

CONFIDENTIAL

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

ORIGINAL

9/27/13
Form ACO-1
October 2008
Form Must Be Typed

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 + 3118
Contact Person: John Niemberger
Phone: (316) 691-9500
CONTRACTOR: License # 30606
Name: Murfin Drilling, Co., Inc.
Wellsite Geologist: Jeff Christian
Purchaser: NCRA

Designate Type of Completion:
 New Well Re-Entry Workover
 Oil SWD SIOW
 Gas ENHR SIGW
 CM (Coal Bed Methane) Temp. Abd.
 Dry Other _____
(Core, WSW, Expl., Cathodic, 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: _____ Plug Back Total Depth _____
 Commingled Docket No.: _____
 Dual Completion Docket No.: _____
 Other (SWD or Enhr.?) Docket No.: _____

<u>6/16/11</u>	<u>6/26/11</u>	<u>6/26/11</u>
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 063-21922-0000
Spot Description: 70' S & 150' W
NE NW NE Sec. 20 Twp. 13 S. R. 31 East West
400 Feet from North / South Line of Section
1800 Feet from East / West Line of Section
Footages Calculated from Nearest Outside Section Corner:
 NE NW SE SW
County: Gove
Lease Name: Hess 20A Well #: 1
Field Name: _____
Producing Formation: Johnson
Elevation: Ground: 2877 Kelly Bushing: 2887
Total Depth: 4630 Plug Back Total Depth: 4577
Amount of Surface Pipe Set and Cemented at: 220 Feet
Multiple Stage Cementing Collar Used? Yes No
If yes, show depth set: 2356 Feet
If Alternate II completion, cement circulated from: surface
feet depth to: 2356 w/ 450 sx cmt.

Drilling Fluid Management Plan Alt II 10-5-11
(Data must be collected from the Reserve Pit)
Chloride content: 8600 ppm Fluid volume: 900 bbls
Dewatering method used: evaporation
Location of fluid disposal if hauled offsite: **RECEIVED**
Operator Name: _____ **SEP 29 2011**
Lease Name: _____ License No.: _____
Quarter _____ Sec. _____ Twp. _____ S. R. **KCC-WICHITA**
County: _____ Docket No.: _____

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.

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: _____
Title: Production Manager Date: 9/27/11
Subscribed and sworn to before me this 27th day of September
20 11
Notary Public: Debra K Phillips
Date Commission Expires: 5-4-15

KCC Office Use ONLY
 Letter of Confidentiality Received 9/27/11 - 9/27/13
 If Denied, Yes Date: _____
 Wireline Log Received
 Geologist Report
 UIC Distribution
CONFIDENTIAL
SEP 27 2013

DEBRA K. PHILLIPS
Notary Public - State of Kansas
My Appt. Expires 5-4-15

KCC

Operator Name: Ritchie Exploration, Inc. Lease Name: Hess 20A Well #: 1
 Sec. 20 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 copy of all Electric Wireline 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 <i>(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;">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	220	common	175	3%cc, 2%gel
Production	7-7/8	5-1/2	15.5	4621	ASC	220	10% soil, 2% gel & 3/4% CD-31

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	4485' - 4490' (7/18/11)	500 gallons 15% NE	
			RECEIVED
			SEP 29 2011
			KCC WICHITA

TUBING RECORD: Size: <u>2-7/8</u> Set At: <u>4558</u> Packer At: <u> </u> Liner Run: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Date of First, Resumed Production, SWD or Enhr. <u>8/4/11</u>	Producing Method: <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain) <u> </u>
Estimated Production Per 24 Hours	Oil Bbls. <u>126.56</u> Gas Mcf <u> </u> Water Bbls. <u>0</u> Gas-Oil Ratio <u> </u> Gravity <u>30.1</u>

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 <input type="checkbox"/> Other (Specify) <u> </u>	PRODUCTION INTERVAL: <p style="text-align: center; font-size: 1.2em;">CONFIDENTIAL</p> <p style="text-align: center; font-size: 1.2em;">SEP 27 2013</p>
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#1 Hess 20A

400' FNL & 1800' FEL

70' S & 150' W of NE NW NE Section 20-13S-31W

Gove County, Kansas

API# 15-063-21922-0000

Elevation: 2877' GL: 2887' KB

<u>Sample Tops</u>			<u>Ref.</u> <u>Well</u>
Anhydrite	2369'	+518	+1
B/Anhydrite	2391'	+496	+2
Heebner	3882'	-995	-12
Toronto	3909'	-1022	-10
Lansing	3926'	-1039	-13
Muncie Shale	4077'	-1190	-9
LKC "H"	4089'	-1202	-10
Stark Shale	4159'	-1272	-9
Hush.	4193'	-1306	-8
BKC	4230'	-1343	-9
Marmaton	4258'	-1371	-8
Altamont	4283'	-1396	-7
Pawnee	4361'	-1474	-9
Myrick	4393'	-1506	-9
Fort Scott	4413'	-1526	-8
Cherokee Shale	4441'	-1554	-9
Johnson	4483'	-1596	-8
B/Johnson	4504'	-1617	-9
Morrow Sand	4510'	-1623	N/A
Mississippian	4526'	-1639	-4
RTD	4630'	-1743	

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ALLIED CEMENTING CO., LLC. 040898

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

SERVICE POINT: Oakley, KS

DATE <u>6-27-11</u>	SEC. <u>20</u>	TWP. <u>13</u>	RANGE <u>31</u>	CALLED OUT	ON LOCATION	JOB START <u>4:30 pm</u>	JOB FINISH <u>5:30 pm</u>
LEASE <u>Mass 20A</u>	WELL # <u>1</u>	LOCATION <u>Oakley 115 3E 35</u>			COUNTY <u>Gove</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one)				<u>1E Stato</u>			

CONTRACTOR Express Well OWNER same

TYPE OF JOB port collar

HOLE SIZE _____ T.D. 4630' CEMENT _____

CASING SIZE 5 1/2 DEPTH 4621' AMOUNT ORDERED 900 lbs 4000 # 20 gal

TUBING SIZE _____ DEPTH _____ Ver # flo seal 1000# Hulls

DRILL PIPE _____ DEPTH _____

TOOL Port Collar DEPTH 2356'

PRES. MAX _____ MINIMUM _____ COMMON 324 sks @ 16.25 5265.00

MEAS. LINE _____ SHOE JOINT _____ POZMIX 216 sks @ 8.50 1836.00

CEMENT LEFT IN CSG. _____ GEL 31 sks @ 26.25 658.75

PERFS. _____ CHLORIDE _____

DISPLACEMENT _____ ASC _____

EQUIPMENT

PUMP TRUCK CEMENTER Lakene closeal 135 # @ 2.70 364.50

431 HELPER Darren Cottonseed hulls 330 # @ .89 489.50

BULK TRUCK _____

394/287 DRIVER Earl

BULK TRUCK _____

_____ DRIVER _____

HANDLING 954 sks @ 2.25 2146.50

MILEAGE 214 sks/mile 1783.28

TOTAL 12544.23

REMARKS:

pressure to 1200#. Open port collar
mix 450 sks cement and 250# hulls
cement did not circulate. closed port
collar, reloaded truck with 450 sks,
mix 90 sks cement w/ 300# hulls
cement did not circulate. could
not move, pulled tubing out on
swedge of valve & pressure up to
400 #

Thank you

CHARGE TO: Ritchie Exploration

STREET _____

CITY _____ STATE _____ ZIP _____

SERVICE

DEPTH OF JOB 2356'

PUMP TRUCK CHARGE 2125.00

EXTRA FOOTAGE _____

MILEAGE 12 x 2 @ 7.00 238.00

MANIFOLD swedge @ 325.00

Light Vehicle @ 4.00 136.00

TOTAL 2824.00

TOTAL 3129.00

PLUG & FLOAT EQUIPMENT

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

TOTAL _____

SALES TAX (If Any) _____

TOTAL CHARGES _____

PRINTED NAME _____ DISCOUNT _____ IF PAID IN 30 DAYS

SIGNATURE Thomas [Signature] CONFIDENTIAL

SEP 27 2013

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KCC WICHITA

A

ALLIED CEMENTING CO., LLC. 039845

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

SERVICE POINT:
OAKLEY

DATE <u>6-16-11</u>	SEC. <u>20</u>	TWP. <u>13S</u>	RANGE <u>31W</u>	CALLED OUT	ON LOCATION <u>9:30 AM</u>	JOB START <u>10:30 AM</u>	JOB FINISH <u>11:00 AM</u>
LEASE <u>Hess 20A</u>	WELL # <u>1</u>	LOCATION <u>OAKLEY 1/5-3E-35-1E</u>			COUNTY <u>GOVE</u>	STATE <u>KS</u>	
OLD OR <u>NEW</u> (Circle one)							

CONTRACTOR MURFIN OIL & GAS REC # 1F OWNER SAME

TYPE OF JOB SURFACE
 HOLE SIZE 12 1/4" T.D. 220'
 CEMENT AMOUNT ORDERED 175 SKS COM 3% CC 2% GEL
 CASING SIZE 8 7/8" DEPTH 220'
 TUBING SIZE DEPTH
 DRILL PIPE DEPTH
 TOOL DEPTH

PRES. MAX MINIMUM
 MEAS. LINE SHOE JOINT
 CEMENT LEFT IN CSG. 15'
 PERFS.
 DISPLACEMENT 13 BBLs

EQUIPMENT
 PUMP TRUCK CEMENTER TERRY
 # 422 HELPER EARL
 BULK TRUCK
 # 347 DRIVER CHRIS
 BULK TRUCK
 # DRIVER

COMMON	<u>175 SKS</u>	@	<u>16.25</u>	<u>2843.75</u>
POZMIX		@		
GEL	<u>3 SKS</u>	@	<u>21.25</u>	<u>63.75</u>
CHLORIDE	<u>6 SKS</u>	@	<u>58.20</u>	<u>349.20</u>
ASC		@		
		@		
		@		
		@		
		@		
		@		
HANDLING	<u>184 SKS</u>	@	<u>2.25</u>	<u>414.00</u>
MILEAGE	<u>11.6 PER 5 RT MILE</u>			<u>344.00</u>
TOTAL				<u>4014.75</u>

REMARKS:
MIX 175 SKS COM 3% CC 2% GEL
DISPLACE 13 BBLs WATER.

CEMENT did CTC
THANK YOU

CHARGE TO: ROTCHER EXPLORATION
 STREET _____
 CITY _____ STATE _____ ZIP _____

SERVICE
 DEPTH OF JOB 220'
 PUMP TRUCK CHARGE 1125.00
 EXTRA FOOTAGE @ _____
 MILEAGE 17X2 @ 7.00 238.00
 MANIFOLD @ _____
LEANT Vehicle 17X2 @ 4.00 136.00
 @ _____
 @ _____
 TOTAL 1499.00

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 Jason Coelli
 SIGNATURE Jason Coelli

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

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 KCC

Handwritten mark

ALLIED CEMENTING CO., LLC. 043436

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

SERVICE POINT:
Oakley

DATE <u>6-26-11</u>	SEC. <u>20</u>	TWP. <u>13</u>	RANGE <u>31</u>	CALLED OUT	ON LOCATION	JOB START <u>11:00 AM</u>	JOB FINISH <u>11:30 AM</u>
LEASE <u>Hess 20A</u>	WELL # <u>1</u>	LOCATION <u>Oakley 11S 3E</u>	COUNTY <u>Gove</u>	STATE <u>Ks</u>			
OLD OR (NEW) (Circle one) <u>NEW</u>			<u>3S 1E SINTO</u>				

CONTRACTOR Murfin Drilling Rig 14 OWNER same

TYPE OF JOB Production

HOLE SIZE 7 7/8 T.D. 4630'

CASING SIZE 5 7/8 DEPTH 4621'

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL Port collar DEPTH 2356'

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT 21'

CEMENT LEFT IN CSG. 21'

PERFS.

DISPLACEMENT 109 BBL

EQUIPMENT

PUMP TRUCK CEMENTER Andrew

423-287 HELPER Jerry

BULK TRUCK

396 DRIVER Mike

BULK TRUCK

DRIVER

CEMENT	AMOUNT ORDERED		
	<u>250 sks Asc</u>	@ <u>19.00</u>	<u>4750.00</u>
	<u>5th Gilsonite 10% salt 24 gal</u>	@ <u>0.89</u>	<u>112.50</u>
	<u>3/4 of 1% CD-31 500 gal WFR-2</u>	@ <u>23.95</u>	<u>574.80</u>
	<u>CD-31 176#</u>	@ <u>9.35</u>	<u>1645.60</u>
	<u>WFR-2 500 gal</u>	@ <u>11.27</u>	<u>635.00</u>
	<u>HANDLING 305 sks</u>	@ <u>2.25</u>	<u>686.25</u>
	<u>MILEAGE 11# sk/mile</u>	@ <u>5.70</u>	<u>627.00</u>
TOTAL			<u>9974.50</u>

REMARKS:

Pump 500 gal WFR-2, plug mouse hole 15 sks, Rgt hole 30 sks, mix 200 sks down shaft casing wash pump and lines clean. Displace plug 900# lift 1300# land plug. Plug landed float held.

Thank you

SERVICE

DEPTH OF JOB	<u>4621'</u>		
PUMP TRUCK CHARGE		@	<u>2405.00</u>
EXTRA FOOTAGE		@	
MILEAGE <u>17 miles x 2</u>		@ <u>2.00</u>	<u>238.00</u>
MANIFOLD <u>head</u>		@	<u>200.00</u>
<u>Light vehicle</u>		@ <u>4.00</u>	<u>136.00</u>
TOTAL			<u>2979.00</u>

CHARGE TO: Ritchie Exploration

STREET _____

CITY _____ STATE _____ ZIP _____

PLUG & FLOAT EQUIPMENT

<u>1 Guide shoe</u>	@	<u>240.00</u>
<u>1 AFE Insert</u>	@	<u>286.00</u>
<u>1 Port collar</u>	@	<u>2600.00</u>
<u>1 Rubber plug</u>	@	<u>73.00</u>
<u>4 Baskets</u>	@ <u>332.00</u>	<u>1348.00</u>
<u>7 Turbo Lizers</u>	@ <u>49.00</u>	<u>343.00</u>
TOTAL		<u>4890.00</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. A.

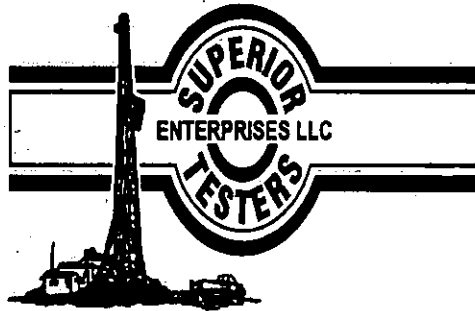
SALES TAX (If Any) _____

TOTAL CHARGES _____

DISCOUNT _____ IF PAID IN 30 DAYS

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SEP 27 2013
KCC



DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

8100 East 22nd Street North #
700 Wichita, Kansas
67278

ATTN: Jeff Christian

20/13S/31W Gove

#1 Hess 20A

Start Date: 2011.06.20 @ 01:43:00

End Date: 2011.06.20 @ 08:12:23

Job Ticket #: 16604 DST #: 1

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530

1-800-792-6902

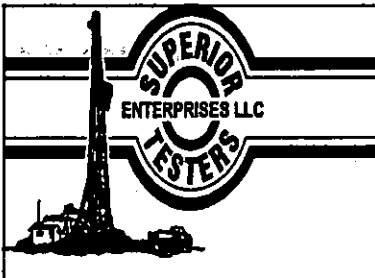
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Printed: 2011.07.05 @ 14:00:21

Ritchie Exploration #1 Hess 20A 20/13S/31W Gove DST # 1 Lansing Kansas City 2011.06.20



DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration
 8100 East 22nd Street North #
 700 Wichita, Kansas
 67278
 ATTN: Jeff Christian

#1 Hess 20A
20/13S/31W Gove
 Job Ticket: 16604 DST#: 1
 Test Start: 2011.06.20 @ 01:43:00

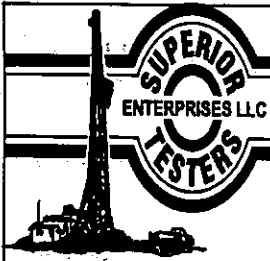
Tool Information

Drill Pipe:	Length: 3406.00 ft	Diameter: 3.80 inches	Volume: 47.78 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 535.41 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 40000.00 lb
			<u>Total Volume: 50.41 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.41 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	3942.00 ft			Final 70000.00 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: Thank You for the work!

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-in Tool	5.00			3927.00	
Hydrolic Tool	5.00			3932.00	
Packer	5.00			3937.00	20.00 Bottom Of Top Packer
Packer	5.00			3942.00	
Perforations	25.00			3967.00	
Recorder	1.00	6666	Inside	3968.00	
Recorder	1.00	8405	Outside	3969.00	
Bull Plug	3.00			3972.00	30.00 Bottom Packers & Anchor

Total Tool Length: 50.00



DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

#1 Hess 20A

8100 East 22nd Street North #
700 Wichita, Kansas
67278
ATTN: Jeff Christian

20/13S/31W Gove

Job Ticket: 16604

DST#: 1

Test Start: 2011.06.20 @ 01:43:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 67.00 sec/qt

Water Loss: 7.57 in³

Resistivity: ohm.m

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psia

Oil API:

Water Salinity:

deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
95.00	Slightly Oil cut Watery Mud	0.467
0.00	Oil 10% Water 30% Mud 60%	0.000
190.00	Slightly Oil cut Muddy Water	0.934
0.00	Oil 5% Mud 20% Water 75%	0.000
190.00	Salt Water with a trace of Oil	0.934
0.00	Water 100%	0.000
0.00	Chlorides were 56,000.0	0.000
0.00	Resistivity was .38 @ 68 degrees	0.000

Total Length: 475.00 ft

Total Volume: 2.335 bbl

Num Fluid Samples: 0

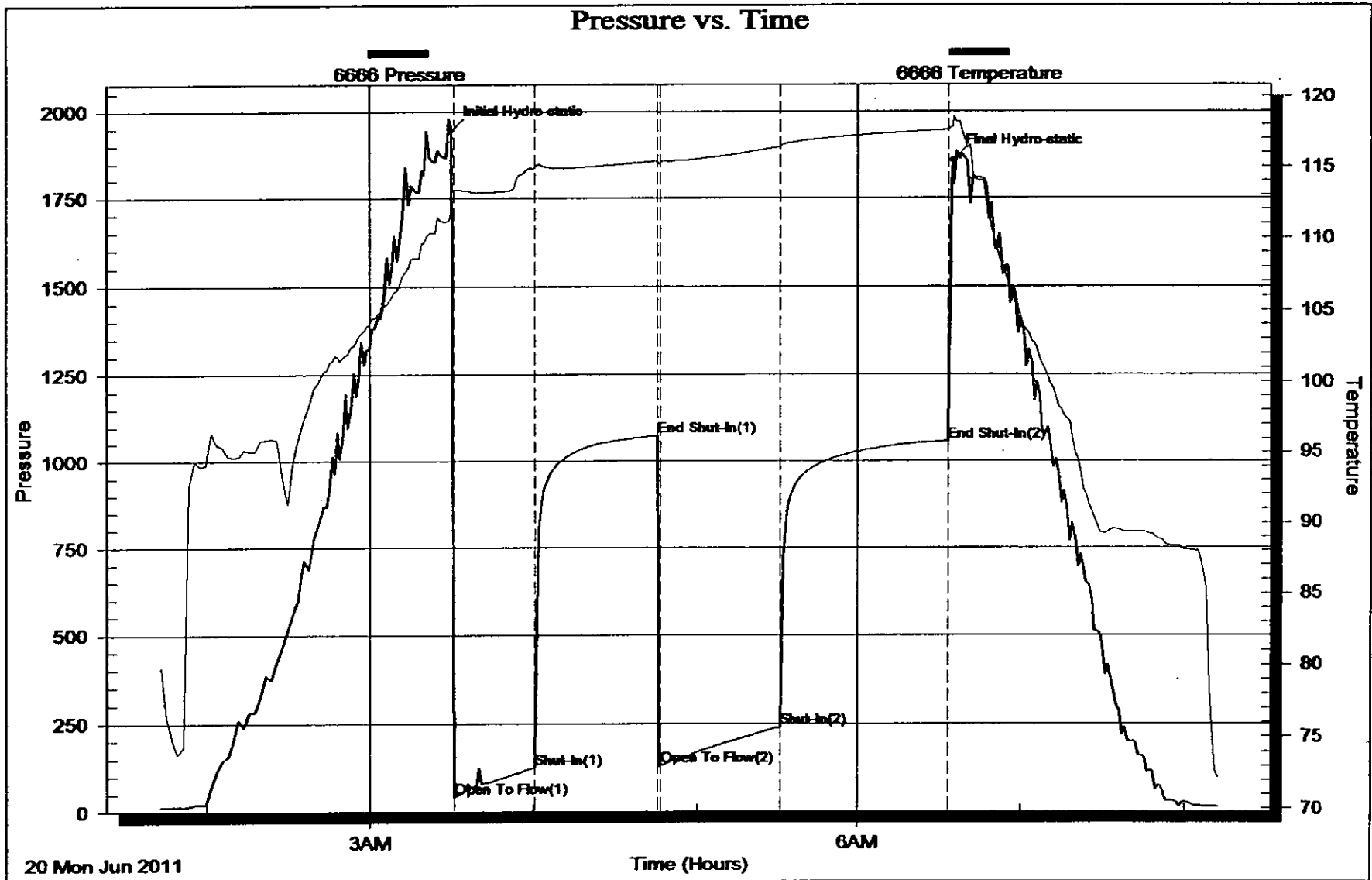
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

8100 East 22nd Street North #
700 Wichita, Kansas
67278

ATTN: Jeff Christian

20/13S/31W Gove

#1 Hess 20A

Start Date: 2011.06.20 @ 03:43:00

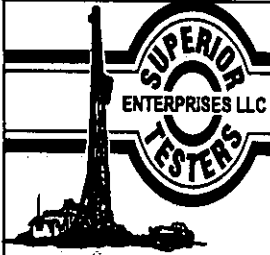
End Date: 2011.06.20 @ 09:15:30

Job Ticket #: 16605 DST #: 2

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

Printed: 2011.07.05 @ 14:00:32

Ritchie Exploration #1 Hess 20A 20/13S/31W Gove DST # 2 Lansing Kansas City 2011.06.20



DRILL STEM TEST REPORT

Ritchie Exploration

#1 Hess 20A

8100 East 22nd Street North #
700 Wichita, Kansas
67278
ATTN: Jeff Christian

20/13S/31W Gove

Job Ticket: 16605 DST#: 2
Test Start: 2011.06.20 @ 03:43:00

GENERAL INFORMATION:

Formation: **Lansing Kansas City**
Deviated: **No Whipstock:** ft (KB)
Time Tool Opened: 05:51:30
Time Test Ended: 09:15:30

Test Type: **Conventional Bottom Hole (Initial)**
Tester: **Dylan E Ellis/Dustin**
Unit No: **3345/Scott City/60**

Interval: **3972.00 ft (KB) To 3990.00 ft (KB) (TVD)**
Total Depth: **3990.00 ft (KB) (TVD)**
Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **2887.00 ft (KB)**
2877.00 ft (CF)
KB to GR/CF: **10.00 ft**

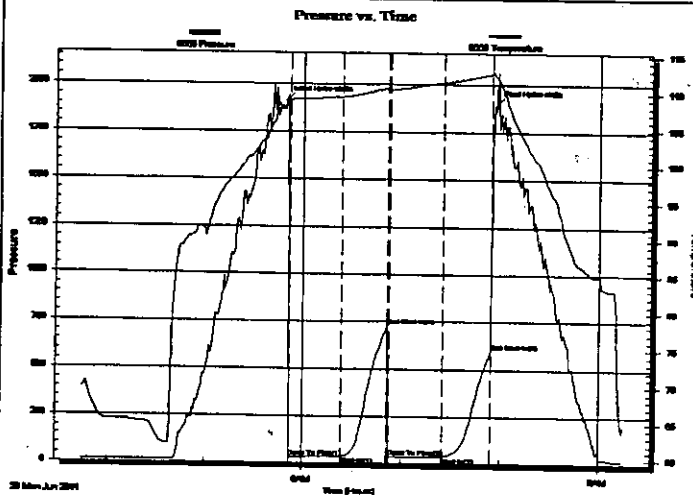
Serial #: 6666

Outside

Press@RunDepth: **36.23 psia @ 3987.00 ft (KB)**
Start Date: **2011.06.20** End Date: **2011.06.20**
Start Time: **03:44:00** End Time: **09:15:30**

Capacity: **5000.00 psia**
Last Calib.: **2011.06.20**
Time On Btm: **2011.06.20 @ 05:49:30**
Time Off Btm: **2011.06.20 @ 07:57:00**

TEST COMMENT: 1ST Opening 30 Minutes opened tool/blow dead/w e got 6 bubbles after 28 minutes and thats it
1ST Shut-In 30 Minutes no blow back
2ND Openig 30 Minutes opeed tool/blow dead/flushed tool good surge no help/blow still dead
2ND Shut-In 30 Minutes no blow back



PRESSURE SUMMARY

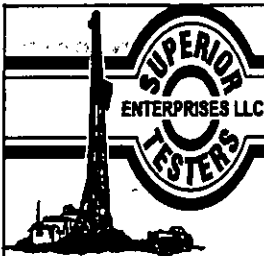
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1911.01	108.21	Initial Hydro-static
2	31.09	109.08	Open To Flow (1)
35	33.86	109.49	Shut-In(1)
62	723.28	110.59	End Shut-In(1)
63	32.93	110.39	Open To Flow (2)
95	36.23	111.39	Shut-In(2)
125	597.61	112.58	End Shut-In(2)
128	1900.17	112.13	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Very Lightly Oil Spotted Mud-100%	0.05

Gas Rates

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



DRILL STEM TEST REPORT

Ritchie Exploration
 8100 East 22nd Street North #
 700 Wichita, Kansas
 67278
 ATTN: Jeff Christian

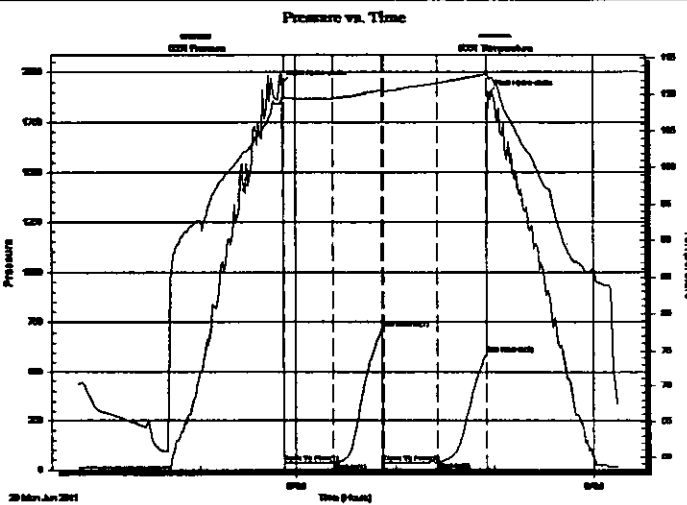
#1 Hess 20A
 20/13S/31W Gove
 Job Ticket: 16605 DST#: 2
 Test Start: 2011.06.20 @ 03:43:00

GENERAL INFORMATION:

Formation: Lansing Kansas City
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 05:51:30 Tester: Dylan E Ellis/Dustin
 Time Test Ended: 09:15:30 Unit No: 3345/Scott City/60
 Interval: 3972.00 ft (KB) To 3990.00 ft (KB) (TVD) Reference Elevations: 2887.00 ft (KB)
 Total Depth: 3990.00 ft (KB) (TVD) 2877.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 10.00 ft

Serial #: 6651 Inside
 Press@RunDepth: 596.02 psia @ 3986.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2011.06.20 End Date: 2011.06.20 Last Calib.: 2011.06.20
 Start Time: 03:44:00 End Time: 09:16:00 Time On Btm: 2011.06.20 @ 05:51:00
 Time Off Btm: 2011.06.20 @ 07:56:00

TEST COMMENT: 1ST Opening 30 Minutes opened tool/blow dead/w we got 6 bubbles after 28 minutes and thats it
 1ST Shut-in 30 Minutes no blow back
 2ND Openig 30 Minutes opeed tool/blow dead/flushed tool good surge no help/blow still dead
 2ND Shut-in 30 Minutes no blow back



PRESSURE SUMMARY

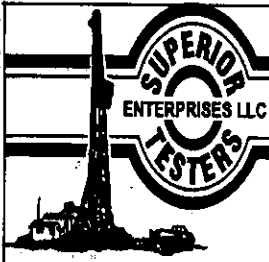
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1938.44	109.37	Initial Hydro-static
2	33.45	109.63	Open To Flow (1)
32	34.47	109.58	Shut-In(1)
61	717.49	110.61	End Shut-In(1)
62	34.45	110.45	Open To Flow (2)
94	35.65	111.61	Shut-In(2)
124	596.02	112.77	End Shut-In(2)
125	1889.81	112.40	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Very Lightly Oil Spotted Mud-100%	0.05

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration
 8100 East 22nd Street North #
 700 Wichita, Kansas
 67278
 ATTN: Jeff Christian

#1 Hess 20A
 20/13S/31W Gove
 Job Ticket: 16605 DST#: 2
 Test Start: 2011.06.20 @ 03:43:00

Tool Information

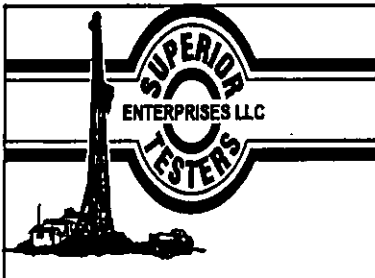
Drill Pipe:	Length: 3426.00 ft	Diameter: 3.80 inches	Volume: 48.06 bbl	Tool Weight: 2000.00 lb
Heavy.Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 535.41 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 24000.00 lb
			<u>Total Volume: 50.69 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.41 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	3972.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	18.00 ft			
Tool Length:	38.00 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			3957.00	
Hydraulic Tool	5.00			3962.00	
Packer	5.00			3967.00	20.00
Packer	5.00			3972.00	Bottom Of Top Packer
Perforations	13.00			3985.00	
Recorder	1.00	6651	Inside	3986.00	
Recorder	1.00	6666	Outside	3987.00	
Bull Plug	3.00			3990.00	18.00
					Bottom Packers & Anchor

Total Tool Length: 38.00



DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration
 8100 East 22nd Street North #
 700 Wichita, Kansas
 67278
 ATTN: Jeff Christian

#1 Hess 20A
20/13S/31W Gove
 Job Ticket: 16605 DST#: 2
 Test Start: 2011.06.20 @ 03:43:00

Mud and Cushion Information

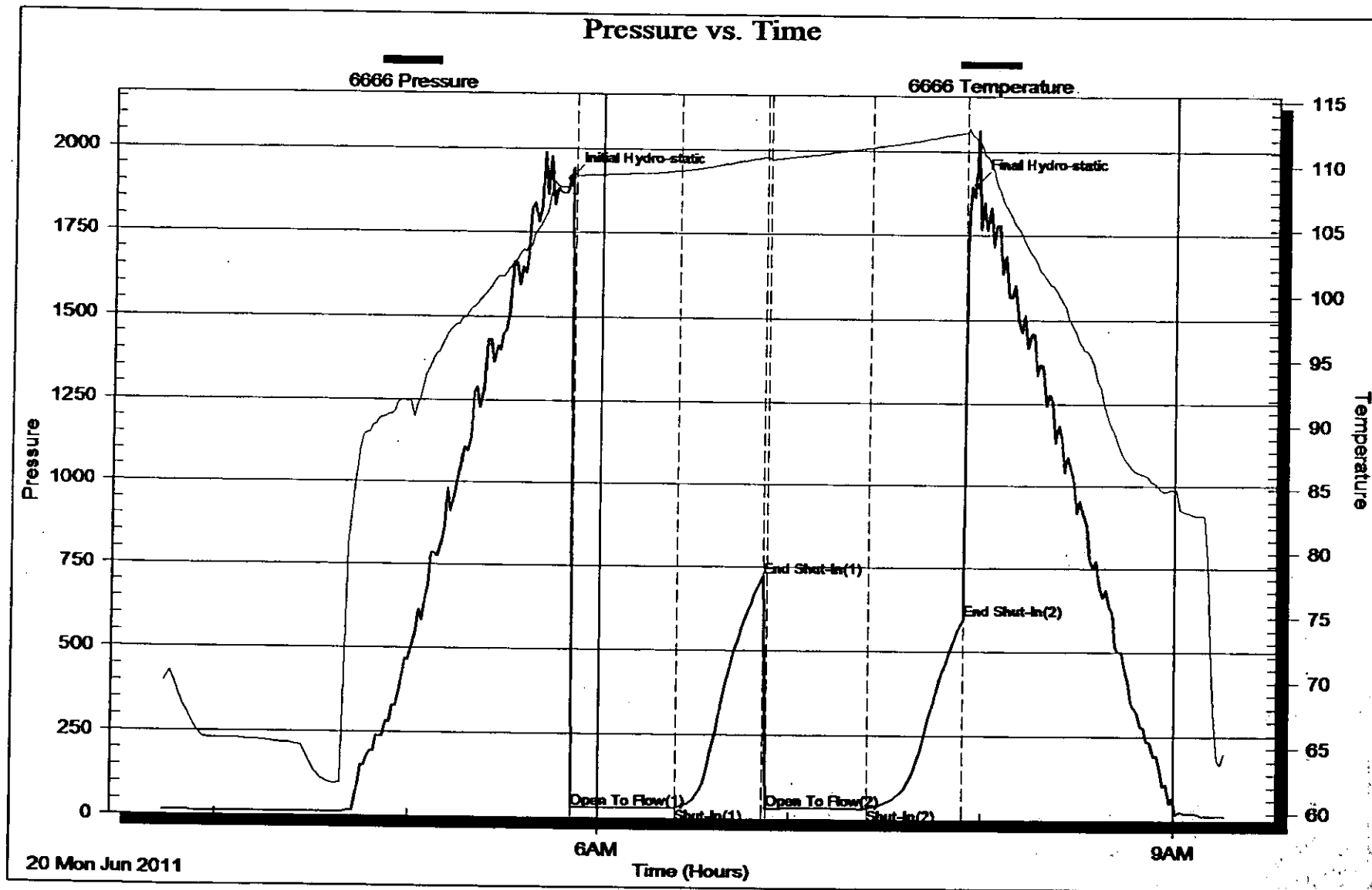
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 59.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.97 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 2500.00 ppm			
Filter Cake: 1.00 inches			

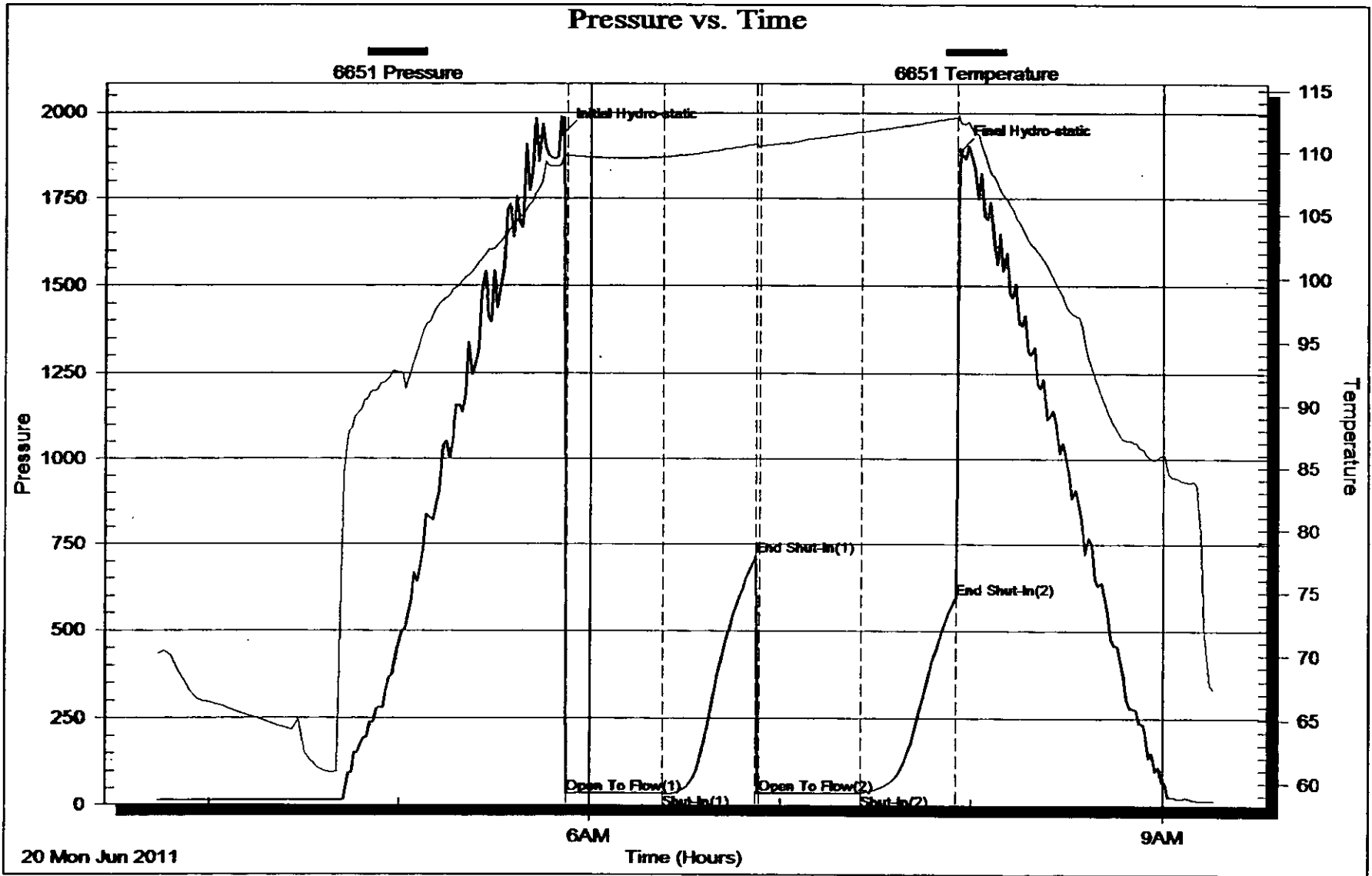
Recovery Information

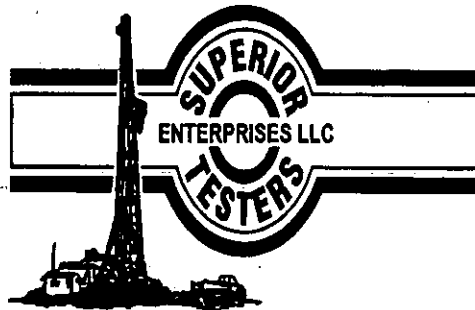
Recovery Table

Length ft	Description	Volume bbl
10.00	Very Lightly Oil Spotted Mud-100%	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

8100 East 22nd Street North #
700 Wichita, Kansas
67278

ATTN: Jeff Christian

20/13S/31W Gove

#1 Hess 20A

Start Date: 2011.06.21 @ 04:30:00

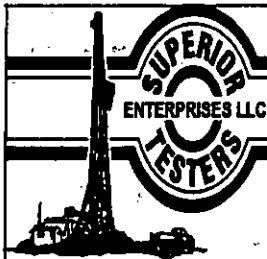
End Date: 2011.06.21 @ 10:49:30

Job Ticket #: 16606 DST #: 3

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

Printed: 2011.07.05 @ 14:00:42

Ritchie Exploration #1 Hess 20A 20/13S/31W Gove DST # 3 Lansing Kansas City 2011.06.21



DRILL STEM TEST REPORT

Ritchie Exploration
 8100 East 22nd Street North #
 700 Wichita, Kansas
 67278
 ATTN: Jeff Christian

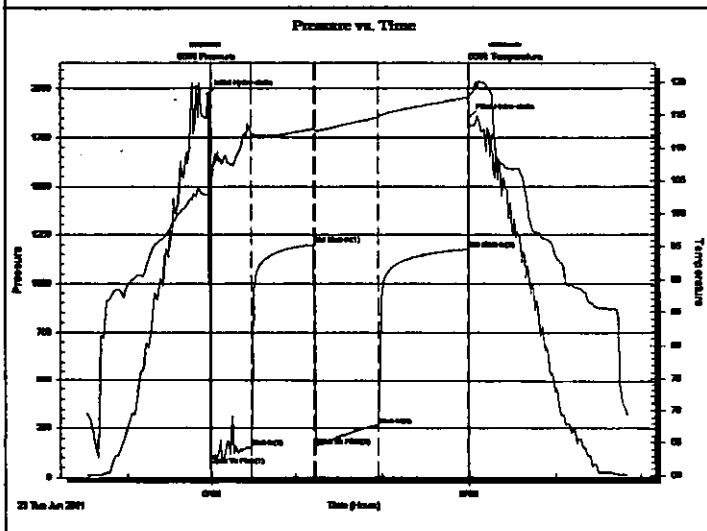
#1 Hess 20A
20/13S/31W Gove
 Job Ticket: 16606 **DST#: 3**
 Test Start: 2011.06.21 @ 04:30:00

GENERAL INFORMATION:

Formation: **Lansing Kansas City**
 Deviated: **No** Whipstock: **ft (KB)**
 Time Tool Opened: **05:58:00**
 Time Test Ended: **10:49:30**
 Interval: **3990.00 ft (KB) To 4012.00 ft (KB) (TVD)**
 Total Depth: **4012.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**
 Test Type: **Conventional Bottom Hole (Initial)**
 Tester: **Dylan E Ellis/Dustin**
 Unit No: **3345/Scott City/60**
 Reference Elevations: **2887.00 ft (KB)**
2877.00 ft (CF)
 KB to GR/CF: **10.00 ft**

Serial #: 6651 **Inside**
 Press@RunDepth: **1176.41 psia @ 4008.00 ft (KB)** Capacity: **5000.00 psia**
 Start Date: **2011.06.21** End Date: **2011.06.21** Last Calib.: **2011.06.21**
 Start Time: **04:31:00** End Time: **10:50:30** Time On Btm: **2011.06.21 @ 05:58:00**
 Time Off Btm: **2011.06.21 @ 09:00:00**

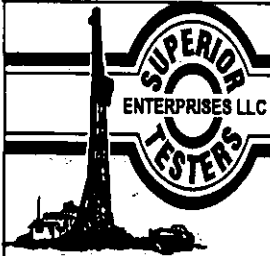
TEST COMMENT: 1ST Opening 30 Minutes weak but building blow/blow blew to bottom of bucket of water in 30 minutes
 1ST Shut-in 45 Minutes yes very weak blow back at surface
 2ND Opening 45 Minutes weak building blow/blow blew to bottom of bucket of water in 38 minutes
 2ND Shut-in 60 Minutes very weak surface blow bak



PRESSURE SUMMARY			
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1973.49	103.16	Initial Hydro-static
1	61.97	103.79	Open To Flow (1)
31	1154.96	112.07	Shut-in(1)
75	1122.95	112.95	End Shut-in(1)
76	1162.43	112.61	Open To Flow (2)
120	1126.54	114.68	Shut-in(2)
181	1176.41	117.61	End Shut-in(2)
182	1850.60	118.08	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
50.00	Clean free oil 100%	0.25
65.00	Water cut muddy oil	0.32
0.00	10% water 20% mud 70%oil	0.00
95.00	Lightly water cut oil mud	0.47
0.00	10%water 40%oil 50% mud	0.00
190.00	Lightly water mud cut oil	0.93

Gas Rates			
	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)



DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

#1 Hess 20A

8100 East 22nd Street North #
700 Wichita, Kansas
67278

20/13S/31W Gove

Job Ticket: 16606

DST#: 3

ATTN: Jeff Christian

Test Start: 2011.06.21 @ 04:30:00

Tool Information

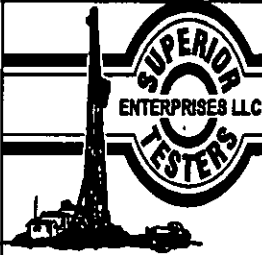
Drill Pipe:	Length: 3454.00 ft	Diameter: 3.80 inches	Volume: 48.45 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 535.41 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 25000.00 lb
			Total Volume: 51.08 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.41 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	3990.00 ft			Final 74000.00 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			3975.00	
Hydraulic Tool	5.00			3980.00	
Packer	5.00			3985.00	20.00 Bottom Of Top Packer
Packer	5.00			3990.00	
Perforations	17.00			4007.00	
Recorder	1.00	6651	Inside	4008.00	
Recorder	1.00	6666	Outside	4009.00	
Bull Plug	3.00			4012.00	22.00 Bottom Packers & Anchor

Total Tool Length: 42.00



DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration
 8100 East 22nd Street North #
 700 Wichita, Kansas
 67278
 ATTN: Jeff Christian

#1 Hess 20A
 20/13S/31W Gove
 Job Ticket: 16606 DST#: 3
 Test Start: 2011.06.21 @ 04:30:00

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: 59.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.98 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 2500.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

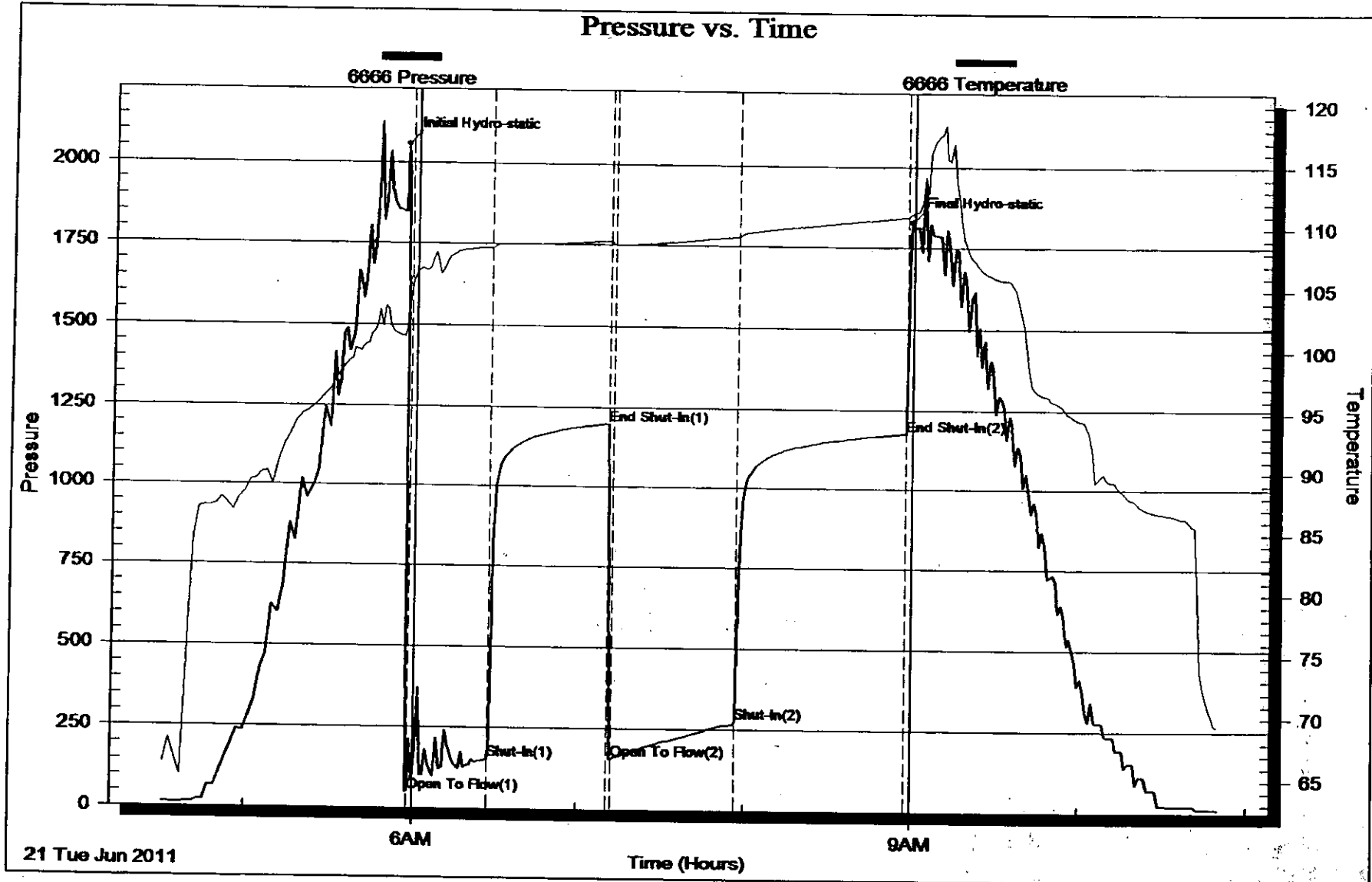
Length ft	Description	Volume bbl
50.00	Clean free oil 100%	0.246
65.00	Water cut muddy oil	0.320
0.00	10% water 20% mud 70%oil	0.000
95.00	Lightly water cut oil mud	0.467
0.00	10%water 40%oil 50% mud	0.000
190.00	Lightly water mud cut oil	0.934
0.00	10% water 10%mud 80%oil	0.000
190.00	Light oil cut water	1.432
0.00	10%oil 90% water	0.000
0.00	Gravity of oil corrected w as 46	0.000
0.00	Chlorides were 52000	0.000
0.00	Resistivity w as .30@80degrees	0.000

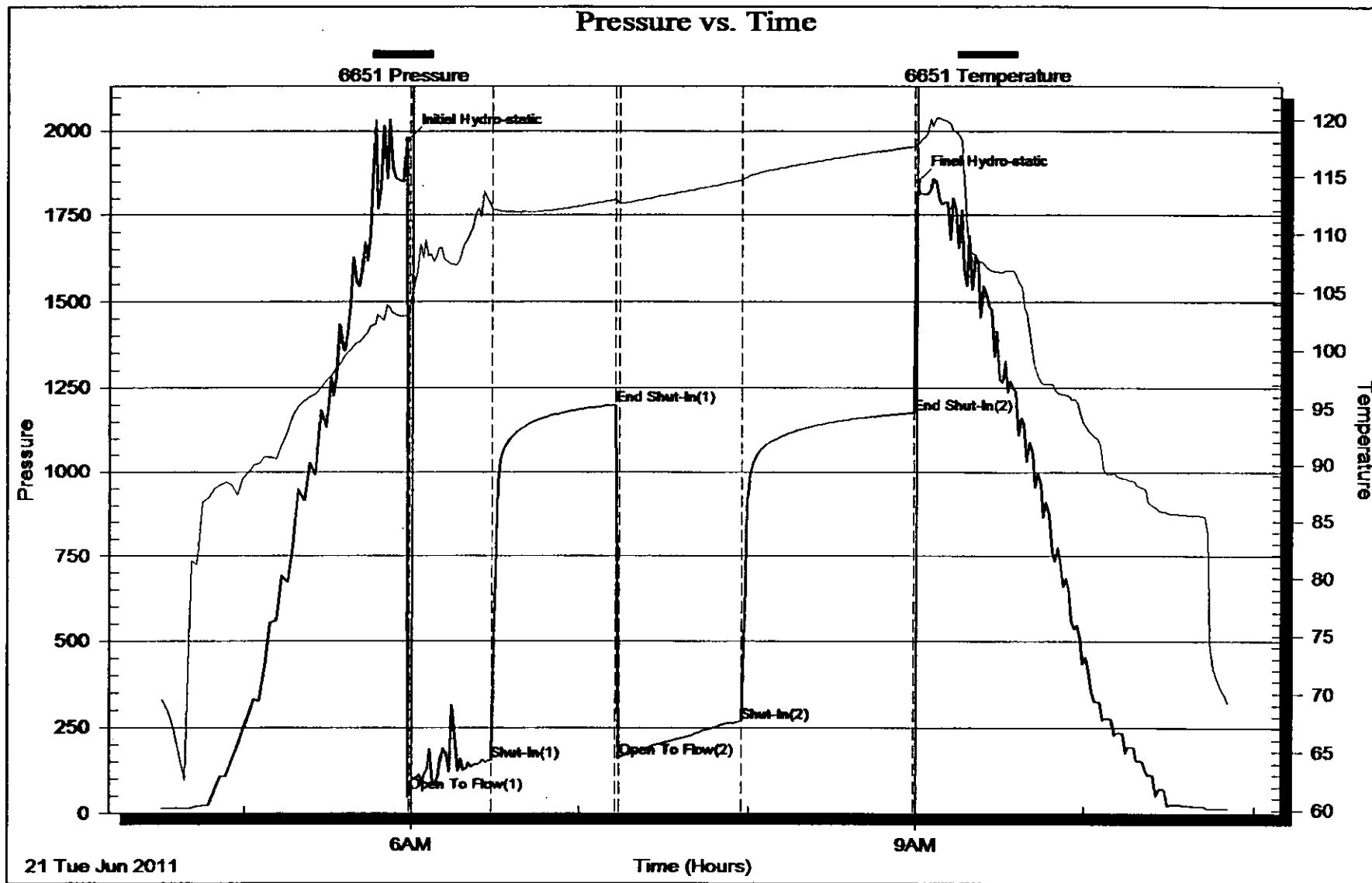
Total Length: 590.00 ft Total Volume: 3.399 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

8100 East 22nd Street North #
700 Wichita, Kansas
67278

ATTN: Jeff Christian

20/13S/31W Gove

#1 Hess.20A

Start Date: 2011.06.21 @ 10:50:00

End Date: 2011.06.21 @ 17:22:30

Job Ticket #: 16607 DST #: 4

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

Printed: 2011.07.05 @ 14:00:55

Ritchie Exploration

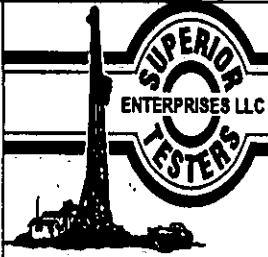
#1 Hess 20A

20/13S/31W Gove

DST # 4

Lancing Kansascity

2011.06.21



DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration
 8100 East 22nd Street North #
 700 Wichita, Kansas
 67278
 ATTN: Jeff Christian

#1 Hess 20A
 20/13S/31W Gove
 Job Ticket: 16607 DST#: 4
 Test Start: 2011.06.21 @ 10:50:00

Tool Information

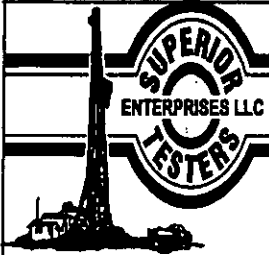
Drill Pipe:	Length: 3539.00 ft	Diameter: 3.80 inches	Volume: 49.64 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 535.41 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 240000.0 lb
			<u>Total Volume: 52.27 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.41 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4072.00 ft			Final 70000.00 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			4057.00	
Hydraulic Tool	5.00			4062.00	
Packer	5.00			4067.00	20.00 Bottom Of Top Packer
Packer	5.00			4072.00	
Perforations	25.00			4097.00	
Recorder	1.00	6666	Inside	4098.00	
Recorder	1.00	6551	Outside	4099.00	
Bull Plug	3.00			4102.00	30.00 Bottom Packers & Anchor

Total Tool Length: 50.00



DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration
 8100 East 22nd Street North #
 700 Wichita, Kansas
 67278
 ATTN: Jeff Christian

#1 Hess 20A
 20/13S/31W Gove
 Job Ticket: 16607 DST#: 4
 Test Start: 2011.06.21 @ 10:50:00

Mud and Cushion Information

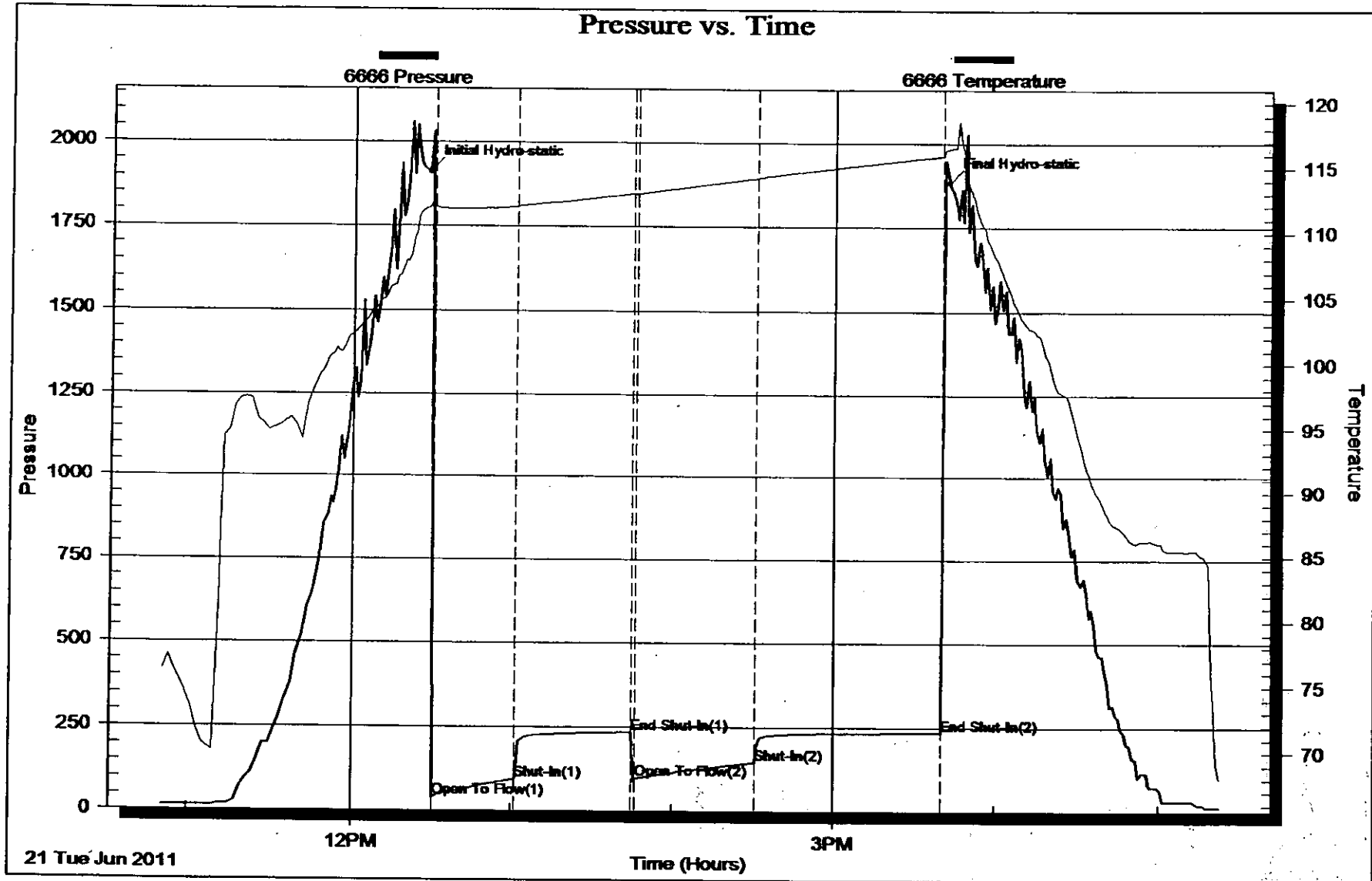
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 67.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.58 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 3200.00 ppm			
Filter Cake: 1.00 inches			

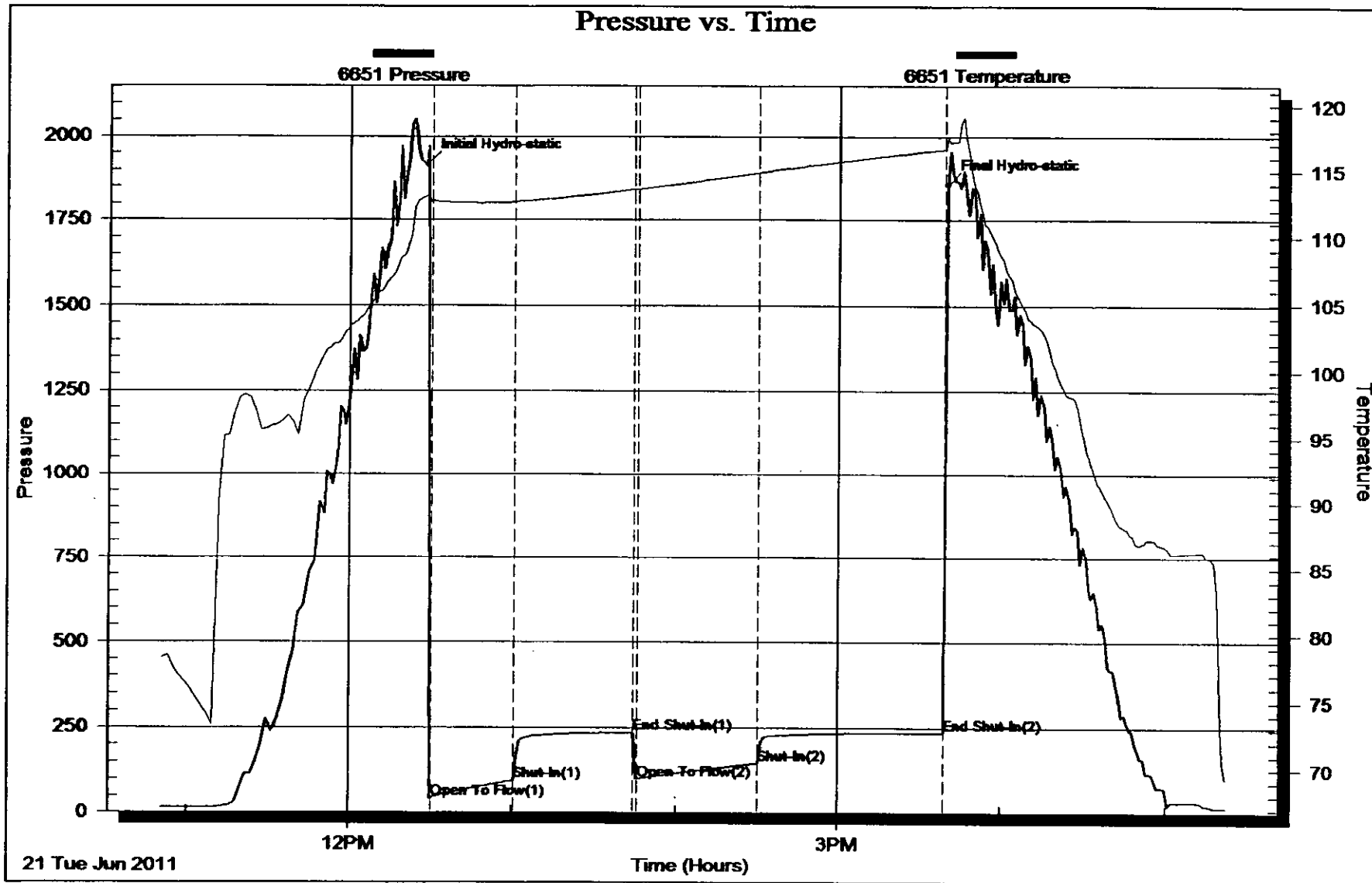
Recovery Information

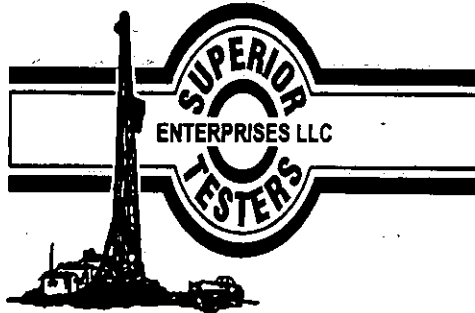
Recovery Table

Length ft	Description	Volume bbl
200.00	Muddy water with a few oil spots	0.984
0.00	20% mud 80% water	0.000
0.00	Resistivity was .58@ 74 degrees	0.000
0.00	Chlorides 49000	0.000

Total Length: 200.00 ft Total Volume: 0.984 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

8100 East 22nd Street North #
700 Wichita, Kansas
67278

ATTN: Jeff Christian

20/13S/31W Gove

#1 Hess 20A

Start Date: 2011.06.22 @ 12:03:00

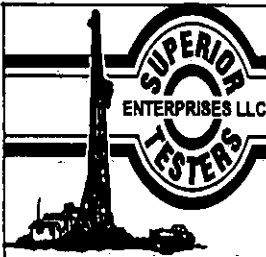
End Date: 2011.06.22 @ 18:50:00

Job Ticket #: 16608 DST #: 5

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

Printed: 2011.07.05 @ 14:01:06

Ritchie Exploration #1 Hess 20A 20/13S/31W Gove DST # 5 Lancing Kansas City " 2011.06.22



DRILL STEM TEST REPORT

Ritchie Exploration

#1 Hess 20A

8100 East 22nd Street North #
700 Wichita, Kansas
67278

20/13S/31W Gove

Job Ticket: 16608

DST#: 5

ATTN: Jeff Christian

Test Start: 2011.06.22 @ 12:03:00

GENERAL INFORMATION:

Formation: Lancing Kansas City "

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:45:30

Time Test Ended: 18:50:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Dylan E. Ellis/Dusti

Unit No: 3354 Scottcity/60

Interval: 4102.00 ft (KB) To 4134.00 ft (KB) (TVD)

Reference Elevations: 2887.00 ft (KB)

Total Depth: 4134.00 ft (KB) (TVD)

2877.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 6651

Inside

Press@RunDepth: 711.80 psia @ 4130.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2011.06.22

End Date: 2011.06.22

Last Calib.: 2011.06.22

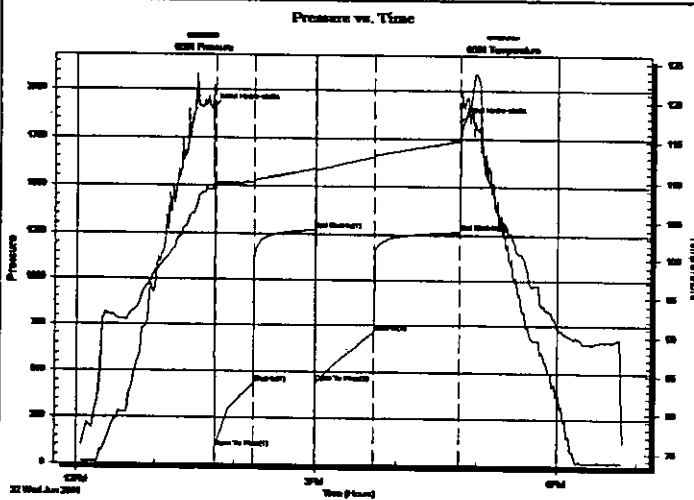
Start Time: 12:04:00

End Time: 18:50:00

Time On Btmr: 2011.06.22 @ 13:43:30

Time Off Btmr: 2011.06.22 @ 16:47:30

TEST COMMENT: 1ST Opening 30 Minutes good steady blow / blow blew to bottom of the bucket in 5 minutes
1ST Shut-In 45 Minutes yes weak blow back
2ND Opening 45 Minutes good steady blow / blow blew to bottom of bucket in 6 minutes
2ND Shut-In 60 Minutes no blow back



PRESSURE SUMMARY

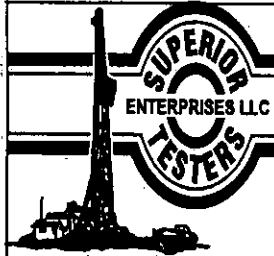
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1901.31	108.92	Initial Hydro-static
2	85.42	109.69	Open To Flow (1)
31	438.68	110.00	Shut-In(1)
76	1269.12	111.67	End Shut-In(1)
77	440.43	111.50	Open To Flow (2)
120	711.80	113.11	Shut-In(2)
183	1262.10	115.11	End Shut-In(2)
184	1839.26	115.27	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1485.00	Salt Water 100%	15.95
0.00	Resistivity was .20 @ 68 degrees	0.00
0.00	Chorides were 80,000.0	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

#1 Hess 20A

8100 East 22nd Street North #
700 Wichita, Kansas
67278
ATTN: Jeff Christian

20/13S/31W Gové
Job Ticket: 16608 DST#: 5
Test Start: 2011.06.22 @ 12:03:00

Tool Information

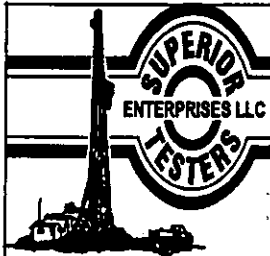
Drill Pipe:	Length: 3575.00 ft	Diameter: 3.80 inches	Volume: 50.15 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 535.41 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 24000.00 lb
			<u>Total Volume: 52.78 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.41 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4102.00 ft			Final 74000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	32.00 ft			
Tool Length:	52.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Hydraulic Tool	5.00			4087.00	
Shut-In Tool	5.00			4092.00	
Packer	5.00			4097.00	20.00 Bottom Of Top Packer
Packer	5.00			4102.00	
Perforations	27.00			4129.00	
Recorder	1.00	6651	Inside	4130.00	
Recorder	1.00	6666	Outside	4131.00	
bulplug	3.00			4134.00	32.00 Bottom Packers & Anchor

Total Tool Length: 52.00



DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

#1 Hess 20A

8100 East 22nd Street North #
700 Wichita, Kansas
67278

20/13S/31W Gove

Job Ticket: 16608 DST#: 5

ATTN: Jeff Christian

Test Start: 2011.06.22 @ 12:03:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 64.00 sec/qt
Water Loss: 79.86 in³
Resistivity: ohm.m
Salinity: 3500.00 ppm
Filter Cake: 1.00 inches

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

Oil API: deg API
Water Salinity: ppm

Recovery Information:

Recovery Table

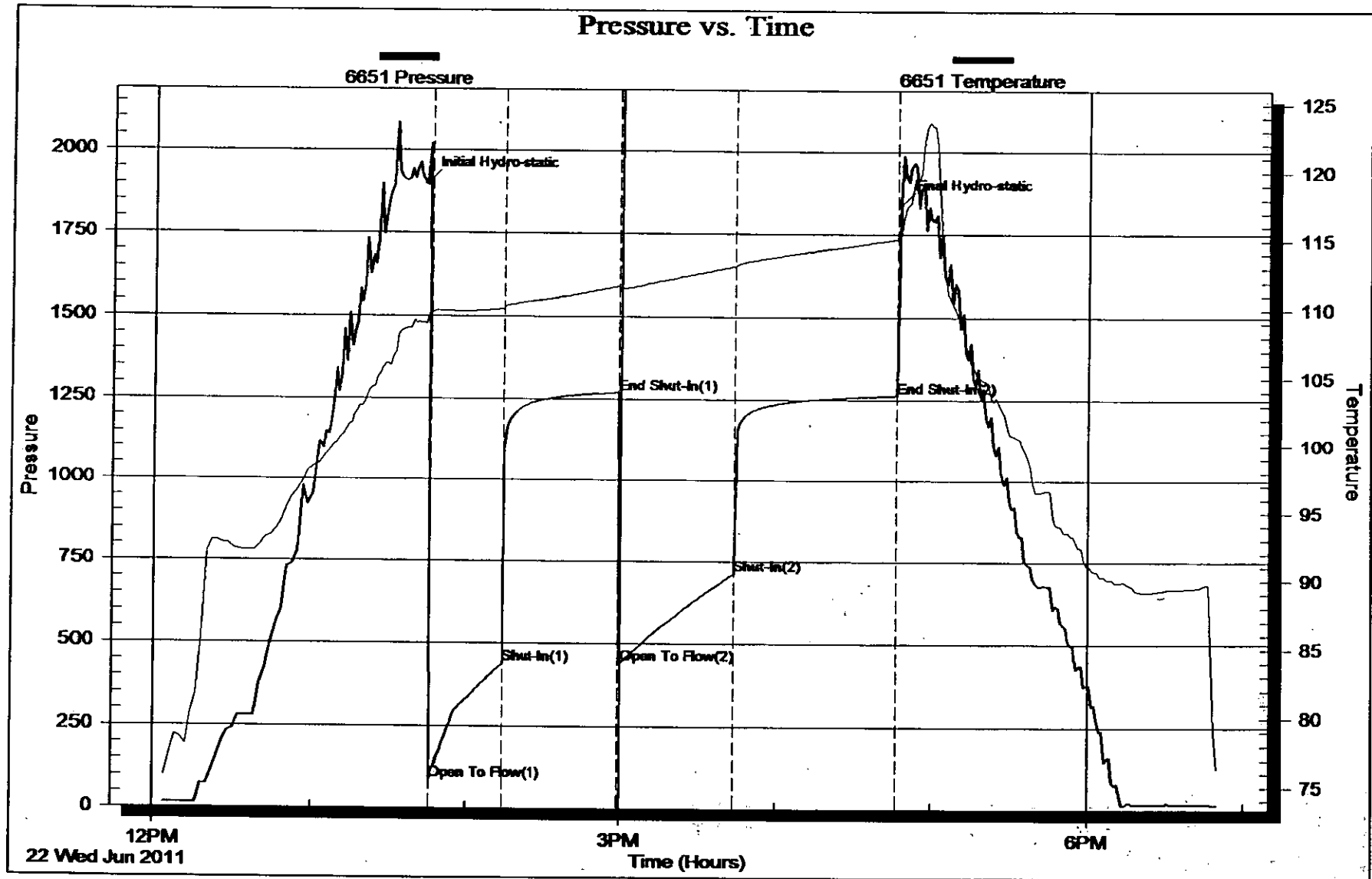
Length ft	Description	Volume bbl
1485.00	Salt Water 100%	15.953
0.00	Resistivity was .20 @ 68 degrees	0.000
0.00	Chorides were 80,000.0	0.000

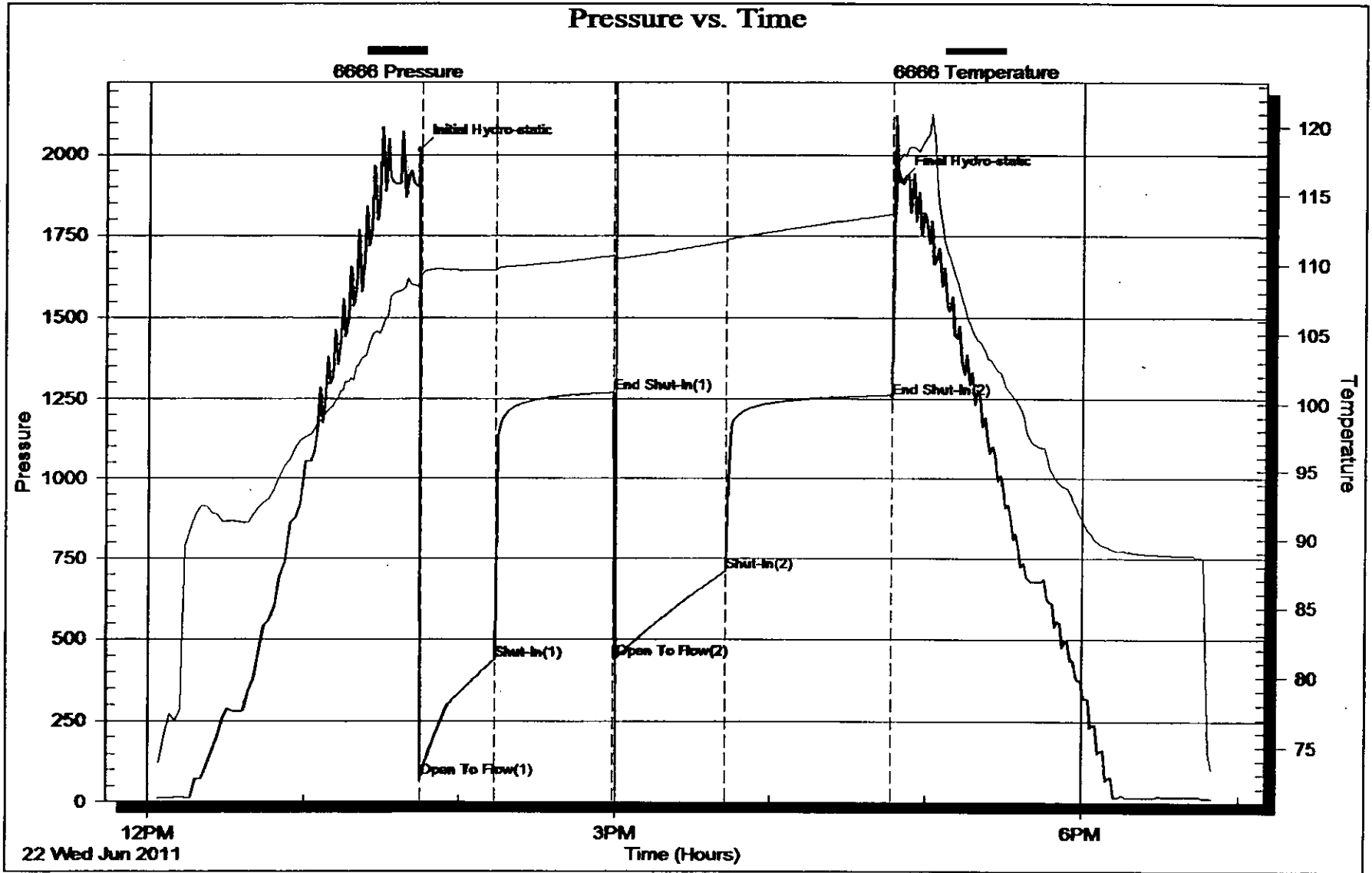
Total Length: 1485.00 ft Total Volume: 15.953 bbl

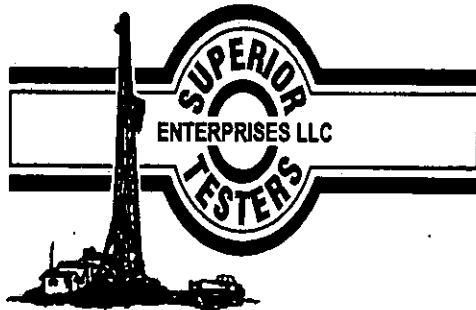
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

8100 East 22nd Street North #
700 Wichita, Kansas
67278

ATTN: Jeff Christian

20/13S/31W Gove

#1 Hess 20A

Start Date: 2011.06.23 @ 01:09:00

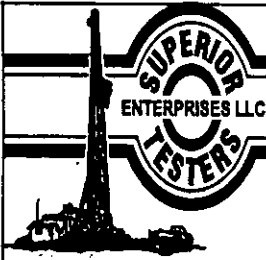
End Date: 2011.06.23 @ 07:50:30

Job Ticket #: 16609 DST #: 6

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

Printed: 2011.07.05 @ 14:01:20

Ritchie Exploration #1 Hess 20A 20/13S/31W Gove DST # 6 Lansing Kansas City 2011.06.23



DRILL STEM TEST REPORT

Ritchie Exploration

#1 Hess 20A

8100 East 22nd Street North #
700 Wichita, Kansas
67278
ATTN: Jeff Christian

20/13S/31W Gove
Job Ticket: 16609 DST#: 6
Test Start: 2011.06.23 @ 01:09:00

GENERAL INFORMATION:

Formation: **Lansing Kansas City**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 03:00:30
Time Test Ended: 07:50:30

Test Type: Conventional Bottom Hole (Initial)
Tester: Dylan E Ellis/Dustin
Unit No: 3345/Scott City/60

Interval: **4132.00 ft (KB) To 4155.00 ft (KB) (TVD)**
Total Depth: **4155.00 ft (KB) (TVD)**
Hole Diameter: **7.88 inches** Hole Condition: Fair

Reference Elevations: **2887.00 ft (KB)**
2877.00 ft (CF)
KB to GR/CF: **10.00 ft**

Serial #: **6666**

Outside

Press@RunDepth: **107.84 psia @ 4152.00 ft (KB)**

Capacity: **5000.00 psia**

Start Date: **2011.06.23**

End Date: **2011.06.23**

Last Calib.: **2011.06.23**

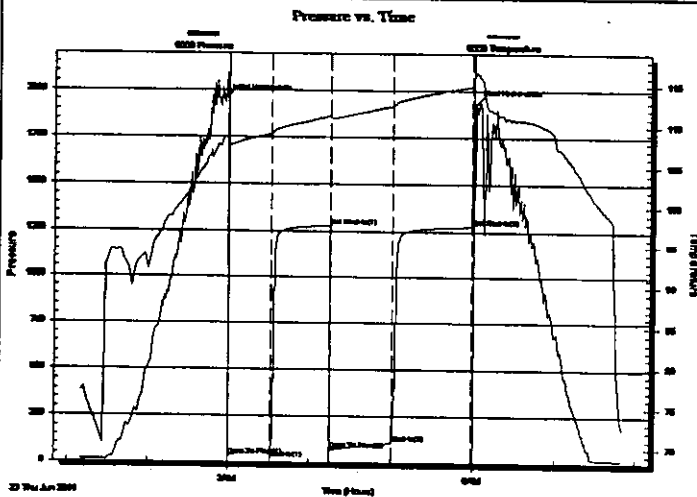
Start Time: **01:10:00**

End Time: **07:50:30**

Time On Btm: **2011.06.23 @ 02:57:00**

Time Off Btm: **2011.06.23 @ 06:01:30**

TEST COMMENT: 1ST Opening 30 Minutes very weak blow /blow blew 2 inches into bucket of water
1ST Shut-In 45 Minutes no blow back
2ND Opening 45 Minutes very weak blow /blow blew 2 inches into bucket of water
2ND Shut-In 60 Minutes no blow back



PRESSURE SUMMARY

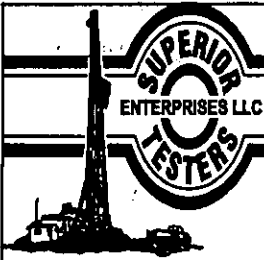
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1950.21	108.66	Initial Hydro-static
4	37.23	107.66	Open To Flow (1)
35	66.66	109.08	Shut-In(1)
78	1275.12	111.33	End Shut-In(1)
79	70.22	111.03	Open To Flow (2)
124	107.84	112.59	Shut-In(2)
182	1272.06	114.95	End Shut-In(2)
185	1931.46	116.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
190.00	Muddy Water with a trace of Oil	0.93
0.00	Chlorides were 49,000	0.00
0.00	Resistivity was .20 @ 64 degrees	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration
 8100 East 22nd Street North #
 700 Wichita, Kansas
 67278
 ATTN: Jeff Christian

#1 Hess 20A
 20/13S/31W Gove
 Job Ticket: 16609 DST#: 6
 Test Start: 2011.06.23 @ 01:09:00

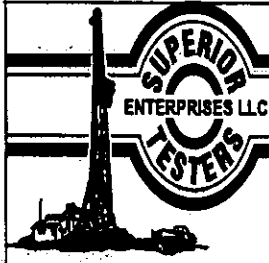
Tool Information

Drill Pipe:	Length: 3581.00 ft	Diameter: 3.80 inches	Volume: 50.23 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 535.41 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 20000.00 lb
			<u>Total Volume: 52.86 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	4.41 ft			String Weight: initial 70000.00 lb
Depth to Top Packer:	4132.00 ft			Final 120000.0 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	23.00 ft			
Tool Length:	43.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: We pulled tight for the 6 stands of pipe/w e pulled steady at 120,000.0 lbs. on the first 4 stands then dropped off to 100,000.0 lbs. and then is didnt drag anymore. Charge for a packer.

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			4117.00	
Hydrolic Tool	5.00			4122.00	
Packer	5.00			4127.00	20.00 Bottom Of Top Packer
Packer	5.00			4132.00	
Perforations	18.00			4150.00	
Recorder	1.00	6651	Inside	4151.00	
Recorder	1.00	6666	Outside	4152.00	
Bull Plug	3.00			4155.00	23.00 Bottom Packers & Anchor

Total Tool Length: 43.00



DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

#1 Hess 20A

8100 East 22nd Street North #
700 Wichita, Kansas
67278

20/13S/31W Gove

Job Ticket: 16609

DST#: 6

ATTN: Jeff Christian

Test Start: 2011.06.23 @ 01:09:00

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: 64.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psia

Salinity: 3500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
190.00	Muddy Water with a trace of Oil	0.934
0.00	Chlorides were 49,000	0.000
0.00	Resistivity was .20 @ 64 degrees	0.000

Total Length: 190.00 ft

Total Volume: 0.934 bbl

Num Fluid Samples: 0

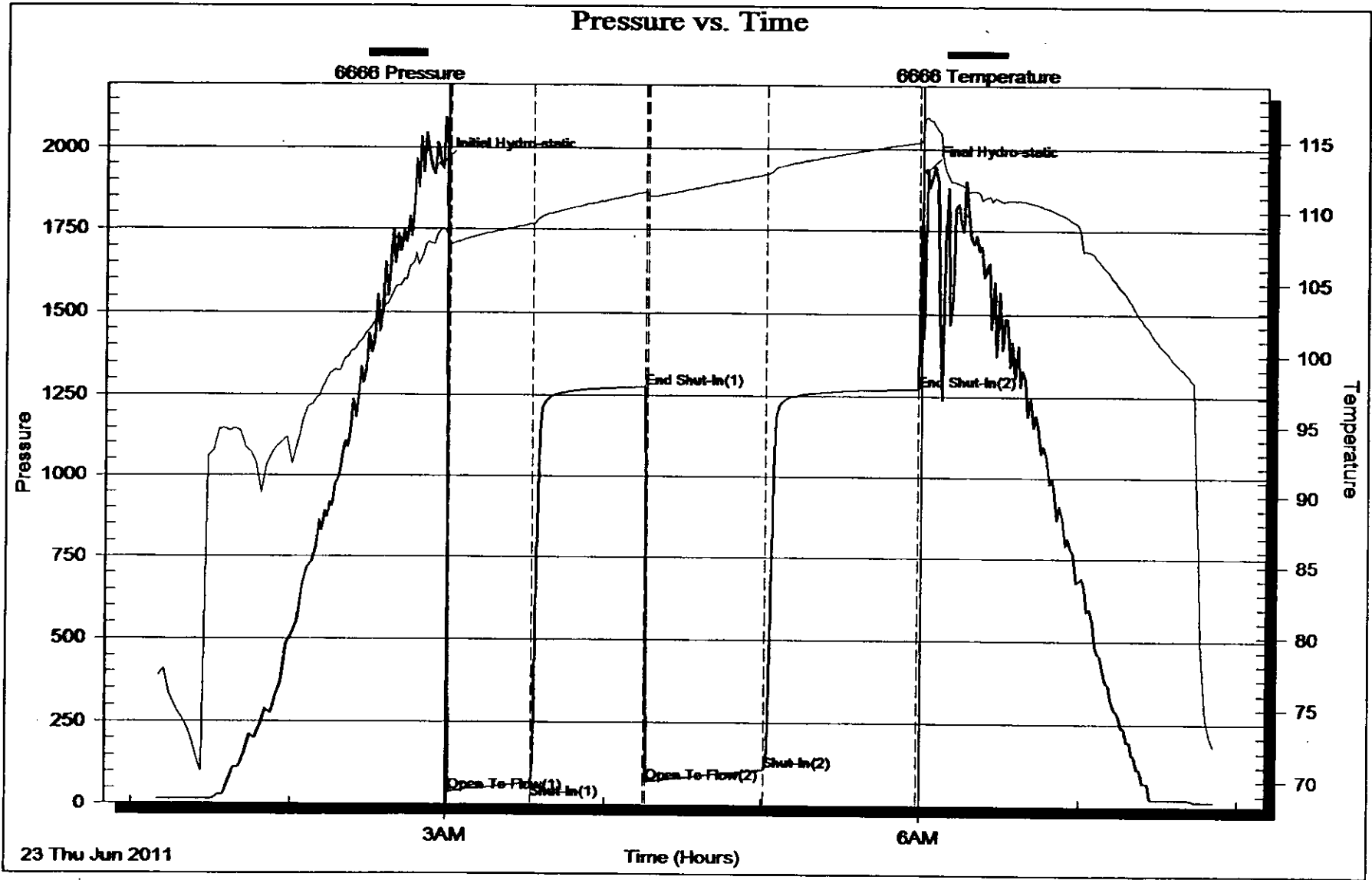
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



23 Thu Jun 2011



DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

8100 East 22nd Street North #
700 Wichita, Kansas
67278

ATTN: Jeff Christian

20/13S/31W Gove

#1 Hess 20A

Start Date: 2011.06.24 @ 05:30:00

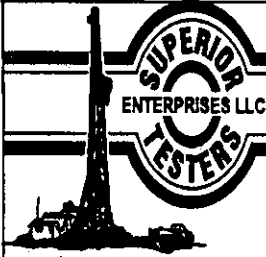
End Date: 2011.06.24 @ 13:03:39

Job Ticket #: 16610 DST #: 7

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

Printed: 2011.07.05 @ 14:01:32

Ritchie Exploration #1 Hess 20A 20/13S/31W Gove DST # 7 Johnson Zone 2011.06.24



DRILL STEM TEST REPORT

Ritchie Exploration

#1 Hess 20A

8100 East 22nd Street North #
700 Wichita, Kansas
67278

20/13S/31W Gove

ATTN: Jeff Christian

Job Ticket: 16610

DST#: 7

Test Start: 2011.06.24 @ 05:30:00

GENERAL INFORMATION:

Formation: Johnson Zone

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:17:09

Time Test Ended: 13:03:39

Test Type: Conventional Bottom Hole (Initial)

Tester: Dylan E. Ellis/Dusti

Unit No: 3345 Scottcity/60

Interval: 4458.00 ft (KB) To 4494.00 ft (KB) (TVD)

Reference Elevations: 2887.00 ft (KB)

Total Depth: 4494.00 ft (KB) (TVD)

2877.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 6651

Outside

Press@RunDepth: 319.88 psia @ 4490.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2011.06.24

End Date: 2011.06.24

Last Calib.: 2011.06.25

Start Time: 05:31:00

End Time: 13:03:39

Time On Btm: 2011.06.24 @ 07:15:39

Time Off Btm: 2011.06.24 @ 10:21:09

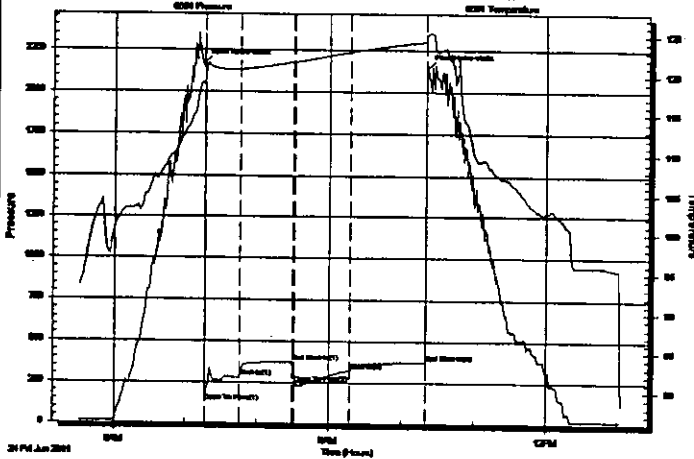
TEST COMMENT: 1ST Open 30Minutes very good/Blow blew bottom of bucket in 3 minutes

1ST Shut in 45Minutes yes strong blow back

2ND Open 45Minutes very strong blow/ Blow bottom of bucket instantly gas to surface in 13 minutes

2ND Shut in 60Minutes yes strong blow back

Pressure vs. Time



PRESSURE SUMMARY

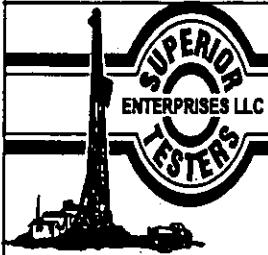
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2169.33	119.19	Initial Hydro-static
2	124.11	119.62	Open To Flow (1)
31	279.81	120.83	Shut-In(1)
75	372.62	121.80	End Shut-In(1)
76	243.29	121.81	Open To Flow (2)
122	319.88	122.99	Shut-In(2)
184	370.57	124.31	End Shut-In(2)
186	2146.47	125.24	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
950.00	Clean Gassy Oil	8.45
0.00	Gas 30% Oil 70%	0.00
95.00	Gassy Oil cut Mud	1.33
0.00	Gas 20% Oil 25% Mud 55%	0.00
95.00	Gassy Oil cut Mud	1.33
0.00	Gas 10% Oil 20% Mud 70%	0.00

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	0.13	7.10	2.66
Last Gas Rate	0.13	10.50	3.93



DRILL STEM TEST REPORT

Ritchie Exploration
 8100 East 22nd Street North #
 700 Wichita, Kansas
 67278
 ATTN: Jeff Christian

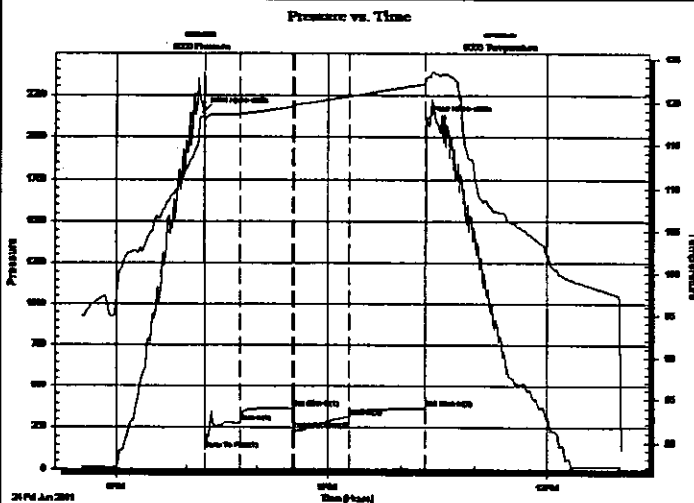
#1 Hess 20A
20/13S/31W Gove
 Job Ticket: 16610 DST#: 7
 Test Start: 2011.06.24 @ 05:30:00

GENERAL INFORMATION:

Formation: **Johnson Zone**
 Deviated: **No Whipstock:** ft (KB)
 Time Tool Opened: 07:17:09
 Time Test Ended: 13:03:39
 Interval: **4458.00 ft (KB) To 4494.00 ft (KB) (TVD)**
 Total Depth: **4494.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: Fair
 Test Type: **Conventional Bottom Hole (Initial)**
 Tester: **Dylan E. Ellis/Dusti**
 Unit No: **3345 Scottcity/60**
 Reference Elevations: **2887.00 ft (KB)**
 2877.00 ft (CF)
 KB to GR/CF: **10.00 ft**

Serial #: 6666 **Inside**
 Press@RunDepth: **369.52 psia @ 4491.00 ft (KB)** Capacity: **5000.00 psia**
 Start Date: **2011.06.24** End Date: **2011.06.24** Last Calib.: **2011.06.25**
 Start Time: **05:31:00** End Time: **13:03:00** Time On Btm: **2011.06.24 @ 07:15:00**
 13:03:00 Time Off Btm: **2011.06.24 @ 10:20:30**

TEST COMMENT: 1ST Open 30Minutes very good/Blow blew bottom of bucket in 3 minutes
 1ST Shut in 45Minutes yes strong blow back
 2ND Open 45Minutes very strong blow / Blow bottom of bucket instantly gas to surface in 13 minutes
 2ND Shut in 60Minutes yes strong blow back



PRESSURE SUMMARY

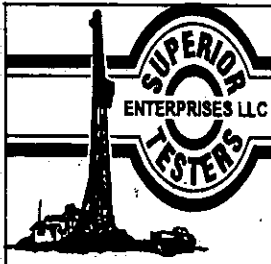
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2145.80	118.28	Initial Hydro-static
2	122.72	117.96	Open To Flow (1)
31	279.09	118.54	Shut-In(1)
76	371.95	119.46	End Shut-In(1)
77	232.88	119.65	Open To Flow (2)
123	319.43	120.86	Shut-In(2)
185	369.52	122.07	End Shut-In(2)
186	2100.82	122.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
950.00	Clean Gassy Oil	8.45
0.00	Gas 30% Oil 70%	0.00
95.00	Gassy Oil cut Mud	1.33
0.00	Gas 20% Oil 25% Mud 55%	0.00
95.00	Gassy Oil cut Mud	1.33
0.00	Gas 10% Oil 20% Mud 70%	0.00

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mc/d)
First Gas Rate	0.13	7.10	2.66
Last Gas Rate	0.13	10.50	3.93



DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

#1 Hess 20A

8100 East 22nd Street North #
700 Wichita, Kansas
67278
ATTN: Jeff Christian

20/13S/31W Gove

Job Ticket: 16610

DST#: 7

Test Start: 2011.06.24 @ 05:30:00

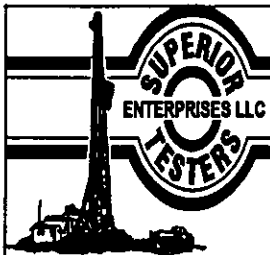
Tool Information

Drill Pipe:	Length: 3927.00 ft	Diameter: 3.80 inches	Volume: 55.09 bbl	Tool Weight: 20000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 535.41 ft	Diameter: 2.25 inches	Volume: 2.63 bbl	Weight to Pull Loose: 25000.00 lb
			<u>Total Volume: 57.72 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.41 ft			String Weight: Initial 720000.0 lb
Depth to Top Packer:	4458.00 ft			Final 750000.0 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	36.00 ft			
Tool Length:	56.00 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			4443.00	
Hydraulic Tool	5.00			4448.00	
Packer	5.00			4453.00	20.00 Bottom Of Top Packer
Packer	5.00			4458.00	
Perforations	31.00			4489.00	
Recorder	1.00	6651	Outside	4490.00	
Recorder	1.00	6666	Inside	4491.00	
Bull Plug	3.00			4494.00	36.00 Bottom Packers & Anchor

Total Tool Length: 56.00



DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration
8100 East 22nd Street North #
700 Wichita, Kansas
67278
ATTN: Jeff Christian

#1 Hess 20A
20/13S/31W Gove
Job Ticket: 16610 DST#: 7
Test Start: 2011.06.24 @ 05:30:00

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: 67.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.99 in*	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 54000.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
950.00	Clean Gassy Oil	8.449
0.00	Gas 30% Oil 70%	0.000
95.00	Gassy Oil cut Mud	1.333
0.00	Gas 20% Oil 25% Mud 55%	0.000
95.00	Gassy Oil cut Mud	1.333
0.00	Gas 10% Oil 20% Mud 70%	0.000
0.00	Gravity of Oil corrected was 39	0.000

Total Length: 1140.00 ft Total Volume: 11.115 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

