

**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: Robert Lewellyn  
 Purchaser: NCRA

Designate Type of Completion:  
 New Well       Re-Entry       Workover  
 Oil       WSW       SWD       SLOW  
 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 #: \_\_\_\_\_  
 8/26/2010      9/7/2010      10/5/2010  
 Spud Date or      Date Reached TD      Completion Date or  
 Recompletion Date                Recompletion Date

API No. 15 - 15-101-22252-00-00  
 Spot Description: \_\_\_\_\_  
N2 SW NW NW Sec. 24 Twp. 18 S. R. 30  East  West  
887 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: Lane  
 Lease Name: Marit Well #: 1-24  
 Field Name: Wildcat  
 Producing Formation: Marmaton, L-KC  
 Elevation: Ground: 2847 Kelly Bushing: 2854  
 Total Depth: 4622 Plug Back Total Depth: 4572  
 Amount of Surface Pipe Set and Cemented at: 256 Feet  
 Multiple Stage Cementing Collar Used?  Yes  No  
 If yes, show depth set: 2111 Feet  
 If Alternate II completion, cement circulated from: 2111  
 feet depth to: 0 w/ 180 sx cmt.

**Drilling Fluid Management Plan**  
 (Data must be collected from the Reserve Pit)  
 Chloride content: 2500 ppm Fluid volume: 800 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: 12/21/2010

Confidential Release Date: 12/20/2012

Wireline Log Received

Geologist Report Received

UIC Distribution

ALT  I  II  III Approved by: NAOMI JAMES Date: 12/22/2010

Operator Name: Larson Engineering, Inc. dba Larson Operating Company Lease Name: Marit Well #: 1-24  
 Sec. 24 Twp. 18 S. R. 30  East  West County: Lane

**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 <i>(Attach Additional Sheets)</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Name Attached	Top Attached	Datum Attached
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 <i>(If no, Submit Copy)</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				
Dual Induction Dual Comp Porosity Microresistivity				

CASING RECORD <input checked="" type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12.25	8.625	20	256	Class A	175	2% gel, 3% CC
Production	7.875	5.5	15.5	4619	SMD	100	1/4#/sk flocele
Production	7.875	5.5	15.5	4619	EA-2	100	7#/sk gilsonite, 3/4% CFR

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	0-2111	SMD	180	1/4#/sk flocele
	-			

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
Attached	Attached	Attached	Attached

TUBING RECORD:	Size: <u>2.375</u>	Set At: <u>4303</u>	Packer At:	Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No
Date of First, Resumed Production, SWD or ENHR. <u>10/5/2010</u>	Producing Method: <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls. <u>123</u>	Gas Mcf	Water Bbls. <u>33</u>	Gas-Oil Ratio <u>35</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 checked="" type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: <u>4532-4250</u>
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Form	ACO1 - Well Completion
Operator	Larson Engineering, Inc. dba Larson Operating Company
Well Name	Marit 1-24
Doc ID	1048489

Tops

Anhydrite	2152	+702
Base Anhydrite	2209	+645
Heebner Sh	3898	-1044
Lansing-KC	3939	-1085
Stark Sh	4210	-1356
Base KC	4298	-1444
Altamont	4352	-1498
Pawnee	4407	-1553
Fort Scott	4460	-1606
Cherokee	4485	-1631
Mississippian	4548	-1694

Form	ACO1 - Well Completion
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Doc ID	1048489

**Perforations**

4	4530-32, 4496-4502, 4443-46, 4413-16	250 gal 15% NEFe	4530-32
		250 gal 15% NEFe	4496-4502
4	4368-71	250 gal 15% MCA	4368-71
4	4307-11	250 gal 15% MCA	4307-11
4	4277-80	250 gal 15% MCA	4277-80
		200 gal 15% NE	4277-80
		SQZ: 50 sx Class A	4277-80
4	4250-61	250 gal 15% MCA	4250-61

# ALLIED CEMENTING CO., LLC. 038987

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

SERVICE POINT:  
Oakley KS

DATE <u>8-26-10</u>	SEC. <u>24</u>	TWP. <u>18s</u>	RANGE <u>30w</u>	CALLED OUT	ON LOCATION <u>6:30pm</u>	JOB START <u>8:30pm</u>	JOB FINISH <u>9:00pm</u>
LEASE <u>Marib</u>	WELL # <u>1.24</u>	LOCATION <u>Digden 7w-5in</u>			COUNTY <u>Lane</u>	STATE <u>KS</u>	
OLD OR <u>NEW</u> (Circle one)							

CONTRACTOR H-D #3

TYPE OF JOB Surface

HOLE SIZE 12 1/4 T.D. 260'

CASING SIZE used 8 5/8 DEPTH 259'

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

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

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

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

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

CEMENT LEFT IN CSG. 15'

PERFS. \_\_\_\_\_

DISPLACEMENT 15.9

OWNER \_\_\_\_\_

CEMENT AMOUNT ORDERED 175 stks Com 3 20cc  
20 cc gel

COMMON	<u>175</u>	@ <u>13.65</u>	<u>2388.75</u>
POZMIX		@	
GEL	<u>3</u>	@ <u>20.40</u>	<u>61.20</u>
CHLORIDE	<u>6</u>	@ <u>57.5</u>	<u>342.00</u>
ASC		@	
		@	
		@	
		@	
		@	
		@	
		@	
		@	
HANDLING	<u>184</u>	@ <u>2.10</u>	<u>386.40</u>
MILEAGE	<u>10 x 94 mile</u>		<u>717.00</u>
TOTAL			<u>3896.85</u>

**EQUIPMENT**

PUMP TRUCK CEMENTER Fuzzie

# 431 HELPER Kelly

BULK TRUCK

# 373 DRIVER Jerry

BULK TRUCK

# \_\_\_\_\_ DRIVER \_\_\_\_\_

**REMARKS:**

cement did circulate  
approx 5 BBLs

Job completed @ 9:00pm

Thanks Fuzzie crew

**SERVICE**

DEPTH OF JOB	<u>259'</u>		
PUMP TRUCK CHARGE			<u>999.00</u>
EXTRA FOOTAGE		@	
MILEAGE	<u>3.9</u>	@ <u>70.00</u>	<u>273.00</u>
MANIFOLD		@	
		@	
		@	
TOTAL			<u>1272.00</u>

CHARGE TO: Larson Engineering

STREET \_\_\_\_\_

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

**PLUG & FLOAT EQUIPMENT**

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

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

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



CHARGE TO: LARSON ENGINEERING

ADDRESS: \_\_\_\_\_

CITY, STATE, ZIP CODE: \_\_\_\_\_

SERVICE LOCATIONS 1. <u>NAAS</u>	WELL/PROJECT NO. <u>1-24</u>	LEASE <u>MARIT</u>	COUNTY/PARISH <u>LANE</u>	STATE <u>KS</u>	CITY
2. <u>NESS</u>	TICKET TYPE <input checked="" type="checkbox"/> SERVICE <input type="checkbox"/> SALES	CONTRACTOR	RIG NAME/NO. <u>Wrightwell</u>	SHIPPED VIA <u>GT</u>	DELIVERED TO <u>1E. 185 Army</u>
3.	WELL TYPE <u>OIL</u>	WELL CATEGORY <u>Develop</u>	JOB PURPOSE <u>CMT: Andy Collin</u>	WELL PERMIT NO.	
4. REFERRAL LOCATION	INVOICE INSTRUCTIONS				

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.	UM	QTY.
		LOC	ACCT	DF				
<u>575</u>		<u>1</u>			<u>MILEAGE #112</u>	<u>50</u>	<u>mi</u>	
<u>576-D</u>		<u>1</u>			<u>Pump Service</u>	<u>1</u>	<u>EA</u>	
<u>290</u>		<u>1</u>			<u>DAIR</u>	<u>2</u>	<u>GAZ</u>	
<u>330</u>		<u>2</u>			<u>SMD CMT</u>	<u>180</u>	<u>SM</u>	
<u>276</u>		<u>2</u>			<u>Fluores</u>	<u>50</u>	<u>LB</u>	
<u>581</u>		<u>2</u>			<u>SERVICE CHC CMT</u>	<u>225</u>	<u>SM</u>	
<u>583</u>		<u>2</u>			<u>DRAYAGE</u>	<u>4492</u>	<u>TM</u>	

**LEGAL TERMS:** Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY** provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

X  
DATE SIGNED 07-14-10 TIME SIGNED 1400  A.M.  P.M.

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

SURVEY	AGREE	U DEC
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?		
WE UNDERSTOOD AND MET YOUR NEEDS?		
OUR SERVICE WAS PERFORMED WITHOUT DELAY?		
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?		
ARE YOU SATISFIED WITH OUR SERVICE?	<input type="checkbox"/> YES	<input type="checkbox"/> NO

CUSTOMER DID NOT WISH TO RESPOND

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

SWIFT OPERATOR DAVE APPROVAL \_\_\_\_\_

**JOB LOG**

**SWIFT Services, Inc.**

DATE 07-14-10 PAGE NO 1

CUSTOMER LARSON ENGINEERING WELL NO. 1-24 LEASE MARIT JOB TYPE CMT: PORT CUM TICKET NO. 18080

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1400							DILUTION CMT: 205 SMD 1/4" FWD 2 3/8" S 1/2 155" P.C. @ 2111
	1435		10	✓		1000	1000	PSI TEST OPEN P.C.
	1440	3.5	5.0	✓		150		INJ RATE GOOD BLOW
	1442	3.5	0	✓		150		START CMT @ 112"
		4.5	21.0	✓		475		" TO CIRC. MWD
		4.5	50.0	✓		550		
		4.5	88.0	✓		550		CIRC CMT TO PIT! MIX 205 S @ 14
		4.5	93.0	✓		550		END CMT
	1500	4.0	0	✓		500		START DISP
	1502	4.0	7.0	✓		500		END CLOSE PL
	1508			✓	✓	1100	1100	PSI TEST HOLD RUN IN 4 JOBS
	1515	3.5	0				300	PLED OUT
			7.5	✓			5	1ST FLAG
			10.5	✓				2ND FLAG
	1521		00.0	✓			200	ALL CLEAN
								TOTAL CMT 180 S @ 00 S @ TO PIT!
	1600							JOB COMPLETE  THANK YOU! DAVE, JOE & SHANE



CHARGE TO: LARSON ENGINEERING

ADDRESS \_\_\_\_\_

CITY, STATE, ZIP CODE \_\_\_\_\_

SERVICE LOCATIONS 1. <u>1145</u>	WELL/PROJECT NO. <u>1-24</u>	LEASE <u>MARIT</u>	COUNTY/PARISH <u>LANE</u>	STATE <u>KS</u>	CITY
2. <u>NESS</u>	TICKET TYPE <input checked="" type="checkbox"/> SERVICE <input type="checkbox"/> SALES	CONTRACTOR	RIG NAME/NO. <u>H/DRIE #3</u>	SHIPPED VIA <u>Tr</u>	DELIVERED TO <u>161/185 Army</u>
3.	WELL TYPE <u>DIC</u>	WELL CATEGORY <u>Develop</u>	JOB PURPOSE <u>LONGSTRINE</u>	WELL PERMIT NO. <u>15-101-02252</u>	
4.	REFERRAL LOCATION	INVOICE INSTRUCTIONS			

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.	UM	QTY.
		LOC	ACCT	DF				
<u>525</u>		<u>1</u>			<u>MILEAGE #112</u>	<u>40</u>	<u>mi</u>	
<u>578</u>		<u>1</u>			<u>Pump Service</u>	<u>1</u>	<u>EA</u>	
<u>281</u>		<u>1</u>			<u>LUBRICANT</u>	<u>2</u>	<u>GAZ</u>	
<u>281</u>		<u>1</u>			<u>MUD FLUSH</u>	<u>500</u>	<u>GAZ</u>	
<u>290</u>		<u>1</u>			<u>D-AIR</u>	<u>2</u>	<u>GAZ</u>	
<u>419</u>		<u>1</u>			<u>ROTATING HEAD PUMP</u>	<u>1</u>	<u>EA</u>	<u>5</u>

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MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

X  
DATE SIGNED 09/07/10 TIME SIGNED 1930  A.M.  P.M.

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

SURVEY		AGREE	DEC
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?			
WE UNDERSTOOD AND MET YOUR NEEDS?			
OUR SERVICE WAS PERFORMED WITHOUT DELAY?			
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?			
ARE YOU SATISFIED WITH OUR SERVICE?		<input type="checkbox"/> YES	<input type="checkbox"/> NO
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESP			

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

SWIFT OPERATOR [Signature] APPROVAL [Signature]





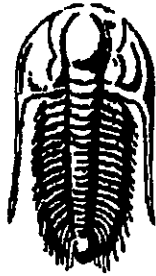
# SWIFT Services, Inc.

DATE 09-07-10 PAGE NO. 1

## JOB LOG

CUSTOMER LAYBOW ENGINEERING WELL NO. 104 LEASE MARIT JOB TYPE LONGSTRING TICKET NO. 18077

CHART NO.	TIME	RATE (BPM)	VOLUME (BB) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1930							ON LOCATION CMT: LEM: 1255 SMD TAIL: 100 EA-2 RTO 4620 SET PRE 4619 ST 42.60 JENSEN 4576 5/2 155# P.C. ON TOP N/A, 2157 FT 2114 FT CMT N/A BORE N/A
	2010							TALBOTTEN - DRIP PAN
	2015							BREAK CIR, ROTATE PIPE
	2120		70					PLUG RA 3D SMD
	2125	5.5	12				250	START MUDFLUSH 500 CMT
			20					" WLL FINE
			37					LEAD CMT 9500 SMD @ 12.5#
			21.5					TAIL CMT 100.00 EA-2 @ 15.4#
								DRIP W/ PLUG WAS BOUT A
	2245	7.5	0				300	START W/ KEY
			48.5				400	CMT DRIP TREN
			95.0				500	
			100.0				650	
			105.0				750	STOP ROTATING PIPE
	2200	4.5	108.9				1500	LAND PIPE
	2205							RELEASE - DRY
								DRIP COMPLETE
								THANK YOU! DAN ROSAB, JDE



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Larson Engineering**

562 W. St. Rd 4  
Olmitz, KS 67564-8561

ATTN: Bob Lewellyn

**S24-18-30 Lane,KS**

**Marit #1-24**

Start Date: 2010.09.01 @ 22:28:00

End Date: 2010.09.02 @ 04:19:24

Job Ticket #: 40207                      DST #: 1

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Larson Engineering

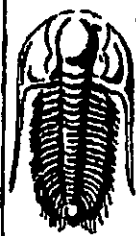
Marit #1-24

S24-18-30 Lane,KS

DST # 1

Lansing 'H'

2010.09.01



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

Larson Engineering  
562 W. St. Rd 4  
Olmitz, KS 67564-8561  
ATTN: Bob Lewellyn

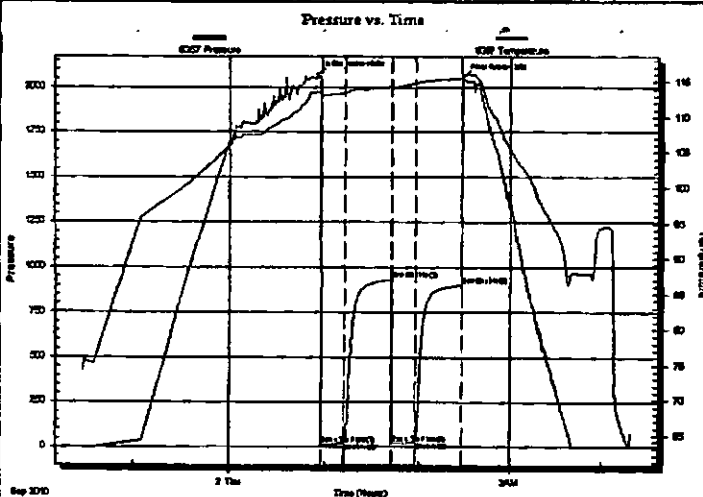
Marit #1-24  
S24-18-30 Lane, KS  
Job Ticket: 40207      DST#: 1  
Test Start: 2010.09.01 @ 22:28:00

### GENERAL INFORMATION:

Formation: **Lansing 'H'**  
Deviated: **No Whipstock**      ft (KB)  
Time Tool Opened: **00:57:42**  
Time Test Ended: **04:19:24**  
Interval: **4110.00 ft (KB) To 4145.00 ft (KB) (TVD)**  
Total Depth: **4145.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches** Hole Condition: **Good**  
Test Type: **Conventional Bottom Hole**  
Tester: **Chuck Smith**  
Unit No: **37**  
Reference Elevations: **2854.00 ft (KB)**  
**2847.00 ft (CF)**  
KB to GR/CF: **7.00 ft**

Serial #: **8357**      Inside  
Press@RunDepth: **24.50 psig @ 4114.00 ft (KB)**      Capacity: **8000.00 psig**  
Start Date: **2010.09.01**      End Date: **2010.09.02**      Last Calib.: **2010.09.02**  
Start Time: **22:28:05**      End Time: **04:19:24**      Time On Btrr: **2010.09.02 @ 00:55:00**  
**Time Off Btrr: 2010.09.02 @ 02:28:42**

TEST COMMENT: IF: Surface blow receded.  
IS: No return.  
FF: No blow.  
FSI: No return.



### PRESSURE SUMMARY

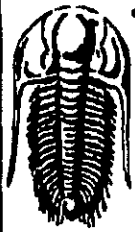
Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	2070.36	113.52	Initial Hydro-static
3	16.38	112.75	Open To Flow (1)
18	19.13	113.47	Shut-in(1)
48	932.95	114.35	End Shut-in(1)
48	21.03	114.04	Open To Flow (2)
63	24.50	114.87	Shut-in(2)
94	904.84	115.55	End Shut-in(2)
94	2052.42	115.95	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
20.00	OSM 100%M	0.10

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Larson Engineering  
562 W. St. Rd 4  
Ohrutz, KS 67564-8561  
ATTN: Bob Lewellyn

Marit #1-24  
S24-18-30 Lane, KS  
Job Ticket: 40207      DST#: 1  
Test Start: 2010.09.01 @ 22:28:00

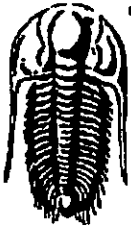
**Tool Information**

Drill Pipe:	Length: 4028.00 ft	Diameter: 3.80 inches	Volume: 56.50 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 86.00 ft	Diameter: 2.25 inches	Volume: 0.42 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 56.92 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.50 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	4110.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	35.00 ft			
Tool Length:	62.50 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			4083.50	
Shut In Tool	5.00			4088.50	
Hydraulic tool	5.00			4093.50	
Jars	5.00			4098.50	
Safety Joint	2.50			4101.00	
Packer	5.00			4106.00	27.50 Bottom Of Top Packer
Packer	4.00			4110.00	
Stubb	1.00			4111.00	
Perforations	3.00			4114.00	
Recorder	0.00	8357	Inside	4114.00	
Recorder	0.00	6751	Outside	4114.00	
Perforations	28.00			4142.00	
Bullnose	3.00			4145.00	35.00 Bottom Packers & Anchor

**Total Tool Length: 62.50**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Larson Engineering  
562 W. St. Rd 4  
Olmitz, KS 67564-8561  
ATTN: Bob Lewellyn

Marit #1-24  
S24-18-30 Lane, KS  
Job Ticket: 40207      DST#: 1  
Test Start: 2010.09.01 @ 22:28:00

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	0 ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.18 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 1700.00 ppm			
Filter Cake: 2.00 inches			

## Recovery Information

Recovery Table

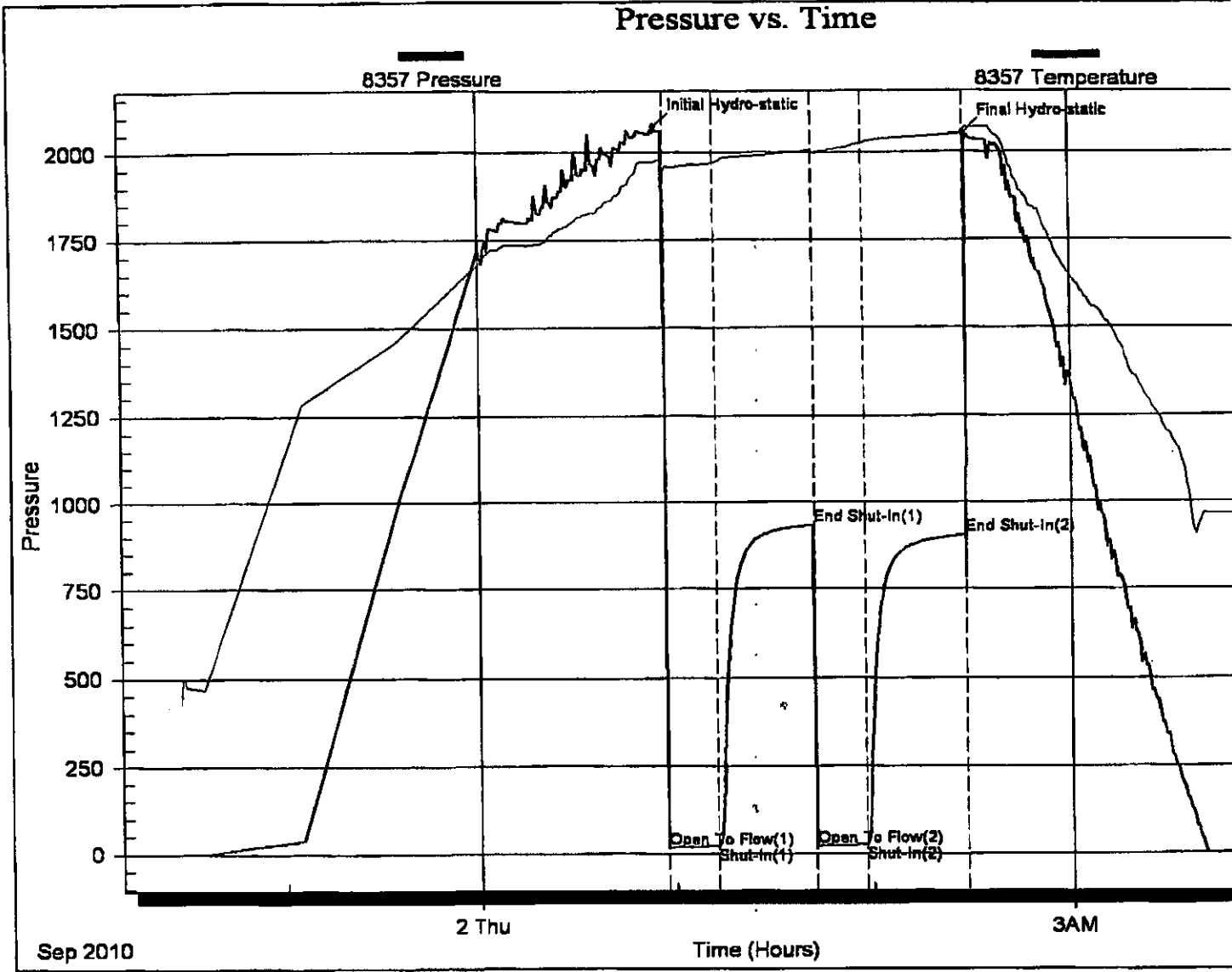
Length ft	Description	Volume bbl
20.00	OSM 100%M	0.098

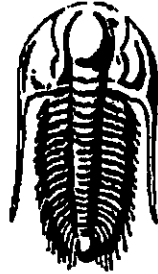
Total Length: 20.00 ft      Total Volume: 0.098 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments:





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Larson Engineering**

562 W. St. Rd 4  
Olmitz, KS 67564-8561

ATTN: Bob Lewellyn

**S24-18-30 Lane,KS**

**Marit #1-24**

Start Date: 2010.09.02 @ 15:47:00

End Date: 2010.09.02 @ 22:25:36

Job Ticket #: 40208                      DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Larson Engineering

Marit #1-24

S24-18-30 Lane,KS

DST # 2

Lansing 'J'

2010.09.02





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Larson Engineering  
562 W. St. Rd 4  
Olmitz, KS 67564-8561  
ATTN: Bob Lewellyn

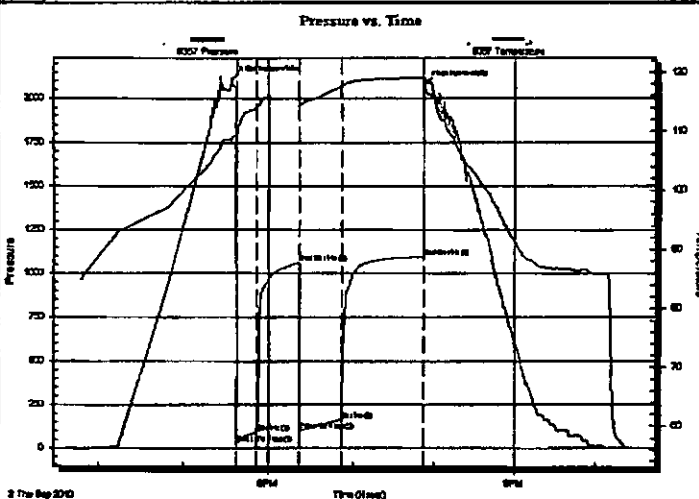
Marit #1-24  
S24-18-30 Lane, KS  
Job Ticket: 40208      DST#: 2  
Test Start: 2010.09.02 @ 15:47:00

## GENERAL INFORMATION:

Formation: **Lansing 'J'**  
 Deviated: **No** Whipstock: **ft (KB)**  
 Time Tool Opened: **17:37:06**  
 Time Test Ended: **22:25:36**  
 Interval: **4154.00 ft (KB) To 4187.00 ft (KB) (TVD)**  
 Total Depth: **4187.00 ft (KB) (TVD)**  
 Hole Diameter: **7.88 inches** Hole Condition: **Good**  
 Test Type: **Conventional Bottom Hole**  
 Tester: **Chuck Smith**  
 Unit No: **37**  
 Reference Elevations: **2854.00 ft (KB)**  
**2847.00 ft (CF)**  
 KB to GR/CF: **7.00 ft**

Serial #: **8357** Inside  
 Press@RunDepth: **161.66 psig @ 4156.00 ft (KB)** Capacity: **8000.00 psig**  
 Start Date: **2010.09.02** End Date: **2010.09.02** Last Calib.: **2010.09.02**  
 Start Time: **15:47:05** End Time: **22:25:36** Time On Btm: **2010.09.02 @ 17:33:48**  
 Time Off Btm: **2010.09.02 @ 19:53:06**

TEST COMMENT: IF: B.O.B. @ 12 min.  
 IS: 2" Return receded to 1/2".  
 FF: B.O.B. @ 10 min.  
 FSt 2 1/2" Return receded to 1/2".



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2109.92	108.65	Initial Hydro-static
4	24.56	108.40	Open To Flow (1)
18	89.74	114.11	Shut-In(1)
48	1060.81	115.57	End Shut-In(1)
49	97.95	115.00	Open To Flow (2)
79	161.66	117.58	Shut-In(2)
139	1094.75	118.99	End Shut-In(2)
140	2079.58	118.79	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
173.00	GMOO 15%G 20%M 65%O	1.13
198.00	GO 20%G 80%O	2.75
0.00	425 Feet GIP	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Larson Engineering  
562 W. St. Rd 4  
Olmritz, KS 67564-8561

Marit #1-24  
S24-18-30 Lane, KS  
Job Ticket: 40208      DST#: 2  
Test Start: 2010.09.02 @ 15:47:00

ATTN: Bob Lewellyn

**Tool Information**

Drill Pipe:	Length: 3996.00 ft	Diameter: 3.80 inches	Volume: 56.05 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 142.00 ft	Diameter: 2.25 inches	Volume: 0.70 bbl	Weight to Pull Loose: 65000.00 lb
		Total Volume: 56.75 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	11.50 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	4154.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	33.00 ft			
Tool Length:	60.50 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			4127.50	
Shut In Tool	5.00			4132.50	
Hydraulic tool	5.00			4137.50	
Jars	5.00			4142.50	
Safety Joint	2.50			4145.00	
Packer	5.00			4150.00	27.50      Bottom Of Top Packer
Packer	4.00			4154.00	
Stubb	1.00			4155.00	
Perforations	1.00			4156.00	
Recorder	0.00	8357	Inside	4156.00	
Recorder	0.00	6751	Outside	4156.00	
Perforations	28.00			4184.00	
Bullnose	3.00			4187.00	33.00      Bottom Packers & Anchor

**Total Tool Length: 60.50**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Larson Engineering  
582 W. St. Rd 4  
Olmritz, KS 67564-8561  
ATTN: Bob Lewellyn

Marit #1-24  
S24-18-30 Lane, KS  
Job Ticket: 40208      DST#: 2  
Test Start: 2010.09.02 @ 15:47:00

## Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	36 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Satinity:	0 ppm
Viscosity:	54.00 sec/qt	Cushion Volume:	bbbl		
Water Loss:	6.39 in*	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1900.00 ppm				
Filter Cake:	2.00 inches				

## Recovery Information

Recovery Table

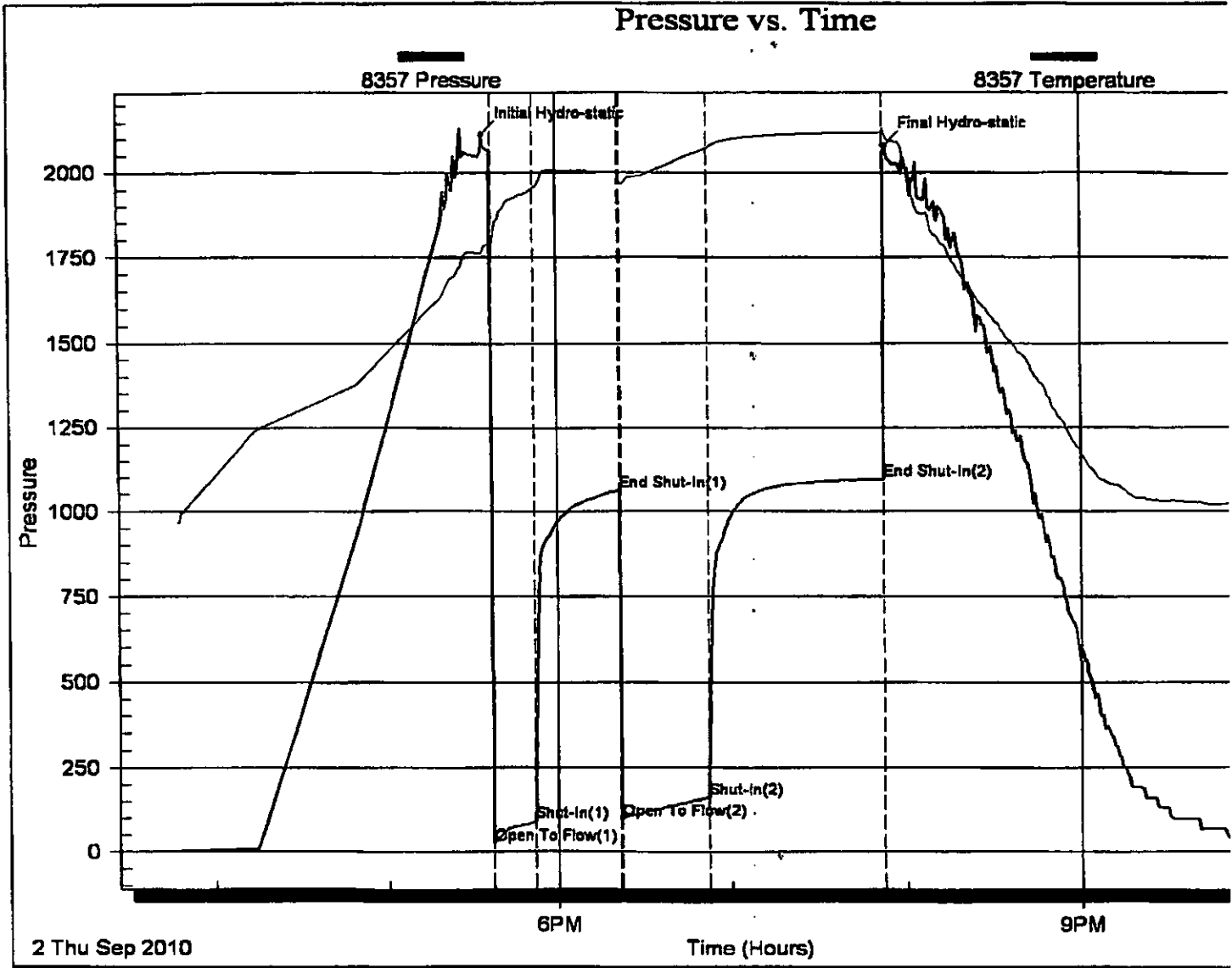
Length ft	Description	Volume bbbl
173.00	GMOO 15%G 20%M 65%O	1.133
196.00	GO 20%G 80%O	2.749
0.00	425 Feet GIP	0.000

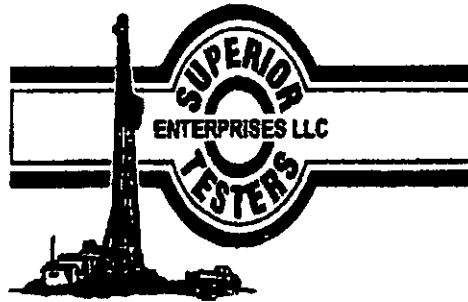
Total Length: 369.00 ft      Total Volume: 3.882 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: API 35 @ 60 Degrees F = 36 .





## DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc.**

562 West State Road #4 Oimitz 67564+8561

ATTN: Bob Lewellyn

**24/18S/30W Lane**

**Marit #1-24**

Start Date: 2010.09.03 @ 09:46:00

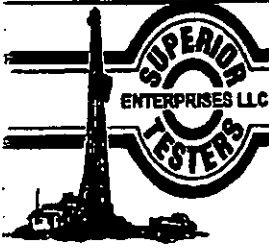
End Date: 2010.09.03 @ 16:13:30

Job Ticket #: 16113                      DST #: 3

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

Printed: 2010.09.03 @ 17:02:24

Larson Engineering Inc.      Marit #1-24      24/18S/30W Lane      DST # 3      Logging      2010.09.03



# DRILL STEM TEST REPORT

Larson Engineering Inc.  
 562 West State Road #4 Otritz 67564+8561  
 ATTN: Bob Lewellyn

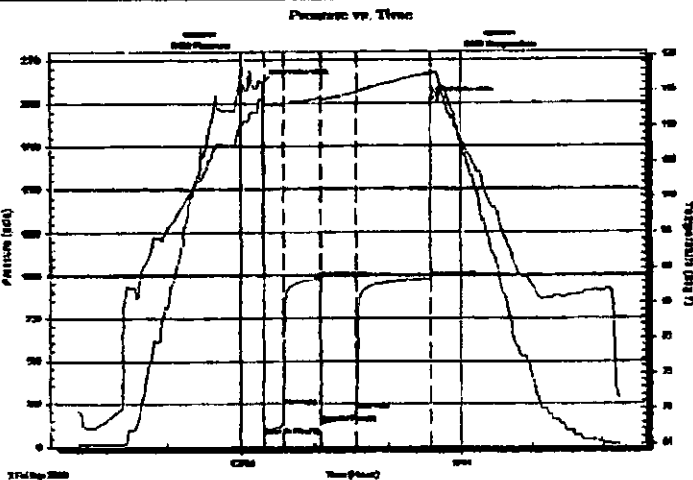
Marit #1-24  
 24/18S/30W Lane  
 Job Ticket: 16113 DST#: 3  
 Test Start: 2010.09.03 @ 09:46:00

## GENERAL INFORMATION:

Formation: Lansing  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 12:19:30  
 Time Test Ended: 16:13:30  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Dylan E. Ellis  
 Unit No: 3345-GB-206  
 Interval: 4184.00 ft (KB) To 4215.00 ft (KB) (TVD)  
 Reference Elevations: 2854.00 ft (KB)  
 Total Depth: 4215.00 ft (KB) (TVD)  
 2847.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 KB to GR/CF: 7.00 ft

Serial #: 8400 Outside  
 Press@RunDepth: 212.60 psia @ 4212.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2010.09.03 End Date: 2010.09.03 Last Calib.: 2010.09.03  
 Start Time: 09:46:00 End Time: 16:13:30 Time On Btm: 2010.09.03 @ 12:18:00  
 Time Off Btm: 2010.09.03 @ 14:35:00

TEST COMMENT: 1ST Opening 15 Minutes fair steady blow / bottom of a 5 gallon bucket of water in 13 minutes.  
 1ST Shut-in 30 Minutes yes steady through out 1 inch into 5 gallon bucket of water  
 2ND Opening 30 Minutes fair steady blow / bottom of a 5 gallon bucket of water in 13 minutes.  
 2ND Shut-in 60 Minutes yes but it died out half way through shut-in



## PRESSURE SUMMARY

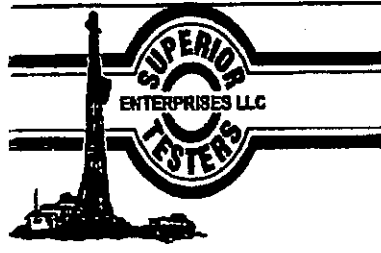
Time (Mn.)	Pressure (psia)	Temp (deg F)	Annotation
0	2120.15	113.70	Initial Hydro-static
2	66.66	113.08	Open To Flow (1)
17	231.60	113.01	Shut-in(1)
47	982.11	113.97	End Shut-in(1)
48	132.43	113.76	Open To Flow (2)
76	212.60	114.72	Shut-in(2)
137	980.30	117.48	End Shut-in(2)
137	2015.48	118.03	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	Slightly Gassy Oil cut Muddy Water	0.30
0.00	Gas 5% Oil 5% Mud 15% Water 75%	0.00
60.00	Gassy Mud cut Oil	0.30
0.00	Gas 10% Oil 46% Mud 44%	0.00
60.00	Slightly Watery Gassy Mud cut Oil	0.30
0.00	Gas 15% Oil 55% Mud 26% Water 4%	0.00

## Gas Rates

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



# DRILL STEM TEST REPORT

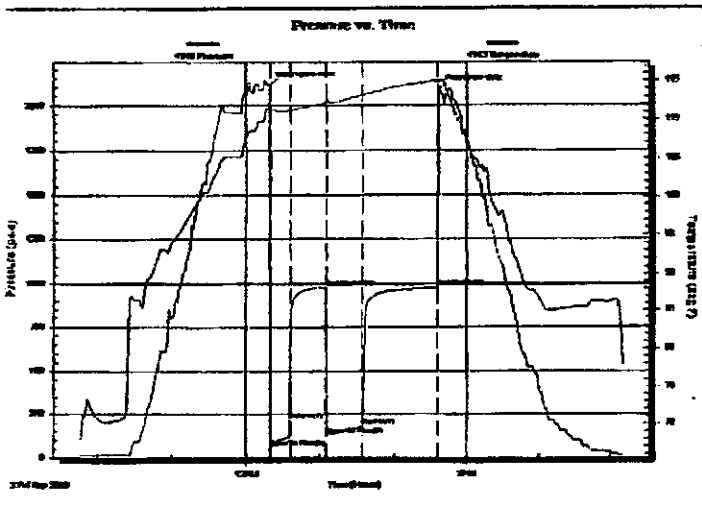
**Larson Engineering Inc.** **Marit #1-24**  
 562 West State Road #4 Orlitz 67564+8561 **24/18S/30W Lane**  
 ATTN: Bob Lewellyn Job Ticket: 16113 **DST#: 3**  
Test Start: 2010.09.03 @ 09:46:00

**GENERAL INFORMATION:**

<b>Formation:</b> Lansing <b>Deviated:</b> No <b>Whipstock:</b> ft (KB) <b>Time Tool Opened:</b> 12:19:30 <b>Time Test Ended:</b> 16:13:30	<b>Test Type:</b> Conventional Bottom Hole (Initial) <b>Tester:</b> Dylan E. Ellis <b>Unit No:</b> 3345-GB-206
<b>Interval:</b> 4184.00 ft (KB) To 4215.00 ft (KB) (TVD) <b>Total Depth:</b> 4215.00 ft (KB) (TVD) <b>Hole Diameter:</b> 7.88 inches <b>Hole Condition:</b> Fair	<b>Reference Elevations:</b> 2854.00 ft (KB) 2847.00 ft (CF) <b>KB to GR/CF:</b> 7.00 ft

**Serial #: 4143** **Inside**  
**Press@RunDepth:** 978.78 psia @ 4211.00 ft (KB) **Capacity:** 5000.00 psia  
**Start Date:** 2010.09.03 **End Date:** 2010.09.03 **Last Calib.:** 2010.09.03  
**Start Time:** 09:46:00 **End Time:** 16:13:30 **Time On Btm:** 2010.09.03 @ 12:19:16  
**Time Off Btm:** 2010.09.03 @ 14:36:46

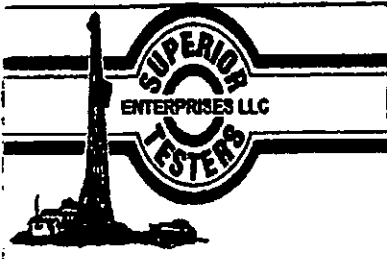
**TEST COMMENT:** 1ST Opening 15 Minutes fair steady blow / bottom of a 5 gallon bucket of water in 13 minutes.  
 1ST Shut-in 30 Minutes yes steady through out 1 inch into 5 gallon bucket of water  
 2ND Opening 30 Minutes fair steady blow / bottom of a 5 gallon bucket of water in 13 minutes.  
 2ND Shut-in 60 Minutes yes but it died out half way through shut-in



PRESSURE SUMMARY			
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2110.68	111.41	Initial Hydro-static
1	56.95	111.36	Open To Flow (1)
17	213.62	111.19	Shut-in(1)
46	979.04	112.14	End Shut-in(1)
47	132.02	112.16	Open To Flow (2)
75	182.36	113.12	Shut-in(2)
136	978.78	115.08	End Shut-in(2)
138	2088.61	114.84	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
60.00	Slightly Gassy Oil cut Muddy Water	0.30
0.00	Gas 5% Oil 5% Mud 15% Water 75%	0.00
60.00	Gassy Mud cut Oil	0.30
0.00	Gas 10% Oil 46% Mud 44%	0.00
60.00	Slightly Watery Gassy Mud cut Oil	0.30
0.00	Gas 15% Oil 55% Mud 26% Water 4%	0.00

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



# DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering Inc.  
 562 West State Road #4 Omitz 67564+8561  
 ATTN: Bob Leweflyn

Marit #1-24  
 24/18S/30W Lane  
 Job Ticket: 16113 DST#: 3  
 Test Start: 2010.09.03 @ 09:46:00

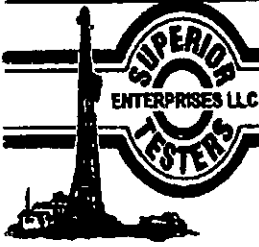
## Tool Information

Drill Pipe:	Length: 4002.00 ft	Diameter: 3.80 inches	Volume: 56.14 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: 182.83 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose:	60000.00 lb
			<u>Total Volume: 57.04 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	29.83 ft			String Weight: Initial	54000.00 lb
Depth to Top Packer:	4184.00 ft			Final	55000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	31.00 ft				
Tool Length:	60.00 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			4156.00	
Shut-In Tool	5.00			4161.00	
Hydroic Tool	5.00			4166.00	
Jars	6.00			4172.00	
Safety Joint	2.00			4174.00	
Packer	5.00			4179.00	29.00 Bottom Of Top Packer
Packer	5.00			4184.00	
Perforations	26.00			4210.00	
Recorder	1.00	4143	Inside	4211.00	
Recorder	1.00	8400	Outside	4212.00	
Bullnose	3.00			4215.00	31.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>60.00</b>				





# DRILL STEM TEST REPORT

## FLUID SUMMARY

Larson Engineering Inc.

Marit #1-24

562 West State Road #4 Oritz 67564+8561

24/18S/30W Lane

Job Ticket: 16113

DST#: 3

ATTN: Bob Lewellyn

Test Start: 2010.09.03 @ 09:46:00

### Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	37 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	55000 ppm
Viscosity: 58.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.40 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 1900.00 ppm			
Filter Cake: 2.00 inches			

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	Slightly Gassy Oil cut Muddy Water	0.295
0.00	Gas 5% Oil 5% Mud 15% Water 75%	0.000
60.00	Gassy Mud cut Oil	0.295
0.00	Gas 10% Oil 46% Mud 44%	0.000
60.00	Slightly Watery Gassy Mud cut Oil	0.295
0.00	Gas 15% Oil 55% Mud 26% Water 4%	0.000
50.00	Slightly Gassy Oil cut Mud	0.676
0.00	Gas 10% Oil 80% Mud 10%	0.000
140.00	Free Oil Oil 100%	1.964
0.00	Chlorides 55000.0	0.000
0.00	Resistivity is .28 @ 84 Degrees	0.000

Total Length: 370.00 ft      Total Volume: 3.525 bbl

Num Fluid Samples: 0

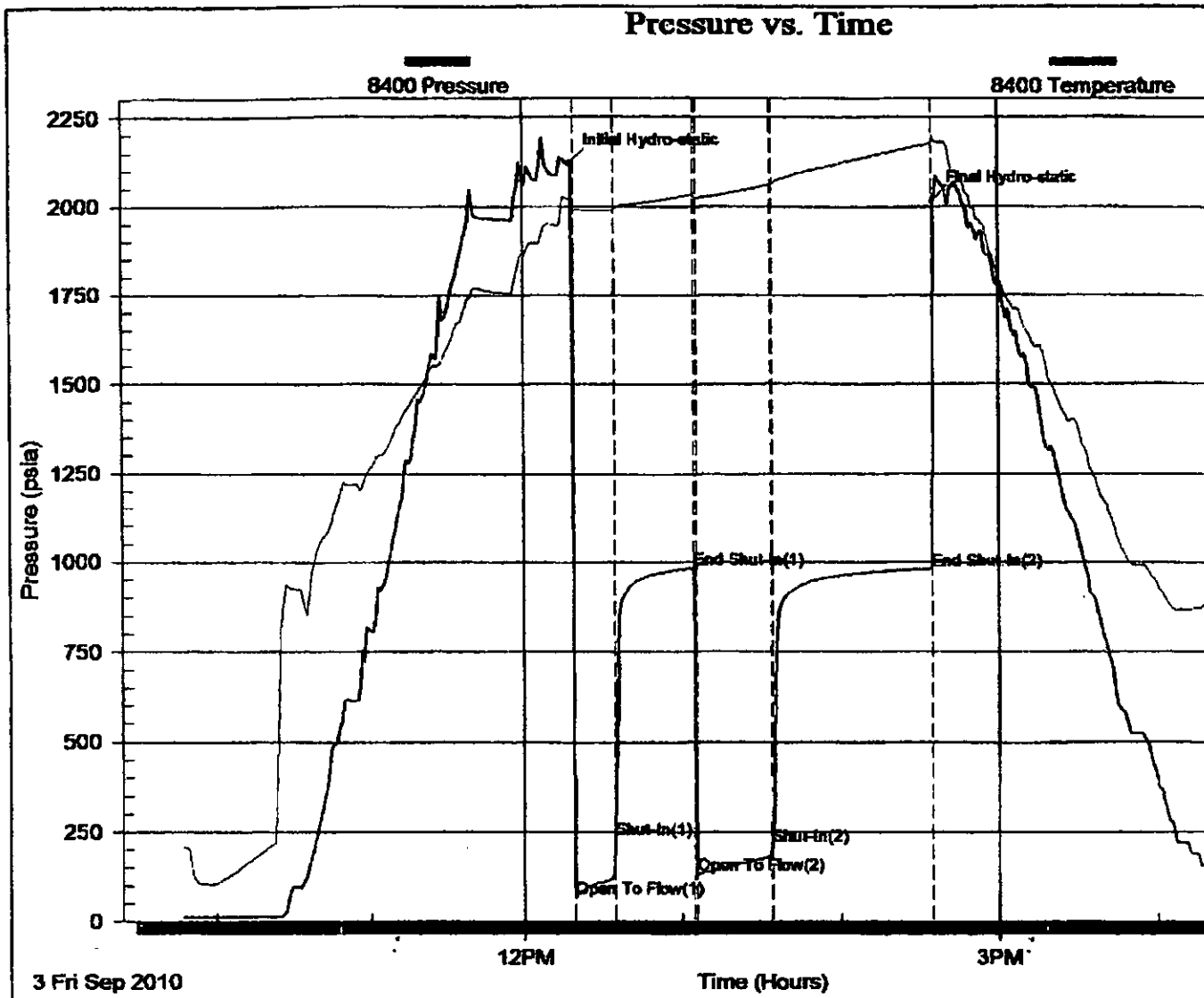
Num Gas Bombs: 0

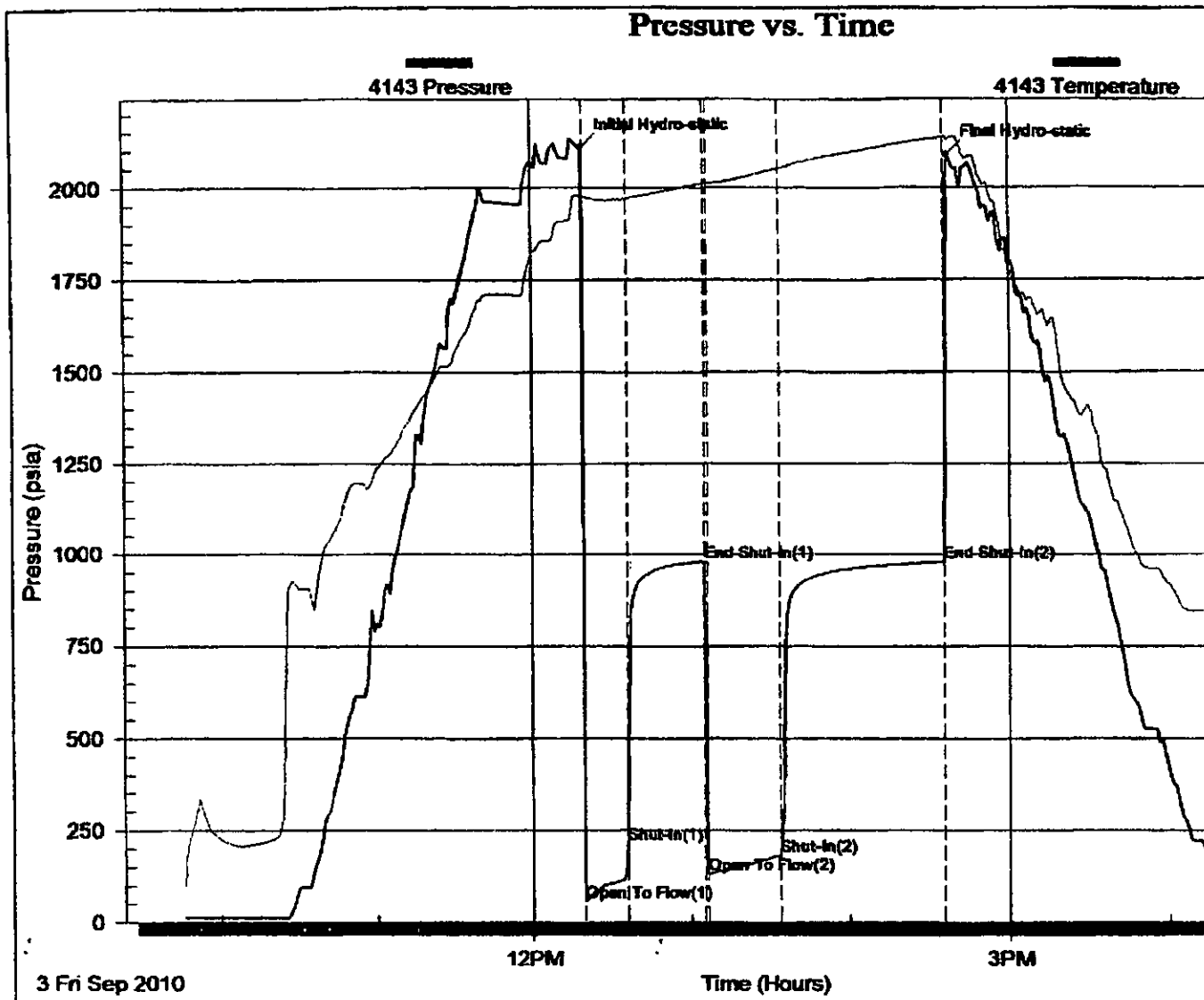
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc.**

562 West State Road #4 Olmitz 67564+8561

ATTN: Bob Lewellyn

**24/18S/30W Lane**

**Marit #1-24**

Start Date: 2010.09.04 @ 05:40:00

End Date: 2010.09.04 @ 12:44:15

Job Ticket #: 16114

DST #: 4

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

Printed: 2010.09.04 @ 13:30:54

Larson Engineering Inc.

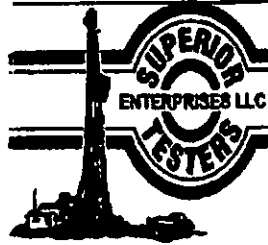
Marit #1-24

24/18S/30W Lane

DST # 4

Lansing "K" Zone

2010.09.04



# DRILL STEM TEST REPORT

Larson Engineering Inc.  
 562 West State Road #4 Omitz 67564+8561  
 ATTN: Bob Leweflyn

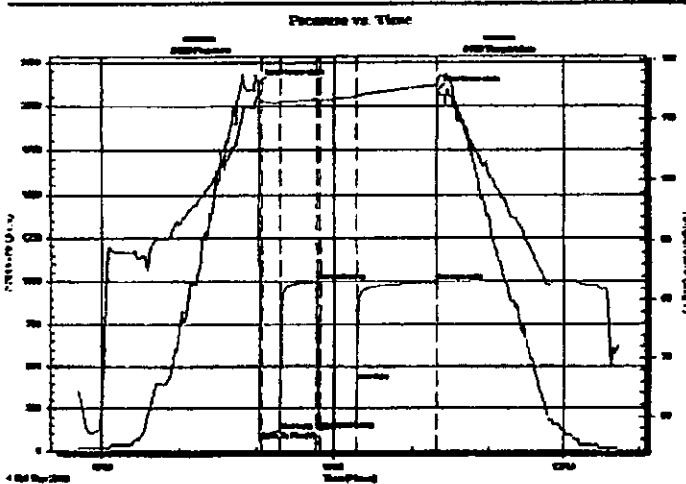
Marit #1-24  
 2418S/30W Lane  
 Job Ticket: 16114 DST#: 4  
 Test Start: 2010.09.04 @ 05:40:00

## GENERAL INFORMATION:

Formation: Lansing "K" Zone  
 Deviated: No Whipstock ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 08:03:30 Tester: Dylan E. Ellis  
 Time Test Ended: 12:44:15 Unit No: 3345-GB-206  
 Interval: 4209.00 ft (KB) To 4240.00 ft (KB) (TVD) Reference Elevations: 2854.00 ft (KB)  
 Total Depth: 4240.00 ft (KB) (TVD) 2847.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 7.00 ft

Serial #: 8400 Outside  
 Press@RunDepth: 413.97 psia @ 4237.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2010.09.04 End Date: 2010.09.04 Last Calc.: 2010.09.04  
 Start Time: 05:40:00 End Time: 12:44:15 Time On Btrr: 2010.09.04 @ 08:01:30  
 Time Off Btrr: 2010.09.04 @ 10:19:30

TEST COMMENT: 1ST Opening 15 Minutes weak blow /blow built to 6 inches into a 5 gallon bucket of water  
 1ST Shut-in 30 Minutes no blow back  
 2ND Opening 30 Minutes weak blow /blow built to bottom of the 5 gallon bucket of water  
 2ND Shut-in 60 Minutes no blow back



## PRESSURE SUMMARY

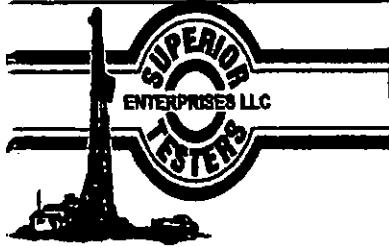
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2129.53	113.58	Initial Hydro-static
2	62.66	112.92	Open To Flow (1)
16	116.74	112.69	Shut-in(1)
45	1000.56	113.33	End Shut-in(1)
47	121.80	113.10	Open To Flow (2)
76	413.97	113.85	Shut-in(2)
137	997.74	115.69	End Shut-in(2)
138	2084.15	116.08	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	Slight Oil skim in Mud cut Water	0.30
0.00	1% Oil 20% Mud 79% Water	0.00
60.00	Slight Oil skim in Mud cut Water	0.30
0.00	0.50% Oil 10% Mud 89.50% Water	0.00
60.00	Mud cut Water with a trace of Oil	0.30
0.00	20% Mud 80% Water	0.00

## Gas Rates

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



# DRILL STEM TEST REPORT

Larson Engineering Inc.  
 562 West State Road #4 Obitz 67564+8561  
 ATTN: Bob Leweflyn

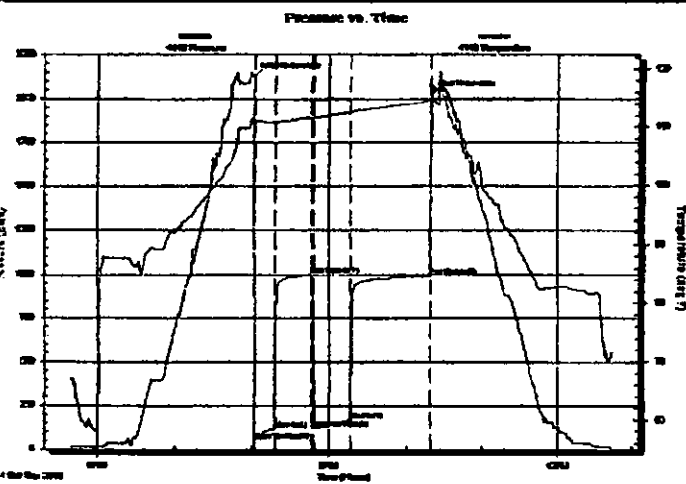
Marit #1-24  
 24/18S/30W Lane  
 Job Ticket: 16114 DST#: 4  
 Test Start: 2010.09.04 @ 05:40:00

## GENERAL INFORMATION:

Formation: Lansing "K" Zone  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 08:03:30 Tester: Dylan E. Ellis  
 Time Test Ended: 12:44:15 Unit No: 3345-GB-206  
 Interval: 4209.00 ft (KB) To 4240.00 ft (KB) (TVD) Reference Elevations: 2854.00 ft (KB)  
 Total Depth: 4240.00 ft (KB) (TVD) 2847.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 7.00 ft

Serial #: 4143 Inside  
 Press@RunDepth: 995.19 psia @ 4236.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2010.09.04 End Date: 2010.09.04 Last Calib.: 2010.09.04  
 Start Time: 05:40:00 End Time: 12:44:15 Time On Btrr: 2010.09.04 @ 08:01:15  
 Time Off Btrr: 2010.09.04 @ 10:19:16

TEST COMMENT: 1ST Opening 15 Minutes weak blow /blow built to 6 inches into a 5 gallon bucket of water  
 1ST Shut-in 30 Minutes no blow back  
 2ND Opening 30 Minutes weak blow /blow built to bottom of the 5 gallon bucket of water  
 2ND Shut-in 60 Minutes no blow back



## PRESSURE SUMMARY

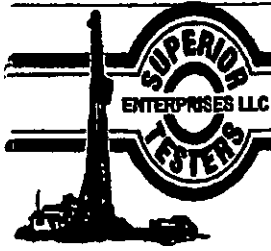
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2126.92	111.32	Initial Hydro-static
2	53.19	111.22	Open To Flow (1)
17	118.41	110.80	Shut-in(1)
46	998.77	111.58	End Shut-in(1)
48	121.56	111.64	Open To Flow (2)
76	170.20	112.59	Shut-in(2)
138	995.19	114.45	End Shut-in(2)
139	2025.14	114.22	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	Slight Oil skim in Mud cut Water	0.30
0.00	1% Oil 20% Mud 79% Water	0.00
60.00	Slight Oil skim in Mud cut Water	0.30
0.00	0.50% Oil 10% Mud 89.50% Water	0.00
60.00	Mud cut Water with a trace of Oil	0.30
0.00	20% Mud 80% Water	0.00

## Gas Rates

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



# DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering Inc.  
 562 West State Road #4 Otritz 67564+8561  
 ATTN: Bob Lewellyn

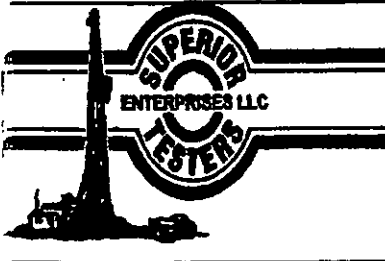
Marit #1-24  
 24/18S/30W Lane  
 Job Ticket: 16114      DST#: 4  
 Test Start: 2010.09.04 @ 05:40:00

## Tool Information

Drill Pipe:	Length: 4019.00 ft	Diameter: 3.80 inches	Volume: 56.38 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: 182.83 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 58000.00 lb
		Total Volume: 57.28 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	21.83 ft			String Weight: Initial 53000.00 lb
Depth to Top Packer:	4209.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	31.00 ft			
Tool Length:	60.00 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			4181.00	
Shut-in Tool	5.00			4186.00	
Hydrolic Tool	5.00			4191.00	
Jars	6.00			4197.00	
Safety Joint	2.00			4199.00	
Packer	5.00			4204.00	29.00      Bottom Of Top Packer
Packer	5.00			4209.00	
Perforations	26.00			4235.00	
Recorder	1.00	4143	Inside	4236.00	
Recorder	1.00	8400	Outside	4237.00	
Bullnose	3.00			4240.00	31.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>		<b>60.00</b>			



# DRILL STEM TEST REPORT

## FLUID SUMMARY

Larson Engineering Inc.

Marit #1-24

562 West State Road #4 Otrtz 67564+8561

24/18S/30W Lane

Job Ticket: 16114

DST#: 4

ATTN: Bob Leweflyn

Test Start: 2010.09.04 @ 05:40:00

### 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: 57.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.80 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohmm	Gas Cushion Pressure: psia		
Salinity: 2000.00 ppm			
Filter Cake: 2.00 inches			

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	Slight Oil skim in Mud cut Water	0.295
0.00	1% Oil 20% Mud 79% Water	0.000
60.00	Slight Oil skim in Mud cut Water	0.295
0.00	0.50% Oil 10% Mud 89.50% Water	0.000
60.00	Mud cut Water with a trace of Oil	0.295
0.00	20% Mud 80% Water	0.000
60.00	Slight Watery Oil cut Mud	0.816
0.00	10% Oil 80% Mud 10% Water	0.000
60.00	Oil cut Mud 50% Oil/50%Mud	0.842
0.00	Chlorides 31000	0.000
0.00	Resistivity is .33@84 Degrees	0.000

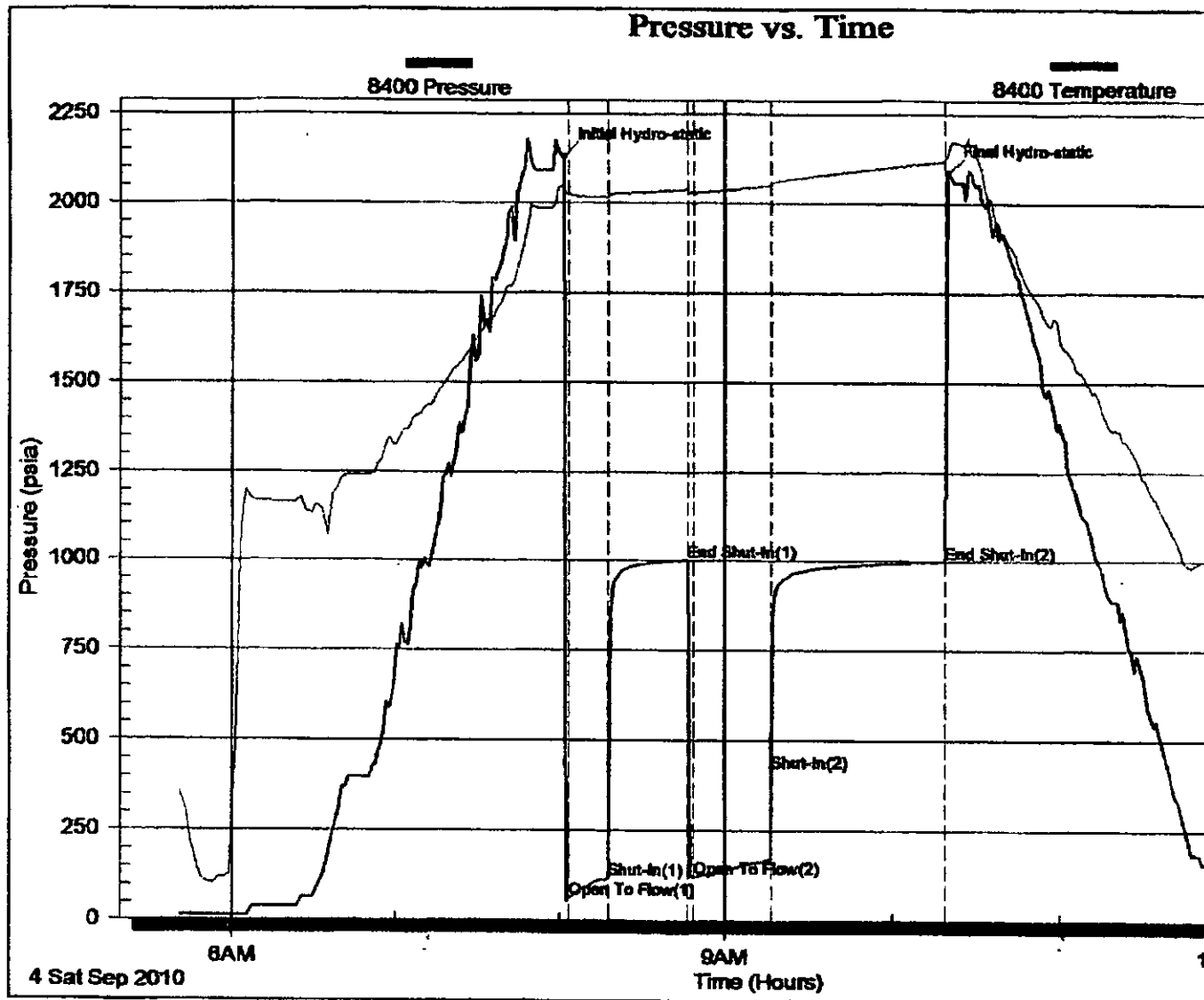
Total Length: 300.00 ft      Total Volume: 2.543 bbl

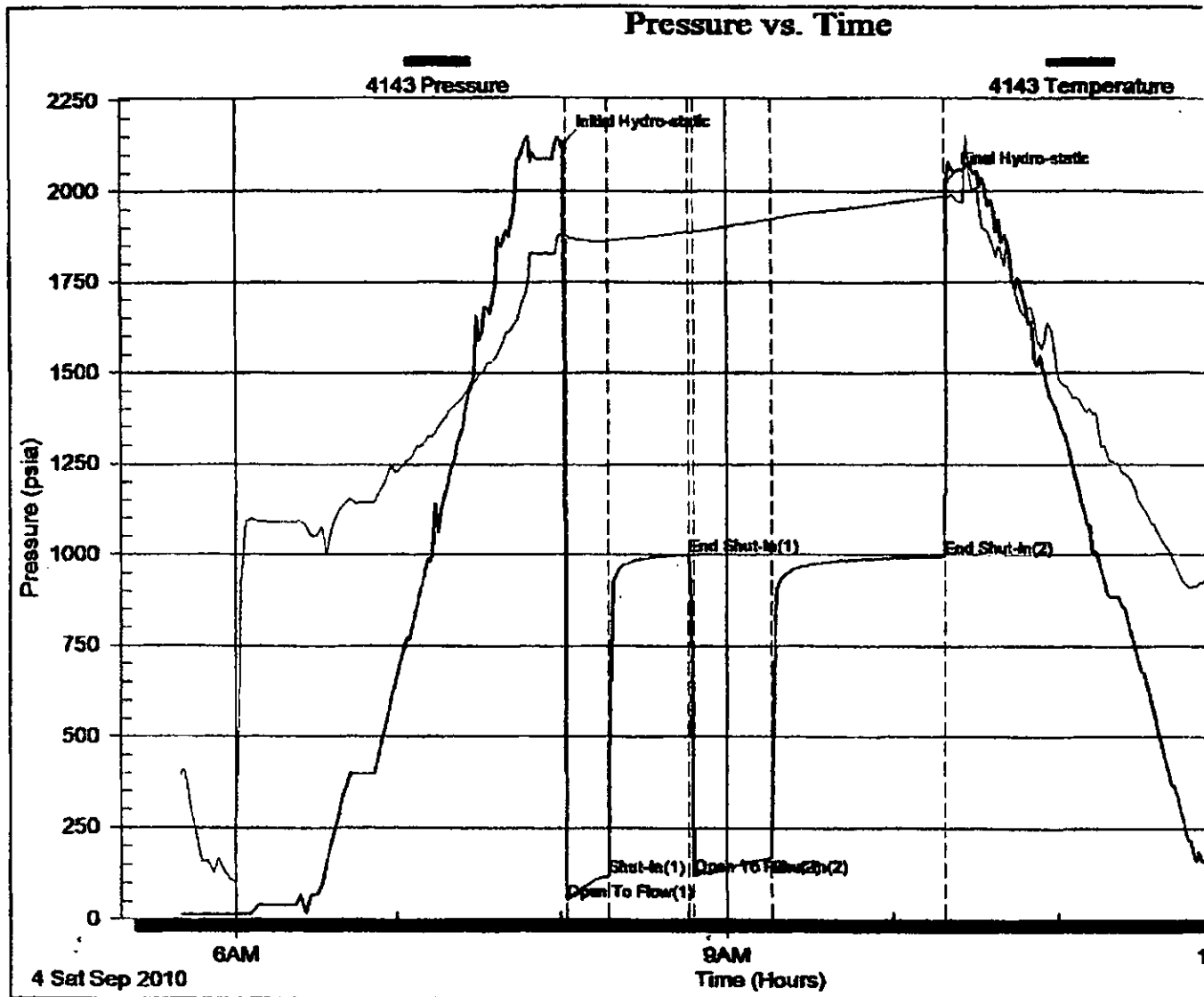
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

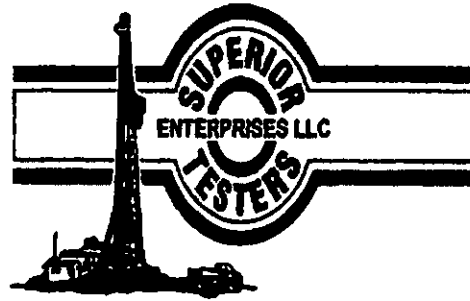
Laboratory Name:      Laboratory Location:

Recovery Comments:









## DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc.**

562 West State Road #4 Olmitz 67564+8561

ATTN: Bob Lewellyn

**24/18S/30W Lane**

**Marit #1-24**

Start Date: 2010.09.04 @ 22:49:00

End Date: 2010.09.05 @ 10:18:00

Job Ticket #: 16115

DST #: 5

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

Printed: 2010.09.05 @ 11:18:39

Larson Engineering Inc.

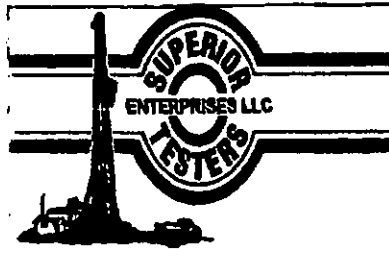
Marit #1-24

24/18S/30W Lane

DST # 5

Lansing " L " Zone

2010.09.04



# DRILL STEM TEST REPORT

Larson Engineering Inc.  
 562 West State Road #4 Olatz 67564+8561  
 ATTN: Bob Leweflyn

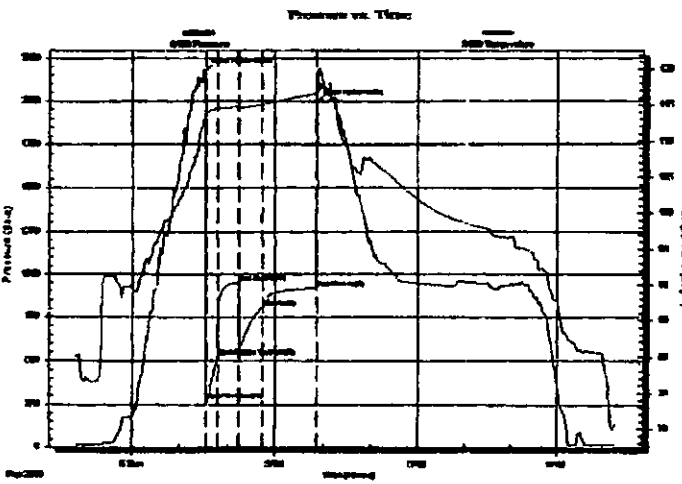
Marit #1-24  
 24/18S/30W Lane  
 Job Ticket: 16115 DST#: 5  
 Test Start: 2010.09.04 @ 22:49:00

## GENERAL INFORMATION:

Formation: Lansing " L " Zone  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 01:34:00 Tester: Dylan E. Ellis  
 Time Test Ended: 10:18:00 Unit No: 3345-Dighton-30  
 Interval: 4246.00 ft (KB) To 4270.00 ft (KB) (TVD) Reference Elevations: 2854.00 ft (KB)  
 Total Depth: 4270.00 ft (KB) (TVD) 2847.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 7.00 ft

Serial #: 8400 Outside  
 Press@RunDepth: 807.00 psia @ 4267.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2010.09.04 End Date: 2010.09.05 Last Calib.: 2010.09.05  
 Start Time: 22:49:00 End Time: 10:18:00 Time On Btm: 2010.09.05 @ 01:32:30  
 Time Off Btm: 2010.09.05 @ 03:53:30

TEST COMMENT: 1ST Opening 15 Minutes strong blow/Blow blew to bottom of a 5 gallon bucket of water  
 1ST Shut-in 30 Minutes yes had blow back  
 2ND Opening 30 Minutes not as strong as a blow but still blew to the bottom of a 5 gallon bucket  
 of water in 1 minute



## PRESSURE SUMMARY

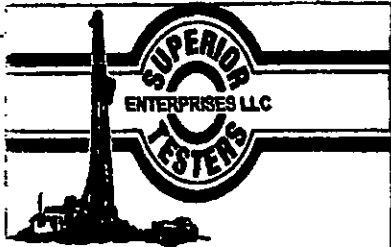
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2175.23	113.63	Initial Hydro-static
2	272.07	113.68	Open To Flow (1)
16	524.78	114.54	Shut-in(1)
41	951.98	114.77	End Shut-in(1)
42	570.26	114.67	Open To Flow (2)
72	807.00	115.14	Shut-in(2)
140	919.75	116.68	End Shut-in(2)
141	1992.44	119.52	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	Slightly Oil and Water cut Mud	0.30
0.00	14% Oil 60% 26% Water	0.00
60.00	Lightly Watery Mud cut Oil	0.30
0.00	10% Gas 45% Oil 20% Mud 15% Water	0.00
60.00	Oil cut Mud Oil 50% Mud 50%	0.30
504.00	Slightly Mud cut Gassy Oil	7.04

## Gas Rates

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



# DRILL STEM TEST REPORT

Larson Engineering Inc.  
 562 West State Road #4 Omitz 67564+8561  
 ATTN: Bob Lewellyn

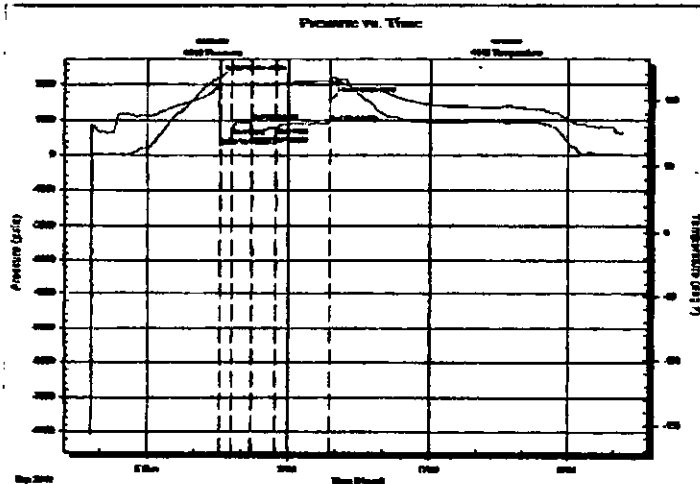
Marit #1-24  
 24/18S/30W Lane  
 Job Ticket: 16115 DST#: 5  
 Test Start: 2010.09.04 @ 22:49:00

## GENERAL INFORMATION:

Formation: Lansing " L " Zone  
 Deviated: No Whipstock ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 01:34:00  
 Tester: Dylan E Ellis  
 Time Test Ended: 10:18:00  
 Unit No: 3345-Dighton-30  
 Interval: 4246.00 ft (KB) To 4270.00 ft (KB) (TVD)  
 Reference Elevations: 2854.00 ft (KB)  
 Total Depth: 4270.00 ft (KB) (TVD) 2847.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 7.00 ft

Serial #: 4143 Inside  
 Press@RunDepth: 919.62 psia @ 4266.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2010.09.04 End Date: 2010.09.05 Last Calib.: 2010.09.05  
 Start Time: 22:49:00 End Time: 10:18:00 Time On Btmr: 2010.09.05 @ 01:32:15  
 Time Off Btmr: 2010.09.05 @ 03:52:46

TEST COMMENT: 1ST Opening 15 Minutes strong blow/Blow blew to bottom of a 5 gallon bucket of water  
 1ST Shut-In 30 Minutes yes had blow back  
 2ND Opening 30 Minutes not as strong as a blow but still blew to the bottom of a 5 gallon bucket  
 of water in 1 minute



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2173.64	111.17	Initial Hydro-static
2	274.91	111.91	Open To Flow (1)
17	529.73	112.44	Shut-In (1)
42	950.46	112.48	End Shut-In (1)
43	569.17	112.50	Open To Flow (2)
72	805.33	113.45	Shut-In (2)
140	919.62	115.40	End Shut-In (2)
141	1543.14	117.57	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	Slightly Oil and Water cut Mud	0.30
0.00	14% Oil 60% 26% Water	0.00
60.00	Lightly Watery Mud cut Oil	0.30
0.00	10% Gas 45% Oil 20% Mud 15% Water	0.00
60.00	Oil cut Mud Oil 50% Mud 50%	0.30
504.00	Slightly Mud cut Gassy Oil	7.04

## Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcfd)



# DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering Inc.  
 562 West State Road #4 Omitz 67564+8561  
 ATTN: Bob Lewellyn

Marit #1-24  
 24/18S/30W Lane  
 Job Ticket: 16115 DST#: 5  
 Test Start: 2010.09.04 @ 22:49:00

## Tool Information

Drill Pipe:	Length: 4052.00 ft	Diameter: 3.80 inches	Volume: 56.84 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: 182.83 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose:	70000.00 lb
		Total Volume: 57.74 bbl		Tool Chased	0.00 ft
Drill Pipe Above KB:	12.83 ft			String Weight: Initial	54000.00 lb
Depth to Top Packer:	4246.00 ft			Final	61000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	24.00 ft				
Tool Length:	48.00 ft				
Number of Packers:	1	Diameter:	6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4223.00	
Shut-In Tool	5.00			4228.00	
Hydroic Tool	5.00			4233.00	
Jars	6.00			4239.00	
Safety Joint	2.00			4241.00	
Packer	5.00			4246.00	24.00 Bottom Of Top Packer
Perforations	19.00			4265.00	
Recorder	1.00	4143	Inside	4266.00	
Recorder	1.00	8400	Outside	4267.00	
Bullnose	3.00			4270.00	24.00 Anchor Tool
<b>Total Tool Length:</b>	<b>48.00</b>				



# DRILL STEM TEST REPORT

## FLUID SUMMARY

Larson Engineering Inc.

Marit #1-24

562 West State Road #4 Omitz 67564+8561

24/18S/30W Lane

Job Ticket: 16115

DST#: 5

ATTN: Bob Lewellyn

Test Start: 2010.09.04 @ 22:49:00

### Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	40 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 52.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.20 in <sup>2</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psia		
Salinity: 2400.00 ppm			
Filter Cake: 2.00 inches			

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	Slightly Oil and Water cut Mud	0.295
0.00	14% Oil 60% 26% Water	0.000
60.00	Lightly Watery Mud cut Oil	0.295
0.00	10% Gas 45% Oil 20% Mud 15% Water	0.000
60.00	Oil cut Mud Oil 50% Mud 50%	0.295
504.00	Slightly Mud cut Gassy Oil	7.044
0.00	8% Gas 80% Oil 12% Mud	0.000
504.00	Slightly Mud cut Gassy Oil	7.070
0.00	20% Gas 70% Oil 10% Mud	0.000
504.00	Oil and Gassy Mud	7.070
0.00	35% Gas 60% Oil 5% Mud	0.000
504.00	Slightly Mud cut Gassy Oil	7.070
0.00	10% Gas 80% Oil 10% Mud	0.000
0.00	Gravity Of Oil Corrected is 40	0.000

Total Length: 2196.00 ft      Total Volume: 29.139 bbl

Num Fluid Samples: 0

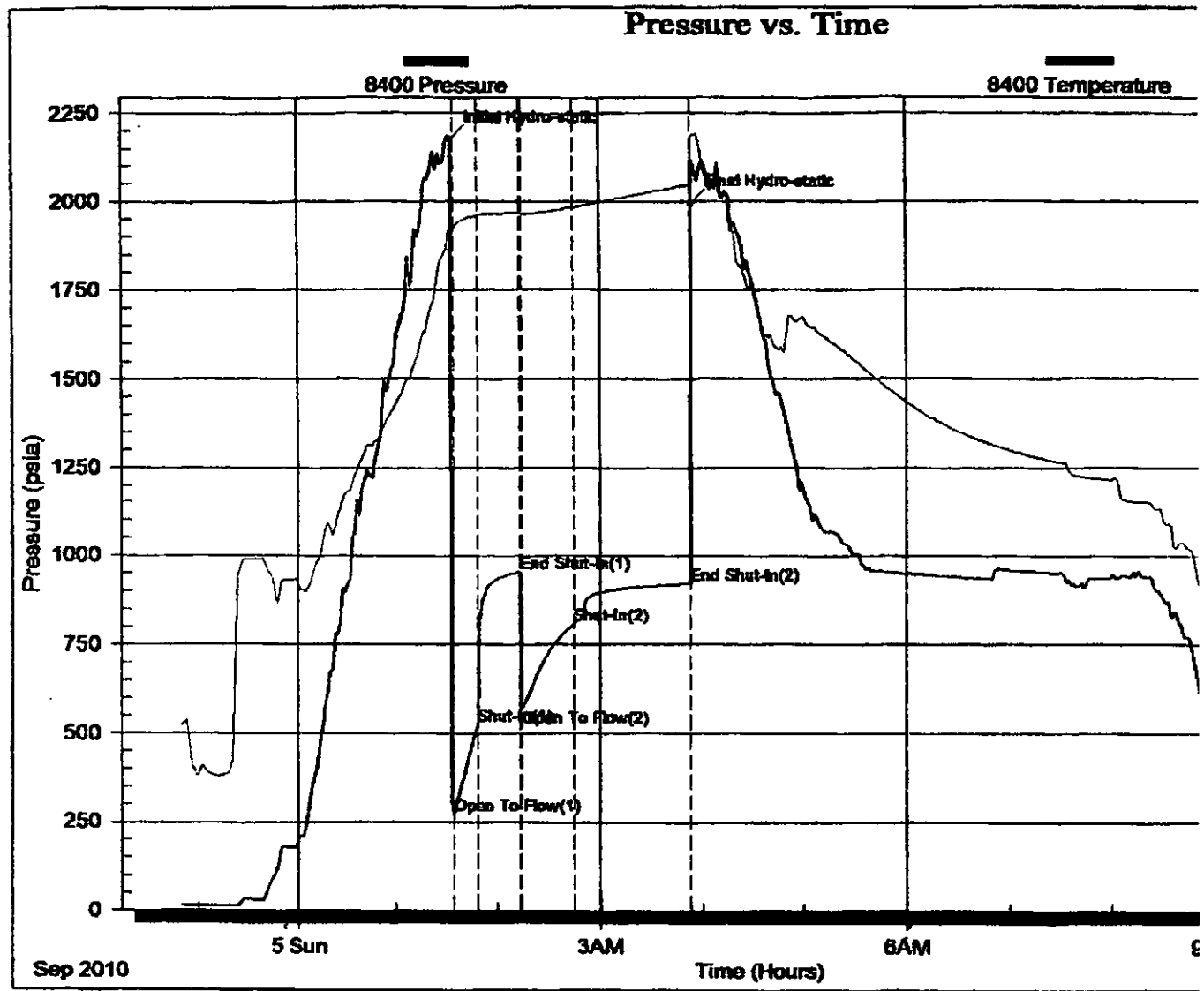
Num Gas Bombs: 0

Serial #:

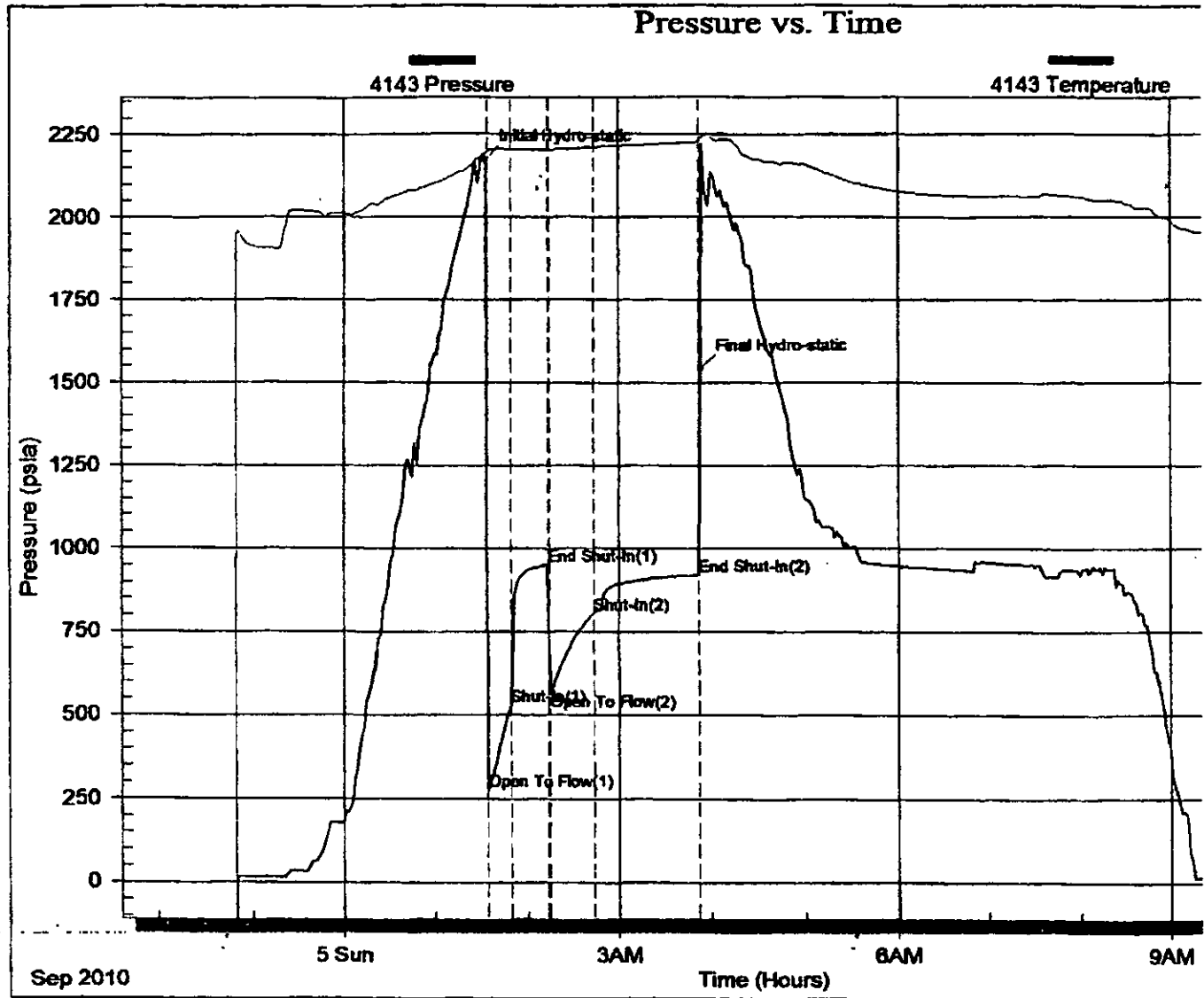
Laboratory Name:

Laboratory Location:

Recovery Comments: Pulled 5 stands of drill pipe dumped oil and dropped the bar down hole and circulated for 35 - 40 minutes and came out of the hole







# **Robert C. Lewellyn**

*Consulting Petroleum Geologist*

P. O. Box 375  
Kechi, KS 67067-0375  
Office 316-744-2567  
Cell 316-518-0495  
*robblewellyn@yahoo.com*

## **GEOLOGICAL REPORT**

### **Larson Engineering, Inc.**

Marit No. 1-24  
880' FNL & 330' FWL Sec. 24-18S-30W  
Lane County, Kansas

**CONTRACTOR:** H D Drilling, LLC  
**SPUDDED:** August 26, 2010  
**DRILLING COMPLETED:** September 07, 2010  
**SURFACE CASING:** 8 5/8" @ 260 KBM/175 sx,  
**ELECTRIC LOGS:** Log-Tech DIL CNL/CDL MEL  
**ELEVATIONS:** 2854 KB 2847 GL

### **FORMATION TOPS (Electric Log):**

Anhydrite	2152 (+ 702)
Base Anhydrite	2209 (+ 645)
Heebner Shale	3898 (-1044)
Lansing-Kansas City Group	3939 (-1085)
Muncie Creek Shale	4110 (-1256)
Stark Shale	4210 (-1356)
Hushpuckney shale	4247 (-1393)
Base Kansas City	4298 (-1444)
Altamont	4352 (-1498)
Pawnee	4407 (-1553)
Myrick Station	4436 (-1582)
Fort Scott	4460 (-1606)
Cherokee	4485 (-1631)
Mississippian	4548 (-1694)
Electric Log Total Depth	4622 (-1768)

Samples were examined microscopically from 3800 to Rotary Total Depth. Samples were examined wet and dry and samples from potentially productive zones were viewed under a fluoroscope and checked for oil cut. Following is a description of zones of interest, Drill Stem Tests, etc. For a complete lithologic description of all formations, refer to the sample log in the back pages of this report.

Lansing-Kansas City Zones:

3939-3946 (A Zone)

Limestone, buff, some cream, dense with scattered finely crystalline, some chalky, slightly fossiliferous, rare trace of dead stain, zone is mostly tight with no show of live oil.

3973-3975 (B Zone)

Limestone, cream to buff, dense to finely crystalline with much chalk, poor scattered intercrystalline porosity, trace of dead stain, no show of live oil.

3993-4022 (C/D Zone)

Limestone, cream to buff, dense and chalky, some finely crystalline, zone is mostly tight with no shows of oil. Some scattered light gray chert.

4024-4038 (E Zone)

Limestone, buff to tan, dense to finely crystalline, some sub-lithographic, some cream chalky limestone, zone is mostly tight with trace of dead stain, no shows of live oil.

4041-4054 (F Zone)

Limestone, cream to buff, some grey, finely crystalline and slightly oolitic, trace of very poor intercrystalline and interoolitic porosity with scattered traces of dead stain, no shows of live oil.

4056-4063 (G Zone)

Limestone, cream to buff, finely crystalline and partly oolitic, much chalky, poor scattered ooliticastic porosity, no show of oil, some scattered white chert.

4122-4130 (H Zone)

Limestone, cream to buff to tan, some brown, dense to finely crystalline, partly fossiliferous, scattered poor to fair intercrystalline and interfossil porosity with poor to fair spotted stain, show of free oil, fair to good odor, poor fluorescence, poor to fair cut.

**Drill Stem Test No. 1**

**4110-4145**

15-30-15-30; surface blow receded and died on first flow; blow did not return on second flow; recovered 20 feet of oil spotted mud. ISIP 933# FSIP 905# IFP 16-19# FFP 21-25# IHP 2070# FHP 2052# BHT 116 degrees.

**4165-4168 & 4172-4175 (I Zone)**

Limestone, buff, finely crystalline and fossiliferous, fair intercrystalline and interfossil porosity, poor to fair spotted stain, fair to good show of free oil, fair to good odor, poor fluorescence, poor to fair cut.

**Drill Stem Test No. 2**

**4154-4187**

15-30-30-60; blow off bottom of bucket in 12 minutes of first flow, 2 inch blowback receded to ½"; blow off bottom of bucket in 10 minutes of second flow, 2 ½ inch blowback receded to ½ inch; recovered 425 feet of gas in drill pipe, 196 feet of gassy oil (20% gas, 80% oil), 173 feet of gassy mud cut oil (15% gas, 65% oil, 20% mud). ISIP 1061# FSIP 1095# IFP 25-90# FFP 98-162# IHP 2110# FHP 2080# BHT 119 degrees.

**4187-4198 (J Zone)**

Limestone, buff to tan, finely crystalline and coarsely oolitic, good oolitic porosity with fair to good spotted stain, trace of saturated stain, good show of free oil, good odor, fair to good fluorescence, good cut, porosity is 50% barren.

**Drill Stem Test No. 3**

**4184-4215**

15-30-30-60; blow off bottom of bucket in 13 minutes on first flow period, blowback on shut in; blow off bottom of bucket in 13 minutes of second flow, blowback on shut in, died; recovered 140 feet of gassy free oil (100% oil), 50 feet of slightly gassy muddy oil (10% gas, 80% oil, 10% mud), 60 feet of gassy mud cut oil with a trace of water (10% gas, 55% oil, 26% mud, 4% water), 60 feet of gassy mud cut oil (10% gas, 46% oil, 44% mud), 60 feet of gassy oil cut muddy water (5% gas, 5% oil, 15% mud, 75% water), chlorides 55,000 ppm, system chlorides 1900 ppm. ISIP 982# FSIP 980# IFP 66-231# FFP 132-212# IHP 2120# FHP 2015# BHT 117 degrees.

**4221-4225 (K Zone)**

Limestone, buff to tan, some scattered brown, dense to finely crystalline, fossiliferous in part, trace of oolitic, fair intercrystalline porosity, some fair interfossil porosity, fair spotted stain, fair to good show of free oil, good odor, poor fluorescence, fair cut.

**Drill Stem Test No. 4**

**4209-4240**

15-30-30-60; weak blow built to six inches on first flow period, no blowback; weak blow, built to bottom of bucket on second flow period, no blowback; recovered 60 feet of mud cut oil (50% oil, 50% mud), 60 feet of slightly watery oil cut mud (10% oil, 80% mud, 10% water), 60 feet of mud cut water with a trace of oil (20% mud, 80% water), 60 feet

of mud cut water with oil skim (.5% oil, 10% mud, 89.5% water), 60 feet of mud cut water with oil skim (1% oil, 20% mud, 79% water). ISIP 1000# FSIP 997# IFP 62-116# FFP 121-413# IHP 2129# FHP 2084# BHT 115 degrees. Chlorides 31,000 ppm, system chlorides 2,000 ppm.

4279-4284 (Middle Creek & L Zone)

Limestone, buff to tan, some brown, dense to finely crystalline, some poor to fair scattered intercrystalline and small vug porosity, fair spotted stain, fair show of free oil, good odor, poor fluorescence, fair cut.

Drill Stem Test No 5

4246-4270

15-30-30-60; blow off bottom of bucket in one minute of first flow period, blowback on shut-in; blow off bottom of bucket in one minute of second flow period, blowback on shut-in; recovered 504 feet of slightly mud cut gassy oil (10% gas, 80% oil, 10% mud), 504 feet of gassy slightly muddy oil (35% gas, 60% oil, 5% mud), 504 feet of gassy slightly muddy oil (20% gas, 70% oil, 10% mud), 504 feet of gassy slightly muddy oil (8% gas, 80% oil, 12% mud), 60 feet of heavily mud cut oil (50% oil, 50% mud), 60 feet of gassy water and mud cut oil (10% gas, 45% oil, 20% mud, 25% water), 60 feet of slightly oil and water cut mud (14% oil, 60% mud, 26% water). ISIP 951# FSIP 919# IFP 272-524# FFP 570-807# IHP 2175# FHP 1992# BHT 116 degrees. Gravity of oil is 40 degrees (corrected). Pulled five stands and drained, then reversed fluid out with sample every 60 seconds.

4306-4310 (Pleasanton Zone)

Limestone, cream to buff, dense to finely crystalline and chalky, some scattered fair intercrystalline porosity, trace of poor spotted stain, trace of scattered dead stain on fracture faces, very slight show of free oil, fair to good odor, poor fluorescence, poor cut.

4368-4371 (Altamont Zone)

Limestone, cream to buff, some tan, finely crystalline, trace of oolitic, scattered poor intercrystalline porosity, trace of poor spotted stain, faint odor, poor fluorescence, poor to fair cut.

4413-4416 (Pawnee Zone)

Limestone, buff to tan, some brown, dense to finely crystalline, trace of very poor intercrystalline porosity, scattered traces of very poor spotted stain, very slight show of free oil, faint odor, no fluorescence, very poor cut.

4442-4445 (Myrick Station Zone)

Limestone, buff to tan, some brown, dense to finely crystalline, poor to fair intercrystalline porosity, scattered poor spotted stain, very slight show of free oil, faint to fair odor, poor fluorescence, poor cut.

**4460-4485 (Fort Scott Zone)**

The upper section of the Fort Scott consisted of limestone, buff, some tan, dense to finely crystalline, trace of oolitic, some cream chalky, mostly tight, no show of oil. The lower section consisted of limestone, cream to buff, some tan, dense to finely crystalline, scattered very poor intercrystalline porosity, poor to fair spotted stain in a few pieces, slight show of free oil, faint to fair fleeting odor, poor fluorescence, poor cut.

**4521-4535 (Johnson Zone)**

Limestone, buff to tan, some grey, dense to finely crystalline, slightly fossiliferous, trace of very poor intercrystalline porosity, some poor vugular porosity, scattered poor to fair spotted stain, slight show of free oil, faint fleeting odor, no fluorescence, poor cut, some black flaky inclusions in dense limestone.

**4535-4548 (Detrital Zone)**

Scattered varicolored fresh chert with very fine grand white, tight sand and varicolored shale, no reservoir quality, no show of oil.

**4548-4599 (Mississippian Zone)**

Limestone, cream to buff, dense to finely crystalline and mealy, brittle, flaky, some scattered chalky, section is mostly tight with no show of oil.

4599-4622

Dolomite, tan to brown, dense to finely crystalline, trace of sucrosic, some scattered partly oolitic, some scattered chert, interval is mostly tight with no shows of oil.

4620

Rotary Total Depth

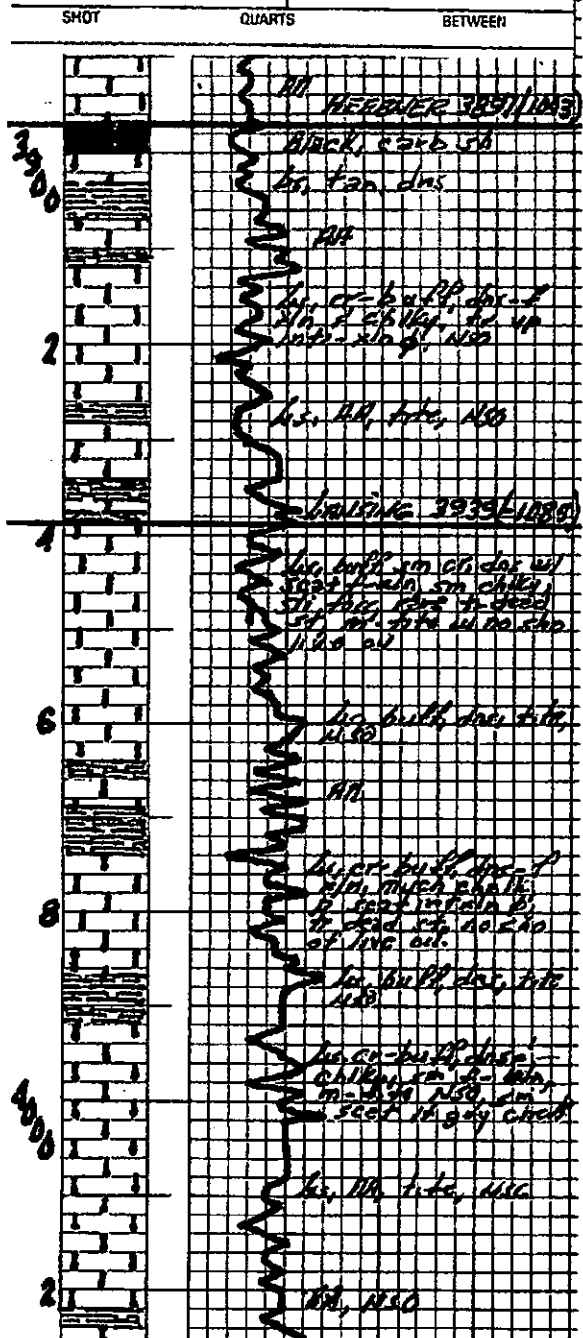
**Conclusions and Recommendations:**

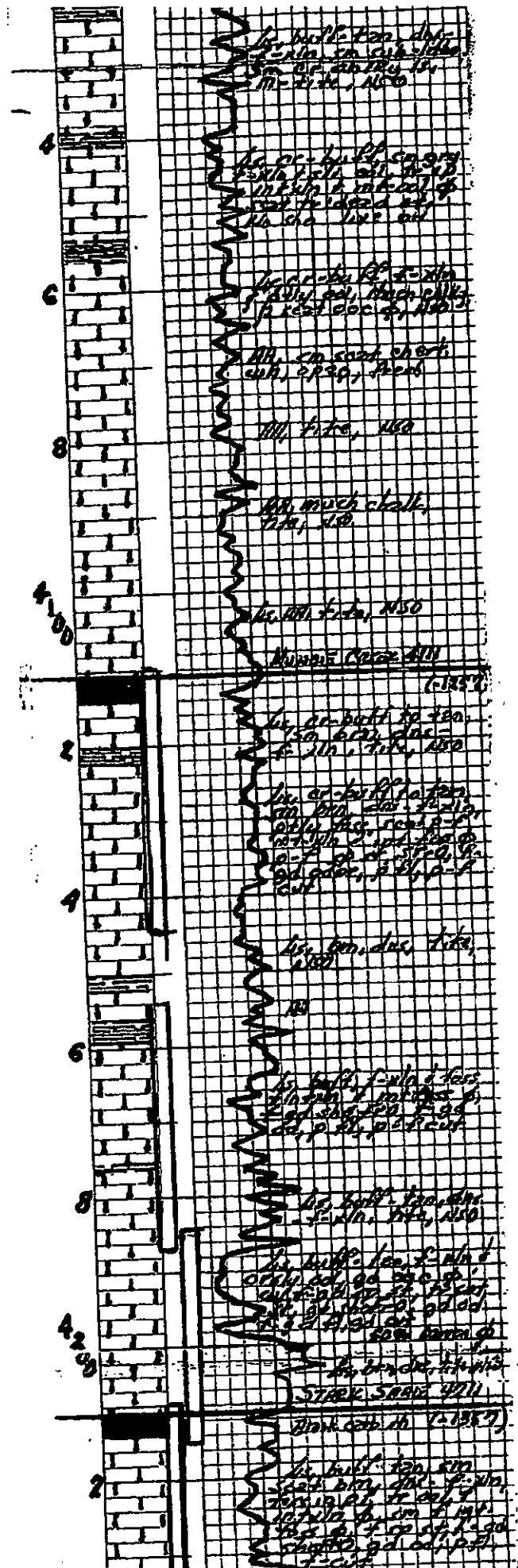
Production casing was cemented on the No. 1-24 Marit, and it is recommended that various zones in the well be perforated and production tested as per Tom Larson and Kyle Carter.

Respectfullt submitted,

Robert C. Lewellyn  
Petroleum Geologist

PARSONS		COMPANY <b>DIKSON ENGINEERING</b>	
COUNTY	<b>LANE</b>	FARM	<b>MARRIT 1-24</b>
BLOCK		SURVEY	<b>880' FNL &amp; 330' FNL</b>
SEC.	<b>24</b>		
T. <b>185</b>	R. <b>30N</b>	TOTAL DEPTH	<b>4620</b>
		CONTRACTOR	<b>HD Drig LLC</b>
		COMMENCED	<b>08-26-2010</b>
		COMPLETED	<b>09-07-2010</b>
		REMARKS	
ALTITUDE	<b>2856 KB</b>		
PRODUCTION	<b>Oil</b>	Robert C. Jewell, Inc. - Geol	
CASING RECORD			
<b>8 5/8" @ 260 KBM/175 SX</b>			





Ls. buff. tan, dol. f. -  
 silt. sh. sub. blue  
 m. sh. blue sh.  
 M. silt. N50

Ls. or buff. tan, gray  
 silt. sh. sub. blue  
 m. sh. blue sh.  
 silt. sh. sub. blue  
 m. sh. blue sh.

Ls. or buff. tan, gray  
 silt. sh. sub. blue  
 m. sh. blue sh.

M. sh. on sand chert.  
 cup, p. sh., rock

M. silt. N50

M. much chalk.  
 M. sh.

M. sh. silt. N50

M. sh. silt. N50

Ls. or buff. tan, gray  
 silt. sh. sub. blue  
 m. sh. blue sh.

Ls. or buff. tan, gray  
 silt. sh. sub. blue  
 m. sh. blue sh.

Ls. buff. tan, gray  
 silt. sh. sub. blue

Ls.

Ls. buff. tan, gray  
 silt. sh. sub. blue  
 m. sh. blue sh.

Ls. buff. tan, gray  
 silt. sh. sub. blue  
 m. sh. blue sh.

Ls. buff. tan, gray  
 silt. sh. sub. blue  
 m. sh. blue sh.

Ls. buff. tan, gray  
 silt. sh. sub. blue  
 m. sh. blue sh.

Ls. buff. tan, gray  
 silt. sh. sub. blue  
 m. sh. blue sh.

Ls. buff. tan, gray  
 silt. sh. sub. blue  
 m. sh. blue sh.









*Mark Parkinson, Governor  
Thomas E. Wright, Chairman  
Joseph F. Harkins, Commissioner  
Ward Loyd, Commissioner*

December 21, 2010

Thomas Larson  
Larson Engineering, Inc. dba Larson Operating  
Company  
562 W STATE RD 4  
OLMITZ, KS 67564-8561

Re: ACO1  
API 15-101-22252-00-00  
Marit 1-24  
NW/4 Sec.24-18S-30W  
Lane County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,  
Thomas Larson