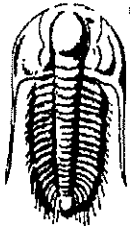
1515 Commerce Parkway Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.05.11 @ 11:39:50

Palomino Petroleum Inc. 18-14s-30w Gove,KS Alta #1 DST # 4 LKC J - L 2018.05.08





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Palomino Petroleum Inc.

18-14s-30w Gove, KS

4824 SE 84th.St.  
New ton KS 67114

Alta #1

Job Ticket: 63592

DST#: 4

ATTN: Ryan Seib

Test Start: 2018.05.08 @ 12:02:15

## GENERAL INFORMATION:

Formation: LKC J - L

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:50:30

Time Test Ended: 17:40:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 81

Interval: 4185.00 ft (KB) To 4300.00 ft (KB) (TVD)

Reference Elevations: 2883.00 ft (KB)

Total Depth: 4300.00 ft (KB) (TVD)

2878.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8647

Inside

Press@RunDepth: 157.01 psig @ 4285.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.08

End Date:

2018.05.08

Last Calib.: 2018.05.08

Start Time: 12:02:15

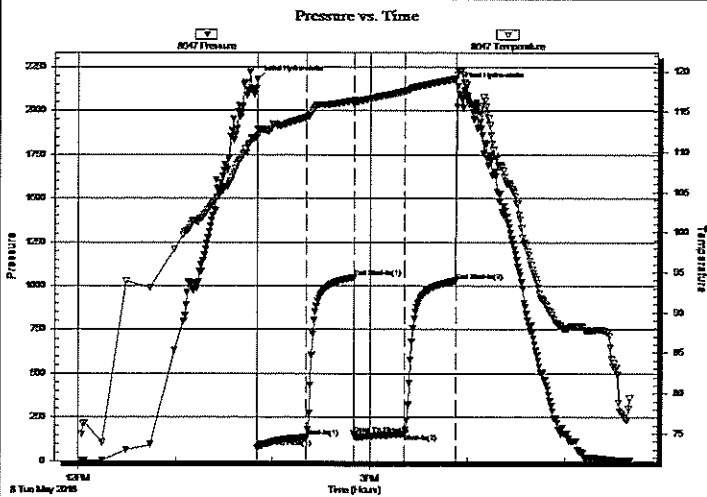
End Time:

17:40:30

Time On Btm: 2018.05.08 @ 13:50:15

Time Off Btm: 2018.05.08 @ 15:54:00

TEST COMMENT: IF: Built to 5 1/2" blow  
IS: No return blow  
FF: Built to 4 1/2" blow  
FS: No return blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2176.88	112.72	Initial Hydro-static
1	76.87	111.97	Open To Flow (1)
31	133.66	114.30	Shut-In(1)
60	1049.88	116.40	End Shut-In(1)
60	154.96	115.84	Open To Flow (2)
91	157.01	117.52	Shut-In(2)
123	1030.34	119.09	End Shut-In(2)
124	2138.43	120.04	Final Hydro-static

## Recovery

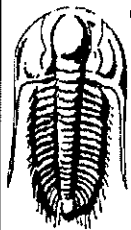
Length (ft)	Description	Volume (bbl)
180.00	ocm 2% o 98% m	1.46
5.00	free oil 100% o	0.07

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Palomino Petroleum Inc.

18-14s-30w Gove, KS

4824 SE 84th.St.  
New ton KS 67114

Alta #1

Job Ticket: 63592

DST#: 4

ATTN: Ryan Seib

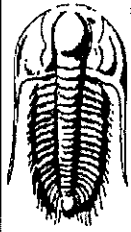
Test Start: 2018.05.08 @ 12:02:15

### Tool Information

Drill Pipe:	Length: 4066.00 ft	Diameter: 3.80 inches	Volume: 57.04 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 117.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 74000.00 lb
			<u>Total Volume: 57.62 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 51000.00 lb
Depth to Top Packer:	4185.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	115.00 ft			
Tool Length:	143.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4158.00	
Shut In Tool	5.00			4163.00	
Hydraulic tool	5.00			4168.00	
Jars	5.00			4173.00	
Safety Joint	3.00			4176.00	
Packer	5.00			4181.00	28.00 Bottom Of Top Packer
Packer	4.00			4185.00	
Stubb	1.00			4186.00	
Perforations	2.00			4188.00	
Change Over Sub	1.00			4189.00	
Drill Pipe	95.00			4284.00	
Change Over Sub	1.00			4285.00	
Recorder	0.00	8647	Inside	4285.00	
Recorder	0.00	8374	Outside	4285.00	
Perforations	10.00			4295.00	
Bullnose	5.00			4300.00	115.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>143.00</b>				



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

FLUID SUMMARY

Palomino Petroleum Inc.

18-14s-30w Gove,KS

4824 SE 84th.St.  
New ton KS 67114

Alta #1

Job Ticket: 63592

DST#: 4

ATTN: Ryan Seib

Test Start: 2018.05.08 @ 12:02:15

### Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 37 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 0 ppm
Viscosity: 52.00 sec/qt	Cushion Volume: bbl	
Water Loss: 6.37 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 4500.00 ppm		
Filter Cake: 1.00 inches		

### Recovery Information

Recovery Table

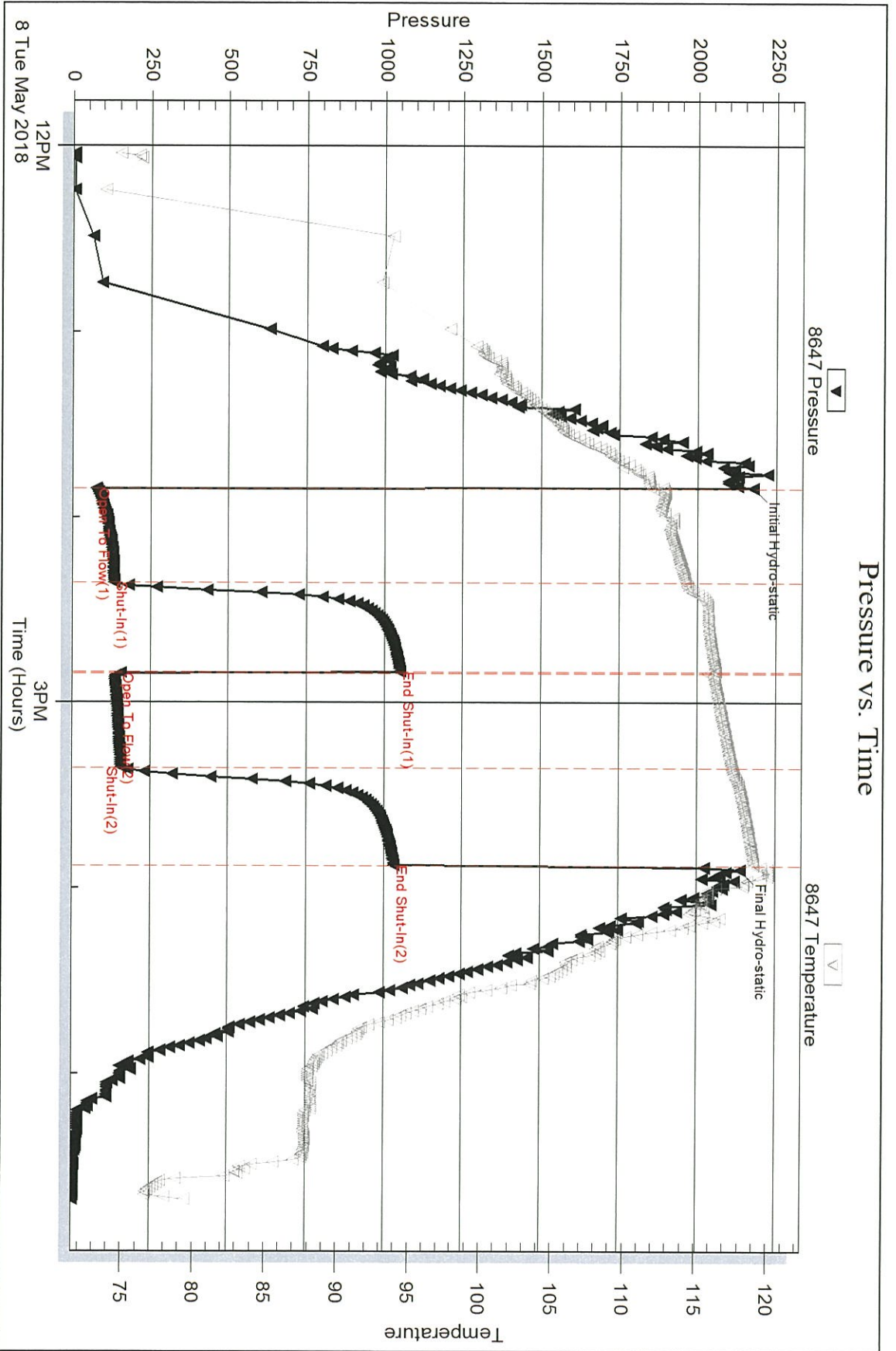
Length ft	Description	Volume bbl
180.00	ocm 2%o 98%m	1.459
5.00	free oil 100% o	0.070

Total Length: 185.00 ft      Total Volume: 1.529 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: API- 37



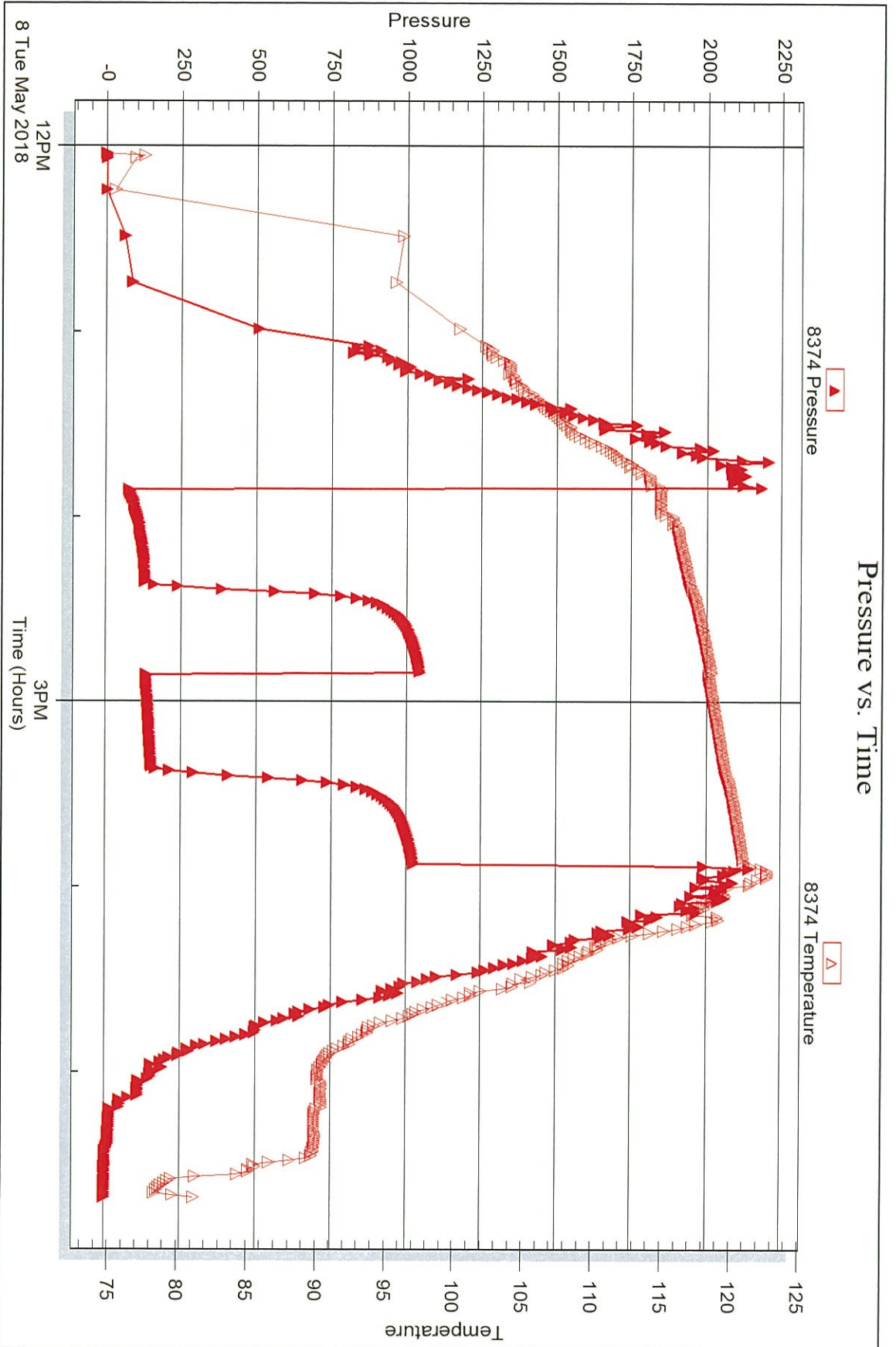
Serial #: 8374

Outside

Palomino Petroleum Inc.

Alta #1

DST Test Number: 4

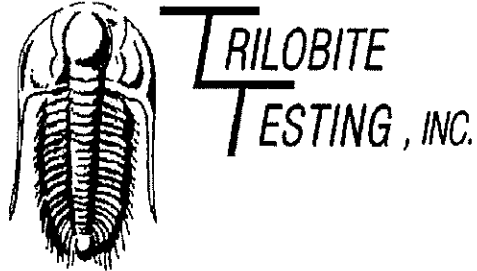


Trilobite Testing, Inc

Ref. No: 63592

Printed: 2018.05.11 @ 11:39:51





## DRILL STEM TEST REPORT

Prepared For: **Palomino Petroleum Inc.**

4824 SE. 84th.St.  
Newton KS 67114

ATTN: Ryan Seib

**Alta #1**

**18-14s-30w Gove,KS**

Start Date: 2018.05.09 @ 18:57:03

End Date: 2018.05.10 @ 00:51:03

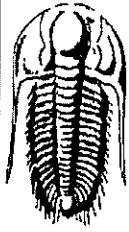
Job Ticket #: 63634                      DST #: 5

Trilobite Testing, Inc

1515 Commerce Parkway Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.05.11 @ 11:39:27



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Palomino Petroleum Inc.

**18-14s-30w Gove, KS**

4824 SE 84th. St.  
New ton KS 67114

**Alta #1**

Job Ticket: 63634

DST#: 5

ATTN: Ryan Seib

Test Start: 2018.05.09 @ 18:57:03

## GENERAL INFORMATION:

Formation: **Johnson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:45:03

Time Test Ended: 00:51:03

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: **4464.00 ft (KB) To 4562.00 ft (KB) (TVD)**

Reference Elevations: 2883.00 ft (KB)

Total Depth: 4562.00 ft (KB) (TVD)

2878.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8166** Outside

Press@RunDepth: 35.39 psig @ 4465.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.09

End Date: 2018.05.10

Last Calib.: 2018.05.10

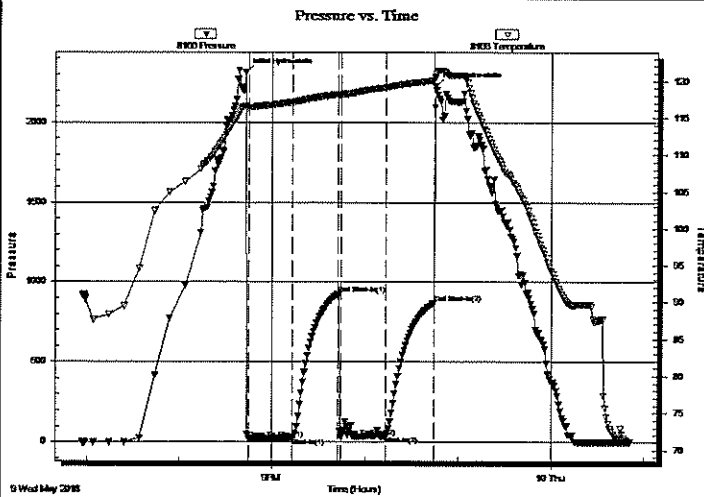
Start Time: 18:57:08

End Time: 00:51:02

Time On Btm: 2018.05.09 @ 20:43:03

Time Off Btm: 2018.05.09 @ 22:45:33

TEST COMMENT: IF: 1/4" blow died in 15 min.  
IS: No return.  
FF: No blow.  
FS: No return.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2311.91	116.58	Initial Hydro-static
2	20.06	116.39	Open To Flow (1)
31	27.19	117.08	Shut-In(1)
60	925.41	118.14	End Shut-In(1)
62	30.56	118.06	Open To Flow (2)
90	35.39	119.06	Shut-In(2)
122	871.55	120.05	End Shut-In(2)
123	2227.54	120.61	Final Hydro-static

## Recovery

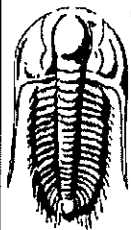
Length (ft)	Description	Volume (bbl)
5.00	mud 100% m	0.02

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Palomino Petroleum Inc.  
4824 SE. 84th.St.  
New ton KS 67114  
ATTN: Ryan Seib

**18-14s-30w Gove,KS**  
**Alta #1**  
Job Ticket: 63634      DST#: 5  
Test Start: 2018.05.09 @ 18:57:03

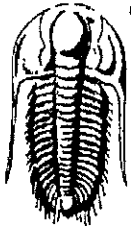
### Tool Information

Drill Pipe:	Length: 4350.00 ft	Diameter: 3.80 inches	Volume: 61.02 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 117.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 61.60 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	4464.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	98.00 ft			
Tool Length:	125.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			4438.00	
Shut In Tool	5.00			4443.00	
Hydraulic tool	5.00			4448.00	
Jars	5.00			4453.00	
Safety Joint	2.00			4455.00	
Packer	5.00			4460.00	27.00      Bottom Of Top Packer
Packer	4.00			4464.00	
Stubb	1.00			4465.00	
Recorder	0.00	6651	Inside	4465.00	
Recorder	0.00	8166	Outside	4465.00	
Perforations	26.00			4491.00	
Change Over Sub	1.00			4492.00	
Drill Pipe	64.00			4556.00	
Change Over Sub	1.00			4557.00	
Bullnose	5.00			4562.00	98.00      Bottom Packers & Anchor

**Total Tool Length: 125.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

FLUID SUMMARY

Palomino Petroleum Inc.

18-14s-30w Gove, KS

4824 SE 84th.St.  
New ton KS 67114

Alta #1

Job Ticket: 63634

DST#: 5

ATTN: Ryan Seib

Test Start: 2018.05.09 @ 18:57:03

## Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 52.00 sec/qt

Water Loss: 6.79 in<sup>3</sup>

Resistivity: 0.00 ohm.m

Salinity: 2400.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API: 0 deg API

Water Salinity: 0 ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud 100%m	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

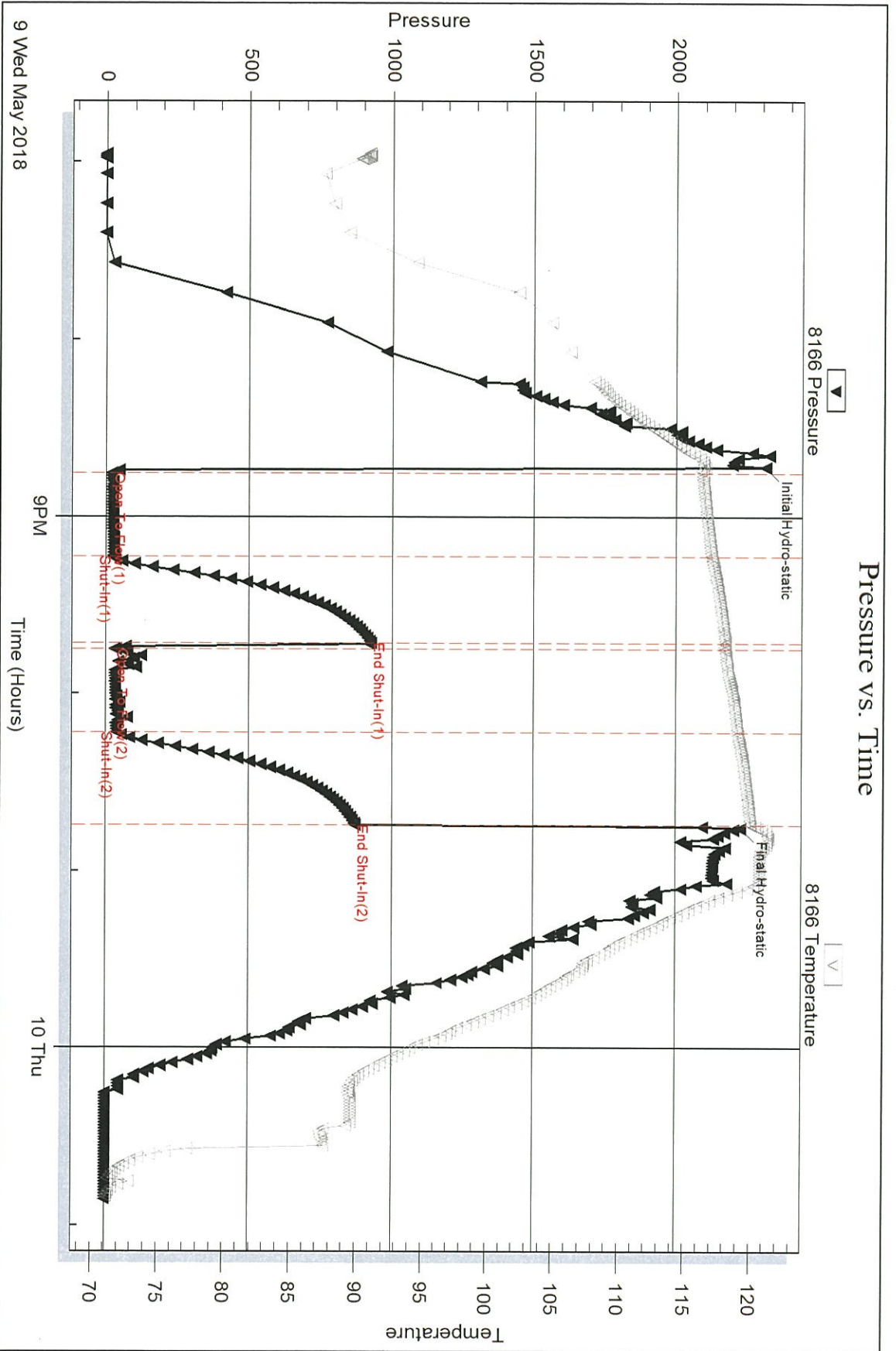
Serial #: 8166

Outside

Palomino Petroleum Inc.

Alta #1

DST Test Number: 5



Trilobite Testing, Inc

Ref. No: 63634

Printed: 2018.05.11 @ 11:39:28

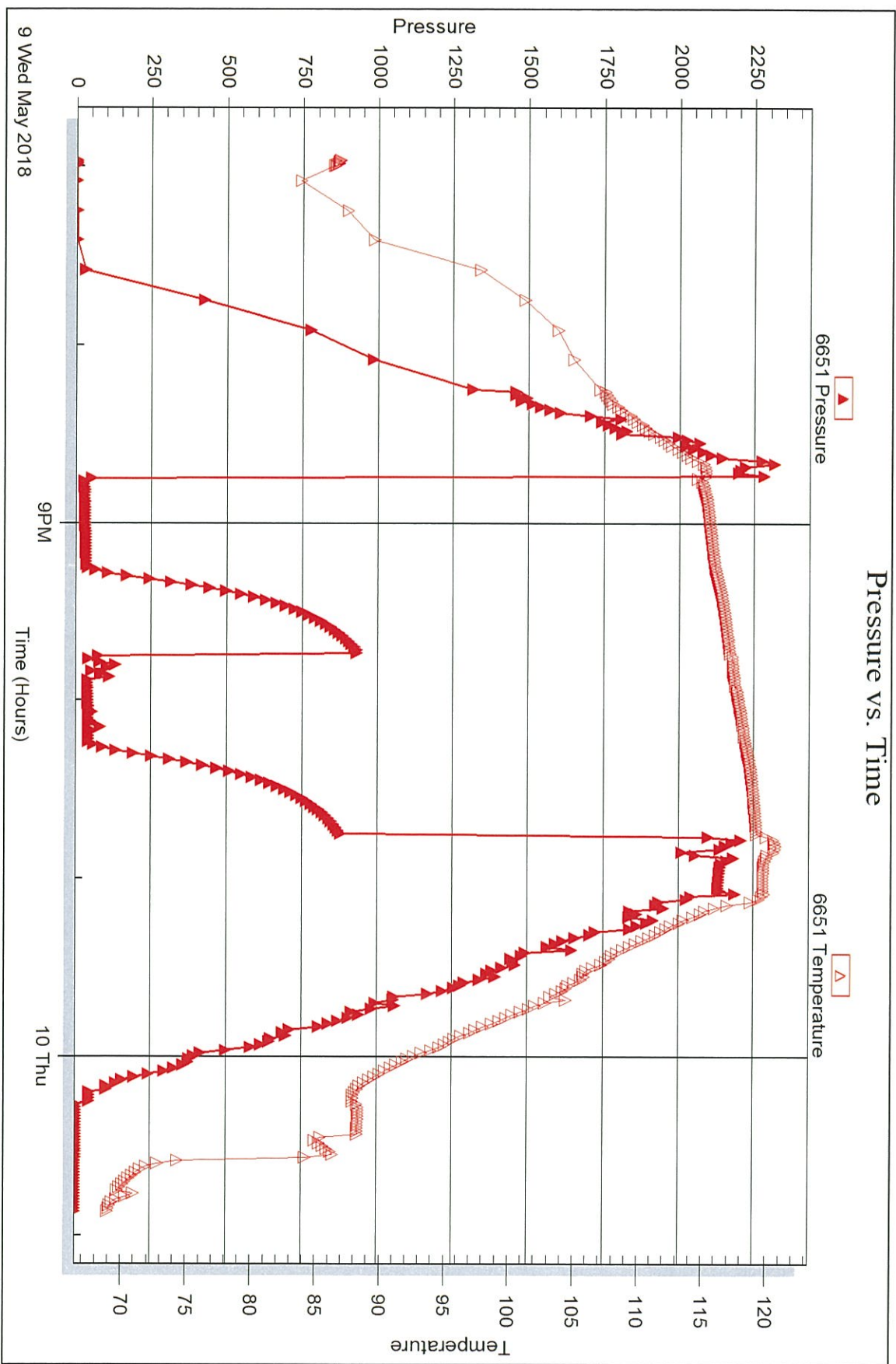
Serial #: 6651

Inside

Palomino Petroleum Inc.

Alta #1

DST Test Number: 5

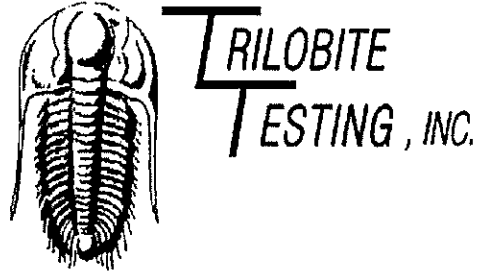


Trilobite Testing, Inc

Ref. No: 63634

Printed: 2018.05.11 @ 11:39:28





## DRILL STEM TEST REPORT

Prepared For: **Palomino Petroleum Inc.**

4824 SE. 84th.St.  
Newton KS 67114

ATTN: Ryan Seib

**Alta #1**

**18-14s-30w Gove,KS**

Start Date: 2018.05.10 @ 23:13:11

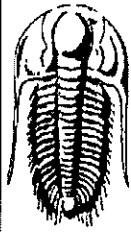
End Date: 2018.05.11 @ 07:19:41

Job Ticket #: 63635                      DST #: 6

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

Printed: 2018.05.11 @ 11:38:59

Palomino Petroleum Inc. 18-14s-30w Gove,KS Alta #1 DST # 6 Pawnee 2018.05.10



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Palomino Petroleum Inc.

18-14s-30w Gove, KS

4824 SE 84th. St.  
New ton KS 67114

Alta #1

Job Ticket: 63635

DST#: 6

ATTN: Ryan Seib

Test Start: 2018.05.10 @ 23:13:11

## GENERAL INFORMATION:

Formation: Pawnee

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:45:41

Time Test Ended: 07:19:41

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: 4405.00 ft (KB) To 4435.00 ft (KB) (TVD)

Reference Elevations: 2883.00 ft (KB)

Total Depth: 4707.00 ft (KB) (TVD)

2878.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6651

Inside

Press@RunDepth: 338.12 psig @ 4406.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.10

End Date: 2018.05.11

Last Calib.: 2018.05.11

Start Time: 23:13:16

End Time: 07:19:40

Time On Btm: 2018.05.11 @ 01:45:11

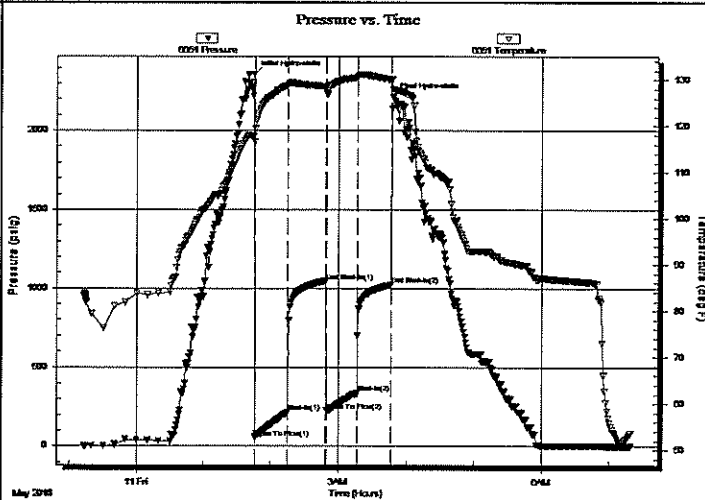
Time Off Btm: 2018.05.11 @ 03:48:11

TEST COMMENT: IF: BOB in 3 min. 153"

IS: BOB in 17 min. 14"

FF: BOB in 3 min. 58"

FS: BOB in 9 min. 20"



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2354.36	117.80	Initial Hydro-static
1	53.91	116.56	Open To Flow (1)
30	216.02	128.84	Shut-In(1)
64	1044.23	128.49	End Shut-In(1)
65	224.50	126.94	Open To Flow (2)
91	338.12	130.48	Shut-In(2)
121	1021.10	130.06	End Shut-In(2)
123	2216.19	127.96	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
189.00	gocw m 10%g 10%o 5%w 75%m	1.59
504.00	go 30%g 70%o	7.07
472.00	go 50%g 50%o	6.62
0.00	2174 GIP	0.00

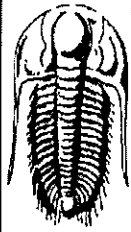
\* Recovery from multiple tests

## Gas Rates

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







**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Palomino Petroleum Inc.

**18-14s-30w Gove,KS**

4824 SE. 84th.St.  
New ton KS 67114

**Alta #1**

Job Ticket: 63635

DST#: 6

ATTN: Ryan Seib

Test Start: 2018.05.10 @ 23:13:11

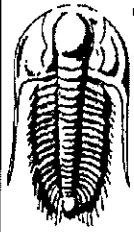
### Tool Information

Drill Pipe:	Length: 4296.00 ft	Diameter: 3.80 inches	Volume: 60.26 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 117.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 60.84 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4405.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	321.00 ft			
Tool Length:	343.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			4384.00	
Shut In Tool	5.00			4389.00	
Hydraulic tool	5.00			4394.00	
Safety Joint	2.00			4396.00	
Packer	5.00			4401.00	22.00 Bottom Of Top Packer
Packer	4.00			4405.00	
Stubb	1.00			4406.00	
Recorder	0.00	6651	Inside	4406.00	
Recorder	0.00	8166	Outside	4406.00	
Perforations	24.00			4430.00	
Blank Off Sub	1.00			4431.00	
Packer - Shale	4.00			4435.00	
Stubb	1.00			4436.00	
Perforations	11.00			4447.00	
Change Over Sub	1.00			4448.00	
Drill Pipe	272.00			4720.00	
Recorder	0.00	8650	Below	4720.00	
Change Over Sub	1.00			4721.00	
Bullnose	5.00			4726.00	321.00 Bottom Packers & Anchor

**Total Tool Length: 343.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Palomino Petroleum Inc.

**18-14s-30w Gove,KS**

4824 SE. 84th. St.  
New ton KS 67114

**Alta #1**

Job Ticket: 63635

DST#: 6

ATTN: Ryan Seib

Test Start: 2018.05.10 @ 23:13:11

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

36 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3200.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
189.00	gocw m 10%g 10%o 5%w 75%m	1.585
504.00	go 30%g 70%o	7.070
472.00	go 50%g 50%o	6.621
0.00	2174 GIP	0.000

Total Length: 1165.00 ft

Total Volume: 15.276 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 37@50=36

Serial #: 6651

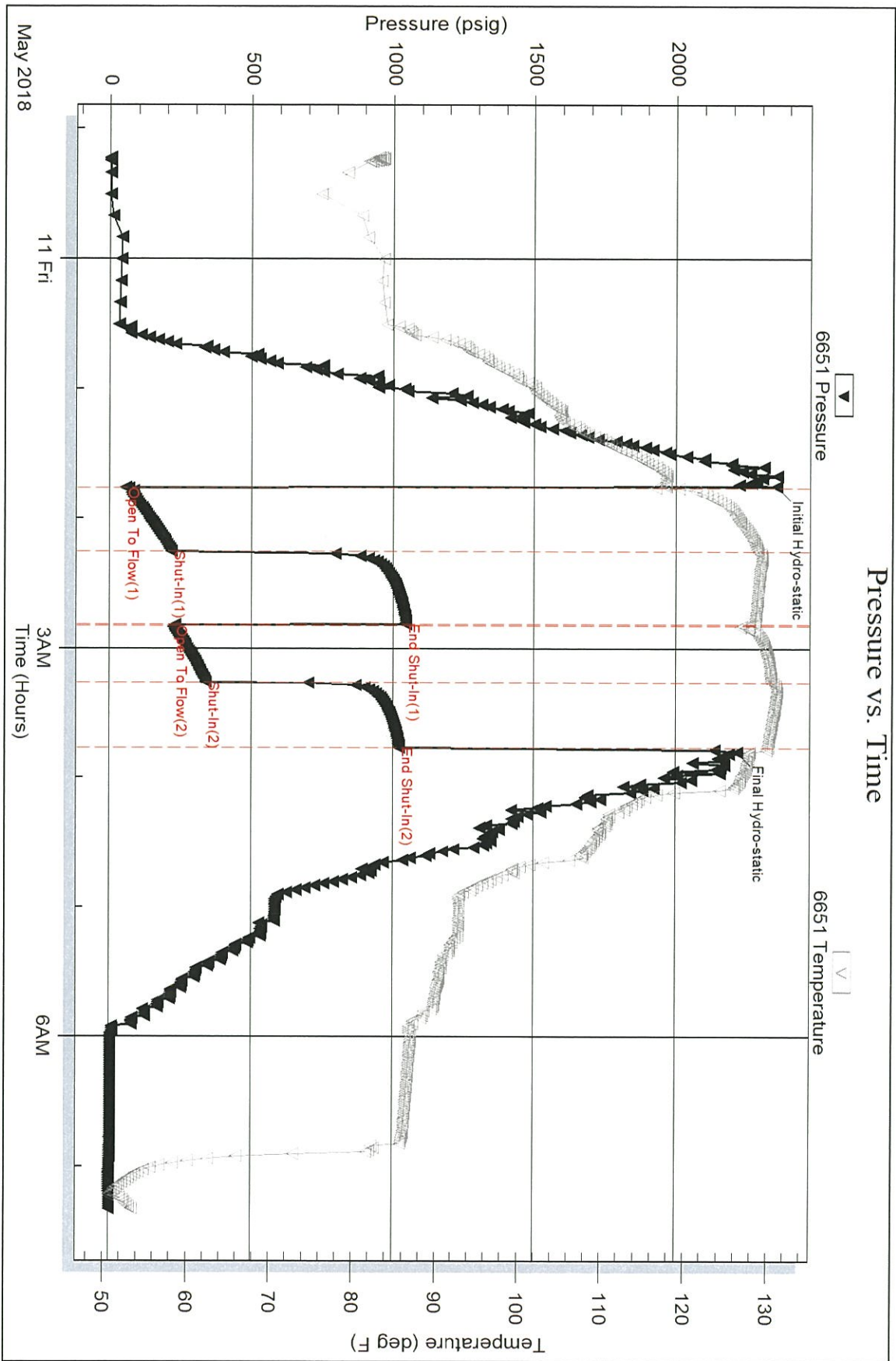
Inside

Palomino Petroleum Inc.

Alta #1

DST Test Number: 6

### Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 63635

Printed: 2018.05.11 @ 11:39:00



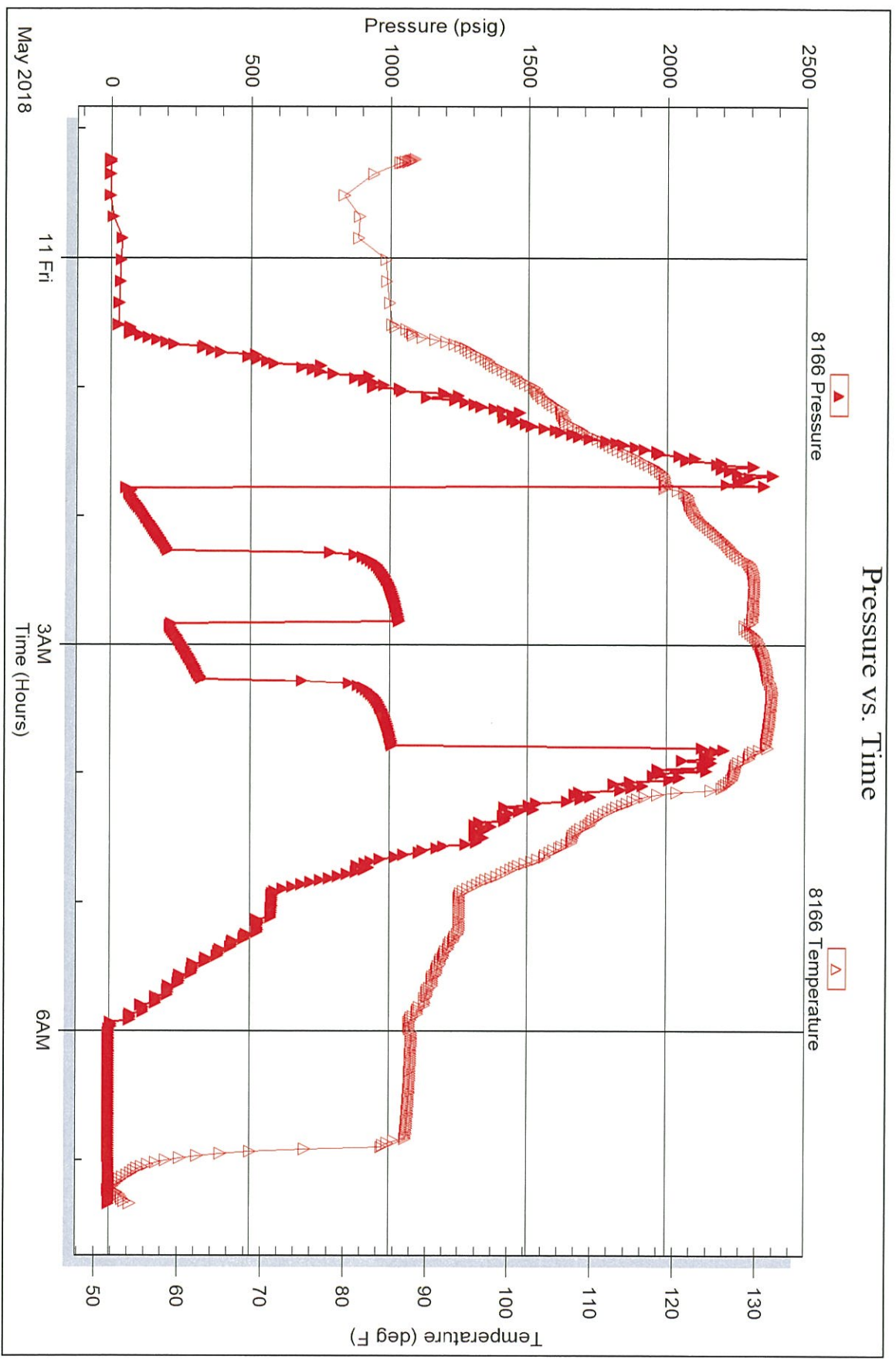
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Outside

Palomino Petroleum Inc.

Alta #1

DST Test Number: 6



Trilobite Testing, Inc

Ref. No: 63635

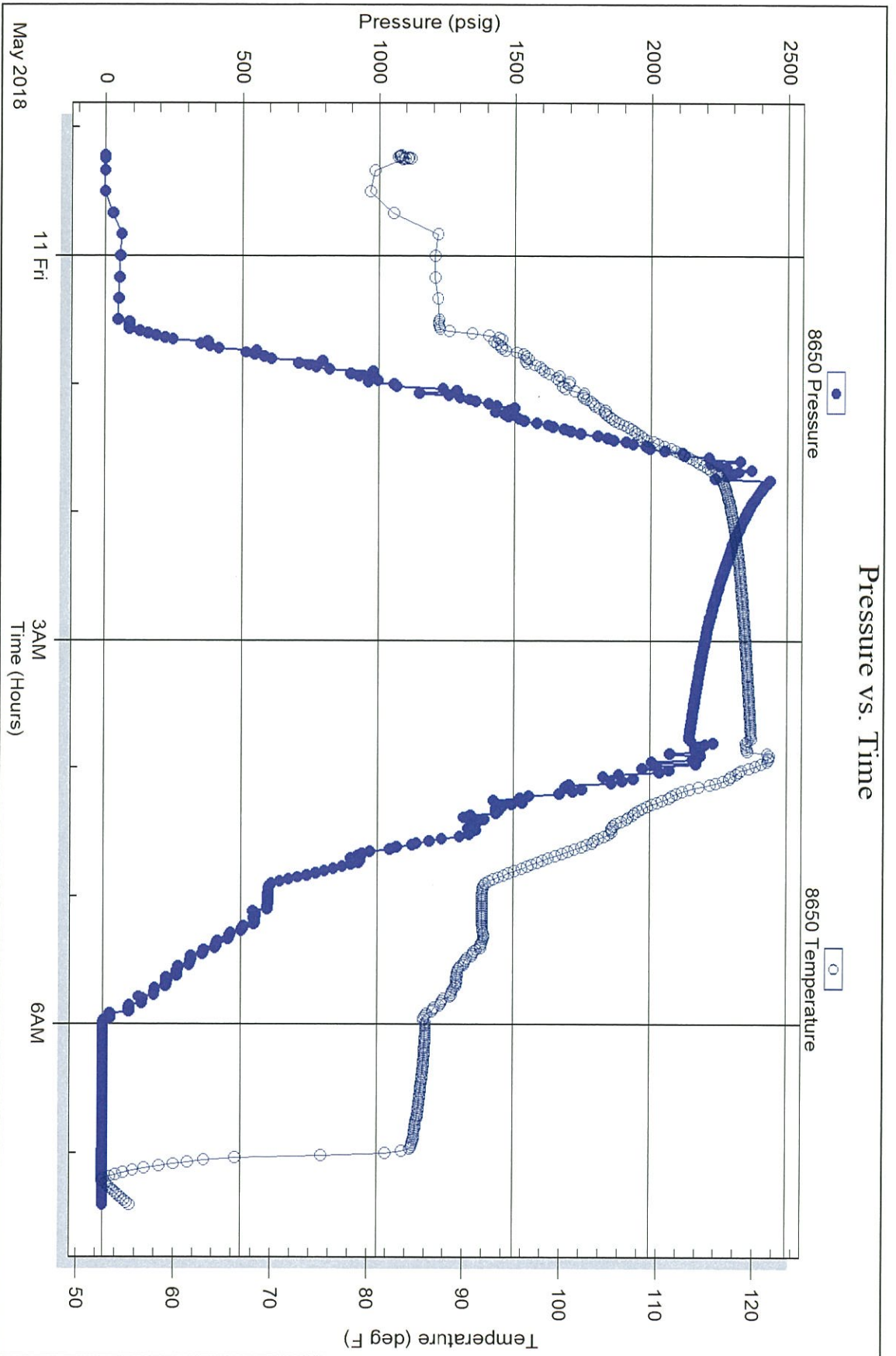
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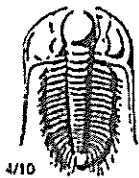
Serial #: 8650

Below (Strat) Petro Petroleum Inc.

Alta #1

DST Test Number: 6





# TRIBOLITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 63589

Well Name & No. Alta #1 Test No. 1 Date 5-6-18  
 Company Palomino Petroleum Inc. Elevation 2883 KB 2878 GL  
 Address 4824 SE 84th St, Newton KS 67114  
 Co. Rep / Geo. Ryan Seib Rig WW 8  
 Location: Sec. 18 Twp 14S Rge. 30W Co. Grove State KS

Interval Tested 3990-4023 Zone Tested "C"  
 Anchor Length 33 Drill Pipe Run 3877 Mud Wt. 9.0  
 Top Packer Depth 3985 Drill Collars Run 117 Vis 67  
 Bottom Packer Depth 3990 Wt. Pipe Run Ø WL 6.4  
 Total Depth 4023 Chlorides 4800 ppm System LCM 2  
 Blow Description IF: Built to Weak Surface Blow  
IS: No Return Blow  
FF: No Blow  
FS: No Return Blow

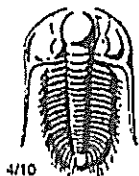
Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>MUD</u>				

Rec Total 1 BHT 112 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 1967  Test 1150 T-On Location 04:30  
 (B) First Initial Flow 21  Jars 250 T-Started 06:03  
 (C) First Final Flow 23  Safety Joint 75 T-Open 08:35  
 (D) Initial Shut-In 322  Circ Sub NC T-Pulled 10:35  
 (E) Second Initial Flow 23  Hourly Standby — T-Out —  
 (F) Second Final Flow 23  Mileage 108 RT 108 Comments —  
 (G) Final Shut-In 135  Sampler —  
 (H) Final Hydrostatic 194.5  Straddle —  Ruined Shale Packer —  
 Shale Packer —  Ruined Packer —  
 Extra Packer —  Extra Copies —  
 Extra Recorder — Sub Total 0  
 Day Standby — Total 1583  
 Accessibility — MP/DST Disc'l —  
 Sub Total 1583

Approved By — Our Representative Mike Bobetz

Tribolite 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.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 63590

Well Name & No. Alta #1 Test No. 2 Date 5-6-18  
 Company Palomina Petroleum Inc Elevation 2883 KB 2878 GL  
 Address 4824 SE 84<sup>th</sup> St, Newton KS 67114  
 Co. Rep / Geo. Ryan Seib Rig WW 8  
 Location: Sec. 18 Twp 14S Rge. 30W Co. Grove State KS

Interval Tested 4036-4074 Zone Tested E-F  
 Anchor Length 38 Drill Pipe Run 3908 Mud Wt. 9.2  
 Top Packer Depth 4031 Drill Collars Run 117 Vls 58  
 Bottom Packer Depth 4036 Wt. Pipe Run Ø WL 6.4  
 Total Depth 4074 Chlorides 5500 ppm System LCM 2

Blow Description IF: Built to 1" Blow  
IS: No Return Blow  
FF: No Blow  
FS: No Return Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>3</u>	<u>MUD</u>			<u>100</u>	

Rec Total 3 BHT 112 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 2068  
 (B) First Initial Flow 22  
 (C) First Final Flow 24  
 (D) Initial Shut-In 611  
 (E) Second Initial Flow 25  
 (F) Second Final Flow 26  
 (G) Final Shut-In 548  
 (H) Final Hydrostatic 1979

Test 1150  
 Jars 250  
 Safety Joint 75  
 Circ Sub NC  
 Hourly Standby  
 Mileage 108 RT 108  
 Sampler  
 Straddle  
 Shale Packer  
 Extra Packer  
 Extra Recorder  
 Day Standby  
 Accessibility  
 Sub Total 1583

T-On Location 21:00  
 T-Started 21:51  
 T-Open 23:34  
 T-Pulled 01:34  
 T-Out 03:10

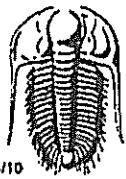
Comments  
 Ruined Shale Packer  
 Ruined Packer  
 Extra Copies  
 Sub Total 0  
 Total 1583  
 MP/DST Disc't

Initial Open 30  
 Initial Shut-In 30  
 Final Flow 30  
 Final Shut-In 30

Approved By \_\_\_\_\_

Our Representative Mike Roberts

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# TRIBOLITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 63591

Well Name & No. Alta #1 Test No. 3 Date 5-7-18  
 Company Palomino Petroleum Inc Elevation 2883 KB 2828 GL  
 Address 4824 SE 84th St, Newton KS 67114  
 Co. Rep / Geo. Ryan Seib Rig WW8  
 Location: Sec. 18 Twp 14s Rge. 30w Co. Grove State KS

Interval Tested 4116-4187 Zone Tested H-I  
 Anchor Length 71 Drill Pipe Run 4003 Mud Wt. 9.2  
 Top Packer Depth 4111 Drill Collars Run 117 Vls 52  
 Bottom Packer Depth 4116 Wt. Pipe Run 4 WL 6.4  
 Total Depth 4187 Chlorides 4900 ppm System LCM 2

Blow Description IF: Built to 14"  
IS: No Return Blow  
FF: Built to 12"  
FS: Built to 1 1/2" Return Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Free Oil</u>	<u>100</u>			
<u>103</u>	<u>OCM</u>	<u>10</u>		<u>90</u>	
<u>117</u>	<u>OCM</u>	<u>5</u>		<u>95</u>	
<u>230</u>	<u>BHT 118</u>	<u>37</u>	<u>API RW</u>	<u>@</u>	<u>F Chlorides</u> ppm

(A) Initial Hydrostatic 2097  
 (B) First Initial Flow 48  
 (C) First Final Flow 123  
 (D) Initial Shut-In 714  
 (E) Second Initial Flow 132  
 (F) Second Final Flow 147  
 (G) Final Shut-In 660  
 (H) Final Hydrostatic 2053

Test 1150  
 Jars 250  
 Safety Joint 75  
 Circ Sub NC  
 Hourly Standby  
 Mileage 108 RT 108  
 Sampler  
 Straddle  
 Shale Packer  
 Extra Packer  
 Extra Recorder  
 Day Standby  
 Accessibility  
 Sub Total 1583

T-On Location 15:25  
 T-Started 16:25  
 T-Open 18:09  
 T-Pulled 20:09  
 T-Out 21:59  
 Comments \_\_\_\_\_  
 Ruined Shale Packer  
 Ruined Packer  
 Extra Copies  
 Sub Total 0  
 Total 1583  
 MP/DST Disc't \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 30  
 Final Flow 30  
 Final Shut-In 30

Approved By \_\_\_\_\_

Our Representative Mike Roberts

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 63592

Well Name & No. Alta #1 Test No. 4 Date 5-8-18  
 Company Palomino Petroleum Trc Elevation 2883 KB 2878 GL  
 Address 4824 SE 84th St. Newton KS 67114  
 Co. Rep / Geo. Ryan Seib Rig WW 8  
 Location: Sec. 18 Twp 14S Rge. 30W Co. Grove State KS

Interval Tested 4185-4300 Zone Tested J-K-L  
 Anchor Length 115 Drill Pipe Run 4066 Mud Wt. 9.2  
 Top Packer Depth 4180 Drill Collars Run 117 Vis 52  
 Bottom Packer Depth 4185 Wt. Pipe Run Ø WL 6.4  
 Total Depth 4300 Chlorides 4500 ppm System LCM 2

Blow Description IF: Built to 5 1/2" Blow  
IS: No Return Blow  
FF: Built to 4 1/2" Blow  
FS: No Return Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	Feet of <u>ERR Oil</u>	<u>100</u>			
<u>180</u>	Feet of <u>DCM</u>				
	Feet of				
	Feet of				
	Feet of				

Rec Total \_\_\_\_\_ BHT 119 Gravity 37 API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2176  Test 1150 T-On Location 11:10  
 (B) First Initial Flow 76  Jars 250 T-Started 12:02  
 (C) First Final Flow 133  Safety Joint 75 T-Open 13:50  
 (D) Initial Shut-In 1049  Circ Sub NC T-Pulled 15:50  
 (E) Second Initial Flow 154  Hourly Standby \_\_\_\_\_ T-Out 17:40  
 (F) Second Final Flow 157  Mileage 108 RT 108 Comments \_\_\_\_\_  
 (G) Final Shut-In 1030  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2138  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Initial Open 30  Ruined Shale Packer \_\_\_\_\_  
 Initial Shut-In 30  Ruined Packer \_\_\_\_\_  
 Final Flow 30  Extra Copies \_\_\_\_\_  
 Final Shut-In 30  Sub Total 0  
 Sub Total 1583 Total 1583  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Mike Roberts

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 63634

Well Name & No. Alta #1 Test No. 5 Date 5-9-18  
 Company Alamo Petroleum Inc Elevation 2883 KB 2878 GL  
 Address \_\_\_\_\_  
 Co. Rep / Geo. Ryan Seib Rig WW #8  
 Location: Sec. 18 Twp 14S Rge. 30W Co. Gove State KS

Interval Tested 4464 4562 Zone Tested Johnson  
 Anchor Length 98 Drill Pipe Run 4350 Mud Wt. 9.3  
 Top Packer Depth 4459 Drill Collars Run 117 Vis 52  
 Bottom Packer Depth 4464 Wt. Pipe Run \_\_\_\_\_ WL 6.8  
 Total Depth 4562 Chlorides 2400 ppm System LCM 1

Blow Description #F: 1/4 blow died in 15 min.  
IS: No return.  
FFI No blow.  
FS: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 10 BHT 120 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2311  Test 1150 T-On Location 18:35  
 (B) First Initial Flow 20  Jars 250 T-Started 18:57  
 (C) First Final Flow 27  Safety Joint 75 T-Open 20:43  
 (D) Initial Shut-In 925  Circ Sub N/L T-Pulled 22:43  
 (E) Second Initial Flow 30  Hourly Standby \_\_\_\_\_ T-Out 00:51  
 (F) Second Final Flow 35  Mileage 108 108 Comments \_\_\_\_\_  
 (G) Final Shut-In 871  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2227  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 30  
 Final Flow 30  
 Final Shut-In 30  
 Sub Total 0  
 Total 1583  
 MP/DST Disc't \_\_\_\_\_  
 Sub Total 1583

Approved By \_\_\_\_\_ Our Representative [Signature]  
 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.





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 63635

Well Name & No. Altg #1 Test No. 6 Date 5-10-18  
 Company Palomino Petroleum Elevation 2883 KB 2878 GL  
 Address \_\_\_\_\_  
 Co. Rep / Geo. Ryan Scib Rig WW #8  
 Location: Sec. 18 Twp 14S Rge. 30W Co. Gove State KS

Interval Tested 4405 4435 Zone Tested Pawnee  
 Anchor Length 30 Drill Pipe Run 4296 Mud Wt. 9.4  
 Top Packer Depth 4405 Drill Collars Run 117 Vis 61  
 Bottom Packer Depth 4435 Wt. Pipe Run \_\_\_\_\_ WL 72  
 Total Depth 4707 Chlorides 3200 ppm System LCM 2

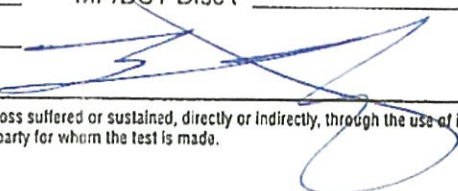
Blow Description IF: BoB in 3 min, 153 inches  
IS: BoB in 17 min, 14 inches  
FF: BoB in 3 min, 58 inches  
FS: BoB in 9 min, 20 inches

Rec	Feet of	%gas	%oil	%water	%mud
<u>472</u>	<u>90</u>	<u>50</u>	<u>50</u>		
<u>504</u>	<u>90</u>	<u>30</u>	<u>70</u>		
<u>189</u>	<u>90 CW M</u>	<u>10</u>	<u>10</u>	<u>5</u>	<u>75</u>
	<u>2174 GEP</u>				

Rec Total 1165 BHT 131 Gravity 37 API RW \_\_\_\_\_ @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2354  Test 1150 T-On Location 22:45  
 (B) First Initial Flow 53  Jars 250 T-Started 23:13  
 (C) First Final Flow 216  Safety Joint 75 T-Open 1:45  
 (D) Initial Shut-In 1044  Circ Sub NIL T-Pulled 3:45  
 (E) Second Initial Flow 224  Hourly Standby \_\_\_\_\_ T-Out 7:20  
 (F) Second Final Flow 338  Mileage 108-108 Comments \_\_\_\_\_  
 (G) Final Shut-In 1021  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2216  Straddle 600  Ruined Shale Packer 350  
 Shale Packer 250  Ruined Packer 320

Initial Open 30  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Shut-In 30  Extra Recorder \_\_\_\_\_ Sub Total 670  
 Final Flow 30  Day Standby \_\_\_\_\_ Total 3103.00  
 Final Shut-In 30  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 2433

Approved By \_\_\_\_\_ Our Representative 

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Palomina Petroleum  
Alta # 1

245' FSL ± 1821' FEL

18 145 30w

Gove Kansas

W Drilling Rig # 8

5/11/18 5/11/18  
4704' 4707'

7500' RTD

3500' RTD

3500' RTD

3500' RTD

3400'

Chemical

15-063-24325

Anhydrite	2316 (+567)	1861 (+1022)
Hoeberer	3937 (-1050)	3929 (-1046)
Toronto	3953 (-1070)	3951 (-1068)
Lansing	2969 (-1086)	3968 (-1085)
Muncie Creek	4126 (-1242)	4129 (-1241)
Stark	4217 (-1234)	4215 (-1232)
Hushpuckney	4251 (-1268)	4252 (-1269)
BKC	4291 (-1408)	4291 (-1408)
Marmaton	4321 (-1438)	4320 (-1437)
Lansae	4410 (-1530)	4412 (-1529)
Fl. South	4475 (-1592)	4472 (-1589)
Cherokee sh	4500 (-1617)	4498 (-1615)
Miscellaneous	4585 (-1702)	4584 (-1701)

500 12-1988

2883'

2878'

KB

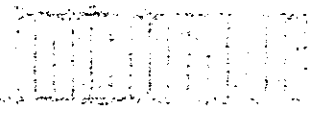
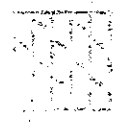
8 5/8" @

17'

N/A

CNO, OIL,

micro



3500

Handwritten notes for 3500

10

20

30

Handwritten notes for 30

40

50

Handwritten notes for 50

60

70

80

Handwritten notes for 80

90

3600

Handwritten notes for 3600

10

20

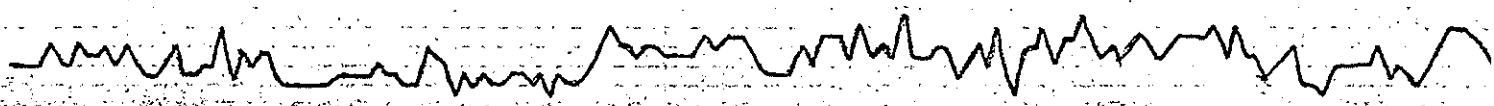
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Handwritten notes for 30

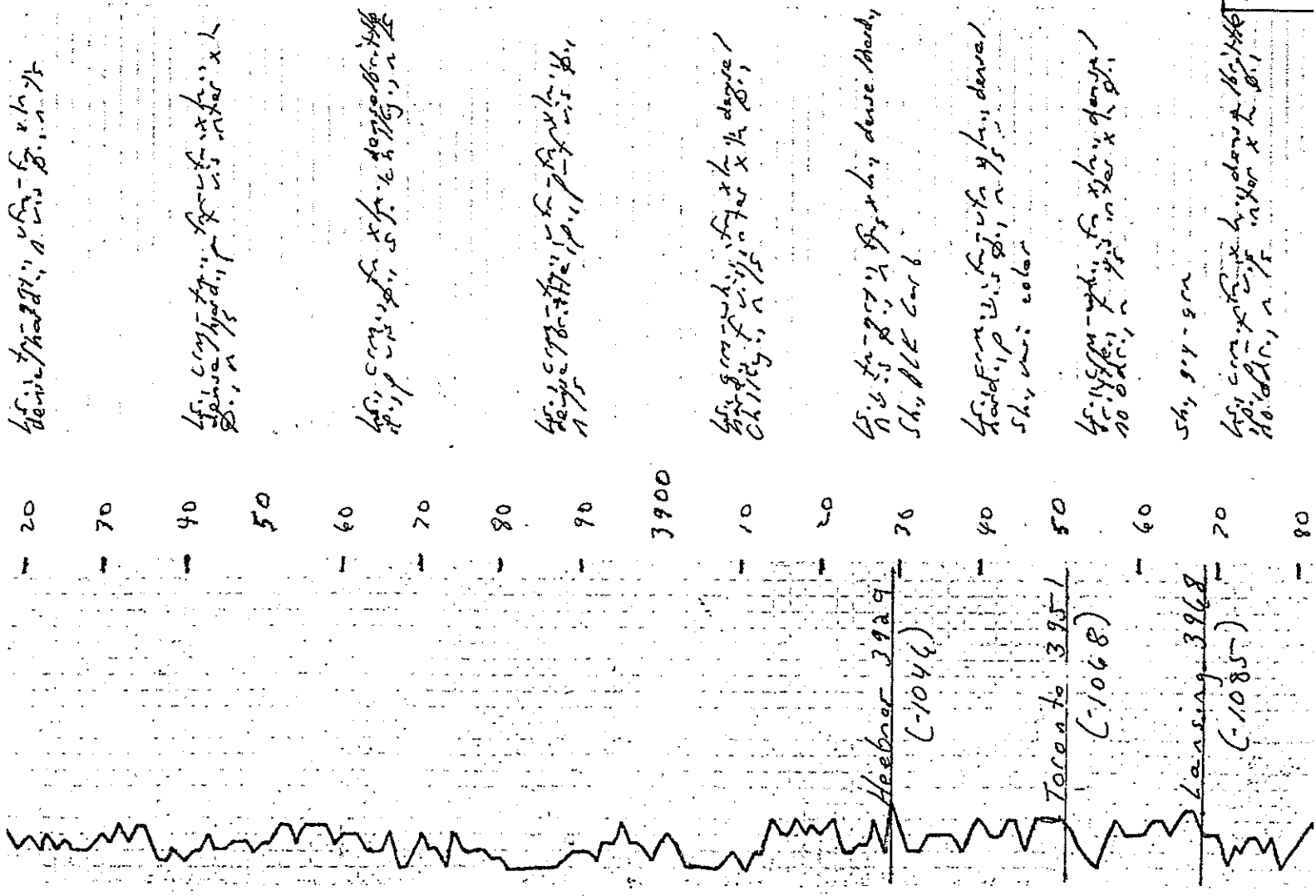
40

50

Handwritten notes for 50







6.5 cm. x 1.5 cm. x 1.5 cm. x 1.5 cm.

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6.5 cm. x 1.5 cm. x 1.5 cm. x 1.5 cm.

5.5 x 1.5 x 1.5

6.5 cm. x 1.5 cm. x 1.5 cm. x 1.5 cm.

POST # 2 3990-4023  
 REC 1 MAD  
 20-30-30-30

IF-14" N. Return  
 FF-lead  
 HP-1947#-1945#  
 FF-21#-23# FF-23#-25#  
 ISE-322# FSE-135#

decreased to 1/2 in vis. p. 1/2  
 sh, grey - 611C  
 4000  
 10  
 20  
 30  
 40  
 50  
 60  
 70  
 80  
 90  
 1000  
 10  
 20  
 30  
 40

decreased to 1/2 in vis. p. 1/2  
 sh, grey - 611C

decreased to 1/2 in vis. p. 1/2  
 sh, grey - 611C

decreased to 1/2 in vis. p. 1/2  
 sh, grey - 611C

decreased to 1/2 in vis. p. 1/2  
 sh, grey - 611C

decreased to 1/2 in vis. p. 1/2  
 sh, grey - 611C

decreased to 1/2 in vis. p. 1/2  
 sh, grey - 611C

decreased to 1/2 in vis. p. 1/2  
 sh, grey - 611C

decreased to 1/2 in vis. p. 1/2  
 sh, grey - 611C

decreased to 1/2 in vis. p. 1/2  
 sh, grey - 611C

decreased to 1/2 in vis. p. 1/2  
 sh, grey - 611C

decreased to 1/2 in vis. p. 1/2  
 sh, grey - 611C

decreased to 1/2 in vis. p. 1/2  
 sh, grey - 611C

Mud ✓ @ 4023'  
 wt. - 9.2  
 vis - 5.2  
 ul - 6.4  
 chl - 4.200  
 lcm - 2#

DST # 2 90361-4074'  
 Rec 3' mud  
 FF-1"  
 FF-lead N. Return  
 HP-2068# 1979#  
 FF-22#-24# FF-25#-26#  
 FSE-64# FSE-548#

Mud ✓ @ 4178'  
 wt. - 9.2  
 vis - 5.2  
 ul - 6.4

Muncie Creek  
 4/24 (-1241)

41-4, 900  
2cm - 2#

dense, w/ wds, cherty, in no odd, 1/2

dense, hard, 1/2 in - 1/2 in, 1/2 in

sh, gray  
light gray - 1/2 in to 1/2 in, 1/2 in, 1/2 in

sh, gray  
1/2 in to 1/2 in, 1/2 in, 1/2 in, 1/2 in

sh, gray  
1/2 in to 1/2 in, 1/2 in, 1/2 in, 1/2 in

sh, gray  
1/2 in to 1/2 in, 1/2 in, 1/2 in, 1/2 in

sh, gray  
1/2 in to 1/2 in, 1/2 in, 1/2 in, 1/2 in

sh, gray  
1/2 in to 1/2 in, 1/2 in, 1/2 in, 1/2 in

sh, dk carb

sh, dk carb  
1/2 in to 1/2 in, 1/2 in, 1/2 in, 1/2 in

sh, dk carb  
1/2 in to 1/2 in, 1/2 in, 1/2 in, 1/2 in

sh, dk carb  
1/2 in to 1/2 in, 1/2 in, 1/2 in, 1/2 in

sh, dk carb

sh, dk carb  
1/2 in to 1/2 in, 1/2 in, 1/2 in, 1/2 in

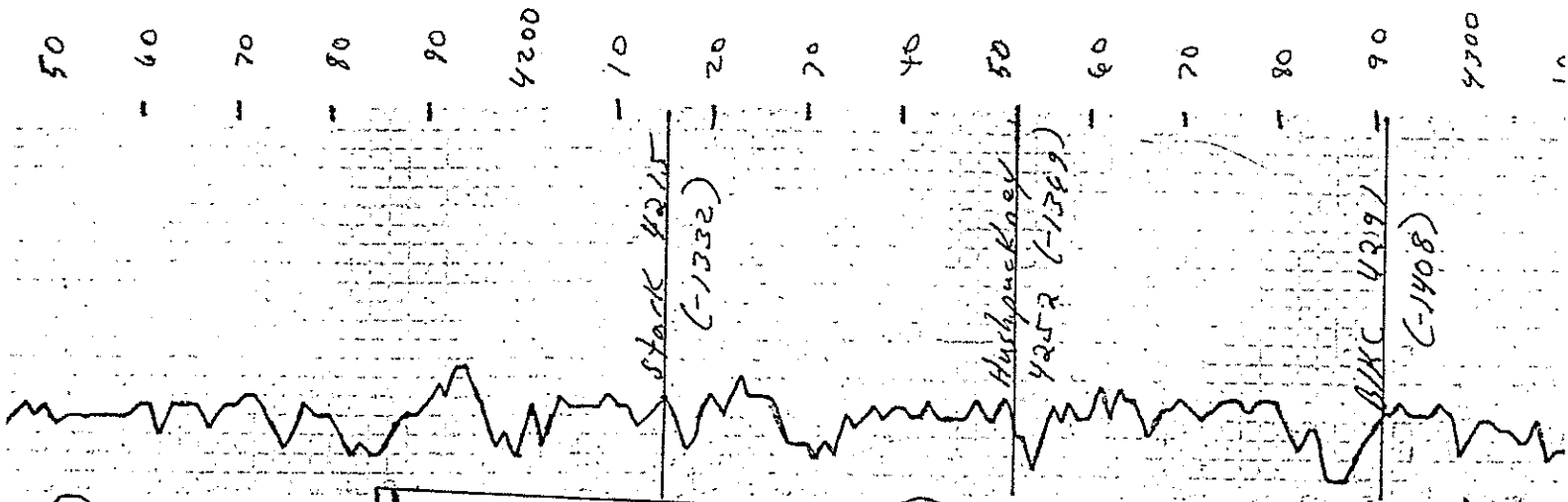
sh, dk carb  
1/2 in to 1/2 in, 1/2 in, 1/2 in, 1/2 in

sh, dk carb  
1/2 in to 1/2 in, 1/2 in, 1/2 in, 1/2 in

sh, dk carb

sh, dk carb  
1/2 in to 1/2 in, 1/2 in, 1/2 in, 1/2 in

sh, dk carb

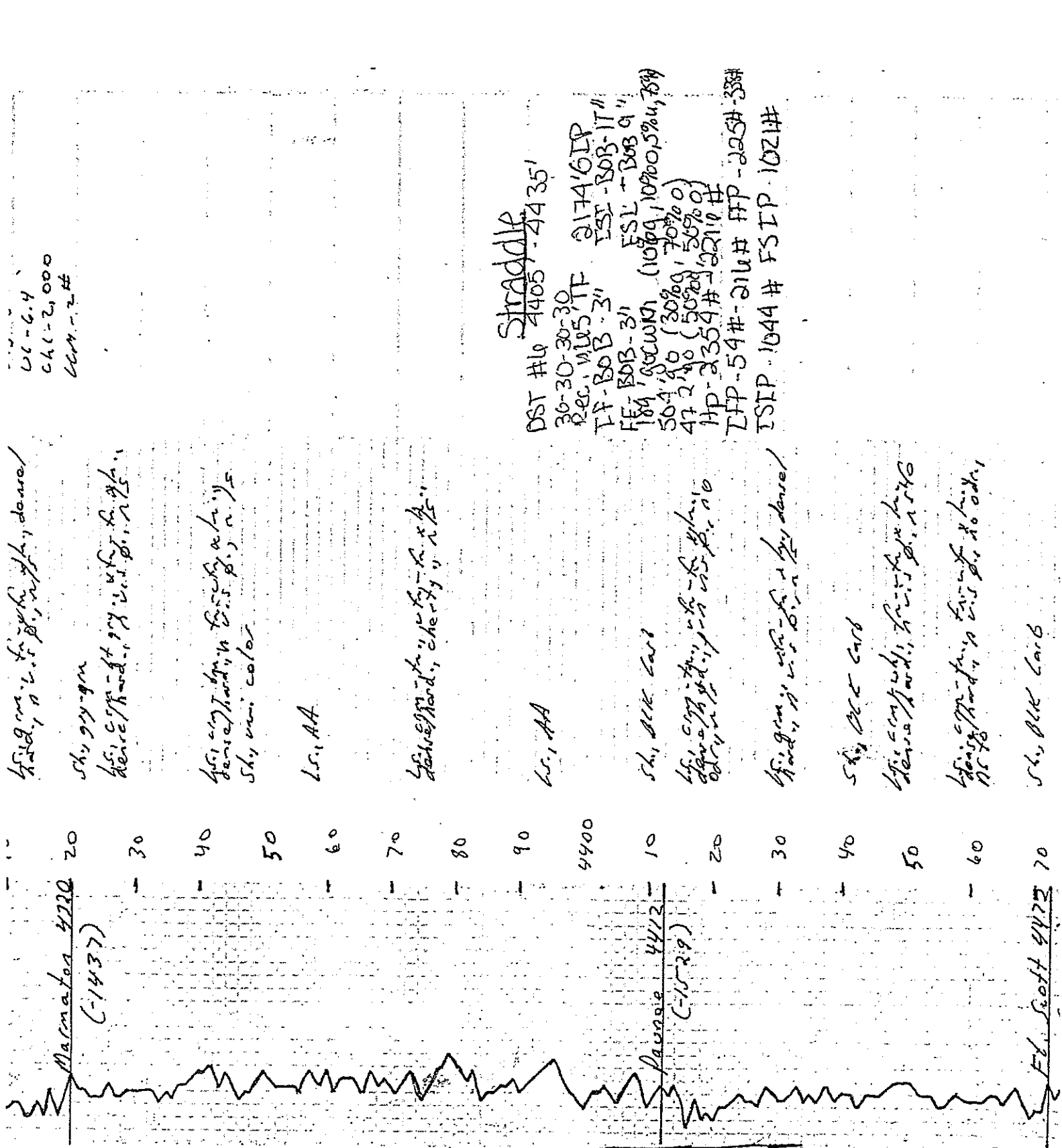


DST # 3 4116' - 4187'  
 30-30-30-30  
 Rec. 230' TF  
 IF-14" FSI-Oend  
 FF-12" FSI-1 1/2"  
 10' co C100700  
 105' om C1090, 9070m  
 117' om C5700, 9570m  
 NP-209) # - 2053#  
 FFP-484, 123 # FFP-132# - 147#  
 FSEP-714# FSEP-660#

DST # 4 4185' - 4300'  
 30-30-30-30  
 Rec. 185' TF  
 IF-5 1/2" N. Return  
 FF-4 1/2"  
 5' co C100700  
 185' om (2700, 9820m)  
 NP-2176# - 2139#  
 FFP-76# - 113# FFP-154# - 157#  
 FSEP-1049# FSEP-1030#

Mad v @ 4700'  
 0.1 - 9.3





40-6.4  
 ch-2,000  
 cam-2#  
 Sh, grey-gm  
 dense/hard, 1/4 vit. p., 1/5  
 Sh, uni. color  
 ls, AA  
 dense/hard, cherty, 1/4 vit. p.  
 ls, AA  
 Sh, blk carb  
 dense/hard, 1/4 vit. p., 1/5  
 Sh, blk carb  
 dense/hard, 1/4 vit. p., 1/5  
 Sh, blk carb  
 dense/hard, 1/4 vit. p., 1/5  
 Sh, blk carb

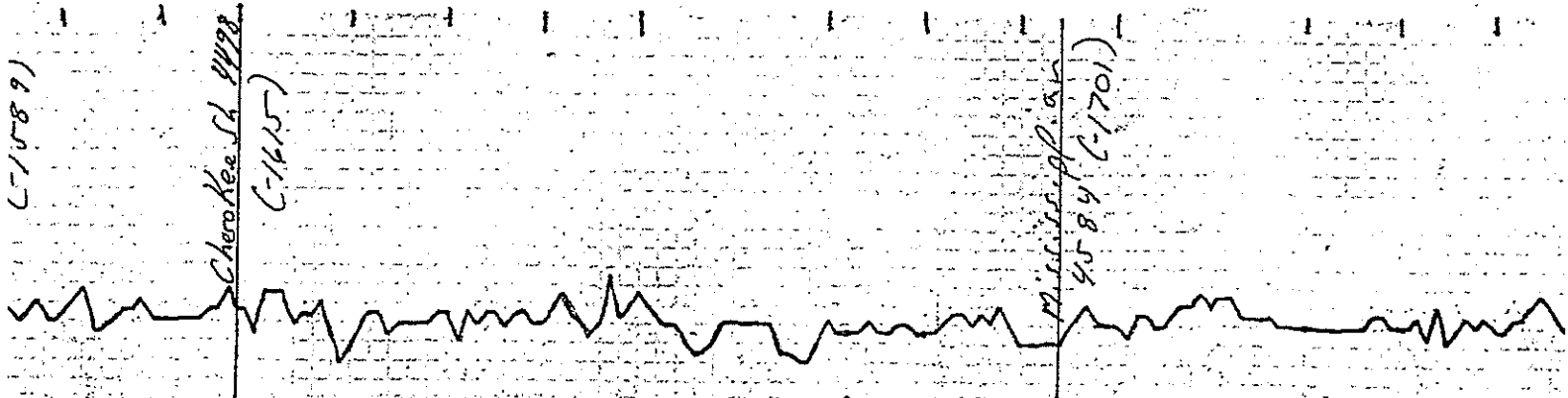
Straddle  
 DST #16 44057-4435'  
 30-30-30-30  
 REC. WLS, TF 2174'6IP  
 LF-BOB-3" ESI-BOB-11"  
 FF-BOB-3" ESI-BOB-9"  
 184' GOCWIN (10700, 10700, 5%u, 75#)  
 50.4' 40 (30%u, 70%o)  
 47.2' 40 (50%u, 50%o)  
 HP-2354#-22110#  
 LFP-54#-2116# FFP-2254#-338#  
 ISIP-1044# FSIIP-1021#

Marmaton 4420 (-1437)

Lawson 4412 (-1529)

Ft. Scott 4472 70

(-1089) 80  
 (-1615) 90  
 4500  
 10  
 20  
 30  
 40  
 50  
 60  
 70  
 80  
 90  
 4600  
 10  
 20  
 30



(-1089) 80  
 (-1615) 90  
 4500  
 10  
 20  
 30  
 40  
 50  
 60  
 70  
 80  
 90  
 4600  
 10  
 20  
 30

fine, gray - 1/4" diam, with fine x 1/2" diam  
 hand, in 20' diam, no. 0.1, 1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 11.0, 12.0, 13.0, 14.0, 15.0, 16.0, 17.0, 18.0, 19.0, 20.0, 21.0, 22.0, 23.0, 24.0, 25.0, 26.0, 27.0, 28.0, 29.0, 30.0, 31.0, 32.0, 33.0, 34.0, 35.0, 36.0, 37.0, 38.0, 39.0, 40.0, 41.0, 42.0, 43.0, 44.0, 45.0, 46.0, 47.0, 48.0, 49.0, 50.0, 51.0, 52.0, 53.0, 54.0, 55.0, 56.0, 57.0, 58.0, 59.0, 60.0, 61.0, 62.0, 63.0, 64.0, 65.0, 66.0, 67.0, 68.0, 69.0, 70.0, 71.0, 72.0, 73.0, 74.0, 75.0, 76.0, 77.0, 78.0, 79.0, 80.0, 81.0, 82.0, 83.0, 84.0, 85.0, 86.0, 87.0, 88.0, 89.0, 90.0, 91.0, 92.0, 93.0, 94.0, 95.0, 96.0, 97.0, 98.0, 99.0, 100.0, 101.0, 102.0, 103.0, 104.0, 105.0, 106.0, 107.0, 108.0, 109.0, 110.0, 111.0, 112.0, 113.0, 114.0, 115.0, 116.0, 117.0, 118.0, 119.0, 120.0, 121.0, 122.0, 123.0, 124.0, 125.0, 126.0, 127.0, 128.0, 129.0, 130.0, 131.0, 132.0, 133.0, 134.0, 135.0, 136.0, 137.0, 138.0, 139.0, 140.0, 141.0, 142.0, 143.0, 144.0, 145.0, 146.0, 147.0, 148.0, 149.0, 150.0, 151.0, 152.0, 153.0, 154.0, 155.0, 156.0, 157.0, 158.0, 159.0, 160.0, 161.0, 162.0, 163.0, 164.0, 165.0, 166.0, 167.0, 168.0, 169.0, 170.0, 171.0, 172.0, 173.0, 174.0, 175.0, 176.0, 177.0, 178.0, 179.0, 180.0, 181.0, 182.0, 183.0, 184.0, 185.0, 186.0, 187.0, 188.0, 189.0, 190.0, 191.0, 192.0, 193.0, 194.0, 195.0, 196.0, 197.0, 198.0, 199.0, 200.0, 201.0, 202.0, 203.0, 204.0, 205.0, 206.0, 207.0, 208.0, 209.0, 210.0, 211.0, 212.0, 213.0, 214.0, 215.0, 216.0, 217.0, 218.0, 219.0, 220.0, 221.0, 222.0, 223.0, 224.0, 225.0, 226.0, 227.0, 228.0, 229.0, 230.0, 231.0, 232.0, 233.0, 234.0, 235.0, 236.0, 237.0, 238.0, 239.0, 240.0, 241.0, 242.0, 243.0, 244.0, 245.0, 246.0, 247.0, 248.0, 249.0, 250.0, 251.0, 252.0, 253.0, 254.0, 255.0, 256.0, 257.0, 258.0, 259.0, 260.0, 261.0, 262.0, 263.0, 264.0, 265.0, 266.0, 267.0, 268.0, 269.0, 270.0, 271.0, 272.0, 273.0, 274.0, 275.0, 276.0, 277.0, 278.0, 279.0, 280.0, 281.0, 282.0, 283.0, 284.0, 285.0, 286.0, 287.0, 288.0, 289.0, 290.0, 291.0, 292.0, 293.0, 294.0, 295.0, 296.0, 297.0, 298.0, 299.0, 300.0, 301.0, 302.0, 303.0, 304.0, 305.0, 306.0, 307.0, 308.0, 309.0, 310.0, 311.0, 312.0, 313.0, 314.0, 315.0, 316.0, 317.0, 318.0, 319.0, 320.0, 321.0, 322.0, 323.0, 324.0, 325.0, 326.0, 327.0, 328.0, 329.0, 330.0, 331.0, 332.0, 333.0, 334.0, 335.0, 336.0, 337.0, 338.0, 339.0, 340.0, 341.0, 342.0, 343.0, 344.0, 345.0, 346.0, 347.0, 348.0, 349.0, 350.0, 351.0, 352.0, 353.0, 354.0, 355.0, 356.0, 357.0, 358.0, 359.0, 360.0, 361.0, 362.0, 363.0, 364.0, 365.0, 366.0, 367.0, 368.0, 369.0, 370.0, 371.0, 372.0, 373.0, 374.0, 375.0, 376.0, 377.0, 378.0, 379.0, 380.0, 381.0, 382.0, 383.0, 384.0, 385.0, 386.0, 387.0, 388.0, 389.0, 390.0, 391.0, 392.0, 393.0, 394.0, 395.0, 396.0, 397.0, 398.0, 399.0, 400.0, 401.0, 402.0, 403.0, 404.0, 405.0, 406.0, 407.0, 408.0, 409.0, 410.0, 411.0, 412.0, 413.0, 414.0, 415.0, 416.0, 417.0, 418.0, 419.0, 420.0, 421.0, 422.0, 423.0, 424.0, 425.0, 426.0, 427.0, 428.0, 429.0, 430.0, 431.0, 432.0, 433.0, 434.0, 435.0, 436.0, 437.0, 438.0, 439.0, 440.0, 441.0, 442.0, 443.0, 444.0, 445.0, 446.0, 447.0, 448.0, 449.0, 450.0, 451.0, 452.0, 453.0, 454.0, 455.0, 456.0, 457.0, 458.0, 459.0, 460.0, 461.0, 462.0, 463.0, 464.0, 465.0, 466.0, 467.0, 468.0, 469.0, 470.0, 471.0, 472.0, 473.0, 474.0, 475.0, 476.0, 477.0, 478.0, 479.0, 480.0, 481.0, 482.0, 483.0, 484.0, 485.0, 486.0, 487.0, 488.0, 489.0, 490.0, 491.0, 492.0, 493.0, 494.0, 495.0, 496.0, 497.0, 498.0, 499.0, 500.0, 501.0, 502.0, 503.0, 504.0, 505.0, 506.0, 507.0, 508.0, 509.0, 510.0, 511.0, 512.0, 513.0, 514.0, 515.0, 516.0, 517.0, 518.0, 519.0, 520.0, 521.0, 522.0, 523.0, 524.0, 525.0, 526.0, 527.0, 528.0, 529.0, 530.0, 531.0, 532.0, 533.0, 534.0, 535.0, 536.0, 537.0, 538.0, 539.0, 540.0, 541.0, 542.0, 543.0, 544.0, 545.0, 546.0, 547.0, 548.0, 549.0, 550.0, 551.0, 552.0, 553.0, 554.0, 555.0, 556.0, 557.0, 558.0, 559.0, 560.0, 561.0, 562.0, 563.0, 564.0, 565.0, 566.0, 567.0, 568.0, 569.0, 570.0, 571.0, 572.0, 573.0, 574.0, 575.0, 576.0, 577.0, 578.0, 579.0, 580.0, 581.0, 582.0, 583.0, 584.0, 585.0, 586.0, 587.0, 588.0, 589.0, 590.0, 591.0, 592.0, 593.0, 594.0, 595.0, 596.0, 597.0, 598.0, 599.0, 600.0, 601.0, 602.0, 603.0, 604.0, 605.0, 606.0, 607.0, 608.0, 609.0, 610.0, 611.0, 612.0, 613.0, 614.0, 615.0, 616.0, 617.0, 618.0, 619.0, 620.0, 621.0, 622.0, 623.0, 624.0, 625.0, 626.0, 627.0, 628.0, 629.0, 630.0, 631.0, 632.0, 633.0, 634.0, 635.0, 636.0, 637.0, 638.0, 639.0, 640.0, 641.0, 642.0, 643.0, 644.0, 645.0, 646.0, 647.0, 648.0, 649.0, 650.0, 651.0, 652.0, 653.0, 654.0, 655.0, 656.0, 657.0, 658.0, 659.0, 660.0, 661.0, 662.0, 663.0, 664.0, 665.0, 666.0, 667.0, 668.0, 669.0, 670.0, 671.0, 672.0, 673.0, 674.0, 675.0, 676.0, 677.0, 678.0, 679.0, 680.0, 681.0, 682.0, 683.0, 684.0, 685.0, 686.0, 687.0, 688.0, 689.0, 690.0, 691.0, 692.0, 693.0, 694.0, 695.0, 696.0, 697.0, 698.0, 699.0, 700.0, 701.0, 702.0, 703.0, 704.0, 705.0, 706.0, 707.0, 708.0, 709.0, 710.0, 711.0, 712.0, 713.0, 714.0, 715.0, 716.0, 717.0, 718.0, 719.0, 720.0, 721.0, 722.0, 723.0, 724.0, 725.0, 726.0, 727.0, 728.0, 729.0, 730.0, 731.0, 732.0, 733.0, 734.0, 735.0, 736.0, 737.0, 738.0, 739.0, 740.0, 741.0, 742.0, 743.0, 744.0, 745.0, 746.0, 747.0, 748.0, 749.0, 750.0, 751.0, 752.0, 753.0, 754.0, 755.0, 756.0, 757.0, 758.0, 759.0, 760.0, 761.0, 762.0, 763.0, 764.0, 765.0, 766.0, 767.0, 768.0, 769.0, 770.0, 771.0, 772.0, 773.0, 774.0, 775.0, 776.0, 777.0, 778.0, 779.0, 780.0, 781.0, 782.0, 783.0, 784.0, 785.0, 786.0, 787.0, 788.0, 789.0, 790.0, 791.0, 792.0, 793.0, 794.0, 795.0, 796.0, 797.0, 798.0, 799.0, 800.0, 801.0, 802.0, 803.0, 804.0, 805.0, 806.0, 807.0, 808.0, 809.0, 810.0, 811.0, 812.0, 813.0, 814.0, 815.0, 816.0, 817.0, 818.0, 819.0, 820.0, 821.0, 822.0, 823.0, 824.0, 825.0, 826.0, 827.0, 828.0, 829.0, 830.0, 831.0, 832.0, 833.0, 834.0, 835.0, 836.0, 837.0, 838.0, 839.0, 840.0, 841.0, 842.0, 843.0, 844.0, 845.0, 846.0, 847.0, 848.0, 849.0, 850.0, 851.0, 852.0, 853.0, 854.0, 855.0, 856.0, 857.0, 858.0, 859.0, 860.0, 861.0, 862.0, 863.0, 864.0, 865.0, 866.0, 867.0, 868.0, 869.0, 870.0, 871.0, 872.0, 873.0, 874.0, 875.0, 876.0, 877.0, 878.0, 879.0, 880.0, 881.0, 882.0, 883.0, 884.0, 885.0, 886.0, 887.0, 888.0, 889.0, 890.0, 891.0, 892.0, 893.0, 894.0, 895.0, 896.0, 897.0, 898.0, 899.0, 900.0, 901.0, 902.0, 903.0, 904.0, 905.0, 906.0, 907.0, 908.0, 909.0, 910.0, 911.0, 912.0, 913.0, 914.0, 915.0, 916.0, 917.0, 918.0, 919.0, 920.0, 921.0, 922.0, 923.0, 924.0, 925.0, 926.0, 927.0, 928.0, 929.0, 930.0, 931.0, 932.0, 933.0, 934.0, 935.0, 936.0, 937.0, 938.0, 939.0, 940.0, 941.0, 942.0, 943.0, 944.0, 945.0, 946.0, 947.0, 948.0, 949.0, 950.0, 951.0, 952.0, 953.0, 954.0, 955.0, 956.0, 957.0, 958.0, 959.0, 960.0, 961.0, 962.0, 963.0, 964.0, 965.0, 966.0, 967.0, 968.0, 969.0, 970.0, 971.0, 972.0, 973.0, 974.0, 975.0, 976.0, 977.0, 978.0, 979.0, 980.0, 981.0, 982.0, 983.0, 984.0, 985.0, 986.0, 987.0, 988.0, 989.0, 990.0, 991.0, 992.0, 993.0, 994.0, 995.0, 996.0, 997.0, 998.0, 999.0, 1000.0

Mud v @ 4506  
 wt. - 9.3  
 vis - 5.2  
 ul - 6.8  
 chl. 2,400  
 cm - 7

DST # 5 4464 - 4562  
 Rec. 10' mud  
 FF - 1/4" N. Return  
 FF Lead  
 HP-2311 # 222 #  
 FPF-20 # 22 # FFP-30 # 25 #  
 FPF-92 # FPF-87 #

Chero. Kee. Sh. 4498

Mississippian

(-1089)

(-1615)

4584 (-1701)

Mud v @ 4655  
wt - 9.4  
vis - 61  
wt - 7.2  
CL - 3,200  
LGM - 2#

sfähre Nord, N/S, S/S, N/S

sfähre Nord, N/S, S/S, N/S

LS, AA

40  
50  
60  
70  
80  
90  
4700

RTO 4704

(-1821)

