



KANSAS CORPORATION COMMISSION 1085105  
OIL & GAS CONSERVATION DIVISION

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 # 5663  
Name: Hess Oil Company  
Address 1: PO BOX 1009  
Address 2: \_\_\_\_\_  
City: MCPHERSON State: KS Zip: 67460 + 1009  
Contact Person: Bryan Hess  
Phone: ( 620 ) 241-4640  
CONTRACTOR: License # 4958  
Name: Mallard, J. V., Inc.  
Wellsite Geologist: Jerry A. Smith  
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  
 Conv. to GSW
- Plug Back: \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_  
 Commingled    Permit #: \_\_\_\_\_  
 Dual Completion    Permit #: \_\_\_\_\_  
 SWD    Permit #: \_\_\_\_\_  
 ENHR    Permit #: \_\_\_\_\_  
 GSW    Permit #: \_\_\_\_\_

<u>5/1/2012</u>	<u>5/8/2012</u>	<u>5/8/2012</u>
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-135-25385-00-00

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

NE NE NW SW Sec. 11 Twp. 16 S. R. 21  East  West  
2670 Feet from  North /  South Line of Section  
1155 Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE     NW     SE     SW

County: Ness

Lease Name: Joyce Well #: 1

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

Producing Formation: na

Elevation: Ground: 2313 Kelly Bushing: 2317

Total Depth: 4227 Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: 207 Feet

Multiple Stage Cementing Collar Used?  Yes  No

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

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

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

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: 0 ppm Fluid volume: 0 bbls

Dewatering method used: Evaporated

Location of fluid disposal if hauled offsite: \_\_\_\_\_

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

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

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

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

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

- Letter of Confidentiality Received  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: Deanna Garrison Date: 06/22/2012



1085105

Operator Name: Hess Oil Company Lease Name: Joyce Well #: 1  
 Sec. 11 Twp. 16 S. R. 21  East  West County: Ness

**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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No Electric Log Submitted Electronically <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i>  List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input checked="" type="checkbox"/> Sample  Name Top Datum Attached Attached Attached
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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	12.25	8.625	20	207	common	150	2% gel, 3% cc

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
___ Perforate				
___ Protect Casing	-			
___ Plug Back TD				
___ Plug Off Zone	-			

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: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Date of First, Resumed Production, SWD or ENHR. _____		Producing Method: <input type="checkbox"/> Flowing <input 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"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Hess Oil Company
Well Name	Joyce 1
Doc ID	1085105

Tops

Name	Depth	Interval
Anhydrite	1613	+704
Base Anhydrite	1652	+665
Heebner	3717	-1400
Lansing	3757	-1440
Base Kansas City	4020	-1703
Pawnee	4103	-1786
Fort Scott	4166	-1849
Pawnee A Sand	4181	-1864
Pawnee B Sand	4188	-1871
Cherokee A Sand	4207	-1890
Cherokee B Sand	4219	-1902
RTD	4227	-1910



# ALLIED OIL & GAS SERVICES, LLC 053524

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

SERVICE POINT  
Gettysburg, KS

DATE <u>5-1-12</u>	SEC <u>71</u>	TWP <u>N02</u>	RANGE <u>21W</u>	CALLED OUT	ON LOCATION	JOB START <u>11:00am</u>	JOB FINISH <u>11:30am</u>	
LEASE <u>Joyce</u>	WELL # <u>1</u>	LOCATION <u>McGrohon #5 West</u>		COUNTY <u>SEYmour</u>	STATE <u>KS</u>			
OLD OR NEW (Circle one)		to <u>11.25</u> <u>South 1/2 West</u> <u>South into</u>						

CONTRACTOR <u>Mallard</u>	OWNER <u>Hess Oil Co.</u>
TYPE OF JOB <u>Surface</u>	
HOLE SIZE <u>12 1/8</u> T.D. <u>707</u>	CEMENT AMOUNT ORDERED <u>150 SKS</u>
CASING SIZE <u>8 3/8</u> DEPTH <u>707</u>	<u>1 1/2" A 30' per 2 1/2' set</u>
TUBING SIZE DEPTH	
DRILL PIPE DEPTH	
TOOL DEPTH	
PRES. MAX MINIMUM	COMMON <u>150</u> @ <u>16.25</u> <u>2,437.50</u>
MEAS. LINE SHOE JOINT	POZMIX @
CEMENT LEFT IN CSC. <u>15 SKS</u>	GEL <u>3</u> @ <u>21.25</u> <u>63.75</u>
PERFS.	CHLORIDE <u>5</u> @ <u>58.20</u> <u>291.00</u>
DISPLACEMENT <u>10.25 SKS</u>	ASC @

**EQUIPMENT**

PUMP TRUCK # <u>366</u>	CEMENTER <u>Sam &amp; Tom</u>
BULK TRUCK # <u>377</u>	DRIVER <u>Kevan</u>
BULK TRUCK #	DRIVER

HANDLING <u>142.9</u>	@ <u>2.10</u>	<u>300.09</u>
MILEAGE <u>7.4 X 35</u>	@ <u>2.35</u>	<u>172.90</u>
		<b>TOTAL <u>3,742.92</u></b>

**REMARKS:**

Pipe on bottom break circ.  
1st 10' run in. Hook up and  
run 10' set. Run in 2 1/2' set  
Del Displacement 10.25 SKS. Water  
about 100' - Cement set circ. etc  
sig done  
May done @ 11:30am

**SERVICE**

DEPTH OF JOB		
PUMP TRUCK CHARGE		<u>1125.00</u>
EXTRA FOOTAGE @		
MILEAGE <u>Hum 70</u>	@ <u>7.00</u>	<u>490.00</u>
MANIFOLD @		
<u>Hum 70</u>	@ <u>4.00</u>	<u>280.00</u>
		<b>TOTAL <u>1895.00</u></b>

CHARGE TO: Hess Oil Co.  
STREET \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

**PLUG & FLOAT EQUIPMENT**

	@	
	@	
	@	
	@	
	@	
		<b>TOTAL _____</b>

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

PRINTED NAME X Frank Szymanski  
SIGNATURE Frank Szymanski  
Thank you!

SALES TAX (If Any)		
TOTAL CHARGES	<u>5,637.92</u>	
DISCOUNT <u>70% 20%</u>	<u>1,816.92</u>	IF PAID IN 30 DAYS
		<b><u>3,821.00</u></b>

# ALLIED OIL & GAS SERVICES, LLC 053528

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

SERVICE POINT:  
Good Land, KS

DATE: <u>5-8-12</u>	SEC: <u>11</u>	TWP: <u>16N</u>	RANGE: <u>31W</u>	CALLED OUT	ON LOCATION	JOB START: <u>7:15 AM</u>	JOB FINISH: <u>8:15 PM</u>
LEASE: <u>Topec</u>	WELL #: <u>1</u>	LOCATION: <u>McCraw, 1/4 North, 1/2 West, South into</u>				COUNTY: <u>NEOSHO</u>	STATE: <u>KS</u>
OLD OR (NEW) (Circle one)							

CONTRACTOR: Walters

TYPE OF JOB: Rotary Plug

HOLE SIZE: 7 7/8 T.D. 4221

CASING SIZE: \_\_\_\_\_ DEPTH \_\_\_\_\_

TUBING SIZE: \_\_\_\_\_ DEPTH \_\_\_\_\_

DRILL PIPE: \_\_\_\_\_ DEPTH \_\_\_\_\_

TOOL: \_\_\_\_\_ DEPTH \_\_\_\_\_

PRES. MAX: \_\_\_\_\_ MINIMUM \_\_\_\_\_

MEAS. LINE: \_\_\_\_\_ SHOE JOINT \_\_\_\_\_

CEMENT LEFT IN CSG: \_\_\_\_\_

PERFS: \_\_\_\_\_

DISPLACEMENT: \_\_\_\_\_

OWNER: Hess Oil Co.

CEMENT AMOUNT ORDERED: 170 gals 60/40  
490 gal 1/2 loss

COMMON	<u>162</u>	@ <u>16.25</u>	<u>2,632.50</u>
POZMIX	<u>108</u>	@ <u>8.50</u>	<u>918.00</u>
GEL	<u>9</u>	@ <u>21.25</u>	<u>191.25</u>
CHLORIDE		@	
ASC		@	
<u>Flowcol</u>	<u>67</u>	@ <u>2.70</u>	<u>180.90</u>
		@	
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		@	
HANDLING	<u>284.46</u>	@ <u>2.10</u>	<u>607.36</u>
MILEAGE	<u>12.87 x 35 x</u>	@ <u>2.35</u>	<u>300.40</u>
			<b>TOTAL</b> <u>5610.58</u>

EQUIPMENT

PUMP TRUCK CEMENTER: Greg S

# 398 HELPER: Joe P

BULK TRUCK DRIVER: Kenneth

# 344 190

BULK TRUCK DRIVER: \_\_\_\_\_

# \_\_\_\_\_

REMARKS:

1" Plug size	50	4 1/2	G	16.70
2" Plug size	80	5 1/2	G	9.00
3" Plug size	140	5 1/2	G	5.10
4" Plug size	50	5 1/2	P	2.10
5" Plug size	20	5 1/2	P	6.0

Wire Disks - Rethole

CHARGE TO: Hess Oil Co.

STREET: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

SERVICE

DEPTH OF JOB: 1620

PUMP TRUCK CHARGE: 1250.00

EXTRA FOOTAGE: @ \_\_\_\_\_

MILEAGE: blum 70 @ 7.00 490.00

MANIFOLD: lum 70 @ 4.00 280.00

TOTAL: 2020.00

PLUG & FLOAT EQUIPMENT

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

TOTAL: \_\_\_\_\_

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

PRINTED NAME: \_\_\_\_\_

SIGNATURE: [Signature]

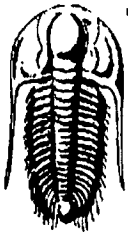
Thank You!

SALES TAX (if Any): \_\_\_\_\_

TOTAL CHARGES: 7,630.55

DISCOUNT: 2,408.21 IF PAID IN 30 DAYS

5,221.84



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Hess Oil Company  
PO Box 1009  
McPherson, KS. 67460  
ATTN: Jerry Smith

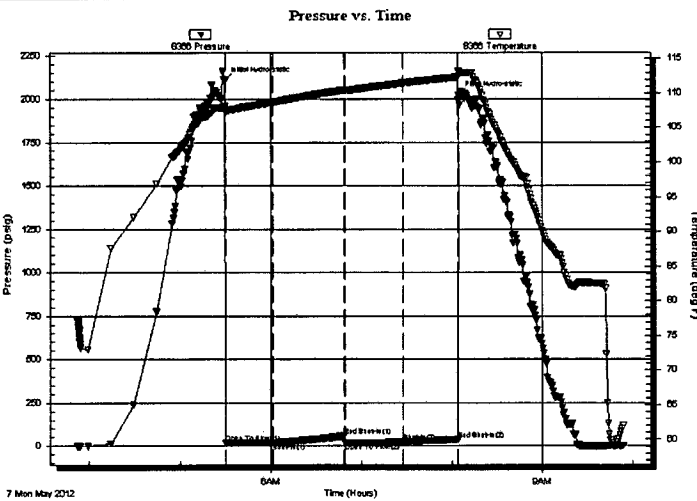
**11-16s-21w Ness,KS**  
**Joyce #1**  
Job Ticket: 47284      **DST#: 1**  
Test Start: 2012.05.07 @ 03:52:22

### GENERAL INFORMATION:

Formation: **Cherokee Sand**  
Deviated: No Whipstock: 0.00 ft (KB)  
Time Tool Opened: 05:29:52  
Time Test Ended: 09:54:07  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Jason McLemore  
Unit No: 54  
Interval: **4142.00 ft (KB) To 4186.00 ft (KB) (TVD)**  
Reference Elevations: 2317.00 ft (KB)  
Total Depth: 4186.00 ft (KB) (TVD)      2312.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: Good      KB to GR/CF: 5.00 ft

**Serial #: 8366**      **Inside**  
Press@RunDepth: 23.25 psig @ 4181.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2012.05.07      End Date: 2012.05.07      Last Calib.: 2012.05.07  
Start Time: 03:52:24      End Time: 09:54:07      Time On Btm: 2012.05.07 @ 05:29:37  
Time Off Btm: 2012.05.07 @ 08:04:37

TEST COMMENT: IFF-Weak Surface Blow , Built to 3/8"  
ISI-Dead  
FFP-Dead  
FSI-Dead



### PRESSURE SUMMARY

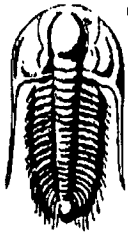
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2108.80	108.08	Initial Hydro-static
1	17.55	107.29	Open To Flow (1)
32	19.73	108.69	Shut-In(1)
79	57.38	110.43	End Shut-In(1)
80	18.83	110.42	Open To Flow (2)
118	23.25	111.45	Shut-In(2)
155	36.95	112.34	End Shut-In(2)
155	2021.34	113.07	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud W/Oil Scum	0.00

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

Hess Oil Company  
PO Box 1009  
McPherson, KS. 67460  
ATTN: Jerry Smith

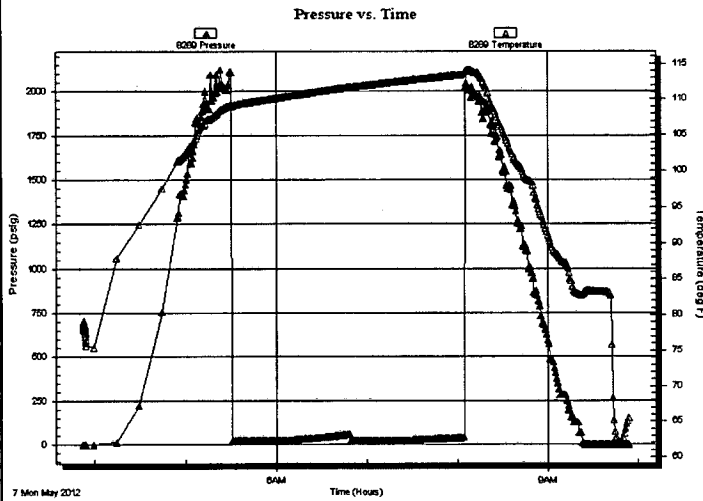
**11-16s-21w Ness,KS**  
**Joyce #1**  
Job Ticket: 47284 **DST#: 1**  
Test Start: 2012.05.07 @ 03:52:22

**GENERAL INFORMATION:**

Formation: **Cherokee Sand**  
Deviated: No Whipstock: 0.00 ft (KB)  
Time Tool Opened: 05:29:52  
Time Test Ended: 09:54:07  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Jason McLemore  
Unit No: 54  
Interval: **4142.00 ft (KB) To 4186.00 ft (KB) (TVD)**  
Reference Elevations: 2317.00 ft (KB)  
Total Depth: 4186.00 ft (KB) (TVD) 2312.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft

**Serial #: 8289 Outside**  
Press@RunDepth: psig @ 4181.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2012.05.07 End Date: 2012.05.07 Last Calib.: 2012.05.07  
Start Time: 03:52:09 End Time: 09:53:52 Time On Btm:  
Time Off Btm:

**TEST COMMENT:** IFP-Weak Surface Blow , Built to 3/8"  
ISI-Dead  
FFP-Dead  
FSI-Dead



**PRESSURE SUMMARY**

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

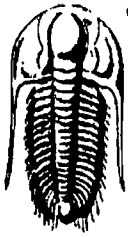
**Recovery**

Length (ft)	Description	Volume (bbl)
1.00	Mud W/Oil Scum	0.00

**Gas Rates**

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





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Hess Oil Company  
PO Box 1009  
McPherson, KS. 67460  
ATTN: Jerry Smith

**11-16s-21w Ness,KS**  
**Joyce #1**  
Job Ticket: 47284      **DST#: 1**  
Test Start: 2012.05.07 @ 03:52:22

### Mud and Cushion Information

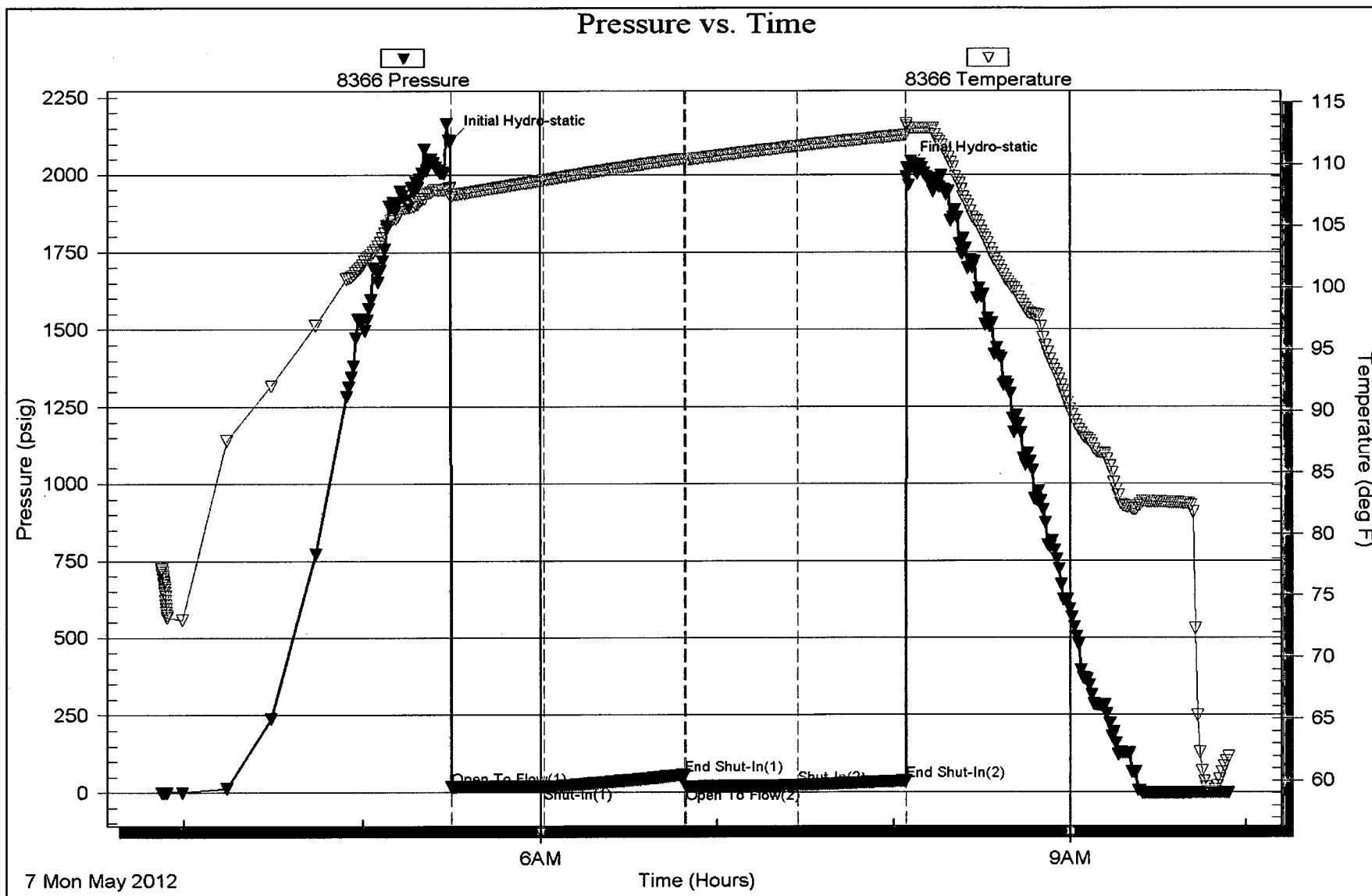
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 49.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.99 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5200.00 ppm			
Filter Cake: inches			

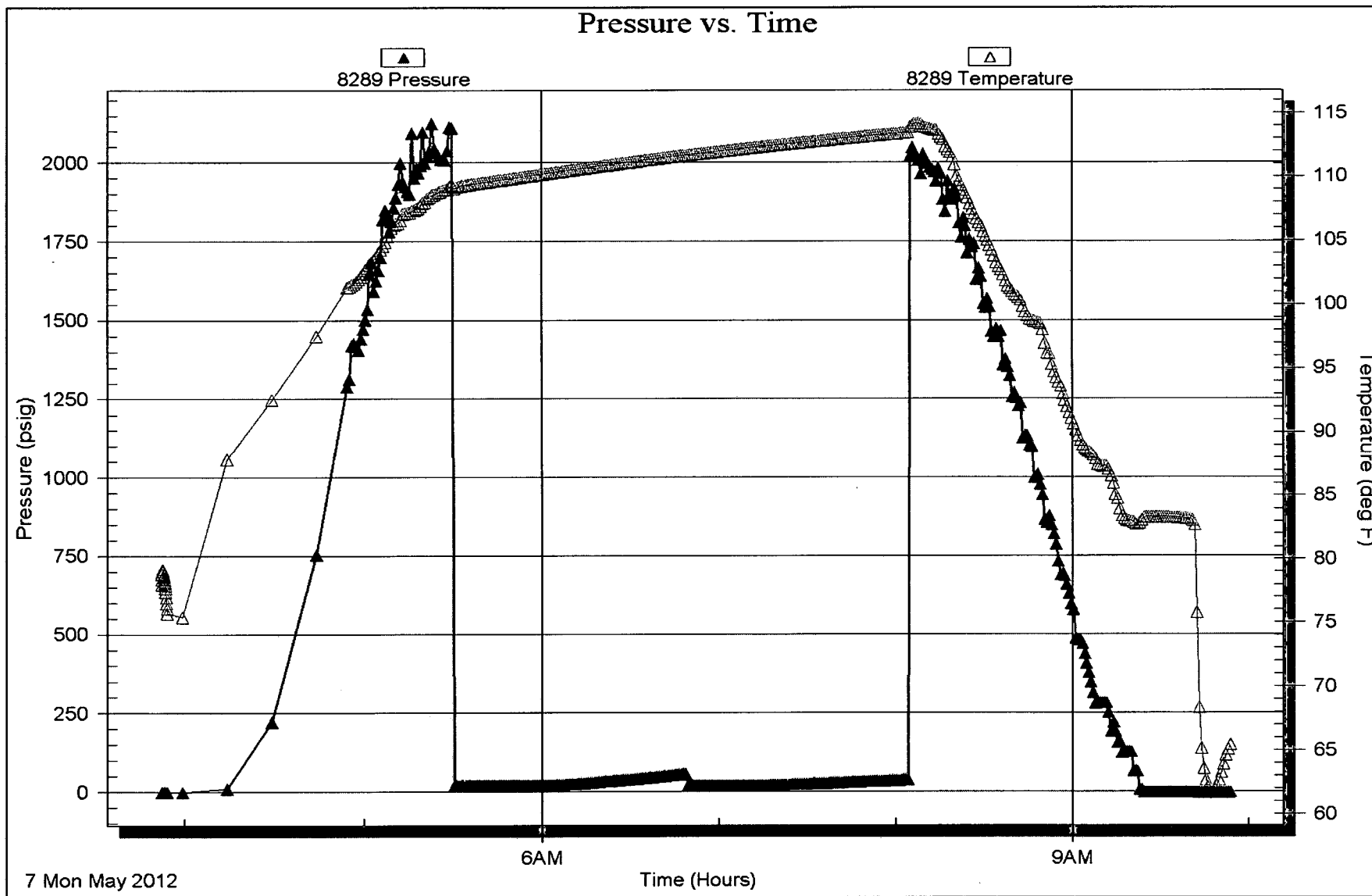
### Recovery Information

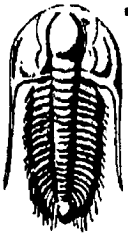
Recovery Table

Length ft	Description	Volume bbl
1.00	Mud W/Oil Scum	0.005

Total Length: 1.00 ft      Total Volume: 0.005 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:







**TRILOBITE TESTING, INC.**

## DRILL STEM TEST REPORT

Hess Oil Company  
 PO Box 1009  
 McPherson, KS. 67460  
 ATTN: Jerry Smith

**11-16s-21w-Ness**  
**Joyce #1**  
 Job Ticket: 47285 **DST#: 2**  
 Test Start: 2012.05.07 @ 16:39:28

### GENERAL INFORMATION:

Formation: **Cherokee Sand**  
 Deviated: No Whipstock: 0.00 ft (KB)  
 Time Tool Opened: 18:32:58  
 Time Test Ended: 21:27:28

Test Type: Conventional Bottom Hole (Reset)  
 Tester: Jason McLemore  
 Unit No: 54

Interval: **4142.00 ft (KB) To 4196.00 ft (KB) (TVD)**  
 Total Depth: 4196.00 ft (KB) (TVD)  
 Hole Diameter: 7.80 inches Hole Condition: Good

Reference Elevations: 2317.00 ft (KB)  
 2312.00 ft (CF)  
 KB to GR/CF: 5.00 ft

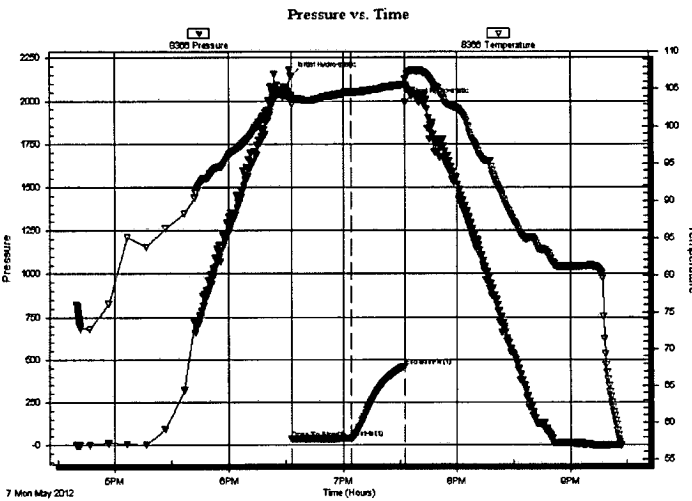
### Serial #: 8366

Inside

Press@RunDepth: 39.89 psig @ 4181.00 ft (KB)  
 Start Date: 2012.05.07 End Date: 2012.05.07  
 Start Time: 16:39:30 End Time: 21:27:28

Capacity: 8000.00 psig  
 Last Calib.: 2012.05.07  
 Time On Btm: 2012.05.07 @ 18:32:43  
 Time Off Btm: 2012.05.07 @ 19:32:43

TEST COMMENT: IFF-Weak Intermittant Surface Blow  
 ISI-Dead



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2143.07	104.16	Initial Hydro-static
1	34.43	103.04	Open To Flow (1)
32	39.89	104.54	Shut-In(1)
60	461.05	105.60	End Shut-In(1)
60	1989.36	106.37	Final Hydro-static

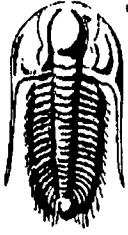
### Recovery

Length (ft)	Description	Volume (bbl)
8.00	Drilling Mud	0.04

\* Recovery from multiple tests

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Hess Oil Company  
PO Box 1009  
McPherson, KS. 67460  
ATTN: Jerry Smith

**11-16s-21w-Ness**  
**Joyce #1**  
Job Ticket: 47285      **DST#: 2**  
Test Start: 2012.05.07 @ 16:39:28

**Mud and Cushion Information**

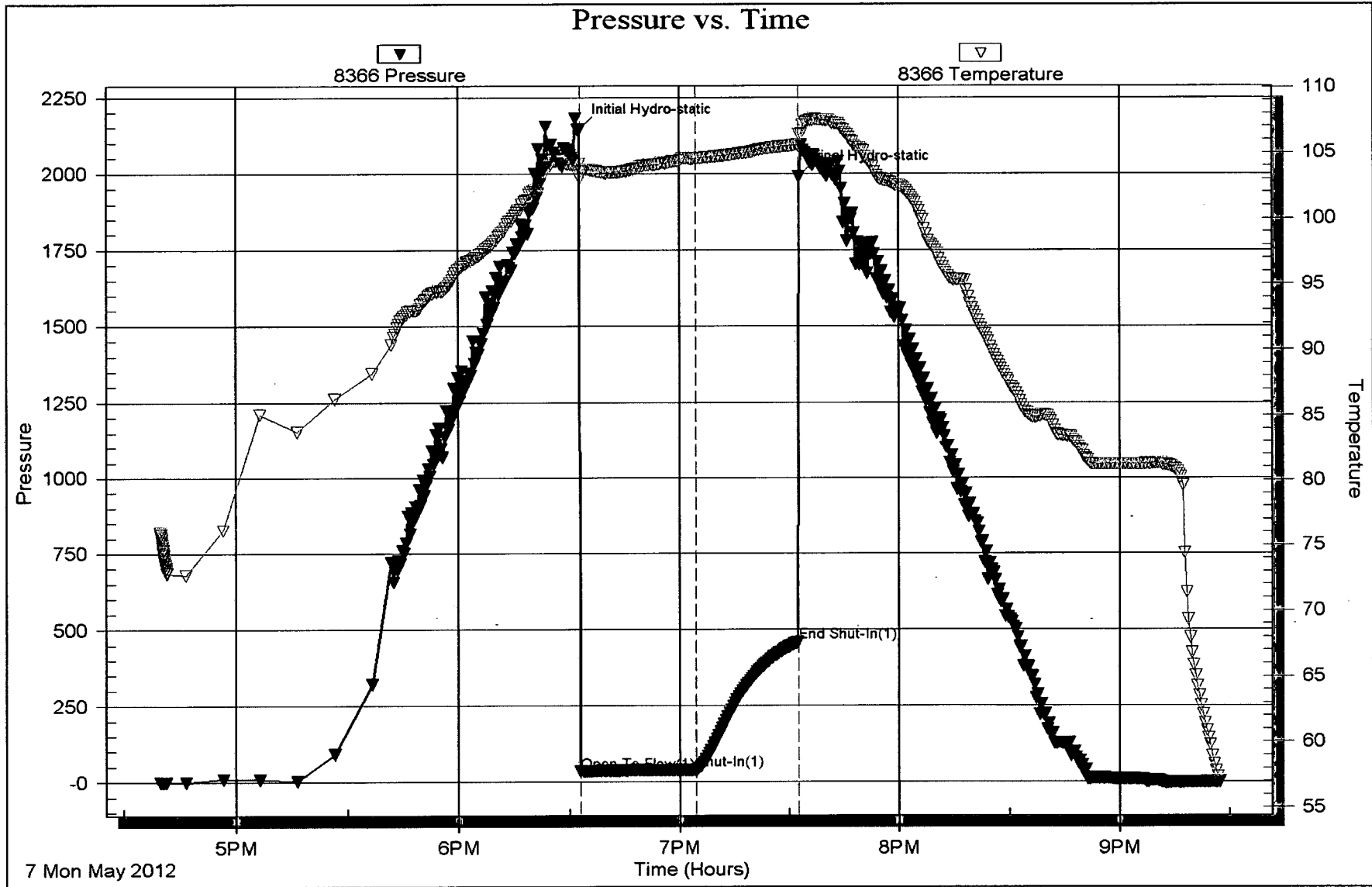
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 10.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 44.00 sec/qt	Cushion Volume: bbl		
Water Loss: 10.39 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5500.00 ppm			
Filter Cake: inches			

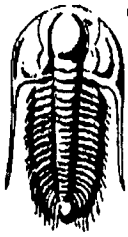
**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
8.00	Drilling Mud	0.039

Total Length: 8.00 ft      Total Volume: 0.039 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Hess Oil Company  
PO Box 1009  
McPherson, KS. 67460  
ATTN: Jerry Smith

**11-16s-21w-Ness**  
**Joyce #1**  
Job Ticket: 47286 **DST#: 3**  
Test Start: 2012.05.08 @ 06:40:28

## GENERAL INFORMATION:

Formation: **Cherokee Sand**  
Deviated: No Whipstock: 0.00 ft (KB)  
Time Tool Opened: 08:39:28  
Time Test Ended: 13:04:43

Test Type: Conventional Bottom Hole (Reset)  
Tester: Jason McLemore  
Unit No: 54

Interval: **4140.00 ft (KB) To 4227.00 ft (KB) (TVD)**  
Total Depth: 4227.00 ft (KB) (TVD)  
Hole Diameter: 7.80 inches Hole Condition: Good

Reference Elevations: 2317.00 ft (KB)  
2312.00 ft (CF)  
KB to GR/CF: 5.00 ft

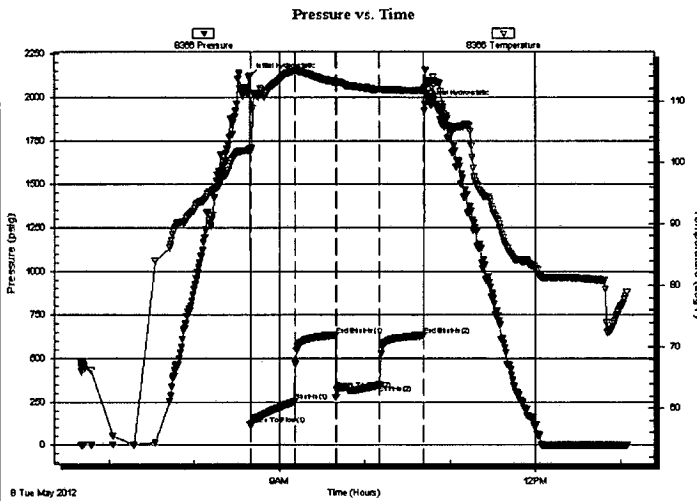
## Serial #: 8366

Inside

Press@RunDepth: 346.51 psig @ 4209.00 ft (KB)  
Start Date: 2012.05.08 End Date: 2012.05.08  
Start Time: 06:40:30 End Time: 13:04:43

Capacity: 8000.00 psig  
Last Calib.: 2012.05.08  
Time On Btm: 2012.05.08 @ 08:38:58  
Time Off Btm: 2012.05.08 @ 10:42:13

TEST COMMENT: IFP-Strong, BOB in 3 Min.  
ISI-Dead  
FFP-Good Blow, Built to 10"  
FSI-Dead



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2119.45	102.17	Initial Hydro-static
1	119.54	101.66	Open To Flow (1)
32	251.27	114.89	Shut-In(1)
61	635.37	113.06	End Shut-In(1)
61	318.09	112.97	Open To Flow (2)
92	346.51	111.78	Shut-In(2)
123	633.94	111.66	End Shut-In(2)
124	1962.65	112.00	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
660.00	Muddy Water	7.07

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Hess Oil Company  
PO Box 1009  
McPherson, KS. 67460  
ATTN: Jerry Smith

**11-16s-21w-Ness**  
**Joyce #1**  
Job Ticket: 47286      **DST#:3**  
Test Start: 2012.05.08 @ 06:40:28

## 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:	24000 ppm
Viscosity: 49.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.97 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5200.00 ppm			
Filter Cake: inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
660.00	Muddy Water	7.072

Total Length: 660.00 ft      Total Volume: 7.072 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:



