



KANSAS CORPORATION COMMISSION 1049432
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 # 3842
Name: Larson Engineering, Inc. dba Larson Operating Company
Address 1: 562 W STATE RD 4
Address 2: _____
City: OLMITZ State: KS Zip: 67564 + 8561
Contact Person: Thomas Larson
Phone: (620) 653-7368
CONTRACTOR: License # 33935
Name: H. D. Drilling, LLC
Wellsite Geologist: Richard S Davis
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>9/17/2010</u>	<u>9/28/2010</u>	<u>9/28/2010</u>
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-135-25154-00-00
Spot Description: _____
S2 - NW - NW - SW Sec. 14 Twp. 16 S. R. 26 East West
1,987 Feet from North / South Line of Section
330 Feet from East / West Line of Section
Footages Calculated from Nearest Outside Section Corner:
 NE NW SE SW
County: Ness
Lease Name: Hagans Well #: 2
Field Name: Unnamed
Producing Formation: N/A
Elevation: Ground: 2576 Kelly Bushing: 2586
Total Depth: 4596 Plug Back Total Depth: _____
Amount of Surface Pipe Set and Cemented at: 221 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: 28500 ppm Fluid volume: 900 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: 01/20/2011



1049432

Operator Name: Larson Engineering, Inc. dba Larson Operating Company Lease Name: Hagans Well #: 2

Sec. 14 Twp. 16 S. R. 26 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 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: <small>Dual Induction Compensated Neutron Porosity microresistivity</small>	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum Attached Attached Attached
---	--

CASING RECORD <input type="checkbox"/> New <input checked="" 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	221	Class A	165	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 Bbbs.	Gas Mcf	Water Bbbs. 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) (Submit ACO-4)</i> <input checked="" type="checkbox"/> Other (Specify) <u>D & A</u>	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Larson Engineering, Inc. dba Larson Operating Company
Well Name	Hagans 2
Doc ID	1049432

Tops

Anhydrite	1996	+590
Base Anhydrite	2030	+556
Heebner	3860	-1274
Lansing	3902	-1316
Pawnee	4332	-1746
Fort Scott	4397	-1811
Cherokee Sh	4422	-1836
Mississippi	4496	-1910

ALLIED CEMENTING CO., LLC. 035469

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

SERVICE POINT: Oakley, KS

DATE <u>9/28/10</u>	SEC <u>14</u>	TWP. <u>16</u>	RANGE <u>24</u>	CALLED OUT	ON LOCATION	JOB START <u>3:00 PM</u>	JOB FINISH <u>4:00 PM</u>
LEASE <u>Hegons</u>	WELL # <u>#2</u>		LOCATION <u>1/4 Sec W to R20 1/2 W</u>		COUNTY <u>NEOSHO</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one) <u>NEW</u>			EXTRA				

CONTRACTOR H-D #2

TYPE OF JOB PTA

HOLE SIZE 7 7/8 T.D. _____

CASING SIZE 8 7/8 DEPTH _____

TUBING SIZE _____ DEPTH _____

DRILL PIPE 4 1/2 DEPTH _____

TOOL _____ DEPTH _____

PRES. MAX _____ MINIMUM _____

MEAS. LINE _____ SHOE JOINT _____

CEMENT LEFT IN CSG. _____

PERFS. _____

DISPLACEMENT _____

OWNER Same

CEMENT AMOUNT ORDERED 270 SK, 60/40 400

gel 14 lb Flo Seal

COMMON	<u>162 SK</u>	@ <u>13.65</u>	<u>2211.30</u>
POZMIX	<u>108 SK</u>	@ <u>7.40</u>	<u>808.00</u>
GEL	<u>9 SK</u>	@ <u>20.10</u>	<u>183.90</u>
CHLORIDE		@	
ASC		@	
<u>Flo Seal</u>	<u>68 lb</u>	@ <u>2.45</u>	<u>166.60</u>
HANDLING	<u>284</u>	@ <u>2.10</u>	<u>598.40</u>
MILEAGE	<u>100 SK</u>		<u>564.00</u>
TOTAL			<u>4,538.50</u>

EQUIPMENT

PUMP TRUCK CEMENTER Alan

422 HELPER Wayne

BULK TRUCK DRIVER W.S.

354 DRIVER

DRIVER

REMARKS:

50 @ 2060'

80 @ 1300'

40 @ 650'

50 @ 260'

80 @ 60'

30 @ Rot Hole

SERVICE

DEPTH OF JOB 2060'

PUMP TRUCK CHARGE 1170.00

EXTRA FOOTAGE @ _____

MILEAGE 20 @ 7.00 140.00

MANIFOLD @ _____

TOTAL 1310.00

CHARGE TO: Larson Engineering

STREET _____

CITY _____ STATE _____ ZIP _____

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 Gilbert Smith

SIGNATURE [Signature]

SALES TAX (If Any) _____

TOTAL CHARGES _____

DISCOUNT _____ IF PAID IN 30 DAYS



DRILL STEM TEST REPORT

Prepared For: **LARSON ENGINEERING**

562 WEST STATE RD 4 OLMITZ KS 67564 +
8561

ATTN: STEVE DAVIS

14-16S-26W NESS

HAGANS #2

Start Date: 2010.09.25 @ 05:30:00

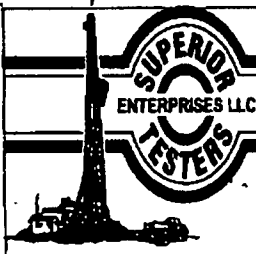
End Date: 2010.09.25 @ 14:02:00

Job Ticket #: 16061 DST #: 1

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

Printed: 2010.09.27 @ 14:37:47

LARSON ENGINEERING HAGANS #2 14-16S-26W NESS DST # 1 MISSISSIPPI 2010.09.25



DRILL STEM TEST REPORT

LARSON ENGINEERING

HAGANS #2

562 WEST STATE RD 4 OLMITZ KS 67564 + 8561

14-16S-26W NESS

ATTN: STEVE DAVIS

Job Ticket: 16061

DST#: 1

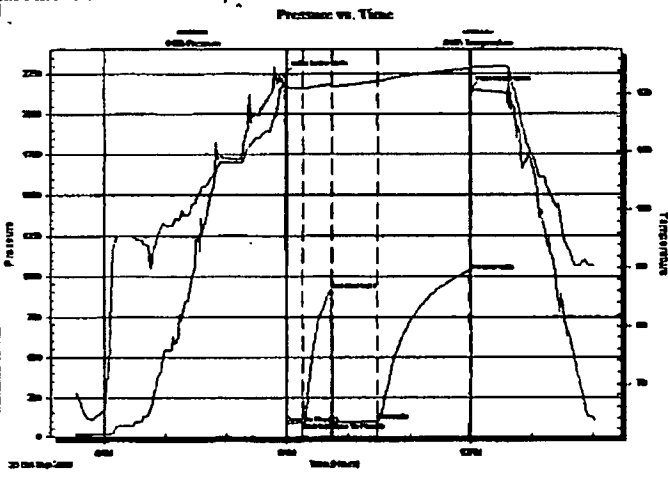
Test Start: 2010.09.25 @ 05:30:00

GENERAL INFORMATION:

Formation: **MISSISSIPPI**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 08:58:30 Tester: JARED SCHECK
 Time Test Ended: 14:02:00 Unit No: 3320-GB-190
 Interval: 4415.00 ft (KB) To 4517.00 ft (KB) (TVD) Reference Elevations: 2585.00 ft (KB)
 Total Depth: 4517.00 ft (KB) (TVD) 2576.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Poor KB to GR/CF: 9.00 ft

Serial #: **8405** Inside
 Press@RunDepth: 100.41 psia @ 4513.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2010.09.25 End Date: 2010.09.25 Last Calib.: 2010.09.25
 Start Time: 05:32:00 End Time: 14:02:00 Time On Bltn: 2010.09.25 @ 08:57:30
 Time Off Bltn: 2010.09.25 @ 11:58:30

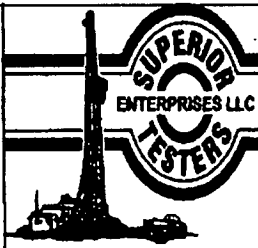
TEST COMMENT: 15/INITIAL OPEN:WEAK SURFACE BLOW BUILT 1 INCH INTO WATER IN 15 MINUTES
 30/INITIAL SHUT IN:NO BLOW BACK
 45/FINAL OPEN:VERY WEAK SURFACE BLOW DIED OFF
 90/FINAL SHUT IN:NO BLOW BACK



PRESSURE SUMMARY			
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2249.98	121.86	Initial Hydro-static
1	83.80	121.33	Open To Flow (1)
18	88.60	120.97	Shut-In(1)
46	913.57	121.64	End Shut-In(1)
47	91.36	121.32	Open To Flow (2)
91	100.41	122.18	Shut-In(2)
181	1031.26	124.30	End Shut-In(2)
181	2152.78	124.59	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
5.00	SLIGHTLEY OIL CUT MUD 4%OIL 96%MO.02	

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

LARSON ENGINEERING

HAGANS #2

562 WEST STATE RD 4 OLMITZ KS 67564 + 8561

14-16S-26W NESS

Job Ticket: 16061

DST#: 1

ATTN: STEVE DAVIS

Test Start: 2010.09.25 @ 05:30:00

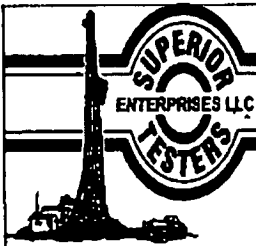
Tool Information

Drill Pipe:	Length: 4281.00 ft	Diameter: 3.80 inches	Volume: 60.05 bbl	Tool Weight: 1000.00 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: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 60.64 bbl</u>	Tool Chased 1.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 75000.00 lb
Depth to Top Packer:	4415.00 ft			Final 75000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	102.00 ft			
Tool Length:	131.00 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			4387.00	
Shut-In Tool	5.00			4392.00	
Hydrolic Tool	5.00			4397.00	
Jars	6.00			4403.00	
Safety Joint	2.00			4405.00	
Packer	5.00			4410.00	29.00 Bottom Of Top Packer
Packer	5.00			4415.00	
Change Over Sub	0.75			4415.75	
Drill Pipe	60.50			4476.25	
Change Over Sub	0.75			4477.00	
Perforations	35.00			4512.00	
Recorder	1.00	8405	Inside	4513.00	
Recorder	1.00	8525	Outside	4514.00	
Bullnose	3.00			4517.00	102.00 Bottom Packers & Anchor

Total Tool Length: 131.00



DRILL STEM TEST REPORT

FLUID SUMMARY

LARSON ENGINEERING

HAGANS #2

562 WEST STATE RD 4 OLMITZ KS 67564 + 8561

14-16S-26W NESS

Job Ticket: 16061

DST#: 1

ATTN: STEVE DAVIS

Test Start: 2010.09.25 @ 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 Satinity:	ppm
Viscosity: 49.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.19 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 3300.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

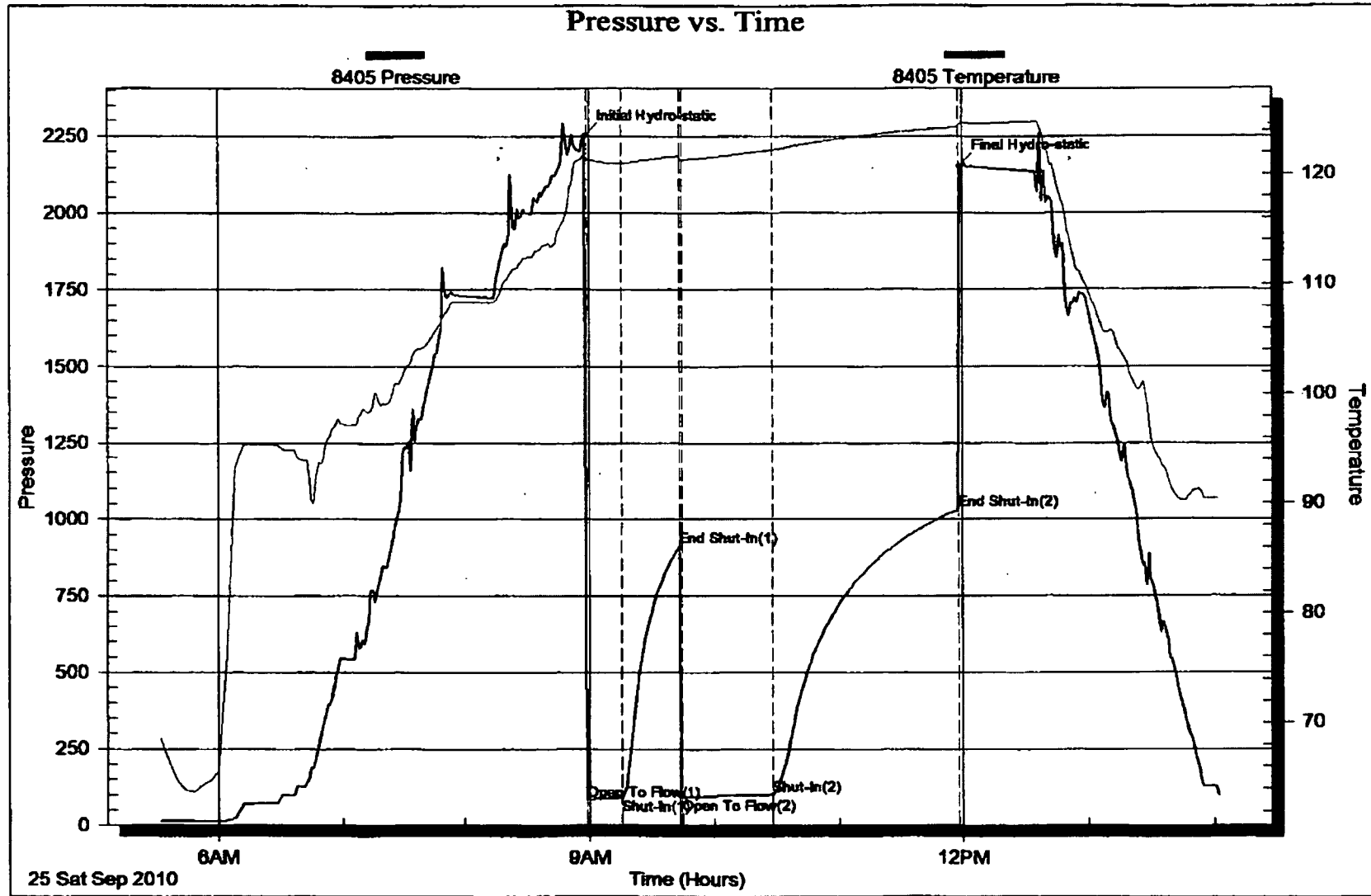
Length ft	Description	Volume bbl
5.00	SLIGHTLEY OIL CUT MUD 4%OIL 96%MUD	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:





DRILL STEM TEST REPORT

Prepared For: **LARSON ENGINEERING**

562 WEST STATE RD 4 OLMITZ KS 67564 +
8561

ATTN: STEVE DAVIS

14-16S-26W NESS

HAGANS #2

Start Date: 2010.09.25 @ 20:50:00

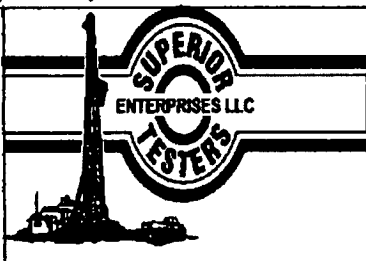
End Date: 2010.09.26 @ 03:09:30

Job Ticket #: 16062 DST #: 2

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

Printed: 2010.09.27 @ 14:37:31

LARSON ENGINEERING HAGANS #2 14-16S-26W NESS DST # 2 MISSISSIPPI 2010.09.26



DRILL STEM TEST REPORT

LARSON ENGINEERING

HAGANS #2

562 WEST STATE RD 4 OLMITZ KS 67564 + 8561

14-16S-26W NESS

Job Ticket: 16062

DST#: 2

ATTN: STEVE DAVIS

Test Start: 2010.09.25 @ 20:50:00

GENERAL INFORMATION:

Formation: **MISSISSIPPI**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:36:30

Time Test Ended: 03:09:30

Test Type: Conventional Bottom Hole (Initial)

Tester: JARED SCHECK

Unit No: 3320-GB-180

Interval: 4510.00 ft (KB) To 4524.00 ft (KB) (TVD)

Reference Elevations: 2585.00 ft (KB)

Total Depth: 4524.00 ft (KB) (TVD)

2576.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 9.00 ft

Serial #: 8405 Inside

Press@RunDepth: 41.19 psia @ 4520.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2010.09.25

End Date: 2010.09.26

Last Calib.: 2010.09.26

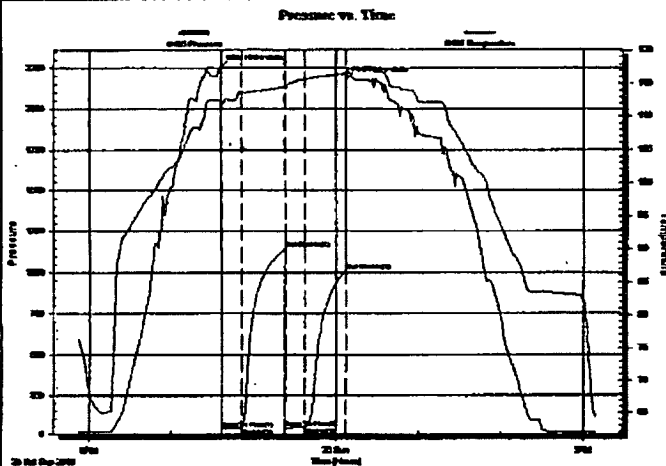
Start Time: 20:52:00

End Time: 03:09:30

Time On Btm: 2010.09.25 @ 22:36:00

Time Off Btm: 2010.09.26 @ 00:07:30

TEST COMMENT: 15/INITIAL OPEN:VERY WEAK SURFACE BLOW STAYED STEADY THROUGHOUT OPEN
 30/INITIAL SHUT IN:NO BLOW BACK
 15/FINAL OPEN:VERY WEAK SURFACE BLOW STAYED STEADY THROUGH OUT OPEN
 30/FINAL SHUT IN:NO BLOW BACK



PRESSURE SUMMARY

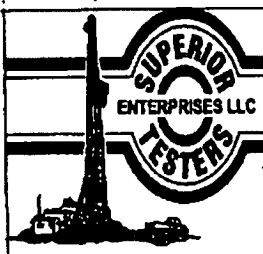
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2250.63	112.64	Initial Hydro-static
1	34.50	111.64	Open To Flow (1)
16	38.17	113.73	Shut-In(1)
47	1144.51	114.42	End Shut-In(1)
48	39.78	114.17	Open To Flow (2)
62	41.19	115.58	Shut-In(2)
91	1013.62	116.52	End Shut-In(2)
92	2175.92	116.85	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	SLIGHTLEY OIL CUT MUD 5%OIL 95%MUD.02	

Gas Rates

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



DRILL STEM TEST REPORT

LARSON ENGINEERING

HAGANS #2

562 WEST STATE RD 4 OLMITZ KS 67564 + 8561

14-16S-26W NESS

Job Ticket: 16062

DST#: 2

ATTN: STEVE DAVIS

Test Start: 2010.09.25 @ 20:50:00

GENERAL INFORMATION:

Formation: MISSISSIPPI

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:36:30

Time Test Ended: 03:09:30

Test Type: Conventional Bottom Hole (Initial)

Tester: JARED SCHECK

Unit No: 3320-GB-190

Interval: 4510.00 ft (KB) To 4524.00 ft (KB) (TVD)

Total Depth: 4524.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2585.00 ft (KB)

2576.00 ft (CF)

KB to GR/CF: 9.00 ft

Serial #: 8419 Outside

Press@RunDepth: 1013.09 psia @ 4521.00 ft (KB)

Start Date: 2010.09.25

End Date:

2010.09.26

Start Time: 20:51:00

End Time:

03:09:30

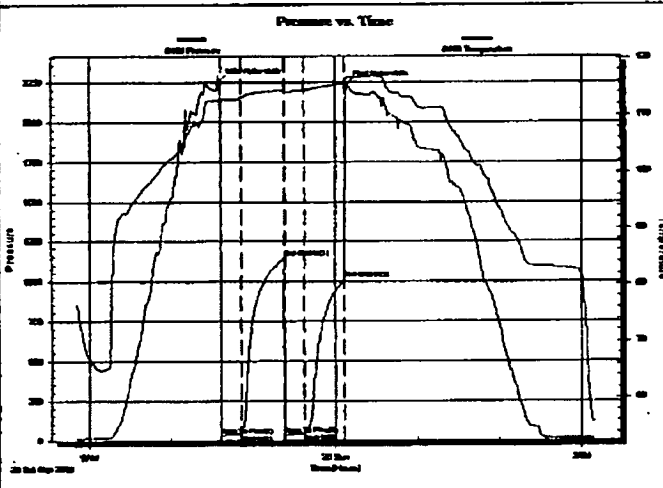
Capacity: 5000.00 psia

Last Calib.: 2010.09.26

Time On Blrm 2010.09.25 @ 22:36:00

Time Off Blrm 2010.09.26 @ 00:08:30

TEST COMMENT: 15/INITIAL OPEN:VERY WEAK SURFACE BLOW STAYED STEADY THROUGHOUT OPEN
 30/INITIAL SHUT IN:NO BLOW BACK
 15/FINAL OPEN:VERY WEAK SURFACE BLOW STAYED STEADY THROUGH OUT OPEN
 30/FINAL SHUT IN:NO BLOW BACK



PRESSURE SUMMARY

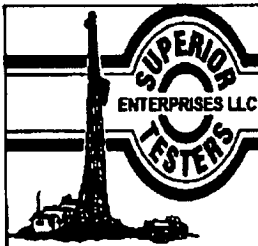
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2251.89	112.83	Initial Hydro-static
1	34.70	111.55	Open To Flow (1)
16	38.62	113.17	Shut-in(1)
47	1144.11	114.39	End Shut-in(1)
48	39.97	114.10	Open To Flow (2)
62	41.55	114.31	Shut-in(2)
91	1013.09	115.56	End Shut-in(2)
93	2235.06	116.74	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	SLIGHTLEY OIL CUT MUD 5%OIL 95%MUD.02	

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

LARSON ENGINEERING

HAGANS #2

562 WEST STATE RD 4 OLMITZ KS 67564 + 8561

14-16S-26W NESS

Job Ticket: 16062

DST#: 2

ATTN: STEVE DAVIS

Test Start: 2010.09.25 @ 20:50:00

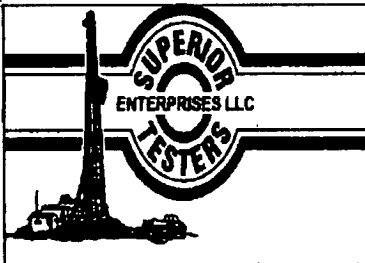
Tool Information

Drill Pipe:	Length: 4376.00 ft	Diameter: 3.80 inches	Volume: 61.38 bbl	Tool Weight: 1000.00 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: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 90000.00 lb
			Total Volume: 61.97 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 75000.00 lb
Depth to Top Packer:	4510.00 ft			Final 75000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	14.00 ft			
Tool Length:	43.00 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			4482.00	
Shut-In Tool	5.00			4487.00	
Hydraulic Tool	5.00			4492.00	
Jars	6.00			4498.00	
Safety Joint	2.00			4500.00	
Packer	5.00			4505.00	29.00 Bottom Of Top Packer
Packer	5.00			4510.00	
Perforations	9.00			4519.00	
Recorder	1.00	8405	Inside	4520.00	
Recorder	1.00	8419	Outside	4521.00	
Bullnose	3.00			4524.00	14.00 Bottom Packers & Anchor

Total Tool Length: 43.00



DRILL STEM TEST REPORT

FLUID SUMMARY

LARSON ENGINEERING

HAGANS #2

562 WEST STATE RD 4 OLMITZ KS 67564 + 8561

14-16S-26W NESS

Job Ticket: 16062

DST#: 2

ATTN: STEVE DAVIS

Test Start: 2010.09.25 @ 20:50:00

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: 59.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.79 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Safinity: 3400.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	SLIGHTLEY OIL CUT MUD 5%OIL 95%MUD	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:



DRILL STEM TEST REPORT

GAS RATES

LARSON ENGINEERING

HAGANS #2

562 WEST STATE RD 4 OLMITZ KS 67564 + 8561

14-16S-26W NESS

Job Ticket: 16062

DST#: 2

ATTN: STEVE DAVIS

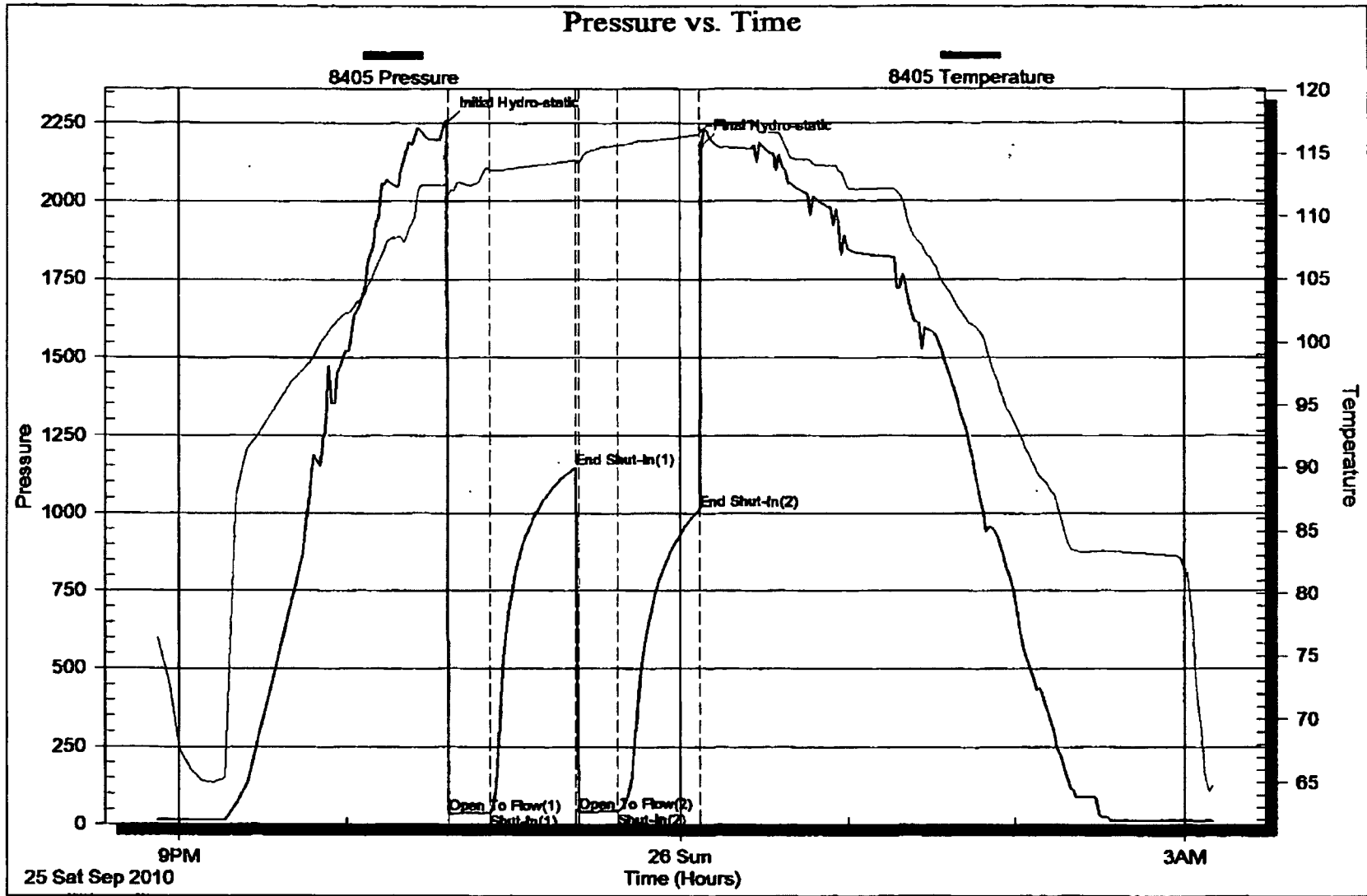
Test Start: 2010.09.25 @ 20:50:00

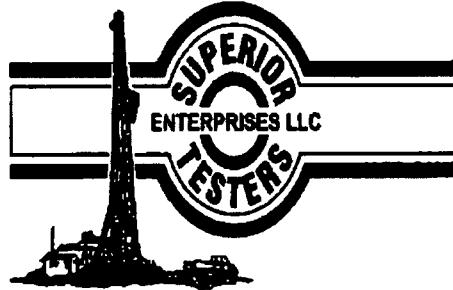
Gas Rates Information

Temperature: 59 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
		0.00	0.00	0.00





DRILL STEM TEST REPORT

Prepared For: **LARSON ENGINEERING**

562 WEST STATE RD 4 OLMITZ KS 67564 +
8561

ATTN: STEVE DAVIS

14-16S-26W NESS

HAGANS #2

Start Date: 2010.09.26 @ 11:00:00

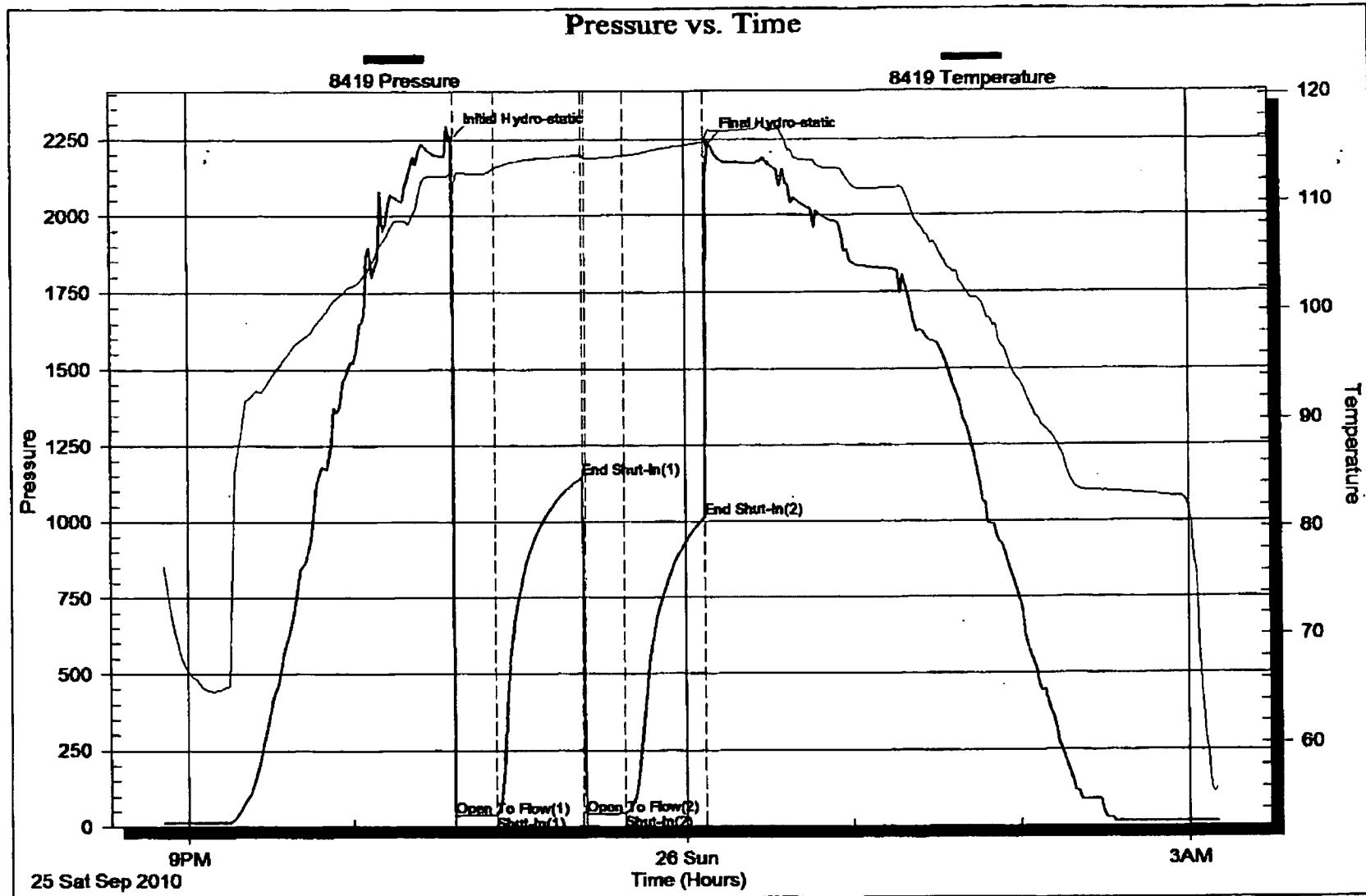
End Date: 2010.09.26 @ 16:56:30

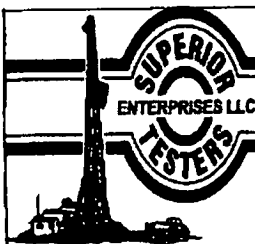
Job Ticket #: 16063 DST #: 3

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

Printed: 2010.09.27 @ 14:37:14

LARSON ENGINEERING HAGANS #2 14-16S-26W NESS DST # 3 MISSISSIPPI 2010.09.26





DRILL STEM TEST REPORT

LARSON ENGINEERING

HAGANS #2

562 WEST STATE RD 4 OLMITZ KS 67564 + 8561

14-16S-26W NESS

Job Ticket: 16063

DST#: 3

ATTN: STEVE DAVIS

Test Start: 2010.09.26 @ 11:00:00

GENERAL INFORMATION:

Formation: **MISSISSIPPI**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:02:00

Time Test Ended: 16:56:30

Test Type: Conventional Bottom Hole (Initial)

Tester: JARED SCHECK

Unit No: 3320-GB-190

Interval: 4515.00 ft (KB) To 4529.00 ft (KB) (TVD)

Total Depth: 4529.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2585.00 ft (KB)

2576.00 ft (CF)

KB to GR/CF: 9.00 ft

Serial #: 8405

Inside

Press@RunDepth: 43.47 psia @ 4525.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2010.09.26

End Date:

2010.09.26

Last Calib.:

2010.09.26

Start Time: 11:02:00

End Time:

16:56:30

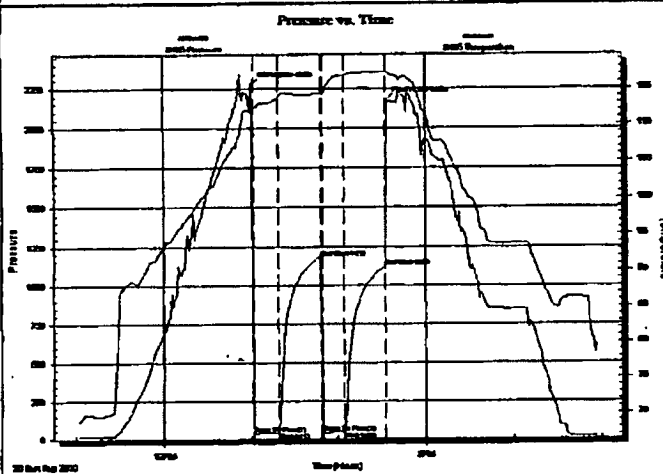
Time On Btm:

2010.09.26 @ 13:01:00

Time Off Btm:

2010.09.26 @ 14:33:30

TEST COMMENT: 15/INITIAL OPEN:WEAK SURFACE BLOW STAYED STEADY THROUGHOUT OPEN
 30/INITIAL SHUT IN:NO BLOW BACK
 15/FINAL OPEN:WEAK SURFACE BLOW STAYED STEADY THROUGHOUT OPEN
 30/FINAL SHUT IN:NO BLOW BACK



PRESSURE SUMMARY

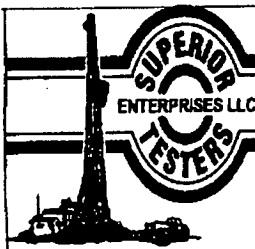
Time (Mn.)	Pressure (psia)	Temp (deg F)	Annotation
0	2273.88	112.78	Initial Hydro-static
1	36.24	112.27	Open To Flow (1)
18	39.78	113.88	Shut-in(1)
48	1181.97	114.22	End Shut-in(1)
49	40.86	114.07	Open To Flow (2)
63	43.47	116.76	Shut-in(2)
92	1120.25	117.23	End Shut-in(2)
93	2175.61	117.22	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	SPOT OIL CUT MUD 1% OIL 99% MUD	0.02

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

LARSON ENGINEERING
 562 WEST STATE RD 4 OLMITZ KS 67564 + 8561
 ATTN: STEVE DAVIS

HAGANS #2
 14-16S-26W NESS
 Job Ticket: 16063 DST#: 3
 Test Start: 2010.09.26 @ 11:00:00

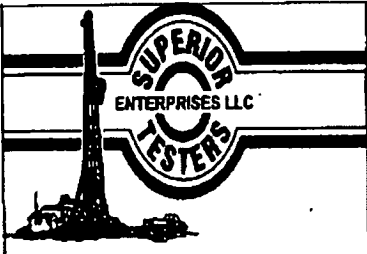
Tool Information

Drill Pipe:	Length: 4374.00 ft	Diameter: 3.80 inches	Volume: 61.36' bbl	Tool Weight: 1000.00 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: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 61.95 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 75000.00 lb
Depth to Top Packer:	4515.00 ft			Final 75000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	14.00 ft			
Tool Length:	43.00 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			4487.00	
Shut-in Tool	5.00			4492.00	
Hydrolic Tool	5.00			4497.00	
Jars	6.00			4503.00	
Safety Joint	2.00			4505.00	
Packer	5.00			4510.00	29.00 Bottom Of Top Packer
Packer	5.00			4515.00	
Perforations	9.00			4524.00	
Recorder	1.00	8405	Inside	4525.00	
Recorder	1.00	8419	Outside	4526.00	
Bullnose	3.00			4529.00	14.00 Bottom Packers & Anchor

Total Tool Length: 43.00



DRILL STEM TEST REPORT

FLUID SUMMARY

LARSON ENGINEERING

HAGANS #2

562 WEST STATE RD 4 OLMITZ KS 67564 + 8561

14-16S-26W NESS

Job Ticket: 16063

DST#: 3

ATTN: STEVE DAVIS

Test Start: 2010.09.26 @ 11:00:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 59.00 sec/qt

Water Loss: 6.19 in³

Resistivity: ohm.m

Salinity: 3400.00 ppm

Filter Cake: 2.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psia

Oil API:

Water Salinity: deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	SPOT OIL CUT MUD 1%OIL 99%MUD	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

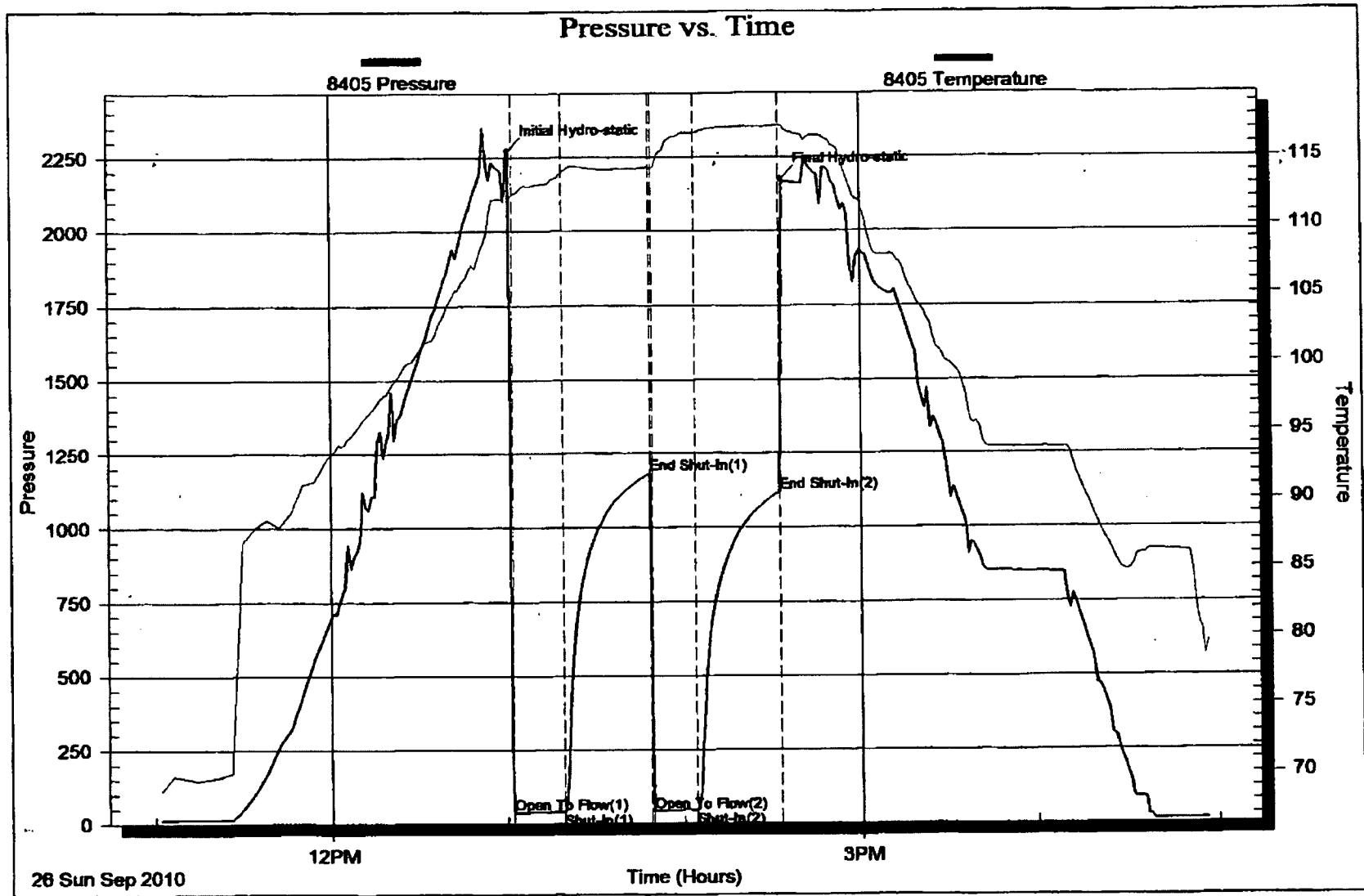
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

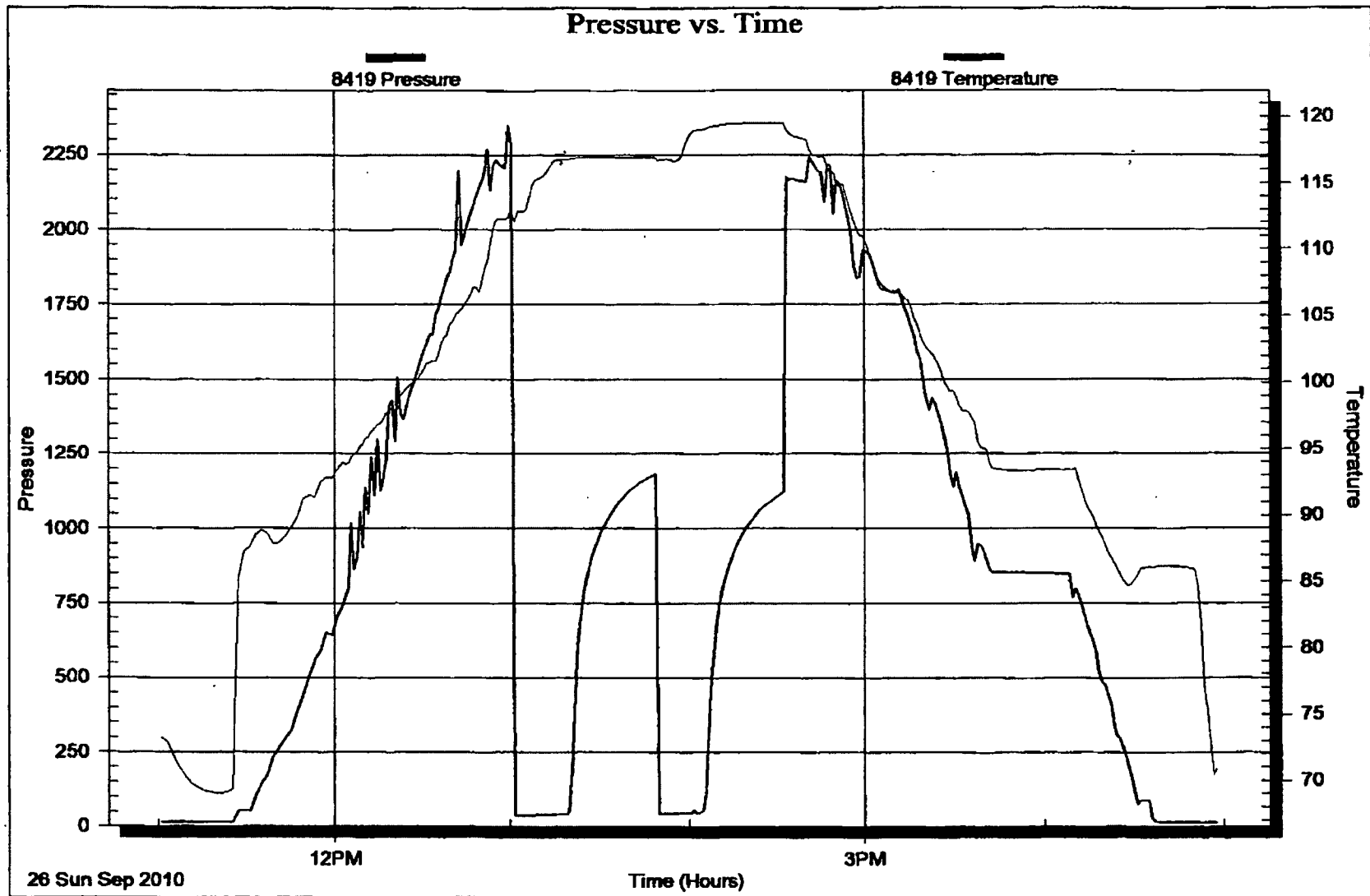


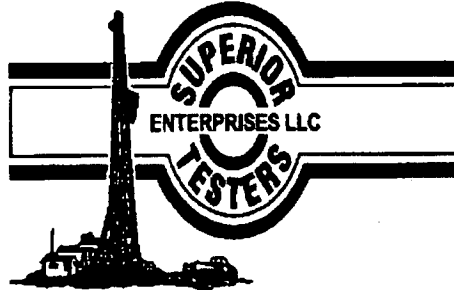
Serial #: 8419

Outside LARSON ENGINEERING

14-16S-26W NESS

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **LARSON ENGINEERING**

562 WEST STATE RD 4 OLMITZ KS 67564 +
8561

ATTN: STEVE DAVIS

14-16S-26W NESS

HAGANS #2

Start Date: 2010.09.26 @ 23:40:00

End Date: 2010.09.27 @ 06:49:00

Job Ticket #: 16064 DST #: 4

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

Printed: 2010.09.27 @ 14:36:58

LARSON ENGINEERING

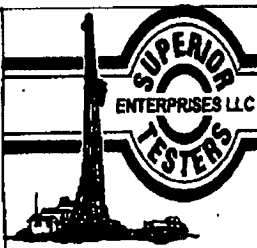
HAGANS #2

14-16S-26W NESS

DST # 4

MISSISSIPPI

2010.09.26



DRILL STEM TEST REPORT

LARSON ENGINEERING

HAGANS #2

562 WEST STATE RD 4 OLMITZ KS 67564 + 8561

14-16S-26W NESS

Job Ticket: 16064

DST#: 4

ATTN: STEVE DAVIS

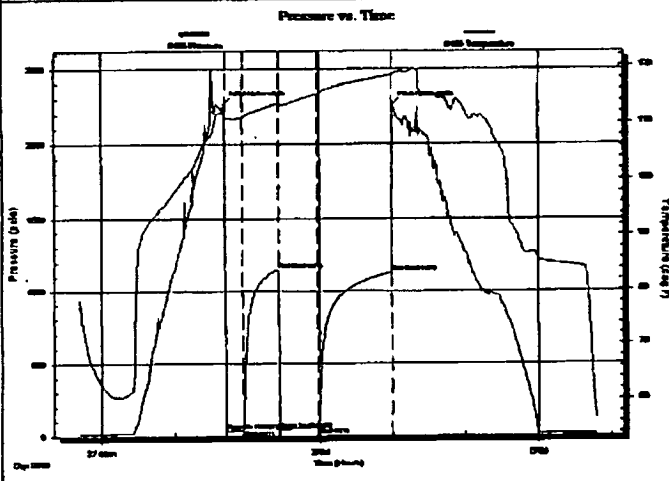
Test Start: 2010.09.26 @ 23:40:00

GENERAL INFORMATION:

Formation: **MISSISSIPPI**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 01:42:30 Tester: JARED SCHECK
 Time Test Ended: 06:49:00 Unit No: 320-GB-190
 Interval: 4526.00 ft (KB) To 4538.00 ft (KB) (TVD) Reference Elevations: 2585.00 ft (KB)
 Total Depth: 4538.00 ft (KB) (TVD) 2576.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 9.00 ft

Serial #: 8405 Inside
 Press@RunDepth: 61.45 psia @ 4534.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2010.09.26 End Date: 2010.09.27 Last Calib.: 2010.09.27
 Start Time: 23:42:00 End Time: 06:49:00 Time On Btm: 2010.09.27 @ 01:41:30
 Time Off Btm: 2010.09.27 @ 04:00:30

TEST COMMENT: 15/INITIAL OPEN:WEAK BLOW BUILT 1 INCH INTO WATER IN 15 MINUTES
 30/INITIAL SHUT IN:NO BLOW BACK
 30/FINAL OPEN:WEAK BUT BUILDING BLOW BUILT 1 INCH INTO WATER IN 30 MINUTES
 60/FINAL SHUT IN:NO BLOW BACK



PRESSURE SUMMARY

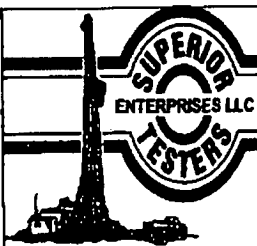
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2263.97	111.71	Initial Hydro-static
1	34.75	111.06	Open To Flow (1)
16	42.68	111.02	Shut-In(1)
45	1149.99	113.47	End Shut-In(1)
46	44.50	113.10	Open To Flow (2)
77	61.45	115.12	Shut-In(2)
138	1127.96	118.45	End Shut-In(2)
139	2261.55	118.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
65.00	MUDDY WATER 30%MUD 70%WATER	0.32
0.00	CHLORIDES 23,000	0.00
0.00	RESISTIVITY .2 @76 DEGREES	0.00

Gas Rates

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



DRILL STEM TEST REPORT

LARSON ENGINEERING

HAGANS #2

562 WEST STATE RD 4 OLMITZ KS 67564 + 8561

14-16S-26W NESS

Job Ticket: 16064

OST#: 4

ATTN: STEVE DAVIS

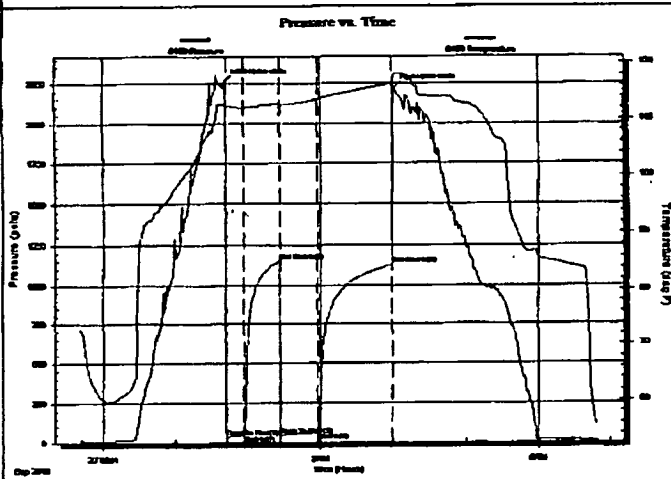
Test Start: 2010.09.26 @ 23:40:00

GENERAL INFORMATION:

Formation: **MISSISSIPPI**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 01:42:30 Tester: JARED SCHECK
 Time Test Ended: 06:49:00 Unit No: 320-GB-190
 Interval: 4526.00 ft (KB) To 4538.00 ft (KB) (TVD) Reference Elevations: 2585.00 ft (KB)
 Total Depth: 4538.00 ft (KB) (TVD) 2576.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 9.00 ft

Serial #: 8419 Outside
 Press@RunDepth: 1128.08 psia @ 4535.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2010.09.26 End Date: 2010.09.27 Last Calib.: 2010.09.27
 Start Time: 23:41:00 End Time: 06:49:30 Time On Btm: 2010.09.27 @ 01:41:00
 Time Off Btm: 2010.09.27 @ 04:01:00

TEST COMMENT: 15/INITIAL OPEN:WEAK BLOW BUILT 1 INCH INTO WATER IN 15 MINUTES
 30/INITIAL SHUT IN:NO BLOW BACK
 30/FINAL OPEN:WEAK BUT BUILDING BLOW BUILT 1 INCH INTO WATER IN 30 MINUTES
 60/FINAL SHUT IN:NO BLOW BACK



PRESSURE SUMMARY

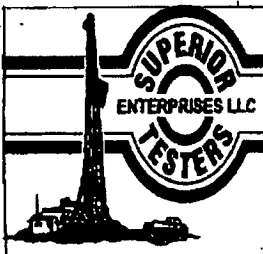
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2263.07	112.61	Initial Hydro-static
1	34.77	112.14	Open To Flow (1)
16	42.89	111.95	Shut-In(1)
45	1150.03	112.76	End Shut-In(1)
46	44.69	112.49	Open To Flow (2)
77	61.74	113.50	Shut-In(2)
138	1128.08	116.23	End Shut-In(2)
140	2222.87	117.95	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
65.00	MUDDY WATER 30%MUD 70%WATER	0.32
0.00	CHLORIDES 23,000	0.00
0.00	RESISTIVITY .2 @76 DEGREES	0.00

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (M cfd)



DRILL STEM TEST REPORT

TOOL DIAGRAM

LARSON ENGINEERING

HAGANS #2

562 WEST STATE RD 4 OLMITZ KS 67564 + 8561

14-16S-26W NESS

Job Ticket: 16064

DST#: 4

ATTN: STEVE DAVIS

Test Start: 2010.09.26 @ 23:40:00

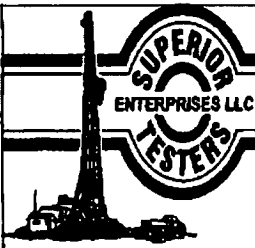
Tool Information

Drill Pipe:	Length: 4407.00 ft	Diameter: 3.80 inches	Volume: 61.82 bbl	Tool Weight: 1000.00 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: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 80000.00 lb
			Total Volume: 62.41 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 75000.00 lb
Depth to Top Packer:	4526.00 ft			Final 75000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	12.00 ft			
Tool Length:	41.00 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			4496.00	
Shut-In Tool	5.00			4503.00	
Hydrolic Tool	5.00			4508.00	
Jars	6.00			4514.00	
Safety Joint	2.00			4516.00	
Packer	5.00			4521.00	29.00 Bottom Of Top Packer
Packer	5.00			4526.00	
Perforations	7.00			4533.00	
Recorder	1.00	8405	Inside	4534.00	
Recorder	1.00	8419	Outside	4535.00	
Bullnose	3.00			4538.00	12.00 Bottom Packers & Anchor

Total Tool Length: 41.00



DRILL STEM TEST REPORT

FLUID SUMMARY

LARSON ENGINEERING

HAGANS #2

562 WEST STATE RD 4 OLMITZ KS 67564 + 8561

14-16S-26W NESS

Job Ticket: 16064

DST#: 4

ATTN: STEVE DAVIS

Test Start: 2010.09.26 @ 23:40:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 57.00 sec/qt
Water Loss: 7.20 in³
Resistivity: ohm.m
Salinity: 4400.00 ppm
Filter Cake: 2.00 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

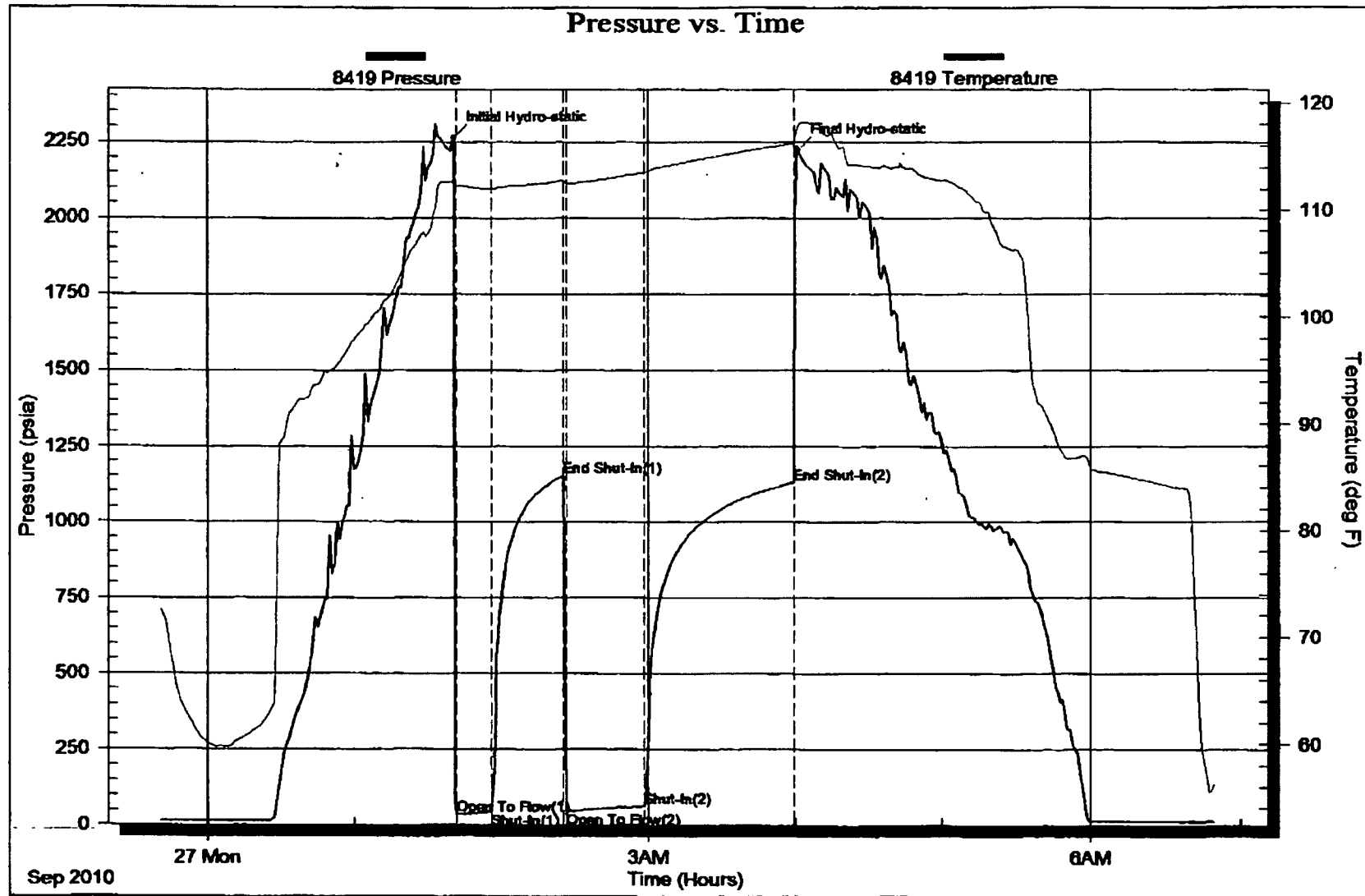
Length ft	Description	Volume bbl
65.00	MUDDY WATER 30%MUD 70%WATER	0.320
0.00	CHLORIDES 23,000	0.000
0.00	RESISTIVITY .2 @76 DEGREES	0.000

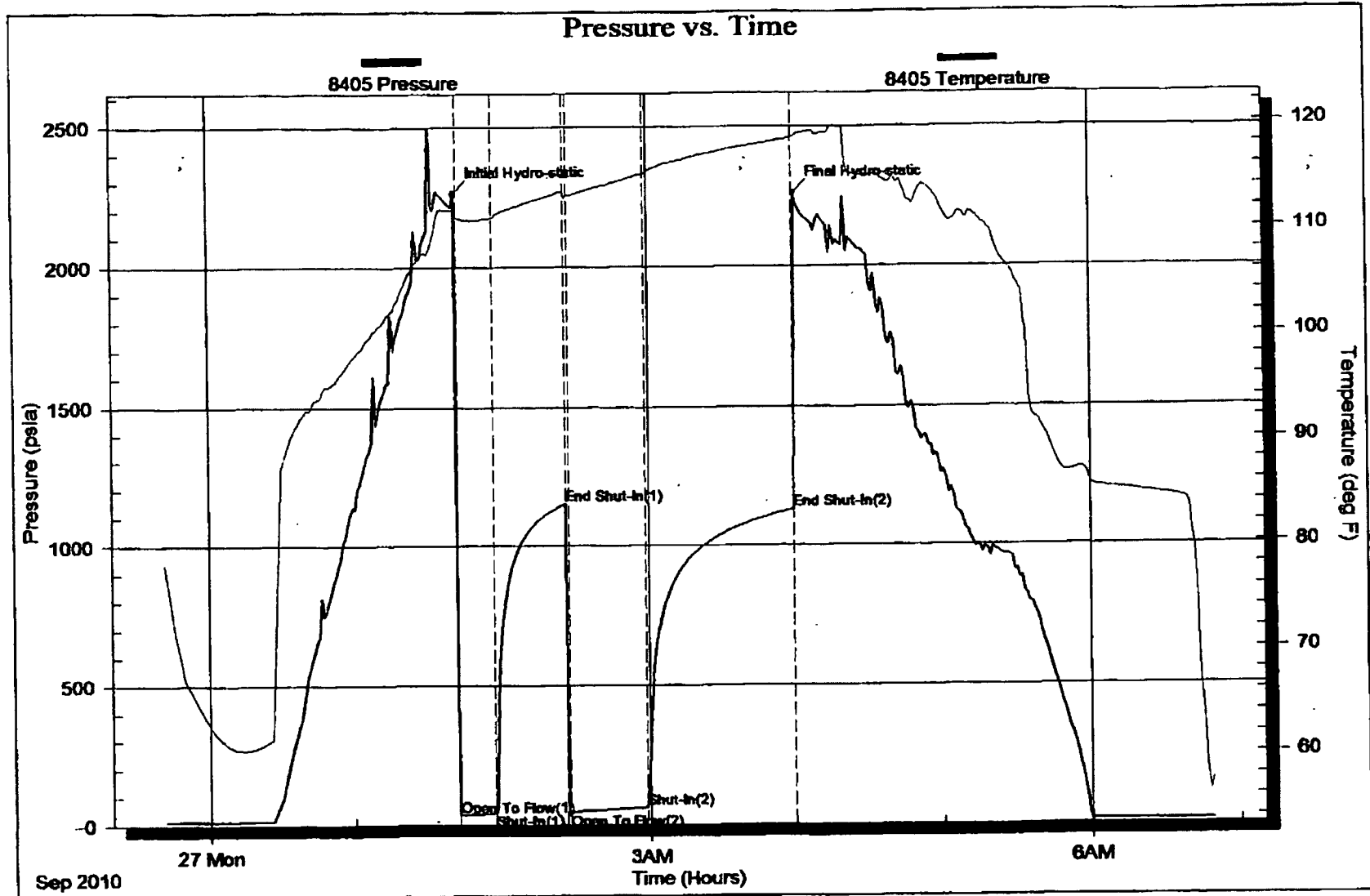
Total Length: 65.00 ft Total Volume: 0.320 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RUINED BOTTOM PACKER





RICHARD S. (Steve) DAVIS JR.

Petroleum Geologist

212 N. Market

Wichita, Kansas 67202

Phone (316) 267-9115

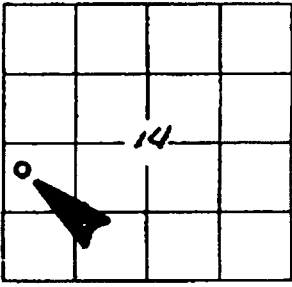
GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

<p>COMPANY <u>CARSON ENGINEERING, INC.</u></p> <p>LEASE <u>HAGANS # 2-14</u></p> <p>FIELD <u>UNNAMED</u></p> <p>LOCATION <u>1987' FSL @ 330' FWL</u></p> <p>SEC <u>14</u> TWP <u>16S</u> RGE <u>26W</u></p> <p>COUNTY <u>NESS</u> STATE <u>KANSAS</u></p>	<p style="text-align: center;">ELEVATIONS</p> <p>KB <u>2586</u></p> <p>DF <u> </u></p> <p>GL <u>2576</u></p> <p>Measurements Are All From <u>KB 2586</u></p>
<p>CONTRACTOR <u>HO DRILLING RIG # 2</u></p> <p>SPUD <u>9-17-2010</u> COMP <u>9-27-2010</u></p> <p>RTD <u>4600 (2014)</u> LTD <u>4596 (2010)</u></p> <p>MUD UP <u>3908</u> TYPE MUD <u>CHEMICAL</u></p>	<p style="text-align: center;">CASING</p> <p>SURFACE <u>8 5/8" @ 223'</u></p> <p>PRODUCTION <u>None</u></p> <p style="text-align: center;">ELECTRICAL SURVEYS</p> <p>TUCKER: <u>CDL/CNL, O.I. & M.C.</u></p>

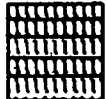
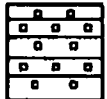

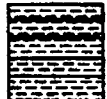


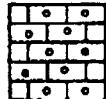

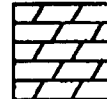
SAMPLES SAVED FROM <u>4300</u> TO <u>RTD</u>
DRILLING TIME KEPT FROM <u>3800</u> TO <u>RTD</u>
SAMPLES EXAMINED FROM <u>4300</u> TO <u>RTD</u>
GEOLOGICAL SUPERVISION FROM <u>4100</u> TO <u>RTD</u>
GEOLOGIST ON WELL <u>STEVE DAVIS</u>

FORMATION TOPS	LOG	SAMPLES
<u>ANHYDRITE</u>	<u>1996 - 590</u>	<u>2003</u>
<u>GLAUCONITE</u>	<u>2030 - 556</u>	<u>2036</u>
<u>HEEBNER</u>	<u>3860 - 1274</u>	<u>3865</u>
<u>LANSING</u>	<u>3902 - 1316</u>	<u>3908</u>
<u>STARK</u>	<u>4141 - 1555</u>	<u>4148</u>
<u>PAWNEE</u>	<u>4332 - 1746</u>	<u>4333</u>
<u>FORT SCOTT</u>	<u>4397 - 1811</u>	<u>4398</u>
<u>CHEROKEE SH</u>	<u>4422 - 1836</u>	<u>4423</u>
<u>MISSISSIPPI</u>	<u>4496 - 1910</u>	<u>4499</u>





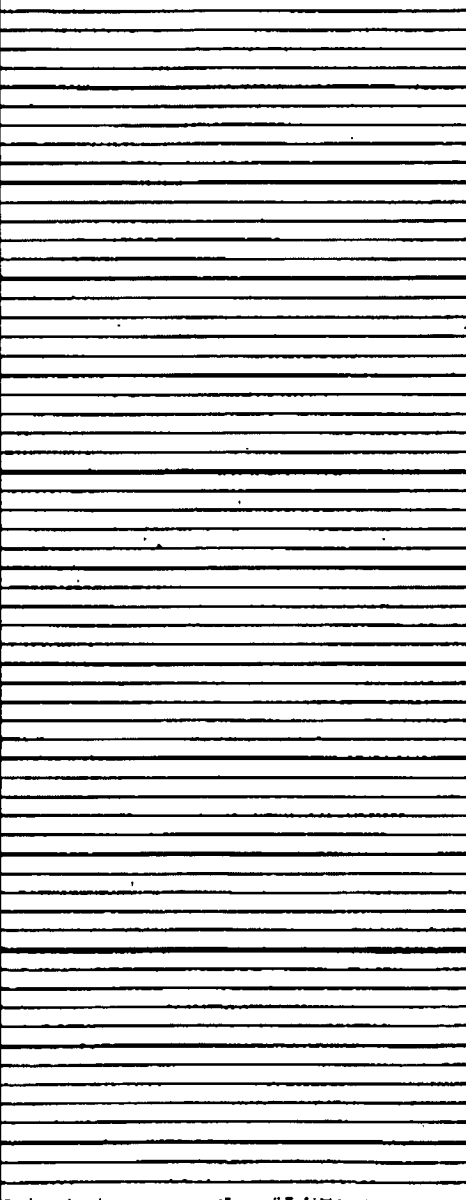
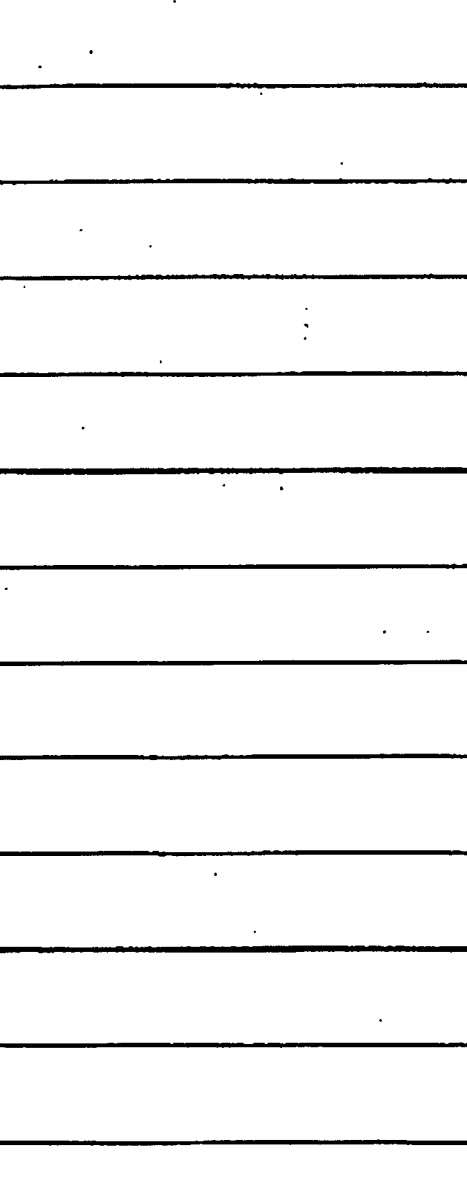
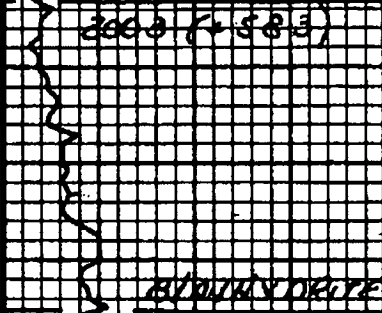

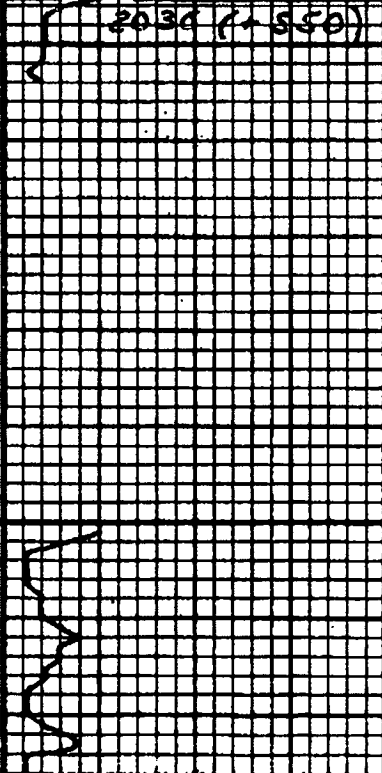
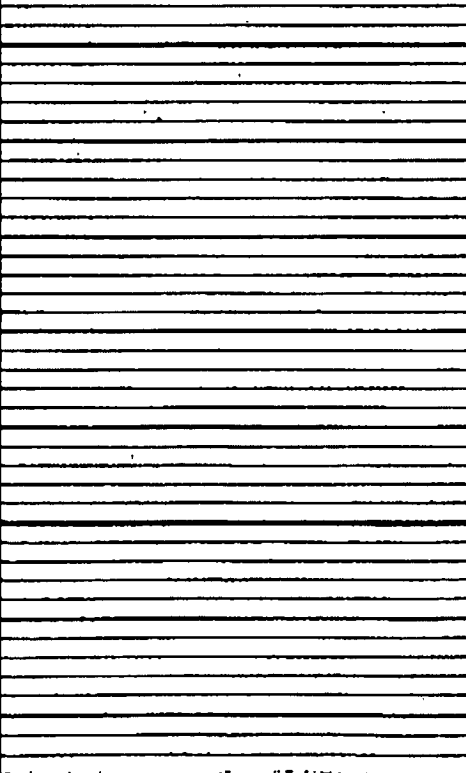
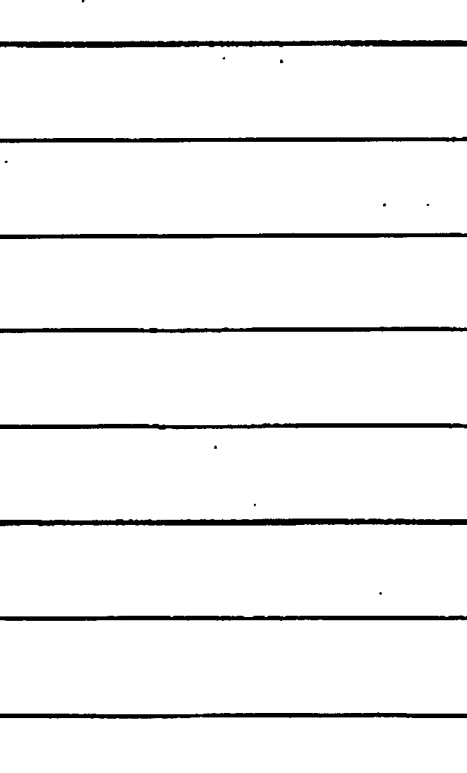
API: 15-135-25154

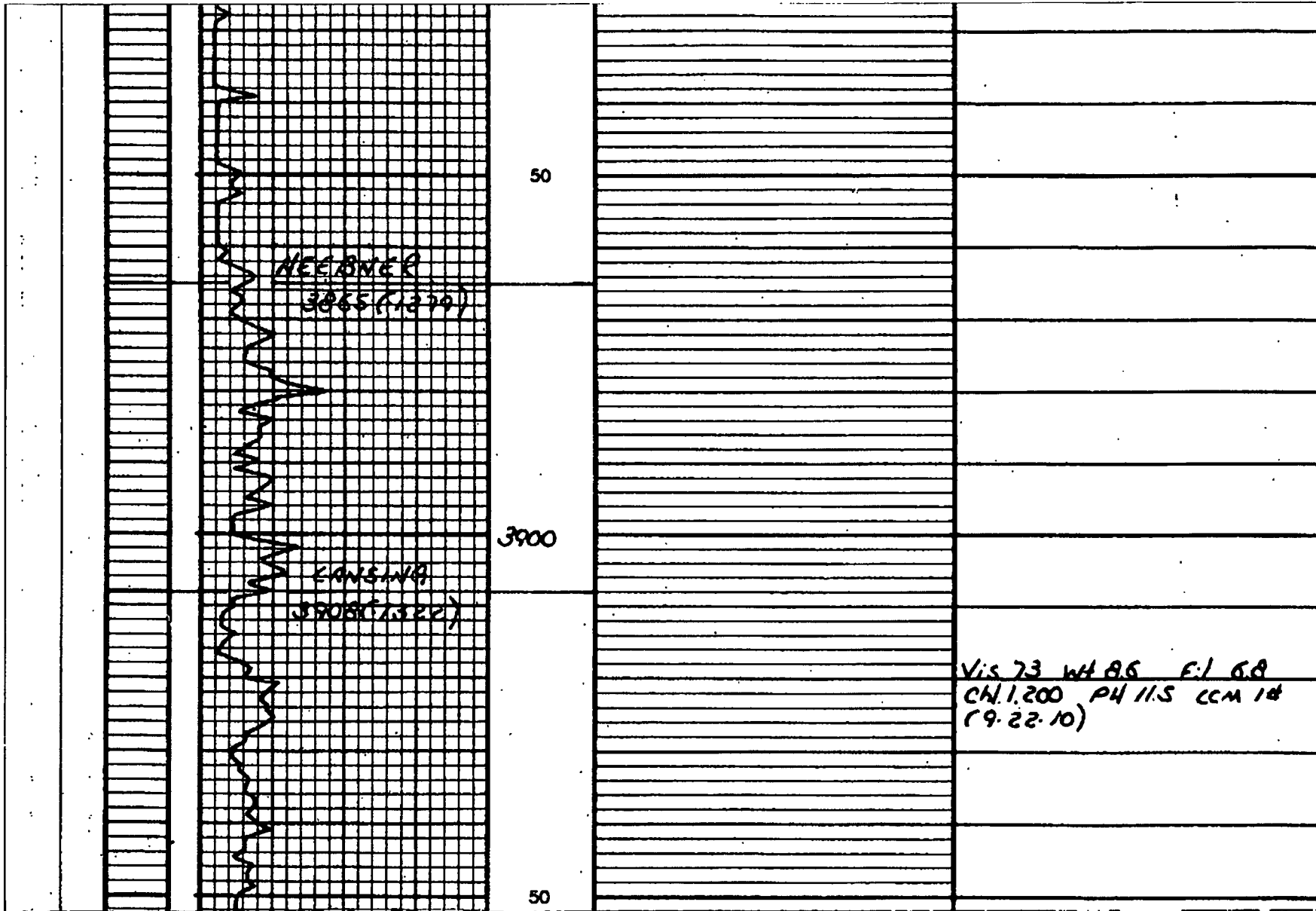
DAILY PENETRATION		BIT RECORD						
DATE	DEPTH	NO	SIZE	MAKE	TYPE	DEPTH OUT	FEET	HOURS
9-17-2010	Spud	1	12 1/4	112	RR	223	223	1 1/2
9-18	223	2	7 7/8	112	9X20	4600	4377	136
9-19	1749							
9-20	2686							
9-21	3271							
9-22	3760							
9-23	4120							
9-24	4375							
9-25	4517							
9-26	4529							
9-27	4538-4600 RTO							

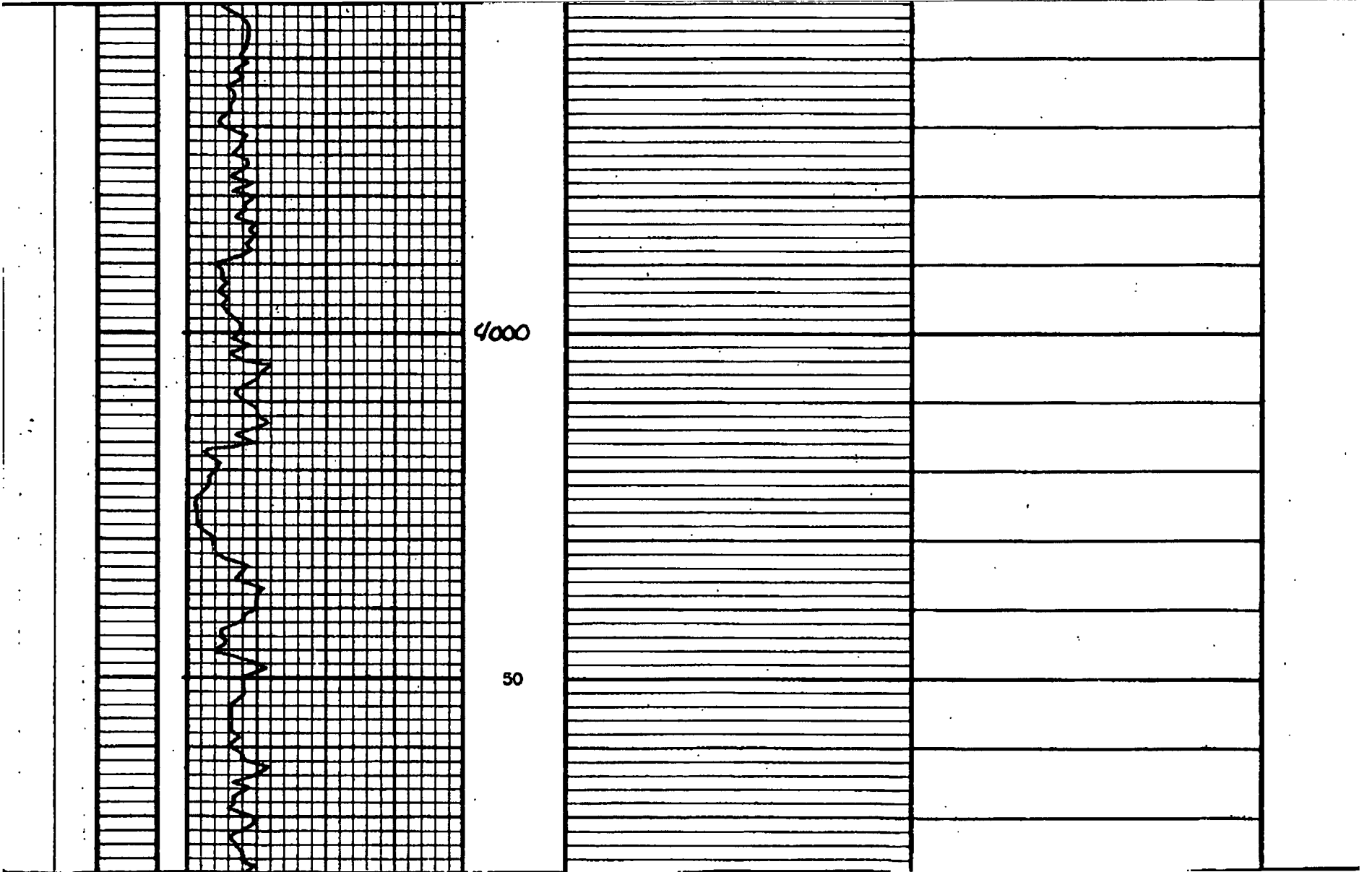
LEGEND								
								
Anhydrite	Salt	Sandstone	Shale	Carb sh	Limestone	Ool. Lime	Chert	Dolomite

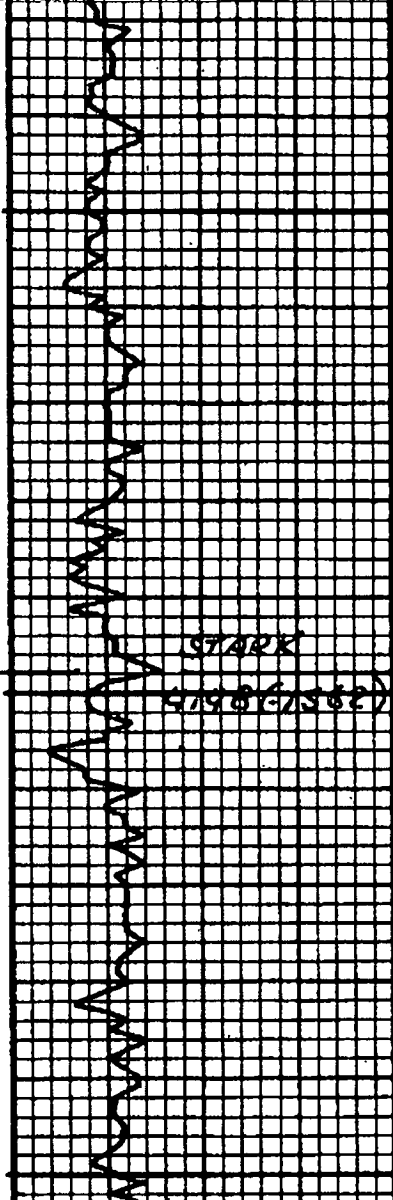
SCALE " = 100'

DRILLING TIME	DEPTH	SAMPLE DESCRIPTION	REMARKS
In Minutes 0 5 10 15 15			

		2000		
		50		
		3800		





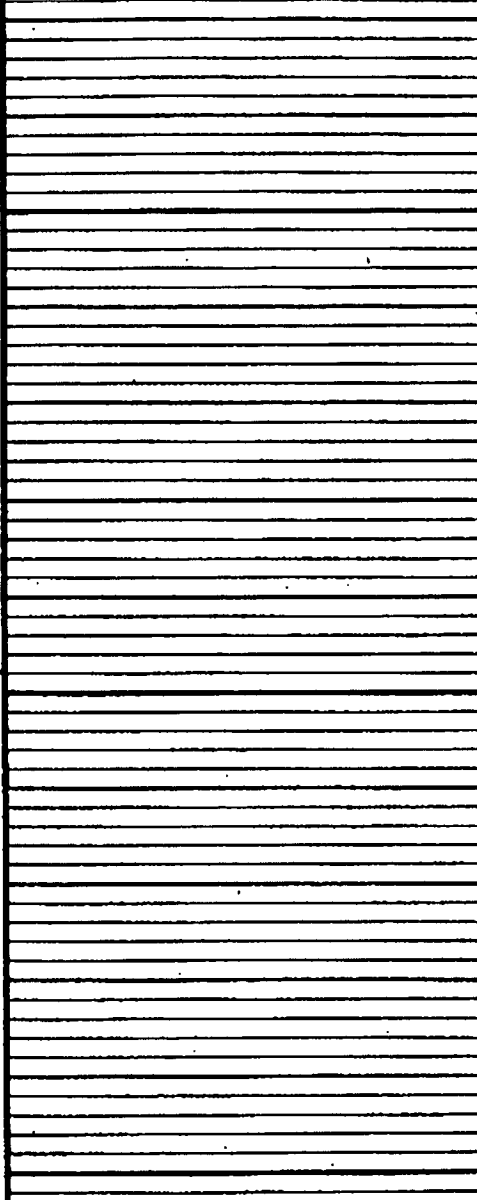


4100

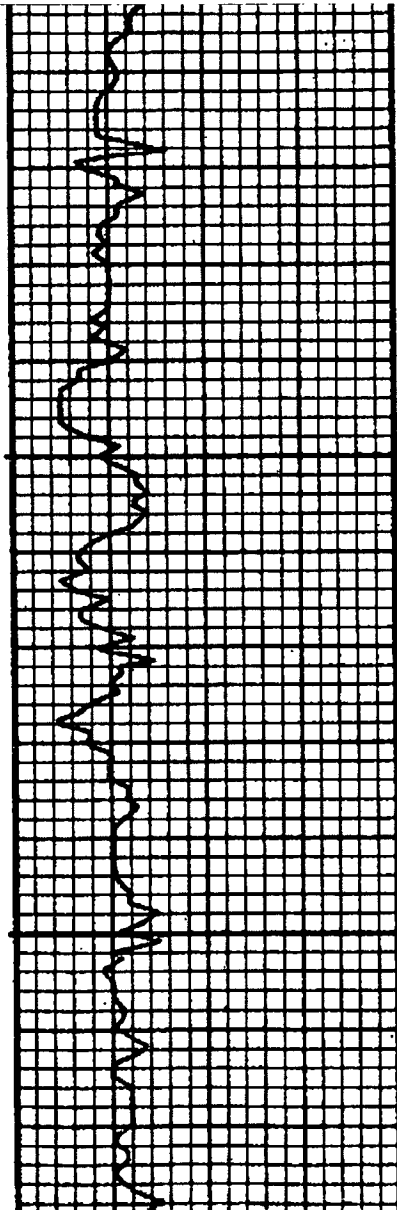
STARK
4198 (7362)

50

4200



Vis 09 Wt 89 E.I. 72
PHI 3.300 PHI.S CCM 14



50

4300

(9.23.10)

CS. con. gray lumbula silty base
mid

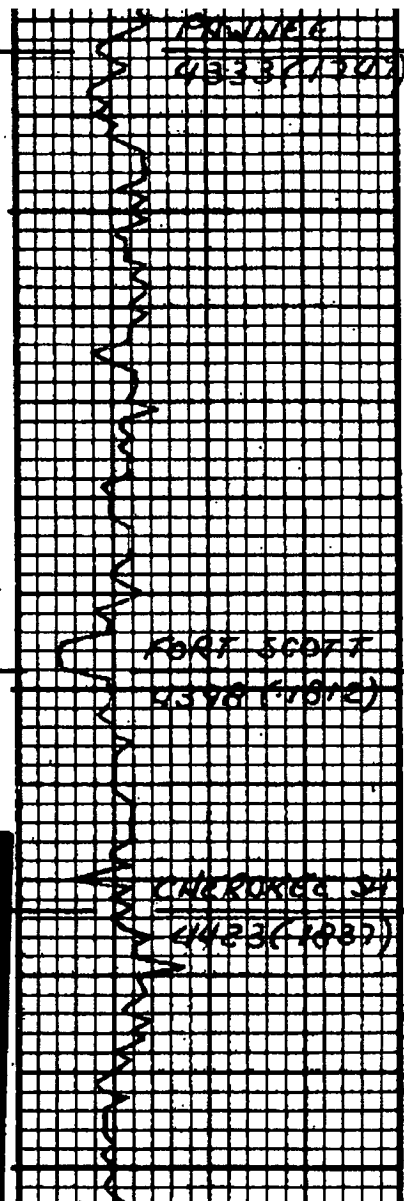
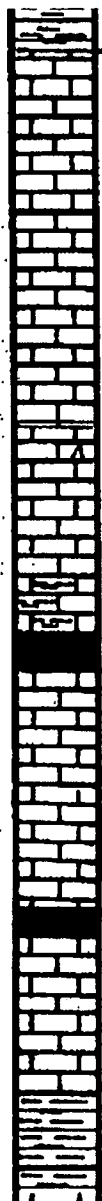
CS. Ad. silice shale black, gray &
green

CS. tan. gray lumbula silty base
chky IP mid

CS. tan. gray lumbula chky IP
mid

shale black sub. mid. gray &

start 10' wet & dry @ 4300'



PRINCE
4332 (1929)

50

green

cs tan-gray l. v. l. silty l. ss
some chky mud

cs tan-cem v. l. silty l. ss
dense mud

cs cem. g. l. white l. v. l. l. ss;
ool. P. m. b. l. n. s. a. abnt shale
gray green & rust low pc's
mat white

abnt shale AA + cs gray tan
v. l. silty l. ss mud

FORT SCOTT
4378 (1912)

4400

shale black carb

cs cem. gray l. v. l. l. ss. ool
P. m. b. l. n. s. a. abnt shale
ool. l. v. l. n. s. 50. v. l. l. ss

EMERSON ST
4423 (1937)

ofs

cs brown-gray l. v. l. l. ss. ool
dense mud

shale black carb

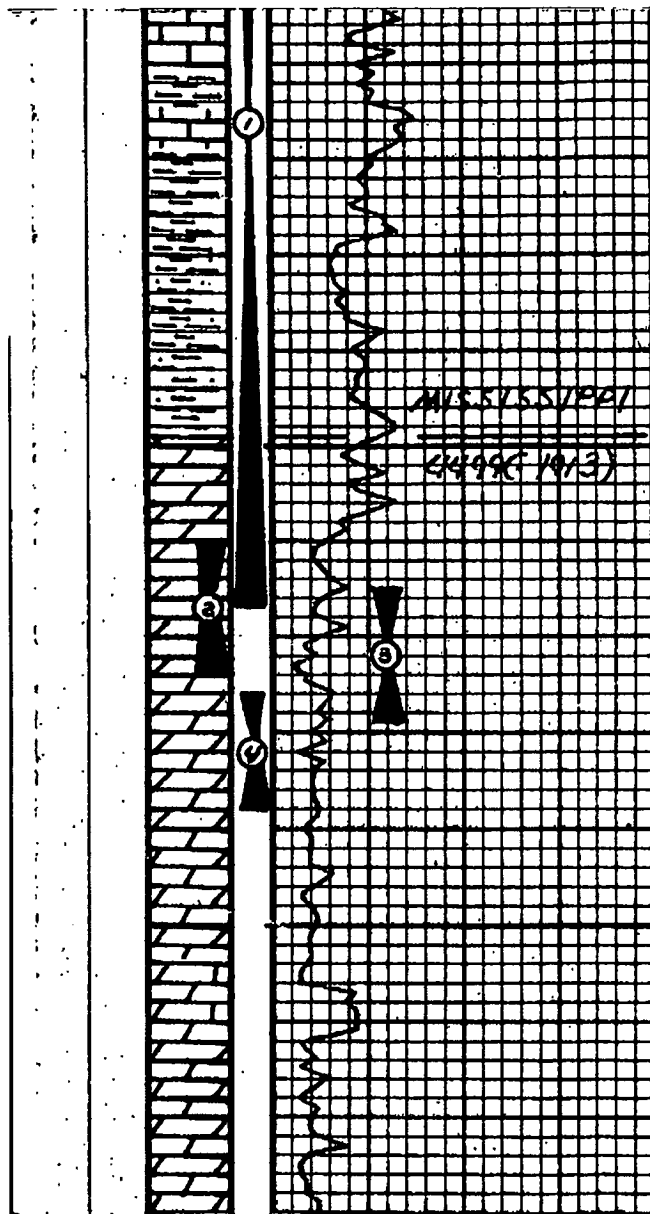
short trip @ 4440'

cs tan-cem v. l. silty l. ss
dense mud

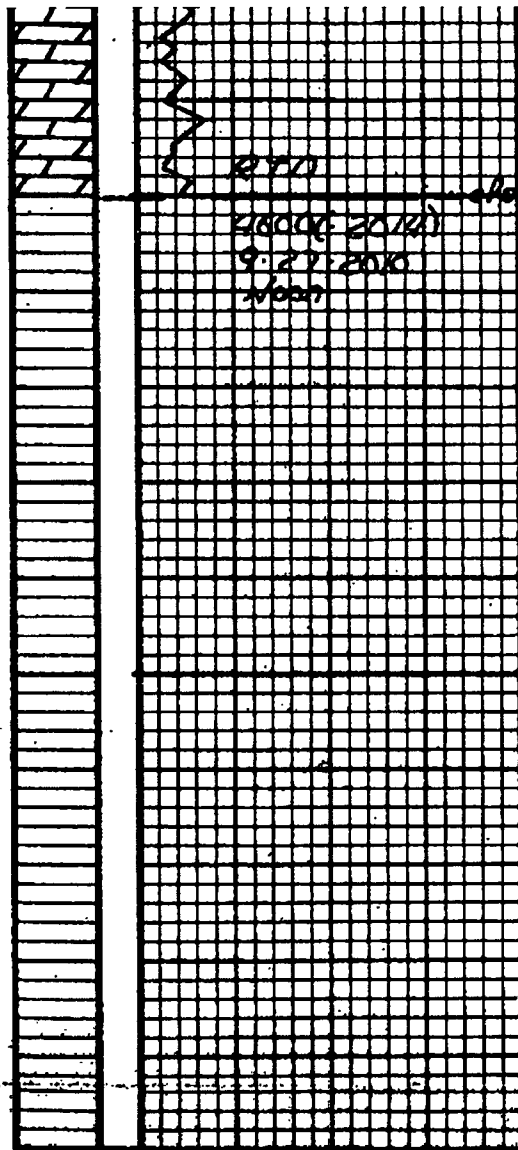
abnt shale gray black & green +
cs tan-cem v. l. silty l. ss dense
and chky l. p.

50

vis. 49 wt. 9.1 fil. 7.2
chl 3.400 PH 11.5 CCM tr.
(9.24.10)



CS gray tan lenticular dense md + shale AA	Pipe Strap @ 4517 Survey 1° 1.17 Cong
CS AA w/ inc shale black gray, green + rust	DST #1 4415-4517 15:30-45:90 BLOW: I.F. 1" F.F. surface blow died RECOVERY: 5' S.O.C.M. (4% O 96% M) I.H.P. 2249# I.F.P. 83-88# I.S.I.P. 913# F.F.P. 91-100# F.S.I.P. 1031# F.H.P. 2152# B.H.T. 124°F
shale AA + chl gray + pink low clay ss gray yellow rd well sort Pigg N.S.	Vis. 59 wt. 9.3 Fil 6.8 Chl. 3.400 PH 10.5 (CM) # (9-25-10)
Most shale black, green gray + rust + ss clepts. black lenticular sub gas, med sort Pigg N.S.E.A. black bits sta odor	DST #2 4510-4524 15:30-15:30 BLOW: I.F. weak surface F.F. weak surface RECOVERY: 5' S.O.C.M. (5% O 95% M) I.H.P. 2250# I.F.P. 34-38# I.S.I.P. 1144# F.F.P. 39-41# F.S.I.P. 1013# F.H.P. 2175# B.H.T. 116°F
Data tan brown lenticular low loss flag F.P. in lab. P. v. d. G.S.E.A. unt. sta. + fluor. odor	DST #3 4515-4529
Data dk brown gray lenticular P. v. d. G.S.E.A. unt. split dk sta dull fluor. odor	
Data tan brown lenticular F.P. in lab. P. v. d. G.S.E.A. unt. lt. sta. unt. fluor. odor	
nts 4529 Data tan gray lenticular P.F. in lab. P. v. d. G.S.E.A. unt. lt. split sta. dull unt. fluor. odor	
nts 4538 Data tan gray lenticular slightly chky F.P. in lab. P. v. d. G.S.E.A. unt. split sta. dull fluor. odor (show dec)	
Data tan. alt white lenticular chky P. in lab. P. v. d. G.S.E.A. split lt. sta. dull fluor. but odor	
CS gray tan lenticular dense sltly Med-ool med	
Data tan white lenticular sltly med P. in lab. P. v. d. G.S.E.A. rare split + chl gray	



Top 1/2 in. to 1/4 in. silty soil
Chy. I.P. 2. mald. vis. + chy. gray

Top 1/2 in. to 1/4 in. silty clay
Pink. + red + chy. gray opp.

15. 30. 15. 30

Blow:

I.F. Weak surface

F.F. Weak surface

RECOVERY:

S.S.O.C.M. (1% 0. 99% M)

I.H.P. 2273#

I.F.P. 36. 39#

I.S.I.P. 1181#

F.F.P. 40. 43#

F.S.I.P. 1120#

F.H.P. 2175M B.H.T. 117°F

DST #4 4526. 4538

15. 30. 30. 60.

Blow:

I.F. Weak built 1"

F.F. Weak built 1"

RECOVERY:

65 M.W. (30% M 70% W)

chl. 23.000

I.H.P. 2265#

I.F.P. 34. 42#

I.S.I.P. 1149#

F.F.P. 44. 61#

F.S.I.P. 1127#

F.H.P. 2261# B.H.T. 118°F

@4600 vis. 57 wt 9.1

Fil. 7.6 chl 5.100 PH 10.5

CCM 1# (9-27-10)

DATE AND TIME

DEPTH

QUALITY OF DESCRIPTION

REMARKS