

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name LAVERNE #1 Test No. 1 Date 12/14/93
Company AMOCO PRODUCTION COMPANY Zone MORROW
Address BOX 800 RM 2118 DENVER CO 80201 Elevation 3223 KB
Co. Rep./Geo. EARL LEITH Cont. CHEYENNE RIG #5 Est. Ft. of Pay _____
Location: Sec. 16 Twp. 29S Rge. 39W Co. STANTON State KS

Interval Tested 5536-5654 Drill Pipe Size 4.5" XH
Anchor Length 118 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 5531 Drill Collar - 2.25 Ft. Run 570
Bottom Packer Depth 5536 Mud Wt. 9 lb/Gal.
Total Depth 5654 Viscosity 57 Filtrate 6.4

Tool Open @ 9:50 AM Initial Blow 1/2" BLOW - BUILT TO 4"
ISI: BLED OFF BLOW - NO BLOW BACK
Final Blow SURFACE BLOW - BUILT TO 2.5"

Recovery - Total Feet 90 Flush Tool? NO

Rec. 90 Feet of DRILLING MUD
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT 130 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 1100 ppm System

(A) Initial Hydrostatic Mud 2660.5 PSI AK1 Recorder No. 13615 Range 4575

(B) First Initial Flow Pressure 90.2 PSI @ (depth) 5540 w / Clock No. 25813

(C) First Final Flow Pressure 73.9 PSI AK1 Recorder No. 11038 Range 5075

(D) Initial Shut-in Pressure 530.9 PSI @ (depth) 5651 w / Clock No. 25814

(E) Second Initial Flow Pressure 130.7 PSI AK1 Recorder No. _____ Range _____

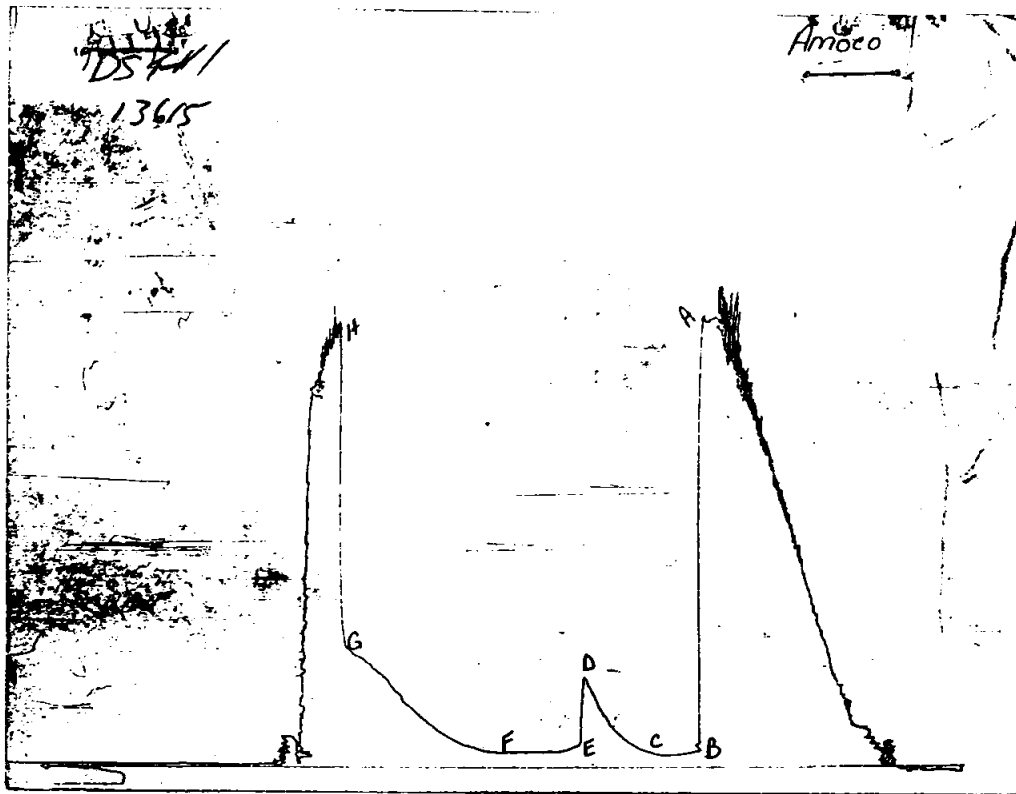
(F) Second Final Flow Pressure 84.1 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 713.6 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 2632.1 PSI Initial Shut-in 60 Final Shut-in 120

Our Representative TOM HORACEK

CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2653	2660.5
(B) FIRST INITIAL FLOW PRESSURE	79	90.2
(C) FIRST FINAL FLOW PRESSURE	79	73.9
(D) INITIAL CLOSED-IN PRESSURE	527	530.9
(E) SECOND INITIAL FLOW PRESSURE	79	130.7
(F) SECOND FINAL FLOW PRESSURE	79	84.1
(G) FINAL CLOSED-IN PRESSURE	724	713.6
(H) FINAL HYDROSTATIC MUD	2630	2632.1

FLUID SAMPLER DATA

Ticket No.: 6630 Date: 12/14/93
Company: AMOCO PRODUCTION COMPANY
Lease: LAVERNE #1 Test No.: 1
County: STANTON Sec.: 16 Twp.: 29S Rng.: 39W

SAMPLER RECOVERY

Gas
Oil
Mud 4000
Water
Other
Pressure 25
TOTAL 4000

PIT MUD ANALYSIS

Chlorides 1100
Resistivity 4.1 ohms@ 71 F
Viscosity 57
Mud Wt. 9
Filtrate 6.4
Other L.C.M. 4#/BBL

SAMPLER ANALYSIS

Resistivity ohms@ F
Chlorides ppm.
Gravity corrected @60F

PIPE RECOVERY

TOP

Resistivity ohms@ F
Chlorides ppm

MIDDLE

Resistivity ohms@ F
Chlorides ppm

BOTTOM

Resistivity ohms@ F
Chlorides ppm

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FLUID SAMPLER DATA

Ticket No. 6630 Date 12-14-93
Company Name Amoco Prod. Co.
Lease Laverne #1 Test No. #1
County Stanton Ks. Sec. 16 Twp. 29 Rng. 39

SAMPLER RECOVERY

Gas _____ ML
Oil _____ ML
Mud 4000 ML
Water _____ ML
Other _____ ML
Pressure 25 PSI
Total 4000 ML

SAMPLER ANALYSIS

Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.
Gravity _____ corrected @ 60 F

PIT MUD ANALYSIS

Chlorides 1500 ppm.
Resistivity 4.1 ohms @ 71 F
Viscosity 57
Mud Weight 9.0
Filtrate 6.4
Other _____

PIPE RECOVERY

TOP
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.

MIDDLE
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.

BOTTOM
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.

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Test Ticket

No 6630

Well Name & No. <u>Laverne #1</u>	Test No. <u>#1</u>	Date <u>12-14-93</u>
Company <u>Amoco Prod. Com.</u>	Zone Tested <u>Morrow</u>	
Address <u>Box 800, Denver Co. 80201</u>	Elevation <u>3223 (KB)</u>	
Co. Rep./Geo. <u>Earl Leith</u>	Cont. <u>Cheyenne Drly #5</u>	Est. Ft. of Pay _____
Location: Sec. <u>16</u>	Twp. <u>29</u>	Rge. <u>39</u> Co. <u>Stanton</u> State <u>Ks.</u>
No. of Copies _____	Distribution Sheet _____	Yes <u>X</u> No _____ Turnkey _____ Yes <u>X</u> No _____ Evaluation _____

Interval Tested <u>5536-5654</u>	Drill Pipe Size <u>4.5 F-Hk</u>
Anchor Length <u>118</u>	Top Choke — 1" _____ Bottom Choke — 1/4" _____
Top Packer Depth <u>5531</u>	Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
Bottom Packer Depth <u>5536</u>	Wt. Pipe I.D. — 2.7 Ft. Run _____
Total Depth <u>5654</u>	Drill Collar — 2.25 Ft. Run <u>590'</u>
Mud Wt. <u>9.0</u> lb/gal.	Viscosity <u>57</u> Filtrate <u>6.4</u>
Tool Open @ <u>9:50 AM</u> Initial Blow <u>1/2 in blow - built to 4 in.</u>	
<u>ISI. Bled off blow - NO blow back</u>	
Final Blow <u>Surface blow - built to 2 1/2 in.</u>	

Recovery — Total Feet <u>90'</u>	Feet of Gas In Pipe _____	Flush Tool? <u>NO</u>
Rec. _____ Feet Of _____	%gas _____ %oil _____ %water _____ %mud _____	
Rec. _____ Feet Of _____	%gas _____ %oil _____ %water _____ %mud _____	
Rec. <u>90'</u> Feet Of <u>Drly mud</u>	%gas _____ %oil _____ %water _____ %mud _____	
Rec. _____ Feet Of _____	%gas _____ %oil _____ %water _____ %mud _____	
Rec. _____ Feet Of _____	%gas _____ %oil _____ %water _____ %mud _____	
BHT <u>130</u> °F	Gravity _____ °API @ _____ °F	Corrected Gravity _____ °API

RW _____ @ _____ °F	Chlorides _____ ppm	Recovery _____ Chlorides <u>1,100</u> ppm	System _____
(A) Initial Hydrostatic Mud <u>2653</u>	PSI	Ak1 Recorder No. <u>13615</u>	Range <u>4575</u>
(B) First Initial Flow Pressure <u>79</u>	PSI	@ (depth) <u>5540</u>	w/Clock No. <u>25813</u>
(C) First Final Flow Pressure <u>79</u>	PSI	Ak1 Recorder No. <u>11032</u>	Range <u>5025</u>
(D) Initial Shut-In Pressure <u>527</u>	PSI	@ (depth) <u>5651</u>	w/Clock No. <u>25814</u>
(E) Second Initial Flow Pressure <u>79</u>	PSI	Ak1 Recorder No. _____	Range _____
(F) Second Final Flow Pressure <u>79</u>	PSI	@ (depth) _____	w/Clock No. _____
(G) Final Shut-In Pressure <u>724</u>	PSI	Initial Opening <u>30</u>	Test <u>X</u> <u>700.00</u>
(H) Final Hydrostatic Mud <u>2630</u>	PSI	Initial Shut-In <u>60</u>	Jars <u>X</u> <u>200.00</u>

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Approved By Austin Garner
Our Representative Tom Horacek

Final Flow 60
Final Shut-In 120
Safety Joint X 50.00
Straddle _____
Circ. Sub _____
Sampler X 200.00
Extra Packer _____
Other _____
TOTAL PRICE \$ 1150

Recorder # 11038

30-60-60-120

A

2.105 -

B

.059

C

052

D

454

E

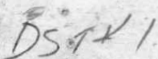
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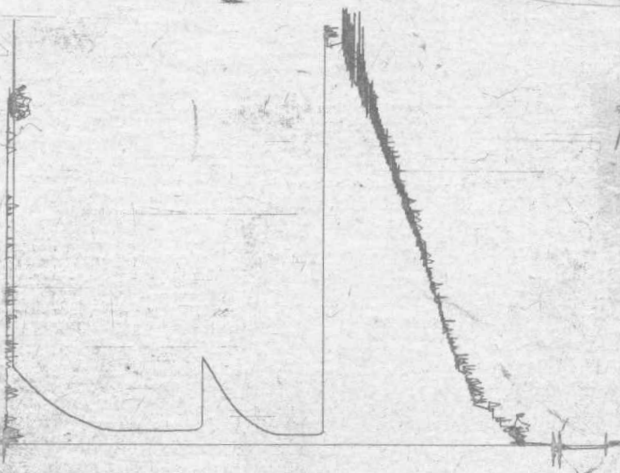
G

14



11038

(Clock Problems?)



30-60-60-120

RECORDER #

13615

INAL HYD. MUD

FINAL FLOW

MINUTES

INTERVAL

FINAL SHUTIN

MINUTES

INTERVAL

1 2.336 2660.5

2 .080 90.2

3 .065 73.9

4 .463 530.9

5 ¹¹⁵ ~~.115~~ 130.7

6 .074 84.1

7 .621 713.6

8 2.311 2632.0

9

10

11

12