

DRILL STEM TEST REPORT

Prepared For: **Samuel Gary Jr & Associates Inc**

1670 Broadway Ste 3300
Denver Colo 80202

ATTN: Tom Fertal

21-18-9-Rice-Ks

Behnke 1-21

Start Date: 2005.05.12 @ 08:07:18

End Date: 2005.05.12 @ 15:54:48

Job Ticket #: 22810 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Samuel Gary Jr & Associates Inc

Behnke 1-21

21-18-9-Rice-Ks

DST # 1

Arbuckle

2005.05.12



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

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Behnke 1-21

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DST#: 1

ATTN: Tom Fertal

Test Start: 2005.05.12 @ 08:07:18

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:29:48

Time Test Ended: 15:54:48

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 21

Interval: 3211.00 ft (KB) To 3261.00 ft (KB) (TVD)

Total Depth: 3261.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1722.00 ft (KB)

1712.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 6799

Inside

Press@RunDepth: 198.95 psig @ 3248.00 ft (KB)

Start Date: 2005.05.12 End Date: 2005.05.12

Start Time: 08:07:19 End Time: 15:54:48

Capacity: 7000.00 psig

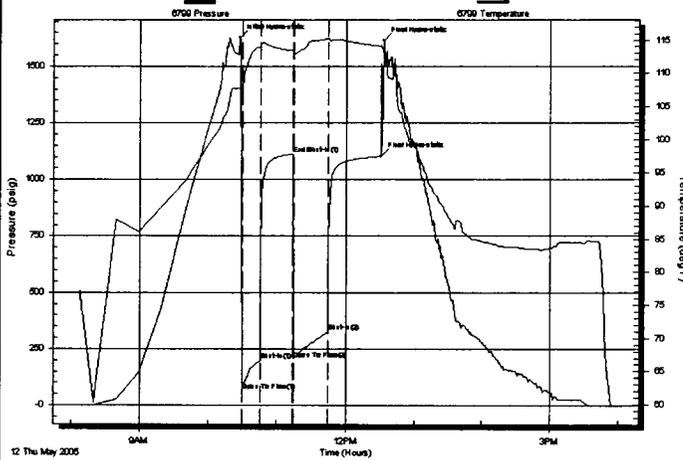
Last Calib.: 2005.05.12

Time On Btm: 2005.05.12 @ 10:27:48

Time Off Btm: 2005.05.12 @ 12:30:18

TEST COMMENT: F-Strong B-B in 5 min
FF-Strong B-B in 7 min
Times-15-30-30-45

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1626.89	107.80	Initial Hydro-static
2	64.61	107.61	Open To Flow (1)
18	198.95	114.02	Shut-in(1)
46	1111.96	113.40	End Shut-in(1)
47	205.42	112.93	Open To Flow (2)
77	324.74	115.20	Shut-in(2)
123	1101.04	114.07	Final Hydro-static
125	1615.31	112.95	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
335.00	Wtr Rw .20 @ 78 = 32000ppm	1.97
250.00	OCMdyW 30%o 50%w 20%m	2.71
125.00	Sttly OCM 3%o 97%m	1.35
5.00	CO	0.05
0.00	120 GIP	0.00

Gas Rates

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



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TESTING, INC

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TOOL DIAGRAM

Samuel Gary Jr & Associates Inc

Behnke 1-21

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Denver Colo 80202

21-18-9-Rice-Ks

Job Ticket: 22810

DST#: 1

ATTN: Tom Fertal

Test Start: 2005.05.12 @ 08:07:18

Tool Information

Drill Pipe:	Length: 2938.00 ft	Diameter: 3.34 inches	Volume: 31.84 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: 25000.00 lb
Drill Collar:	Length: 280.00 ft	Diameter: 2.25 inches	Volume: 1.38 bbl	Weight to Pull Loose: 100000.0 lb
			<u>Total Volume: 33.22 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3211.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	74.00 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			3188.00	
Shut In Tool	5.00			3193.00	
Sampler	3.00			3196.00	
Hydraulic tool	5.00			3201.00	
Packer	5.00			3206.00	24.00 Bottom Of Top Packer
Packer	5.00			3211.00	
Stubb	1.00			3212.00	
Perforations	3.00			3215.00	
Change Over Sub	1.00			3216.00	
Drill Collar	31.00			3247.00	
Change Over Sub	1.00			3248.00	
Recorder	0.00	6799	Inside	3248.00	
Perforations	10.00			3258.00	
Recorder	0.00	13254	Outside	3258.00	
Bullnose	3.00			3261.00	50.00 Bottom Packers & Anchor

Total Tool Length: 74.00



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Behnke 1-21

1670 Broadway Ste 3300
Denver Colo 80202

21-18-9-Rice-Ks

Job Ticket: 22810

DST#: 1

ATTN: Tom Fertal

Test Start: 2005.05.12 @ 08:07:18

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:

32000 ppm

Viscosity: 40.00 sec/qt

Cushion Volume:

bbl

Water Loss: 11.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
335.00	Wtr Fw .20 @ 78 = 32000ppm	1.973
250.00	OCMdyW 30%o 50%w 20%m	2.709
125.00	Silty OCM 3%o 97%m	1.355
5.00	CO	0.054
0.00	120 GIP	0.000

Total Length: 715.00 ft

Total Volume: 6.091 bbl

Num Fluid Samples: 0

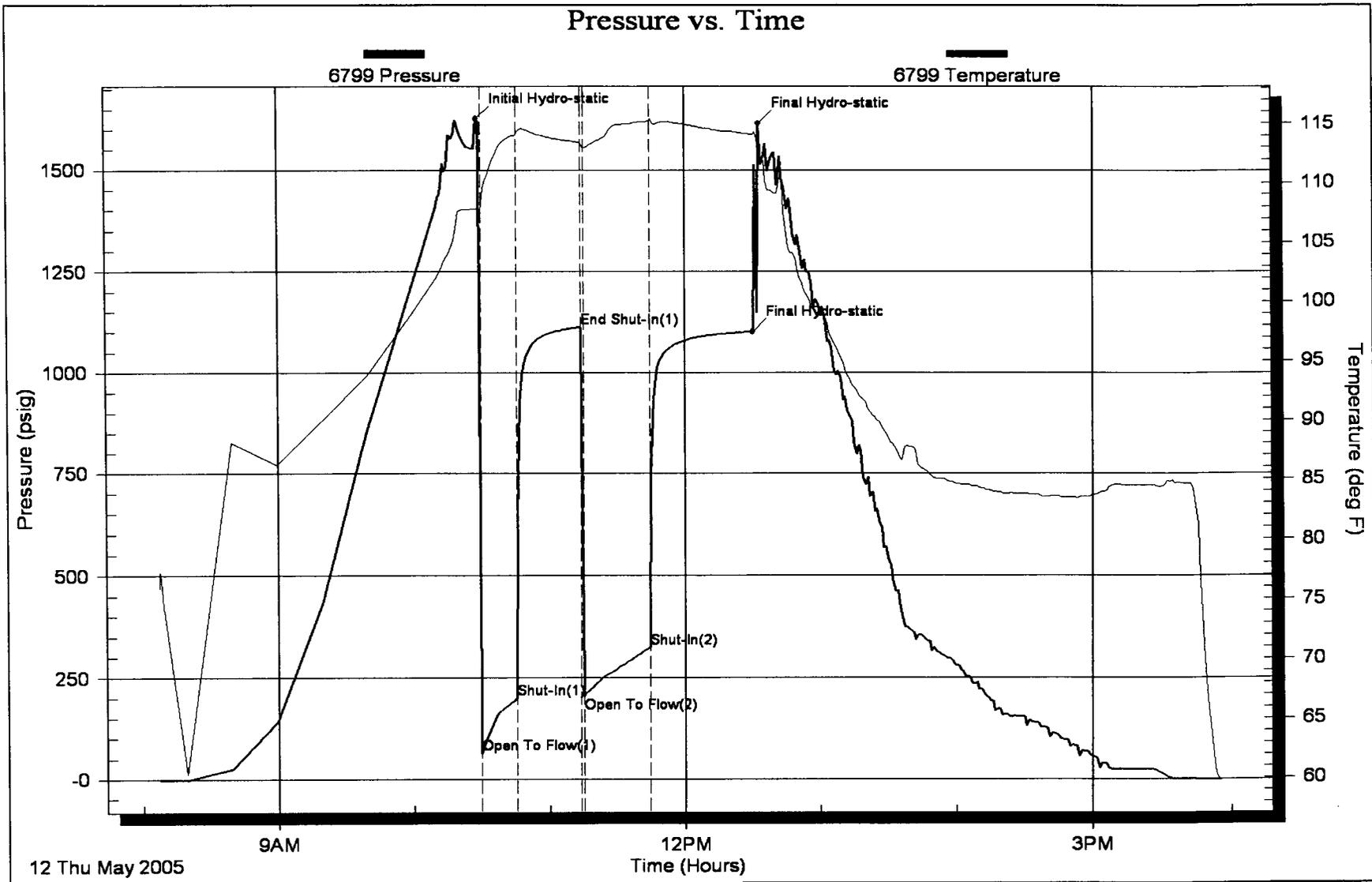
Num Gas Bombs: 0

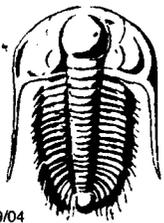
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

INV
7473

No 22810

9/04

Test Ticket

Well Name & No. Behnke 1-21 Test No. 1 Date 5-12-05
 Company Samuel Gary Jr. & Associates, Inc Zone Tested Arbuckle
 Address 1670 Broadway STE 3300, Denver, Colorado 80202 Elevation 1722 KB 1712 GL
 Co. Rep / Geo. Tom Hanson Cont. Summit Est. Ft. of Pay _____ Por. _____ %
 Location: Sec. 21 Twp. 18 Rge. 9 Co. Rice State Ks
 No. of Copies _____ Distribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 3211 — 3261 Initial Str Wt./Lbs. 49,000 Unseated Str Wt./Lbs. 42,000
 Anchor Length 50 Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 10,000
 Top Packer Depth 3206 Tool Weight 2000
 Bottom Packer Depth 3211 Hole Size 7 7/8" Rubber Size 6 3/4"
 Total Depth 3261 Wt. Pipe Run _____ Drill Collar Run 280
 Mud Wt. 9.2 LCM _____ Vis. 40 WL 11.2 Drill Pipe Size 4" X H Ft. Run 2938
 Blow Description I.F. Strong B-B in 5 min.

F.F. Strong B-B in 7 min.

Recovery - Total Feet 715 GIP 120 Ft. in DC 280 Ft. in DP 435
 Rec. 5 Feet of CO %gas _____ %oil _____ %water _____ %mud _____
 Rec. 125 Feet of 5174 OCM %gas 3 %oil _____ %water 97 %mud _____
 Rec. 250 Feet of OC Mdy WTR %gas 30 %oil 50 %water 20 %mud _____
 Rec. 330 Feet of WTR %gas _____ %oil _____ %water _____ %mud _____
 Rec. _____ Feet of _____ %gas _____ %oil _____ %water _____ %mud _____
 BHT 113 °F Gravity _____ °API D @ _____ °F Corrected Gravity _____ °API
 RW .20 @ 78 °F Chlorides 32,000 ppm Recovery _____ Chlorides 7,000 ppm System

	AK-1	Alpine			
(A) Initial Hydrostatic Mud	<u>1626</u>	PSI	Recorder No.	<u>6799</u>	Test <u>950</u>
(B) First Initial Flow Pressure	<u>64</u>	PSI	(depth)	<u>3248</u>	Jars _____
(C) First Final Flow Pressure	<u>198</u>	PSI	Recorder No.	<u>13254</u>	Safety Jt. _____
(D) Initial Shut-In Pressure	<u>1111</u>	PSI	(depth)	<u>3258</u>	Circ Sub _____
(E) Second Initial Flow Pressure	<u>205</u>	PSI	Recorder No.		Sampler <u>X</u> <u>200</u>
(F) Second Final Flow Pressure	<u>324</u>	PSI	(depth)		Straddle _____
(G) Final Shut-In Pressure	<u>1101</u>	PSI	Initial Opening	<u>15</u>	Ext. Packer _____
(Q) Final Hydrostatic Mud	<u>1610</u>	PSI	Initial Shut-In	<u>30</u>	Shale Packer _____
			Final Flow	<u>30</u>	Ruined Packer _____
			Final Shut-In	<u>45</u>	Mileage <u>174</u> <u>174</u>
			T-On Location	<u>02:30</u>	Sub Total: <u>1324</u>
			T-Started	<u>08:07</u>	Std. By _____
			T-Open	<u>10:30</u>	0 <u>No Steps</u> <u>150</u>
			T-Pulled	<u>12:30</u>	Total: _____
			T-Out	<u>15:54</u>	

Approved By _____

Our Representative Dan Baugle

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TRILOBITE TESTING L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 22810 Date 5-17-05
Company Name Samuel Gary Jr & Associates Inc.
Lease Behnke 1-21 Test No. 1
County Rice Sec. 21 Twp. 18 Rng. 9

SAMPLER RECOVERY

Gas 0 ML
Oil 1000 ML
Mud 0 ML
Water 3000 ML
Other - ML
Pressure 1000 PSI
Total 4000 ML

PIT MUD ANALYSIS

Chlorides 7,000 ppm.
Resistivity _____ ohms @ _____ F
Viscosity 40
Mud Weight 9.2
Filtrate 11.2
Other _____

SAMPLER ANALYSIS

Resistivity 120 ohms @ 78 F
Chlorides 32,000 ppm.
Gravity _____ corrected @ 60 F

PIPE RECOVERY

TOP
Resistivity 120 ohms @ 78 F
Chlorides 32,000 ppm.

MIDDLE
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.

BOTTOM
Resistivity 120 ohms @ 78 F
Chlorides 32,000 ppm.

CHART PAGE

This is a photocopy of the actual AK-1 recorder chart.

