

**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

K & N Petroleum
1105 Walnut
Great Bend, KS 67530
ATTN: Wyatt Urban

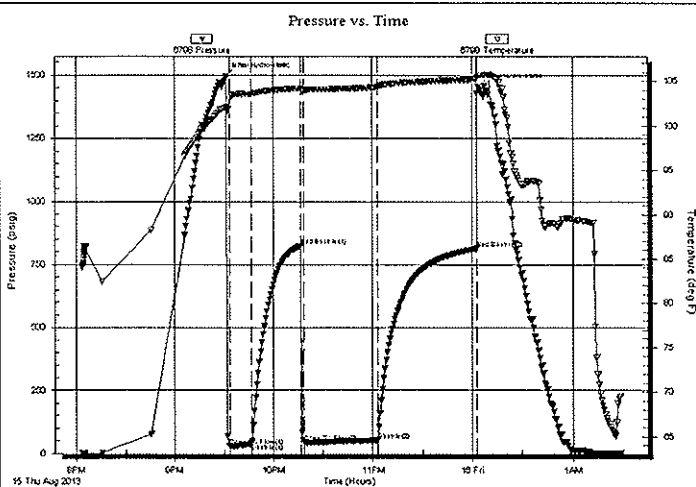
3-19S-11W Barton
Betty Mae 1
Job Ticket: 52385 DST#: 1
Test Start: 2013.08.15 @ 20:03:39

GENERAL INFORMATION:

Formation: **Lansing "A-F"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:33:39
Time Test Ended: 01:28:39
Interval: 3057.00 ft (KB) To 3132.00 ft (KB) (TVD)
Total Depth: 3132.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole (Initial)
Tester: Leal Cason
Unit No: 45
Reference Elevations: 1787.00 ft (KB)
1780.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 6798 Inside
Press@RunDepth: 52.92 psig @ 3058.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.08.15 End Date: 2013.08.16 Last Calib.: 2013.08.16
Start Time: 20:03:40 End Time: 01:28:39 Time On Btm: 2013.08.15 @ 21:31:24
Time Off Btm: 2013.08.16 @ 00:03:39

TEST COMMENT: IF: Strong Blow, BOB in 30 seconds
IS: No Blow Back
FF: Strong Blow, BOB in 30 seconds, GTS in 8 minutes, Gauged Gas
FS: No Blow Back



PRESSURE SUMMARY

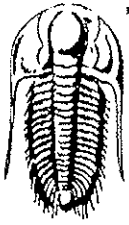
Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1494.54	102.17	Initial Hydro-static
3	28.03	102.86	Open To Flow (1)
16	38.91	103.57	Shut-In(1)
46	824.69	104.20	End Shut-In(1)
48	45.24	103.92	Open To Flow (2)
92	52.92	104.36	Shut-In(2)
152	814.04	105.24	End Shut-In(2)
153	1455.30	105.64	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	2968 GIP	0.00
70.00	SOCM 5%O 95%M	0.98

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	10.00	38.71
Last Gas Rate	0.25	6.00	32.36
Max. Gas Rate	0.25	10.00	38.71



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ATTN: Wyatt Urban

3-19S-11W Barton
Betty Mae 1
Job Ticket: 52385 DST#: 1
Test Start: 2013.08.15 @ 20:03:39

Mud and Cushion Information

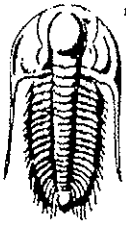
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 64.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.20 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2000.00 ppm			
Filter Cake: 0.02 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	2968 GIP	0.000
70.00	SOCM 5%O 95%M	0.982

Total Length: 70.00 ft Total Volume: 0.982 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:



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GAS RATES

K & N Petroleum
1105 Walnut
Great Bend, KS 67530
ATTN: Wyatt Urban

3-19S-11W Barton
Betty Mae 1
Job Ticket: 52385 **DST#: 1**
Test Start: 2013.08.15 @ 20:03:39

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 (psig)	Gas Rate (Mcf/d)
2	10	0.25	10.00	38.71
2	20	0.25	9.00	37.12
2	30	0.25	7.00	33.95
2	40	0.25	6.00	32.36
2	45	0.25	6.00	32.36

Serial #: 6798

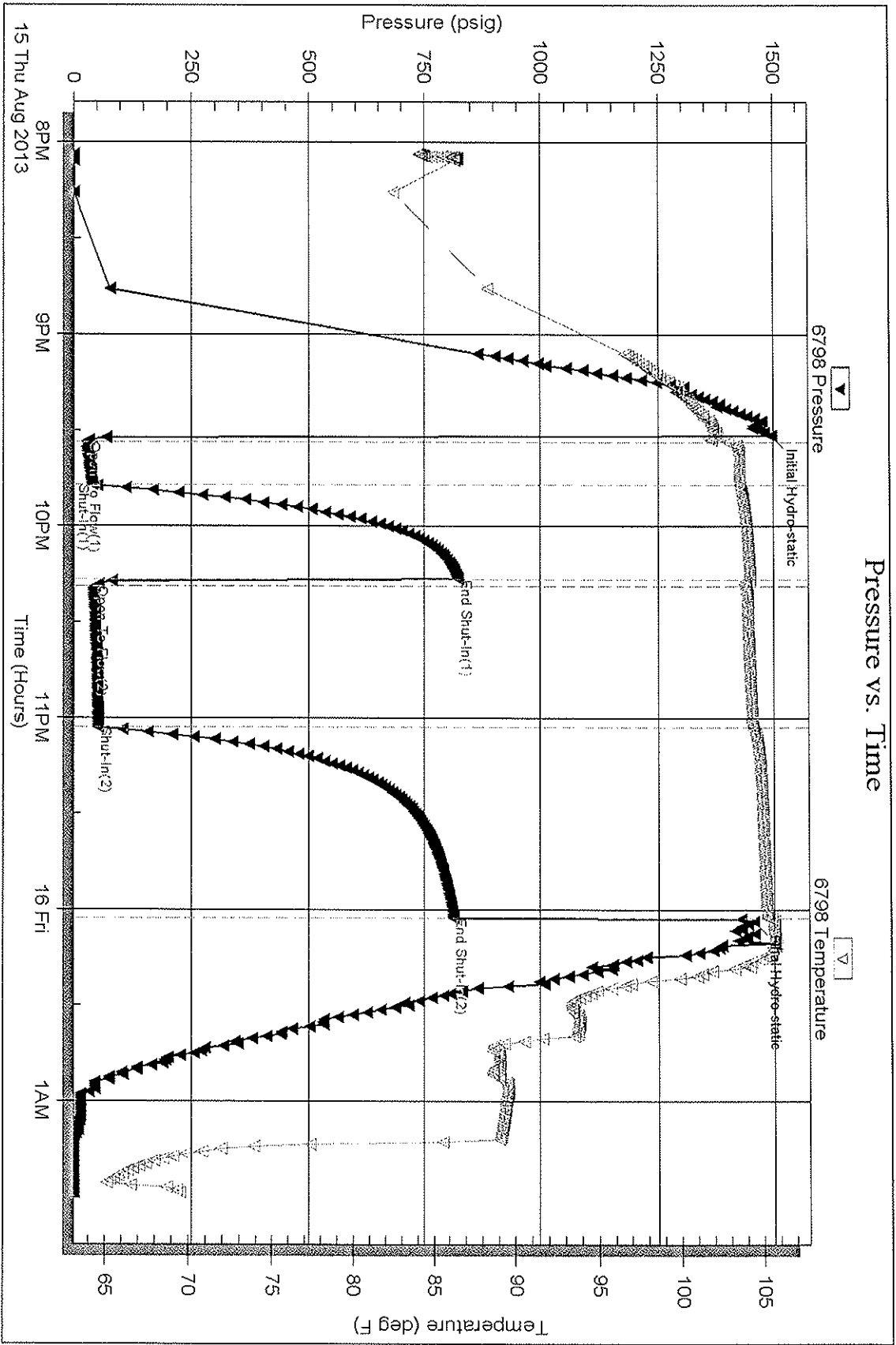
Inside

K & N Petroleum

Betty Mae 1

DST Test Number: 1

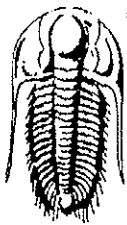
Pressure vs. Time



Trible Testing, Inc

Ref. No: 52385

Printed: 2013.08.16 @ 06:30:46



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K & N Petroleum
1105 Walnut
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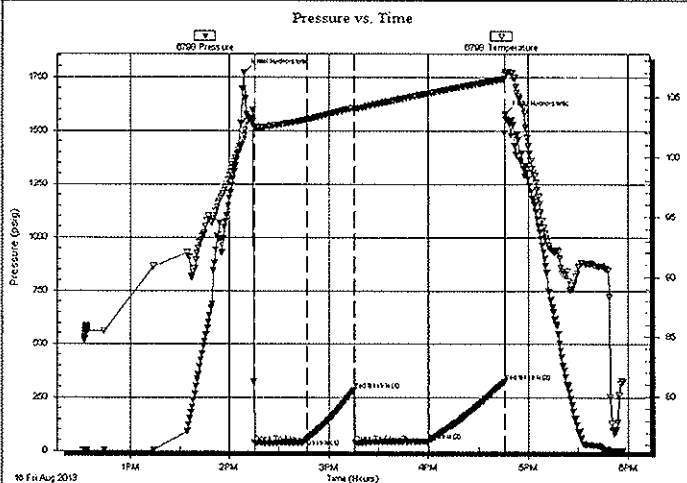
3-19S-11W Barton
Betty Mae 1
Job Ticket: 52386 DST#: 2
Test Start: 2013.08.16 @ 12:32:12

GENERAL INFORMATION:

Formation: **Lansing "H, I, J"**
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 14:15:12 Tester: Leal Cason
 Time Test Ended: 17:56:57 Unit No: 45
 Interval: 3204.00 ft (KB) To 3260.00 ft (KB) (TVD) Reference Elevations: 1787.00 ft (KB)
 Total Depth: 3132.00 ft (KB) (TVD) 1780.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 7.00 ft

Serial #: 6798 Inside
 Press@RunDepth: 47.82 psig @ 3205.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.08.16 End Date: 2013.08.16 Last Calib.: 2013.08.16
 Start Time: 12:32:13 End Time: 17:56:57 Time On Btm: 2013.08.16 @ 14:08:57
 Time Off Btm: 2013.08.16 @ 16:45:57

TEST COMMENT: IF: Fair Blow, Built to 7 inches
 IS: No Blow Back
 FF: Fair Blow, BOB in 10 minutes
 FSI: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1772.32	101.75	Initial Hydro-static
7	38.02	102.58	Open To Flow (1)
38	54.74	103.14	Shut-In(1)
66	285.83	104.10	End Shut-In(1)
67	37.34	104.02	Open To Flow(2)
112	47.82	105.32	Shut-In(2)
157	324.01	106.52	End Shut-In(2)
157	1578.87	106.99	Final Hydro-static

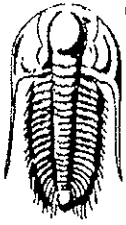
Recovery

Length (ft)	Description	Volume (bbl)
0.00	268 GIP	0.00
40.00	SOGCM 4%O 6%G 90%M	0.56

* Recovery from multiple tests

Gas Rates

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



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3-19S-11W Barton
Betty Mae 1
Job Ticket: 52386 DST#: 2
Test Start: 2013.08.16 @ 12:32:12

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 64.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.19 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2000.00 ppm			
Filter Cake: 0.02 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	268 GIP	0.000
40.00	SOGCM 4%O 6%G 90%M	0.561

Total Length: 40.00 ft Total Volume: 0.561 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

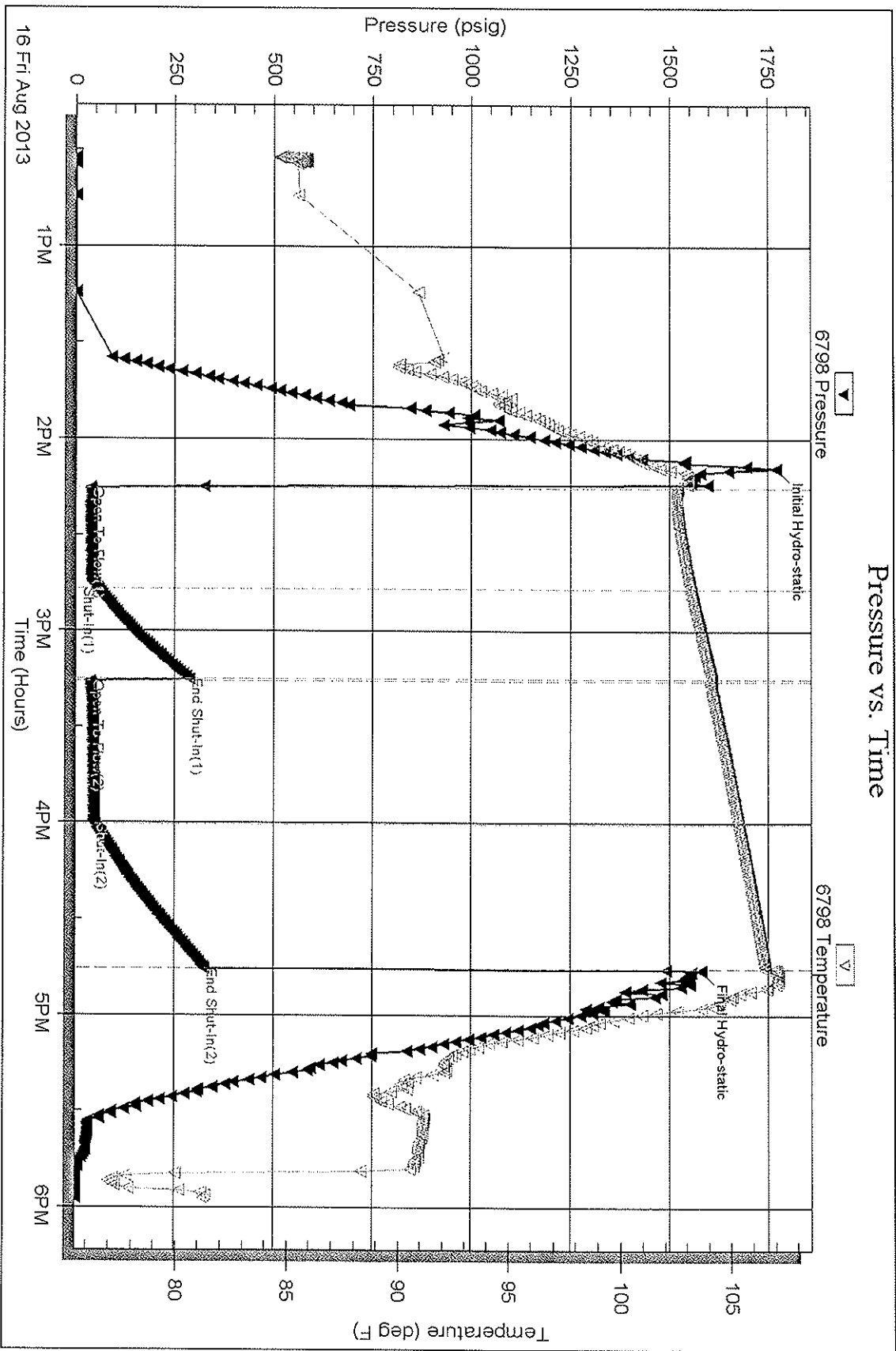
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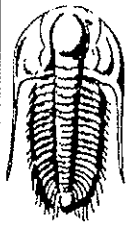
Inside

K & N Petroleum

Belly Mae 1

DST Test Number: 2





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DRILL STEM TEST REPORT

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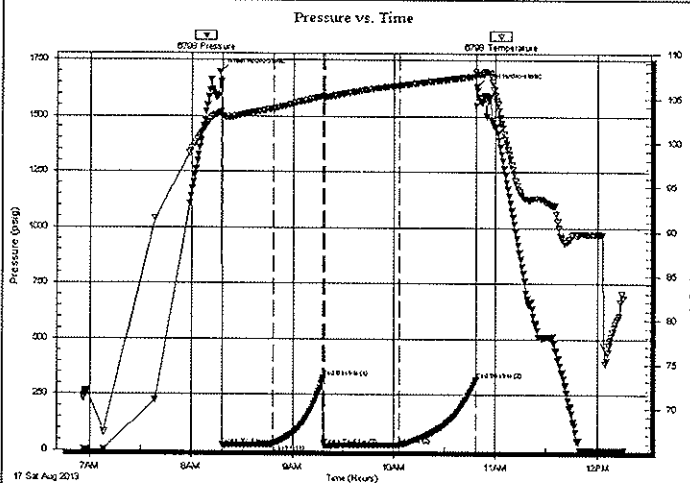
3-19S-11W Barton
Betty Mae 1
 Job Ticket: 52387 **DST#: 3**
 Test Start: 2013.08.17 @ 06:56:15

GENERAL INFORMATION:

Formation: **Conglomerate**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:17:45
 Time Test Ended: 12:15:00
 Interval: **3295.00 ft (KB) To 3368.00 ft (KB) (TVD)**
 Total Depth: **3368.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: **Good**
 Test Type: **Conventional Bottom Hole (Reset)**
 Tester: **Leal Cason**
 Unit No: **45**
 Reference Elevations: **1787.00 ft (KB)**
1780.00 ft (CF)
 KB to GR/CF: **7.00 ft**

Serial #: 6798 **Inside**
 Press@RunDepth: **25.62 psig @ 3296.00 ft (KB)** Capacity: **8000.00 psig**
 Start Date: **2013.08.17** End Date: **2013.08.17** Last Calib.: **2013.08.17**
 Start Time: **06:56:16** End Time: **12:15:00** Time On Btm: **2013.08.17 @ 08:16:30**
 Time Off Btm: **2013.08.17 @ 10:49:00**

TEST COMMENT: IF: Weak 1/2 inch Blow
 IS: No Blow Back
 FF: Weak 2 inch Blow
 FSI: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1696.70	103.34	Initial Hydro-static
2	21.53	103.09	Open To Flow (1)
32	29.69	103.83	Shut-In(1)
62	326.74	105.23	End Shut-In(1)
63	19.64	105.10	Open To Flow (2)
107	25.62	106.47	Shut-In(2)
152	316.86	107.53	End Shut-In(2)
153	1634.07	107.85	Final Hydro-static

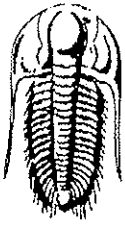
Recovery

Length (ft)	Description	Volume (bbl)
0.00	300 GIP	0.00
20.00	SOCM 2%O 98%M	0.28

* Recovery from multiple tests

Gas Rates

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



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1105 Walnut
Great Bend, KS 67530
ATTN: Wyatt Urban

3-19S-11W Barton
Betty Mae 1
Job Ticket: 52387 DST#: 3
Test Start: 2013.08.17 @ 06:56:15

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: 58.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.99 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4000.00 ppm			
Filter Cake: 0.02 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	300 GIP	0.000
20.00	SOCM 2%O 98%M	0.281

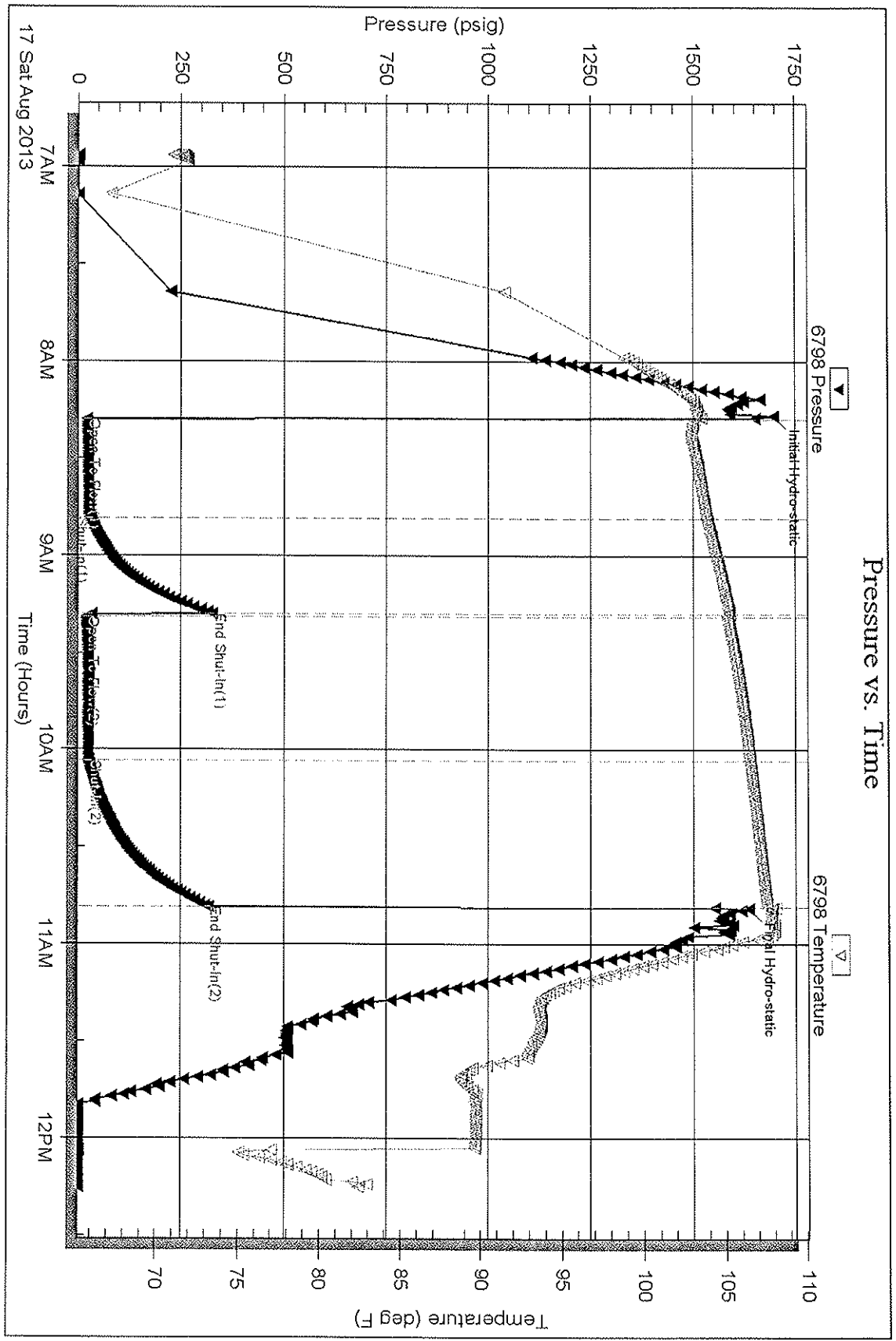
Total Length: 20.00 ft Total Volume: 0.281 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Serial #: 6798

Inside K & N Petroleum

Betty Mae 1

DST Test Number: 3



Trilobe Testing, Inc

Ref. No: 52387

Printed: 2013.08.17 @ 23:01:43

MORNING DRILLING REPORT

SOUTHWIND DRILLING, INC.

For: K&N Petroleum

RIG No. 3

Well Name: Betty Mae #1 Elevation: GL 1780' Rig No. 3 (Pusher Jay Krier) 620 617-4477
 Location: 943' FSL & 1875' FEL KB 1788' Rig No. 3 (Doghouse) 620 617-7104
 Section: 3-19S-11W Est. TD: 3450' Southwind Drilling Office 620 564-3800
 County: Barton Conductor: N/A
 API: 15-009-25863-00-00 Surface Casing: Ran 9 joints of new 23#, 8 5/8" casing, Tally @ 379.45', Set @ 389', used 250 sacks of 60/40 Poz, 3% cc, 2% gel, cement circulated, by Copeland (Ticket #41359), plug down @ 9:30 pm on 08.12.13.
 Production Casing: Ran 83 joints of new 14#, 5 1/2" casing, Tally @ 3442.54'. Set @ 3450', used 200 sacks of 60/40 Poz, 18% salt, 2% gel, 3/4" Defomer, 30 sacks for Rat hole, cemented, by Copeland (Ticket #41362), job complete @ 10:15 am on 08.18.13.
 Rotary Total Depth: 3460' Geologist: JIm Musgrove
 Log Total Depth:

7:00 A.M. Depth: 3460' 7:00 A.M. Current Operation: TEAR DOWN

Spud Date & Time:	08/12/13	08/13/13	08/14/13	08/15/13	08/16/13	08/17/13	08/18/13	Total
08/12/2013 @ 3:00 PM	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	
Total Depth (7:00am)	0	485	1975	2910	3180	3368	3460	
Daily Progress	485	1490	935	270	188	92		3460
Ft. Per Hr.	161.67	78.42	50.54	32.73	21.49	36.80	#DIV/0!	57.67
Current Operation (7:00am)	Rig Up	Drilling	Drilling	CFS	Drilling	TOWB	Tear Down	
Formation	Surface	Shale / Red Bed	Shale/Lime	Shale/Lime	LKC	Arbuckle	Arbuckle	
Fuel Used (39 Gal/Inch)	117.00	429.00	351.00	273.00	273.00	195.00	39.00	1677.00
Survey (degree & depth)				3° @ 3132'	2° @ 3260'	2 1/4° @ 3460'		

Mud Info

Mud Cost	\$0.00	\$1,429.40	\$0.00	\$4,650.85	\$0.00	\$0.00	\$0.00	\$ 6,080.25
Weight (# / Gal)			8.5	8.7	9.0	9.2		
Vis (Funnel)			57	60	58	60		
Water Loss (cc)			8.00	7.2	8.0	8.8		

Bit #1

Bit Make / Type	"A" - RT							
Bit Size	12 1/4							
Bit Hours	2.00							2.00

Bit #2

Bit Make / Type	GT - GT27x6	GT--RR-G26x6	GT--RR-G26x6	GT--RR-G26x6	GT--RR-G26x6	GT--RR-G26x6		
Bit Size	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8	7 7/8		
Bit Hours	1.00	19.00	18.50	8.25	8.75	2.50		58.00
Bit Cumulative Hours	3.00	19.00	18.50	8.25	8.75	2.50	0.00	60.00
Weight on Bit (WOB)	30,000	30,000	30,000	30,000	30,000	30,000		
RPM	80	80	80	80	80	80		
Pump Pressure	400	650	600	600	600	600		
Drilling (Rotating) Hours	3.00	19.00	18.50	8.25	8.75	2.50	0.00	60.00

Daywork Hrs. (Operator's time)

Rat Hole (>.75 Hrs)								0.00
Wait on Cement	8.00							8.00
Trip				6.25	5.50	5.75		17.50
Circulate			1.00	5.50	6.00	4.00		16.50
Tool				0.75	0.50	0.50		1.75
Testing				2.50	2.50	2.50		7.50
Wait on tester								0.00
Logging						5.25		5.25
LDDP / LDDC						2.75		2.75
Run Casing / Cement	2.00						2.75	4.75
Nipple Down / Jet Cellar						0.50	0.50	1.00
Set Slips							0.50	0.50
Lost Circulation (> 2 Hrs)								0.00
Billable Hours	10.00	0.00	1.00	15.00	14.50	21.25	3.75	65.50

Non-Billable Hours (Southwind's time)

Rig Up / Tear Down	5.00						4.25	9.25
Wait on Cement (NB)								0.00
Drill Rat Hole	0.50							0.50
Drill Plug	0.50							0.50
Circulate / Trip (Surface)	0.75							0.75
Rig Repair	2.50							2.50
Connections	1.75	3.50	3.00	0.50	0.75			9.50
Jet/Displace		1.50	1.50					3.00
Surveys				0.25		0.25		0.50
Rig Check								0.00
Lost Circulation (< 2 hrs)								0.00
Lay Down Kelly								0.00
Trip Time for Plugged Bit								0.00
Non-Billable Hrs.	11.00	5.00	4.50	0.75	0.75	0.25	4.25	26.50

Footage Cost	\$ 6,790.00	\$ 20,860.00	\$ 13,090.00	\$ 3,780.00	\$ 2,632.00	\$ 1,288.00	\$ -	\$ 48,440.00
Daywork Cost	\$ 3,500.00	\$ -	\$ 350.00	\$ 5,250.00	\$ 5,075.00	\$ 7,437.50	\$ 1,312.50	\$ 22,925.00
Combined Est. Cost*	\$ 10,290.00	\$ 20,860.00	\$ 13,440.00	\$ 9,030.00	\$ 7,707.00	\$ 8,725.50	\$ 1,312.50	\$ 71,365.00

*Please note that this is estimated footage & daywork cost only. Additional charges will apply on invoice (fuel surcharge, water transfer pump, etc)

DST #1 Info - Footage Interval: 3057' - 3132' LKC "A-F" Recovery: 2900' Gas in Pipe 70' Slight Oil Cut Mud	DST #2 Info - Footage Interval: 3204' - 3260' "LKC" Recovery: 268' Gas in Pipe 40' Oil Cut Gassy Mud
DST #3 Info - Footage Interval: 3295' - 3368' Recovery: 40' Cil Cut Mud	DST #4 Info - Footage Interval: Recovery:

Displaced @

Anhydrite: