KOLAR Document ID: 1461681

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: Andrew Stenzel
Purchaser: None

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 #:

03/05/2019	03/13/2019	03/13/2019
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No.: 15-135-26042-00-00
Spot Description:
SW- SW- NW- SE Sec. 9 Twp. 16 S. R. 26 ☐ East ☑ West
1361 Feet from ☐ North / ☑ South Line of Section
2633 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: Ness
Lease Name: BAKER-DETERDING UNIT Well #: 1
Field Name:
Producing Formation: None
Elevation: Ground: 2634 Kelly Bushing: 2639
Total Vertical Depth: 4633 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 219 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: 05/29/2019
☐ **Confidential Release Date:** 05/28/2021
☑ **Wireline Log Received** ☑ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☐ I ☑ II ☐ III **Approved by:** Karen Ritter **Date:** 05/30/2019

Page Two

Operator Name: Palomino Petroleum, Inc. Lease Name: BAKER-DETERDING UNIT Well #: 1

Sec. 9 Twp. 16 S. R. 26 ☐ East ☑ West County: Ness

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:

Dual Induction
Litho Density Neutron
Micro Resistivity

☑ 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	23	219	Common	170	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:	Producing Method: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other *(Explain)*

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

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

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)*

TUBING RECORD: Size: Set At: Packer At:

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

Form	ACO1 - Well Completion
Operator	Palomino Petroleum, Inc.
Well Name	BAKER-DETERDING UNIT 1
Doc ID	1461681

Tops

Name	Top	Datum
Anhy.	2059	(+ 580)
Base Anhy.	2092	(+ 547)
Stotler	3474	(- 835)
Heebner	3887	(-1248)
Lansing	3929	(-1290)
Muncie Creek	4085	(-1446)
Stark Shale	4172	(-1533)
BKC	4225	(-1586)
Marmaton	4272	(-1633)
Ft. Scott	4428	(-1789)
Cherokee Sh.	4454	(-1815)
Miss.	4534	(-1895)
LTD	4633	(-1994)

Form	ACO1 - Well Completion
Operator	Palomino Petroleum, Inc.
Well Name	BAKER-DETERDING UNIT 1
Doc ID	1461681

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	23	219	Common	170	2% gel, 3% c.c.

QUALITY OILWELL CEMENTING, INC.
PO Box 32 - 740 West Wichita Ave, Russell KS 67665
Phone:785-324-1041 fax:785-483-1087
Email: cementing@ruraltel.net

Date: 3/13/2019
Invoice # 1237
P.O.#:
Due Date: 4/12/2019
Division: *Russell*

Invoice

Contact:
Palomino Petroleum Inc
Address/Job Location:

4924 SE 84th
Newton Ks 67114

Reference:
BAKER DETERDING 1 SEC 9-16-26

Description of Work:
PLUG JOB

Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		$ 675.02	Yes				
Common-Class A	162	$ 2,524.86	Yes				
POZ Mix-Standard	108	$ 571.97	Yes				
Bulk Truck Matl-Material Service Charge	290	$ 219.41	Yes				
Premium Gel (Bentonite)	10	$ 219.41	Yes				
Pump Truck Mileage-Job to Nearest Camp	31	$ 105.54	Yes				
Flo Seal	67	$ 101.38	Yes				
Bulk Truck Mileage-Job to Nearest Bulk Plant	31	$ 82.09	Yes				

Invoice Terms:
Net 30

SubTotal:	$	*4,499.68*
Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice:	$	(112.49)
SubTotal for Taxable Items:	$	4,387.19
SubTotal for Non-Taxable Items:	$	-
Total:	$	4,387.19
6.50% Ness County Sales Tax Tax:	$	285.17
Amount Due:	**$**	**4,672.36**
Applied Payments:		
Balance Due:	**$**	**4,672.36**

Thank You For Your Business!

Past Due Invoices are subject to a service charge (annual rate of 24%)
This does not include any applicable taxes unless it is listed.

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025 Home Office P.O. Box 32 Russell, KS 67665 No. 1237

Cell 785-324-1041

Date	Sec.	Twp.	Range	County	State	On Location	Finish
3-13-19	9	16	26	Ness	KS		12:30

Location Utica 2W BRD 2½N Into

Lease Baker Detering Well No. 1

Contractor WW #2

Type Job Rotary Plug

Hole Size 7 7/8 T.D. 4630

Csg. Depth

Tbg. Size Depth

Tool Depth

Cement Left in Csg. Shoe Joint

Meas Line Displace

EQUIPMENT

Pumptrk 20 No. Cementer Craig
Helper Tony F.

Bulktrk No. Driver
Driver Michael

Bulktrk 9 No. Driver
Driver Jack

JOB SERVICES & REMARKS

Remarks:

Rat Hole 30SK

Mouse Hole

Centralizers

Baskets

D/V or Port Collar

1st 2120 50SK
2nd 1340 80SK
3rd 660 40SK
4th 250 50SK
5th 60 20SK

Thanks

X Signature

Owner

To Quality Oilwell Cementing, Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Charge To Palomino Petroleum

Street

City State

The above was done to satisfaction and supervision of owner agent or contractor.

Cement Amount Ordered 270 60/40 4% Gel ¼# Flo

Common 162

Poz. Mix 108

Gel. 10

Calcium

Hulls

Salt

Flowseal 67#

Kol-Seal

Mud CLR 48

CFL-117 or CD110 CAF 38

Sand

Handling 290

Mileage

FLOAT EQUIPMENT

Guide Shoe

Centralizer

Baskets

AFU Inserts

Float Shoe

Latch Down

Pumptrk Charge Plug

Mileage 31

Tax

Discount

Total Charge

QES
PRESSURE PUMPING LLC

REMIT TO

QES Pressure Pumping LLC
Dept:970
P.O.Box 4346
Houston,TX 77210-4346

MAIN OFFICE

P.O.Box884
Chanute,KS 66720
620/431-9210,1-800/467-8676
Fax 620/431-0012

RECEIVED
MAR 21 2019

Invoice

Invoice# 900576

Invoice Date: 03/19/19

Terms: Net 30

Page 1

PALOMINO PETROLEUM, INC.

4924 SE 84TH STREET
NEWTON KS 67114-8827
USA

BAKER DETERDING UNIT #1

Part No	Description	Quantity	Discounted Unit Price	Discounted Total
CE0471	Cement Pump Charge 301' - 500' (Coalbed/Methane)	1.000	862.5000	862.50
CE0002	Equipment Mileage Charge - Heavy Equipment	40.000	5.3625	214.50
CE0711	Minimum Cement Delivery Charge	1.000	495.0000	495.00
CC5871	Surface Blend II, 2% Gel/3% CaCl	170.000	18.0000	3,060.00
CC5326	Sodium Chloride, Salt	100.000	0.0000	0.00
		SubTotal After Discount		4,632.00

Tax:	198.90
Total:	4,830.90

Amount Due 6,441.20 If paid after 04/18/19

QES

PRESSURE PUMPING LLC
PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

100248
404155

TICKET NUMBER 55988
LOCATION Oakley Ks
FOREMAN Cory Davis

FIELD TICKET & TREATMENT REPORT

CEMENT

Jerry Y
Invoice #900576
Ks.

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
3-5-19	6285	Baker Deterding unit #1	9	16S	26W	Ness

CUSTOMER Palomino

MAILING ADDRESS 4924 SE 84th Street

CITY Newton | STATE KS | ZIP CODE 67114-8827

Office W to 90 N 1½ W Into

TRUCK #	DRIVER	TRUCK #	DRIVER
753	Corey W	703	Cory D
70	Neil W		
Helper	Xavier C		
535	Jerry Y		

JOB TYPE Surface | HOLE SIZE 12¼ | HOLE DEPTH 219 | CASING SIZE & WEIGHT 8⅝ 24#
CASING DEPTH 219 | DRILL PIPE | TUBING | OTHER
SLURRY WEIGHT 15.2 | SLURRY VOL | WATER gal/sk | CEMENT LEFT in CASING 20'
DISPLACEMENT 12.5 | DISPLACEMENT PSI | MIX PSI | RATE

REMARKS: Safety meeting rig up on ww2 circ Casing on Bottom
Mix 170sks com 3%CC 2%gel Displace 12.5 BBL H20, shut in wash up and mix 100# salt

Cement Did Circ.

Aprox 1½ BBL to pit

Thanks you
From Cory D. & Crew

ACCOUNT CODE	QUANITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
CE0471	1	PUMP CHARGE	1,150.00	1,150.00
CE0002	40	MILEAGE	1.15	286.00
CE0711	8	Ton mileage Delivery	1.25	660.00
CC5871	170	surface Blend II	24.00	4,080.00
CC5326	100#	Salt N/C		—
			Subtotal	6,176.00
		25% Disc.		1,544.00
			total	4,632.00
			SALES TAX	198.90
			ESTIMATED TOTAL	4830.90

Ravin 3737

AUTHORIZTION [signature] Cory D TITLE DATE 3-5-19

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form

TERMS AND CONDITIONS

ATTENTION: THESE TERMS AND CONDITIONS CONTAIN INDEMNITY PROVISIONS FOR DAMAGE TO PERSONS AND PROPERTY

All Services or Products provided by QES Pressure Pumping LLC (f/k/a Consolidated Oil Well Services LLC) are subject to these Terms and Conditions unless superseded by a Master Service Agreement signed by the parties. In the event Customer does not accept these Terms and Conditions as written, Customer must request a Master Service Agreement from QES' Contracts Administration Department at msa@qeslp.com.

The operations, services, supplies, materials, personnel or goods to be provided ("Services" or "Products" as applicable) by QES Pressure Pumping LLC ("QES") will be provided to you as customer ("Customer"), in accordance with the following terms and conditions ("Agreement"). QES and Customer may be referred to as "Party" or "Parties".

1. Price and Taxes. Customer will pay QES for the Services or Products in accordance with QES' quoted price which exclude applicable taxes or process license fees. Customer shall pay all applicable taxes and process license fees related to the Services and/or Products. QES' prices are subject to change without notice.

2. Terms of Payment. Customer will pay QES cash in advance for Services and Products unless QES has approved credit prior to the performance of the Services and/or delivery of the Products. Credit terms for approved accounts require full payment of the invoiced amount within 30 days from the date of invoice. All invoices not paid within 30 days will be charged an interest rate of 1½% per month or the maximum rate allowed under applicable state law, whichever is higher. Customer will be responsible for any fees incurred by QES in the collection of any amounts owed to QES including but not limited to attorney's fees and/or collection fee costs.

3. Proof of Services or Delivery of Products. QES will furnish verification of proof of Services performed and Product delivered to Customer's representative at the time of performance of the Services or Product delivery. Customer agrees to sign and return such verification indicating Customer's acceptance of the Services or Products.

4. Delivery or Completion. All liability and responsibility of QES ceases when (1) Products are delivered to the Customer by QES and no longer in the care, custody and control of QES or (2) when the carrier receives the Products and/or shipment. QES will not be responsible for loss or damage to Products in transit or for delays of carriers in delivering goods. In case of shortage, non-conformance, or apparent damage, it is the Customer's responsibility to secure written acknowledgement from the carrier before Customer accepts delivery. Additionally, QES will not be liable for any damage for delays in delivery or completion due to a Force Majeure (as defined below), acts or omissions of the Customer, third party material or manufacturing delays, impossibility or impracticability of performance or any other cause or causes beyond the control of QES. In the event of a delay caused by the aforesaid, the delivery or completion date will be extended for a period equal to any such delay, and the purchase or service will not be void or voidable as a result thereof.

5. Well or Service Site Conditions. Customer, having custody and control of the well and/or service site, and having superior knowledge of the same and the conditions surrounding them, warrant that the well and/or service site will be in proper condition to receive and accommodate Services and Products. Upon QES' request, Customer will provide documentation to verify that the well or service site is adequate to support the Services and the delivery of Products. Customer also warrants that QES' personnel and equipment will be able to safely access the well and service site and that any special equipment or road improvements required for such access will be the responsibility of Customer, unless otherwise agreed to by the parties.

6. Chemical Handling and Hazardous Materials. Customer agrees that for any waste created as part of the Services, Customer will be considered the "generator" for purposes of any applicable laws or regulations pertaining to the transportation, storage and handling of chemicals and hazardous materials.

7. Data, Data Transmission and Storage. QES does not warrant or guarantee the accuracy of any research analysis, survey, or other data generated for the Services. QES is not responsible for any accidental or intentional interception of such data by third parties and it is the responsibility of the Customer to safeguard such data against loss including any need to secure digital or paper copies for storage.

8. WARRANTIES - LIMITATION OF LIABILITY.

a) QES warrants that the Services and Products will: (i) be free from defects in materials and workmanship; (ii) be performed in a good and workmanlike manner, in accordance with good oilfield servicing practices; and (iii) conform to the plans, specifications and technical information provided in writing by Customer until the Services or Products are accepted by Customer or QES' contractual obligations are met. In the event that Customer discovers a defect in the Services or Products within the warranty period specified above, Customer will notify QES of such defect. In the event that QES confirms that the Services or Products are defective, QES's liability and Customer's exclusive remedy in any cause of action (whether in tort, contract, breach of warranty or otherwise) arising out of the sale or use of any Services or Products is expressly limited to, at QES' option, the (i) replacement of such Services or Products upon their return to QES or (ii) a credit to Customer for the full price paid by Customer for the defective segment of the Services or Products upon their return to QES. In the case of products or parts not wholly of QES' manufacture, QES' liability will be limited to the extent of its recovery from the manufacturer of such products or parts under its liability to QES. QES will not be liable for any damages, claims, losses or expenses of Customer resulting from such defects or for damages resulting from delays, loss of use, or other direct, indirect, incidental, punitive or consequential damages of any kind. QES will not be responsible for: (i) failures of Services that have been in any way tampered with or altered by anyone other than an authorized representative of QES; (ii) failures due to lack of compliance with recommended maintenance procedures; and (iii) products requiring replacement due to normal wear and tear.

b) **EXCEPT FOR THE WARRANTIES EXPRESSLY STATED ABOVE, THERE ARE NO OTHER WARRANTIES. THE PARTIES EXPRESSLY EXCLUDE AND CUSTOMER WAIVES ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

c) **IN NO EVENT WILL QES' ENTIRE LIABILITY (IN TORT, CONTRACT, WARRANTY, INFRINGEMENT OR OTHERWISE) TO CUSTOMER EXCEED THE PURCHASE PRICE ACTUALLY PAID BY CUSTOMER FOR THE SERVICES OR PRODUCTS THAT GIVE RISE TO A DISPUTE. THIS PROVISION WILL SURVIVE ANY TERMINATION OF THIS AGREEMENT.**

9. INDEMNIFICATION AND WAIVER OF CONSEQUENTIAL DAMAGES.

9.1 For purpose of this Section 9, the following definitions will apply: "QES Group" means QES Pressure Pumping LLC, its parent company, and affiliated companies, and its and their officers, directors, employees, contractors, subcontractors and invitees. "Customer Group" means Customer, its parent (if any), subsidiary and affiliated companies, co-owners, co-venturers, partners and any entity with whom Customer has an economic interest with respect to the Services, including Customer's joint interest owners and partners and its and their officers, directors, employees, contractors (not including QES), subcontractors and invitees.

9.2 QES INDEMNITY. QES AGREES TO PROTECT, DEFEND, INDEMNIFY AND HOLD HARMLESS CUSTOMER GROUP FROM AND AGAINST ALL CLAIMS, DEMANDS, AND CAUSES OF ACTION OF EVERY KIND AND CHARACTER, ARISING IN CONNECTION WITH THE SERVICES, ON ACCOUNT OF BODILY INJURY, ILLNESS, OR DEATH OF ANY MEMBER OF QES GROUP OR, DAMAGE TO OR LOSS OF PROPERTY OF ANY MEMBER OF QES GROUP.

9.3 CUSTOMER INDEMNITY. CUSTOMER AGREES TO PROTECT, DEFEND, INDEMNIFY AND HOLD HARMLESS QES GROUP FROM AND AGAINST ALL CLAIMS, DEMANDS, AND CAUSES OF ACTION OF EVERY KIND AND CHARACTER, ARISING IN CONNECTION WITH THE SERVICES, ON ACCOUNT OF BODILY INJURY ILLNESS, OR DEATH OF ANY MEMBER OF CUSTOMER GROUP OR DAMAGE TO OR LOSS OF PROPERTY OF ANY MEMBER OF CUSTOMER GROUP.

9.4 WELL. CUSTOMER WILL RELEASE, PROTECT, DEFEND, AND INDEMNIFY QES GROUP FROM AND AGAINST ALL CLAIMS, DEMANDS AND CAUSES OF ACTION OF EVERY KIND AND CHARACTER IN THE EVENTS OF: (I) LOSS OR DAMAGE TO ANY GEOLOGICAL FORMATION, STRATA OR OIL OR GAS RESERVOIR OR MINERAL OR WATER RESOURCE BENEATH THE SURFACE OF THE LAND OR WATER, (II) LOSS OR DAMAGE TO THE HOLE OR WELL, (III) IMPAIRMENT OF PROPERTY RIGHTS OR OTHER INTERESTS IN OR TO OIL, GAS, MINERAL OR WATER RESOURCES, AND (IV) REGAINING CONTROL OF ANY WILD WELL OR OUT OF CONTROL WELL; UNDERGROUND OR ABOVE THE SURFACE, INCLUDING REMOVAL OF WRECK, DEBRIS, EQUIPMENT, AND HAZARDOUS MATERIALS AND REMEDIATING ENVIRONMENTAL DAMAGE.

9.5 POLLUTION RESPONSIBILITY. Subject to paragraphs 9.2 and 9.3, it is understood and agreed between Customer and QES that the responsibility for pollution shall be as follows:

(a) QES WILL ASSUME RESPONSIBILITY FOR CONTROL AND REMOVAL OF AND WILL PROTECT, DEFEND AND INDEMNIFY CUSTOMER GROUP FROM AND AGAINST ALL CLAIMS, DEMANDS AND CAUSES OF ACTION OF EVERY KIND OF CHARACTER ARISING FROM POLLUTION OR CONTAMINATION WHICH ORIGINATES ABOVE THE SURFACE OF THE LAND OR WATER FROM THE EQUIPMENT OF ANY MEMBER OF QES GROUP MAINTAINED IN QES GROUPS' CARE, CUSTODY AND CONTROL, AND ARISING FROM THE PERFORMANCE OF THE SERVICES;

(b) CUSTOMER WILL ASSUME RESPONSIBILITY FOR CONTROL AND REMOVAL OF AND WILL PROTECT, DEFEND AND INDEMNIFY QES GROUP FROM AND AGAINST ALL CLAIMS, DEMANDS AND CAUSES OF ACTION OF EVERY KIND AND CHARACTER ARISING FROM POLLUTION OTHER THAN THAT DESCRIBED IN SECTION 9.5(A) ABOVE, WHICH MAY OCCUR DURING THE CONDUCT OF OPERATIONS HEREUNDER, INCLUDING, BUT NOT LIMITED TO, POLLUTION RESULTING FROM FIRE, BLOWOUT, CRATERING, SEEPAGE OR OTHER UNCONTROLLED FLOW OF OIL, GAS OR OTHER SUBSTANCE.

9.6 WAIVER OF CONSEQUENTIAL DAMAGES. NOTWITHSTANDING ANY PROVISION TO THE CONTRARY, CUSTOMER AND QES FURTHER AGREE THAT NEITHER PARTY WILL BE LIABLE TO THE OTHER OR EACH OTHER'S RESPECTIVE GROUP FOR ANY CONSEQUENTIAL, INCIDENTAL OR INDIRECT DAMAGES, INCLUDING BUT NOT LIMITED TO, LOSS OF PROFIT, LOSS OF PRODUCTION, REVENUE, OR ANTICIPATED BUSINESS ("LOSSES"). CUSTOMER AGREES TO INDEMNIFY AND HOLD QES GROUP HARMLESS FROM AND AGAINST ANY AND ALL CLAIMS FOR SUCH LOSSES ASSERTED BY MEMBERS OF CUSTOMER GROUP. QES AGREES TO INDEMNIFY AND HOLD CUSTOMER GROUP HARMLESS FROM AND AGAINST ANY AND ALL CLAIMS FOR SUCH LOSSES ASSERTED BY MEMBERS OF QES GROUP.

9.7 EXCEPT AS OTHERWISE EXPRESSLY LIMITED BY THIS AGREEMENT OR BY LAW, ALL RELEASES, INDEMNITY OBLIGATIONS AND OTHER LIABILITIES ASSUMED UNDER THIS AGREEMENT WILL BE WITHOUT LIMIT AND WITHOUT REGARD TO THE CAUSE OR CAUSES, INCLUDING, WITHOUT LIMITATION, PREEXISTING CONDITIONS, UNSEAWORTHINESS, STRICT LIABILITY, WILLFUL MISCONDUCT, AND THE SOLE, JOINT, GROSS, OR CONCURRENT NEGLIGENCE OF ANY PARTY.

9.8. Each Party hereunder agrees to support its indemnity obligations with liability insurance coverage with limits of liability not less than ten million dollars ($10,000,000). It is the express intention of the Parties that the indemnities contained herein apply to the fullest extent permitted by applicable law, and in no event will a Party's indemnity obligation be limited to the amount of insurance carried by each Party.

THIS SECTION 9 WILL SURVIVE THE TERMINATION OR EXPIRATION OF THIS AGREEMENT.

10. Insurance. All insurance policies of either Party, in any way related to the Services, whether or not required by this Agreement, shall to the extent of the risks and liabilities assumed by such party: (i) name the other party group as additional insured (except for worker's compensation, OEE/COW, or professional liability policies), (ii) waive subrogation as to the other party group; and (iii) be primary and non-contributory to any insurance of the other party group.

11. Force Majeure. Except the obligation to make payments when due, neither QES nor Customer will be liable nor deemed to be in breach of this Agreement for any delay or failure in performance resulting from the acts of God, civil or military authority, material change of law, any governmental action, acts of public enemy, war, accidents, fires, explosions, earthquakes, floods, failure of transportation, national strikes, acute or unusual labor, material or equipment shortages, or any similar or dissimilar cause beyond the reasonable control of either Party. The Party so affected will as soon as such a cause or event occurs promptly notify the other Party in writing concerning the cause and the estimated effect and take reasonable measures with proper dispatch to remedy the condition. In the event Customer declares a force majeure occurrence, QES will be compensated at the standard daily rate for the materials and personnel that are standing idle as a consequence of the force majeure occurrence until Customer terminates the work order or work resumes.

12. Governing Law. This Agreement will be governed by the laws of the State of Texas, without regard to its conflicts of law provisions. The Parties agree to submit to the exclusive jurisdiction of the federal or state courts located in Houston, Harris County, Texas with respect to any and all disputes that arise out of or are related in any way to the subject matter of this Agreement. This Section 12 will survive the termination or expiration of this Agreement.

13. Independent Contractor. QES will be an independent contractor with respect to the Services performed, and neither QES nor anyone employed by QES will be deemed for any purpose to be the employee, agent, servant, borrowed servant or representative of Customer.

14. Severability. In the event any provision of this Agreement is inconsistent with or contrary to any applicable law, rule or regulation, the provision will be deemed modified to the extent required to comply, and the remaining terms, as modified, will remain in full force and effect.

15. Waiver. A waiver on the part of either Party of any breach of any term, provision or condition of this Agreement will not constitute a precedent and not bind either Party hereto to a waiver of any succeeding or other breach of the same or any other term, provision or condition of this Agreement.

16. Entire Agreement. This Agreement contains the entire agreement of the Parties with regard to the subject matter hereof and supersedes any prior oral and written agreements, contracts, representations or warranty between the Parties relating to the subject matter hereof. No amendment or modification of this Agreement will be effective unless it is in writing and signed by an authorized representative of each Party. If the Parties enter into a Master Service Agreement, then any term or condition herein which conflicts with the provisions of such Master Service Agreement will be deemed invalid.

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Palomino Petroleum Inc.**

4924 SE 84th St.
Newton KS 67114

ATTN: Eli Felts

9-16s-26w Ness,KS

Baker-Deterding Unit #1

Start Date: 2019.03.09 @ 17:52:15
End Date: 2019.03.10 @ 00:28:15
Job Ticket #: 64868 DST #: 1

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

Printed: 2019.03.13 @ 09:50:38

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC

Palomino Petroleum Inc.

4924 SE 84th St.
New ton KS 67114

ATTN: Eli Felts

Baker-Deterding Unit #1

9-16s-26w Ness,KS

Job Ticket: 64868 **DST#: 1**

Test Start: 2019.03.09 @ 17:52:15

GENERAL INFORMATION:

Formation: **LKC H - I**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:24:00
Time Test Ended: 00:28:15

Test Type: Conventional Bottom Hole (Initial)
Tester: Mike Roberts
Unit No: 81

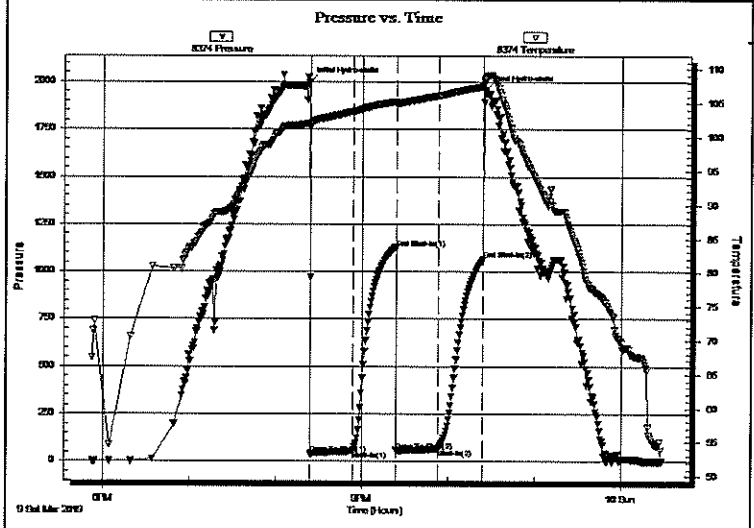
Interval: 4078.00 ft (KB) To 4151.00 ft (KB) (TVD)
Total Depth: 4151.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2639.00 ft (KB)
2636.00 ft (CF)
KB to GR/CF: 3.00 ft

Serial #: 8374 **Inside**
Press@RunDepth: 65.52 psig @ 4146.00 ft (KB)
Start Date: 2019.03.09 End Date: 2019.03.10
Start Time: 17:52:15 End Time: 00:28:15

Capacity: 8000.00 psig
Last Calib.: 2019.03.10
Time On Btm: 2019.03.09 @ 20:23:30
Time Off Btm: 2019.03.09 @ 22:24:45

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



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2001.22	101.88	Initial Hydro-static
1	40.74	101.66	Open To Flow (1)
31	53.58	103.74	Shut-In(1)
60	1121.06	105.24	End Shut-In(1)
60	57.02	104.89	Open To Flow (2)
90	65.52	106.09	Shut-In(2)
121	1062.40	107.46	End Shut-In(2)
122	1955.40	108.46	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
117.00	M w / oil spots 100%m	0.58

Gas Rates

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

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Palomino Petroleum Inc.

4924 SE 84th St.
Newton KS 67114

ATTN: Eli Felts

Baker-Deterding Unit #1

9-16s-26w Ness,KS

Job Ticket: 64868 **DST#: 1**

Test Start: 2019.03.09 @ 17:52:15

GENERAL INFORMATION:

Formation: **LKC H - I**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:24:00
Time Test Ended: 00:28:15

Test Type: Conventional Bottom Hole (Initial)
Tester: Mike Roberts
Unit No: 81

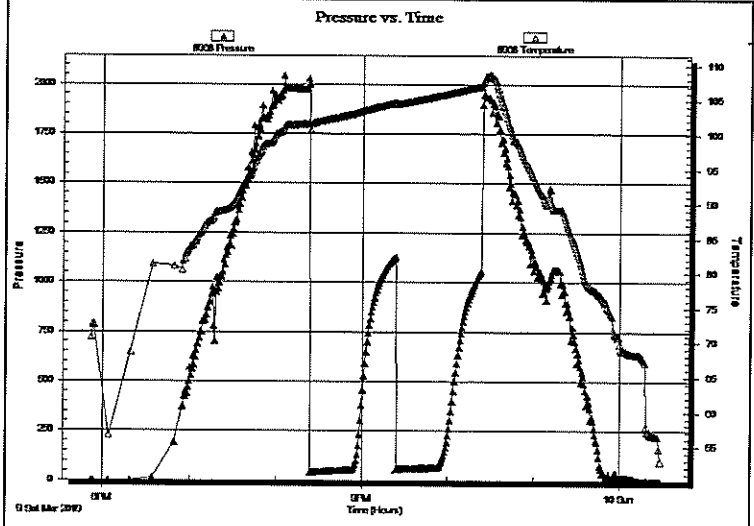
Interval: 4078.00 ft (KB) To 4151.00 ft (KB) (TVD)
Total Depth: 4151.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2639.00 ft (KB)
2636.00 ft (CF)
KB to GR/CF: 3.00 ft

Serial #: 8968 **Outside**
Press@RunDepth: psig @ 4146.00 ft (KB)
Start Date: 2019.03.09 End Date: 2019.03.10
Start Time: 17:52:15 End Time: 00:28:15

Capacity: 8000.00 psig
Last Calib.: 2019.03.10
Time On Btm:
Time Off Btm:

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



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
117.00	M w / oil spots 100%m	0.58

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Palomino Petroleum Inc.

4924 SE 84th St.
New ton KS 67114

ATTN: Eli Felts

Baker-Deterding Unit #1

9-16s-26w Ness,KS

Job Ticket: 64868 **DST#: 1**

Test Start: 2019.03.09 @ 17:52:15

Tool Information

Drill Pipe:	Length:	3943.00 ft	Diameter:	3.80	inches	Volume:	55.31	bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00	inches	Volume:	0.00	bbl	
Drill Collar:	Length:	117.00 ft	Diameter:	2.25	inches	Volume:	0.58	bbl	
						Total Volume:	55.89	bbl	

Drill Pipe Above KB:	10.00 ft
Depth to Top Packer:	4078.00 ft
Depth to Bottom Packer:	ft
Interval between Packers:	73.00 ft
Tool Length:	101.00 ft
Number of Packers:	2 Diameter: 7.88 inches

Tool Weight:	1500.00 lb
Weight set on Packer:	20000.00 lb
Weight to Pull Loose:	70000.00 lb
Tool Chased	10.00 ft
String Weight: Initial	50000.00 lb
Final	50000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4051.00		
Shut In Tool	5.00			4056.00		
Hydraulic tool	5.00			4061.00		
Jars	5.00			4066.00		
Safety Joint	3.00			4069.00		
Packer	5.00			4074.00	28.00	Bottom Of Top Packer
Packer	4.00			4078.00		
Stubb	1.00			4079.00		
Perforations	2.00			4081.00		
Change Over Sub	1.00			4082.00		
Drill Pipe	63.00			4145.00		
Change Over Sub	1.00			4146.00		
Recorder	0.00	8968	Outside	4146.00		
Recorder	0.00	8374	Inside	4146.00		
Bullnose	5.00			4151.00	73.00	Bottom Packers & Anchor
Total Tool Length:	**101.00**					

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Palomino Petroleum Inc.

4924 SE 84th St.
Newton KS 67114

ATTN: Eli Felts

Baker-Deterding Unit #1

9-16s-26w Ness,KS

Job Ticket: 64868 **DST#: 1**

Test Start: 2019.03.09 @ 17:52:15

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:	48.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.94 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	4200.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

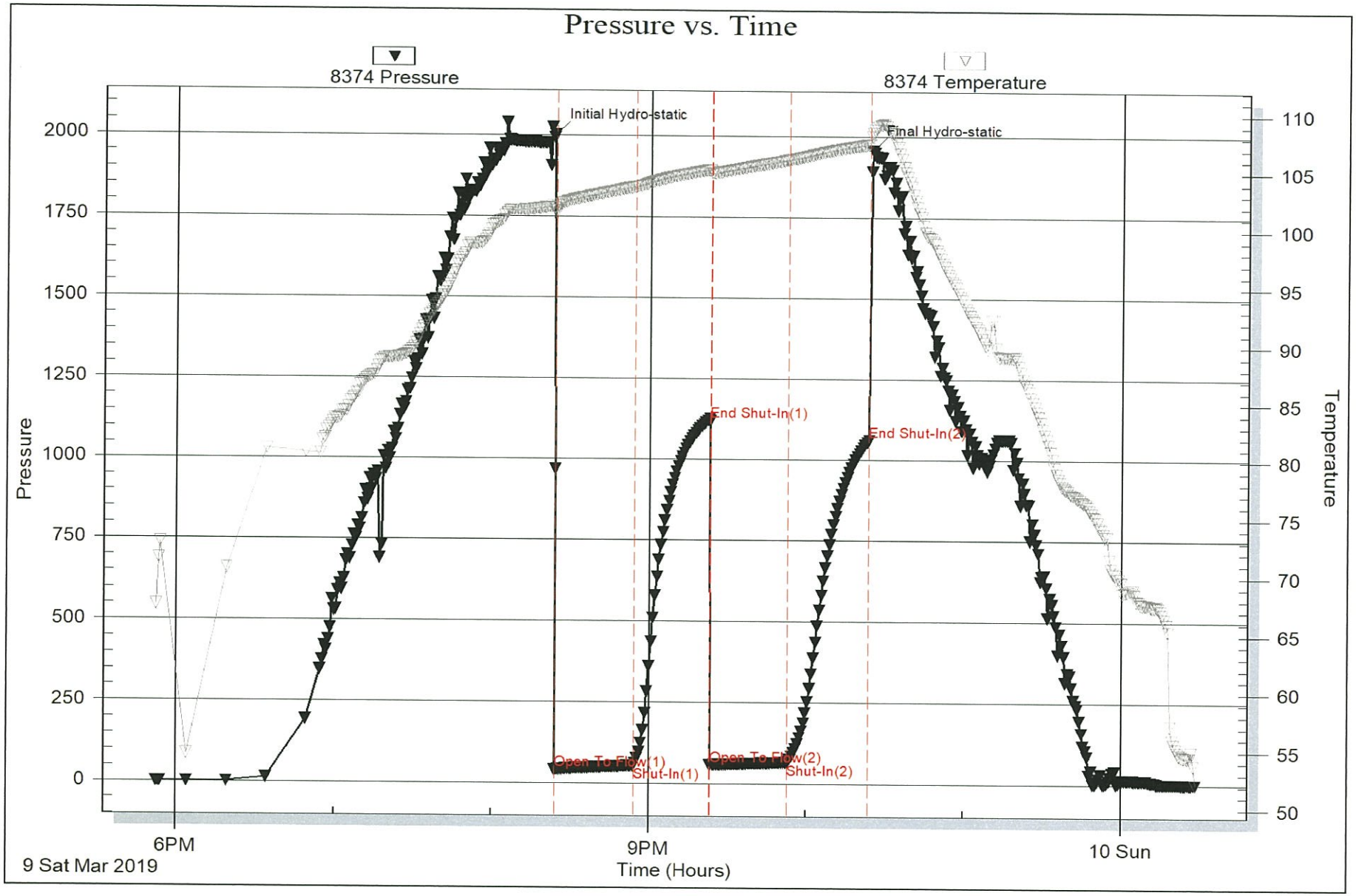
Recovery Table

Length ft	Description	Volume bbl
117.00	Mw / oil spots 100%m	0.575

Total Length: 117.00 ft Total Volume: 0.575 bbl

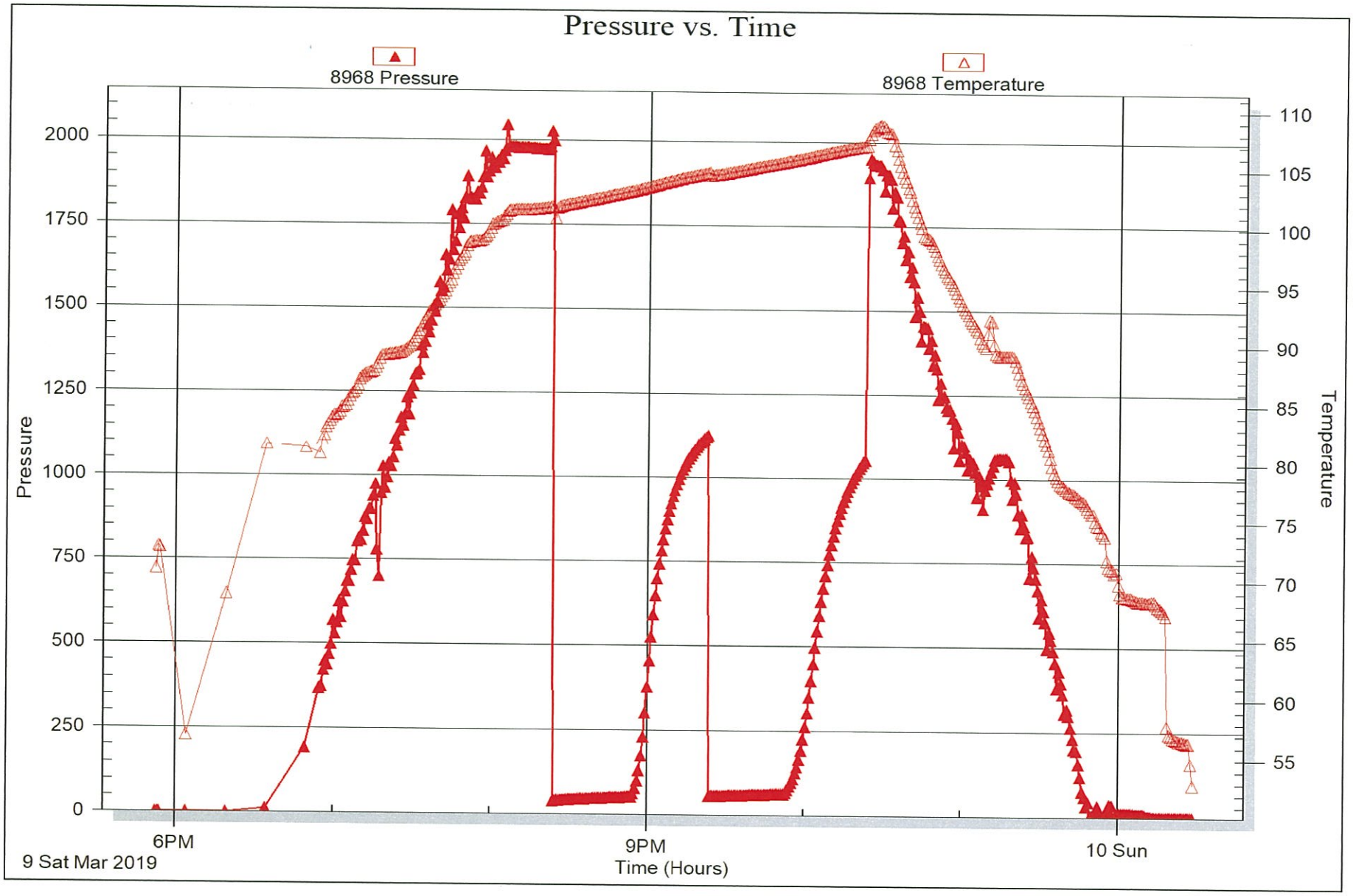
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8374 **Inside** Palomino Petroleum Inc. 9-16s-26w Ness,KS DST Test Number: 1



Trilobite Testing, Inc Ref. No: 64868 Printed: 2019.03.13 @ 09:50:39

Serial #: 8968 **Outside** Palomino Petroleum Inc. 9-16s-26w Ness,KS DST Test Number: 1



Trilobite Testing, Inc Ref. No: 64868 Printed: 2019.03.13 @ 09:50:39

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Palomino Petroleum Inc.**

4924 SE 84th St.
Newton KS 67114

ATTN: Eli Felts

9-16s-26w Ness,KS

Baker-Deterding Unit #1

Start Date: 2019.03.10 @ 14:30:15
End Date: 2019.03.10 @ 20:39:00
Job Ticket #: 64869 DST #: 2

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

Printed: 2019.03.13 @ 09:50:05

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Palomino Petroleum Inc.

4924 SE 84th St.
New ton KS 67114

ATTN: Eli Felts

Baker-Deterding Unit #1

9-16s-26w Ness,KS

Job Ticket: 64869 **DST#: 2**

Test Start: 2019.03.10 @ 14:30:15

GENERAL INFORMATION:

Formation: **LKC J - L**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 16:35:00
Time Test Ended: 20:39:00

Test Type: Conventional Bottom Hole (Reset)
Tester: Mike Roberts
Unit No: 81

Interval: 4143.00 ft (KB) To 4230.00 ft (KB) (TVD)
Total Depth: 4230.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

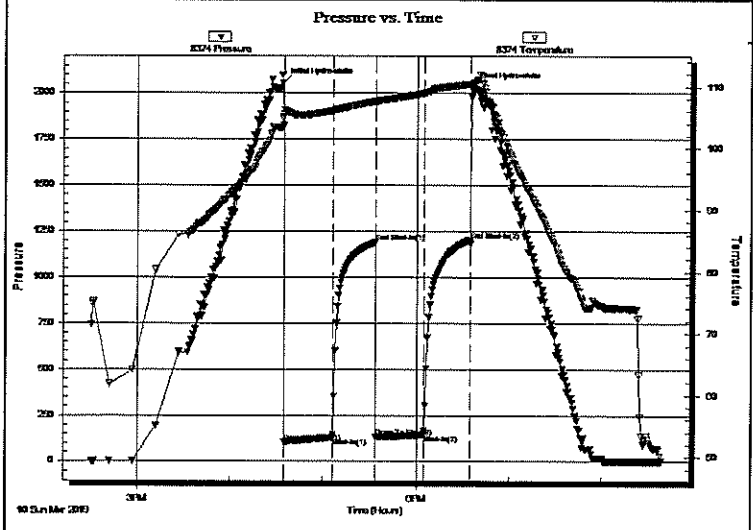
Reference Elevations: 2639.00 ft (KB)
2636.00 ft (CF)
KB to GR/CF: 3.00 ft

Serial #: 8374 **Inside**

Press@RunDepth: 143.69 psig @ 4211.00 ft (KB)
Start Date: 2019.03.10 End Date: 2019.03.10
Start Time: 14:30:15 End Time: 20:39:00

Capacity: 8000.00 psig
Last Calib.: 2019.03.10
Time On Btm: 2019.03.10 @ 16:34:30
Time Off Btm: 2019.03.10 @ 18:36:00

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



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2057.51	104.76	Initial Hydro-static
1	103.05	105.50	Open To Flow (1)
32	128.07	106.03	Shut-In(1)
59	1189.40	107.64	End Shut-In(1)
60	132.61	107.28	Open To Flow (2)
90	143.69	108.89	Shut-In(2)
120	1201.32	110.46	End Shut-In(2)
122	2035.97	110.12	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
189.00	OSM 100%m w ith oil spots	1.59

* Recovery from multiple tests

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

ATTN: Eli Felts

Baker-Deterding Unit #1

9-16s-26w Ness,KS

Job Ticket: 64869 **DST#: 2**

Test Start: 2019.03.10 @ 14:30:15

GENERAL INFORMATION:

Formation: **LKC J - L**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 16:35:00
Time Test Ended: 20:39:00

Test Type: Conventional Bottom Hole (Reset)
Tester: Mike Roberts
Unit No: 81

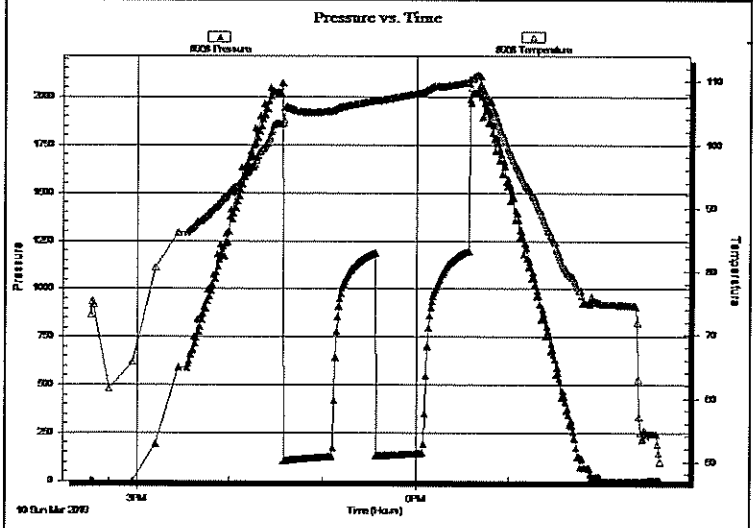
Interval: 4143.00 ft (KB) To 4230.00 ft (KB) (TVD)
Total Depth: 4230.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2639.00 ft (KB)
2636.00 ft (CF)
KB to GR/CF: 3.00 ft

Serial #: 8968 **Outside**
Press@RunDepth: psig @ 4211.00 ft (KB)
Start Date: 2019.03.10 End Date: 2019.03.10
Start Time: 14:30:15 End Time: 20:38:45

Capacity: 8000.00 psig
Last Calib.: 2019.03.10
Time On Btm:
Time Off Btm:

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



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
189.00	OSM 100%m w ith oil spots	1.59

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Palomino Petroleum Inc.

4924 SE 84th St.
New ton KS 67114

ATTN: Eli Felts

Baker-Deterding Unit #1

9-16s-26w Ness,KS

Job Ticket: 64869 **DST#: 2**

Test Start: 2019.03.10 @ 14:30:15

Tool Information

Drill Pipe:	Length:	4008.00 ft	Diameter:	3.80	inches	Volume:	56.22	bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00	inches	Volume:	0.00	bbl	
Drill Collar:	Length:	117.00 ft	Diameter:	2.25	inches	Volume:	0.58	bbl	
						Total Volume:	56.80	bbl	

Drill Pipe Above KB:	10.00 ft
Depth to Top Packer:	4143.00 ft
Depth to Bottom Packer:	ft
Interval between Packers:	87.00 ft
Tool Length:	115.00 ft
Number of Packers:	2
Diameter:	7.88 inches

Tool Weight:	1500.00 lb
Weight set on Packer:	20000.00 lb
Weight to Pull Loose:	70000.00 lb
Tool Chased	10.00 ft
String Weight: Initial	50000.00 lb
Final	lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4116.00		
Shut In Tool	5.00			4121.00		
Hydraulic tool	5.00			4126.00		
Jars	5.00			4131.00		
Safety Joint	3.00			4134.00		
Packer	5.00			4139.00	28.00	Bottom Of Top Packer
Packer	4.00			4143.00		
Stubb	1.00			4144.00		
Perforations	2.00			4146.00		
Change Over Sub	1.00			4147.00		
Drill Pipe	63.00			4210.00		
Change Over Sub	1.00			4211.00		
Recorder	0.00	8968	Outside	4211.00		
Recorder	0.00	8374	Inside	4211.00		
Perforations	14.00			4225.00		
Bullnose	5.00			4230.00	87.00	Bottom Packers & Anchor
Total Tool Length:	**115.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Palomino Petroleum Inc.

4924 SE 84th St.
New ton KS 67114

ATTN: Eli Felts

Baker-Deterding Unit #1

9-16s-26w Ness,KS

Job Ticket: 64869 **DST#: 2**

Test Start: 2019.03.10 @ 14:30:15

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:	43.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.16 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	4300.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

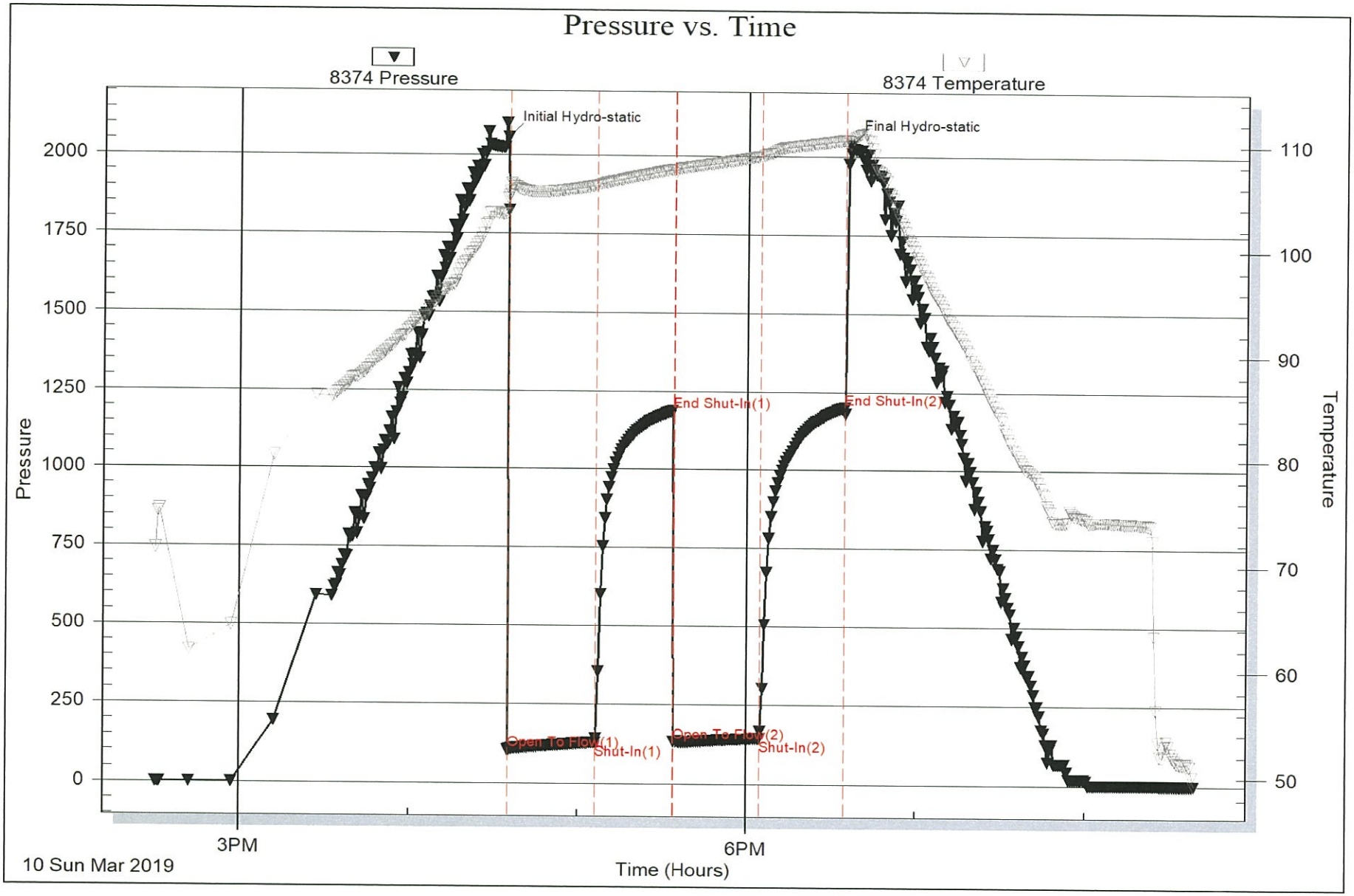
Recovery Table

Length ft	Description	Volume bbl
189.00	OSM 100%m w ith oil spots	1.585

Total Length: 189.00 ft Total Volume: 1.585 bbl

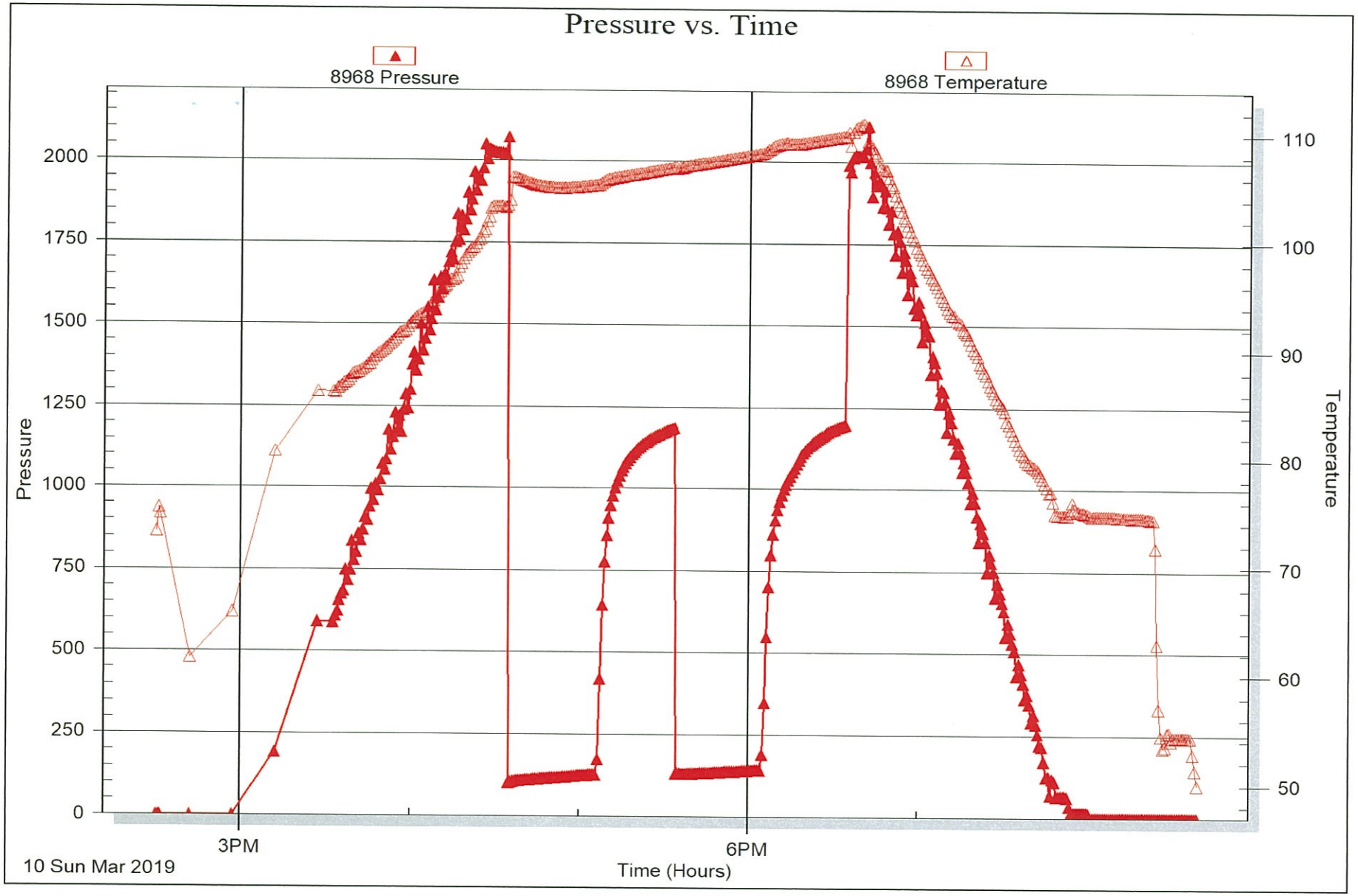
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8374 **Inside** Palomino Petroleum Inc. 9-16s-26w Ness,KS DST Test Number: 2



Trilobite Testing, Inc Ref. No: 64869 Printed: 2019.03.13 @ 09:50:06

Serial #: 8968 **Outside** Palomino Petroleum Inc. 9-16s-26w Ness,KS DST Test Number: 2



Trilobite Testing, Inc Ref. No: 64869 Printed: 2019.03.13 @ 09:50:06

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Palomino Petroleum Inc.**

4924 SE 84th St.
Newton KS 67114

ATTN: Eli Felts

9-16s-26w Ness,KS

Baker-Deterding Unit #1

Start Date: 2019.03.12 @ 18:28:15
End Date: 2019.03.13 @ 00:56:30
Job Ticket #: 64870 DST #: 3

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

Printed: 2019.03.13 @ 09:46:51

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Palomino Petroleum Inc.

4924 SE 84th St.
New ton KS 67114

ATTN: Eli Felts

Baker-Deterding Unit #1

9-16s-26w Ness,KS

Job Ticket: 64870 **DST#: 3**

Test Start: 2019.03.12 @ 18:28:15

GENERAL INFORMATION:

Formation: **Miss**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:53:45
Time Test Ended: 00:56:30

Test Type: Conventional Bottom Hole (Reset)
Tester: Mike Roberts
Unit No: 81

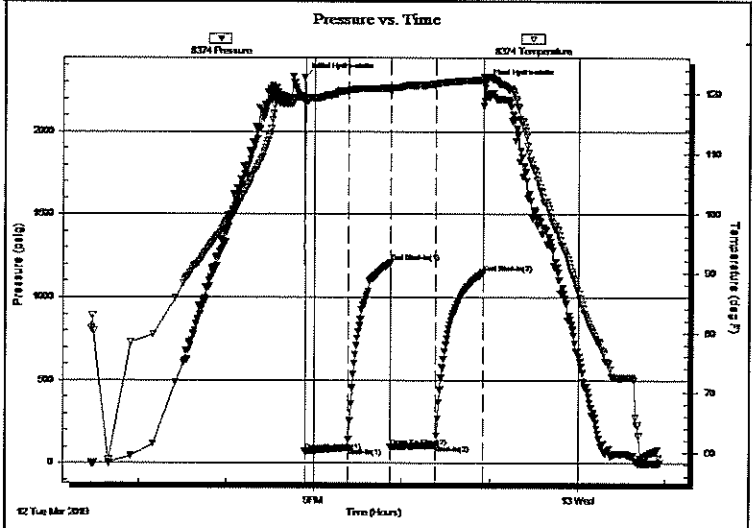
Interval: 4470.00 ft (KB) To 4588.00 ft (KB) (TVD)
Total Depth: 4633.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2639.00 ft (KB)
2636.00 ft (CF)
KB to GR/CF: 3.00 ft

Serial #: 8374 **Inside**
Press@RunDepth: 109.26 psig @ 4569.00 ft (KB)
Start Date: 2019.03.12 End Date: 2019.03.13
Start Time: 18:28:15 End Time: 00:56:30

Capacity: 8000.00 psig
Last Calib.: 2019.03.13
Time On Btm: 2019.03.12 @ 20:53:15
Time Off Btm: 2019.03.12 @ 22:56:15

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



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2323.30	119.33	Initial Hydro-static
1	70.27	118.38	Open To Flow (1)
30	94.27	120.48	Shut-In(1)
59	1208.88	121.02	End Shut-In(1)
60	96.88	120.48	Open To Flow (2)
90	109.26	121.70	Shut-In(2)
122	1147.55	122.39	End Shut-In(2)
123	2288.45	122.68	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	mud 100%m	0.30

* Recovery from multiple tests

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

ATTN: Eli Felts

Baker-Deterding Unit #1

9-16s-26w Ness,KS

Job Ticket: 64870 **DST#: 3**

Test Start: 2019.03.12 @ 18:28:15

GENERAL INFORMATION:

Formation: **Miss**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:53:45
Time Test Ended: 00:56:30

Test Type: Conventional Bottom Hole (Reset)
Tester: Mike Roberts
Unit No: 81

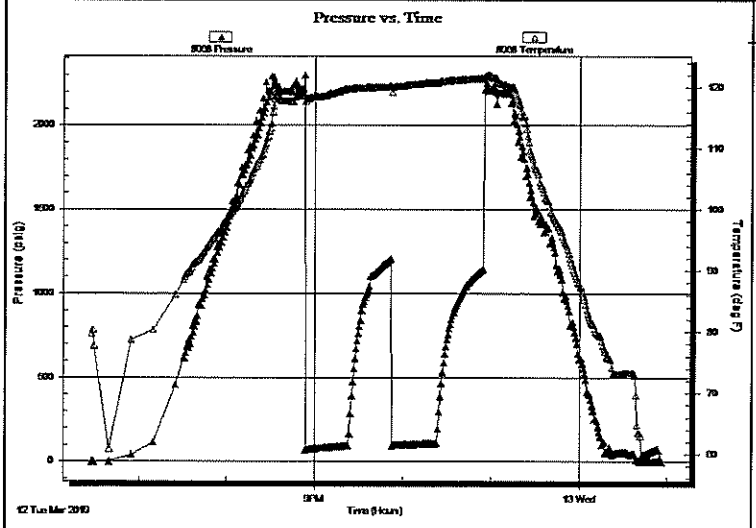
Interval: 4470.00 ft (KB) To 4588.00 ft (KB) (TVD)
Total Depth: 4633.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2639.00 ft (KB)
2636.00 ft (CF)
KB to GR/CF: 3.00 ft

Serial #: 8968 **Outside**
Press@RunDepth: psig @ 4569.00 ft (KB)
Start Date: 2019.03.12 End Date: 2019.03.13
Start Time: 18:28:15 End Time: 00:56:15

Capacity: 8000.00 psig
Last Calib.: 2019.03.13
Time On Btm:
Time Off Btm:

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



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
62.00	mud 100%m	0.30

* Recovery from multiple tests

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

ATTN: Eli Felts

Baker-Deterding Unit #1

9-16s-26w Ness,KS

Job Ticket: 64870 **DST#: 3**

Test Start: 2019.03.12 @ 18:28:15

GENERAL INFORMATION:

Formation: **Miss**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:53:45
Time Test Ended: 00:56:30

Test Type: Conventional Bottom Hole (Reset)
Tester: Mike Roberts
Unit No: 81

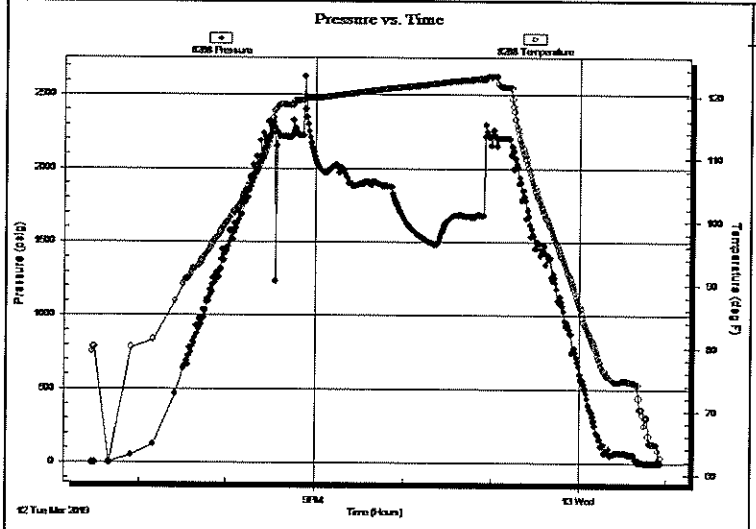
Interval: 4470.00 ft (KB) To 4588.00 ft (KB) (TVD)
Total Depth: 4633.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2639.00 ft (KB)
2636.00 ft (CF)
KB to GR/CF: 3.00 ft

Serial #: 8288 **Below (Straddle)**
Press@RunDepth: psig @ 4628.00 ft (KB)
Start Date: 2019.03.12 End Date: 2019.03.13
Start Time: 18:28:15 End Time: 00:56:00

Capacity: 8000.00 psig
Last Calib.: 2019.03.13
Time On Btm:
Time Off Btm:

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



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
62.00	mud 100%m	0.30

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Palomino Petroleum Inc.

4924 SE 84th St.
New ton KS 67114

ATTN: Eli Felts

Baker-Deterding Unit #1

9-16s-26w Ness,KS

Job Ticket: 64870 **DST#: 3**

Test Start: 2019.03.12 @ 18:28:15

Tool Information

Drill Pipe:	Length:	4357.00 ft	Diameter:	3.80 inches	Volume:	61.12 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:		80000.00 lb
					Total Volume:	61.70 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		32.00 ft					String Weight:	Initial	55000.00 lb
Depth to Top Packer:		4470.00 ft						Final	55000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		163.00 ft							
Tool Length:		191.00 ft							
Number of Packers:		2	Diameter:	7.88 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4443.00		
Shut In Tool	5.00			4448.00		
Hydraulic tool	5.00			4453.00		
Jars	5.00			4458.00		
Safety Joint	3.00			4461.00		
Packer	5.00			4466.00	28.00	Bottom Of Top Packer
Packer	4.00			4470.00		
Stubb	1.00			4471.00		
Perforations	2.00			4473.00		
Change Over Sub	1.00			4474.00		
Drill Pipe	94.00			4568.00		
Change Over Sub	1.00			4569.00		
Recorder	0.00	8968	Outside	4569.00		
Recorder	0.00	8374	Inside	4569.00		
Perforations	15.00			4584.00		
Blank Off Sub	1.00			4585.00		
Packer - Shale	3.00			4588.00		
Stubb	1.00			4589.00		
Perforations	5.00			4594.00		
Change Over Sub	1.00			4595.00		
Drill Pipe	32.00			4627.00		
Change Over Sub	1.00			4628.00		
Recorder	0.00	8288	Below	4628.00		
Bullnose	5.00			4633.00	163.00	Bottom Packers & Anchor
Total Tool Length:	**191.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Palomino Petroleum Inc.

4924 SE 84th St.
New ton KS 67114

ATTN: Eli Felts

Baker-Deterding Unit #1

9-16s-26w Ness,KS

Job Ticket: 64870 **DST#: 3**

Test Start: 2019.03.12 @ 18:28:15

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:	52.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.38 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	4500.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

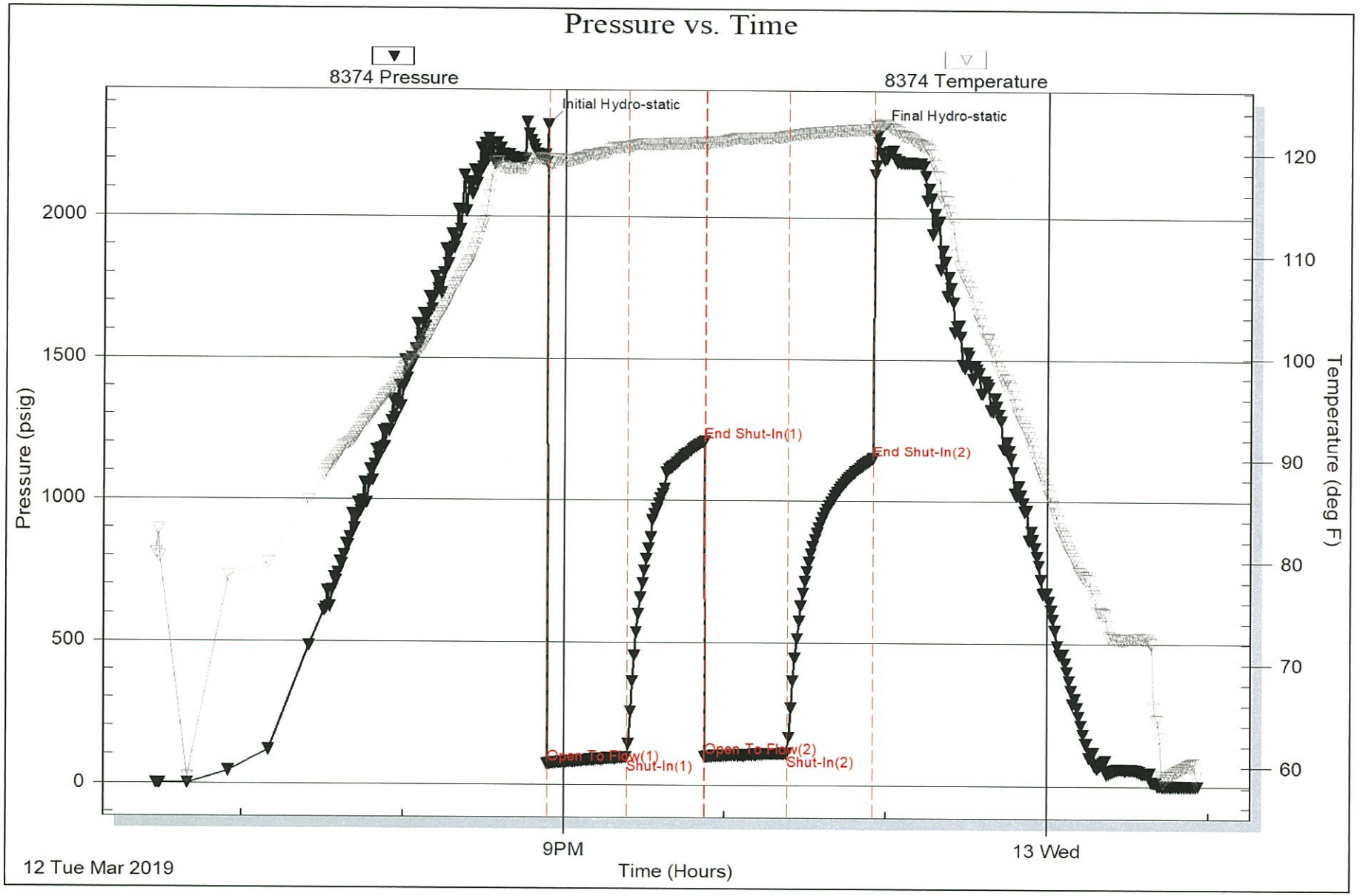
Recovery Table

Length ft	Description	Volume bbl
62.00	mud 100%m	0.305

Total Length: 62.00 ft Total Volume: 0.305 bbl

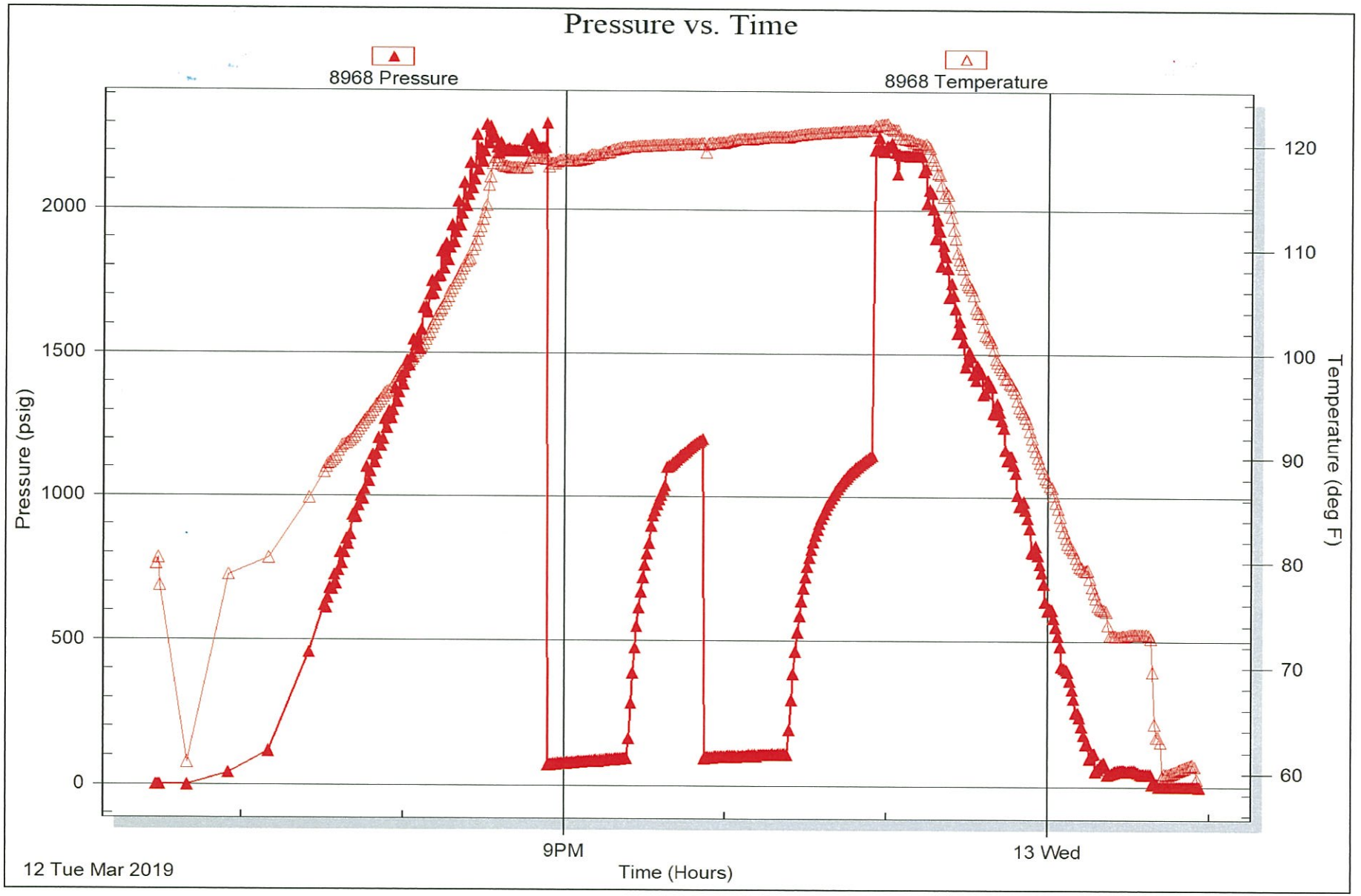
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8374 **Inside** Palomino Petroleum Inc. 9-16s-26w Ness,KS DST Test Number: 3



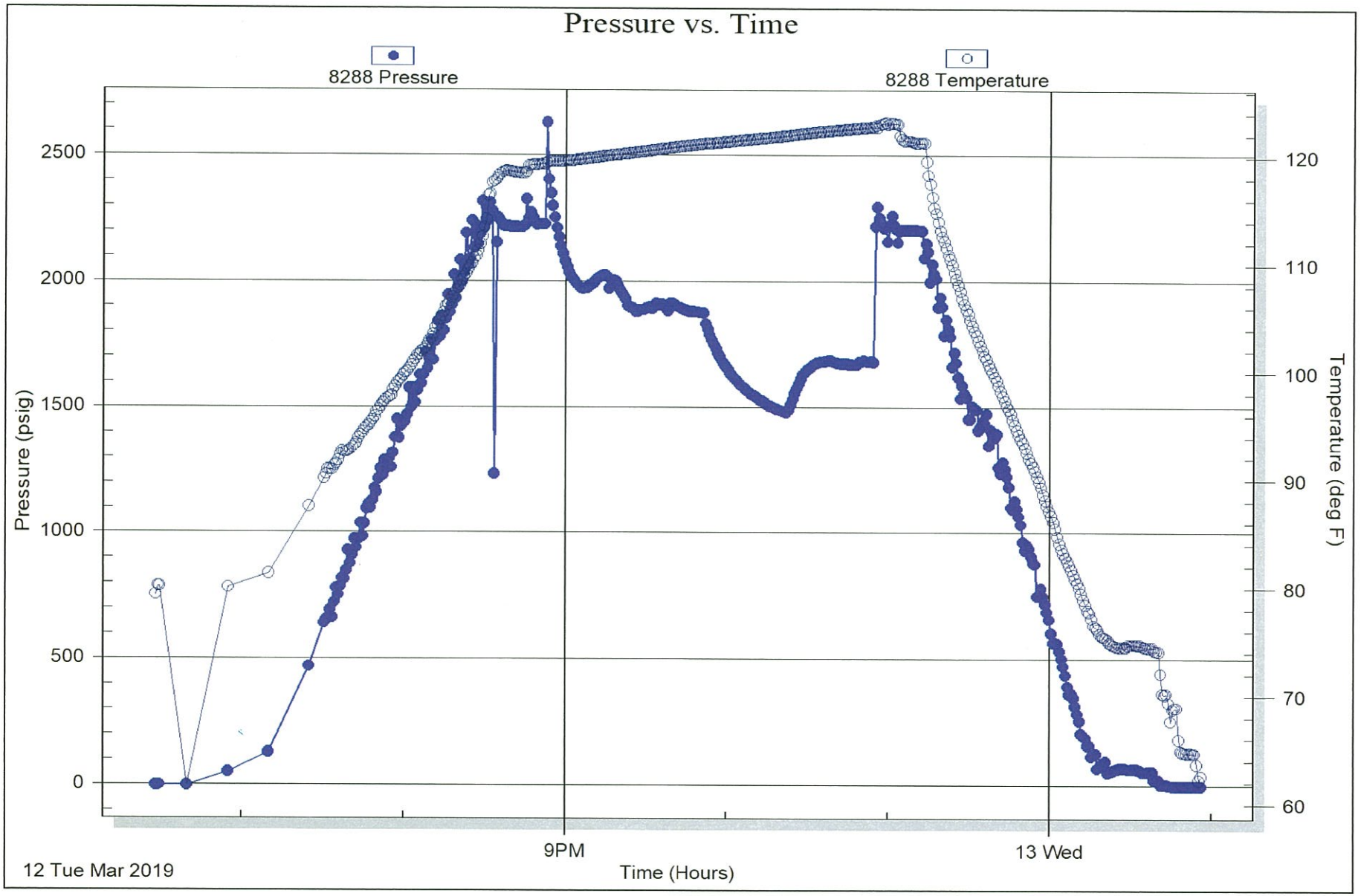
Trilobite Testing, Inc Ref. No: 64870 Printed: 2019.03.13 @ 09:46:52

Serial #: 8968 **Outside** Palomino Petroleum Inc. 9-16s-26w Ness,KS DST Test Number: 3



Trilobite Testing, Inc Ref. No: 64870 Printed: 2019.03.13 @ 09:46:52

Serial #: 8288 **Below (Straddle)** Palomino Petroleum Inc. 9-16s-26w Ness,KS DST Test Number: 3



Trilobite Testing, Inc Ref. No: 64870 Printed: 2019.03.13 @ 09:46:52

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 64868

Well Name & No. Baker-Deterding Unit 1 Test No. 1 Date 3-9-19

Company Palomino Petroleum Inc Elevation 2639 KB 2634 GL

Address 4924 SE 84th St. Newton KS 67114

Co. Rep / Geo. Eli Felts Rig WW2

Location: Sec. 9 Twp 16S Rge. 26W Co. Ness State KS

Interval Tested 4078-4151 Zone Tested KC-HJ

Anchor Length 73' Drill Pipe Run 3943 Mud Wt. 8.9

Top Packer Depth 4073 Drill Collars Run 117 Vis 48

Bottom Packer Depth 4078 Wt. Pipe Run 0 WL 8.0

Total Depth 4151 Chlorides 4200 ppm System LCM 1

Blow Description IF: Built to ½" Blow

IS: No Return Blow

FF: Built to ½" Blow

FS: No Return Blow

Rec 117	Feet of OSM	%gas	%oil	%water 100	%mud	
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 117 BHT 108 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic	2001	☑ Test 1300	T-On Location 16:00
(B) First Initial Flow	40	☑ Jars 250	T-Started 17:52
(C) First Final Flow	53	☑ Safety Joint 75	T-Open 20:23
(D) Initial Shut-In	1121	☑ Circ Sub NC	T-Pulled 22:23
(E) Second Initial Flow	57	☐ Hourly Standby	T-Out 00:28
(F) Second Final Flow	65	☑ Mileage 124 RT 124	Comments Slid 10'
(G) Final Shut-In	1062	☐ Sampler	
(H) Final Hydrostatic	1955	☐ Straddle	
		☐ Shale Packer	☐ EM Tool
Initial Open	30	☐ Extra Packer	☐ Ruined Shale Packer
Initial Shut-In	30	☐ Extra Recorder	☐ Ruined Packer
Final Flow	30	☐ Day Standby	☐ Extra Copies
Final Shut-In	30	☐ Accessibility	Sub Total 0
		Sub Total 1749	Total 1749
			MP/DST Disc't

Approved By E. J. Felts Our Representative Mike Roberts

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. 64869

Well Name & No. Baker–Dieckding Unit 1 Test No. 2 Date 3-10-19

Company Palomino Petroleum Inc Elevation 2639 KB 2636 GL

Address 4924 SE 84th St. Newton KS 67114

Co. Rep / Geo. Eli Felts Rig NW 2

Location: Sec. 9 Twp 16S Rge. 26W Co. Ness State KS

Interval Tested 4143–4230 Zone Tested JKL

Anchor Length 87 Drill Pipe Run 4008 Mud Wt. 9.1

Top Packer Depth 4138 Drill Collars Run 117 Vis 43

Bottom Packer Depth 4143 Wt. Pipe Run 0 WL 7.2

Total Depth 4230 Chlorides 4300 ppm System LCM 1

Blow Description IF: Built to 4" Blow

IS: No Return Blow

FF: Built to 2½ Blow

FS: No Return Blow

Rec 189	Feet of OSM	%gas	%oil	%water 100	%mud	
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 189 BHT 110 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic	2057	☑ Test	1300	T-On Location	13:45
(B) First Initial Flow	103	☑ Jars	250	T-Started	14:30
(C) First Final Flow	128	☑ Safety Joint	75	T-Open	16:35
(D) Initial Shut-In	1189	☑ Circ Sub	NC	T-Pulled	18:35
(E) Second Initial Flow	132	☐ Hourly Standby		T-Out	20:39
(F) Second Final Flow	143	☑ Mileage	124 RT 124	Comments	Slid 10'
(G) Final Shut-In	1201	☐ Sampler			
(H) Final Hydrostatic	2035	☐ 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	1749
		Sub Total	1749	MP/DST Disc't	

Approved By C. J. Felts Our Representative Mike Rebol

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

8200

Test Ticket

NO. 64870

Well Name & No. Baker – Deterding Unit 1 Test No. 3 Date 3-12-19

Company Palomino Petroleum Elevation 2639 KB 2636 GL

Address 4924 SE 84th St. Newton KS 67114

Co. Rep / Geo. Eli Felts Rig WW 2

Location: Sec. 9 Twp 16S Rge. 26W Co. Ness State KS

Interval Tested 4470-4588 TD 4633 Zone Tested Miss

Anchor Length 118 Drill Pipe Run 4357 Mud Wt. 9.3

Top Packer Depth 4465 Drill Collars Run 117 Vis 52

Bottom Packer Depth 4470 Wt. Pipe Run Ø WL 7.4

Total Depth 4633 Chlorides 4500 ppm System LCM 1

Blow Description IF: Built to 1" Blow

IS: No Return Blow

FF: Built to ½" Blow

FS: No Return Blow

Rec 62	Feet of Mud	%gas	%oil	%water 100	%mud	
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 62 BHT 123 Gravity — API RW — @ — F Chlorides — ppm

(A) Initial Hydrostatic	☑ Test 1300	T-On Location 16:20	
(B) First Initial Flow	☑ Jars 250	T-Started 18:28	
(C) First Final Flow	☑ Safety Joint 75	T-Open 20:53	
(D) Initial Shut-In	☑ Circ Sub NC	T-Pulled 22:53	
(E) Second Initial Flow	☐ Hourly Standby	T-Out 00:56	
(F) Second Final Flow	☑ Mileage 124	Comments	
(G) Final Shut-In	☐ Sampler		
(H) Final Hydrostatic	☑ Straddle 600	☐ EM Tool	
	☑ Shale Packer 250	☐ Ruined Shale Packer	
Initial Open 30	☐ Extra Packer	☐ Ruined Packer	
Initial Shut-In 30	☐ Extra Recorder	☐ Extra Copies	
Final Flow 30	☐ Day Standby 1.5d 7.5h	Sub Total 250	
Final Shut-In 30	☐ Accessibility	Total 2849	
	Sub Total 2599	MP/DST Disc't	

Approved By E. J. Felts Our Representative Mike Baker

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:	Baker-Deterding Unit #1
API:	15-135-26042
Location:	SW - SW - NW - SE _ Sec. 9 Twp. 16S Rge. 26W
License Number:	30742
Region:	Ness County, KS
Spud Date:	3/05/2019
Drilling Completed:	3/12/2019
Surface Coordinates:	1361' FSL & 2633' FEL
Bottom Hole Coordinates:	Same as surface coordinates
Ground Elevation (ft):	2634'
K.B. Elevation (ft):	2639'
Logged Interval (ft):	3700' To: 4630'
Total Depth (ft):	4633'
Formation:	Mississippian @ RTD
Type of Drilling Fluid:	Mud-Co. 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	2056 (+583)	ANHY	2059 (+580)
BASE ANHY	2090 (+549)	BASE ANHY	2092 (+547)
STOTLER	3471 (-832)	STOTLER	3474 (-835)
HEEBNER	3883 (-1244)	HEEBNER	3887 (-1248)
LANSING	3924 (-1285)	LANSING	3929 (-1290)
MUNCIE CK.	4081 (-1442)	MUNCIE CK.	4085 (-1446)
STARK	4168 (-1529)	STARK	4172 (-1533)
B/KC	4221 (-1582)	B/KC	4225 (-1586)
MARMATON	4267 (-1628)	MARMATON	4272 (-1633)
FT. SCOTT	4423 (-1784)	FT. SCOTT	4428 (-1789)
CHEROKEE	4452 (-1813)	CHEROKEE	4454 (-1815)
MISS	4528 (-1889)	MISS	4534 (-1895)
RTD	4630 (-1991)	LTD	4633 (-1994)

Drilling Report

3/5/19
Moved in WW Drilling, L.L.C. rotary tools (Rig #2). Spudded at 3:00 p.m. Ran surface casing. Plug down at 8:00 p.m.

3/6/19
Drilling at 350'.

3/7/19
Drilling at 2475'.

3/8/19
Drilling at 3411'.

3/9/19
Drilling at 4084'.
DST #1

3/10/19

Drilling at 4084'.
DST #1

3/10/19
CFS @ 4170'.
DST #2

3/11/19
Drilling @ 4325'.

3/12/19
Drilling @ 4580' Ran Electric Logs. DST #3

3/13/19
Plugged and Abandoned.

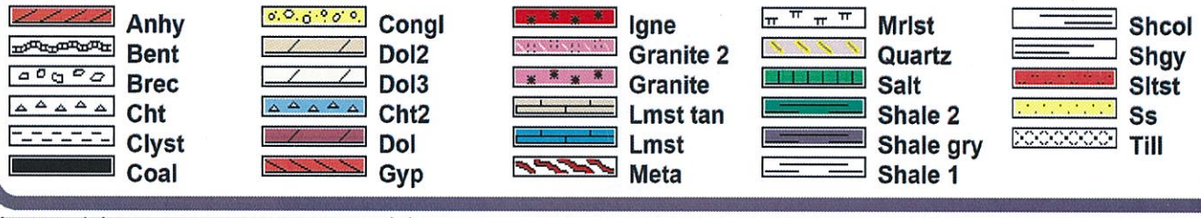
Drill Stem Tests

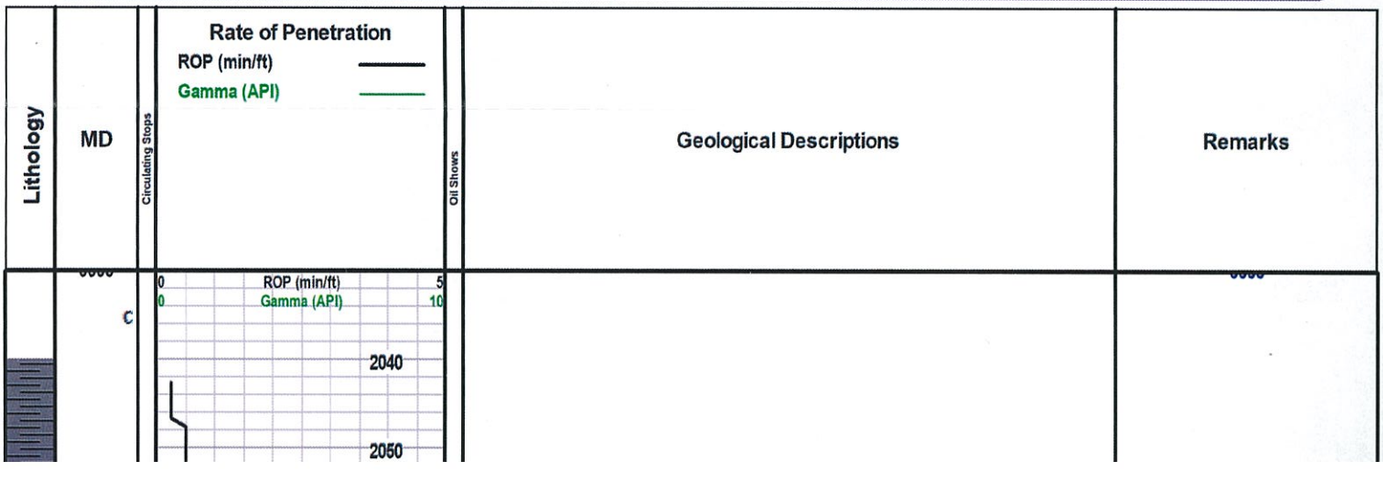
DST #1 KC (H-I)	DST #2 KC (J-L)	DST #3 Mississippian
Interval: 4078'-4151' (73') Anchor 30-30-30-30 IF: built to 1/2" ISI: no blowback FF: built to 1/2" FSI: no blowback SIP: 1121-1062# IF: 40-53# FF: 57-65# Hydrostatic: 2001-1955# BHT: 108 F Grav: NA Recovery: 117' OSM	Interval: 4143'-4230' (87') Anchor 30-30-30-30 IF: built to 4" ISI: no blowback FF: built to 2.5" FSI: no blowback SIP: 1189-1201# IF: 103-128# FF: 132-143# Hydrostatic: 2057-2035# BHT: 110 F Grav: NA Recovery: 189' OSM *tool slid 10' to bottom	Interval: 4470'-4588' (118') Anchor (45' tail) 30-30-30-30 IF: built to 1" ISI: no blowback FF: built to 1/2" FSI: no blowback SIP: 1209-1148# IF: 70-94# FF: 97-109# Hydrostatic: 2323-2288# BHT: 123 F Grav: NA Recovery: 62' Mud

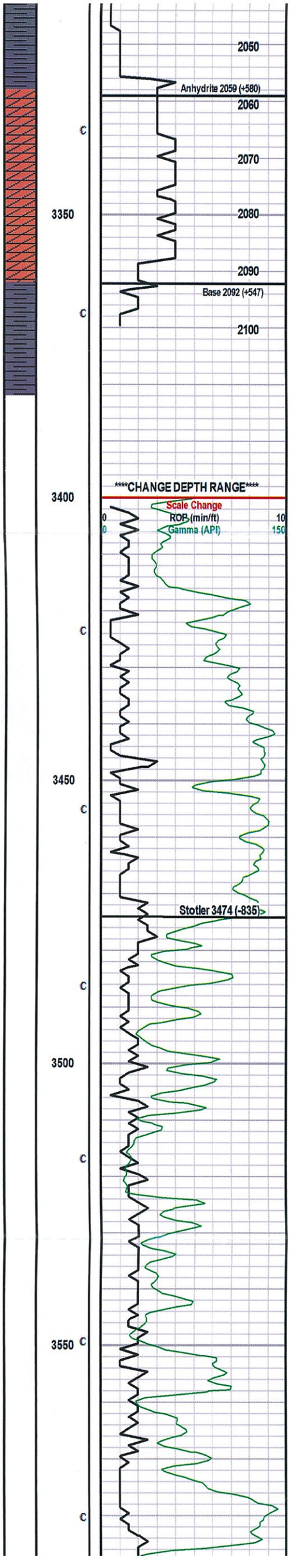
Pipe Setting

3/5/2019
Ran 5 jts. new 8 5/8" 23# surface pipe set at 219' and cemented with 170 sacks Common, 2% gel, 3% c.c. Cement did circulate. Plug down at 8:00 p.m.

ROCK TYPES







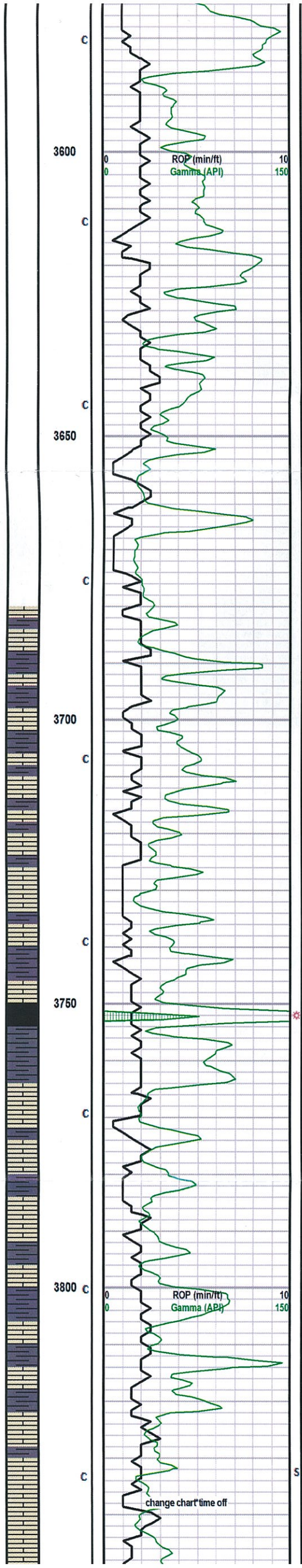
Tops have been adjusted to Gemini Wireline Logging tools & samples have been lagged.

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

Displacing Mud
3391-3440

3350
3400
3450
3500
3550

Mud-Co
Depth: 3580'
Wt. 8.6
Vis. 59
Filtrate 7.2
Chl 2,400
LCM 1#



Chl 2,400
LCM 1#

3600

3650

LS - cream to tan, grey, fine to micro xln, abundant foss, few shaley

Geologist on Location

LS - cream to tan, grey, fine to micro xln, abundant foss, trans chalky ip; few loose white chalk; argillaceous ip

LS - cream to grey, fine to med xln; foss ip; abundant chalky texture; foss txture in some w/ fair vis porosity; chalky & med soft; few pcs SH - grey & gummy

3700
Start 10' Wet & Dry Samples

LS - cream, mst med xln w/ chalky txture; some foss; few loose white gummy chalk & some argillaceous to interbedded shales

LS - cream to lt grey, mst med xln w/ foss to granular texture; chalky & soft

LS - as above; increase chalk - lt grey to white; some gummy; washes milky white

WT: 8.7
VIS: 58
LCM: 2#

LS - cream to white, lt grey, mostly chalk; soft & gummy; washes milky white

3750

LS - cream w/ lt org to pink hue in some; granular to foss txture in some; soft & chalky; trace dark shales; bleed gas

v. similar as above; trans to tan to caramel; micro xln to sub cherty; sharp & block, dense; few re-xln fractures

LS - cream, fine to med xln; sm granular to chalky; trans to fine xln, platy & lithographic, partial foss

LS - cream, fine to med xln; chalky; trans CH - cream to grey, vitreous & foss; sharp & fresh

LS - cream to grey, mst med xln; granular to chalky txture; few CH - lt grey, foss & vitreous

3800

LS - cream, med to fine xln, granuiar txture w/ part foss; some v. fine to CH - cream to white, foss, vitreous

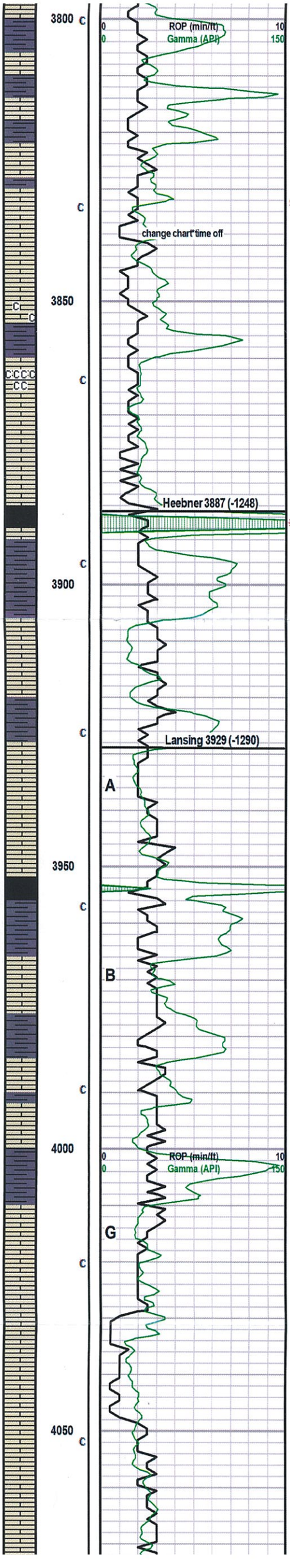
LS - cream, med xln in most, granular to foss ip; trans CH - cream to white, grey, foss, vitreous (20% CH)

LS - cream, med xln w/ chalky app, med hard (firm break but brittle) scattered chalk & few argillaceous to shaley interbed

Working on Mud-Pump

LS - cream to lt grey, mst med xln w/ granular to sucrosic txture, sm foss, med soft w/ abdt chalky matrix & few loose pcs; sm dark edge stain; no odor ns

LS - cream w/ lt grey foss, med xln w/ granular txt, sm re-xln calc (translucent); trans v. fine xln, lt tan; blocky & sharp - sub chty ip



3800

LS - cream, med to fine xln, granuiar txture w/ part foss; some v. fine to CH - cream to white, foss, vitreous

LS - cream, med xln in most, granular to foss ip; trans CH - cream to white, grey, foss, vitreous (20% CH)

LS - cream, med xln w/ chalky app, med hard (firm break but brittle) scattered chalk & few argillaceous to shaley interbed

Working on Mud-Pump

LS - cream to lt grey, mst med xln w/ granular to sucrosic txture, sm foss, med soft w/ abdt chalky matrix & few loose pcs; sm dark edge stain; no odor ns

LS - cream w/ lt grey foss, med xln w/ granular txt, sm re-xln calc (translucent); trans v. fine xln, lt tan; blocky & sharp - sub chty ip

3850

LS - cream, med xln w/ chalky txt; ~20% SH - grey dark grey & chalky edges

WT: 8.8
VIS: 53
LCM: 2#

Flood Chalk; white w/ lt tan edges in some

LS - cream, mostly med xln, granular txture ~50% chalk & few grey shales

SH - dark brown to black, fair show gas, abdundant chalk

LS - cream to lt grey, fine to med xln w/ stn ip;
Flood SH - lt grey, globby to mushy, soft; few lt green, soft slippery

Working on Mud-Pump

3900

LS - mst cream, few tan-brown fine to v. fine xln, platy & lithographic, chalky; few CH

LS - cream, med to v. fine xln ip; trace cherty, rare sm vggy pors, barren, oa lithographic & platy w/ few edge chalk trans

SH - brown to green, soft

WT: 8.7
VIS: 55
LCM: 2#

LS - cream to off-white, fn-med xln, sl granular; few CH - cream to grey, foss ip, vitreous & scatt chalk

CH - cream to grey, foss ip, vitreous; few edge trans LS - cream, v. fine xln micrite; foss ip 50

LS - cream, med xln w/ granular to sucr txture, foss ip, some re-xln w/ poor vis porosity; chalky & trans to fine xln; blocky, platy w/ partial edge staining; trace CH - cream to gry, vit,no odor, no show

3950

SH - grey to dark grey, laminated

LS - cream, lt grey, crm - med xln & foss trans to lt grey, fine xln & platy, blocky w/ poor vis porosity; trace CH & chalky

LS - cream, fine to med xln, most platy w/ few foss to sucrosic txture; chalky on break, some calc xln dev. few pcs CH - varicolored grey to cream, org; oolitic; vitreous

LS - cream to lt grey, fine to med xln, sm micro xln, platy in most, few chalky, scattered CH - cream to wht, vitreous

SH - grey to dark

LS - cream, med to fine xln, sm micro xln, chalky ip; trans CH in sm, lt grey to cream, translucent ip, foss, vitreous

4000

SH - some dark, few pale green & brown, soft

LS - pale green to grey, med to fine xln w/ re-xln ip, argillaceous w/ sm interbedded sh

LS - cream, fine to med xln; abdt chalk

Working on Mud-Pump

LS - cream to pale green, grey, mst fine to med xln,argill ip, blocky, sm re-xln, abdt chalk, scatt CH

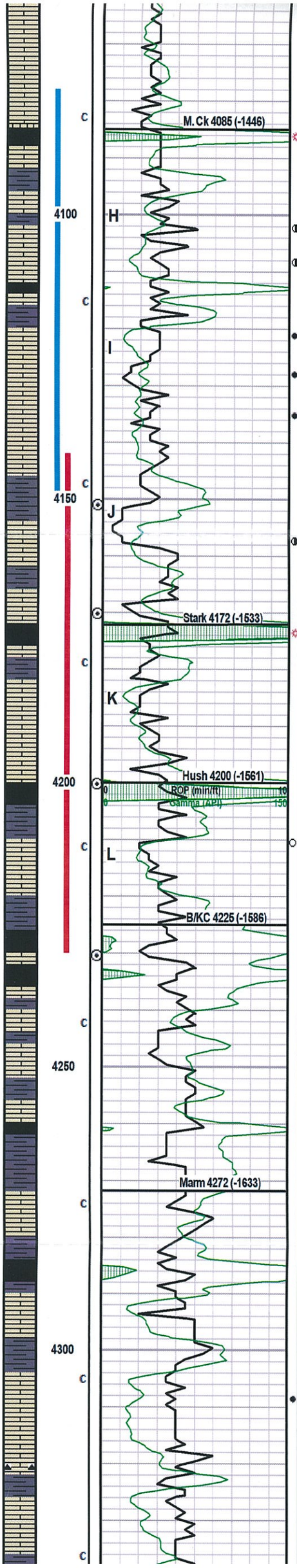
LS - cream, fine to med xln w/ sucros txture in some w/ vis staining in fracs, foss; chalky break, scattered CH, mst wht to cream & chalk, few SH - grey to green

LS - cream to lt tan, med xln,flood pcs w/ oom to ooc porosity, barren w/ soft crush, appears chalky on break; no odor, ns *10% CH, cream to white, lt gry, foss, vitreous

4050

LS ~50% aa, trans to v. fine xln w/ no vis porosity, platy, blocky & lithographic w/ scattered CH

LS - cream, fine to med xln w/ chalky app in most, trans v. fine xln ip, platy, dense, few pcs w/ scattered stained edges & fracs, no odor, ns



LS - cream, fine to med xln w/ chalky app in most, trans v. fine xln ip, platy, dense, few pcs w/ scattered stained edges & fracs, no odor, ns

LS - cream to lt grey, sm off-white, mst fine to med xln w/ chalky appearance, few foss ip, most pcs platy & lithographic, sl dense ip

SH - dark brown to black, ssg

LS - tan, fine to v. fine xln, dense & blocky; trans chalky ip

LS - cream to lt tan, mst fine to v. fine xln w/ sm re-xln calc ip; few pcs w/ staining in fracs; sso on break (frac & pp edge porosity) lt brwn live oil; few pcs chalky w/ intra foss & re-xln por; ss on break; fair odor in cup, few scatt brght ylw fluor

LS - cream to lt tan, cream med xln & foss w/ poor intra foss porosity w/ chalky matrix, ssfo in few,increase on break, tan fine to v. fine xln w/ fractured & pp edge porosity; ssfo; fair cup odor

LS - cream to lt tan, fine to micro xln; vis fracs w/ pp porosity; deeper pp penetration than sample above w/ increase porosity; moderate show fo drops in tray w/ increase break; fair cup odor; lt yellow fluor w/ weeping cut

LS - cream to buff, med xln w/ granular app, foss ip w/ intra foss re-xln porosity, few pcs ooc-oom porosity; ssfo in tray; increase on break w/ sl chalky on break; fair cup odor w/ sptted yellow fluor

LS - cream to buff, med xln w/ granular to foss txture; heavy foss w/ intra foss & partial re-xln porosity, few w/ ooc -oom; fso in tray, few pcs bleeding; good friability w/ increase show; wk to fair cup odor

LS - cream, fine to med xln, sl chalky app in some; trans fine xln, platy & blocky, dense; few CH vit

SH - grey to green,sm mottled, med soft to mushy ip

LS - cream to white, lt grey, med xln; trace pcs w/ foss txt & fair intrafoss porosity; v. good ooc & oom porosity w/ partially connected pores, v. good friability; mostly barren; few pcs w/ sso ip, w/ increase break; lt brwn-gld "clingy" fo w/ partial live shows; fair odor in cup; oa poor-mod show

LS - cream to lt grey, fine xln to micrite - platy & dense; trans to CH ip; lt to dark w/ foss, vitreous

SH - dark brown to black, carb w/ ssg

LS - cream to lt tan, brown, mst fine to micro xln; foss ip, blocky & dense; trans med xln, cream w/ chalky txture; trace CH

CH - varicolored, milky white to grey, lt blue, cream, foss ip, mstly opaque, sm partially translucent; blocky & sharp, vitreous

LS - cream, mst fine xln, platy to blocky, sl dense w/ sm chalky on break; poor to no vis porosity; lithographic

SH - grey to dark grey, soft & globs; trans dark & blocky, fissile

LS - cream to lt tan, mst med xln w/ chalky app, few pcs sl foss ip w/ sm re-xln & intra foss porosity; fair stain in few w/ ssfo; increase w/ break, v chalky matrix; v. faint cup odor; oa poor show

LS - cream to lt grey, fine to med xln; platy & lithographic, chalky ip, no vis porosity

SH - grey to dark, mushy to soft, some med firm; carb in some

LS - cream to lt grey, fine to med xln, foss ip, chalky, argillaceous in part w/ larger foss; few SH - dark to green, sm mottled

Siltstone; brick to red, med firm to blocky, some globby red-brwn sh; sub sandy ip; scatt SH - grey to green, blocky & few lt grn argillaceous LS

LS - cream to lt tan, fine to med xln; app chalky; few re-xln calc; few pcs w/ lt green hue (argillaceous) scatt SH - sm mottled (brk red-green, green-dark)

Flood SH - mst mushy globs, lt grey, few red - brick siltstone; green to maroon; trace sand; rare clusters, app grey, clear qtz, fn-med grn well sorted, sub rnd; partly friable to dense; glauc & pyritic incl; no odor, ns

SH - maroon to purple, lt grey, mushy & soft to med; some green-grey, mottled ip; scatt LS - varicolored grey to green, fn - med xln, mst argillaceous; sm v. dense w/ foss ip

LS - mst crm to tan, lt brwn; few w/ green to purp hue; some pcs argillaceous; partly foss; blocky w/ shaley app

LS - cream to lt grey, mst fine to med xln w/ smooth to chkly texture; re-xln in some; oa blocky & dense; few SH stringers; green to purple

SH - brown to dark grey, med firm, silty to partly laminated; fair amount chalk - white; washes cup white

LS - cream, med xln w/ sl. Chalky app, foss w/ fair intrafoss xln dev; ssfo in ~10 pcs w/fair partial stn; fsfo on break; gd fraibility; lt. brwn lively free oil & few pcs bleeding oil/gas bubbles

LS - cream to lt tan, fine to micro xln in part; blocky & dense; few sl re-xln calc; foss ip; trace pcs CH - black, vitreous

LS - cream to lt grey, fine to med xln w/ sl sandy txture; few dark stn fractures ip w/ poor vis porosity; few pcs interbedded sh (green); chalky ip

DST #1 KC (H-I)
Interval: 4078'-4151'
(73') Anchor
30-30-30-30
IF: built to 1/2"
ISI: no blowback
FF: built to 1/2"
FSI: no blowback
SIP: 1121-1062#
IF: 40-53#
FF: 57-65#
Hydrostatic: 2001-1955#
BHT: 108 F
Grav: NA

Recovery: 117' OSM

Pipe Strap: NA *high winds
Survey: 2.25 degrees dev

Mud-Co
Depth: 4130'
Wt. 8.9
Vis. 48
Filtrate 8.0
Chl 4,200
LCM 1#

DST #2 KC (J-L)
Interval: 4143'-4230'
(87') Anchor
30-30-30-30
IF: built to 4"
ISI: no blowback
FF: built to 2.5"
FSI: no blowback
SIP: 1189-1201#
IF: 103-128#
FF: 132-143#
Hydrostatic: 2057-2035#
BHT: 110 F
Grav: NA

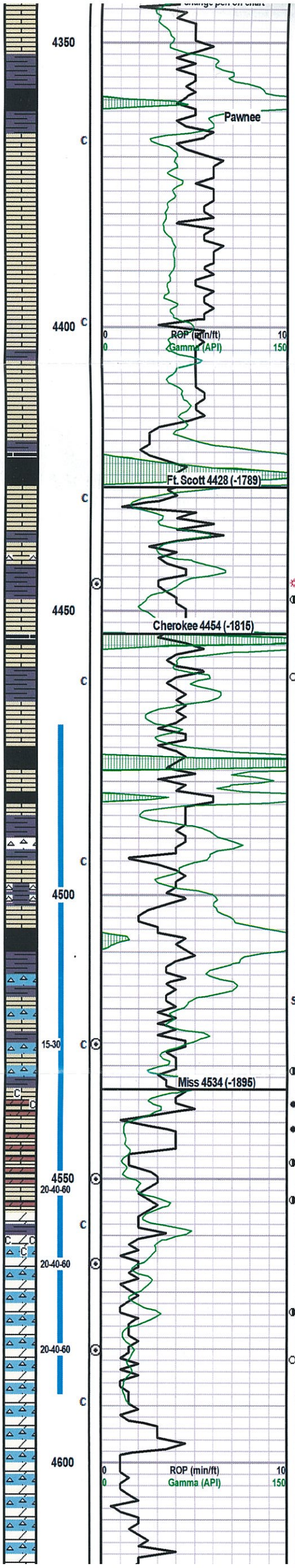
Recovery: 189' OSM
*tool slid 10' to bottom

Pipe Strap: 3' STB
Survey: NA

Swapped Bit after DST #2

Mud-Co
Depth: 4226'
Wt. 9.1
Vis. 43
Filtrate 7.2
Chl 4,300
LCM 1/2#

WT: 9.3
VIS: 46
LCM: 1#



pcs darker & shale contacts; trace dark purple shale

LS - cream to tan, brown, fine to micro-xln; blocky & dense; few re-xln; oa lithographic & dense

4350

SH - grey, mushy & soft; few dark carb

Mud-Co
Depth: 4364'
Wt. 9.1
Vis. 49
Filtrate 7.2
Chl 4,000
LCM 2#

LS - cream to lt tan, fine to micro xln ip, blocky & dense, few appear chalky on edges; few app sandy txt, fr friable w/ no vis por; ns

LS - lt grey to tan,fine-med xln app w/ sl sandy txture; med firm, poss argillaceous w/ med crush; app chalky on break, no vis por, ns

4400

LS - aa, flood chalk, white, blocky, few ws; gummy & sticky

WT: 9.3
VIS: 52
LCM: 1#

Flood SH - grey - dark grey, few carb; med firm to mushy glob; washes black

Flood SH - black, carb in most

LS - cream lt tan, grey, fine to micro xln in some; sl cherty ip, few trc foss; oa blocky & ds; sl re-xln calc in few pcs

LS - tan, fine to v. fine xln, dense & blocky; few re-xln pyrite in fracs; trc cherty

LS - cream, med xln w/ sl foss to chalky txture; re-xln foss in sm w/ sl pp-sm vggy porosity; appears tight; fsfo on break, lt gld free oil; sl clingy in part; good odor w/ scatt ylw fluor; few pcs bleeding o & g

4450

SH - soft grey, mushy to med firm, some laminated; carb; ques show gas

Nail on Pump

LS - cream, med xln w/ chlky txture; vis dark fracs in sm w/ sl stain & few pp drops fo on edges; wk show on break w/ some heavy, tarry residual oil; faint cup odor

LS - cream, med xln w/ chalky txture ip; sl foss, vis fracs w/ partial stn; appears residual; trace odor; nsfo

LS - cream to lt tan, few brown, med to fine xln in most; few micro-xln darker brown w/ partial re-xln; blocky & dense, few pcs w/ green sh contact; trace pcs CH - translucent to orange; vitreous

LS - crm to lt tan & brown; v. similar aa; increase CH - brown-org, semi translucent; vitreous

4500

CH - pale grey, semi-translucent & white; SH - yellow, soft to mushy w/ SS, fine grn; well rnd & std ; few mottled green /dark gry to black

LS - cream, med xln; heavily foss w/ cherty matrix (white) abdt varicolored SH & CH - yellow, purp, maroon, green, fw clust SS - white; CH - orange, ool & foss; vit

Cherty LS - cream to yellow, white; foss, weathered ip; CH - varicolored white to yellow, hightly ool to foss; yellow LS & varicolored SH - ylw, maroon, green, some sandy ip

CH - cream to white, lt tan, foss ip w/ abundant trippolitic pcs; brown to black weathered pcs w/ poor fraibility; faint cup odor; no vis show

Mostly SH - varicolored & mottled; sandy ip; CH- cream to lt tan, trippolitic to dolomitic; partial staining in some w/ ssfo; fair friability, increase show on break; fair to good cup odor

WT: 9.3
VIS: 46
LCM: 1#

Predom LS- white, med xln, sm foss w/ chalky, friable; (15-20) pcs Dol- tan to brown; fine xln-sucr; sm vuggy por w/ good friability; fsfo w/ increase on break; lt brwn-gld fo w/ good cup odor

LS - cream to white; med xln, sm foss, abdt chalk (5-10) pcs Dol - tan to brown, fine xln sucr, sm vuggy por w/ decrease friability; fsfo w/ increase on break; lt brwn-gld fo w/ good cup odor

4550

DST #3 Mississippian
Interval: 4470'-4588'
(118') Anchor (45' tail)
30-30-30-30
IF: built to 1"
ISI: no blowback
FF: built to 1/2"
FSI: no blowback
SIP: 1209-1148#
IF: 70-94#
FF: 97-109#
Hydrostatic: 2323-2288#
BHT: 123 F
Grav: NA

Recovery: 62' Mud

LS - cream to white, fine to med xln w/ sl granular txture; chalky w/ abdt loose chalk & CH - white to lt grey, pyritic ip

Flood SH & CH - varicolored SH - every color; mottled in most; med firm, pyritic ip; CH - varicolored white to grey, blocky (app re-worked) pyritic ip; abdt loose chalk; few Dol- white, med xln app cottony, ns

AA - mostly white sticky, chalky & CH

Flood CH - grey to lt blue, spic foss, vitreous in most, sm weathered to dolomitic & Dol-white, cottony w/ trace shows ip, sl fraible; fair cup odor

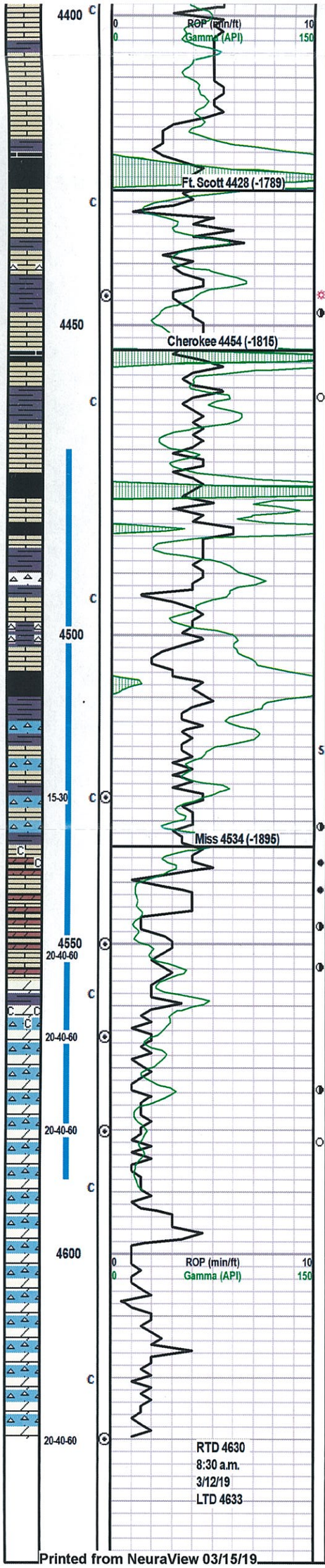
CH, dolomitic CH & dol; abdt transitional pcs ~50/50 split; trace pc w/ ssfo; pp porosity; fair odor

CH- varicolored; most grey to white; some translucent; dolomitic & partly weathered & white to cream, cottony dolomite; chalky ip, barren porosity

4600

CH - varicol, mst lt grey to blue, white; mst vitreous, foss (mst spic) few w/ dark edge stn; sm pyrite dev ip; few transitional pcs to dolomite; white cottony, fr fraible w/ chalky break; no odor, ns

CH - white to lt blue, grey, some translucent; vitreous in most w/ few edge dolomite; foss in part; sharp & fresh, no odor, ns



4400

LS - aa, flood chalk, white, blocky, few ws; gummy & sticky

WT: 9.3
VIS: 52
LCM: 1#

Flood SH - grey - dark grey, few carb; med firm to mushy glob; washes black

Flood SH - black, carb in most

LS - cream lt tan, grey, fine to micro xln in some; sl cherty ip, few trc foss; oa blocky & ds; sl re-xln calc in few pcs

LS - tan, fine to v. fine xln, dense & blocky; few re-xln pyrite in fracs; trc cherty

LS - cream, med xln w/ sl foss to chalky txture; re-xln foss in sm w/ sl pp-sm vggy porosity; appears tight; fsfo on break, lt gld free oil; sl clingy in part; good odor w/ scatt ylw fluor; few pcs bleeding o & g

4450

SH - soft grey, mushy to med firm, some laminated; carb; ques show gas

Nail on Pump

LS - cream, med xln w/ chlky txture; vis dark fracs in sm w/ sl stain & few pp drops fo on edges; wk show on break w/ some heavy, tarry residual oil; faint cup odor

LS - cream, med xln w/ chalky txture ip; sl foss, vis fracs w/ partial stn; appears residual; trace odor; nsfo

LS - cream to lt tan, few brown, med to fine xln in most; few micro-xln darker brown w/ partial re-xln; blocky & dense, few pcs w/ green sh contact; trace pcs CH - translucent to orange; vitreous

LS - crm to lt tan & brown; v. similar aa; increase CH - brown-org, semi translucent; vitreous

4500

CH - pale grey, semi-translucent & white; SH - yellow, soft to mushy w/ SS, fine grn; well rnd & std ; few mottled green /dark gry to black

LS - cream, med xln; heavily foss w/ cherty matrix (white) abdt varicolored SH & CH - yellow, purp, maroon, green, fw clust SS - white; CH - orange, ool & foss; vit

Cherty LS - cream to yellow, white; foss, weathered ip; CH - varicolored white to yellow, hightly ool to foss; yellow LS & varicolored SH - ylw, maroon, green, some sandy ip

CH - cream to white, lt tan, foss ip w/ abundant trippolitic pcs; brown to black weathered pcs w/ poor fraibility; faint cup odor; no vis show

Mostly SH - varicolored & mottled; sandy ip; CH- cream to lt tan, trippolitic to dolomitic; partial staining in some w/ ssfo; fair friability, increase show on break; fair to good cup odor

WT: 9.3
VIS: 46
LCM: 1#

Predom LS- white, med xln, sm foss w/ chalky, friable; (15-20) pcs Dol- tan to brown; fine xln-sucr; sm vuggy por w/ good friability; fsfo w/ increase on break; lt brwn-gld fo w/ good cup odor

LS - cream to white; med xln, sm foss, abdt chalk (5-10) pcs Dol - tan to brown, fine xln sucr, sm vuggy por w/ decrease friability; fsfo w/ increase on break; lt brwn-gld fo w/ good cup odor

4550

DST #3 Mississippian
Interval: 4470'-4588'
(118') Anchor (45' tail)
30-30-30-30
IF: built to 1"
ISI: no blowback
FF: built to 1/2"
FSI: no blowback
SIP: 1209-1148#
IF: 70-94#
FF: 97-109#
Hydrostatic: 2323-2288#
BHT: 123 F
Grav: NA

Recovery: 62' Mud

LS - cream to white, fine to med xln w/ sl granular txture; chalky w/ abdt loose chalk & CH - white to lt grey, pyritic ip

Flood SH & CH - varicolored SH - every color; mottled in most; med firm, pyritic ip; CH - varicolored white to grey, blocky (app re-worked) pyritic ip; abdt loose chalk; few Dol- white, med xln app cottony, ns

AA - mostly white sticky, chalky & CH

Flood CH - grey to lt blue, spic foss, vitreous in most, sm weathered to dolomitic & Dol-white, cottony w/ trace shows ip, sl fraible; fair cup odor

CH, dolomitic CH & dol; abdt transitional pcs ~50/50 split; trace pc w/ ssfo; pp porosity; fair odor

CH- varicolored; most grey to white; some translucent; dolomitic & partly weathered & white to cream, cottony dolomite; chalky ip, barren porosity

4600

CH - varicol, mst lt grey to blue, white; mst vitreous, foss (mst spic) few w/ dark edge stn; sm pyrite dev ip; few transitional pcs to dolomite; white cottony, fr fraible w/ chalky break; no odor, ns

CH - white to lt blue, grey, some translucent; vitreous in most w/ few edge dolomite; foss in part; sharp & fresh, no odor, ns

CH - white to lt blue, grey, translucent to opaque, vitreous; foss ip; trace pcs dolomite on edges

CH - no significant changes, few dolomite; ns

CFS 20-40-60 @ RTD
Short Trip
CTCH 1.5 hours
Start out for Logs