



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1213700  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

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       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- 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 ENHR       Conv. to SWD
- Plug Back       Conv. to GSW       Conv. to Producer
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

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
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_



1213700

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  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				

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*  
 Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 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)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

Date of First, Resumed Production, SWD or ENHR. \_\_\_\_\_ Producing Method:  
 Flowing  Pumping  Gas Lift  Other *(Explain)* \_\_\_\_\_

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)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <i>(Submit ACO-4)</i>	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Baird Oil Company LLC
Well Name	David Worcester 1-24
Doc ID	1213700

Tops

Name	Top	Datum
Anhydrite	1766	+392
Base Anhydrite	1797	+362
Topeka	3144	-985
Heebner	3354	-1195
Toronto	3375	-1216
Lansing	3390	-1231
Base Kansas City	3578	-1419
Arbuckle	3681	-1522
Total Depth	3694	-1535





Global Cementing LLC

18048 I-70 Road  
Russell, KS 67665

# Invoice

Date	Invoice #
4/25/2014	1307

<b>Bill To</b>
BAIRD OIL COMPANY LLC PO BOX 428 LOGAN,KS 67646

P.O. No.	Terms	Project
DAVID WORCES...	Net 30	

Quantity	Description	Rate	Amount
160	COMMON	15.50	2,480.00
6	CALCIUM	53.00	318.00
3	GEL	23.50	70.50
169	HANDLING	2.10	354.90
	BULK MILEAGE	446.16	446.16
1	TRI-PLEX PUMP CHARGE FOR SURFACE	1,050.00	1,050.00
66	PUMP TRUCK MILEAGE	6.50	429.00
66	PICKUP	2.50	165.00
	DEDUCT 15% FROM TOTAL IF PAID WITHIN 30 DAYS OF INVOICE GRAHAM CO	7.15%	0.00
<p><i>R 4/29/14</i> <i>P 4/29/14</i> <i>David W 190402 4516.53</i> <i>David Worcester 1-24- pump charge, cement,</i> <i>+ other misc used to cement surface casing</i></p>			

Thank you for your business.

Phone #	Fax #	E-mail
785-324-2658	785-445-3526	

**Total** \$5,313.56

*\$4516.53*



# GLOBAL CEMENTING, L.L.C.

1307

REMIT TO 18048 170RD  
RUSSELL, KS 67665

SERVICE POINT: Russell, KS

DATE <u>4-25-14</u>	SEC. <u>24</u>	TWP. <u>7</u>	RANGE <u>22</u>	CALLED OUT	ON LOCATION	JOB START <u>6:45pm</u>	JOB FINISH <u>7:15pm</u>
LEASE <u>David Worcester</u>	WELL #. <u>1-24</u>	LOCATION			COUNTY <u>Graham</u>	STATE <u>KS</u>	
OLD OR <u>NEW</u> (CIRCLE ONE)							

CONTRACTOR Ww Drilling

TYPE OF JOB Surface

HOLE SIZE 12 1/4 T.D.

CASING SIZE 8 5/8 DEPTH

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. 20 cu

PERFS

DISPLACEMENT 12 3/4 bbl

EQUIPMENT

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PUMP TRUCK CEMENTER Heath

# B1 HELPER Cody

BULK TRUCK

# B1 DRIVER Brad

BULK TRUCK

# DRIVER

OWNER

CEMENT AMOUNT ORDERED 160sr com 3%cc 2%gel

COMMON @

POZMIX @

GEL @

CHLORIDE @

ASC @

HANDLING @

MILEAGE @

TOTAL

REMARKS:

Ran 5 Hrs of 8 5/8 casing and landing it  
est circulation with mud pump

Hook up and mix 160sr and disp 12 3/4 bbl  
of H2O. Shut in @ 300 ps.

CHARGE TO: Boird Oil

STREET

CITY STATE ZIP

SERVICE

DEPTH OF JOB

PUMP TRUCK CHARGE

EXTRA FOOTAGE @

MILEAGE @

MANIFOLD @

TOTAL

PLUG & FLOAT EQUIPMENT

@

@

@

@

TOTAL

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

PRINTED NAME Coleman Pharr

SIGNATURE Coleman Pharr

SALES TAX (If Any)

TOTAL CHARGES

DISCOUNT IF PAID IN 30 DAYS



# SWIFT



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

## Invoice

DATE	INVOICE #
5/4/2014	25488

BILL TO
Baird Oil Company LLC PO Box 428 Logan, KS 67646

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#1-24	David Wooster	Graham	WW Drilling	Oil	Development	LongString	Nick

PRICE REF.	DESCRIPTION	QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way	70	Miles	6.00	420.00
578D-L	Pump Charge - Long String - 3711 Feet	1	Job	1,500.00	1,500.00
221	Liquid KCL (Clayfix)	2	Gallon(s)	25.00	50.00T
280	Flocheck 21	500	Gallon(s)	3.00	1,500.00T
290	D-Air	2	Gallon(s)	42.00	84.00T
402-5	5 1/2" Centralizer	11	Each	70.00	770.00T
403-5	5 1/2" Cement Basket	1	Each	300.00	300.00T
404-5	5 1/2" Port Collar	1	Each	2,900.00	2,900.00T
406-5	5 1/2" Latch Down Plug & Baffle	1	Each	275.00	275.00T
407-5	5 1/2" Insert Float Shoe With Auto Fill	1	Each	375.00	375.00T
411-5	5 1/2" Recipo Scratcher	40	Each	50.00	2,000.00T
325	Standard Cement	200	Sacks	14.50	2,900.00T
326	60/40 Pozmix (2% Gel)	40	Sacks	11.50	460.00T
276	Flocele	50	Lb(s)	2.50	125.00T
277	Gilsonite (Coal Seal)	400	Lb(s)	0.75	300.00T
283	Salt	850	Lb(s)	0.20	170.00T
285	CFR-1	100	Lb(s)	4.50	450.00T
581D	Service Charge Cement	240	Sacks	2.00	480.00
583D	Drayage	822	Ton Miles	1.00	822.00
	Subtotal				15,881.00
	Sales Tax Graham County			7.15%	905.12

*R 5/22/14*  
*P 5/12/14*  
*David W 190402 16786.12*  
*David Wooster 1-24- pump charge, cement, & other misc expenses used to cement production casing*

<b>We Appreciate Your Business!</b>	<b>Total</b>	\$16,786.12
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CHARGE TO: Baird O.I.C.  
 ADDRESS:  
 CITY, STATE, ZIP CODE:

TICKET 25488  
 PAGE 1 OF 2

1. SERVICE LOCATIONS: 1. Hays, KS. 2. Ness City, KS.  
 WELL/PROJECT NO. 1-24  
 LEASE: David Weaster  
 COUNTY/PARISH: Graham  
 STATE: KS  
 CITY: Location  
 DATE: 5-4-14  
 OWNER: same  
 ORDER NO.:  
 TICKET TYPE:  SERVICE  SALES  
 CONTRACTOR: W & W #  
 RIG NAME/NO.:  
 SHIPPED VIA: 7  
 DELIVERED TO: Location  
 WELL PERMIT NO.:  
 WELL TYPE: o.i.  
 WELL CATEGORY: Development  
 JOB PURPOSE: long string  
 WELL LOCATION:  
 INVOICE INSTRUCTIONS:

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	LOC	ACCT	DF	DESCRIPTION	MILEAGE	QTY.			UNIT PRICE	AMOUNT
							QTY.	UM	QTY.		
5-75						70 mi				420.00	
5-78					Pump Charge (long string)	1 po		3711		1500.00	
221					HEL	2 gal				50.00	
280					Flocheck-21	500 gal				1500.00	
290					D-A	2 gal				84.00	
402					Centralizers	17 ea		5 1/2"		770.00	
403					Basket	1 ea				300.00	
404					Part Collar	1 ea				2900.00	
406					LD Plug Bottle	1 ea				2750.00	
407					Insert Plug Shoe w/ fill	1 ea				375.00	
411					Reciprocating Scrubbers	410 ea				50.00	

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY**, and **LIMITED WARRANTY** provisions.  
 MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS  
 REMIT PAYMENT TO:  
 SWIFT SERVICES, INC.  
 P.O. BOX 466  
 NESS CITY, KS 67560  
 785-798-2300  
 DATE SIGNED: 5-4-14  
 TIME SIGNED: 9:30  
 A.M.  P.M.  
 CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES: The customer hereby acknowledges receipt of the materials and services listed on this ticket.  
 APPROVAL: [Signature]  
 SWIFT OPERATOR: [Signature]  
 X  
 SURVEY: OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?  YES  NO  
 WE UNDERSTOOD AND MET YOUR NEEDS?  YES  NO  
 OUR SERVICE WAS PERFORMED WITHOUT DELAY?  YES  NO  
 WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?  YES  NO  
 ARE YOU SATISFIED WITH OUR SERVICE?  YES  NO  
 TOTAL: 16,786.10

Thank You





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

TICKET CONTINUATION

TICKET No. 25988

CUSTOMER *Burd Oil Co.*

WELL *Burd Koster #1-24*

DATE *5-4-14*

PAGE 2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	WELL		UNIT PRICE		AMOUNT
		LOC	ACCT	DF			QTY.	UM	QTY.	UM	
325						Standard Cement	200	sk	14	50	2900.00
326						60# Per 2' leg (1)	40	sk	11	50	460.00
276						Fleete	50	#	2	50	125.00
277						Gilsonite	400	#	10	25	300.00
283						Salt	850	#	18	00	170.00
285						CFR-1	100	#	4	50	450.00
581						SERVICE CHARGE			2	00	480.00
583						MILEAGE CHARGE			1	00	822.00
						TOTAL WEIGHT	240				
						LOADED MILES	70				
						CUBIC FEET					
						TON MILES	822				
CONTINUATION TOTAL											5767.00



**JOB LOG**

**SWIFT Services, Inc.**

DATE 5-4-14 PAGE NO. 1

CUSTOMER Bald Oil Co WELL NO. #1-24 LEASE David Weaster JOB TYPE Longstring TICKET NO. 25488

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1500							on loc w/FE
								RTD 3711' LTD 3706'
								5 1/2" x 14# x 3706' x 41'
								Cent 1-10, 44
								Basket 45
								P.C. 45 @ 1788'
	1530							Start FE
	1730							Break circ
	1830	2	7					Plug RH 30cks 60% Poz 2% gel
	1840	5	0				200	start KCL flush 10 bbl
	1842	5	10/0				200	start Flocheck 500 gal
	1844	5	12/0				200	start KCL flush 10 bbl
	1846	5	10/0				200	start 60% Poz mix 2% gel 10cks 60% Poz 2% gel
	1847	5	5/0				200	start Standard Cement 20cks std 18% std
	1856		44					End Cement
								wash P&L
								Drop L O Plug
	1903	6	0				200	Start Displacement
	1913	5	61				250	Catch Cement
	1918		89.5				530 / 1400	Land Plug
								Release Pressure & Float Held

Thank you

Nick, David E. & Craig

# SWIFT



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



## Invoice

DATE	INVOICE #
5/6/2014	25490

BILL TO
Baird Oil Company LLC PO Box 428 Logan, KS 67646

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#1-24	David Wooster	Graham	Bach Well Service	Oil	Development	Port Collar	Nick
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				70	Miles	6.00	420.00
576D-D	Pump Charge - Port Collar - 1787 Feet				1	Job	1,500.00	1,500.00
290	D-Air				2	Gallon(s)	42.00	84.00T
330	Swift Multi-Density Standard (MIDCON II)				180	Sacks	18.50	3,330.00T
276	Flocele				50	Lb(s)	2.50	125.00T
581D	Service Charge Cement				200	Sacks	2.00	400.00
583D	Drayage				684.5	Ton Miles	1.00	684.50
	Subtotal							6,543.50
	Sales Tax Graham County						7.15%	253.04
	<p>R 5/12/14 P 5/12/14 David W 190402 1500.00 David Worcester 1-24- Rental of port collar tool + man when cementing from port collar to surface. David W 190402 5296.54 David Worcester 1-24- pump charge, cement, + other misc used to cement from port collar to surface.</p>							

5/12/2014  
CK#14444

**We Appreciate Your Business!**

**Total**

\$6,796.54





CHARGE TO: David Oil Co.  
 ADDRESS  
 CITY, STATE, ZIP CODE

TICKET 25490  
 PAGE 1 OF 1

SERVICE LOCATIONS

1. <u>Hays, KS.</u>	WELL/PROJECT NO. <u># 1-24</u>	LEASEE <u>David Westover</u>	COUNTY/PARISH <u>Butler</u>	STATE <u>KS</u>	CITY	DATE <u>5-6-14</u>	OWNER <u>same</u>
2. <u>Ness City, KS.</u>	TICKET TYPE <input checked="" type="checkbox"/> SERVICE <input type="checkbox"/> SALES	CONTRACTOR <u>Bach Well Service</u>	RIG NAME/NO.	SHIPPED VIA <u>CT</u>	DELIVERED TO <u>Locations</u>	ORDER NO.	
3.	WELL TYPE	WELL CATEGORY <u>Development</u>	JOB PURPOSE <u>Part Cellar</u>	WELL PERMIT NO.	WELL LOCATION		
4.	INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	MILEAGE	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT
		LOC	ACCT	DF								
<u>575</u>		<u>1</u>			<u>70 mi</u>						<u>6.00</u>	<u>420.00</u>
<u>576.D</u>		<u>1</u>			<u>Pump Charge (Part Cellar)</u>	<u>1 ea</u>		<u>1787</u>			<u>1500.00</u>	<u>1500.00</u>
<u>290</u>		<u>1</u>			<u>D-Air</u>	<u>2 gal</u>					<u>42.00</u>	<u>84.00</u>
<u>330</u>		<u>2</u>			<u>SMD Cement</u>	<u>180</u>	<u>00</u>				<u>18.50</u>	<u>3330.00</u>
<u>276</u>		<u>2</u>			<u>Floacle</u>	<u>50H</u>		<u>1434</u>			<u>2.50</u>	<u>125.00</u>
<u>581</u>		<u>2</u>			<u>Cement Service Charge</u>	<u>200</u>	<u>cks</u>				<u>2.00</u>	<u>400.00</u>
<u>583</u>		<u>2</u>			<u>Drayage</u>	<u>6845</u>	<u>TM</u>				<u>1.00</u>	<u>6845.00</u>

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 5-4-14 TIME SIGNED 1330

A.M.  P.M.

Steve Handman

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

SURVEY

OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?	AGREE	UN-DECIDED	DIS-AGREE
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

CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL 6543.50

TOTAL 6796.50

Graham TAX 7.15%

253.00

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

SWIFT OPERATOR Neil Steiner APPROVAL

Thank You



**JOB LOG**

**SWIFT Services, Inc.**

DATE 5-6-14 PAGE NO. 1

CUSTOMER Baird Oil Co WELL NO. #1-24 LEASE David Weaster JOB TYPE Port Collar TICKET NO. 25490

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1025							enloc w/ P.C. Tool 2 3/8" x 5 1/2"
	1030							start in Hole locate P.C. @ 1787'
	1145						1000	Test Csg Open P.C.
	1155	3	5				200	Take inj rate + check blow
	1200	3	0				200	start Mud
	1225	4.5	80/0				300	Start SMD emt
	1245	4.5	90				400	circ emt/raise weight
	1246	4.5	95/0				400	End Cement/start
	1248		6				500	Cement Displaced
								close PC
	1252						1000	Test Csg
								Ran 5jts
	1305						150	Reverse cut
	1310							Hole Clean
								TOOH w/ P.C. Tool
								180 sks SMD circ 20 sks topit
								Thank you
								Nick, Davide, & Isaac



## DRILL STEM TEST REPORT

Prepared For: **Baird Oil Company**

PO Box 428  
Logan KS. 67646

ATTN: Richard Bell

**David Worcester 1-24**

**24-7s-22s Graham,KS**

Start Date: 2014.04.29 @ 15:30:00

End Date: 2014.04.29 @ 22:05:30

Job Ticket #: 55064                      DST #: 1

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.05.05 @ 10:54:15



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Baird Oil Company

**24-7s-22s Graham, KS**

PO Box 428  
Logan KS. 67646

**David Worcester 1-24**

ATTN: Richard Bell

Job Ticket: 55064

**DST#: 1**

Test Start: 2014.04.29 @ 15:30:00

## GENERAL INFORMATION:

Formation: **LKC C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:06:00

Time Test Ended: 22:05:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Chuck Kreuzer Jr.

Unit No: 61

**Interval: 3416.00 ft (KB) To 3442.00 ft (KB) (TVD)**

Reference Elevations: 2158.00 ft (KB)

Total Depth: 3442.00 ft (KB) (TVD)

2150.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 8960**

**Inside**

Press@RunDepth: 164.91 psig @ 3419.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.29

End Date:

2014.04.29

Last Calib.:

2014.04.29

Start Time: 15:30:01

End Time:

22:05:30

Time On Btm:

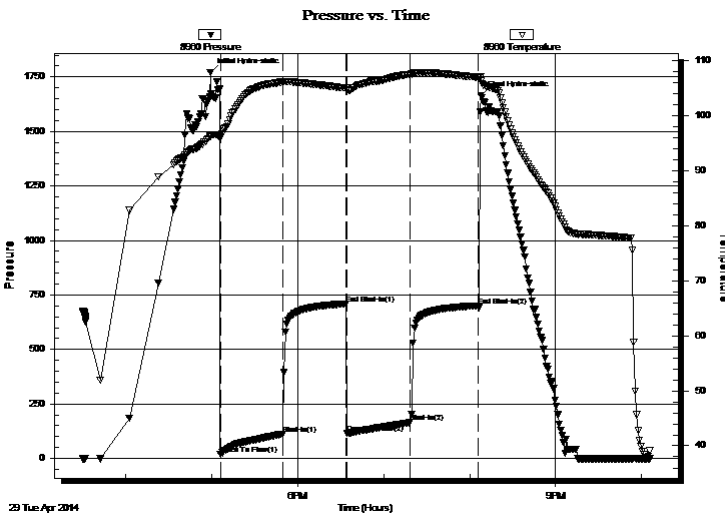
2014.04.29 @ 16:59:00

Time Off Btm:

2014.04.29 @ 20:08:00

**TEST COMMENT:** IF: Strong blow , Built to B.O.B in 25 mins.  
IS: No blow back  
FF: Strong blow , Built to B.O.B in 31 mins.  
FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1770.69	96.31	Initial Hydro-static
7	17.82	95.99	Open To Flow (1)
51	112.28	106.09	Shut-In(1)
95	709.46	105.08	End Shut-In(1)
96	116.08	104.73	Open To Flow (2)
140	164.91	107.58	Shut-In(2)
187	700.94	107.04	End Shut-In(2)
189	1664.04	106.34	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
59.00	mud-100%m	0.29
60.00	w cm-30%w 70%m	0.30
126.00	mcw -35%m65%w	1.77
85.00	mcw -15%m85%w	1.19
3.00	oil	0.04

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Baird Oil Company

**24-7s-22s Graham, KS**

PO Box 428  
Logan KS. 67646

**David Worcester 1-24**

ATTN: Richard Bell

Job Ticket: 55064

**DST#: 1**

Test Start: 2014.04.29 @ 15:30:00

## GENERAL INFORMATION:

Formation: **LKC C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:06:00

Time Test Ended: 22:05:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Chuck Kreuzer Jr.

Unit No: 61

**Interval: 3416.00 ft (KB) To 3442.00 ft (KB) (TVD)**

Reference Elevations: 2158.00 ft (KB)

Total Depth: 3442.00 ft (KB) (TVD)

2150.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 8673 Outside**

Press@RunDepth: psig @ 3419.00 ft (KB)

Start Date: 2014.04.29

End Date:

2014.04.29

Capacity: 8000.00 psig

Last Calib.:

2014.04.29

Start Time: 15:30:01

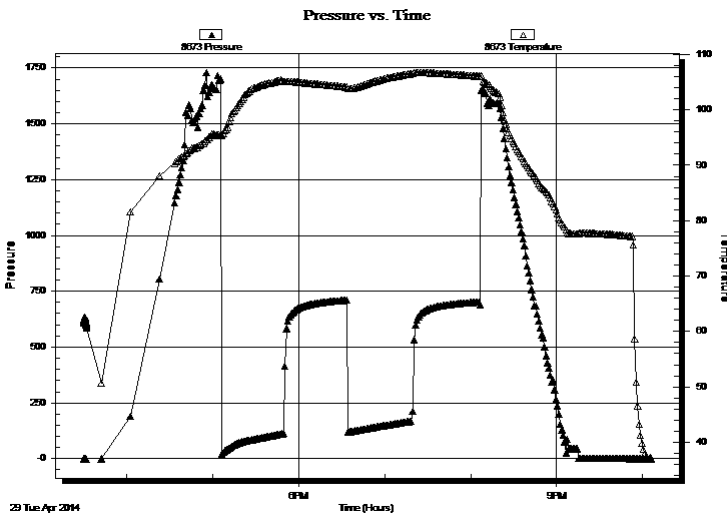
End Time:

22:05:30

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF: Strong blow , Built to B.O.B in 25 mins.  
IS: No blow back  
FF: Strong blow , Built to B.O.B in 31 mins.  
FS: No blow back



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
59.00	mud-100%m	0.29
60.00	w cm-30%w 70%m	0.30
126.00	mcw -35%m65%w	1.77
85.00	mcw -15%m85%w	1.19
3.00	oil	0.04

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Baird Oil Company

**24-7s-22s Graham, KS**

PO Box 428  
Logan KS. 67646

**David Worcester 1-24**

Job Ticket: 55064

**DST#: 1**

ATTN: Richard Bell

Test Start: 2014.04.29 @ 15:30:00

## Tool Information

Drill Pipe:	Length: 3293.00 ft	Diameter: 3.80 inches	Volume: 46.19 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 46.78 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3416.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	26.00 ft			
Tool Length:	46.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3401.00	
Hydraulic tool	5.00			3406.00	
Packer	5.00			3411.00	20.00 Bottom Of Top Packer
Packer	5.00			3416.00	
Stubb	1.00			3417.00	
Perforations	2.00			3419.00	
Recorder	0.00	8960	Inside	3419.00	
Recorder	0.00	8673	Outside	3419.00	
Perforations	20.00			3439.00	
Bullnose	3.00			3442.00	26.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>46.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Baird Oil Company

**24-7s-22s Graham, KS**

PO Box 428  
Logan KS. 67646

**David Worcester 1-24**

Job Ticket: 55064

**DST#: 1**

ATTN: Richard Bell

Test Start: 2014.04.29 @ 15:30:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

10000 ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.38 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 1.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1600.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
59.00	mud-100%m	0.290
60.00	w cm-30%w 70%m	0.295
126.00	mcw -35%m65%w	1.767
85.00	mcw -15%m85%w	1.192
3.00	oil	0.042

Total Length: 333.00 ft      Total Volume: 3.586 bbl

Num Fluid Samples: 0

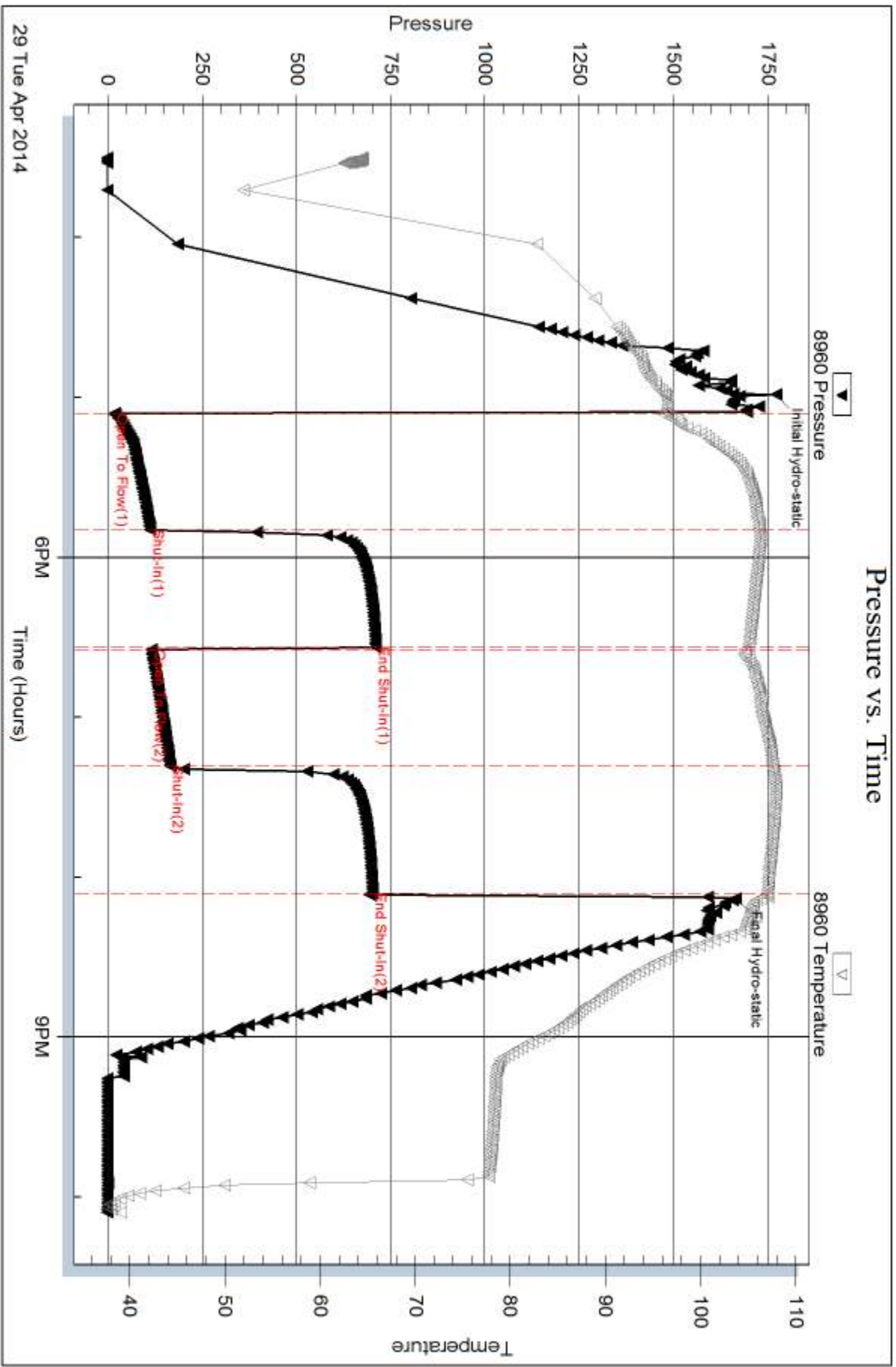
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Water salinity-42\*@1.=10000



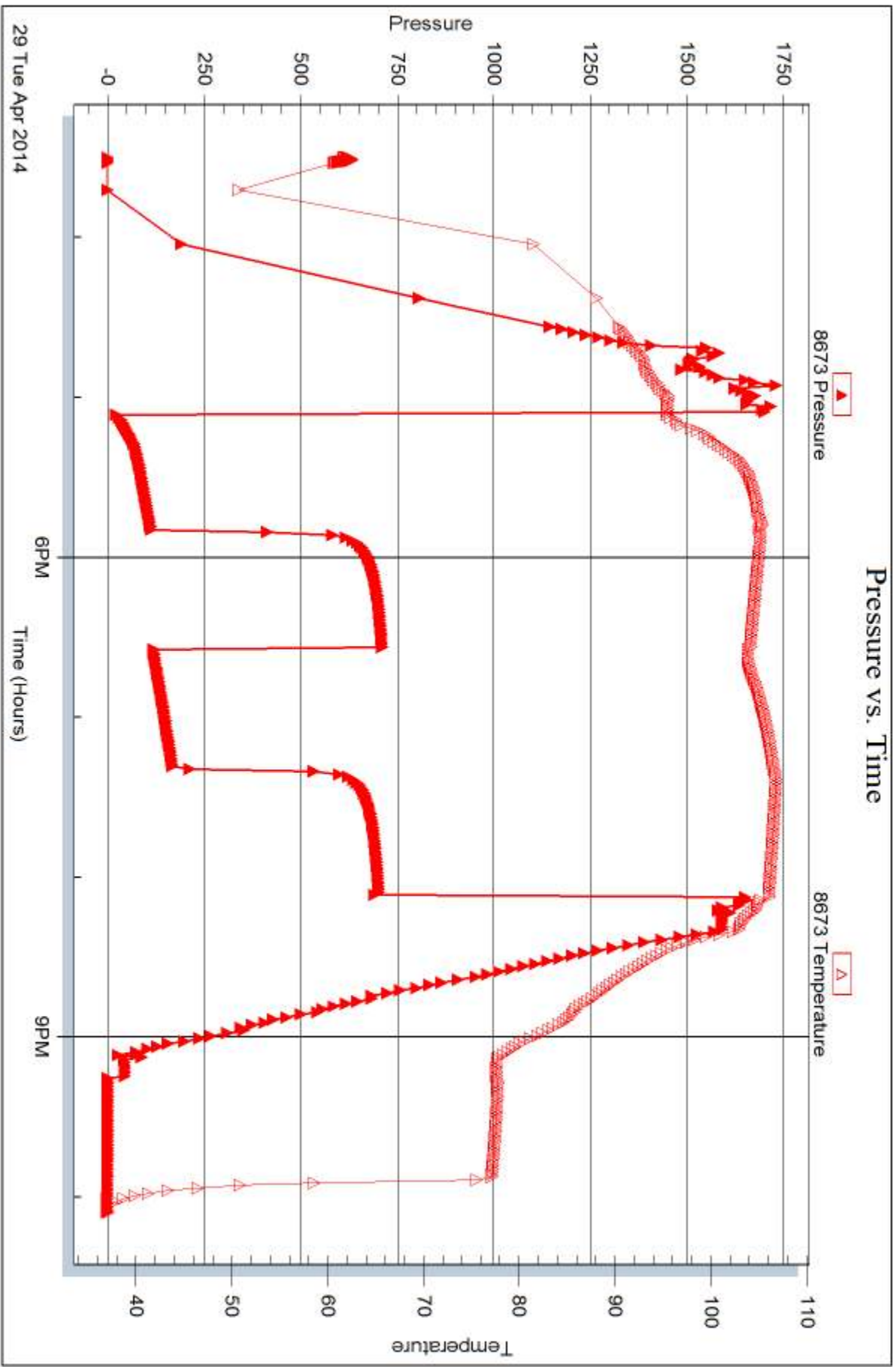


Serial #: 8673

Outside Baird Oil Company

David Worcester 1-24

DST Test Number: 1







## DRILL STEM TEST REPORT

Prepared For: **Baird Oil Company**

PO Box 428  
Logan KS. 67646

ATTN: Richard Bell

**David Worcester 1-24**

**24-7s-22s Graham,KS**

Start Date: 2014.04.30 @ 05:15:00

End Date: 2014.04.30 @ 12:01:00

Job Ticket #: 55065                      DST #: 2

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.05.05 @ 10:53:42



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Baird Oil Company

**24-7s-22s Graham, KS**

PO Box 428  
Logan KS. 67646

**David Worcester 1-24**

ATTN: Richard Bell

Job Ticket: 55065

**DST#: 2**

Test Start: 2014.04.30 @ 05:15:00

## GENERAL INFORMATION:

Formation: **LKC-D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:57:00

Time Test Ended: 12:01:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

**Interval: 3439.00 ft (KB) To 3458.00 ft (KB) (TVD)**

Reference Elevations: 2158.00 ft (KB)

Total Depth: 3458.00 ft (KB) (TVD)

2150.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 8960**

**Inside**

Press@RunDepth: 124.59 psig @ 3440.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.30

End Date:

2014.04.30

Last Calib.: 2014.04.30

Start Time: 05:15:01

End Time:

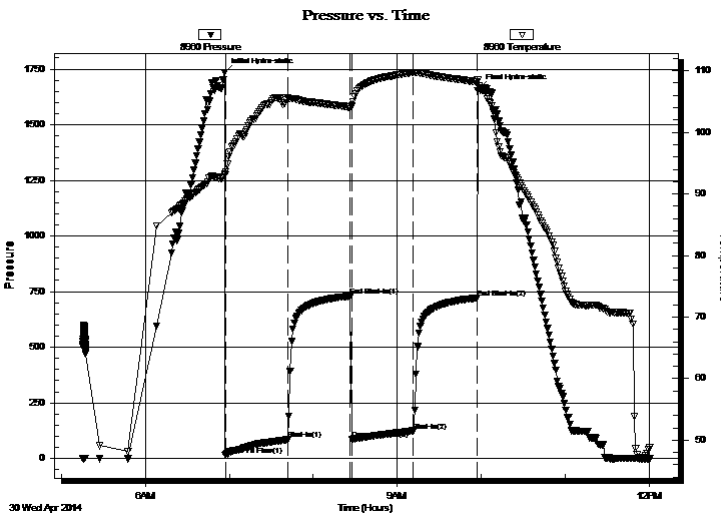
12:01:00

Time On Btm: 2014.04.30 @ 06:56:30

Time Off Btm: 2014.04.30 @ 09:58:30

**TEST COMMENT:** IF: Weak blow ,Built to 3 1/2" over 45 mins.  
IS: No blow back  
FF: Weak blow , Built to 6" over 45 mins.  
FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1735.08	93.23	Initial Hydro-static
1	14.76	93.13	Open To Flow (1)
45	84.48	105.59	Shut-In(1)
90	729.58	104.06	End Shut-In(1)
91	86.91	104.27	Open To Flow (2)
135	124.59	109.70	Shut-In(2)
181	721.24	108.21	End Shut-In(2)
182	1664.15	107.52	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
59.00	mw -10% m90%w	0.29
123.00	vsocmw -5%o15%m80%w	1.18
48.00	vsocmw -10%o25%m65%w	0.67
20.00	oil-100%o	0.28

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Baird Oil Company

**24-7s-22s Graham, KS**

PO Box 428  
Logan KS. 67646

**David Worcester 1-24**

Job Ticket: 55065

**DST#: 2**

ATTN: Richard Bell

Test Start: 2014.04.30 @ 05:15:00

## Tool Information

Drill Pipe:	Length: 3325.00 ft	Diameter: 3.80 inches	Volume: 46.64 bbl	Tool Weight:	2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose:	60000.00 lb
			<u>Total Volume: 47.23 bbl</u>	Tool Chased	2.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial	56000.00 lb
Depth to Top Packer:	3439.00 ft			Final	58000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	19.00 ft				
Tool Length:	39.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3424.00	
Hydraulic tool	5.00			3429.00	
Packer	5.00			3434.00	20.00 Bottom Of Top Packer
Packer	5.00			3439.00	
Stubb	1.00			3440.00	
Recorder	0.00	8960	Inside	3440.00	
Recorder	0.00	8673	Outside	3440.00	
Perforations	15.00			3455.00	
Bullnose	3.00			3458.00	19.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>39.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Baird Oil Company

**24-7s-22s Graham, KS**

PO Box 428  
Logan KS. 67646

**David Worcester 1-24**

Job Ticket: 55065

**DST#: 2**

ATTN: Richard Bell

Test Start: 2014.04.30 @ 05:15:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.37 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 1.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1600.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
59.00	mw -10% <del>m</del> 90%w	0.290
123.00	vsocmw -5% <del>o</del> 15% <del>m</del> 80%w	1.179
48.00	vsocmw -10% <del>o</del> 25% <del>m</del> 65%w	0.673
20.00	oil-100% <del>o</del>	0.281

Total Length: 250.00 ft

Total Volume: 2.423 bbl

Num Fluid Samples: 0

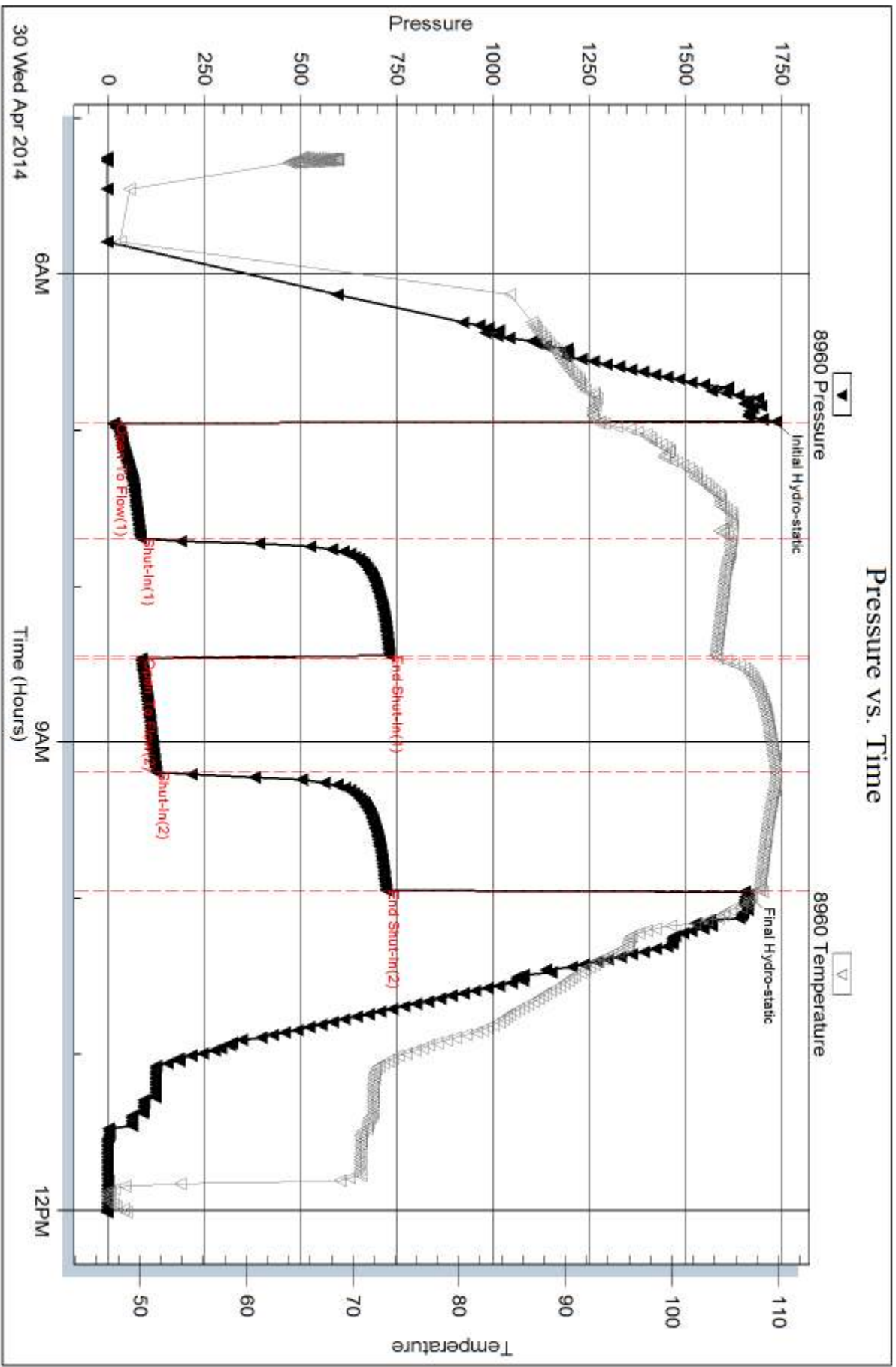
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

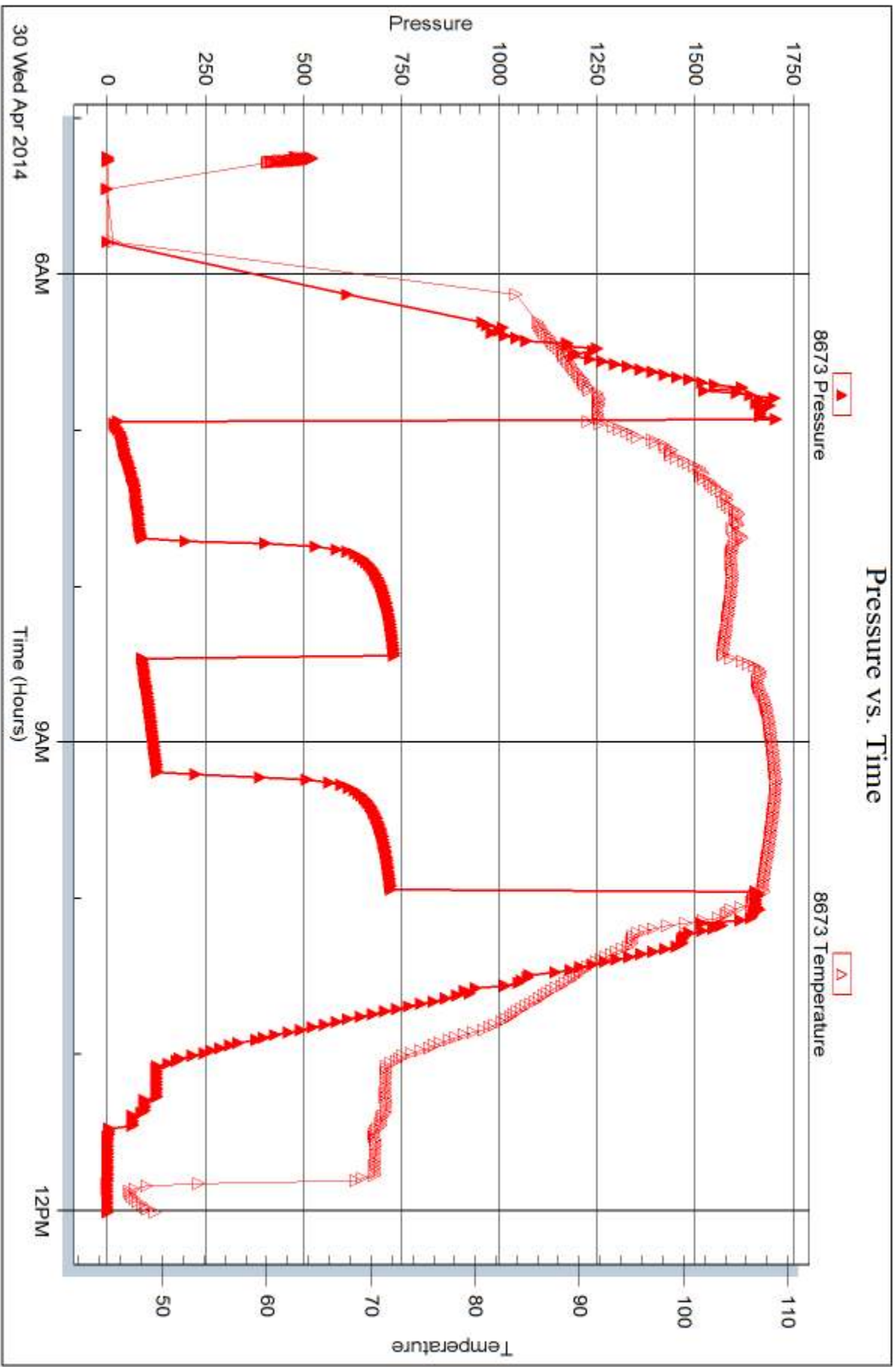


Serial #: 8673

Outside Baird Oil Company

David Worcester 1-24

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 55065

Printed: 2014.05.05 @ 10:53:43



## DRILL STEM TEST REPORT

Prepared For: **Baird Oil Company**

PO Box 428  
Logan KS. 67646

ATTN: Richard Bell

**David Worcester 1-24**

**24-7s-22s Graham,KS**

Start Date: 2014.04.30 @ 17:56:00

End Date: 2014.05.01 @ 00:51:00

Job Ticket #: 55066                      DST #: 3

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.05.05 @ 10:53:17





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Baird Oil Company

**24-7s-22s Graham, KS**

PO Box 428  
Logan KS. 67646

**David Worcester 1-24**

ATTN: Richard Bell

Job Ticket: 55066

**DST#: 3**

Test Start: 2014.04.30 @ 17:56:00

## GENERAL INFORMATION:

Formation: **LKC-E-F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:25:30

Time Test Ended: 00:51:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

**Interval: 3456.00 ft (KB) To 3478.00 ft (KB) (TVD)**

Reference Elevations: 2158.00 ft (KB)

Total Depth: 3478.00 ft (KB) (TVD)

2150.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 8960**

**Inside**

Press@RunDepth: 261.25 psig @ 3459.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.30

End Date:

2014.05.01

Last Calib.: 2014.05.01

Start Time: 17:56:01

End Time:

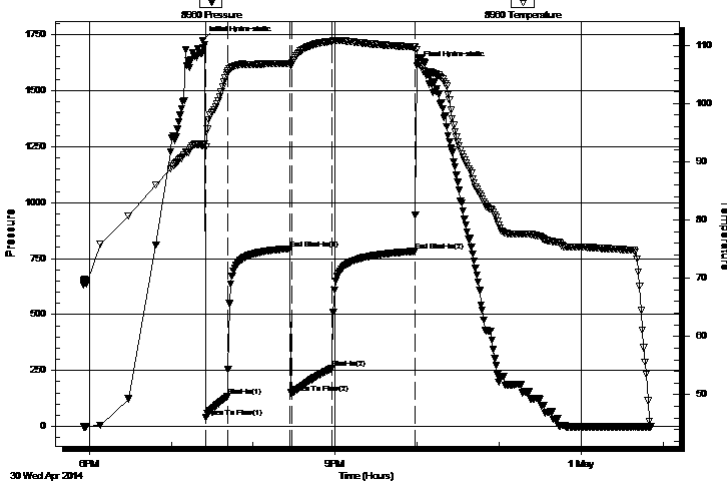
00:51:00

Time On Btm: 2014.04.30 @ 19:23:00

Time Off Btm: 2014.04.30 @ 21:59:30

**TEST COMMENT:** IF: Strong blow, Built to B.O.B in 2 mins.  
IS: Blow back after 1 min. Built to 6" over 45 mins.  
FF: Strong blow, Built to B.O.B in 3 mins.  
FS: Blow back, Built to B.O.B in 15 mins.

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1724.82	92.82	Initial Hydro-static
3	42.12	92.52	Open To Flow (1)
18	133.47	105.28	Shut-In(1)
64	794.57	106.79	End Shut-In(1)
65	148.37	106.62	Open To Flow (2)
95	261.25	110.68	Shut-In(2)
155	782.57	109.68	End Shut-In(2)
157	1613.66	109.24	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
119.00	vsocw m-10%o10w 80m	0.59
63.00	ocm-20%o80%m	0.88
189.00	go-50%g50%o	2.65
189.00	go-20%g80%o	2.65
73.00	go-5%g95%	1.02

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Baird Oil Company

**24-7s-22s Graham, KS**

PO Box 428  
Logan KS. 67646

**David Worcester 1-24**

Job Ticket: 55066

**DST#: 3**

ATTN: Richard Bell

Test Start: 2014.04.30 @ 17:56:00

## Tool Information

Drill Pipe:	Length: 3324.00 ft	Diameter: 3.80 inches	Volume: 46.63 bbl	Tool Weight:	2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose:	60000.00 lb
			<u>Total Volume: 47.22 bbl</u>	Tool Chased	2.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial	54000.00 lb
Depth to Top Packer:	3456.00 ft			Final	56000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	22.00 ft				
Tool Length:	42.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3441.00	
Hydraulic tool	5.00			3446.00	
Packer	5.00			3451.00	20.00 Bottom Of Top Packer
Packer	5.00			3456.00	
Stubb	1.00			3457.00	
Perforations	2.00			3459.00	
Recorder	0.00	8960	Inside	3459.00	
Recorder	0.00	8673	Outside	3459.00	
Perforations	16.00			3475.00	
Bullnose	3.00			3478.00	22.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>42.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Baird Oil Company

**24-7s-22s Graham,KS**

PO Box 428  
Logan KS. 67646

**David Worcester 1-24**

Job Ticket: 55066

**DST#: 3**

ATTN: Richard Bell

Test Start: 2014.04.30 @ 17:56:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbf
119.00	vsocw m-10%o10w 80m	0.585
63.00	ocm-20%o80%m	0.884
189.00	go-50%g50%o	2.651
189.00	go-20%g80%o	2.651
73.00	go-5%g95%	1.024

Total Length: 633.00 ft

Total Volume: 7.795 bbl

Num Fluid Samples: 0

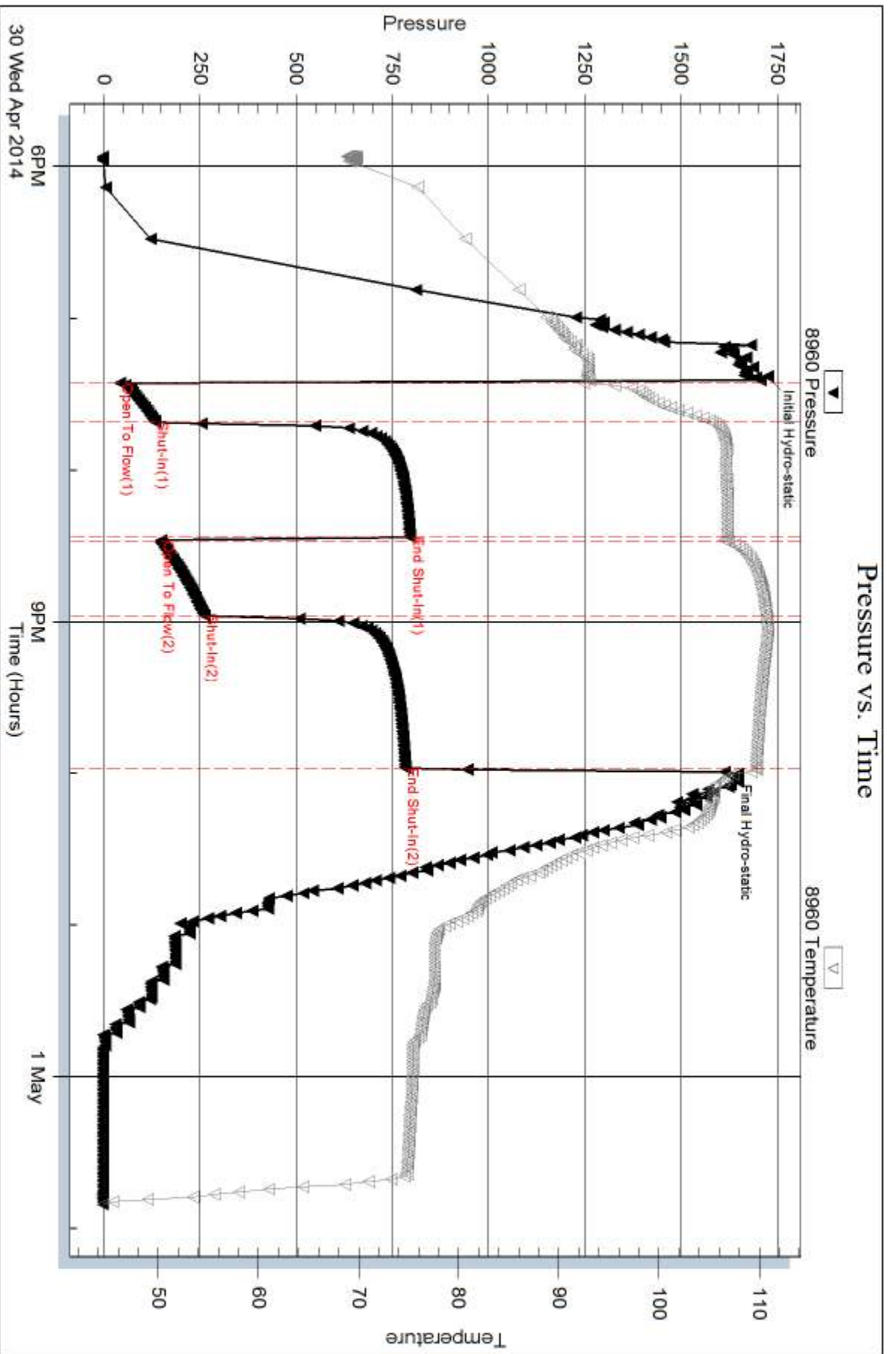
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

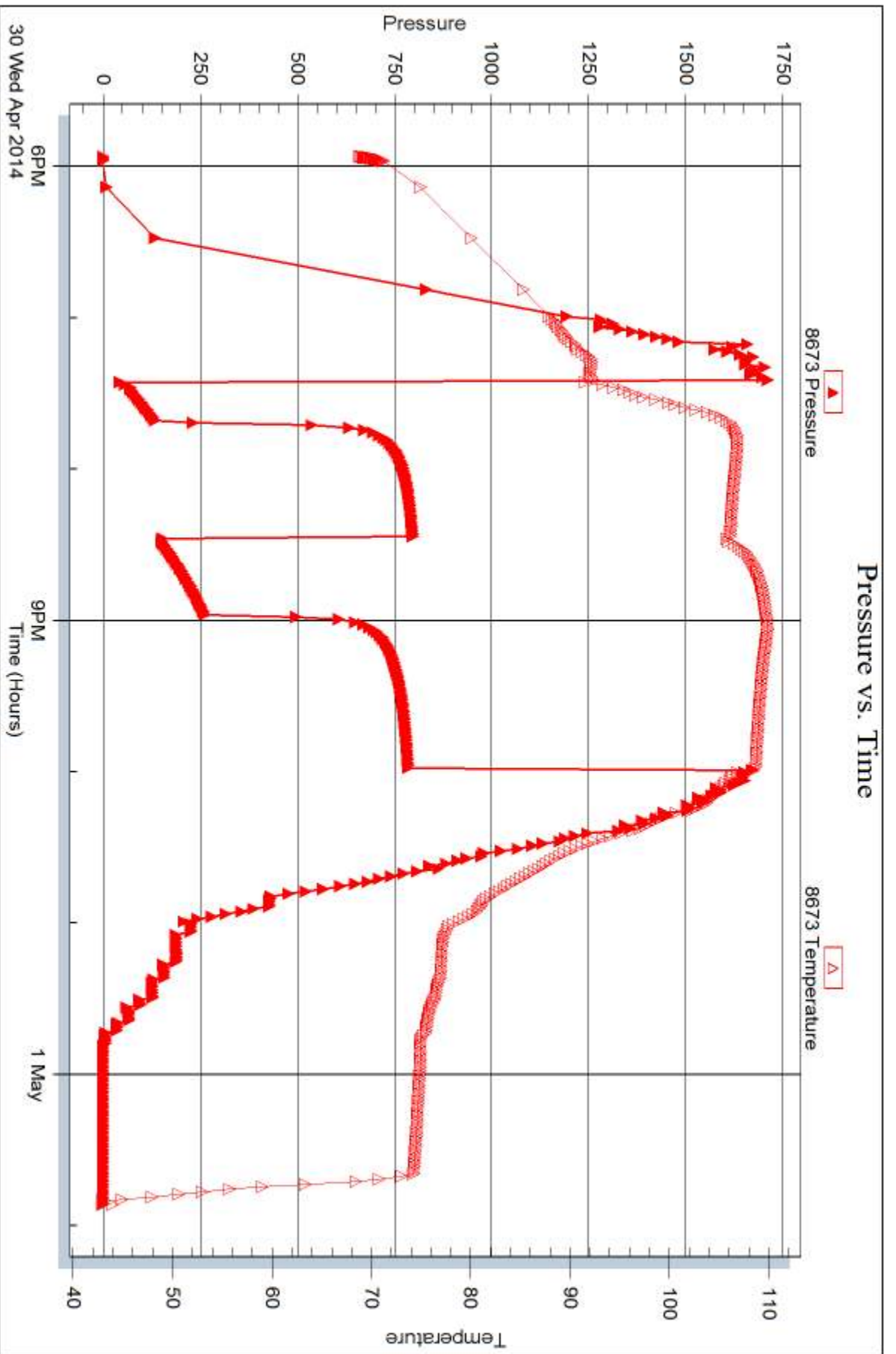


Serial #: 8673

Outside    Baird Oil Company

David Worcester 1-24

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 55066

Printed: 2014.05.05 @ 10:53:19



## DRILL STEM TEST REPORT

Prepared For: **Baird Oil Company**

PO Box 428  
Logan KS. 67646

ATTN: Richard Bell

**David Worcester 1-24**

**24-7s-22s Graham,KS**

Start Date: 2014.05.01 @ 13:45:00

End Date: 2014.05.01 @ 19:29:00

Job Ticket #: 55067                      DST #: 4

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.05.05 @ 10:52:53



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Baird Oil Company

**24-7s-22s Graham, KS**

PO Box 428  
Logan KS. 67646

**David Worcester 1-24**

ATTN: Richard Bell

Job Ticket: 55067

**DST#: 4**

Test Start: 2014.05.01 @ 13:45:00

## GENERAL INFORMATION:

Formation: **LKC-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:37:00

Time Test Ended: 19:29:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

**Interval: 3530.00 ft (KB) To 3560.00 ft (KB) (TVD)**

Reference Elevations: 2158.00 ft (KB)

Total Depth: 3560.00 ft (KB) (TVD)

2150.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 8960**

**Inside**

Press@RunDepth: 24.70 psig @ 3533.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.01

End Date:

2014.05.01

Last Calib.:

2014.05.01

Start Time: 13:45:01

End Time:

19:29:00

Time On Btm:

2014.05.01 @ 15:34:30

Time Off Btm:

2014.05.01 @ 17:42:00

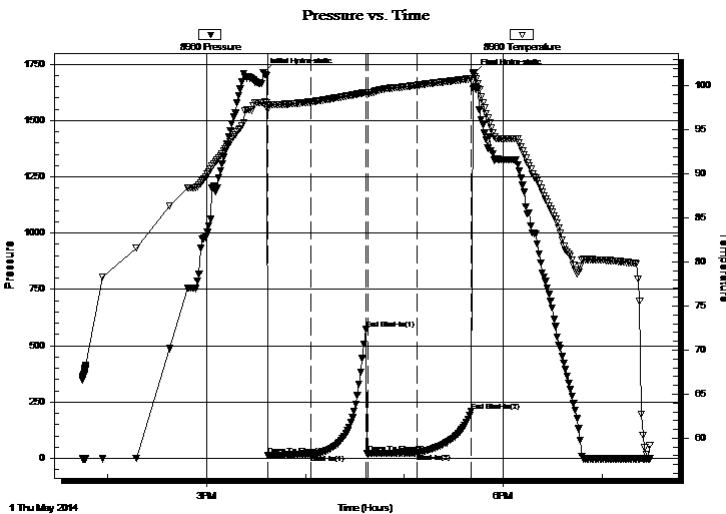
**TEST COMMENT:** IF: Weak blow , Built to 1/4" started to die, died in 28 mins.

IS: No blow back

FF: No blow

FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1713.46	98.05	Initial Hydro-static
3	12.95	97.26	Open To Flow (1)
29	18.56	98.18	Shut-In(1)
62	572.46	99.26	End Shut-In(1)
64	21.25	99.17	Open To Flow (2)
93	24.70	100.06	Shut-In(2)
126	209.44	100.83	End Shut-In(2)
128	1710.01	101.52	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
20.00	ocw m-30%o30%w 40%m	0.10

\* Recovery from multiple tests

## Gas Rates

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







**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Baird Oil Company

**24-7s-22s Graham, KS**

PO Box 428  
Logan KS. 67646

**David Worcester 1-24**

Job Ticket: 55067

**DST#: 4**

ATTN: Richard Bell

Test Start: 2014.05.01 @ 13:45:00

## Tool Information

Drill Pipe:	Length: 3396.00 ft	Diameter: 3.80 inches	Volume: 47.64 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 48.23 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3530.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	50.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3515.00	
Hydraulic tool	5.00			3520.00	
Packer	5.00			3525.00	20.00 Bottom Of Top Packer
Packer	5.00			3530.00	
Stubb	1.00			3531.00	
Perforations	2.00			3533.00	
Recorder	0.00	8960	Inside	3533.00	
Recorder	0.00	8673	Outside	3533.00	
Perforations	24.00			3557.00	
Bullnose	3.00			3560.00	30.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>50.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Baird Oil Company

**24-7s-22s Graham,KS**

PO Box 428  
Logan KS. 67646

**David Worcester 1-24**

Job Ticket: 55067

**DST#: 4**

ATTN: Richard Bell

Test Start: 2014.05.01 @ 13:45:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 49.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 6.80 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: 1.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	ocw m-30%o30%w 40%m	0.098

Total Length: 20.00 ft      Total Volume: 0.098 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

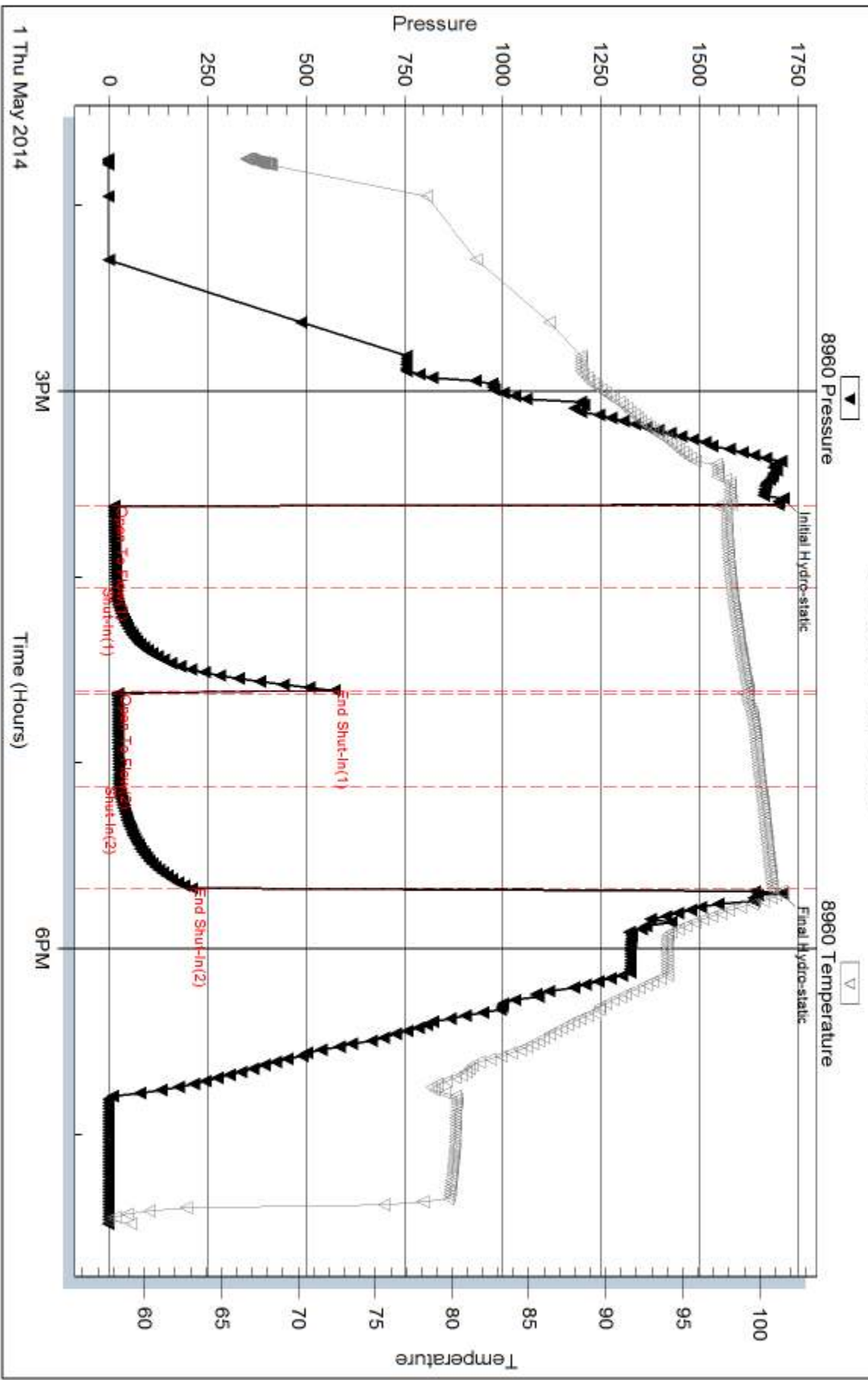
Serial #:

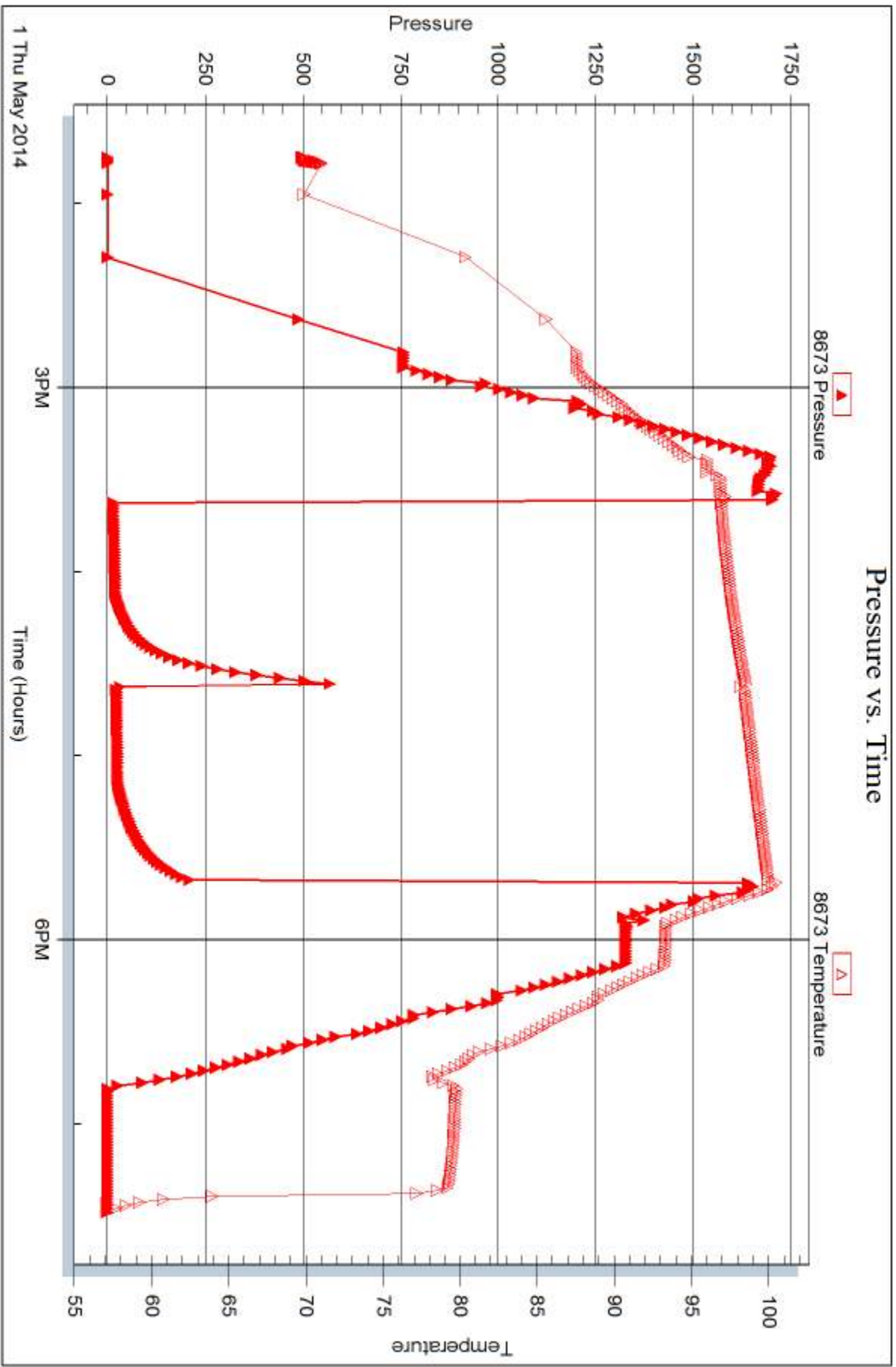
Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time







## DRILL STEM TEST REPORT

Prepared For: **Baird Oil Company**

PO Box 428  
Logan KS. 67646

ATTN: Richard Bell

**David Worcester 1-24**

**24-7s-22s Graham,KS**

Start Date: 2014.05.02 @ 03:00:00

End Date: 2014.05.02 @ 10:17:30

Job Ticket #: 55068                      DST #: 5

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.05.05 @ 10:52:27



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Baird Oil Company

**24-7s-22s Graham, KS**

PO Box 428  
Logan KS. 67646

**David Worcester 1-24**

ATTN: Richard Bell

Job Ticket: 55068

**DST#: 5**

Test Start: 2014.05.02 @ 03:00:00

## GENERAL INFORMATION:

Formation: **LKC-K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:58:30

Time Test Ended: 10:17:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

**Interval: 3559.00 ft (KB) To 3580.00 ft (KB) (TVD)**

Reference Elevations: 2158.00 ft (KB)

Total Depth: 3580.00 ft (KB) (TVD)

2150.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 8960**

**Inside**

Press@RunDepth: 52.93 psig @ 3562.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.02

End Date:

2014.05.02

Last Calib.: 2014.05.02

Start Time: 03:00:01

End Time:

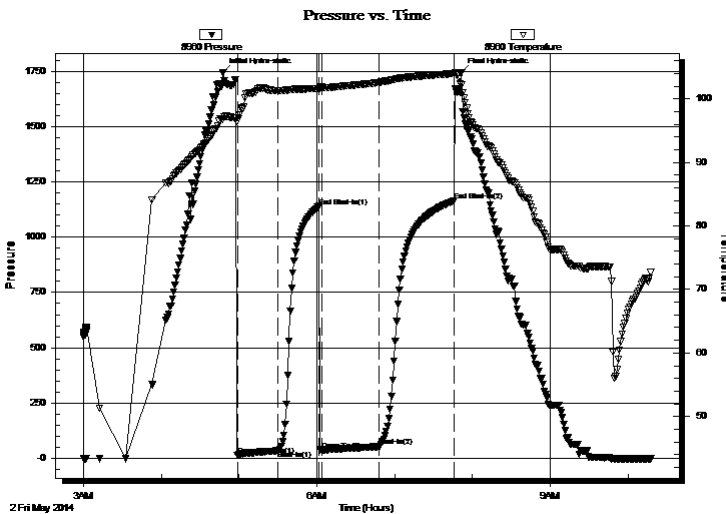
10:17:30

Time On Btm: 2014.05.02 @ 04:47:30

Time Off Btm: 2014.05.02 @ 07:51:30

**TEST COMMENT:** IF: Weak blow , Built to surface over 30 mins.  
IS: No blow back  
FF: Weak blow , Built to Surface over 30 mins.  
FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1744.10	96.78	Initial Hydro-static
11	13.82	96.50	Open To Flow (1)
43	34.88	101.31	Shut-In(1)
74	1139.40	101.65	End Shut-In(1)
77	37.49	101.84	Open To Flow (2)
121	52.93	102.60	Shut-In(2)
178	1163.41	103.97	End Shut-In(2)
184	1744.95	102.16	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	50 Ft. gas in pipe	0.00
60.00	ocw m-20%o30%w 50%m	0.30
30.00	go-10%g90%o	0.15

\* Recovery from multiple tests

## Gas Rates

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







**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Baird Oil Company

**24-7s-22s Graham, KS**

PO Box 428  
Logan KS. 67646

**David Worcester 1-24**

Job Ticket: 55068

**DST#: 5**

ATTN: Richard Bell

Test Start: 2014.05.02 @ 03:00:00

## Tool Information

Drill Pipe:	Length: 3425.00 ft	Diameter: 3.80 inches	Volume: 48.04 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 48.63 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3559.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	21.00 ft			
Tool Length:	41.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3544.00	
Hydraulic tool	5.00			3549.00	
Packer	5.00			3554.00	20.00 Bottom Of Top Packer
Packer	5.00			3559.00	
Stubb	1.00			3560.00	
Perforations	2.00			3562.00	
Recorder	0.00	8960	Inside	3562.00	
Recorder	0.00	8673	Outside	3562.00	
Perforations	15.00			3577.00	
Bullnose	3.00			3580.00	21.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>41.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Baird Oil Company

**24-7s-22s Graham, KS**

PO Box 428  
Logan KS. 67646

**David Worcester 1-24**

Job Ticket: 55068

**DST#: 5**

ATTN: Richard Bell

Test Start: 2014.05.02 @ 03:00:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
0.00	50 Ft. gas in pipe	0.000
60.00	ocw m-20%o30%w 50%m	0.295
30.00	go-10%g90%o	0.148

Total Length: 90.00 ft      Total Volume: 0.443 bbl

Num Fluid Samples: 0

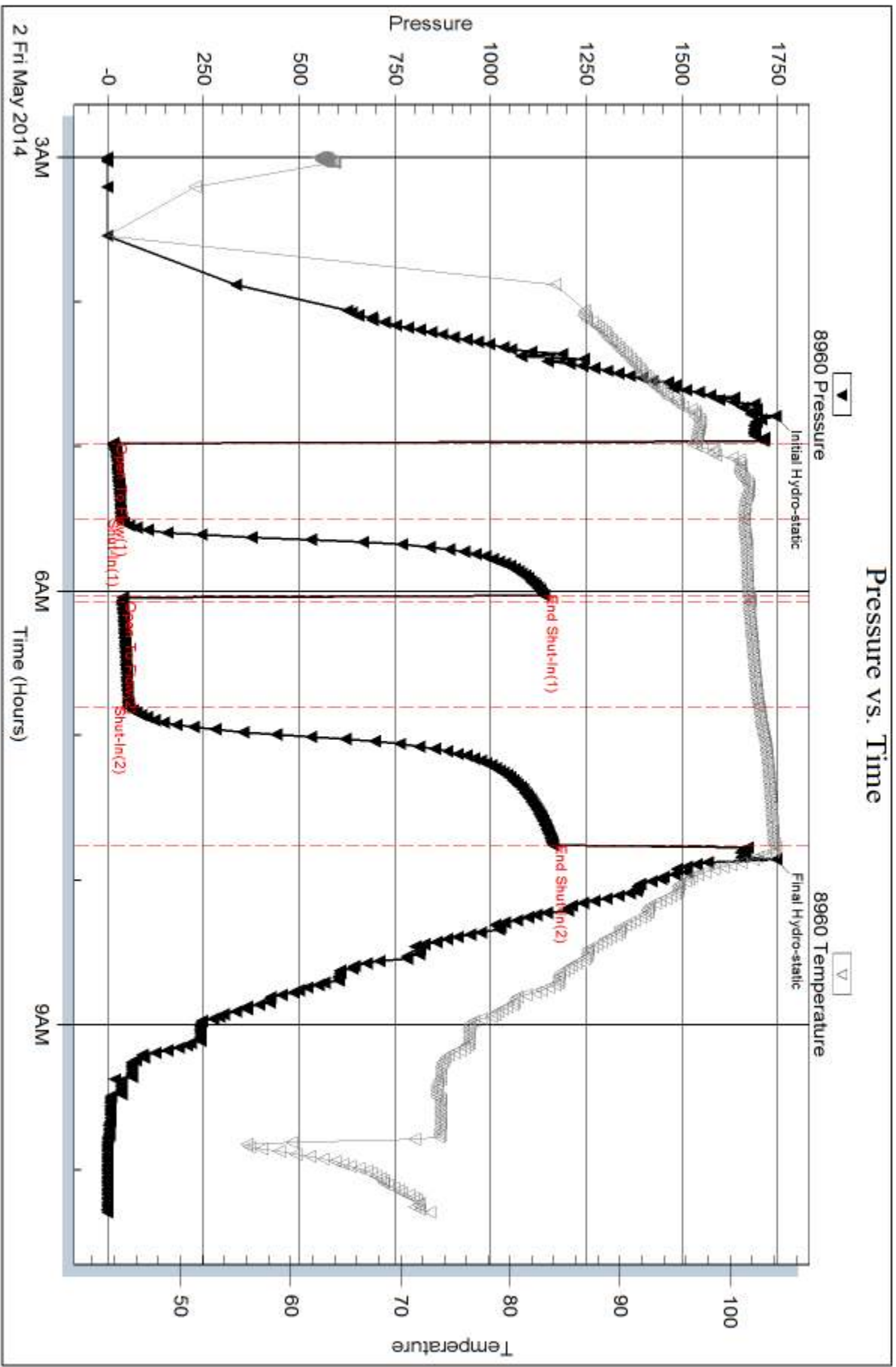
Num Gas Bombs: 0

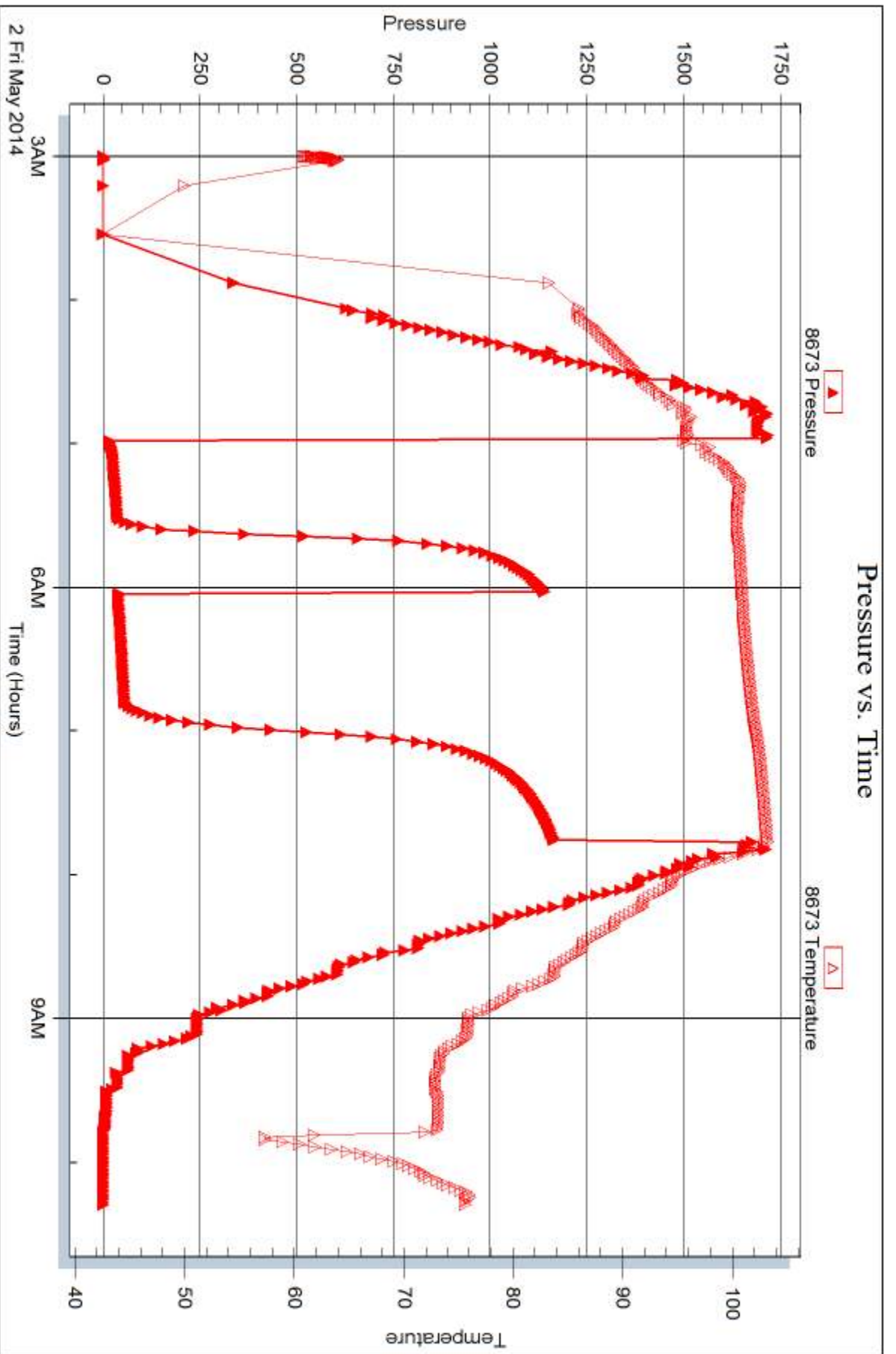
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 29@70\*=28corrected gravity







## DRILL STEM TEST REPORT

Prepared For: **Baird Oil Company**

PO Box 428  
Logan KS. 67646

ATTN: Richard Bell

**David Worcester 1-24**

**24-7s-22s Graham,KS**

Start Date: 2014.05.03 @ 04:35:00

End Date: 2014.05.03 @ 09:09:19

Job Ticket #: 55069                      DST #: 6

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.05.05 @ 10:52:04



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Baird Oil Company

**24-7s-22s Graham, KS**

PO Box 428  
Logan KS. 67646

**David Worcester 1-24**

ATTN: Richard Bell

Job Ticket: 55069

**DST#: 6**

Test Start: 2014.05.03 @ 04:35:00

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:22:49

Time Test Ended: 09:09:19

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreutzer Jr.

Unit No: 61

**Interval: 3654.00 ft (KB) To 3696.00 ft (KB) (TVD)**

Reference Elevations: 2158.00 ft (KB)

Total Depth: 3696.00 ft (KB) (TVD)

2150.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 8960**

**Inside**

Press@RunDepth: 21.04 psig @ 3661.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.03

End Date:

2014.05.03

Last Calib.: 2014.05.03

Start Time: 04:35:01

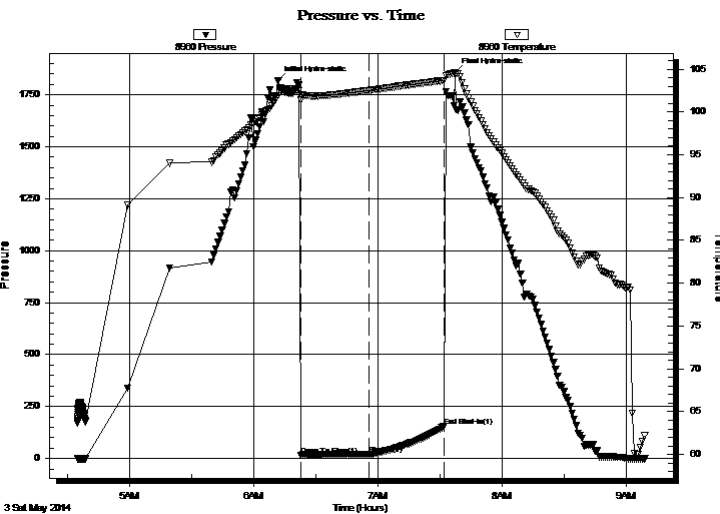
End Time:

09:09:18

Time On Btm: 2014.05.03 @ 06:11:49

Time Off Btm: 2014.05.03 @ 07:37:19

TEST COMMENT: IF: Weak blow ,Surface Died in 21 mins.  
IS: No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1817.37	101.88	Initial Hydro-static
11	16.01	101.39	Open To Flow (1)
44	21.04	102.51	Shut-In(1)
80	153.62	103.67	End Shut-In(1)
86	1857.72	104.61	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
20.00	ocm-20%o80%m	0.10

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Baird Oil Company

**24-7s-22s Graham, KS**

PO Box 428  
Logan KS. 67646

**David Worcester 1-24**

Job Ticket: 55069

**DST#: 6**

ATTN: Richard Bell

Test Start: 2014.05.03 @ 04:35:00

## Tool Information

Drill Pipe:	Length: 3545.00 ft	Diameter: 3.80 inches	Volume: 49.73 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 50.32 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3654.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	42.00 ft			
Tool Length:	62.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3639.00	
Hydraulic tool	5.00			3644.00	
Packer	5.00			3649.00	20.00 Bottom Of Top Packer
Packer	5.00			3654.00	
Stubb	1.00			3655.00	
Perforations	5.00			3660.00	
Blank Off Sub	1.00			3661.00	
Recorder	0.00	8960	Inside	3661.00	
Recorder	0.00	8673	Outside	3661.00	
Drill Pipe	31.00			3692.00	
Change Over Sub	1.00			3693.00	
Bullnose	3.00			3696.00	42.00 Bottom Packers & Anchor

**Total Tool Length: 62.00**





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Baird Oil Company

**24-7s-22s Graham, KS**

PO Box 428  
Logan KS. 67646

**David Worcester 1-24**

Job Ticket: 55069

**DST#: 6**

ATTN: Richard Bell

Test Start: 2014.05.03 @ 04:35:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 1.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	ocm-20%o80%m	0.098

Total Length: 20.00 ft      Total Volume: 0.098 bbl

Num Fluid Samples: 0

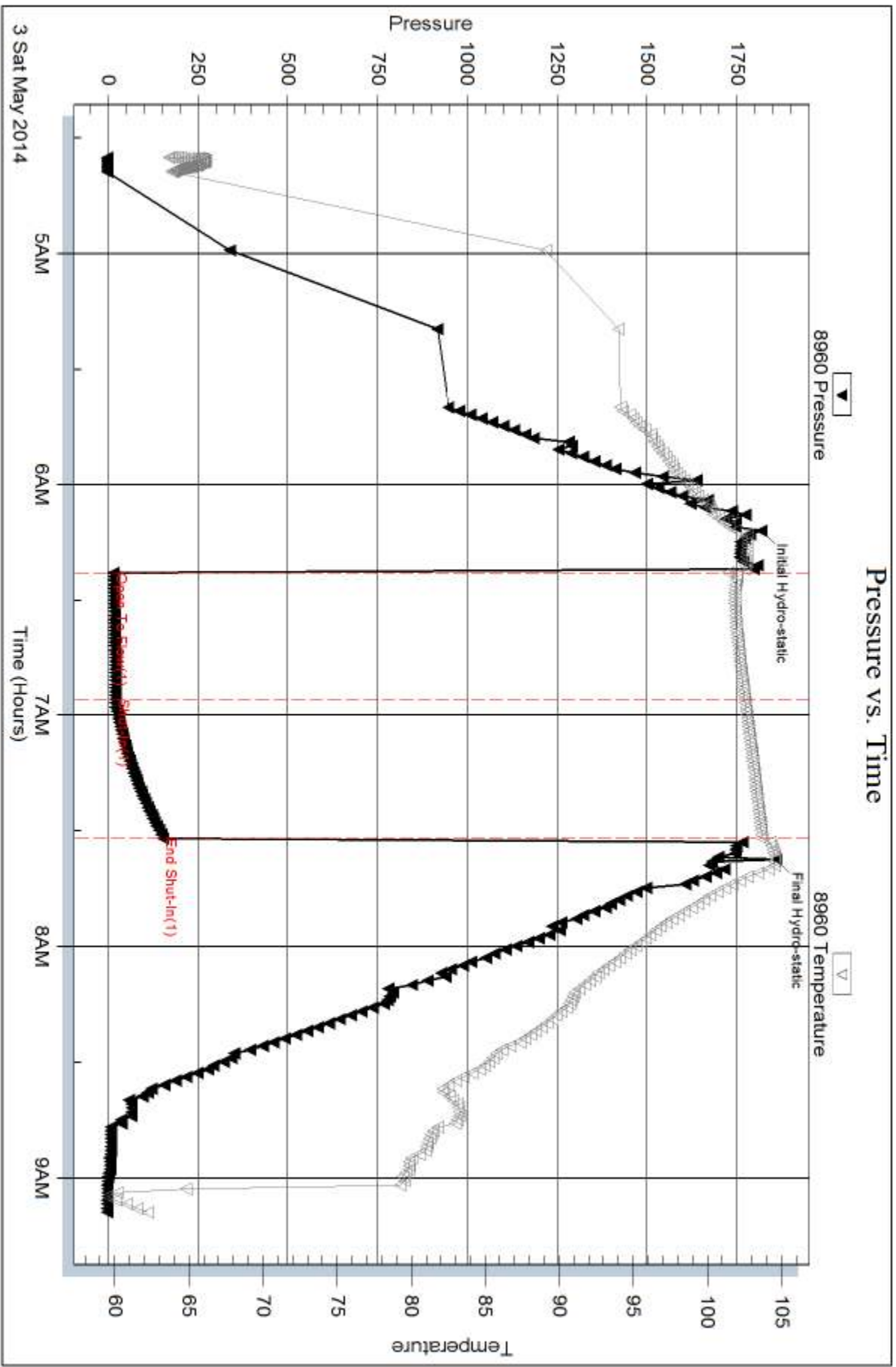
Num Gas Bombs: 0

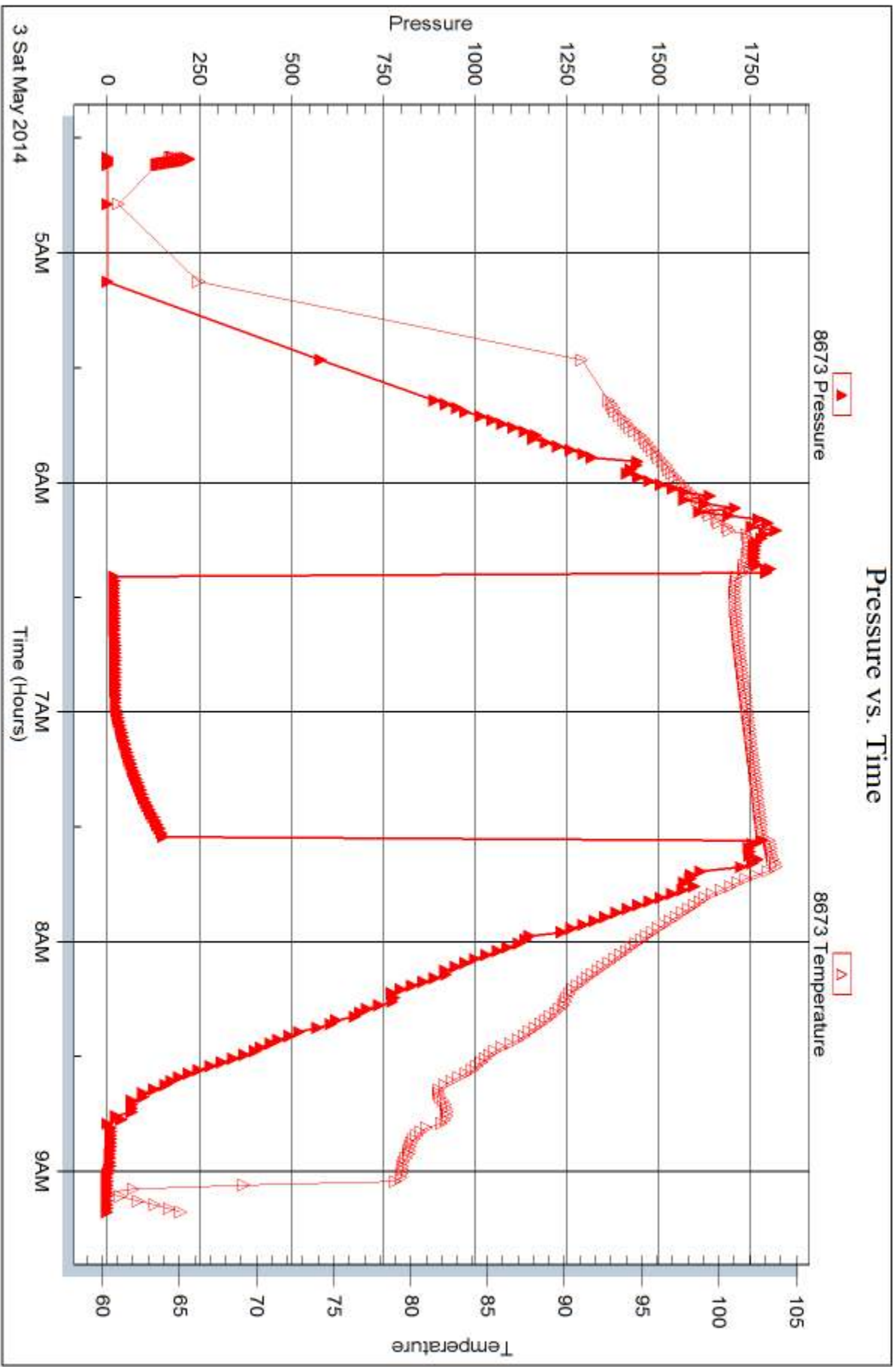
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **Baird Oil Company**

PO Box 428  
Logan KS. 67646

ATTN: Richard Bell

**David Worcester 1-24**

**24-7s-22s Graham,KS**

Start Date: 2014.05.03 @ 15:50:00

End Date: 2014.05.03 @ 20:10:30

Job Ticket #: 55070                      DST #: 7

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.05.05 @ 10:51:37



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Baird Oil Company

**24-7s-22s Graham, KS**

PO Box 428  
Logan KS. 67646

**David Worcester 1-24**

ATTN: Richard Bell

Job Ticket: 55070

**DST#: 7**

Test Start: 2014.05.03 @ 15:50:00

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:37:30

Time Test Ended: 20:10:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

**Interval: 3694.00 ft (KB) To 3711.00 ft (KB) (TVD)**

Reference Elevations: 2158.00 ft (KB)

Total Depth: 3711.00 ft (KB) (TVD)

2150.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 8960 Inside**

Press@RunDepth: psig @ 3695.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.03

End Date:

2014.05.03

Last Calib.: 2014.05.04

Start Time: 15:50:01

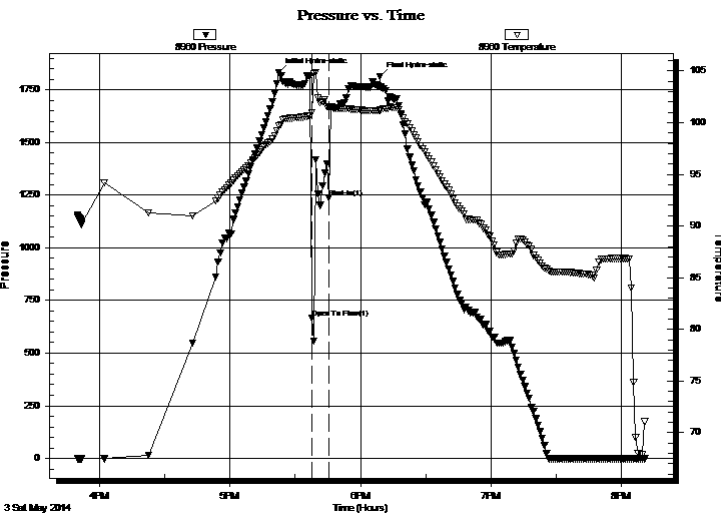
End Time:

20:10:30

Time On Btm: 2014.05.03 @ 17:22:30

Time Off Btm: 2014.05.03 @ 18:09:00

TEST COMMENT: PACKER FAILURE



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1832.58	99.65	Initial Hydro-static
15	667.94	100.95	Open To Flow (1)
23	1236.89	101.44	Shut-In(1)
47	1813.18	101.20	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
500.00	mud-100%m	5.93

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Baird Oil Company

**24-7s-22s Graham, KS**

PO Box 428  
Logan KS. 67646

**David Worcester 1-24**

Job Ticket: 55070

**DST#: 7**

ATTN: Richard Bell

Test Start: 2014.05.03 @ 15:50:00

## Tool Information

Drill Pipe:	Length: 3575.00 ft	Diameter: 3.80 inches	Volume: 50.15 bbl	Tool Weight: 2200.00 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: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 50.74 bbl</u>	Tool Chased 3.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3694.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	17.00 ft			
Tool Length:	37.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3679.00	
Hydraulic tool	5.00			3684.00	
Packer	5.00			3689.00	20.00 Bottom Of Top Packer
Packer	5.00			3694.00	
Stubb	1.00			3695.00	
Recorder	0.00	8960	Inside	3695.00	
Recorder	0.00	8673	Outside	3695.00	
Perforations	13.00			3708.00	
Bullnose	3.00			3711.00	17.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>37.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Baird Oil Company

**24-7s-22s Graham, KS**

PO Box 428  
Logan KS. 67646

**David Worcester 1-24**

Job Ticket: 55070

**DST#: 7**

ATTN: Richard Bell

Test Start: 2014.05.03 @ 15:50:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
500.00	mud-100%m	5.930

Total Length: 500.00 ft      Total Volume: 5.930 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

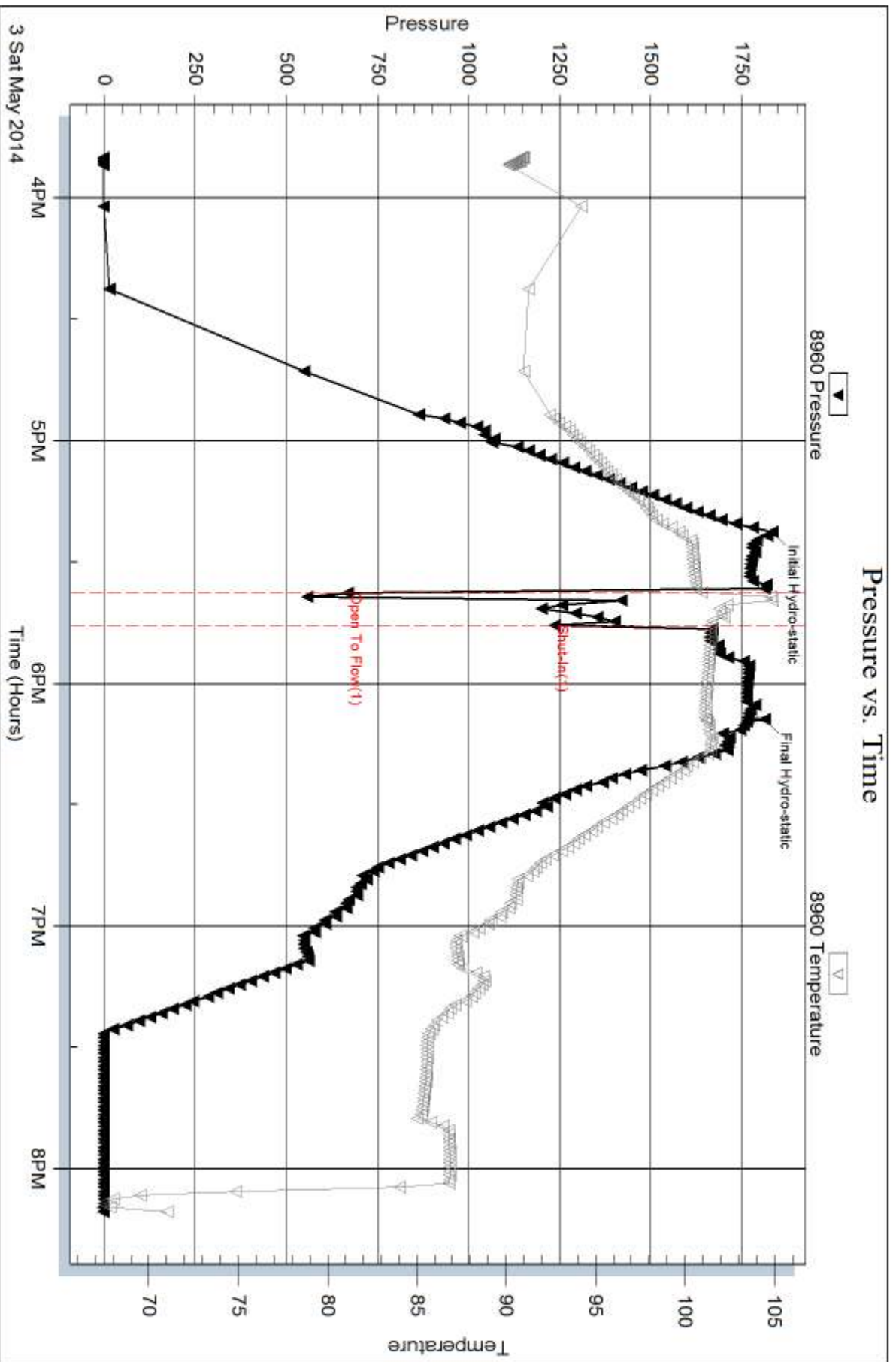
Laboratory Name:

Laboratory Location:

Recovery Comments:



### Pressure vs. Time

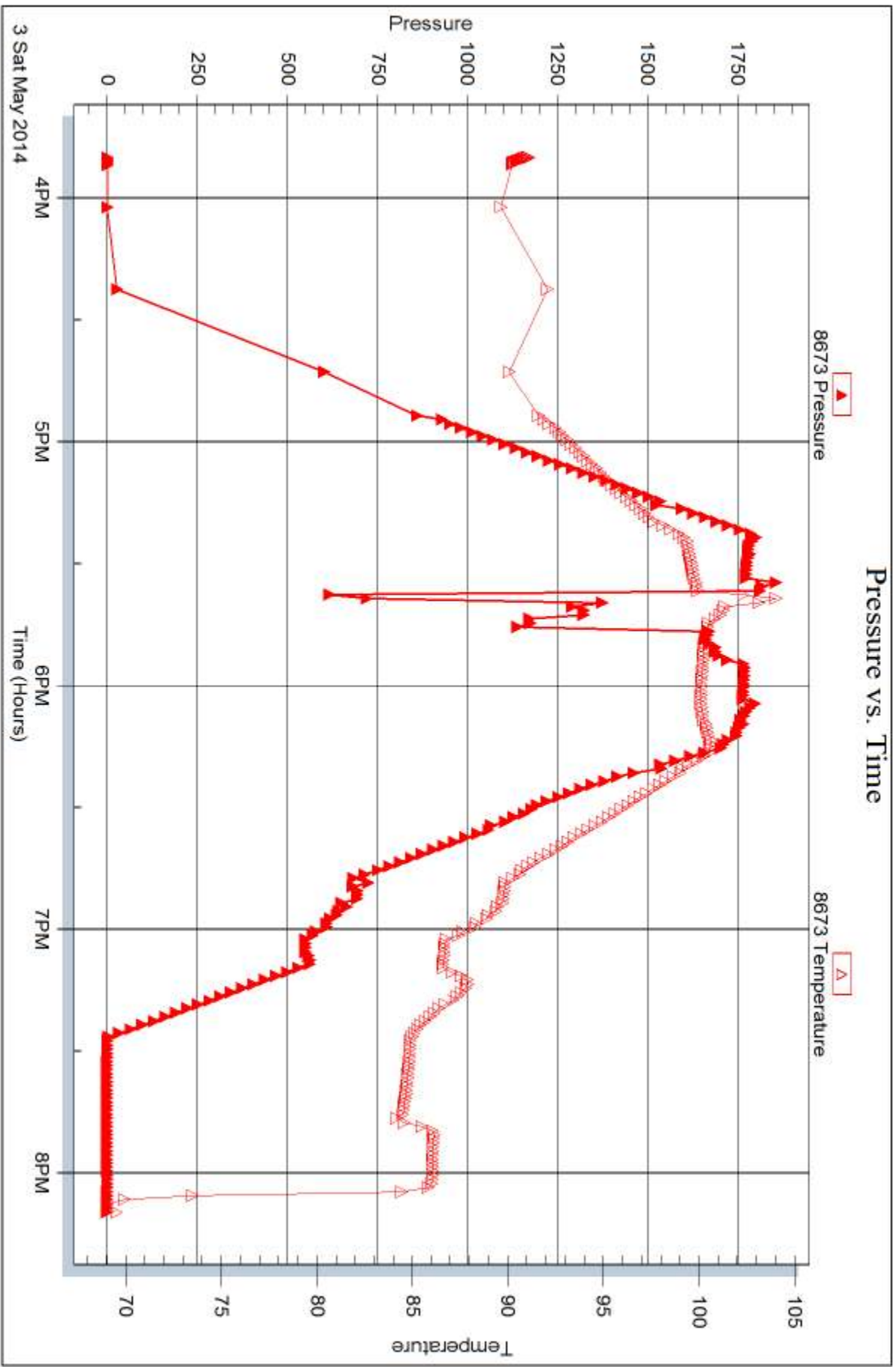


Serial #: 8673

Outside Baird Oil Company

David Worcester 1-24

DST Test Number: 7



Trilobite Testing, Inc

Ref. No: 55070

Printed: 2014.05.05 @ 10:51:39



## DRILL STEM TEST REPORT

Prepared For: **Baird Oil Company**

PO Box 428  
Logan KS. 67646

ATTN: Richard Bell

**David Worcester 1-24**

**24-7s-22s Graham,KS**

Start Date: 2014.05.03 @ 20:30:00

End Date: 2014.05.04 @ 01:10:36

Job Ticket #: 55071                      DST #: 8

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.05.05 @ 10:50:58



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Baird Oil Company

**24-7s-22s Graham, KS**

PO Box 428  
Logan KS. 67646

**David Worcester 1-24**

ATTN: Richard Bell

Job Ticket: 55071

**DST#: 8**

Test Start: 2014.05.03 @ 20:30:00

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:07:36

Time Test Ended: 01:10:36

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreutzer Jr.

Unit No: 61

**Interval: 3653.00 ft (KB) To 3711.00 ft (KB) (TVD)**

Reference Elevations: 2158.00 ft (KB)

Total Depth: 3711.00 ft (KB) (TVD)

2150.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 8960**

**Inside**

Press@RunDepth: 30.52 psig @ 3659.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.03

End Date:

2014.05.04

Last Calib.: 2014.05.04

Start Time: 20:30:01

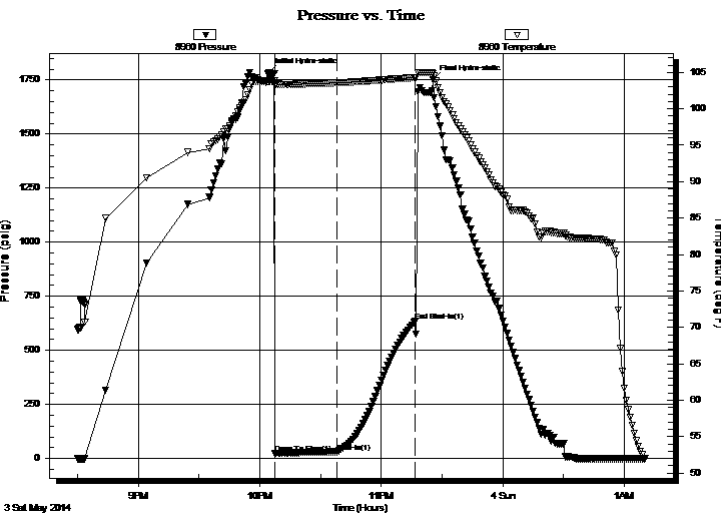
End Time:

01:10:36

Time On Btm: 2014.05.03 @ 22:04:36

Time Off Btm: 2014.05.03 @ 23:25:36

TEST COMMENT: IF: Weak blow surface over 30 mins.  
IS: No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1785.21	103.78	Initial Hydro-static
3	21.77	103.29	Open To Flow (1)
34	30.52	103.57	Shut-In(1)
72	633.88	104.29	End Shut-In(1)
81	1750.18	104.88	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
20.00	socm-20%o80%m	0.10

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Baird Oil Company

**24-7s-22s Graham, KS**

PO Box 428  
Logan KS. 67646

**David Worcester 1-24**

Job Ticket: 55071

**DST#: 8**

ATTN: Richard Bell

Test Start: 2014.05.03 @ 20:30:00

## Tool Information

Drill Pipe:	Length: 3519.00 ft	Diameter: 3.80 inches	Volume: 49.36 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 49.95 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3653.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	58.00 ft			
Tool Length:	78.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut In Tool	5.00			3638.00	
Hydraulic tool	5.00			3643.00	
Packer	5.00			3648.00	20.00 Bottom Of Top Packer
Packer	5.00			3653.00	
Stubb	1.00			3654.00	
Perforations	5.00			3659.00	
Recorder	0.00	8960	Inside	3659.00	
Recorder	0.00	8673	Outside	3659.00	
Change Over Sub	1.00			3660.00	
Blank Spacing	32.00			3692.00	
Change Over Sub	1.00			3693.00	
Perforations	15.00			3708.00	
Bullnose	3.00			3711.00	58.00 Bottom Packers & Anchor

**Total Tool Length: 78.00**





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Baird Oil Company

**24-7s-22s Graham, KS**

PO Box 428  
Logan KS. 67646

**David Worcester 1-24**

Job Ticket: 55071

**DST#: 8**

ATTN: Richard Bell

Test Start: 2014.05.03 @ 20:30:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	socm-20%o80%m	0.098

Total Length: 20.00 ft      Total Volume: 0.098 bbl

Num Fluid Samples: 0

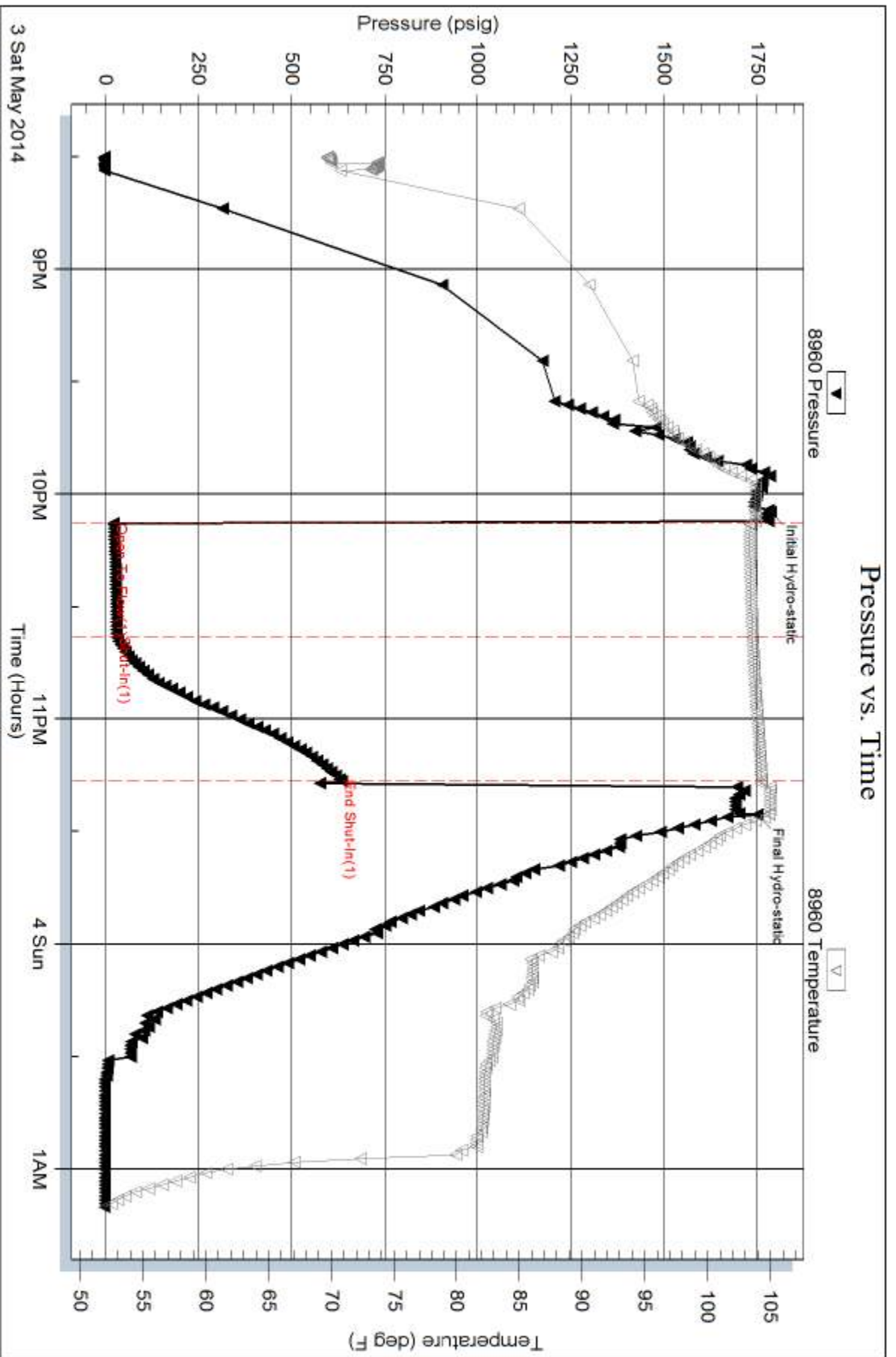
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

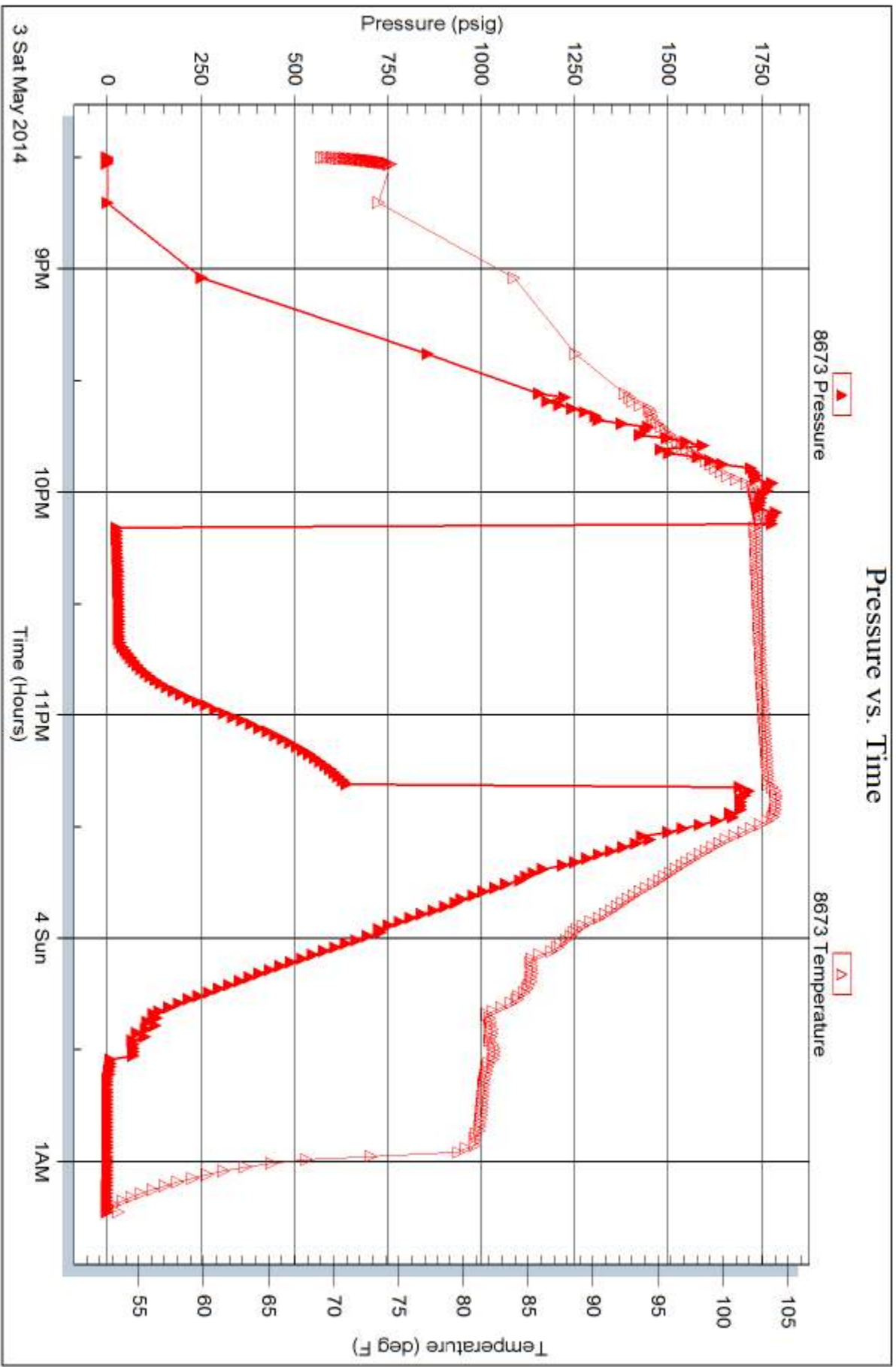


Serial #: 8673

Outside Baird Oil Company

David Worcester 1-24

DST Test Number: 8



Trilobite Testing, Inc

Ref. No: 55071

Printed: 2014.05.05 @ 10:51:00



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **55064**

Well Name & No. David Worcester # 1-24 Test No. 1 Date 4-29-2014  
 Company Baird oil company Elevation 2158 KB 2150 GL  
 Address 113 W. Main P.O. Box 428 Logan KS - 67646  
 Co. Rep / Geo. Richard Bell Rig WW#12  
 Location: Sec. 24 Twp. 7S Rge. 22W Co. Graham State Ks

Interval Tested 3416 3442 Zone Tested LKC-C  
 Anchor Length 26 Drill Pipe Run 3293 Mud Wt. 9.2  
 Top Packer Depth 3411 Drill Collars Run 119 Vis 61  
 Bottom Packer Depth 3416 Wt. Pipe Run -0- WL 6.4  
 Total Depth 3442 Chlorides 1600 ppm System LCM 3#

Blow Description IF: strong blow, Built to B.O.B in 25 mins  
ISFI No blow back  
FF: strong blow, Built to B. O.B in 31  
FSI: No blow back

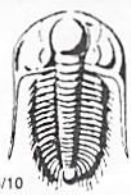
Rec	Feet of	%gas	%oil	%water	%mud
<u>3</u>	<u>oil</u>		<u>100</u>		
<u>85</u>	<u>mcw</u>			<u>85</u>	<u>15</u>
<u>126</u>	<u>mcw</u>			<u>65</u>	<u>35</u>
<u>60</u>	<u>wcm</u>			<u>30</u>	<u>70</u>
<u>59</u>	<u>mud</u>				<u>100</u>

Rec Total 333 BHT 108 Gravity \_\_\_\_\_ API RW 1. @ 42 ° F Chlorides 10000 ppm  
 (A) Initial Hydrostatic 1771  Test 1150 T-On Location 14:53  
 (B) First Initial Flow 18  Jars \_\_\_\_\_ T-Started 15:30  
 (C) First Final Flow 112  Safety Joint \_\_\_\_\_ T-Open 17:06  
 (D) Initial Shut-In 709  Circ Sub \_\_\_\_\_ T-Pulled 20:05  
 (E) Second Initial Flow 116  Hourly Standby \_\_\_\_\_ T-Out 22:05  
 (F) Second Final Flow 165  Mileage 80x2=160x2= \_\_\_\_\_  
 (G) Final Shut-In 701  Sampler 137ft 212.35 \_\_\_\_\_  
 (H) Final Hydrostatic 1664  Straddle \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 45  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 45  Day Standby \_\_\_\_\_ Total 1362.35  
 Final Flow 45  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 45  \_\_\_\_\_  
 Sub Total 1362.35

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. **55065**

Well Name & No. David Worcester #1-24 Test No. 2 Date 4-30-2014  
 Company Baird oil company Elevation 2158 KB 2150 GL  
 Address 113 W. Main <sup>P.O.</sup> Box 428 Logan Ks. 67643  
 Co. Rep / Geo. Richard Bell Rig WW#12  
 Location: Sec. 24 Twp. 75 Rge. 22w Co. Grain State Ks

Interval Tested 3439 3458 Zone Tested LKC-D  
 Anchor Length 19 Drill Pipe Run 3325 Mud Wt. 9.2  
 Top Packer Depth 3434 Drill Collars Run 119 Vis 61  
 Bottom Packer Depth 3439 Wt. Pipe Run -0- WL 6.4  
 Total Depth 3458 Chlorides 1600 ppm System LCM 3#

Blow Description IF: Weak blow, Built to 3 1/2 in over 45 mins.  
ISF: No blow back  
FF: Weak blow built to 6 in over 45 mins  
FSS: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>oil on top</u>		<u>100</u>		
<u>48</u>	<u>vsocmw</u>	<u>10</u>	<u>10</u>	<u>65</u>	<u>25</u>
<u>123</u>	<u>vsocmw</u>	<u>5</u>	<u>5</u>	<u>80</u>	<u>15</u>
<u>59</u>	<u>mw</u>			<u>90</u>	<u>10</u>

Rec Total 245 BHT 110 Gravity ✓ API RW @ ° F Chlorides ppm

(A) Initial Hydrostatic 1735  Test 1150 T-On Location 4:00  
 (B) First Initial Flow 15  Jars 5:15  
 (C) First Final Flow 84  Safety Joint 6:57  
 (D) Initial Shut-In 730  Circ Sub 10:00  
 (E) Second Initial Flow 82  Hourly Standby 12:01  
 (F) Second Final Flow 125  Mileage 212.35  
 (G) Final Shut-In 721  Sampler   
 (H) Final Hydrostatic 1664  Straddle

Initial Open 45  Shale Packer   Ruined Shale Packer   
 Initial Shut-In 45  Extra Packer   Ruined Packer   
 Final Flow 45  Extra Recorder  Sub Total 0  
 Final Shut-In 45  Day Standby  Total 1362.35  
 Accessibility  MP/DST Disc't   
 Sub Total 1362.35

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

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. **55066**

Well Name & No. David Worcester #1-24 Test No. 3 Date 4-30-2017  
 Company Baird oil company Elevation 2158 KB 2150 GL  
 Address 113 W. main P.O. Box 428 Logan  
 Co. Rep / Geo. Richard Bell Rig WW#12  
 Location: Sec. 24 Twp. 7S Rge. 22W Co. Graham State Ks

Interval Tested 3456 3478 Zone Tested LKC - E, F  
 Anchor Length 22 Drill Pipe Run 3324 Mud Wt. 9.1  
 Top Packer Depth 3451 Drill Collars Run 119 Vis 49  
 Bottom Packer Depth 3456 Wt. Pipe Run -0- WL 6.8  
 Total Depth 3478 Chlorides 1800 ppm System LCM 1#

Blow Description IF: Strong blow, Built to B.O.B in 2mins  
ISF: Blow back after 1min. Built to 6in over 45mins  
FF: strong blow, Built to B.O.B in 3mins  
FST: Blow back, Built to B.O.B in 15mins.

Rec	Feet of go	%gas	%oil	%water	%mud
<u>73</u>	<u>90</u>	<u>5</u>	<u>95</u>		
<u>189</u>	<u>90</u>	<u>20</u>	<u>80</u>		
<u>181</u>	<u>90</u>	<u>50</u>	<u>50</u>		
<u>63</u>	<u>OCM</u>		<u>20</u>		<u>80</u>
<u>119</u>	<u>USOCWM</u>		<u>10</u>	<u>10</u>	<u>80</u>

Rec Total 633 BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1725  Test 1150 T-On Location 17:40  
 (B) First Initial Flow 42  Jars \_\_\_\_\_ T-Started 17:56  
 (C) First Final Flow 133  Safety Joint \_\_\_\_\_ T-Open 19:25  
 (D) Initial Shut-In 795  Circ Sub \_\_\_\_\_ T-Pulled 22:00  
 (E) Second Initial Flow 148  Hourly Standby \_\_\_\_\_ T-Out 51  
 (F) Second Final Flow 261  Mileage 212.35 Comments \_\_\_\_\_  
 (G) Final Shut-In 783  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1614  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 15  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 45  Day Standby \_\_\_\_\_ Total 1362.35  
 Final Flow 30  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 60 Sub Total 1362.35

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

Our Representative Chapman

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **55067**

Well Name & No. David Worcester #1-24 Test No. 4 Date 5-01-2014  
 Company Burd oil company Elevation 2158 KB 2150 GL  
 Address 113 W. Main P.O. Box 428 Logan  
 Co. Rep / Geo. Richard Bell Rig WW#12  
 Location: Sec. 24 Twp. 7S Rge. 22W Co. Graham State Ks

Interval Tested 3530 3560 Zone Tested LKC  
 Anchor Length 30 Drill Pipe Run 3396 Mud Wt. 91  
 Top Packer Depth 3525 Drill Collars Run 119 Vis 49  
 Bottom Packer Depth 3530 Wt. Pipe Run -0 WL 68  
 Total Depth 3560 Chlorides 1800 ppm System LCM 1#

Blow Description IF: Weak blow, Built to 1/4 in. started to DIC, Died in 28 mins  
ISF: No blow back  
FFI No blow  
FSI: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
20	2000MM		30%	30%	40%

Rec Total 20 BHT 101 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1713  Test 1150 T-On Location 13:30  
 (B) First Initial Flow 13  Jars \_\_\_\_\_ T-Started 13:45  
 (C) First Final Flow 19  Safety Joint \_\_\_\_\_ T-Open 15:37  
 (D) Initial Shut-In 572  Circ Sub \_\_\_\_\_ T-Pulled 17:30  
 (E) Second Initial Flow 21  Hourly Standby \_\_\_\_\_ T-Out 19:29  
 (F) Second Final Flow 25  Mileage 212.35 Comments \_\_\_\_\_  
 (G) Final Shut-In 209  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1710  Straddle \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 30  Day Standby \_\_\_\_\_ Total 1362.35  
 Final Flow 30  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 30 Sub Total 1362.35

Approved By \_\_\_\_\_ Our Representative Chuck [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. 55068

Well Name & No. David Worcester #1-24 Test No. 5 Date 5-02-14  
 Company Barel Oil Company Elevation 2158 KB 2150 GL  
 Address 113 W. main P.O. Box 428 Logan  
 Co. Rep / Geo. Richard Bell Rig WW #12  
 Location: Sec. 24 Twp. 7S Rge. 22W Co. Graham State Ks

Interval Tested 3559 3580 Zone Tested LKCB  
 Anchor Length 21 Drill Pipe Run 3425 Mud Wt. 9.0  
 Top Packer Depth 3554 Drill Collars Run 119 Vis 48  
 Bottom Packer Depth 3559 Wt. Pipe Run 0 WL 2.6  
 Total Depth 3580 Chlorides 2400 ppm System LCM 1#

Blow Description IF: Weak blow, surface over 30mins

FSI: No blow back

FF: Weak blow, surface over 45mins.

FSI: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>10 go</u>	<u>10</u>	<u>40</u>		
<u>60</u>	<u>OCWM</u>		<u>20</u>	<u>30</u>	<u>50</u>
<u>0</u>	<u>50 ft gas in pipe</u>				

Rec Total 70 BHT 102 Gravity 28 API RW @ ° F Chlorides ppm

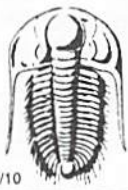
(A) Initial Hydrostatic	<u>1744</u>	<input checked="" type="checkbox"/> Test	<u>1150</u>	T-On Location	<u>2:20</u>
(B) First Initial Flow	<u>14</u>	<input type="checkbox"/> Jars		T-Started	<u>3:00</u>
(C) First Final Flow	<u>35</u>	<input type="checkbox"/> Safety Joint		T-Open	<u>4:58</u>
(D) Initial Shut-In	<u>1139</u>	<input type="checkbox"/> Circ Sub		T-Pulled	<u>7:45</u>
(E) Second Initial Flow	<u>37</u>	<input type="checkbox"/> Hourly Standby		T-Out	<u>10:17</u>
(F) Second Final Flow	<u>53</u>	<input checked="" type="checkbox"/> Mileage	<u>212.35</u>	Comments	
(G) Final Shut-In	<u>1163</u>	<input type="checkbox"/> Sampler			
(H) Final Hydrostatic	<u>1745</u>	<input type="checkbox"/> Straddle			

Initial Open	<u>30</u>	<input type="checkbox"/> Shale Packer		<input type="checkbox"/> Ruined Shale Packer	
Initial Shut-In	<u>30</u>	<input type="checkbox"/> Shale Packer		<input type="checkbox"/> Ruined Packer	
Final Flow	<u>45</u>	<input type="checkbox"/> Extra Packer		<input type="checkbox"/> Extra Copies	
Final Shut-In	<u>45</u>	<input type="checkbox"/> Extra Recorder		Sub Total	<u>0</u>
		<input type="checkbox"/> Day Standby		Total	<u>1362.35</u>
		<input type="checkbox"/> Accessibility		MP/DST Disc't	
		Sub Total	<u>1362.35</u>		

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

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **55069**

Well Name & No. David Worcester #1-24 Test No. 6 Date 5-03-14  
 Company Baird oil company Elevation 2158 KB 2150 GL  
 Address 113 W. Main P.O. Box 428 Logan  
 Co. Rep / Geo. Richard Bell Rig nm#12  
 Location: Sec. 24 Twp. 7S Rge. 22W Co. Graham State Ks

Interval Tested 3654 3696 Zone Tested Arbuckle  
 Anchor Length 42 Drill Pipe Run 3545 Mud Wt. 9.0  
 Top Packer Depth 3649 Drill Collars Run 119 Vis 48  
 Bottom Packer Depth 3654 Wt. Pipe Run -0- WL 7.6  
 Total Depth 3696 Chlorides 2400 ppm System LCM 1#

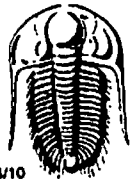
Blow Description IF: Weak blow, surface, died in 2 mins.  
 ISS: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>OCM</u>		<u>20%</u>		<u>80%</u>

Rec Total 20 BHT 102 Gravity API RW @ ° F Chlorides ppm  
 (A) Initial Hydrostatic 1817  Test 1150 T-On Location 4:07  
 (B) First Initial Flow 16  Jars T-Started 4:35  
 (C) First Final Flow 21  Safety Joint T-Open 6:22  
 (D) Initial Shut-In 154  Circ Sub T-Pulled 7:30  
 (E) Second Initial Flow  Hourly Standby T-Out 9:09  
 (F) Second Final Flow  Mileage 212.35 Comments \_\_\_\_\_  
 (G) Final Shut-In 1857  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic  Straddle \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Initial Open 30  Shale Packer \_\_\_\_\_  
 Initial Shut-In 30  Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Final Flow \_\_\_\_\_  Day Standby \_\_\_\_\_  
 Final Shut-In \_\_\_\_\_  Accessibility \_\_\_\_\_  
 Sub Total 1362.35 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Chuck King

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 55070

Well Name & No. David Worcester #1-24 Test No. 2 Date 5-03-14  
 Company Baird Oil Company Elevation 2158 KB 2150 GL  
 Address 113 W. Main P.O. Box 428 Logan  
 Co. Rep / Geo. Richard Bell Rig WW#12  
 Location: Sec. 24 Twp. 7S Rge. 22W Co. Graham State KS

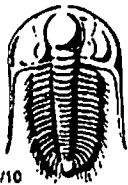
Interval Tested 3694 3711 Zone Tested Ar buette  
 Anchor Length 17 Drill Pipe Run \_\_\_\_\_ Mud Wt. 20  
 Top Packer Depth 3689 Drill Collars Run #19 Vis 48  
 Bottom Packer Depth 3694 Wt. Pipe Run 10 WL 7.6  
 Total Depth 3711 Chlorides 2400 ppm System LCM 1#  
 Blow Description Packer Packer-falar

Rec	Feet of	%gas	%oil	%water	%mud
<u>500</u>	<u>mud</u>				<u>100%</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Rec Total 500 BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1833  Test 950 T-On Location 15:40  
 (B) First Initial Flow 668  Jars \_\_\_\_\_ T-Started 15:50  
 (C) First Final Flow 1237  Safety Joint \_\_\_\_\_ T-Open 17:37  
 (D) Initial Shut-In \_\_\_\_\_  Circ Sub \_\_\_\_\_ T-Pulled 17:40  
 (E) Second Initial Flow \_\_\_\_\_  Hourly Standby \_\_\_\_\_ T-Out 20:10  
 (F) Second Final Flow \_\_\_\_\_  Mileage 212.35 Comments \_\_\_\_\_  
 (G) Final Shut-In \_\_\_\_\_  Sampler \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 (H) Final Hydrostatic 1813  Straddle \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 \_\_\_\_\_  Shale Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 \_\_\_\_\_  Extra Packer \_\_\_\_\_ Sub Total 0  
 \_\_\_\_\_  Extra Recorder \_\_\_\_\_ Total 1162.35  
 \_\_\_\_\_  Day Standby \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 \_\_\_\_\_  Accessibility \_\_\_\_\_  
 Sub Total 1162.35

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. 55071

Well Name & No. David Worcester # 1-24 Test No. 8 Date 5-3-2011  
 Company Baird oil company Elevation 2158 KB 2150 GL  
 Address 113 W. Main P.O. Box 428 Logan Ks  
 Co. Rep / Geo. Richard Bell Rig WW#12  
 Location: Sec. 24 Twp. 7S Rge. 22W Co. Graham State Ks

Interval Tested 3653 3711 Zone Tested Arbuckle  
 Anchor Length 58 Drill Pipe Run 3519 Mud Wt. 9.0  
 Top Packer Depth 3648 Drill Collars Run 119 Vis 48  
 Bottom Packer Depth 3653 Wt. Pipe Run -0- WL 7.6  
 Total Depth 3711 Chlorides 2400 ppm System LCM 1#

Blow Description IFI Weak surface blow, over 30 mins.

ISI: No blow back.

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>SDCM</u>	<u>20</u>			<u>80</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 20 BHT 103 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1785  Test 1150 T-On Location 15:40  
 (B) First Initial Flow 22  Jars \_\_\_\_\_ T-Started 20:30  
 (C) First Final Flow 31  Safety Joint \_\_\_\_\_ T-Open 22:07  
 (D) Initial Shut-In 634  Circ Sub \_\_\_\_\_ T-Pulled 23:40  
 (E) Second Initial Flow \_\_\_\_\_  Hourly Standby \_\_\_\_\_ T-Out 1:10  
 (F) Second Final Flow \_\_\_\_\_  Mileage \_\_\_\_\_  
 (G) Final Shut-In \_\_\_\_\_  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1750  Straddle \_\_\_\_\_  
 Initial Open 30  Shale Packer \_\_\_\_\_  
 Initial Shut-In 30  Extra Packer \_\_\_\_\_  
 Final Flow \_\_\_\_\_  Extra Recorder \_\_\_\_\_  
 Final Shut-In \_\_\_\_\_  Day Standby \_\_\_\_\_  
 Sub Total 1150  Accessibility \_\_\_\_\_  
 Sub Total 1150

Comments \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Sub Total 0  
 Total 1150  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Chuck [Signature]  
 TriLOBite Testing Inc. shall not be liable for damaged or 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.



A.P.T.# 15-065-24036-00-00

**GEOLOGICAL REPORT**  
DRILLING TIME AND SAMPLE LOG

COMPANY Baird Oil Company, LLC.  
 LEASE David Worcester #1-24  
 FIELD Wildcat  
 LOCATION 1880' FNL + 1360' FEL  
 SEC 24 TWSP 7s RGE 22w  
 COUNTY Graham STATE Kansas

ELEVATION  
 KB 2169'  
 DF 2167'  
 GL 2161'  
 Depths Measured From  
 Log KB Drilling KB

CONTRACTOR WW Drilling Rig #12  
 SPUD 4-25-14 COMP 5-4-14  
 SAMPLES SAVED FROM 3100' TO R.T.D.

CASING  
 Surface 8 5/8" @ 219'  
 Production 5 1/2" @ 3705'

ELECTRIC LOGS  
Nabors

FORMATION TOPS AND STRUCTURAL POSITION

FORMATION	SAMPLE	E. LOG	DATUM	A	B	C	D
				-0-	●		
Anhydrite	1770	1766	+ 392	+ 404	+ 381		
Base Anhydrite	1802	1797	+ 362	+ 371	+ 350		
Topeka	3149	3144	- 985		- 983		
Heebner	3359	3354	- 1195	- 1202	- 1193		
Toronto	3380	3375	- 1216	- 1227	- 1214		
Lansing	3395	3390	- 1231	- 1242	- 1230		
Base Kansas City	3584	3578	- 1419	- 1436	- 1420		
Arbuckle	3686	3681	- 1522	- 1551	- 1506		
Total Depth	3711	3694	- 1535	- 1582	- 1574		

REFERENCE WELLS

- A Murfin + Sitrin, Wallace #1, SE SE NE Sec. 24-7s-22w
- B Baird Oil Co., LLC. Esther Worcester #2-13 1270' FSL + 695' FEL
- C Sec. 13-7s-22w
- D Port Collar @ 1788'



REMARKS

This well ran 1 foot lower to 11 feet higher on the Lansing top than the reference wells. Encouraging D.S.T. data warranted the cementing of production casing, to further test the well. The following zones should be tested; 3439'-3442', 3455'-3457', 3461'-3465' and 3564'-3567'.

Richard B. Bell  
5-5-14

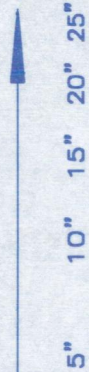
7502

LEGEND

-   
Anhydrite
-   
Salt
-   
Sandstone
-   
Shale
-   
Carb sh
-   
Limestone
-   
Ool. Lime
-   
Chert
-   
Dolomite

DRILLING TIME IN MINUTES  
PER FOOT

Rate of Penetration Decreases



DEPTH

1760

80

LITHOLOGY

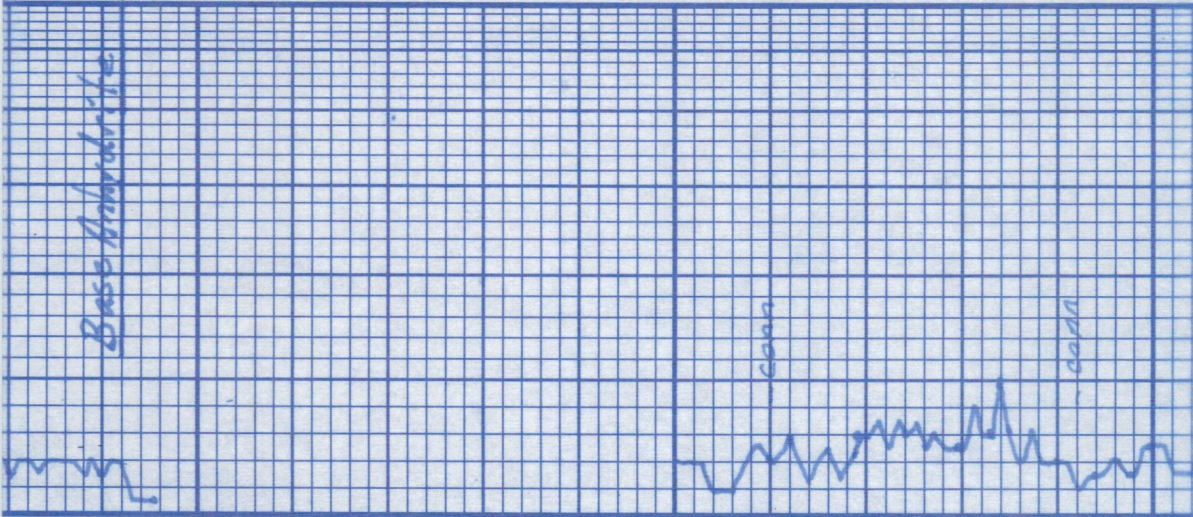
SAMPLE DESCRIPTIONS

OIL SHOWS

REMARKS

LOG 7710





1800

3000

20

40

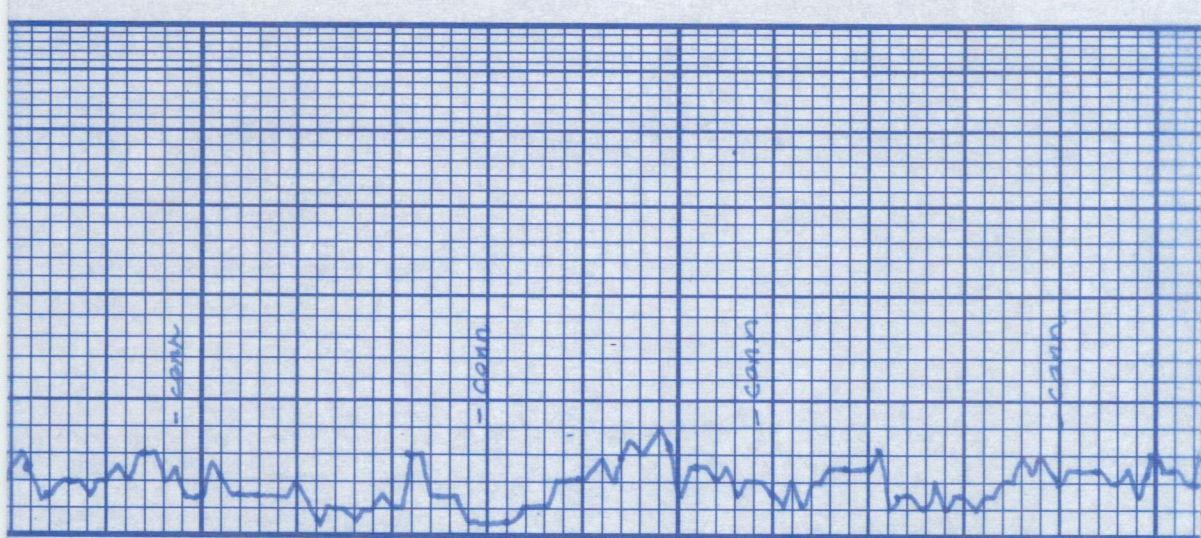
Samples are lagged  
good Samples

Drilling time must  
be adjusted up 5'  
to Match E. / log tops

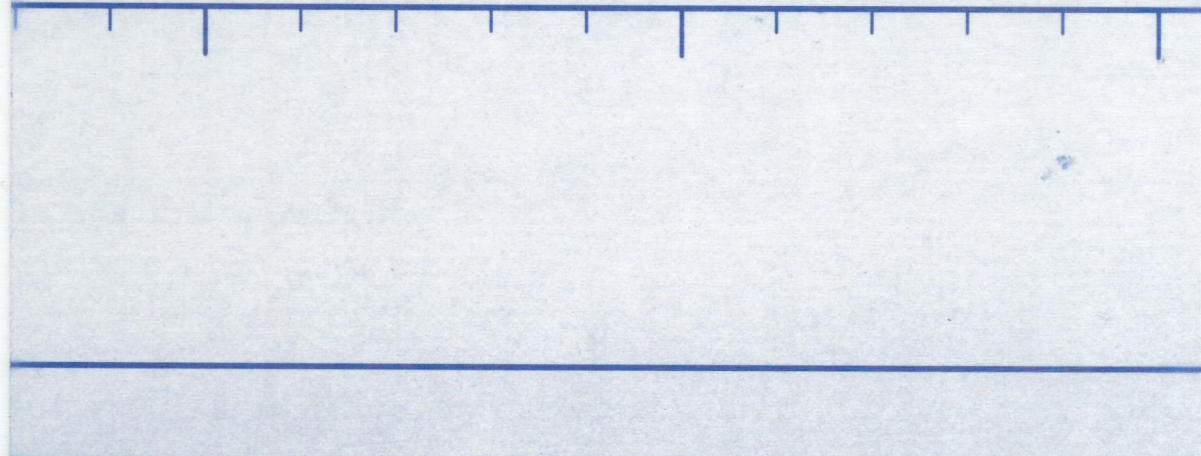




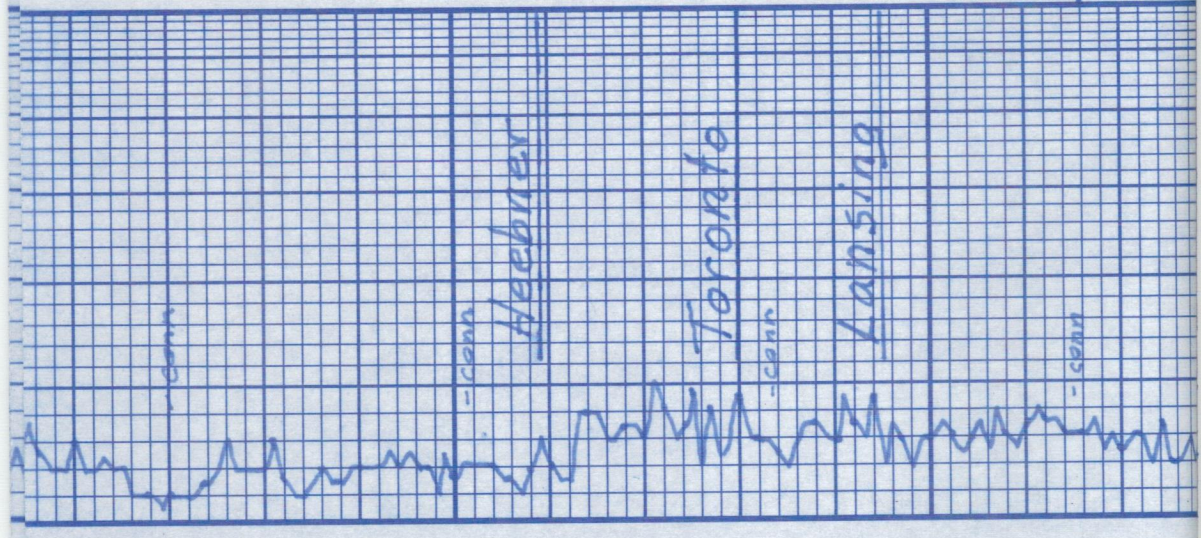




80		LS: tn-gry fs/f das N.S.O.
3200		SHstone: tn-gry
20		LS: wh-tn v. chy -fx tr friable N.S.O. Δ tr wh-st. gry
40		LS: gry fs/f dns
60		LS: ta-gry fs/f dne N.S.O. Tr Δ wh-gry
80		sh: blk carb LS: gry fs/f dns SHstone: gry
300		SHstone: brn + tn
		LS: wh-tn chy -fx ln No Vis φ Δ wh-tn N.S.O.
		sh: brn
		LS: tn-gry fs/f das
		sh: brn
		LS: tn-gry fs/f das N.S.O.





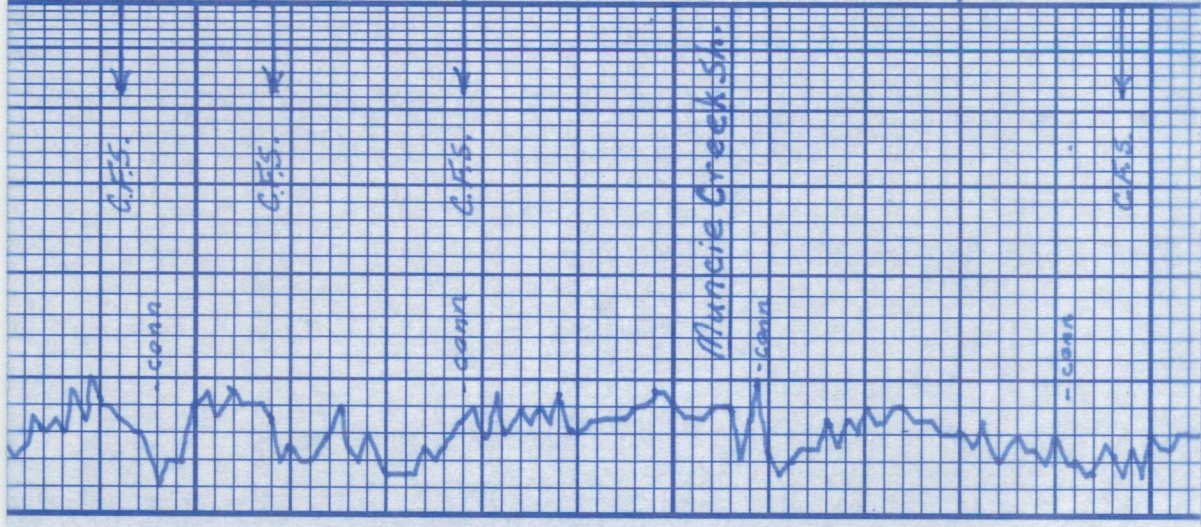


LS: wh-to fxln-fs/f Tr ppd friable N.S.O. Δ Tn. ht. gry	20
a.a. sh.ber	
LS: wh-to-gry cky-fs/f fr pe in part of N.S.O. Δ wh. tr	40
LS: wh. tr- gry cky-fs/f dns	60
sh: blk Carb. LS: tr- gry fs/f dns	
sltstone: gry	80
LS: tr fxln dns Tr Δ wh	
sh.ber	
LS: wh-th cky-fxln tr sl: ool dns N.S.O Tr Δ wh-tr fs/f	3400.A
LS: wh- crm fxln dns	
LS: gry fs/f dns	20
LS: wh-to slt. cky-fxln	

Incline @ 3442' 3/4  
Trilobite Testing

DST # 1 3416' 3442'  
45-45-45-45  
IF: B.O.B. in 25 min.  
ISI: No blow  
FF: B.O.B. in 31 min  
FSI: No blow  
Recovery: 333' Total  
3 Oil  
85' MW 15% M, 85% W  
126' MW 35% M, 65% W  
60' MW 30% W, 70% M  
59' Mud  
HYD: 1770-1664#  
FP: 17-112 / 116-164#  
BHP: 709-700#  
DIT: 107°F





40'	D	G.F.S.	sl: fslf ppφ tr vgyφ fr. o.s.tn fr spta o.s.tn ppφφ. strong odor & wh-tn. Sh. brn. Siltty
40'	E	G.F.S.	Dol: tn fxln inxln φ - vgyφ above drk o.s.tn rainbow s.p. pp f.o. strong odor & grey mtd
60'	F	G.F.S.	ls: tn fxln dns ls: wh- CRM fxln sl: ool ppφ tr vgy φ Lt. o.s.tn tr f.o. ls: wh-tn cky-fxln ool impart φ - vgyφ Lt. o.s.tn pp floating f.o.
80'	G	G.F.S.	ls: wh- CRM sl: cky-fxln pr-pp φ n.s.o.
3500'	H	G.F.S.	ls: wh-tn fxln dns a.a. sh: blk carb. ls: tn grey mtd fslf dns
40'	I	G.F.S.	ls: wh-tn tr. sub ool dns n.s.o. tr Δ-tn sh: brn
44'	J	G.F.S.	ls: wh-tn fxln tr. pr. pp φ tr isd. vugs R.T. blk tary sps ls: wh-tn fslf ppφ tr vgyφ

**DST #2 3439-3458'**  
 45-45-45-45  
 IF: wk blow incr. to 3 1/2"  
 FF: wk blow incr. to 6"  
 Recovery: 250' Total  
 20' Oil  
 48' OMCW 1020, 252M, 652W  
 123' OMCW 520, 252M  
 59' MW 102M, 90% W, 80% W  
 HYD: 1735-1664#  
 FP: 14-84/86-124#  
 BHP: 729-721#  
 BH Temp: 108°F.

**DST #3 3456'-3478'**  
 15-45-30-60  
 IF: B.O.B. in 2 min  
 ISI: 6" blow  
 FF: B.O.B. in 3 min  
 FSI: B.O.B. in 15 min.  
 Recovery: 633' Total  
 73' 60 52 G, 95% O  
 189' 60 207 G, 80% O  
 189' 60 502 G, 50% O  
 63' OCM 2020, 802M  
 119' OMCW 1020, 102W, 802M  
 HYD: 1724-1613#  
 FP: 42-133/148-261#  
 BHP: 794-782#  
 BH Temp: 109°F.

**DST #4 3530'-3560'**  
 30-30-30-30  
 IF: wk blow died in 28 min  
 FF: No blow  
 Recovery: 20' OMCW



Hyd: 1713 - 1710 #  
 FP: 12-18 / 21-24 #  
 BHP: 572 - 209 #  
 DST #5 3559' - 3580'  
 30-30-45-45  
 IF: wk blow  
 FF: wk blow  
 Recovery: 50' G.I.P.  
 30' G.O. 10% G, 90% O  
 60' AWCM 20% O, 30% W  
 50% M  
 Hyd: 1744 - 1744  
 FP: 13-34 / 37-52 #  
 BHP: 1139 - 1163 #  
 Gravity: 28° API  
 BH Temp: 103° F  
 DST #6 3654' - 3696'  
 30-30-0-0  
 IF: wk blow died in 25 min.  
 Recovery: 20' OCM  
 20% O, 80% M  
 Hyd: 1817 - 1857 #  
 FP: 16-21 #  
 BHP: 153 #  
 BH Temp: 103° F  
 DST #7 3694' - 3711'  
 Misrun Packer failed  
 DST #8 3653' - 3711'  
 30-30-0-0  
 IF: wk blow  
 Recovery: 20' OCM  
 20% O, 80% M  
 Hyd: 1785 - 1750 #  
 FP: 31-30 #  
 BHP: 633 #  
 BH Temp: 104° F  
 Board 3602.76  
 Strap 3602.36  
 Diff .40

S.O. P.F.O fr. odor  
 Sh: brn + gry  
 LS: wh-tn fxln oöl abund.  
 in part φ Lt. O sat. pp F.O.  
 Lt. rainbow fr odor  
 LS: tn-brn mtlid fslf dns  
 shly: brn + gry  
 a.a.  
 LS: tn-brn fslf dns N.S.O.  
 shly: brn + gry  
 LS: tn-brn fxln dns  
 Sh: brn slty  
 LS: tn-gry fxln-fslf sd  
 embedded dns N.S.O.  
 LS: wh-tn chy-fxln dns N.S.O.  
 LS: a.a.  
 Sh: brn slty  
 Sh: brn slty  
 Dol: tn fxln pr. inx/mid Tr.  
 isol vugs. Lt.-fr satd O stn  
 Sat pp F.O. Lt. odor  
 Dol: tn fxln-mxln inxln φ  
 vgy φ O sat Tr bleeding Fo  
 Dol: wh-tn fxln-mxln vgy φ  
 Lt-drt O sat P.F.O.

