

CONFIDENTIAL

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

ORIGINAL

Form ACO-1  
October 2008  
Form Must Be Typed

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 3911

Name: Rama Operating Co., Inc.

Address 1: P.O. Box 159

Address 2: \_\_\_\_\_

City: Stafford State: KS Zip: 67578 + \_\_\_\_\_

Contact Person: Robin L. Austin

Phone: (620) 234-5191

CONTRACTOR: License # 5142

Name: Sterling Drilling Company

Wellsite Geologist: Josh Austin

Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well       Re-Entry       Workover
  - Oil       SWD       SIOW
  - Gas       ENHR       SIGW
  - CM (Coal Bed Methane)       Temp. Abd.
  - Dry       Other \_\_\_\_\_
- (Core, WSW, Expl., Cathodic, etc.)*

If Workover/Re-entry: Old Well Info as follows:

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

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

Deepening       Re-perf.       Conv. to Enhr.       Conv. to SWD

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

Commingled      Docket No.: \_\_\_\_\_

Dual Completion      Docket No.: \_\_\_\_\_

Other (SWD or Enhr.?)      Docket No.: \_\_\_\_\_

03-04-2010      03-11-2010      03-18-2010

Spud Date or      Date Reached TD      Completion Date or  
Recompletion Date           Recompletion Date

API No. 15 - 185-23612-00-00

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

W/2 13 21 13  
Ne Ne Se Sec. 33 Twp. 19 S. R. 9  East  West

2,310 Feet from  North /  South Line of Section

610 Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE     NW     SE     SW

County: Stafford

Lease Name: Batman Well #: 7-13

Field Name: Mueller

Producing Formation: Arbuckle

Elevation: Ground: 1860 Kelly Bushing: 1869

Total Depth: 3,650 Plug Back Total Depth: 3,560

Amount of Surface Pipe Set and Cemented at: 296 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 AH INJ 510-0  
*(Data must be collected from the Reserve Pit)*

Chloride content: \_\_\_\_\_ ppm Fluid volume: 320 bbls

Dewatering method used: \_\_\_\_\_

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

Operator Name: John Darrah

Lease Name: Anshutz License No.: 5088

Quarter Ne Sec. 15 Twp. 21 S. R. 14  East  West

County: Stafford Docket No.: D-17,893

**INSTRUCTIONS:** An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information of side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

All requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Signature: [Signature]

Title: V.P. Date: 5-4-2010

Subscribed and sworn to before me this 4<sup>th</sup> day of MAY

20 10

Notary Public: [Signature]

Date Commission Expires: 5-1-2011

NOTARY PUBLIC - State of Kansas  
DAWN SCHREIBER  
My Appt. Exp. 5-1-11

**KCC Office Use ONLY**

Letter of Confidentiality Received

If Denied, Yes  Date: \_\_\_\_\_

Wireline Log Received

Geologist Report Received

UIC Distribution

RECEIVED  
KANSAS CORPORATION COMMISS  
MAY 05 2010  
CONSERVATION DIVISIO  
WICHITA, KS

Operator Name: Rama Operating Co., Inc. Lease Name: Batman Well #: 7-13  
 Sec. 33 Twp. 19 S. R. 9  East  West County: Stafford

**INSTRUCTIONS:** Show important tops and base of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed. Attach copy of all Electric Wireline Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Electric Log Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(Submit Copy)</i>  List All E. Logs Run: <b>Dual Induction, Micro &amp; Compensated Porosity</b>	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input checked="" type="checkbox"/> Sample  <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;">Name</td> <td style="width:20%;">Top</td> <td style="width:20%;">Datum</td> </tr> <tr> <td>Topeka</td> <td>2843</td> <td>-972</td> </tr> <tr> <td>Heebner</td> <td>3,118</td> <td>-1247</td> </tr> <tr> <td>Lansing</td> <td>3,265</td> <td>-1,394</td> </tr> <tr> <td>Arbuckle</td> <td>3,561</td> <td>-1,660</td> </tr> <tr> <td>RTD</td> <td>3,650</td> <td>-1749</td> </tr> </table>	Name	Top	Datum	Topeka	2843	-972	Heebner	3,118	-1247	Lansing	3,265	-1,394	Arbuckle	3,561	-1,660	RTD	3,650	-1749
Name	Top	Datum																	
Topeka	2843	-972																	
Heebner	3,118	-1247																	
Lansing	3,265	-1,394																	
Arbuckle	3,561	-1,660																	
RTD	3,650	-1749																	

CASING RECORD <input checked="" type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12 1/4	8 5/8	23	296	60/40 poz	250	2% gel 3% CC
Production	7 7/8	5 1/2	14	3,656	AA2	125	500 gal. mud flush

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	#Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
4	3602-06 Bridge Plug		3590
4	3572-78 Bridge Plug		3566
4	3552-56	250 gal 15%	

TUBING RECORD: Size: 2 7/8 Set At: 3,555 Packer At:   Liner Run:  Yes  No

Date of First, Resumed Production, SWD or Enhr. 03-27-2010 Producing Method:  Flowing  Pumping  Gas Lift  Other (Explain)

Estimated Production Per 24 Hours	Oil Bbls. <u>40</u>	Gas Mcf <u>0</u>	Water Bbls. <u>10</u>	Gas-Oil Ratio	Gravity
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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 <input type="checkbox"/> Other (Specify) <u> </u>	PRODUCTION INTERVAL: <u>3552-56</u>
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KCC  
MAY 05 2010

## TREATMENT REPORT

Customer: Rama Operating Co. Inc. Lease No. [blank] Date: 3-4-10  
 Lease: Batman B Well # 7-13  
 Field Order # 17181174 Station Pratt Ks Casing 8 5/8" Depth [blank] County Stafford State KANS.  
 Type Job 8 5/8" Surface Formation CNW TO 296 Legal Description 13-21-13

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PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size"	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP	
8 5/8"		250 sks		60/40 Por	20% gel	30% CC	5 Min.	
296"	Depth	From	To	1/4" Pre Pad	Max		10 Min.	
	Volume	From	To	cell Flake @	Min		15 Min.	
	Max Press	From	To	Pad	Avg		Annulus Pressure	
	Well Connection	From	To	Frac	HHP Used		Total Load	
	Plug Depth	From	To	Flush DISP	Gas Volume			
	Packer Depth	From	To	Fresh Water				

Customer Representative [blank] Station Manager Scotty Treater Allen F. Werth

Service Units	28443	19889	19842	19960	19918				
Driver Names	Werth	Keenan	Lesley	Mike	McGuire				

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
730					on Loc. Discuss Safety, Setup, Plan Job
750					Rig Drilling surface hole.
830					Hole cut 296'
900					start out w/ Drill Pipe.
1020					out of hole w/ Drill Pipe. Rig up to Run casing
1030	200#		5		start 8 5/8 csg. 23# in 12 1/4" hole
			56		casing @ 296' Hookup + CIR w/ Rig.
					start mix 250 sks 60/40 Por
					w/ 20% gel, 30% CC, 1/4" cell Flake 14.7#
					Finish mix
1046				5	start Disp.
1055	200#			2	Plug down - shut in @ well
	0#				Release PSI
					Knock loose washup Equip.
					Rackup.
1130					Job complete.
					cement CIR. To Pit.
					thanks Allen, Keenan.
					Mike McGuire

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MAY 05 2010

CONSERVATION DIVISION  
WICHITA, KS

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MAY 05 2010  
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## TREATMENT REPORT

Customer RAMA Oper. Co. Inc.	Lease No.	Date 3-11-10
Well # Batman 'B'	Well # 4-13	
Field Order # 17181478A	Station Pratt KS.	Casing " 5 1/2"
Type Job 5 1/2" Long String	Formation CWW	Depth TD 3550
		County Staford
		State Kansas
		Legal Description 15-21-13

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME	
Casing Size "	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP
5 1/2"		125 SKS		AA2 @	15.4 #/90L		
Depth 3549'	Depth	From	To	Pre Pad	Max		5 Min.
			50 SKS	60/40 Por	Plug	R.H. + M.H.	
Volume 86 BB1	Volume	From	To	Pad	Min		10 Min.
Max Press 1200 #	Max Press	From	To	Frac	Avg		15 Min.
			12 BB1s	mud Flush			
Well Connection P.C.	Annulus Vol.	From	To		HHP Used		Annulus Pressure
Plug Depth 3536	Packer Depth	From	To	Flush	Gas Volume		Total Load
				D.SP. Freshwater			

Customer Representative Randy	Station Manager 19918 19918 Scotty	Treater Allen F. Wertl
Service Units 28443	19833	20920
Driver Names A werth	Joe	melson Dale Phyc

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
7:45 AM					Sterling #1 on Loc. Discuss Safety Setup. Plan Job Rig doing cellar work
9:13					START 5 1/2 CASING. 14# - S.I. 14.05 Shoe Joint w/ Reg. Guide Shoe + Auto Fillup insert in collar. cmt. 1-3-5-7-9
11:00					Tng Bottom @ 3550' Pickup 1" dia @ 3549-20' up.
11:45	100#		12	5	Pump 12 BB1s mud Flush
			5	5	Pump 5 BB1s H2O spacer
				5	Mix + pump. 125 SKS AA2 @ 15.4 #
			30		Finish mix cmt. washout Pump + Line. Drop. Top Plug
12:08	100#			5 1/2	Start Disp.
12:25	1200#			4 1/2	caught Lift PSI w/ 68 BB1s out
12:28				3	Plug down - "Release OK" Plug Rat Hole + Mouse Hole w/ 50 SKS 60/40 Por.
13:30					wash up equip. + RACK up. Job complete + THANKS Allen Wertl

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KANSAS CORPORATION COMMISSION  
MAY 05 2010  
CONSERVATION DIVISION  
WICHITA, KS



## DRILL STEM TEST REPORT

Prepared For: **RAMA OPERATING CO INC**

101 S MAIN ST STAFFORD KS 67578+1479

ATTN: JOSH AUSTIN

**13-21-13W**

**BATMAN "B" 7-13**

Start Date: 2010.03.08 @ 01:15:00

End Date: 2010.03.08 @ 10:45:00

Job Ticket #: 16321                      DST #: 1

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

Printed: 2010.03.08 @ 12:11:27

RAMA OPERATING CO INC  
BATMAN "B" 7-13  
13-21-13W  
DST # 1  
LANSING "A" F  
2010.03.08



# DRILL STEM TEST REPORT

RAMA OPERATING CO INC  
 101 S MAIN ST STAFFORD KS 67578+1479  
 ATTN: JOSH AUSTIN

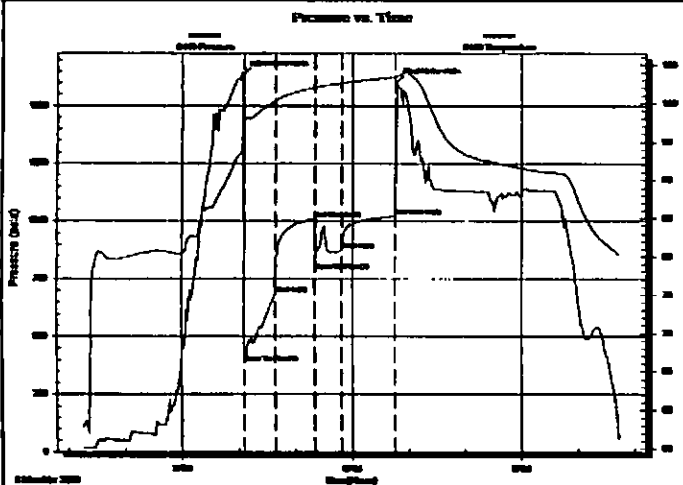
**BATMAN "B" 7-13**  
**13-21-13W**  
 Job Ticket: 16321      **DST#: 1**  
 Test Start: 2010.03.08 @ 01:15:00

## GENERAL INFORMATION:

Formation: **LANSING "A"-F**  
 Deviated: **No Whipstock**      ft (KB)  
 Time Tool Opened: **04:06:30**  
 Time Test Ended: **10:45:00**  
 Interval: **3250.00 ft (KB) To 3345.00 ft (KB) (TVD)**  
 Total Depth: **3345.00 ft (KB) (TVD)**  
 Hole Diameter: **6.88 inches** Hole Condition: **Fair**  
 Test Type: **Conventional Bottom Hole (Initial)**  
 Tester: **JARED SCHECK**  
 Unit No: **3320- GB -**  
 Reference Elevations: **1871.00 ft (KB)**  
**1860.00 ft (CF)**  
 KB to GR/CF: **11.00 ft**

Serial #: **8419**      Inside  
 Press@RunDepth: **876.99 psia @ 3340.00 ft (KB)**      Capacity: **5000.00 psia**  
 Start Date: **2010.03.08**      End Date: **2010.03.08**      Last Calib.: **2010.03.08**  
 Start Time: **01:15:00**      End Time: **10:45:00**      Time On Btmr: **2010.03.08 @ 04:05:30**  
 Time Off Btmr: **2010.03.08 @ 06:47:00**

**TEST COMMENT: 30/INITIAL OPEN: STRONG BLOW BULT BOTOM OF BUCKET IN 1 MINUTE**  
**45/INITIAL SHUT IN BLOW BACK**  
**30/FINAL OPEN: STROG BLOE BULR BOTOM OF BUCKET IN 1 MINUTE**  
**45/FINAL SHUT IN YES**



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1637.44	96.76	Initial Hydro-static
1	384.60	97.95	Open To Flow (1)
34	683.19	100.29	Shut-in(1)
75	1010.38	102.01	End Shut-in(1)
76	785.71	101.99	Open To Flow (2)
104	876.99	102.59	Shut-in(2)
160	1021.67	103.44	End Shut-in(2)
162	1603.27	103.62	Final Hydro-static

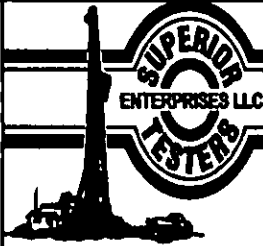
## Recovery

Length (ft)	Description	Volume (bbl)
60.00	O	0.30
60.00	O	0.30
60.00	O	0.30
2100.00	CLEAN GASSEY OIL	29.18

## Gas Rates

	Choke (Inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	0.25	7.60	12.06
Last Gas Rate	0.25	3.00	4.76
Max. Gas Rate	0.25	7.60	12.06





# DRILL STEM TEST REPORT

RAMA OPERATING CO INC  
 101 S MAIN ST STAFFORD KS 67578+1479  
 ATTN: JOSH AUSTIN

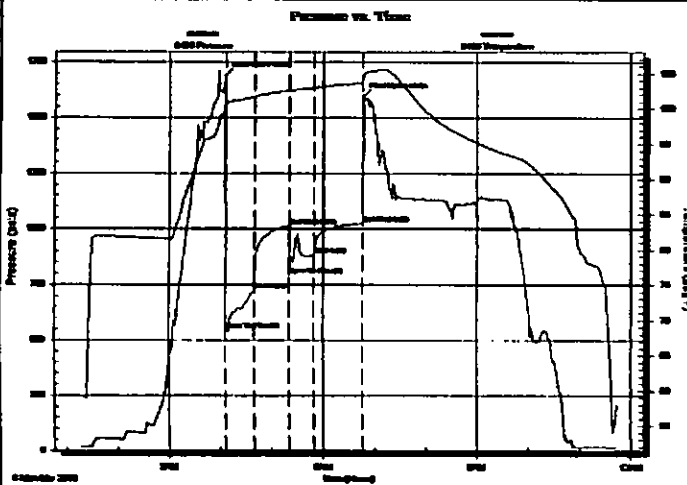
**BATMAN "B" 7-13**  
**13-21-13W**  
 Job Ticket: 16321      **DST#: 1**  
 Test Start: 2010.03.08 @ 01:15:00

## GENERAL INFORMATION:

Formation: **LANSING "A-"F**  
 Deviated: **No Whipstock**      ft (KB)  
 Time Tool Opened: 04:06:30  
 Time Test Ended: 10:45:00  
 Interval: **3250.00 ft (KB) To 3345.00 ft (KB) (TVD)**  
 Total Depth: **3345.00 ft (KB) (TVD)**  
 Hole Diameter: **6.88 inches** Hole Condition: **Fair**  
 Test Type: **Conventional Bottom Hole (Initial)**  
 Tester: **JARED SCHECK**  
 Unit No: **3320- GB -**  
 Reference Elevations: **1871.00 ft (KB)**  
**1860.00 ft (CF)**  
 KB to GR/CF: **11.00 ft**

Serial #: **8405**      **Outside**  
 Press@RunDepth: **1023.03 psia @ 3340.00 ft (KB)**      Capacity: **5000.00 psia**  
 Start Date: **2010.03.08**      End Date: **2010.03.08**      Last Calib.: **2010.03.08**  
 Start Time: **01:15:00**      End Time: **11:44:30**      Time On Btrn: **2010.03.08 @ 04:05:30**  
 Time Off Btrn: **2010.03.08 @ 06:47:00**

TEST COMMENT: **30/INITIAL OPEN: STRONG BLOW BUILT BOTOM OF BUCKET IN 1 MINUTE**  
**45/INITIAL SHUT IN BLOW BACK**  
**30/FINAL OPEN: STROG BLOE BULR BOTOM OF BUCKET IN 1 MINUTE**  
**45/FINAL SHUT IN YES**



## PRESSURE SUMMARY

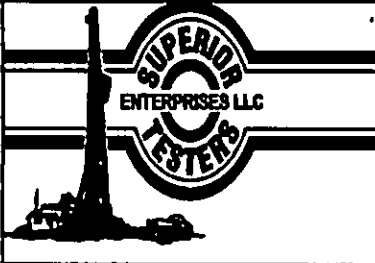
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1688.98	100.81	Initial Hydro-static
1	544.45	100.70	Open To Flow (1)
34	723.70	101.61	Shut-In(1)
75	1012.54	102.55	End Shut-In(1)
76	790.20	102.49	Open To Flow (2)
104	884.55	102.93	Shut-In(2)
160	1023.03	103.66	End Shut-In(2)
162	1597.78	104.63	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	O	0.30
60.00	O	0.30
60.00	O	0.30
2100.00	CLEAN GASSEY OIL	29.18

## Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	0.25	7.60	12.06
Last Gas Rate	0.25	3.00	4.76
Max. Gas Rate	0.25	7.60	12.06



# DRILL STEM TEST REPORT

TOOL DIAGRAM

RAMA OPERATING CO INC  
 101 S MAIN ST STAFFORD KS 67578+1479  
 ATTN: JOSH AUSTIN

BATMAN "B" 7-13  
 13-21-13W  
 Job Ticket: 16321      DST#: 1  
 Test Start: 2010.03.08 @ 01:15:00

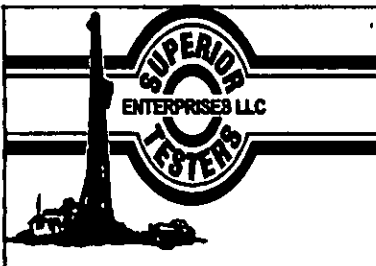
### Tool Information

Drill Pipe:	Length: 3035.00 ft	Diameter: 3.80 inches	Volume: 42.57 bbl	Tool Weight: 10000.00 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: 210.00 ft	Diameter: 2.25 inches	Volume: 1.03 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 43.60 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 57000.00 lb
Depth to Top Packer:	3250.00 ft			Final 610000.0 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	95.00 ft			
Tool Length:	116.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: DROPED BAR

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3230.00	
Shut-In Tool	5.00			3235.00	
Hydraulic Tool	5.00			3240.00	
Recorder	5.00			3245.00	
Packer	5.00			3250.00	21.00      Bottom Of Top Packer
Change Over Sub	0.75			3250.75	
Drill Pipe	63.50			3314.25	
Change Over Sub	0.75			3315.00	
Perforations	25.00			3340.00	
Recorder	0.00	8419	Inside	3340.00	
Recorder	0.00	8405	Outside	3340.00	
Bullnose	5.00			3345.00	95.00      Anchor Tool
<b>Total Tool Length:</b>	<b>116.00</b>				





# DRILL STEM TEST REPORT

**FLUID SUMMARY**

RAMA OPERATING CO INC  
 101 S MAIN ST STAFFORD KS 67578+1479  
 ATTN: JOSH AUSTIN

**BATMAN "B" 7-13**  
**13-21-13W**  
 Job Ticket: 16321      **DST#: 1**  
 Test Start: 2010.03.08 @ 01:15:00

## Mud and Cushion Information

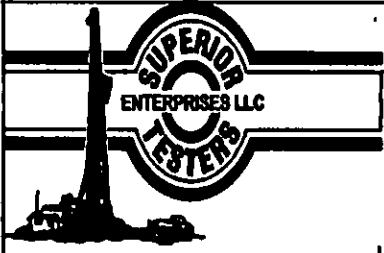
Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	56.00 sec/qt	Cushion Volume:	bbbl		
Water Loss:	8.80 in <sup>3</sup>	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psia		
Salinity:	4300.00 ppm				
Filter Cake:	1.00 inches				

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	O	0.295
60.00	O	0.295
60.00	O	0.295
2100.00	CLEAN GASSEY OIL	29.184

Total Length: 2280.00 ft      Total Volume: 30.069 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments: REVERSED FLUID OUT



# DRILL STEM TEST REPORT

**GAS RATES**

RAMA OPERATING CO INC  
101 S MAIN ST STAFFORD KS 67578+1479

**BATMAN "B" 7-13**  
**13-21-13W**  
Job Ticket: 16321      **DST#: 1**  
Test Start: 2010.03.08 @ 01:15:00

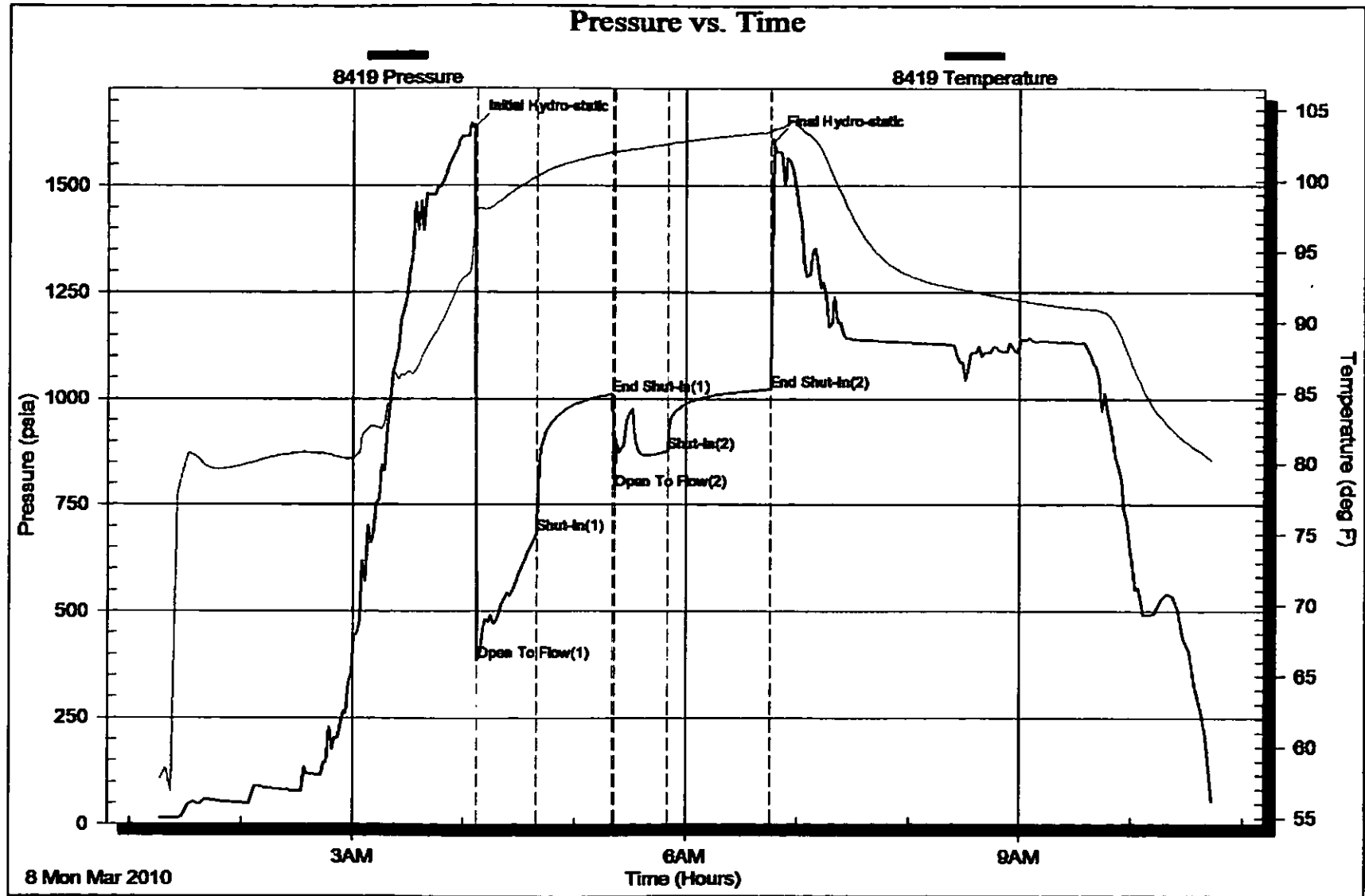
ATTN: JOSH AUSTIN

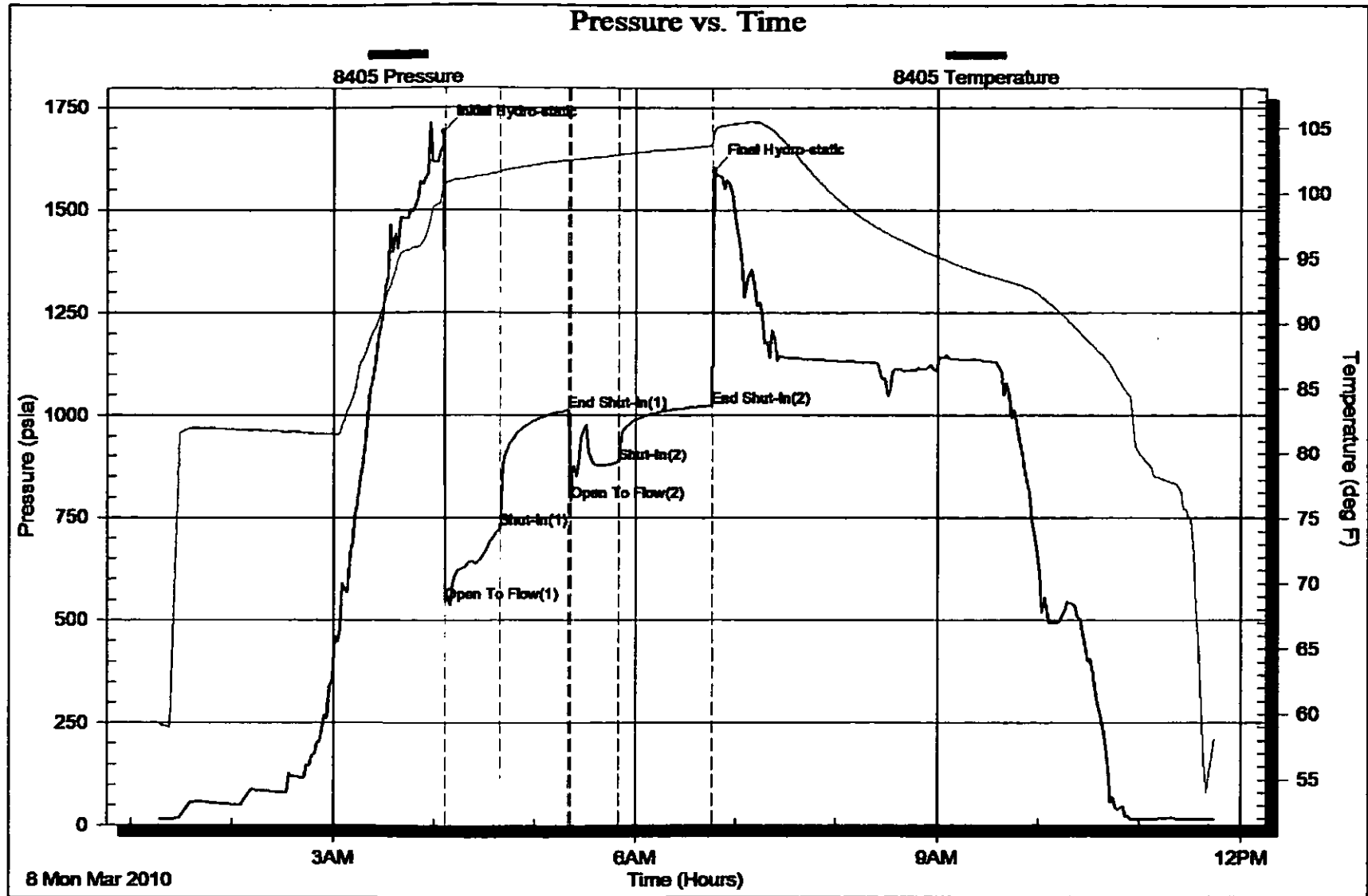
## Gas Rates Information

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)
1	20	0.25	7.60	12.06
1	20	0.25	7.60	12.06
1	30	0.25	7.60	12.06
2	10	0.25	3.00	4.76
2	20	0.25	3.00	4.76







## DRILL STEM TEST REPORT

Prepared For: **RAMA OPERATING CO INC**

101 S MAIN ST STAFFORD KS 67578+1479

ATTN: JOSH AUSTIN

**13-21-13W**

**BATMAN "B" 7-13**

Start Date: 2010.03.09 @ 01:32:00

End Date: 2010.03.09 @ 08:52:30

Job Ticket #: 16322                      DST #: 2

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

Printed: 2010.03.09 @ 09:12:28

RAMA OPERATING CO INC

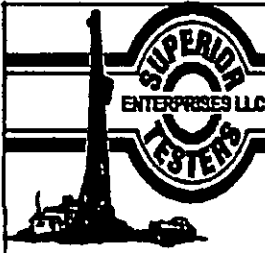
BATMAN "B" 7-13

13-21-13W

DST # 2

LANSING H. I. J

2010.03.09



# DRILL STEM TEST REPORT

RAMA OPERATING CO INC  
 101 S MAIN ST STAFFORD KS 67578+1479  
 ATTN: JOSH AUSTIN

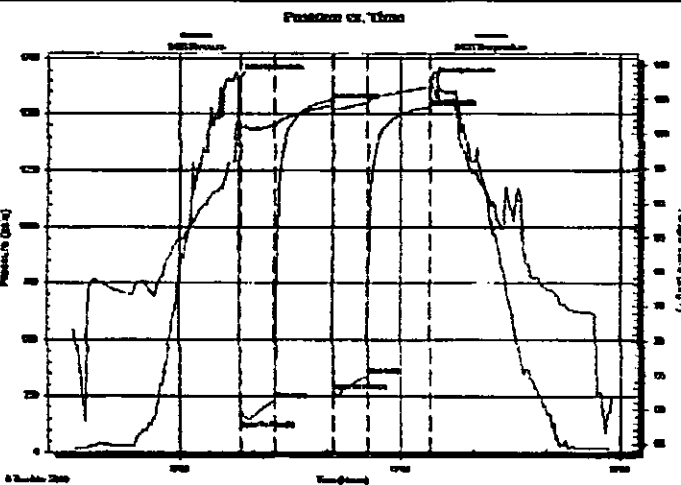
BATMAN "B" 7-13  
 13-21-13W  
 Job Ticket: 16322 DST#: 2  
 Test Start: 2010.03.09 @ 01:32:00

## GENERAL INFORMATION:

Formation: LANSING H, I, J  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 03:49:00  
 Time Test Ended: 08:52:30  
 Interval: 3378.00 ft (KB) To 3430.00 ft (KB) (TVD)  
 Total Depth: 3430.00 ft (KB) (TVD)  
 Hole Diameter: 6.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: JARED SCHECK  
 Unit No: 3320 - GB  
 Reference Elevations: 1871.00 ft (KB)  
 1860.00 ft (CF)  
 KB to GRVCF: 11.00 ft

Serial #: 8405 Inside  
 Press @ Fund Depth: 341.25 psia @ 3425.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2010.03.09 End Date: 2010.03.09 Last Calib.: 2010.03.09  
 Start Time: 01:32:00 End Time: 08:52:30 Time On Btm: 2010.03.09 @ 03:48:00  
 Time Off Btm: 2010.03.09 @ 06:25:30

TEST COMMENT: 30/INITIAL OPEN:STRONG BLOW BUILT BOTTOM OF BUCKET IN 1 MINUTE  
 45/INITIAL SHUT IN BOTTOM OF BUCKET  
 30/FINAL OPEN:STRONG BLOW BUILT BOTTOM OF BUCKET IN 1 MINUTE  
 45/FINAL SHUT IN:NO BLOW BACK



## PRESSURE SUMMARY

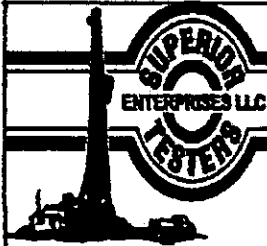
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1658.72	101.80	Initial Hydro-static
1	103.06	100.97	Open To Flow (1)
30	232.43	101.24	Shut-in(1)
77	1561.96	104.17	End Shut-in(1)
78	269.29	103.64	Open To Flow (2)
105	341.25	104.53	Shut-in(2)
157	1531.32	106.78	End Shut-in(2)
158	1649.55	107.49	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
240.00	WATER 15%M 85%W	1.45
300.00	O OJTW 5%O 20%M 75%W	4.21
300.00	SGO MW 5%G 10%O 20%M 65%W	4.21
240.00	SGO CM 5%G 1%O 80%W	3.37
420.00	GAS IN PFE	5.69

## Gas Rates

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



# DRILL STEM TEST REPORT

RAMA OPERATING CO INC  
 101 S MAIN ST STAFFORD KS 67578-1479  
 ATTN: JOSH AUSTIN

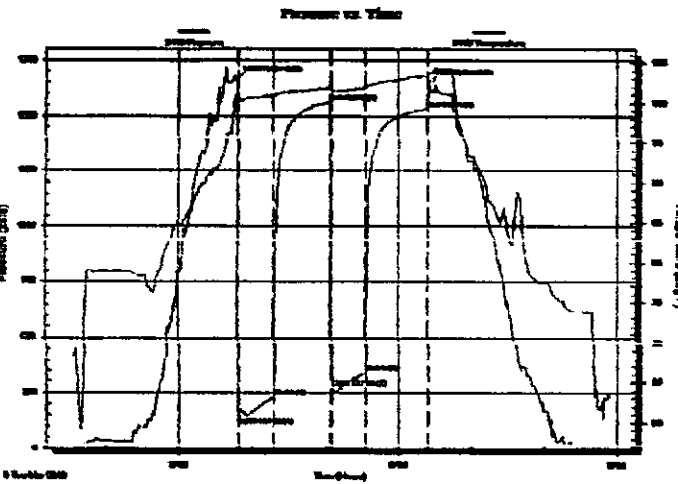
BATMAN "B" 7-13  
 13-21-13W  
 Job Ticket: 16322 DST#: 2  
 Test Start: 2010.03.09 @ 01:32:00

## GENERAL INFORMATION:

Formation: LANSING H, I, J  
 Deviated: No Whipstock ft (KB)  
 Time Tool Opened: 03:49:00  
 Time Test Ended: 08:52:30  
 Interval: 3378.00 ft (KB) To 3430.00 ft (KB) (TVD)  
 Total Depth: 3430.00 ft (KB) (TVD)  
 Hole Diameter: 6.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: JARED SCHECK  
 Unit No: 3320 - GB  
 Reference Elevations: 1871.00 ft (KB)  
 1860.00 ft (CF)  
 KB to GRVCF: 11.00 ft

Serial #: 8419 Outside  
 Press @ Run Depth: 1532.28 psia @ 3425.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2010.03.09 End Date: 2010.03.09 Last Calb.: 2010.03.09  
 Start Time: 01:32:00 End Time: 08:53:00 Time On Btm: 2010.03.09 @ 03:48:00  
 Time Off Btm: 2010.03.09 @ 06:25:30

TEST COMMENT: 30/INITIAL OPEN-STRONG BLOW BUILT BOTTOM OF BUCKET IN 1 MINUTE  
 45/INITIAL SHUT IN BOTTOM OF BUCKET  
 30/FINAL OPEN-STRONG BLOW BUILT BOTTOM OF BUCKET IN 1 MINUTE  
 45/FINAL SHUT IN NO BLOW BACK



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1662.86	100.92	Initial Hydro-static
1	102.39	100.65	Open To Flow (1)
30	232.82	100.78	Shut-in(1)
77	1562.82	101.83	End Shut-in(1)
78	270.02	101.49	Open To Flow (2)
105	341.01	101.84	Shut-in(2)
157	1532.28	103.42	End Shut-in(2)
158	1646.54	103.64	Final Hydro-static

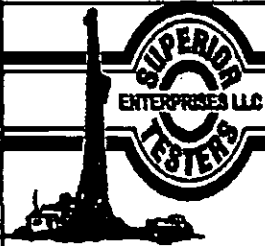
## Recovery

Length (ft)	Description	Volume (bbl)
240.00	WATER 15%M 85%W	1.45
300.00	O CUT W 5%O 20%M 75%W	4.21
300.00	SGO MW 5%G 10%O 20%M 65%W	4.21
240.00	SGO CM 5%G 1%O 80%W	3.37
420.00	GAS IN PIPE	5.69

## Gas Rates

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





# DRILL STEM TEST REPORT

TOOL DIAGRAM

RAMA OPERATING CO INC  
 101 S MAIN ST STAFFORD KS 67578+1478  
 ATTN: JOSH AUSTIN

BATMAN "B" 7-13  
 13-21-13W  
 Job Ticket: 16322      DST#: 2  
 Test Start: 2010.03.09 @ 01:32:00

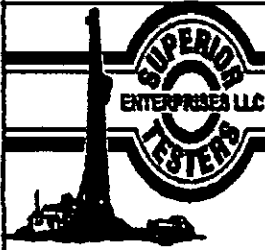
**Tool Information**

Drill Pipe:	Length: 3161.00 ft	Diameter: 3.80 inches	Volume: 44.34 bbl	Tool Weight: 10000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 210.00 ft	Diameter: 2.25 inches	Volume: 1.03 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 45.37 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3378.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	52.00 ft			
Tool Length:	73.00 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			3358.00	
Shut-In Tool	6.00			3363.00	
Hydraulic Tool	5.00			3368.00	
Recorder	5.00			3373.00	
Packer	5.00			3378.00	21.00      Bottom Of Top Packer
Change Over Sub	0.75			3378.75	
Drill Pipe	31.50			3410.25	
Change Over Sub	0.75			3411.00	
Perforations	14.00			3425.00	
Recorder	0.00	8405	Inside	3425.00	
Recorder	0.00	8419	Outside	3425.00	
Bullnose	5.00			3430.00	52.00      Anchor Tool

**Total Tool Length: 73.00**



# DRILL STEM TEST REPORT

FLUID SUMMARY

RAMA OPERATING CO INC  
 101 S MAIN ST STAFFORD KS 67578+1478  
 ATTN: JOSH AUSTIN

BATMAN "B" 7-13  
 13-21-13W  
 Job Ticket: 16322      DST#: 2  
 Test Start: 2010.03.09 @ 01:32:00

## Mud and Cushion Information

Mud Type: Gel Chem  
 Mud Weight: 8.00 lb/gal  
 Viscosity: 47.00 sec/qt  
 Water Loss: 8.00 in<sup>2</sup>  
 Resistivity: ohm.m  
 Salinity: 6500.00 ppm  
 Filter Cake: 1.00 inches

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

CG API:      deg API  
 Water Salinity: ppm

## Recovery Information

Recovery Table

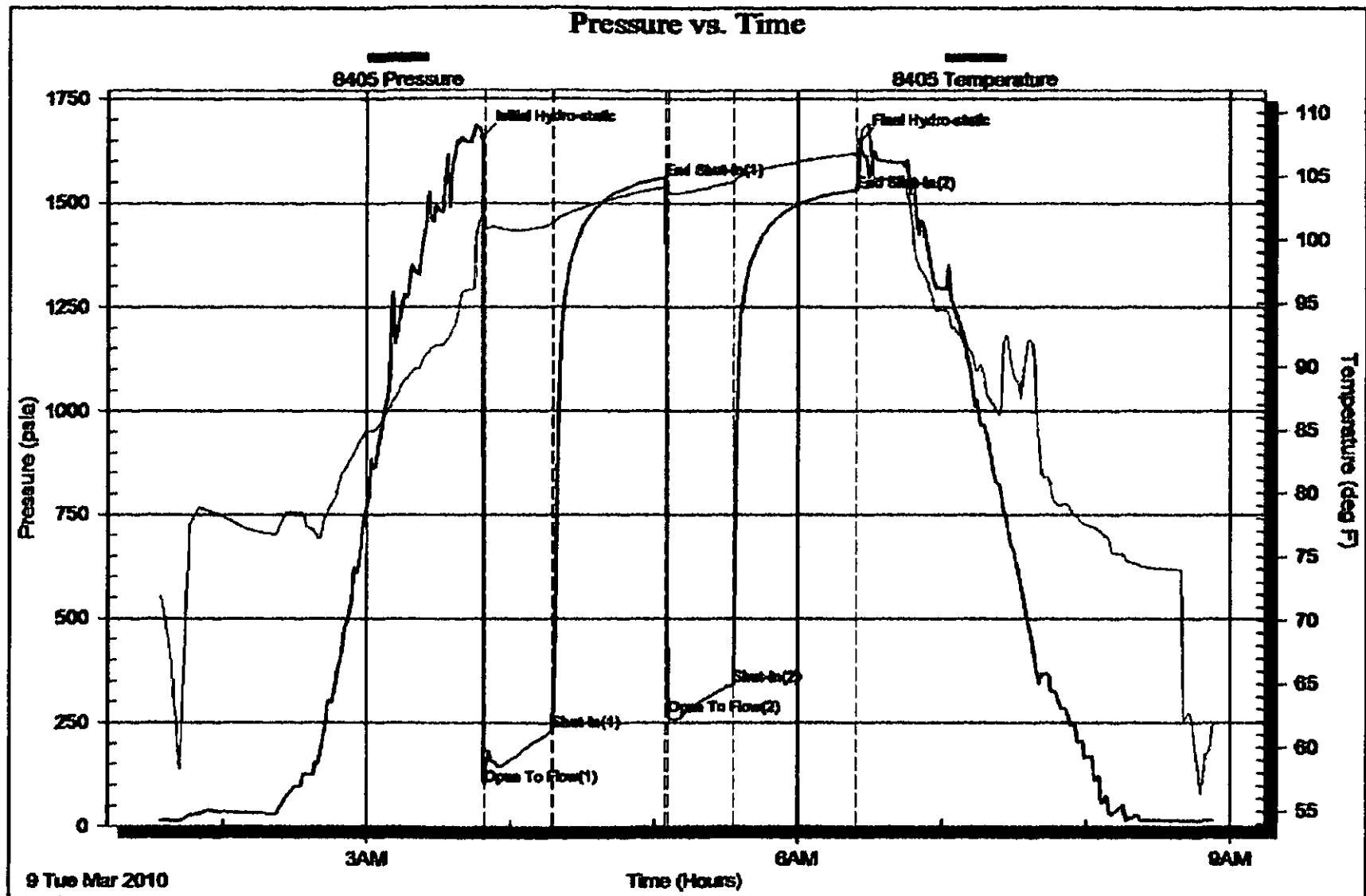
Length ft	Description	Volume bbl
240.00	WATER 15%M 85%W	1.454
300.00	O CUT W 5%O 20%M 75%W	4.208
300.00	SGO M W 5%G 10%O 20%M 85%W	4.208
240.00	SGO C M 5%G 1%O 80%W	3.367
420.00	GAS IN PIPE	5.891

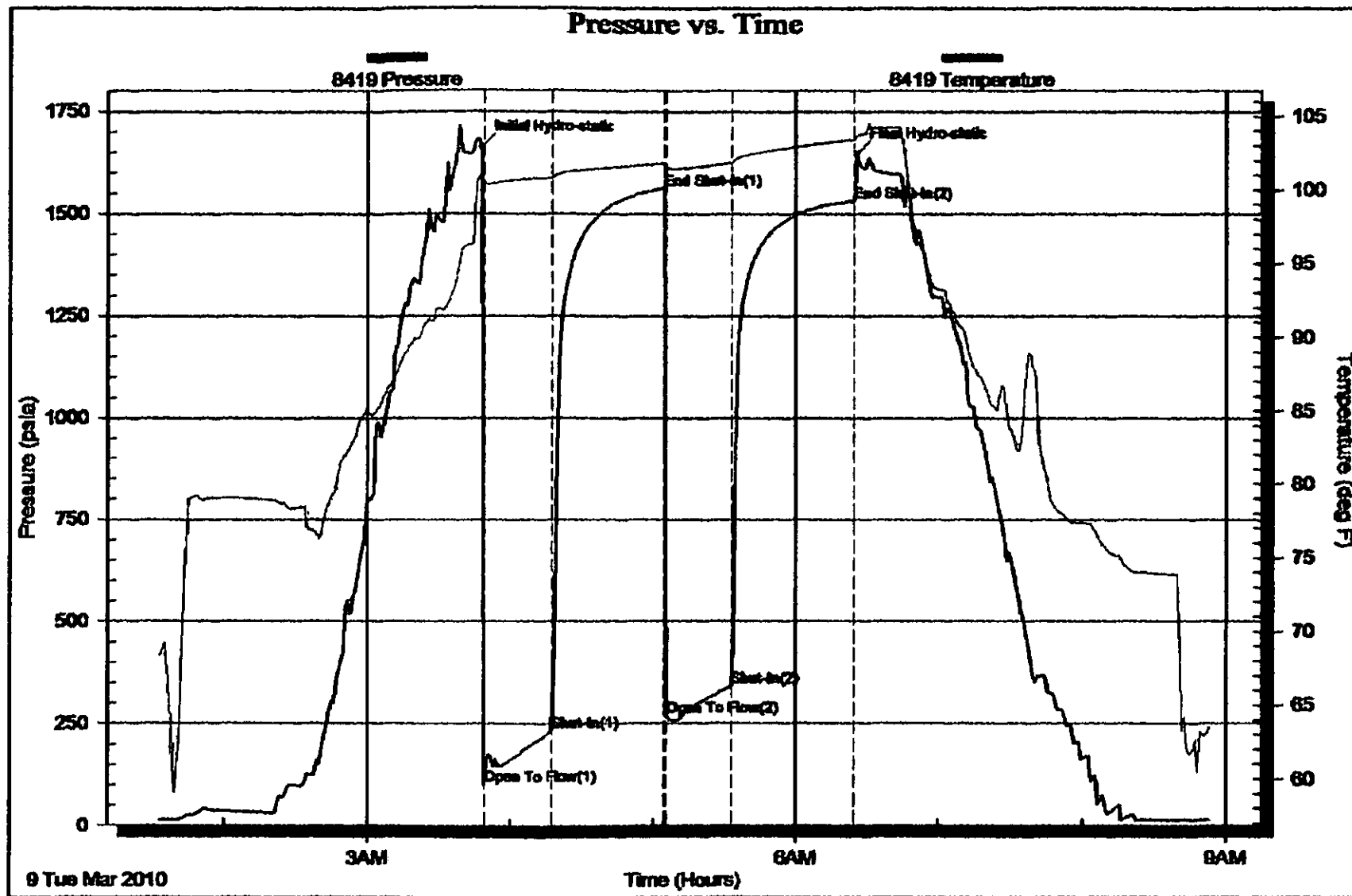
Total Length: 1500.00 ft      Total Volume: 19.128 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: CHLORIDES 50,000







## DRILL STEM TEST REPORT

Prepared For: **RAMA OPERATING CO INC**

101 S MAIN ST STAFFORD KS 67578+1479

ATTN: JOSH AUSTIN

**13-21-13W**

**BATMAN "B" 7-13**

Start Date: 2010.03.09 @ 22:18:00

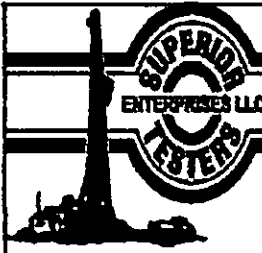
End Date: 2010.03.10 @ 06:26:00

Job Ticket #: 16323                      DST #: 3

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

Printed: 2010.03.10 @ 06:47:33

RAMA OPERATING CO INC    BATMAN "B" 7-13    13-21-13W    DST # 3    ARBUCKLE    2010.03.09



# DRILL STEM TEST REPORT

RAMA OPERATING CO INC  
 101 S MAIN ST STAFFORD KS 67578+1478  
 ATTN: JOSH AUSTIN

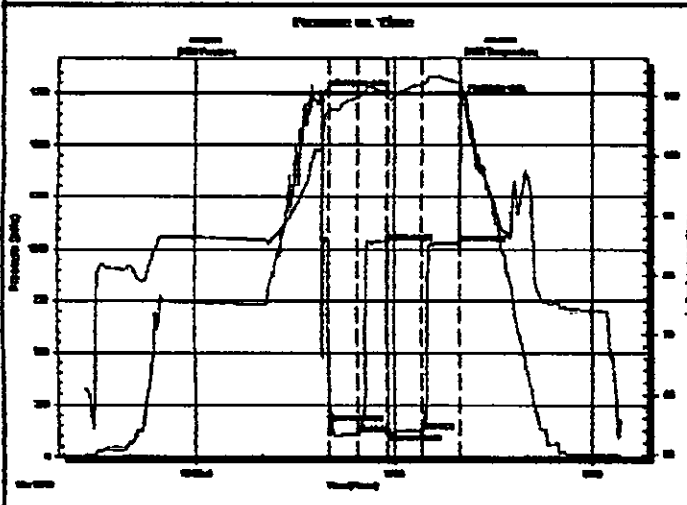
BATMAN "B" 7-13  
 13-21-13W  
 Job Ticket: 16323 DST#: 3  
 Test Start: 2010.03.09 @ 22:18:00

## GENERAL INFORMATION:

Formation: ARBUCKLE  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 02:01:30  
 Time Test Ended: 08:28:00  
 Interval: 3491.00 ft (KB) To 3541.00 ft (KB) (TVD)  
 Total Depth: 3541.00 ft (KB) (TVD)  
 Hole Diameter: 6.68 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: JARED SCHECK  
 Unit No: 3320-28-GB  
 Reference Elevations: 1871.00 ft (KB)  
 1860.00 ft (CF)  
 KB to GRCP: 11.00 ft

Serial #: 8405 Inside  
 Press@RunDepth: 123.91 psia @ 3538.00 ft (KB)  
 Start Date: 2010.03.09 End Date: 2010.03.10  
 Start Time: 22:18:00 End Time: 06:26:00  
 Capacity: 5000.00 psia  
 Last Calib.: 2010.03.10  
 Time On Btm: 2010.03.10 @ 01:55:00  
 Time Off Btm: 2010.03.10 @ 04:01:00

TEST COMMENT: 30/INITIAL OPEN WEAK BLOW BUILT 2 INCHES DIED OFF FLUSHED TOOL WEAK BLOW BUILT 5 1/2 INCH  
 30/INITIAL SHUT IN 1 INCH BLOW BACK  
 30/FINAL OPEN FAIR BLOW BUILT BOTTOM OF BUCKET IN 10 MINUTES  
 30/FINAL SHUT IN 3 INCH BLOW BACK



## PRESSURE SUMMARY

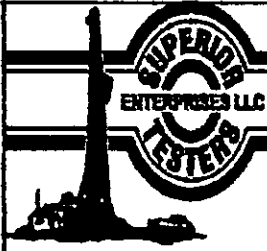
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1743.38	101.70	Initial Hydro-static
7	167.10	107.08	Open To Flow (1)
32	109.94	109.75	Shut-In(1)
59	1034.47	110.60	End Shut-In(1)
60	113.13	109.88	Open To Flow (2)
91	123.91	112.01	Shut-In(2)
125	1032.65	112.13	End Shut-In(2)
126	1724.15	110.68	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
200.00	GASSEY OIL CUT MUD 65%G 15%O	20.981
480.00	GAS IN PFE	6.64

## Gas Rates

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



# DRILL STEM TEST REPORT

RAMA OPERATING CO INC  
 101 S MAIN ST STAFFORD KS 67578+1479  
 ATTN: JOSH AUSTIN

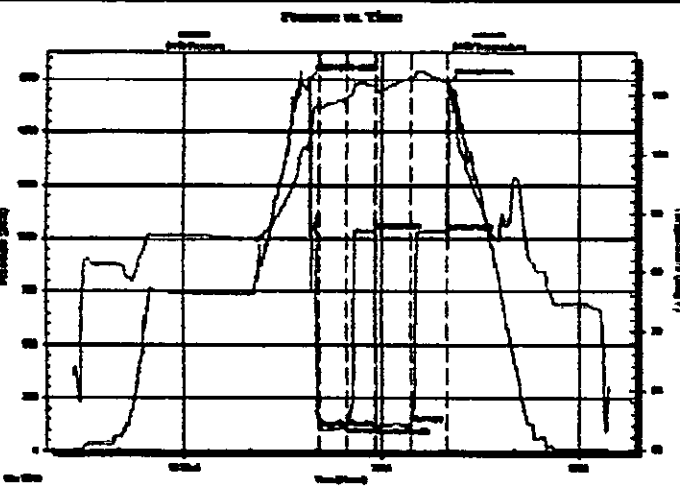
BATMAN "B" 7-13  
 13-21-13W  
 Job Ticket: 16323 DST#: 3  
 Test Start: 2010.03.09 @ 22:18:00

## GENERAL INFORMATION:

Formation: **ARBUCKLE**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 02:01:30 Tester: JARED SCHECK  
 Time Test Ended: 06:26:00 Unit No: 3320-28-GB  
 Interval: 3491.00 ft (KB) To 3541.00 ft (KB) (TVD) Reference Elevations: 1871.00 ft (KB)  
 Total Depth: 3541.00 ft (KB) (TVD) 1860.00 ft (OF)  
 Hole Diameter: 6.68 inches Hole Condition: Fair KB to GRCP: 11.00 ft

Serial #: 8419 Outside  
 Press @ Run Depth: 1033.20 psia @ 3538.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2010.03.09 End Date: 2010.03.10 Last Calib.: 2010.03.10  
 Start Time: 22:18:00 End Time: 06:27:00 Time On Btm: 2010.03.10 @ 01:54:30  
 Time Off Btm: 2010.03.10 @ 04:00:30

TEST COMMENT: 30/INITIAL OPEN WEAK BLOW BUILT 2 INCHES DIED OFF FLUSHED TOOL WEAK BLOW BUILT 5 1/2 INCH  
 30/INITIAL SHUT IN 1 INCH BLOW BACK  
 30/FINAL OPEN FAIR BLOW BUILT BOTTOM OF BUCKET IN 10 MINUTES  
 30/FINAL SHUT IN 3 INCH BLOW BACK



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1760.72	102.20	Initial Hydro-static
8	110.69	107.85	Open To Flow (1)
33	116.93	109.34	Shut-in (1)
59	1035.18	111.56	End Shut-in (1)
60	113.50	111.00	Open To Flow (2)
92	133.24	112.92	Shut-in (2)
125	1033.20	112.28	End Shut-in (2)
126	1734.63	112.19	Final Hydro-static

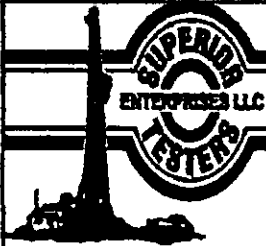
## Recovery

Length (ft)	Description	Volume (bbl)
200.00	GASSEY OIL CUT MUD 65%G 15%O	20.981
480.00	GAS IN PIPE	6.64

## Gas Rates

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





# DRILL STEM TEST REPORT

TOOL DIAGRAM

RAMA OPERATING CO INC  
 101 S MAIN ST STAFFORD KS 67578+1479  
 ATTN: JOSH AUSTIN

BATMAN "B" 7-13  
 13-21-13W  
 Job Ticket: 18323 DST#: 3  
 Test Start: 2010.03.09 @ 22:18:00

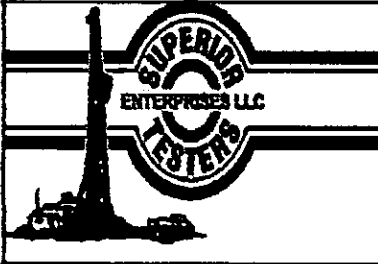
### Tool Information

Drill Pipe:	Length: 3287.00 ft	Diameter: 3.80 inches	Volume: 46.11 bbl	Tool Weight: 10000.00 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: 210.00 ft	Diameter: 2.25 inches	Volume: 1.03 bbl	Weight to Pull Loose: 67000.00 lb
			<u>Total Volume: 47.14 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 57000.00 lb
Depth to Top Packer:	3491.00 ft			Final 57000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	71.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: FLUSHED TOOL 10 MINUTES INTO THE 1ST OPEN

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3471.00	
Shut-In Tool	5.00			3476.00	
Hydraulic Tool	5.00			3481.00	
Recorder	5.00			3486.00	
Packer	5.00			3491.00	21.00 Bottom Of Top Packer
Change Over Sub	0.75			3491.75	
Drill Pipe	31.50			3523.25	
Change Over Sub	0.75			3524.00	
Perforations	12.00			3536.00	
Recorder	0.00	8405	Inside	3538.00	
Recorder	0.00	8419	Outside	3538.00	
Bullnose	5.00			3541.00	50.00 Anchor Tool

Total Tool Length: 71.00



# DRILL STEM TEST REPORT

FLUID SUMMARY

RAMA OPERATING CO INC  
 101 S MAIN ST STAFFORD KS 67578+1479  
 ATTN: JOSH AUSTIN

BATMAN "B" 7-13  
 13-21-13W  
 Job Ticket: 16323      DST#: 3  
 Test Start: 2010.03.09 @ 22:18:00

## 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: 68.00 sec/qt	Cushion Volume: bbl		
Water Loss: 11.20 in*	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 9000.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
200.00	GASSEY OIL CUT MUD 65%G 15%O 20%W	0.984
480.00	GAS IN PIPE	6.642

Total Length: 680.00 ft      Total Volume: 7.626 bbl

Num Fluid Samples: 0

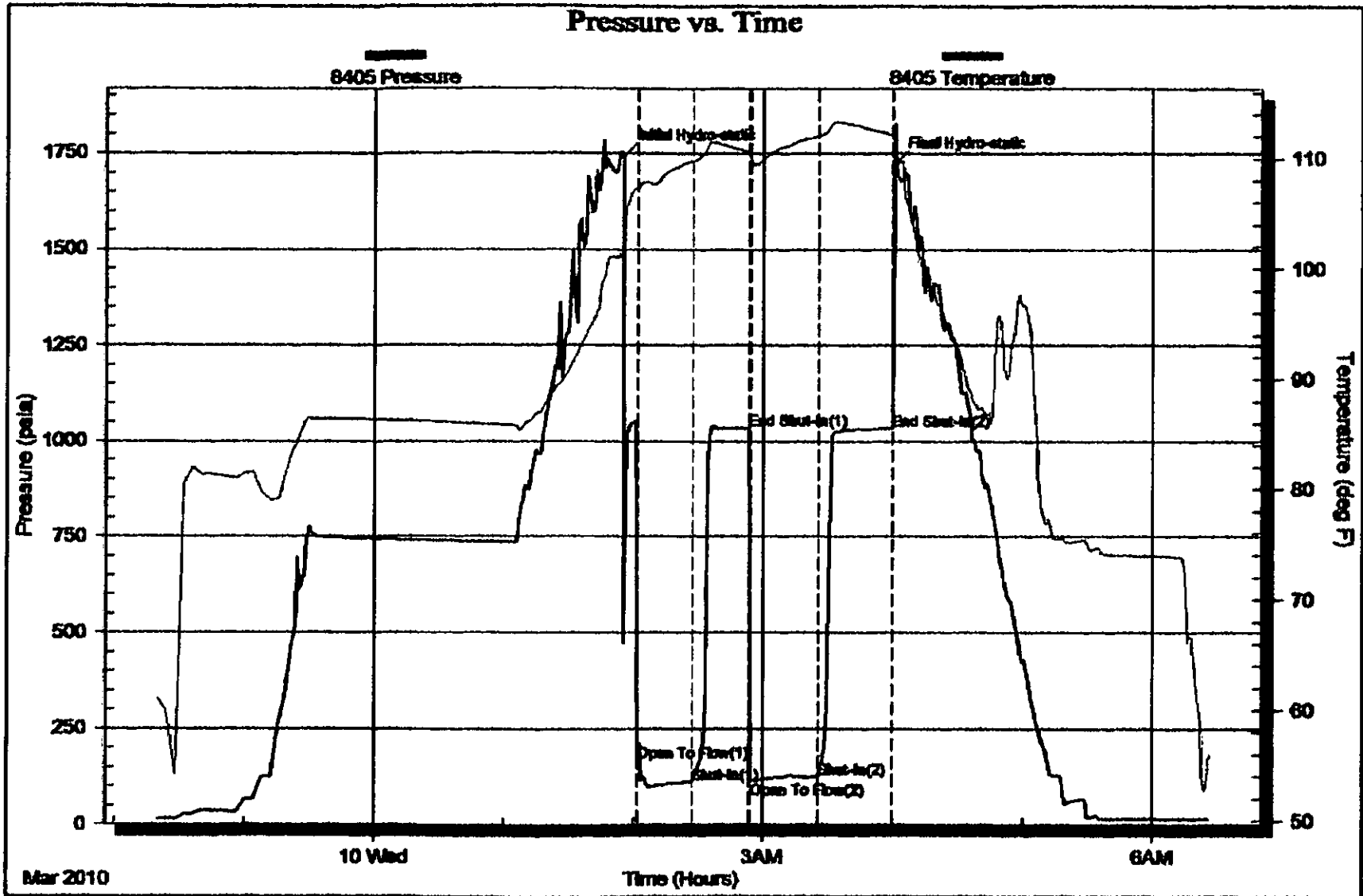
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: FLUSHED TOOL 10 MINUTES INTO 1 ST OPEN



Serial #: 8419

Outside RAMA OPERATING CO INC

13-21-13W

DGT Test Number: 3

