

CONFIDENTIAL

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

ORIGINAL

7/1/13
Form ACO-1
June 2009
Form Must Be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 4767
Name: Ritchie Exploration, Inc.
Address 1: P.O. Box 783188
Address 2:
City: Wichita State: KS Zip: 67278 + 3188
Contact Person: John Niemberger
Phone: (316) 691-9500
CONTRACTOR: License # 30606
Name: Murfin Drilling Co., Inc.
Wellsite Geologist: Mike Engelbrecht
Purchaser: NCRA

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
 Conv. to GSW
 Plug Back: Plug Back Total Depth
 Commingled Permit #:
 Dual Completion Permit #:
 SWD Permit #:
 ENHR Permit #:
 GSW Permit #:

4/1/11 4/12/11 4/12/11
Spud Date or Date Reached TD Completion Date or Recompletion Date

API No. 15 - 063-21900-00-00
Spot Description: 32' N & 155' W
SW SW SW Sec. 29 Twp. 13 S. R. 31 East West
362 Feet from North / South Line of Section
175 Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:
 NE NW SE SW
County: Gove
Lease Name: Hess-Joseph Well #: 1
Field Name:

Producing Formation: LKC & Marmaton
Elevation: Ground: 2878 Kelly Bushing: 2888
Total Depth: 4630 Plug Back Total Depth: 4605
Amount of Surface Pipe Set and Cemented at: 222 Feet
Multiple Stage Cementing Collar Used? Yes No
If yes, show depth set: 2351 Feet
If Alternate II completion, cement circulated from: surface
feet depth to: 2351 w/ 190 sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)
Chloride content: 11300 ppm Fluid volume: 900 bbls
Dewatering method used: evaporation
Location of fluid disposal if hauled offsite:
Operator Name:
Lease Name: License #:
Quarter Sec. Twp. S. R. East West
County: Permit #:

CONFIDENTIAL
JUL 01 2013

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market, Room 2078, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information of side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

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.
Signature: [Signature]
Title: Production Manager Date: 7/1/11

KCC Office Use ONLY
RECEIVED
 Letter of Confidentiality Received Date: 7/1/11 - 7/1/13
 Confidential Release Date:
 Wireline Log Received
 Geologist Report Received
 UIC Distribution
ALT I II III Approved by: NJ Date: 7-2-11
KCC WICHITA

Operator Name: Ritchie Exploration, Inc. Lease Name: Hess-Joseph Well #: 1
 Sec. 29 Twp. 13 S. R. 31 East West County: Gove

INSTRUCTIONS: Show important tops and base 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. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Electric Log Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i> List All E. Logs Run: Dual Induction Log Compensated Density/Neutron Log	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input checked="" type="checkbox"/> Sample Name Top Datum <p style="text-align: center; font-weight: bold;">SEE ATTACHED</p>
---	--

CASING RECORD <input checked="" 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
Surface	12-1/4	8-5/8	23	222	common	175	3% cc, 2% gel
Production	7-7/8	5-1/2	15.5	4630	ASC	200	10% salt, 2% gel & 5#/bx gilsonite

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				

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
4	4404' - 4407' (5/2/11)	500 gallons 15% NE (5/4/11)	
4	4386' - 4389' (5/2/11)	500 gallons 15% NE (5/4/11)	
4	4070' - 4074' (5/2/11)	500 gallons 15% NE (5/5/11)	

TUBING RECORD: Size: <u>2-7/8"</u> Set At: <u>4576'</u> Packer At: _____ Liner Run: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		RECEIVED JUL 05 2011
Date of First, Resumed Production, SWD or ENHR. <u>waiting on tank battery & pipe line</u>		KCC WICHITA
Producing Method: <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain) _____		
Estimated Production Per 24 Hours	Oil Bbls. _____ Gas Mcf _____ Water Bbls. _____	Gas-Oil Ratio _____ Gravity _____

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Comm. <input type="checkbox"/> Other (Specify) _____ <i>(Submit ACO-5) (Submit ACO-4)</i>	PRODUCTION INTERVAL: CONFIDENTIAL JUL 01 2013
---	--	---



#1 Hess-Joseph

362' FSL & 175' FWL

32' N & 155' W of SW SW SW Section 29-13S-31W

Gove County, Kansas

API# 15-063-21900-0000

Elevation: 2878' GL: 2888' KB

<u>Sample Tops</u>			<u>Ref. Well</u>
Anhydrite	2360'	+528	+2
B/Anhydrite	2382'	+506	+3
Heebner	3869'	-981	+8
Lansing	3911'	-1023	+8
Muncie Shale	4064'	-1176	+2
LKC-H	4080'	-1192	+2
Stark Shale	4152'	-1264	+3
Hush.	4188'	-1300	+3
BKC	4223'	-1335	+5
Marmaton	4244'	-1356	+5
Altamont	4273'	-1385	+5
Pawnee	4346'	-1458	+6
Myrick Station	4383'	-1495	+6
Fort Scott	4401'	-1513	+6
Cherokee Shake	4431'	-1543	+5
Johnson	4472'	-1584	+6
Morrow Sand	4505'	-1617	+8
Mississippian	4513'	-1625	+15
RTD	4630'	-1742	

CONFIDENTIAL

JUL 01 2013

KCC

RECEIVED

JUL 05 2011

KCC WICHITA

P.O. Box 783188
Wichita, Kansas 67278-3188

(316) 691-9500
Fax (316) 691-9550
rei@ritchic-exp.com

8100 E. 22nd St. N., Bldg. 700
Wichita, Kansas 67226-2328

ALLIED CEMENTING CO., LLC. 043339

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT:
Oakley, Ks

DATE <u>4-18-11</u>	SEC. <u>29</u>	TWP. <u>13</u>	RANGE <u>31</u>	CALLED OUT	ON LOCATION	JOB START <u>3:00 pm</u>	JOB FINISH <u>3:30 pm</u>
LEASE <u>Hess-Joseph</u>	WELL # <u>1</u>	LOCATION <u>Oakley, Ks 11 S 3 E 5 1/2 S</u>			COUNTY <u>Goove</u>	STATE <u>Ks</u>	
OLD OR NEW (Circle one) <u>NEW</u>				<u>Ev N into</u>			

CONTRACTOR Express Well Service
 TYPE OF JOB port collar
 HOLE SIZE _____ T.D. _____
 CASING SIZE 5 1/2 DEPTH _____
 TUBING SIZE 2 7/8 DEPTH 2348'
 DRILL PIPE _____ DEPTH _____
 TOOL port collar DEPTH 2348'
 PRES. MAX _____ MINIMUM _____
 MEAS. LINE _____ SHOE JOINT _____
 CEMENT LEFT IN CSG. _____
 PERFS. _____
 DISPLACEMENT 12.5 bbl

OWNER Same
 CEMENT
 AMOUNT ORDERED 450 sks 60/40 6 7/8
1/4" flt-seal 500 # hulls on side
Used 290 sks cement 200 # hulls
 COMMON 174 sks @ 16.25 2827.50
 POZMIX 116 sks @ 8.50 986.00
 GEL 15 sks @ 21.25 318.75
 CHLORIDE @ _____
 ASC @ _____
flt-seal 725 # @ 2.70 195.75
cuttaseal hulls 495 @ 3.85 127.40
 HANDLING 487.50 @ 2.25 1095.75
 MILEAGE 118 sk mile 1072.40

EQUIPMENT
 PUMP TRUCK CEMENTER LaRene/Terry
 # 431 HELPER Darren
 BULK TRUCK
 # 396/306 DRIVER Earl
 BULK TRUCK
 # _____ DRIVER _____

REMARKS:
pressure to 1200# - held, open port collar, mix cement to surface with 290 sks cement 200 # hulls, close port collar, pressure to 1200# - held. Run 4 joints in reverse clean

TOTAL ~~127.45~~
6621.35

CHARGE TO: Ritchie Exploration
 STREET _____
 CITY _____ STATE _____ ZIP _____

SERVICE
 DEPTH OF JOB 2348'
 PUMP TRUCK CHARGE 2125.00
 EXTRA FOOTAGE @ _____
 MILEAGE 20x2 @ 7.00 280.00
 MANIFOLD @ _____
light vehicle mileage @ 4.00 160.00
20x2 @ _____

TOTAL 2565.00

PLUG & FLOAT EQUIPMENT
 _____ @ _____
 _____ @ _____
 _____ @ _____
 _____ @ _____
 _____ @ _____
 TOTAL _____

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

PRINTED NAME BENNIE DILLS
 SIGNATURE Bennie Dills

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

JUL 01 2013
KCC

RECEIVED
 JUL 05 2011
 KCC WICHITA

ALLIED CEMENTING CO., LLC. 043289

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT: Dakney

DATE <u>4-11-11</u>	SEC <u>29</u>	TWP. <u>13S</u>	RANGE <u>3/W</u>	CALLED OUT	ON LOCATION	JOB START <u>1:00 Am</u>	JOB FINISH <u>1:30 Am</u>
LEASE <u>Hess 305epl</u>	WELL # <u>1</u>	LOCATION <u>Dakney 11S 3E 5S</u>		COUNTY <u>Gove</u>	STATE <u>KS</u>		
OLD OR NEW (Circle one)			<u>E. N into</u>				

CONTRACTOR <u>Murfin Drilling Rig 14</u>	OWNER <u>same</u>
TYPE OF JOB <u>Production</u>	
HOLE SIZE <u>7 7/8</u>	T.D. <u>4630</u>
CASING SIZE <u>5 1/2</u>	DEPTH <u>4630</u>
TUBING SIZE	DEPTH
DRILL PIPE	DEPTH
TOOL <u>Port collar</u>	DEPTH <u>2348'</u>
PRES. MAX	MINIMUM
MEAS. LINE	SHOE JOINT <u>21'</u>
CEMENT LEFT IN CSG. <u>21'</u>	
PERFS.	
DISPLACEMENT <u>109,69</u>	

EQUIPMENT	
PUMP TRUCK # <u>423-281</u>	CEMENTER <u>Andrew</u>
	HELPER <u>Jerry</u>
BULK TRUCK # <u>394</u>	DRIVER <u>wes</u>
BULK TRUCK #	DRIVER

CEMENT	
AMOUNT ORDERED <u>250 stks Asc 1005914</u>	
<u>206 gal 5" Gilsonite 3405120 CD-31</u>	
<u>500 gal WFR-2</u>	
COMMON	@
POZMIX	@
GEL <u>5 stks</u>	@ <u>21.25 106.25</u>
CHLORIDE	@
ASC <u>250 stks</u>	@ <u>19.00 4750.00</u>
<u>salt 28 stks</u>	@ <u>23.95 670.60</u>
<u>Gilsonite 1250 #</u>	@ <u>0.89 1112.50</u>
<u>CD-31 126 #</u>	@ <u>9.35 1176.10</u>
<u>WFR-2 500 gal</u>	@ <u>1.27 635.00</u>
HANDLING <u>311 stks</u>	@ <u>2.25 699.75</u>
MILEAGE <u>117 stks/mile</u>	<u>684.20</u>
TOTAL <u>10308.90</u>	

REMARKS:

Pump 500 gal WFR-2 plug MH
RH mix cement Release plug
Displace 1000 ft LIFT land
plug @ 1400 float held.

Thank you

CHARGE TO: Ritchie Exploration
STREET _____
CITY _____ STATE _____ ZIP _____

SERVICE

DEPTH OF JOB <u>4630</u>	
PUMP TRUCK CHARGE	<u>2485.00</u>
EXTRA FOOTAGE	@
MILEAGE <u>20 miles x 2</u>	@ <u>7.00 280.00</u>
MANIFOLD head rental	@ <u>200.00</u>
Light vehicle	@ <u>400 160.00</u>
TOTAL <u>3045.00</u>	

5 1/2 PLUG & FLOAT EQUIPMENT	
<u>1 Guide shoe</u>	<u>178.00</u>
<u>1 API Insert</u>	@ <u>155.00</u>
<u>4 Baskets</u>	@ <u>228.00 912.00</u>
<u>2 Turbo Lifters</u>	@ <u>231.00 462.00</u>
<u>1 Port collar</u>	@ <u>176.00</u>
<u>1 Rubber plug</u>	@ <u>60.00</u>
TOTAL <u>3534.00</u>	

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

PRINTED NAME _____
SIGNATURE Thomas A. [Signature]

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

CONFIDENTIAL

JUL 01 2013

KCC

[Signature]

RECEIVED
JUL 05 2011
KCC WICHITA

ALLIED CEMENTING CO., LLC. 059902

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT:
Oakley, KS

DATE <u>4/11/11</u>	SEC. <u>29</u>	TWP. <u>13</u>	RANGE <u>31</u>	CALLED OUT	ON LOCATION	JOB START <u>1:00pm</u>	JOB FINISH <u>1:30pm</u>
HESS-Joseph LEASE	WELL# <u>1</u>	LOCATION <u>Oakley 11S, 3E, 5S, 2a</u>			COUNTY <u>Gove</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one) <u>NEW</u>				<u>into</u>			

CONTRACTOR Murfin 14 OWNER Same

TYPE OF JOB Surface CEMENT AMOUNT ORDERED 170 Com 390CC

HOLE SIZE 12 1/4 T.D. 225' DEPTH 225'

CASING SIZE 8 5/8 TUBING SIZE DEPTH

DRILL PIPE DEPTH PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT CEMENT LEFT IN CSG. 15'

PERFS. DISPLACEMENT 13.37 EQUIPMENT

PUMP TRUCK CEMENTER Alan HELPER Wagel

BULK TRUCK # 4024 DRIVER Wes - Terry

BULK TRUCK # DRIVER HANDLING 179 gals @ 2.25 402.75

MILEAGE 11.5K/mile @ 33.4 374.10

TOTAL 3952.75

REMARKS:

Alan, Circulate, Mix Cement

Displace Cement.

Cement Bid Circulate

Truck Ken Alan, Wagel, Wes, Terry like vehicle 19x2

CHARGE TO: Ritchie Exploration

STREET CITY STATE ZIP

SERVICE

DEPTH OF JOB PUMP TRUCK CHARGE 1125.00

EXTRA FOOTAGE @ MILEAGE 19 x 2 @ 2.00 266.00

MANIFOLD @ 4.00 152.00

TOTAL 1543.00

PLUG & FLOAT EQUIPMENT

CONFIDENTIAL

JUL 01 2013

KCC

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

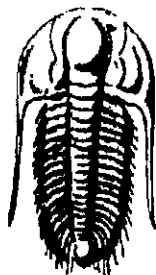
PRINTED NAME Carey Lusk

SIGNATURE Carey Lusk

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

R

RECEIVED
JUL 05 2011
KCC WICHITA



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

8100 E. 22nd St. N 700
Box 783188
Wichita, KS 67278

ATTN: Mike Engelbrecht

29 13s 31w Gove,KS

Hess Joseph #1

Start Date: 2011.04.04 @ 23:05:00

End Date: 2011.04.05 @ 06:55:45

Job Ticket #: 042108 DST #: 1

CONFIDENTIAL

JUL 01 2011

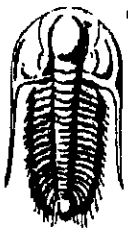
KCC

RECEIVED

JUL 05 2011

KCC WICHITA

Trilobite Testing, Inc
PO Box 1733 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.

Hess Joseph #1

8100 E 22nd St. N 700
Box 783188
Wichita, KS 67278
ATTN: Mike Engelbrecht

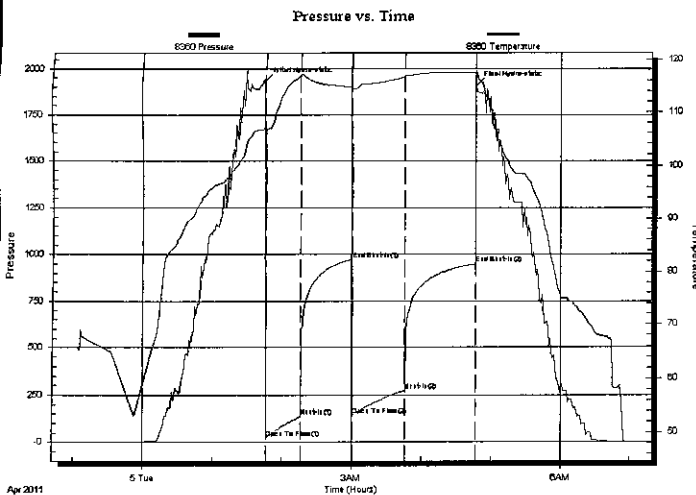
29 13s 31w Gove, KS
Job Ticket: 042108 DST#: 1
Test Start: 2011.04.04 @ 23:05:00

GENERAL INFORMATION:

Formation: **Lansing C**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 01:46:00
 Time Test Ended: 06:55:45
 Interval: **3933.00 ft (KB) To 3955.00 ft (KB) (TVD)**
 Total Depth: **3955.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: Fair
 Test Type: Conventional Bottom Hole
 Tester: Bradley Walter
 Unit No: 40
 Reference Elevations: 2933.00 ft (KB)
 2923.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8360 Outside
 Press@RunDepth: 268.74 psig @ 3934.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2011.04.04 End Date: 2011.04.05 Last Calib.: 2011.04.05
 Start Time: 23:05:05 End Time: 06:55:44 Time On Btm: 2011.04.05 @ 01:45:45
 Time Off Btm: 2011.04.05 @ 04:47:45

TEST COMMENT: IF: BOB @ 23 minutes.
 ISI: No return blow.
 FF: BOB @ 31 minutes.
 FS: Surface blow @ 45 minutes



PRESSURE SUMMARY

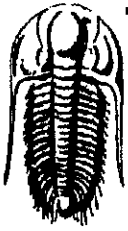
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1931.45	107.13	Initial Hydro-static
1	21.40	106.51	Open To Flow (1)
30	136.94	116.72	Shut-In(1)
75	972.40	114.73	End Shut-In(1)
76	139.80	114.26	Open To Flow (2)
120	268.74	116.62	Shut-In(2)
181	949.18	117.37	End Shut-In(2)
182	1909.87	117.45	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
440.00	mcw 15m 85w (oil specs)	2.16
100.00	ow cm 2o 38w 60m	0.52
5.00	free oil 100%o	0.05

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.
8100 E 22nd St. N 700
Box 783188
Wichita, KS 67278
ATTN: Mike Engelbrecht

Hess Joseph #1
29 13s 31w Gove, KS
Job Ticket: 042108 **DST#: 1**
Test Start: 2011.04.04 @ 23:05:00

Tool Information

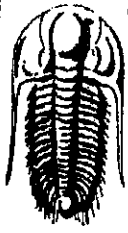
Drill Pipe:	Length: 3392.00 ft	Diameter: 3.20 inches	Volume: 33.74 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 535.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Full Loose: 92000.00 lb
			<u>Total Volume: 36.37 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 78000.00 lb
Depth to Top Packer:	3933.00 ft			Final 80000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	22.00 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
Change Over Sub	1.00			3906.00	
Shut In Tool	5.00			3911.00	
Hydraulic tool	5.00			3916.00	
Jars	5.00			3921.00	
Safety Joint	2.00			3923.00	
Packer	5.00			3928.00	28.00 Bottom Of Top Packer
Packer	5.00			3933.00	
Stubb	1.00			3934.00	
Recorder	0.00	8322	Inside	3934.00	
Recorder	0.00	8360	Outside	3934.00	
Perforations	18.00			3952.00	
Bullnose	3.00			3955.00	22.00 Bottom Packers & Anchor

Total Tool Length: 50.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.
8100 E 22nd St. N 700
Box 783188
Wichita, KS 67278
ATTN: Mike Engelbrecht

Hess Joseph #1
29 13s 31w Gove,KS
Job Ticket: 042108 DST#: 1
Test Start: 2011.04.04 @ 23:05:00

Mud and Cushion Information

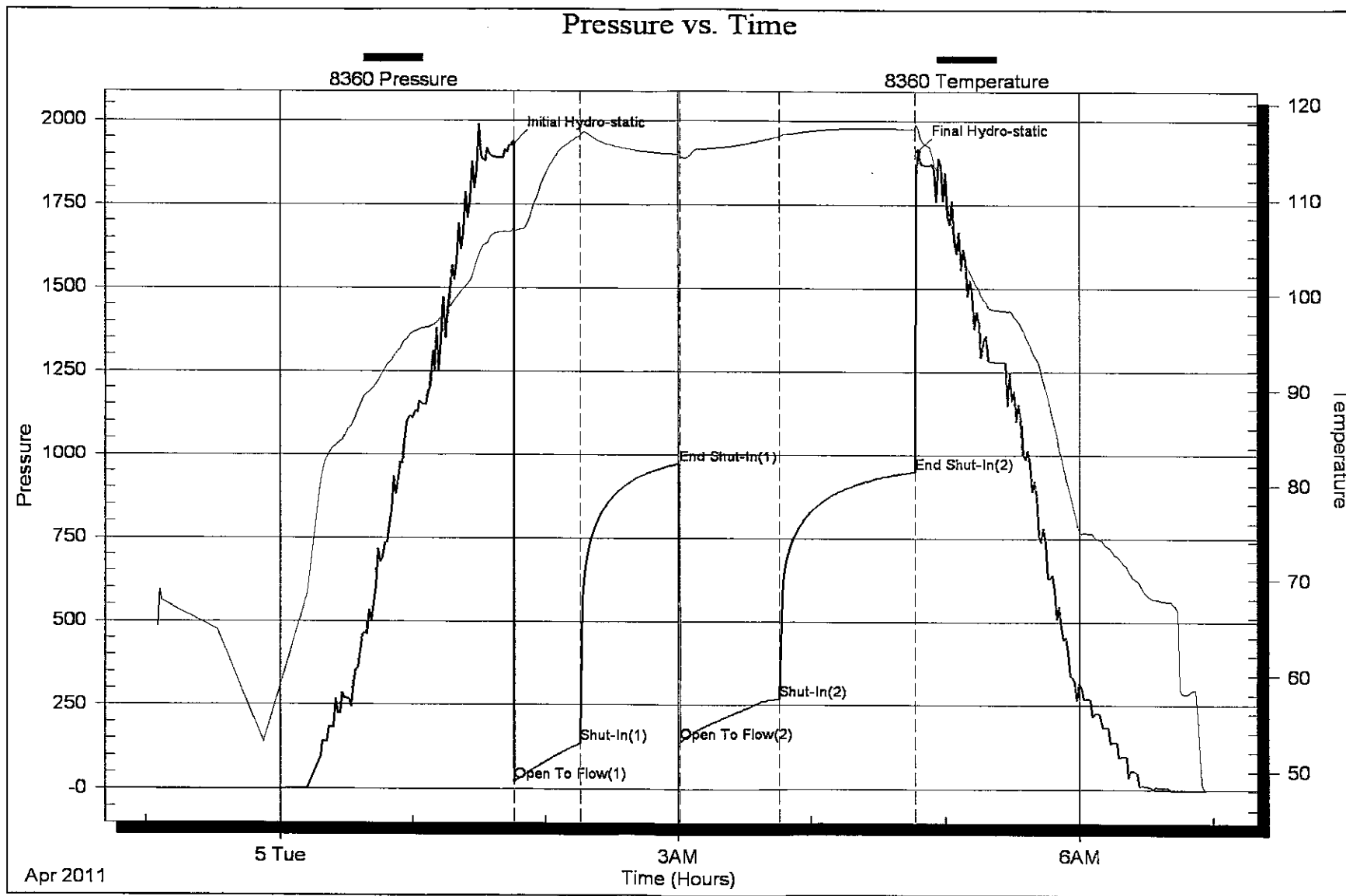
Mud Type: Gel Chem	Cushion Type:	Oil API:	0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	78000 ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.75 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1200.00 ppm			
Filter Cake: 1.00 inches			

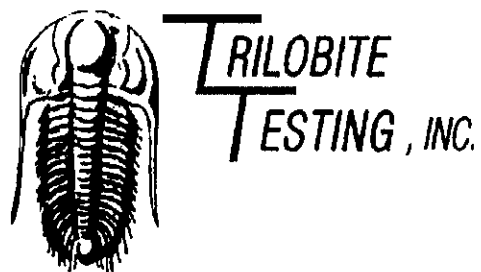
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
440.00	mcw 15m 85w (oil specs)	2.164
100.00	ow cm 2o 38w 60m	0.517
5.00	free oil 100%o	0.050

Total Length: 545.00 ft Total Volume: 2.731 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: rw: .10 @ 70 F





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

8100 E. 22nd St. N 700
Box 783188
Wichita, KS 67278

ATTN: Mike Engelbrecht

29 13s 31w Gove,KS

Hess Joseph #1

Start Date: 2011.04.05 @ 13:37:00

End Date: 2011.04.05 @ 20:57:45

Job Ticket #: 042109 DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Ritchie Exploration, Inc.

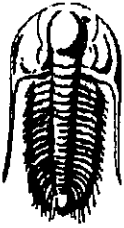
Hess Joseph #1

29 13s 31w Gove,KS

DST # 2

LKC " D "

2011.04.05



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.
8100 E. 22nd St. N 700
Box 783188
Wichita, KS 67278
ATTN: Mke Engelbrecht

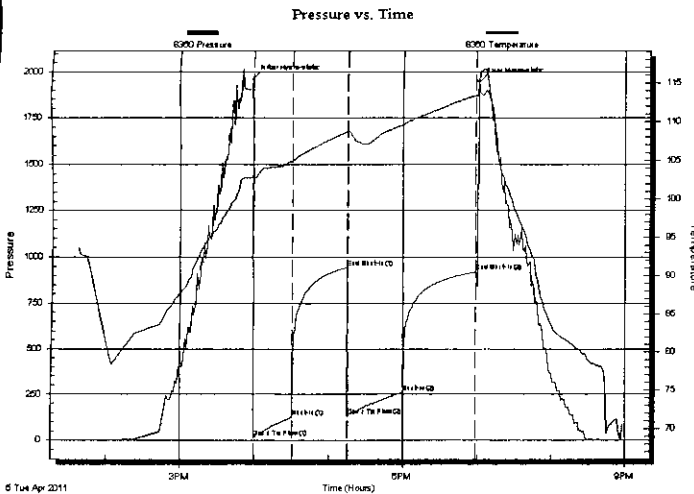
Hess Joseph #1
29 13s 31w Gove,KS
Job Ticket: 042109 DST#: 2
Test Start: 2011.04.05 @ 13:37:00

GENERAL INFORMATION:

Formation: LKC " D"
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:59:15
Time Test Ended: 20:57:45
Interval: 3952.00 ft (KB) To 3975.00 ft (KB) (TVD)
Total Depth: 3975.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole
Tester: Bradley Walter
Unit No: 40
Reference Elevations: 2933.00 ft (KB)
2923.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8360 Outside
Press@RunDepth: 259.44 psig @ 3953.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2011.04.05 End Date: 2011.04.05 Last Calib.: 2011.04.05
Start Time: 13:37:05 End Time: 20:57:44 Time On Btm: 2011.04.05 @ 15:59:00
Time Off Btm: 2011.04.05 @ 19:00:45

TEST COMMENT: IF: 8 inch blow.
ISI: No return blow.
FF: BOB @ 40 minutes
FSI: No return blow.



PRESSURE SUMMARY

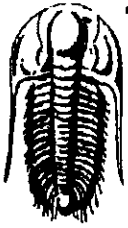
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1960.27	103.19	Initial Hydro-static
1	15.86	102.50	Open To Flow (1)
32	126.69	104.91	Shut-In(1)
76	942.94	108.69	End Shut-In(1)
77	131.57	108.29	Open To Flow (2)
121	259.44	109.56	Shut-In(2)
180	920.09	113.42	End Shut-In(2)
182	1946.99	115.25	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud 100m (heavy)	0.05
525.00	mcw 5m 95w	2.58
0.00	trace oil spots throughout	0.00

Gas Rates

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



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.
8100 E 22nd St. N 700
Box 783188
Wichita, KS 67278
ATTN: Mike Engelbrecht

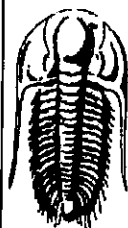
Hess Joseph #1
29 13s 31w Gove,KS
Job Ticket: 042109 DST#: 2
Test Start: 2011.04.05 @ 13:37:00

Tool Information

Drill Pipe:	Length: 3419.00 ft	Diameter: 3.20 inches	Volume: 34.01 bbl	Tool Weight: 2500.00 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: 535.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 89000.00 lb
			Total Volume: 36.64 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 78000.00 lb
Depth to Top Packer:	3952.00 ft			Final 79000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	23.00 ft			
Tool Length:	44.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3932.00	
Shut In Tool	5.00			3937.00	
Hydraulic tool	5.00			3942.00	
Packer	5.00			3947.00	21.00 Bottom Of Top Packer
Packer	5.00			3952.00	
Stubb	1.00			3953.00	
Recorder	0.00	8322	Inside	3953.00	
Recorder	0.00	8360	Outside	3953.00	
Perforations	19.00			3972.00	
Bullnose	3.00			3975.00	23.00 Bottom Packers & Anchor
Total Tool Length:	44.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.

Hess Joseph #1

8100 E. 22nd St. N 700

29 13s 31w Gove, KS

Box 783188

Job Ticket: 042109

DST#: 2

Wichita, KS 67278

ATTN: Mke Engelbrecht

Test Start: 2011.04.05 @ 13:37:00

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:

74000 ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.15 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	mud 100m (heavy)	0.049
525.00	mcw 5m 95w	2.582
0.00	trace oil spots throughout	0.000

Total Length: 535.00 ft

Total Volume: 2.631 bbl

Num Fluid Samples: 0

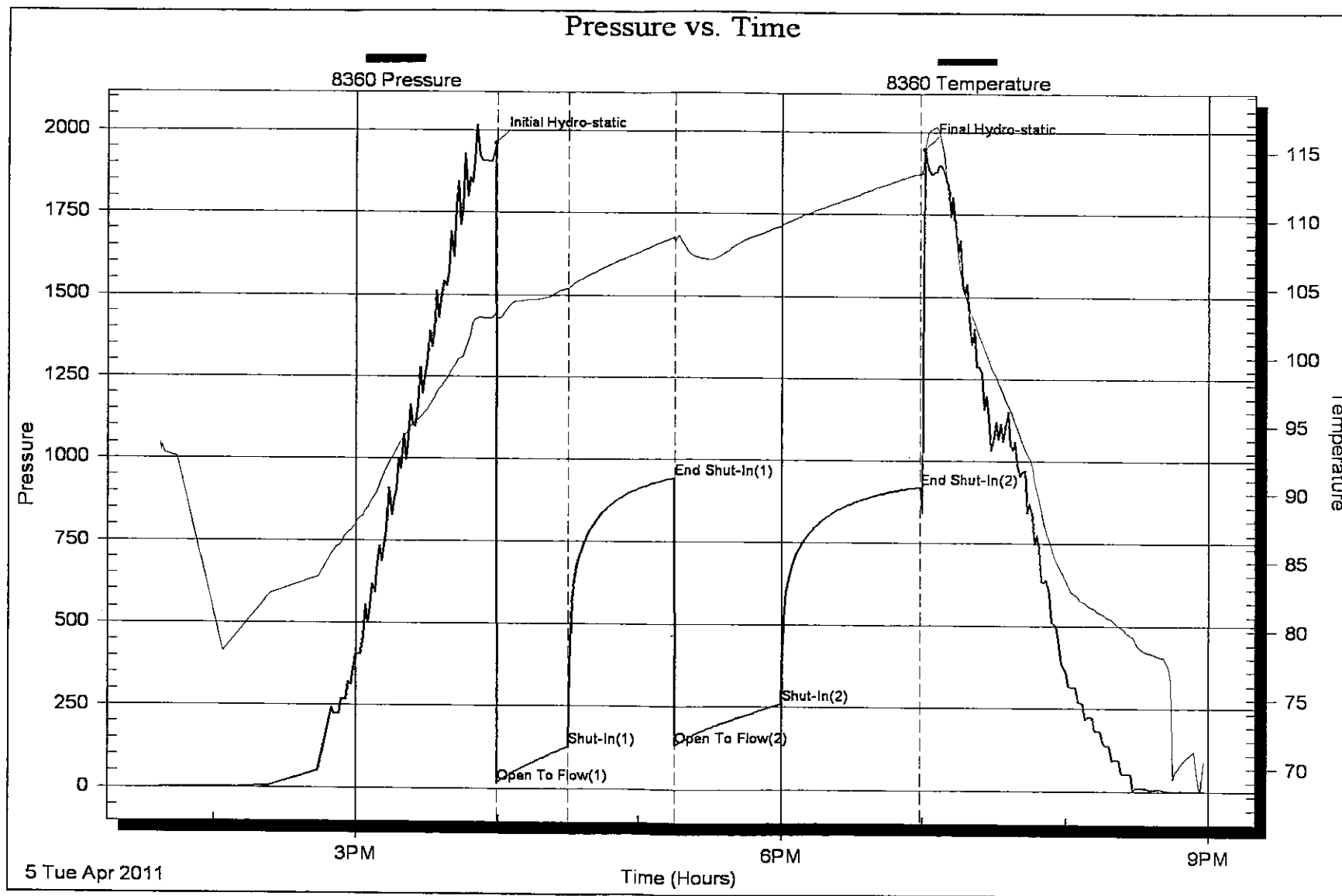
Num Gas Bombs: 0

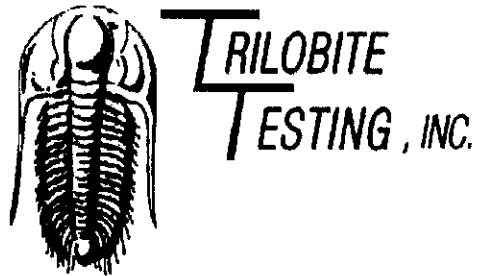
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw is .11 @ 65.5 = 74000 ppm





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

8100 E. 22nd St. N 700
Box 783188
Wichita, KS 67278

ATTN: Mike Engelbrecht

29 13s 31w Gove,KS

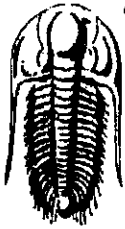
Hess Joseph #1

Start Date: 2011.04.06 @ 12:50:00

End Date: 2011.04.06 @ 19:50:15

Job Ticket #: 042110 DST #: 3

Trilobite Testing, Inc
PO Box 1733 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.

Hess Joseph #1

8100 E 22nd St. N 700
Box 783188
Wichita, KS 67278
ATTN: Mike Engelbrecht

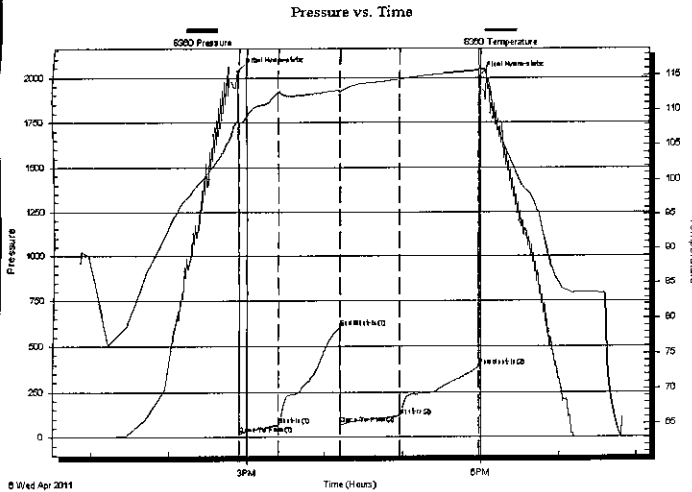
29 13s 31w Gove, KS
Job Ticket: 042110 DST#: 3
Test Start: 2011.04.06 @ 12:50:00

GENERAL INFORMATION:

Formation: LKC "H"
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 14:53:30
Time Test Ended: 19:50:15
Interval: 4060.00 ft (KB) To 4095.00 ft (KB) (TVD)
Total Depth: 4095.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Reference Elevations: 2933.00 ft (KB)
2923.00 ft (CF)
KB to GR/CF: 10.00 ft
Test Type: Conventional Bottom Hole
Tester: Bradley Walter
Unit No: 40

Serial #: 8360 Outside
Press@RunDepth: 117.24 psig @ 4061.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2011.04.06 End Date: 2011.04.06 Last Calib.: 2011.04.06
Start Time: 12:50:05 End Time: 19:50:14 Time On Btm: 2011.04.06 @ 14:53:15
Time Off Btm: 2011.04.06 @ 17:59:15

TEST COMMENT: IF: 9 inch blow.
IS: No return blow.
FF: 9 inch blow.
FSI No return blow.



PRESSURE SUMMARY

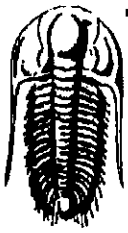
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2032.47	108.45	Initial Hydro-static
1	16.18	107.41	Open To Flow (1)
32	67.68	112.48	Shut-In(1)
79	599.72	112.78	End Shut-In(1)
79	73.93	112.56	Open To Flow (2)
125	117.24	114.40	Shut-In(2)
185	384.95	115.63	End Shut-In(2)
186	2006.82	116.24	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
95.00	gw ocm 10g 20w 20o 50m	0.47
95.00	gw mco 10g 5w 35m 50o	0.47
50.00	gmco 10g 40m 50o	0.25
10.00	oil 100o	0.05
0.00	470 GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

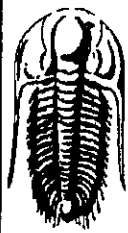
Ritchie Exploration, Inc.
8100 E. 22nd St. N 700
Box 783188
Wichita, KS 67278
ATTN: Mike Engelbrecht

Hess Joseph #1
29 13s 31w Gove,KS
Job Ticket: 042110 DST#: 3
Test Start: 2011.04.06 @ 12:50:00

Tool Information

Drill Pipe:	Length: 3523.00 ft	Diameter: 3.20 inches	Volume: 35.04 bbl	Tool Weight: 2500.00 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: 535.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 91000.00 lb
			<u>Total Volume: 37.67 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 79000.00 lb
Depth to Top Packer:	4060.00 ft			Final 80000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	35.00 ft			
Tool Length:	56.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4040.00	
Shut In Tool	5.00			4045.00	
Hydraulic tool	5.00			4050.00	
Packer	5.00			4055.00	21.00 Bottom Of Top Packer
Packer	5.00			4060.00	
Stubb	1.00			4061.00	
Recorder	0.00	8322	Inside	4061.00	
Recorder	0.00	8360	Outside	4061.00	
Perforations	31.00			4092.00	
Bullnose	3.00			4095.00	35.00 Bottom Packers & Anchor
Total Tool Length:	56.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.
8100 E. 22nd St. N 700
Box 783188
Wichita, KS 67278
ATTN: Mike Engelbrecht

Hess Joseph #1
29 13s 31w Gove,KS
Job Ticket: 042110 DST#: 3
Test Start: 2011.04.06 @ 12:50:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 39 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 0 ppm
Viscosity: 63.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.93 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 2700.00 ppm		
Filter Cake: 1.00 inches		

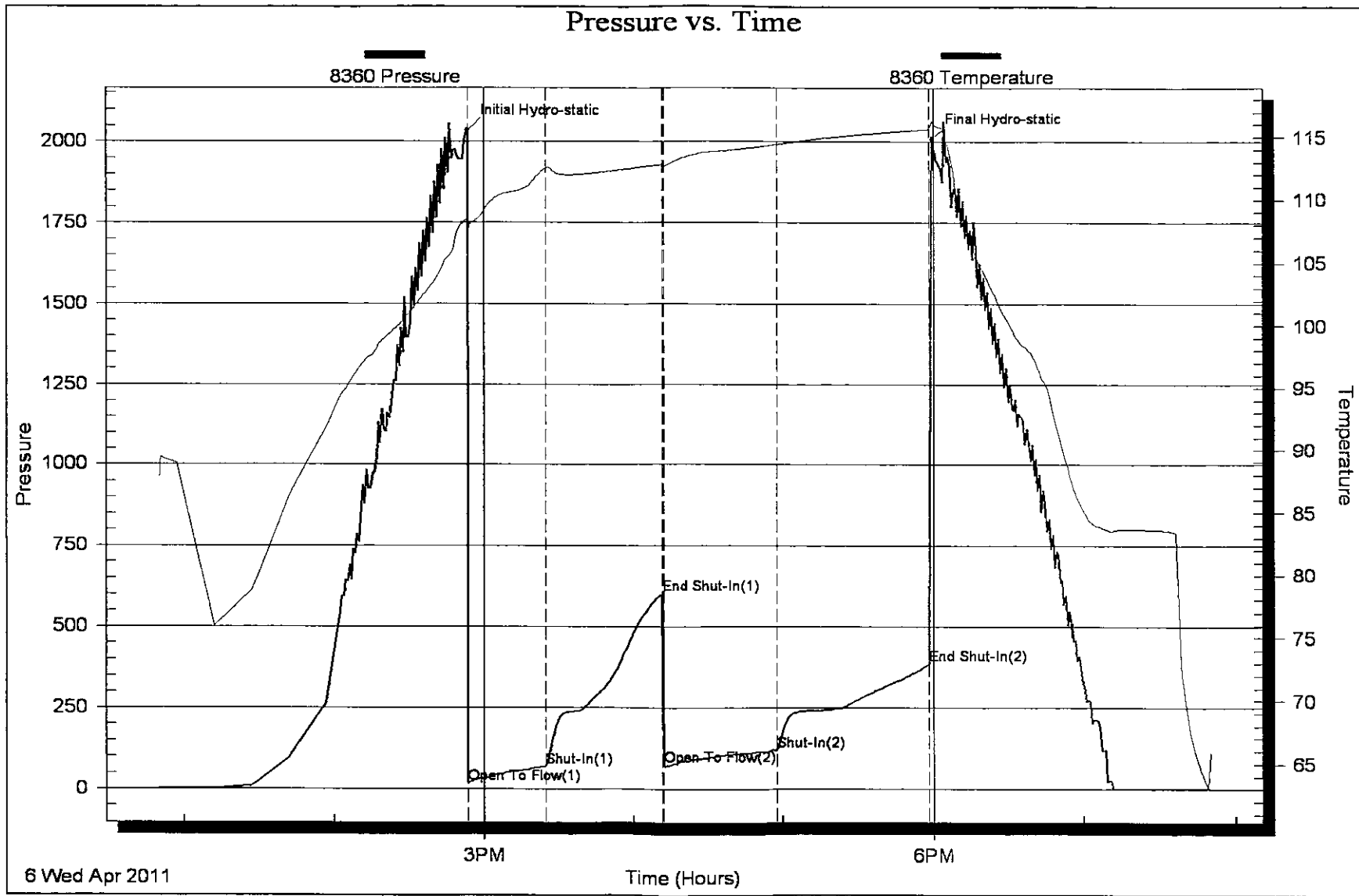
Recovery Information

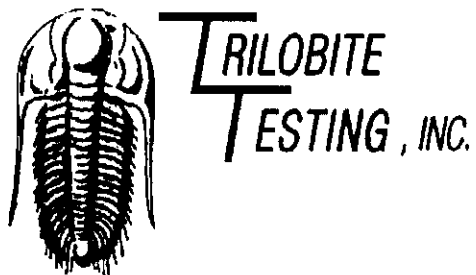
Recovery Table

Length ft	Description	Volume bbl
95.00	gw ocm 10g 20w 20o 50m	0.467
95.00	gw mco 10g 5w 35m 50o	0.467
50.00	gmco 10g 40m 50o	0.246
10.00	oil 100o	0.049
0.00	470 GIP	0.000

Total Length: 250.00 ft Total Volume: 1.229 bbl

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





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

8100 E. 22nd St. N 700
Box 783188
Wichita, KS 67278

ATTN: Mike Engelbrecht

29 13s 31w Gove,KS

Hess Joseph #1

Start Date: 2011.04.07 @ 03:33:30

End Date: 2011.04.07 @ 10:30:15

Job Ticket #: 042111 DST #: 4

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.
8100 E. 22nd St. N 700
Box 783188
Wichita, KS 67278
ATTN: Mike Engelbrecht

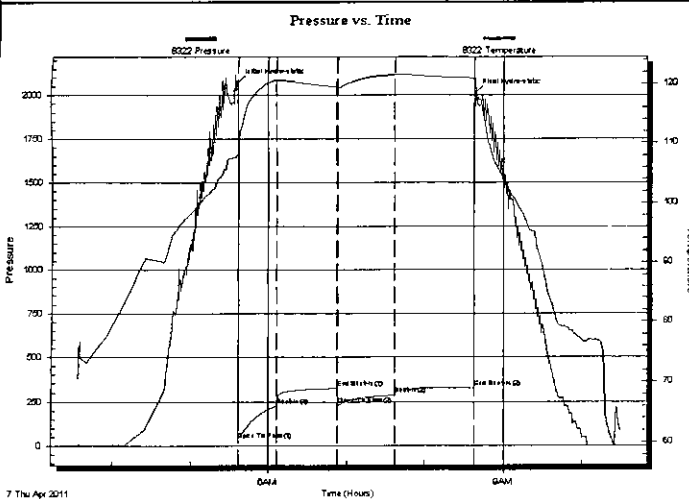
Hess Joseph #1
29 13s 31w Gove, KS
Job Ticket: 042111 DST#: 4
Test Start: 2011.04.07 @ 03:33:30

GENERAL INFORMATION:

Formation: LKC "I"
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 05:37:15
Time Test Ended: 10:30:15
Test Type: Conventional Bottom Hole
Tester: Bradley Walter
Unit No: 40
Interval: 4102.00 ft (KB) To 4128.00 ft (KB) (TVD)
Reference Elevations: 2933.00 ft (KB)
Total Depth: 4128.00 ft (KB) (TVD)
2923.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 10.00 ft

Serial #: 8322 Inside
Press@RunDepth: 287.35 psig @ 4103.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2011.04.07 End Date: 2011.04.07 Last Calib.: 2011.04.07
Start Time: 03:33:35 End Time: 10:30:14 Time On Btm: 2011.04.07 @ 05:37:00
Time Off Btm: 2011.04.07 @ 08:39:15

TEST COMMENT: IF: BOB @ 8 minutes.
IS: 1 inch return blow.
FF: BOB @ 31 minutes.
FS: 1 inch return blow.



PRESSURE SUMMARY

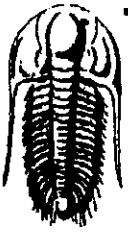
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2074.49	108.08	Initial Hydro-static
1	33.69	107.76	Open To Flow (1)
30	224.42	120.55	Shut-In(1)
76	323.44	119.51	End Shut-In(1)
77	231.42	119.44	Open To Flow (2)
121	287.35	121.49	Shut-In(2)
182	325.03	120.88	End Shut-In(2)
183	2012.09	120.27	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
585.00	mcw 25m 75w (oil spots)	3.13
20.00	oil 100%o	0.20
0.00	105 ft GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.
8100 E. 22nd St. N 700
Box 783188
Wichita, KS 67278
ATTN: Mike Engelbrecht

Hess Joseph #1
29 13s 31w Gove, KS
Job Ticket: 042111 DST#: 4
Test Start: 2011.04.07 @ 03:33:30

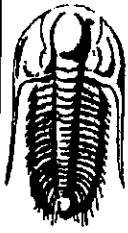
Tool Information

Drill Pipe:	Length: 3551.00 ft	Diameter: 3.20 inches	Volume: 35.32 bbl	Tool Weight: 2500.00 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: 535.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: 37.95 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 78000.00 lb
Depth to Top Packer:	4102.00 ft			Final 78000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	26.00 ft			
Tool Length:	47.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Change Over Sub	1.00			4082.00	
Shut In Tool	5.00			4087.00	
Hydraulic tool	5.00			4092.00	
Packer	5.00			4097.00	21.00 Bottom Of Top Packer
Packer	5.00			4102.00	
Stubb	1.00			4103.00	
Recorder	0.00	8322	Inside	4103.00	
Recorder	0.00	8360	Outside	4103.00	
Perforations	22.00			4125.00	
Bullnose	3.00			4128.00	26.00 Bottom Packers & Anchor
Total Tool Length:	47.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.

Hess Joseph #1

8100 E. 22nd St. N 700

29 13s 31w Gove, KS

Box 783188

Job Ticket: 042111

DST#: 4

Wichita, KS 67278

ATTN: Mike Engelbrecht

Test Start: 2011.04.07 @ 03:33:30

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

41 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

83000 ppm

Viscosity: 64.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.95 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2700.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
585.00	mcw 25m 75w (oil spots)	3.128
20.00	oil 100%o	0.199
0.00	105 ft GIP	0.000

Total Length: 605.00 ft Total Volume: 3.327 bbl

Num Fluid Samples: 0

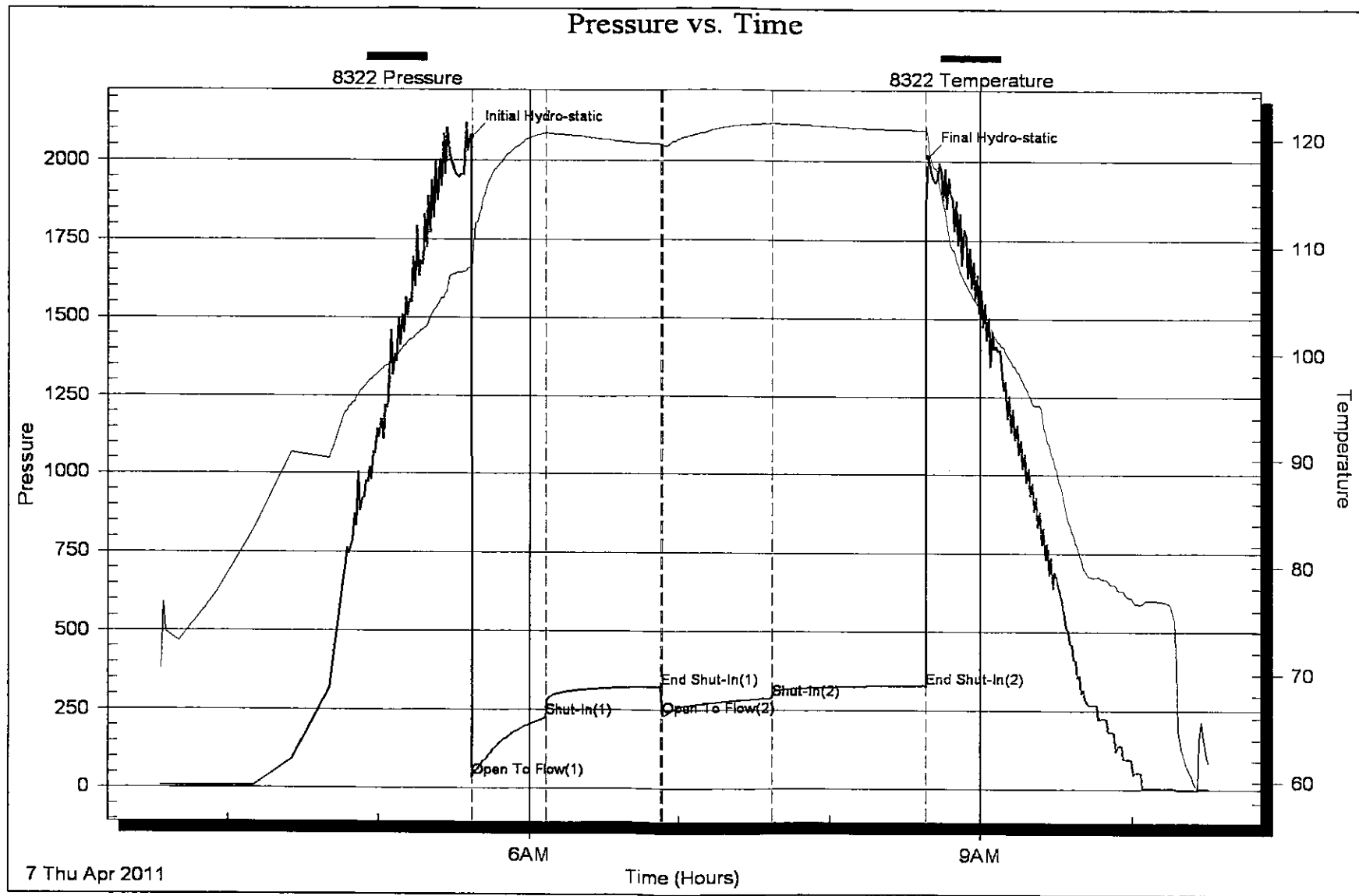
Num Gas Bombs: 0

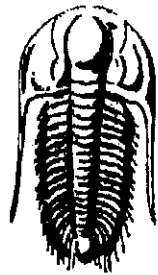
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw is .11@ 66.5 = 83000ppm





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

8100 E. 22nd St. N 700
Box 783188
Wichita, KS 67278

ATTN: Mike Engelbrecht

29 13s 31w Gove,KS

Hess Joseph #1

Start Date: 2011.04.07 @ 17:14:00

End Date: 2011.04.08 @ 00:26:00

Job Ticket #: 042112 DST #: 5

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Ritchie Exploration, Inc.

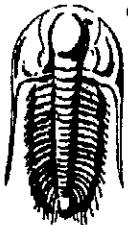
Hess Joseph #1

29 13s 31w Gove,KS

DST # 5

LKC "J"

2011.04.07



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.

Hess Joseph #1

8100 E. 22nd St. N 700
Box 783188
Wichita, KS 67278
ATTN: Mike Engelbrecht

29 13s 31w Gove, KS

Job Ticket: 042112

DST#: 5

Test Start: 2011.04.07 @ 17:14:00

GENERAL INFORMATION:

Formation: LKC "J"

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:13:15

Time Test Ended: 00:26:00

Test Type: Conventional Bottom Hole

Tester: Bradley Walter

Unit No: 40

Interval: 4126.00 ft (KB) To 4154.00 ft (KB) (TVD)

Reference Elevations: 2933.00 ft (KB)

Total Depth: 4154.00 ft (KB) (TVD)

2923.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8652

Inside

Press@RunDepth: 219.82 psig @ 4127.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.04.07

End Date: 2011.04.08

Last Calib.: 2011.04.08

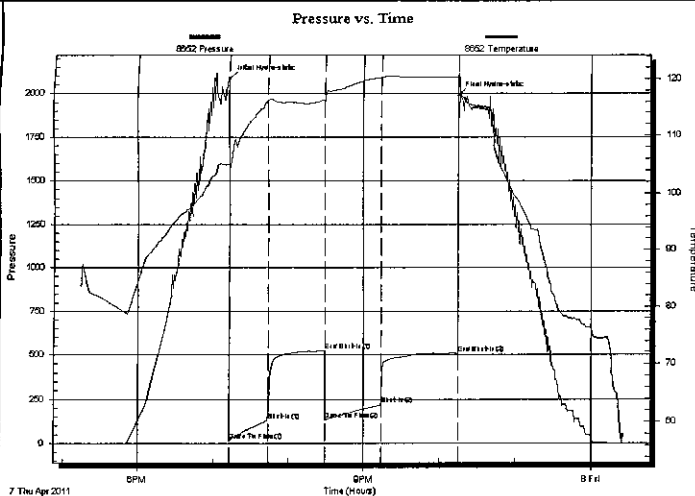
Start Time: 17:14:05

End Time: 00:25:59

Time On Btm: 2011.04.07 @ 19:13:00

Time Off Btm: 2011.04.07 @ 22:15:30

TEST COMMENT: IF: 7 inch blow.
IS: No return blow.
FF: 6 inch blow.
FS: Surface blow @ 20 minutes, Dead @ 35 minutes.



PRESSURE SUMMARY

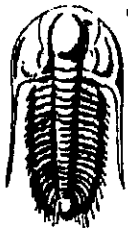
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2085.17	105.17	Initial Hydro-static
1	20.26	103.78	Open To Flow (1)
31	130.21	115.97	Shut-In(1)
77	525.42	116.20	End Shut-In(1)
77	132.95	115.97	Open To Flow (2)
122	219.82	120.23	Shut-In(2)
182	509.07	120.35	End Shut-In(2)
183	1988.75	120.64	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
445.00	mcw 30m 70w	2.19
3.00	oil 100%o	0.01

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

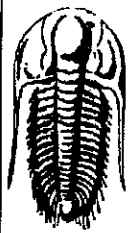
Ritchie Exploration, Inc.
8100 E. 22nd St. N 700
Box 783188
Wichita, KS 67278
ATTN: Mike Engelbrecht

Hess Joseph #1
29 13s 31w Gove,KS
Job Ticket: 042112 DST#: 5
Test Start: 2011.04.07 @ 17:14:00

Tool Information

Drill Pipe:	Length: 3575.00 ft	Diameter: 3.20 inches	Volume: 35.56 bbl	Tool Weight: 2500.00 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: 535.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 94000.00 lb
			<u>Total Volume: 38.19 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 79000.00 lb
Depth to Top Packer:	4126.00 ft			Final 79000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	28.00 ft			
Tool Length:	49.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4106.00	
Shut In Tool	5.00			4111.00	
Hydraulic tool	5.00			4116.00	
Packer	5.00			4121.00	21.00 Bottom Of Top Packer
Packer	5.00			4126.00	
Stubb	1.00			4127.00	
Recorder	0.00	8652	Inside	4127.00	
Recorder	0.00	8360	Outside	4127.00	
Perforations	24.00			4151.00	
Bullnose	3.00			4154.00	28.00 Bottom Packers & Anchor
Total Tool Length:	49.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.
8100 E 22nd St. N 700
Box 783188
Wichita, KS 67278
ATTN: Mike Engelbrecht

Hess Joseph #1
29 13s 31w Gove,KS
Job Ticket: 042112 DST#: 5
Test Start: 2011.04.07 @ 17:14:00

Mud and Cushion Information

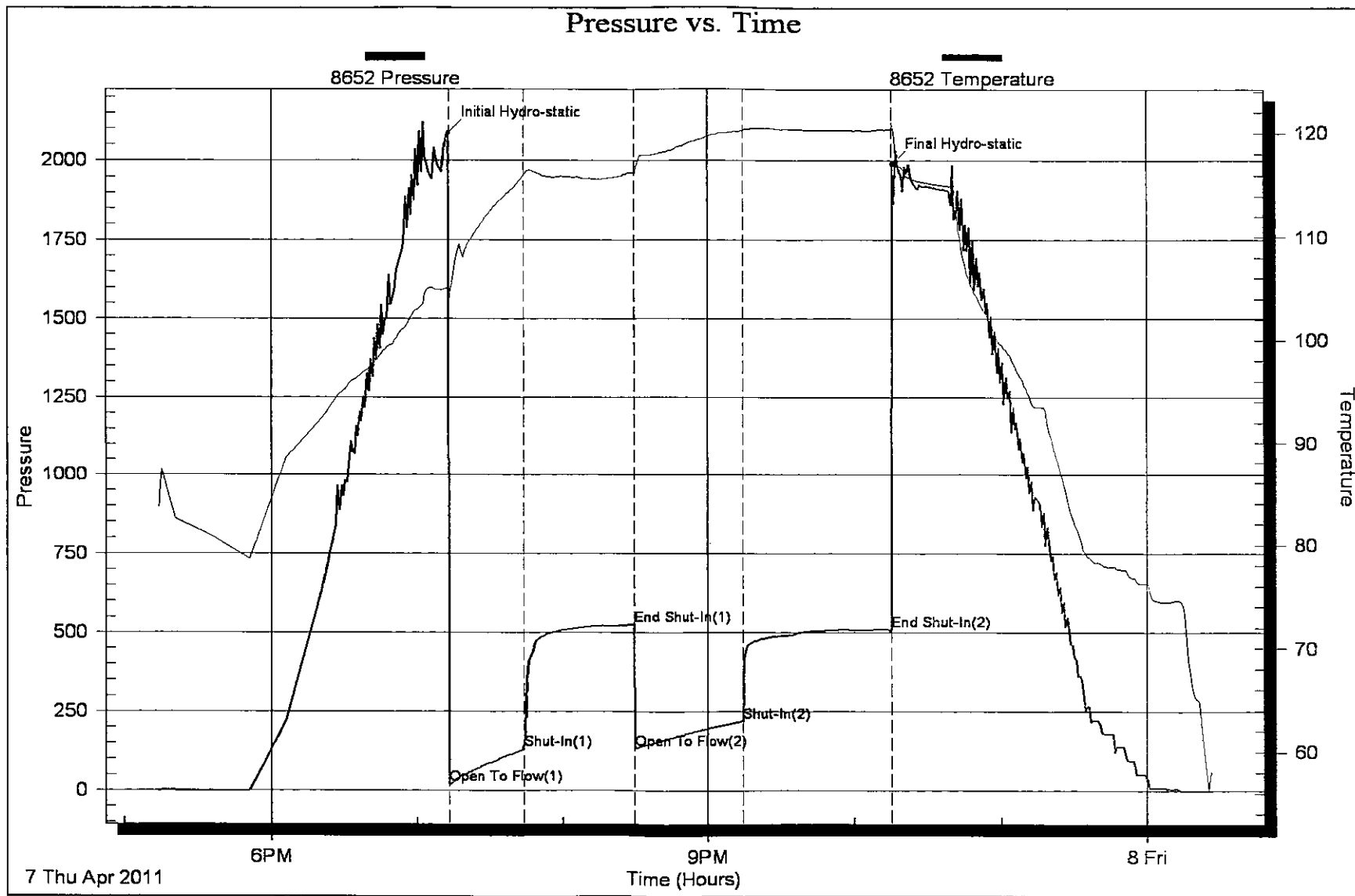
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	61000 ppm
Viscosity: 68.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.17 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 3200.00 ppm			
Filter Cake: 1.00 inches			

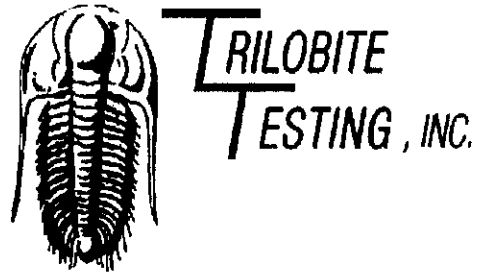
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
445.00	mcw 30m 70w	2.188
3.00	oil 100%o	0.015

Total Length: 448.00 ft Total Volume: 2.203 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: rw is .15 @ 62 F





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

8100 E. 22nd St. N 700
Box 783188
Wichita, KS 67278

ATTN: Mike Engelbrecht

29 13s 31w Gove,KS

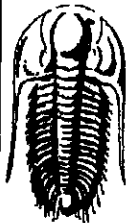
Hess Joseph #1

Start Date: 2011.04.08 @ 12:42:00

End Date: 2011.04.08 @ 20:16:15

Job Ticket #: 042113 DST #: 6

Trilobite Testing, Inc
PO Box 1733 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.
8100 E. 22nd St. N 700
Box 783188
Wichita, KS 67278
ATTN: Mike Engelbrecht

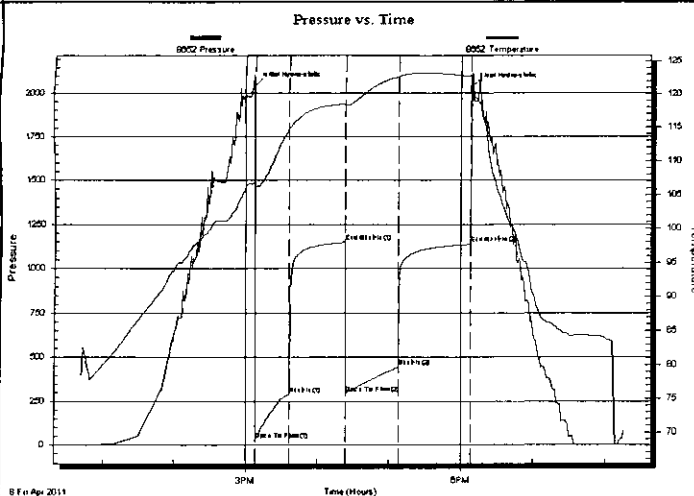
Hess Joseph #1
29 13s 31w Gove,KS
Job Ticket: 042113 DST#: 6
Test Start: 2011.04.08 @ 12:42:00

GENERAL INFORMATION:

Formation: LKC K&L
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:07:45
Time Test Ended: 20:16:15
Test Type: Conventional Bottom Hole
Tester: Bradley Walter
Unit No: 40
Interval: 4149.00 ft (KB) To 4226.00 ft (KB) (TVD)
Reference Elevations: 2933.00 ft (KB)
Total Depth: 4226.00 ft (KB) (TVD)
2923.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair
KB to GR/CF: 10.00 ft

Serial #: 8652 Inside
Press@RunDepth: 445.33 psig @ 4150.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2011.04.08 End Date: 2011.04.08 Last Calib.: 2011.04.08
Start Time: 12:42:05 End Time: 20:16:14 Time On Btm: 2011.04.08 @ 15:07:30
Time Off Btm: 2011.04.08 @ 18:09:00

TEST COMMENT: IF: BOB @ 9 minutes.
ISI: No return blow.
FF: BOB @ 12 minutes.
FSI: Surface blow @ 40 minutes



PRESSURE SUMMARY

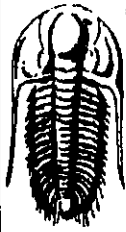
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2044.94	106.68	Initial Hydro-static
1	29.32	106.04	Open To Flow (1)
30	289.28	114.58	Shut-In(1)
77	1148.53	118.44	End Shut-In(1)
77	295.65	118.07	Open To Flow (2)
121	445.33	122.60	Shut-In(2)
181	1137.14	122.67	End Shut-In(2)
182	2038.59	122.94	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
735.00	mcw 10m 90w	4.62
145.00	omcw 1o 20m 79w	1.44

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.

Hess Joseph #1

8100 E. 22nd St. N 700

29 13s 31w Gove, KS

Box 783188

Job Ticket: 042113

DST#: 6

Wichita, KS 67278

Test Start: 2011.04.08 @ 12:42:00

ATTN: Mike Engelbrecht

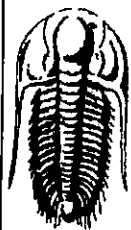
Tool Information

Drill Pipe:	Length: 3606.00 ft	Diameter: 3.20 inches	Volume: 35.87 bbl	Tool Weight: 2500.00 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: 535.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 92000.00 lb
			<u>Total Volume: 38.50 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 79000.00 lb
Depth to Top Packer:	4149.00 ft			Final 82000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	77.00 ft			
Tool Length:	98.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4129.00	
Shut In Tool	5.00			4134.00	
Hydraulic tool	5.00			4139.00	
Packer	5.00			4144.00	21.00 Bottom Of Top Packer
Packer	5.00			4149.00	
Stubb	1.00			4150.00	
Recorder	0.00	8652	Inside	4150.00	
Recorder	0.00	8360	Outside	4150.00	
Perforations	5.00			4155.00	
Change Over Sub	1.00			4156.00	
Drill Pipe	63.00			4219.00	
Change Over Sub	1.00			4220.00	
Perforations	3.00			4223.00	
Bullnose	3.00			4226.00	77.00 Bottom Packers & Anchor

Total Tool Length: 98.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.
8100 E. 22nd St. N 700
Box 783188
Wichita, KS 67278
ATTN: Mke Engelbrecht

Hess Joseph #1
29 13s 31w Gove, KS
Job Ticket: 042113 DST#: 6
Test Start: 2011.04.08 @ 12:42:00

Mud and Cushion Information

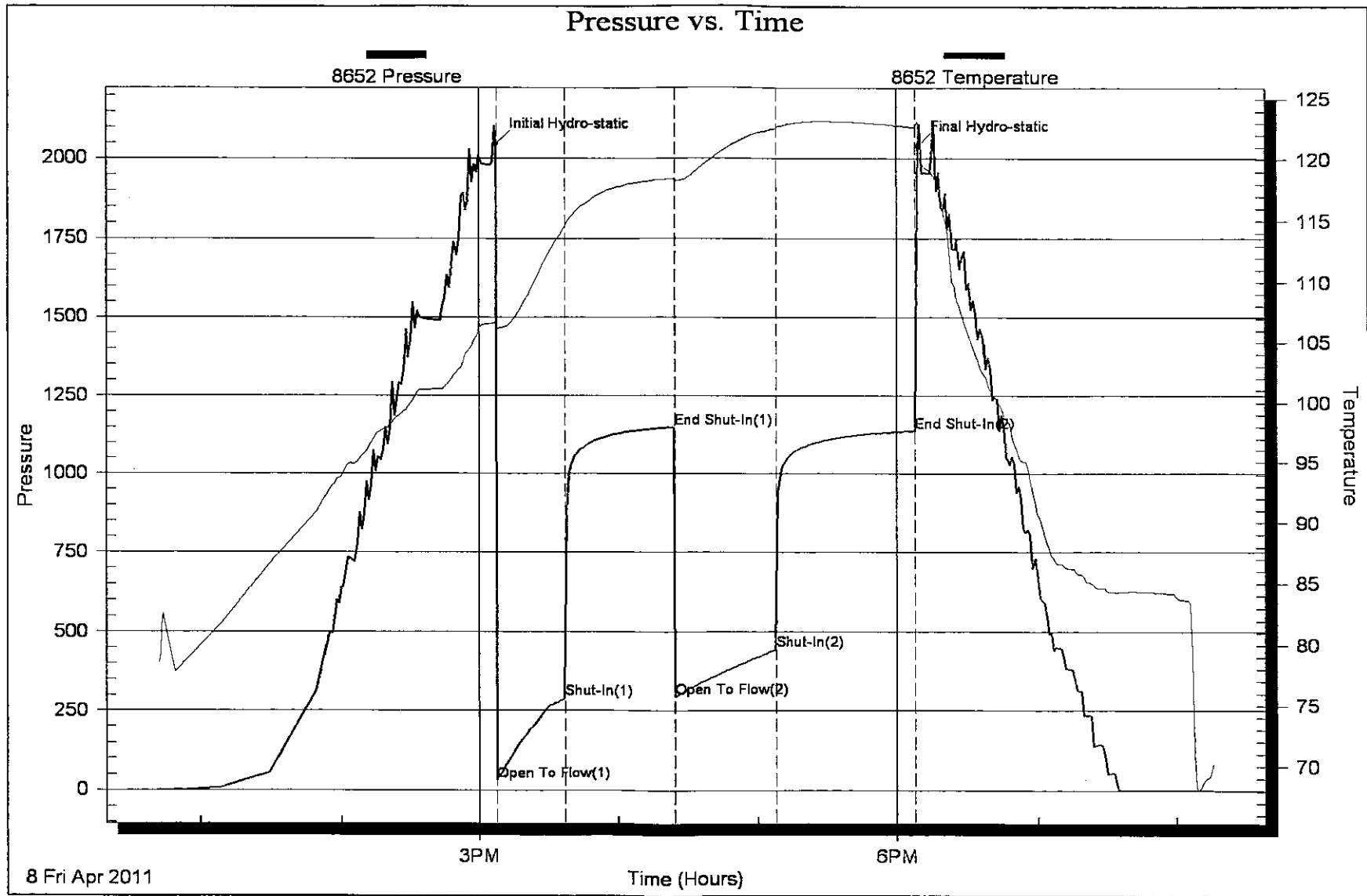
Mud Type: Gel Chem	Cushion Type:	Oil API:	0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	80000 ppm
Viscosity: 66.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.37 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 3000.00 ppm			
Filter Cake: 1.00 inches			

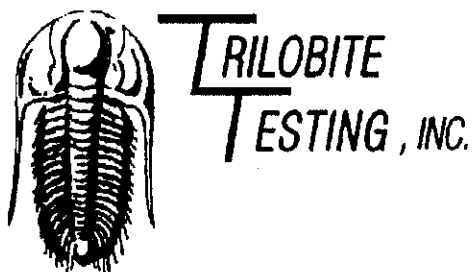
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
735.00	mcw 10m 90w	4.621
145.00	omcw 1o 20m 79w	1.442

Total Length: 880.00 ft Total Volume: 6.063 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: rw is .09 @ 75 F 1 inch free oil on top





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

8100 E. 22nd St. N 700
Box 783188
Wichita, KS 67278

ATTN: Mike Engelbrecht

29 13s 31w Gove,KS

Hess Joseph #1

Start Date: 2011.04.09 @ 14:50:00

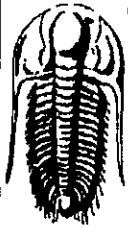
End Date: 2011.04.09 @ 22:39:15

Job Ticket #: 042114 DST #: 7

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.

Hess Joseph #1

8100 E. 22nd St. N 700

29 13s 31w Gove, KS

Box 783188

Job Ticket: 042114

DST#: 7

Wichita, KS 67278

ATTN: Mike Engelbrecht

Test Start: 2011.04.09 @ 14:50:00

GENERAL INFORMATION:

Formation: Myric-Ft Scott

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:26:30

Time Test Ended: 22:39:15

Test Type: Conventional Bottom Hole

Tester: Bradley Walter

Unit No: 40

Interval: 4370.00 ft (KB) To 4412.00 ft (KB) (TVD)

Reference Elevations: 2933.00 ft (KB)

Total Depth: 4412.00 ft (KB) (TVD)

2923.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8652 Inside

Press@RunDepth: 198.72 psig @ 4371.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.04.09

End Date: 2011.04.09

Last Calib.: 2011.04.09

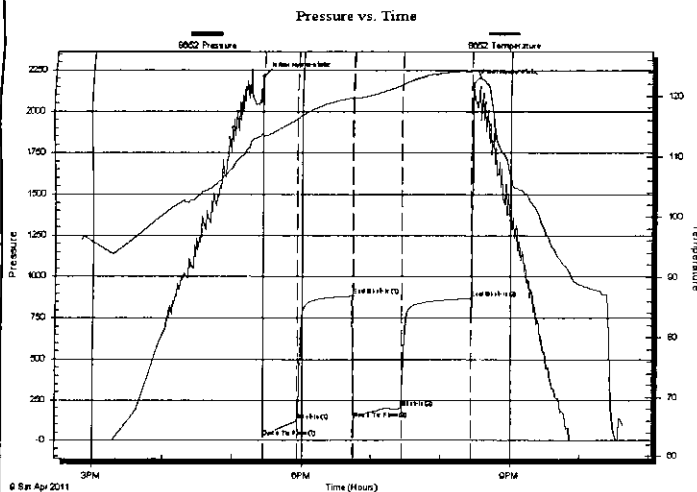
Start Time: 14:50:05

End Time: 22:39:14

Time On Btm: 2011.04.09 @ 17:26:15

Time Off Btm: 2011.04.09 @ 20:27:30

TEST COMMENT: IF: BOB @ 10 minutes.
ISI: 1 inch return blow.
FF: BOB 10 minutes.
FSI: 1 inch return blow.



PRESSURE SUMMARY

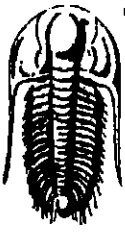
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2211.51	113.72	Initial Hydro-static
1	21.62	112.82	Open To Flow (1)
30	121.83	116.13	Shut-In(1)
78	883.40	119.67	End Shut-In(1)
79	133.04	119.54	Open To Flow (2)
120	198.72	121.79	Shut-In(2)
181	868.41	124.15	End Shut-In(2)
182	2170.21	124.45	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbt)
95.00	gmw co 25g 20m 15w 40o	0.47
450.00	gmco 30g 5m 65o	2.26
0.00	1415 GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.

Hess Joseph #1

8100 E. 22nd St. N 700

29 13s 31w Gove, KS

Box 783188

Job Ticket: 042114

DST#: 7

Wichita, KS 67278

Test Start: 2011.04.09 @ 14:50:00

ATTN: Mike Engelbrecht

Tool Information

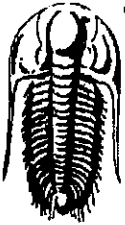
Drill Pipe:	Length: 3835.00 ft	Diameter: 3.20 inches	Volume: 38.15 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 535.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 93000.00 lb
			Total Volume: 40.78 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 81000.00 lb
Depth to Top Packer:	4370.00 ft			Final 82000.00 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			4355.00	
Hydraulic tool	5.00			4360.00	
Packer	5.00			4365.00	20.00 Bottom Of Top Packer
Packer	5.00			4370.00	
Stubb	1.00			4371.00	
Recorder	0.00	8360	Inside	4371.00	
Recorder	0.00	8652	Inside	4371.00	
Perforations	4.00			4375.00	
Change Over Sub	1.00			4376.00	
Drill Pipe	32.00			4408.00	
Change Over Sub	1.00			4409.00	
Bullnose	3.00			4412.00	42.00 Bottom Packers & Anchor

Total Tool Length: 62.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.

Hess Joseph #1

8100 E 22nd St. N 700

29 13s 31w Gove, KS

Box 783188

Job Ticket: 042114

DST#: 7

Wichita, KS 67278

ATTN: Mike Engelbrecht

Test Start: 2011.04.09 @ 14:50:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

27 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
95.00	grw co 25g 20m 15w 40o	0.467
450.00	gmco 30g 5m 65o	2.263
0.00	1415 GIP	0.000

Total Length: 545.00 ft

Total Volume: 2.730 bbl

Num Fluid Samples: 0

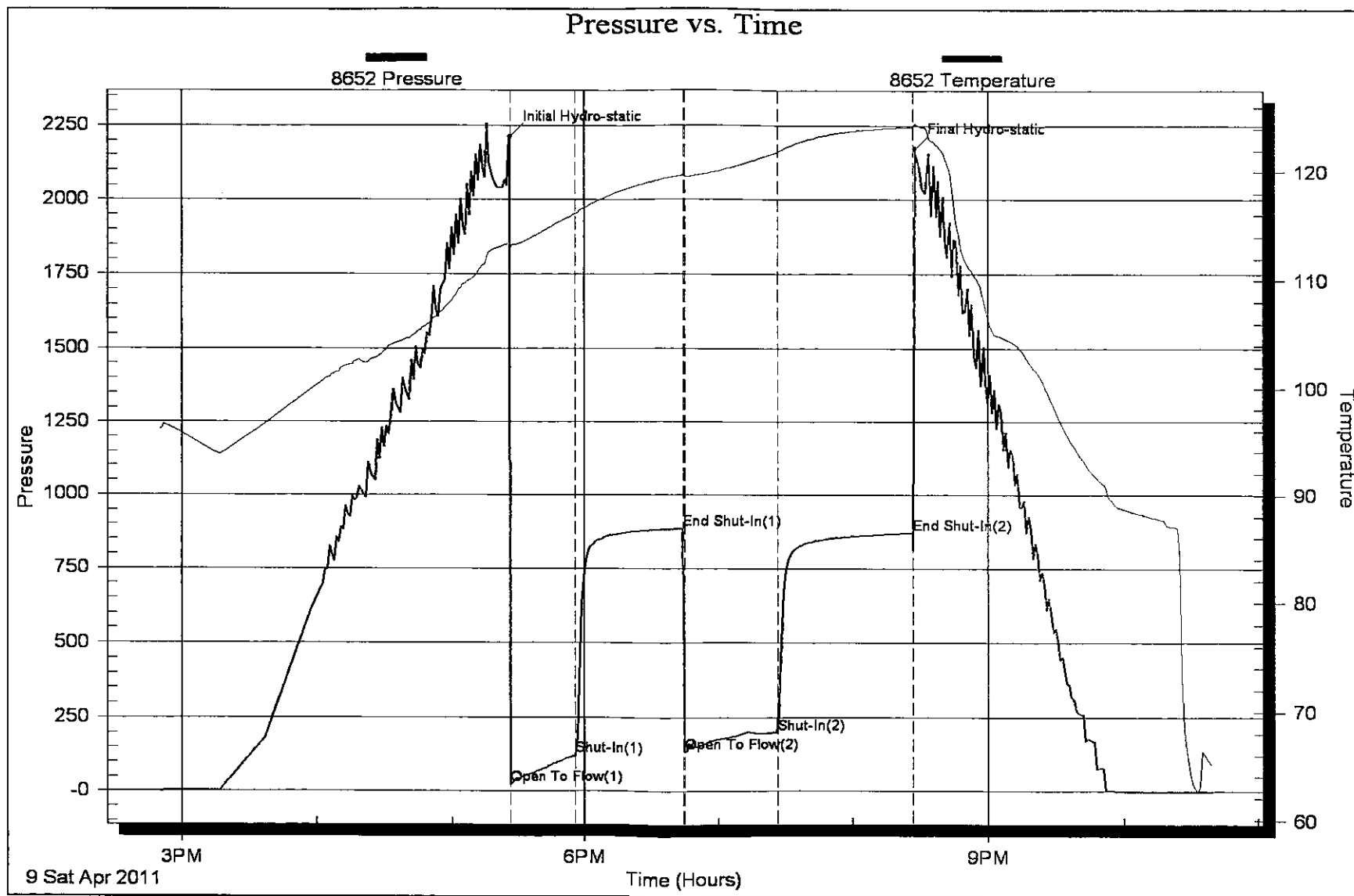
Num Gas Bombs: 0

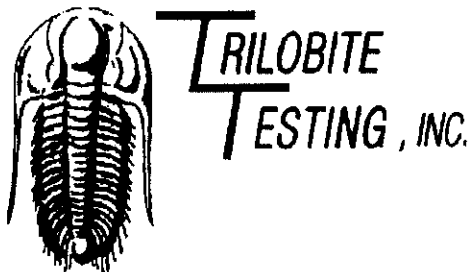
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

8100 E. 22nd St. N 700
Box 783188
Wichita, KS 67278

ATTN: Mike Engelbrecht

29 13s 31w Gove,KS

Hess Joseph #1

Start Date: 2011.04.10 @ 10:03:00

End Date: 2011.04.10 @ 17:14:30

Job Ticket #: 042115 DST #: 8

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Ritchie Exploration, Inc.

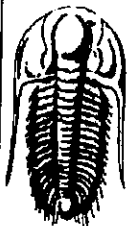
Hess Joseph #1

29 13s 31w Gove,KS

DST # 8

Johnson

2011.04.10



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.
8100 E. 22nd St. N 700
Box 783188
Wichita, KS 67278
ATTN: Mike Engelbrecht

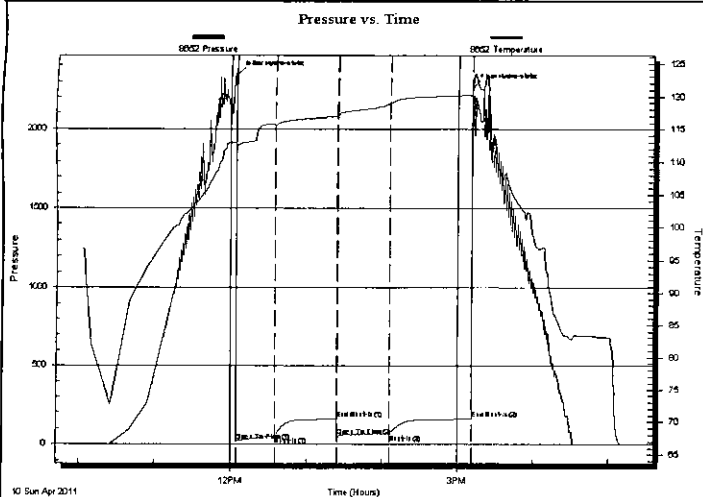
Hess Joseph #1
29 13s 31w Gove, KS
Job Ticket: 042115 DST#: 8
Test Start: 2011.04.10 @ 10:03:00

GENERAL INFORMATION:

Formation: **Johnson**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 12:05:00
Time Test Ended: 17:14:30
Interval: 4450.00 ft (KB) To 4484.00 ft (KB) (TVD)
Total Depth: 4484.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole
Tester: Bradley Walter
Unit No: 40
Reference Elevations: 2933.00 ft (KB)
2923.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: **8652** Inside
Press@RunDepth: 65.98 psig @ 4451.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2011.04.10 End Date: 2011.04.10 Last Calib.: 2011.04.10
Start Time: 10:03:05 End Time: 17:14:29 Time On Btm: 2011.04.10 @ 12:04:45
Time Off Btm: 2011.04.10 @ 15:11:30

TEST COMMENT: IF: BOB @ 9 Minutes.
ISI: No return blow.
FF: BOB @ 20 seconds
FSI: No return blow.



PRESSURE SUMMARY

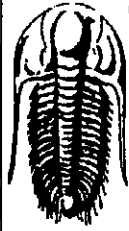
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2339.74	113.08	Initial Hydro-static
1	18.98	112.10	Open To Flow (1)
31	53.04	115.70	Shut-In(1)
80	160.28	117.07	End Shut-In(1)
80	52.54	117.10	Open To Flow (2)
122	65.98	118.95	Shut-In(2)
187	158.77	120.24	End Shut-In(2)
187	2258.80	121.73	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
95.00	gocm 3g 3o 94m	0.47
110.00	mud 100m (oil spots)	0.54
0.00	1400 ft GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.

Hess Joseph #1

8100 E 22nd St. N 700

29 13s 31w Gove, KS

Box 783188

Job Ticket: 042115

DST#: 8

Wichita, KS 67278

ATTN: Mike Engelbrecht

Test Start: 2011.04.10 @ 10:03:00

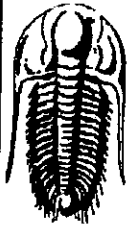
Tool Information

Drill Pipe:	Length: 3900.00 ft	Diameter: 3.20 inches	Volume: 38.79 bbl	Tool Weight: 2500.00 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: 535.00 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 96000.00 lb
		Total Volume: 41.42 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 81000.00 lb
Depth to Top Packer:	4450.00 ft			Final 82000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	34.00 ft			
Tool Length:	55.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4430.00	
Shut in Tool	5.00			4435.00	
Hydraulic tool	5.00			4440.00	
Packer	5.00			4445.00	21.00 Bottom Of Top Packer
Packer	5.00			4450.00	
Stubb	1.00			4451.00	
Recorder	0.00	8360	Outside	4451.00	
Recorder	0.00	8652	Inside	4451.00	
Perforations	30.00			4481.00	
Bullnose	3.00			4484.00	34.00 Bottom Packers & Anchor
Total Tool Length:	55.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.

Hess Joseph #1

8100 E. 22nd St. N 700
Box 783188
Wichita, KS 67278

29 13s 31w Gove, KS

Job Ticket: 042115

DST#: 8

ATTN: Mike Engelbrecht

Test Start: 2011.04.10 @ 10:03:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 68.00 sec/qt
Water Loss: 7.19 in³
Resistivity: ohm.m
Salinity: 3000.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: 0 deg API
Water Salinity: 0 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
95.00	gocm 3g 3o 94m	0.467
110.00	mud 100m (oil spots)	0.541
0.00	1400 ft GIP	0.000

Total Length: 205.00 ft Total Volume: 1.008 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

