

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name & No.	W. STEGMAN #1	Test No.	1	Date	4/19/90
Company	RITCHIE EXPLORATION INC.	Zone Tested	LANSING "B"		
Address	125 N MARKET SWT 1000 WICHITA KS 67201	Elevation	2289 GL		
Co. Rep./Geo.	MR JEFF CHRISTIAN	Cont.	RED TIGER RIG #6	Est. Ft. of Pay	8
Location: Sec.	1	Twp.	25S	Rge.	21W
		Co.	FORD	State	KANSAS

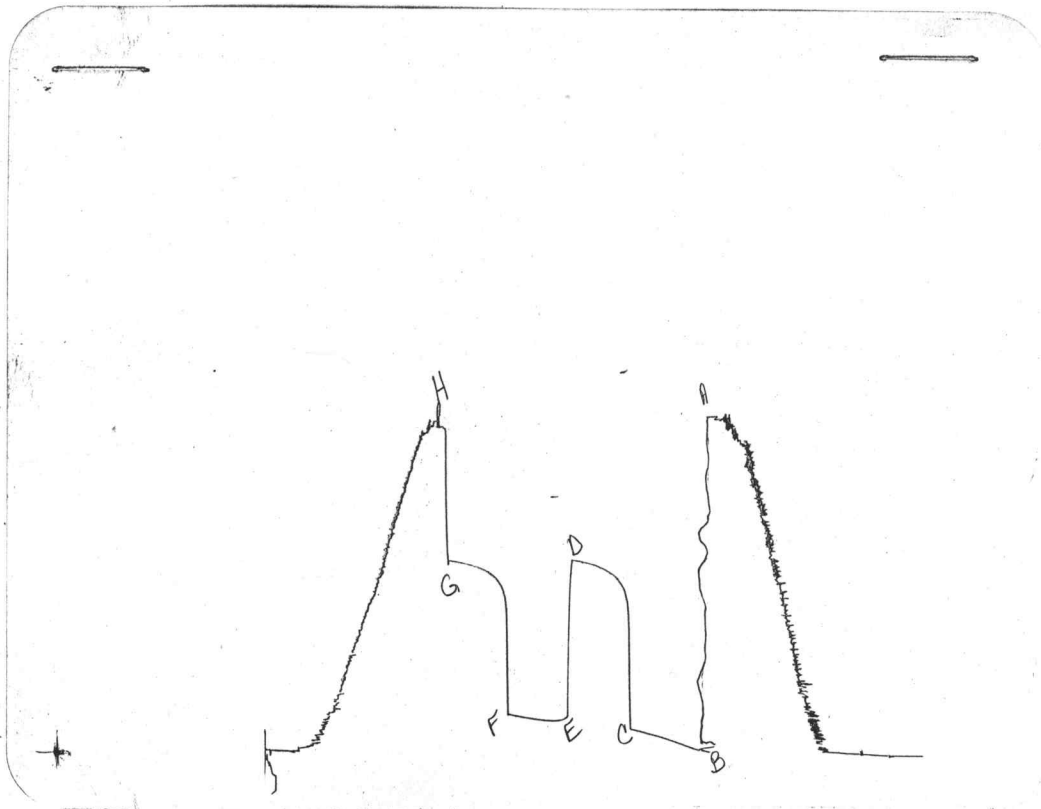
Interval Tested	4134-4160	Drill Pipe Size	4.5" XH
Anchor Length	26	Top Choke — 1"	Bottom Choke — 3/4"
Top Packer Depth	4129	Hole Size — 7 7/8"	Rubber Size — 6 3/4"
Bottom Packer Depth	4134	Wt. Pipe I.D. — 2.7 Ft. Run	625.64
Total Depth	4160	Drill Collar — 2.25 Ft. Run	0
Mud Wt.	9.3	lb/gal.	Viscosity 44 Filtrate 10.8
Tool Open @	10:52 AM	Initial Blow	FAIR STEADY BLOW BUILDING TO 9 1/2" AT SHUT-IN-OPENED 2" & BLED FOR 5 MIN-NO BLOW BACK ON SHUT-IN
Final Blow	WEAK BLOW BUILDING TO 5" AT SHUT-IN/OPENED 2" & BLED FOR 5 MIN-NO BLOW BACK ON SHUT-IN		
Recovery — Total Feet	460	Flush Tool?	
Rec.	40	Feet of	MUD
Rec.	0	Feet of	
Rec.	420	Feet of	WATER
Rec.	0	Feet of	
Rec.	0	Feet of	
BHT	124	°F Gravity	°API @ 0 °F Corrected Gravity 0 °API
RW	.115	@ 71.6 °F	Chlorides 7000 ppm Recovery Chlorides 5000 ppm System
(A) Initial Hydrostatic Mud	2070.1	PSI	Ak1 Recorder No. 13615 Range 4575
(B) First Initial Flow Pressure	46.3	PSI	@ (depth) 4136 w/Clock No. 25813
(C) First Final Flow Pressure	160.9	PSI	Ak1 Recorder No. 10248 Range 4400
(D) Initial Shut-In Pressure	1199.8	PSI	@ (depth) 4157 w/Clock No. 27567
(E) Second Initial Flow Pressure	210.3	PSI	Ak1 Recorder No. 0 Range 0
(F) Second Final Flow Pressure	240.8	PSI	@ (depth) 0 w/Clock No. 0
(G) Final Shut-In Pressure	1185.9	PSI	Initial Opening 45
(H) Final Hydrostatic Mud	2050.1	PSI	Initial Shut-In 45
			Final Flow 45
			Final Shut-In 45

MR ROGER SELLS

400

Our Representative _____

TOTAL PRICE \$ _____

DST# 1RECORDER# 13615

This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud.....	2068	2070.1
(B) First Initial Flow Pressure.....	45	46.3
(C) First Final Flow Pressure.....	168	160.9
(D) Initial Closed-In Pressure.....	1195	1199.8
(E) Second Initial Flow Pressure.....	202	210.3
(F) Second Final Flow Pressure.....	247	240.8
(G) Final Closed-In Pressure.....	1184	1185.9
(H) Final Hydrostatic Mud.....	2046	2050.1

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

TEST TICKET

No 2858

Well Name & No. <u>W. Stegman #1</u>	Test No. <u>1</u>	Date <u>4-19-90</u>
Company <u>Ritchie Exploration, Inc.</u>	Zone Tested <u>Densing "B"</u>	
Address <u>125 W. Market Suite 1000 Wichita, KS</u>	Elevation <u>2289' SL</u>	
Co. Rep. / Geo. <u>Jeff Christian</u>	Cont. <u>Red Tiger Rig #4</u>	Est. Ft. of Pay <u>8'</u>
Location: Sec. <u>1</u>	Twp. <u>25</u>	Rge. <u>21</u> Co. <u>Ford</u> State <u>KS</u>
No. of Copies <u>4</u>	Distribution Sheet <u>Yes</u>	Turnkey <u>Yes</u> <u>X</u> No

Interval Tested <u>4134-4160</u>	Drill Pipe Size <u>4 1/2 XH</u>
Anchor Length <u>26'</u>	Top Choke — 1" Bottom Choke — 3/4"
Top Packer Depth <u>4129</u>	Hole Size — 7 7/8" Rubber Size — 6 3/4"
Bottom Packer Depth <u>4134</u>	Wt. Pipe I.D. — 2.7 Ft. Run <u>625.64</u>
Total Depth <u>4160</u>	Drill Collar — 2.25 Ft. Run
Mud Wt. <u>9.3</u> lb / gal.	Viscosity <u>44</u> Filtrate <u>10.8</u>

Tool Open @ 10:52 AM Initial Blow Fair steady blow building to 9 1/2" @ shut-in
opened 2" bled for 5 min. - no blow-back on shut in.
 Final Blow weak blow building to 5" @ shut-in - opened 2" bled for 5.
no blow-back on shut-in.

Recovery — Total Feet 460 Flush Tool? _____

Rec. <u>40</u> Feet of <u>Mud</u>
Rec. <u>420</u> Feet of <u>Water</u>
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT 124 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
 RW .115 @ 71.6 °F Chlorides 7,000 ppm Recovery Chlorides 5,000 ppm System

(A) Initial Hydrostatic Mud <u>2068</u> PSI	AK1 Recorder No. <u>13615</u> Range <u>4575</u>
(B) First Initial Flow Pressure <u>45</u> PSI	@ (depth) <u>4136</u> W/Clock No. <u>25813</u>
(C) First Final Flow Pressure <u>168</u> PSI	AK1 Recorder No. <u>10248</u> Range <u>4400</u>
(D) Initial Shut-In Pressure <u>1195</u> PSI	@ (depth) <u>4157</u> W/Clock No. <u>27567</u>
(E) Second Initial Flow Pressure <u>202</u> PSI	AK1 Recorder No. _____ Range _____
(F) Second Final Flow Pressure <u>247</u> PSI	@ (depth) _____ W/Clock No. _____
(G) Final Shut-In Pressure <u>1184</u> PSI	Initial Opening <u>45</u> Test <u>400⁰⁰</u>
(H) Final Hydrostatic Mud <u>2046</u> PSI	Initial Shut-In <u>45</u> Jars _____
	Final Flow <u>45</u> Safety Joint _____
	Final Shut-In <u>45</u> Straddle _____

Approved By Jeff Christian
 Our Representative Roger F. Sell

Printcraft Printers - Hays, KS

Circ. Sub X
 Sampler _____
 Extra Packer _____
 Other _____
 TOTAL PRICE \$ 400⁰⁰

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name & No.	W. STEGMAN #1	Test No.	2	Date	4/20/90
Company	RITCHIE EXPLORATION INC		Zone Tested	LANSING "H"	
Address	125 N MARKET SWT 1000 WICHITA KS 67201		Elevation	2289 GL	
Co. Rep./Geo.	MR JEFF CHRISTIAN	Cont.	RED TIGER RIG #6	Est. Ft. of Pay	8
Location: Sec.	1	Twp.	25S	Rge.	21W
		Co.	FORD	State	KANSAS

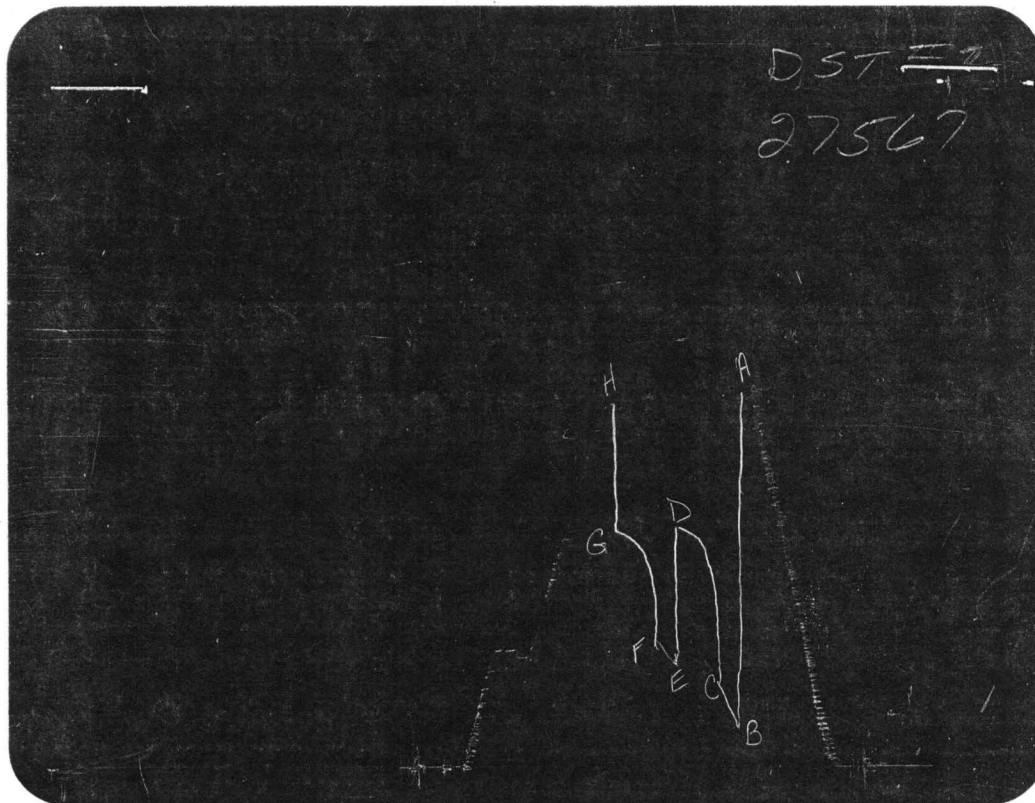
Interval Tested	4250-4276	Drill Pipe Size	4.5" XH
Anchor Length	26	Top Choke — 1"	Bottom Choke — 3/4"
Top Packer Depth	4245	Hole Size — 7 7/8"	Rubber Size — 6 3/4"
Bottom Packer Depth	4250	Wt. Pipe I.D. — 2.7 Ft. Run	625.64
Total Depth	4276	Drill Collar — 2.25 Ft. Run	0
Mud Wt.	9.3	lb/gal.	Viscosity 47 Filtrate 10.8
Tool Open @	10:30 AM	Initial Blow	OFF BOTTOM OF BUCKET IMMEDIATELY-WEAK
			SURFACE BLOW BACK IN 20 MIN-BLED 2" OFF FOR 5 MIN
Final Blow	BLOW OFF BOTTOM OF BUCKET IN 2 MIN-BLED 2" FOR 5 MIN-		
	BLOW BACK AT SURFACE (WEAK) IN 10 MINUTES-THROUGHOUT SHUT-IN		
Recovery — Total Feet	1080	Flush Tool?	
Rec.	60	Feet of	PIT MUD
Rec.	0	Feet of	
Rec.	60	Feet of	MUDDY WATER
Rec.	0	Feet of	
Rec.	960	Feet of	WATER (STRONG GASSY ODOR THROUGHOUT)
BHT	125	°F Gravity	°API @ 0 °F Corrected Gravity 0 °API
RW	.170	@ 79.8 °F Chlorides	3000 ppm Recovery Chlorides 5000 ppm System
(A) Initial Hydrostatic Mud	1666.3	PSI	AK1 Recorder No. 13615 Range 4575
(B) First Initial Flow Pressure	231.4	PSI	@ (depth) 4252 w/Clock No. 25813
(C) First Final Flow Pressure	501.2	PSI	AK1 Recorder No. 10248 Range 4400
(D) Initial Shut-In Pressure	141.6	PSI	@ (depth) 4273 w/Clock No. 27567
(E) Second Initial Flow Pressure	61.2	PSI	AK1 Recorder No. 0 Range 0
(F) Second Final Flow Pressure	755.9	PSI	@ (depth) 0 w/Clock No. 0
(G) Final Shut-In Pressure	1398.4	PSI	Initial Opening 5
(H) Final Hydrostatic Mud	1638.9	PSI	Initial Shut-In 30
			Final Flow 15
			Final Shut-In 30

MR ROGER SELLS

435

Our Representative _____

TOTAL PRICE \$ _____

DST# 2RECORDER# 1

This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud.....	1681	1666.3
(B) First Initial Flow Pressure.....	225	231.4
(C) First Final Flow Pressure.....	500	501.2
(D) Initial Closed-In Pressure.....	1406	141.6
(E) Second Initial Flow Pressure.....	606	61.2
(F) Second Final Flow Pressure.....	751	755.9
(G) Final Closed-In Pressure.....	1384	1398.4
(H) Final Hydrostatic Mud.....	1679	1638.9

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

TEST TICKET

Nº 2859

Well Name & No. W. Stegman #1 Test No. 2 Date 4-20-90
 Company Ritchie Exploration, Inc. Zone Tested Leasing H
 Address 125 N. Market Suite 1000 Wichita, Ks. Elevation 2289 AL
 Co. Rep. / Geo. Jeff Christian Cont. Red Tiger Rig #6 Est. Ft. of Pay 8
 Location: Sec. 1 Twp. 25 Rge. 21 Co. Ford State Ks
 No. of Copies 4 Distribution Sheet Yes ☒ No Turnkey Yes ☒ No

Interval Tested 4250 - 4276 Drill Pipe Size 4 1/2 XH
 Anchor Length 26' Top Choke — 1" Bottom Choke — 3/4"
 Top Packer Depth 4245 Hole Size — 77/8" Rubber Size — 63/4"
 Bottom Packer Depth 4250 Wt. Pipe I.D. — 2.7 Ft. Run 625.64
 Total Depth 4276 Drill Collar — 2.25 Ft. Run
 Mud Wt. 9.3 lb / gal. Viscosity 47 Filtrate 10.8

Tool Open @ 10:30 AM Initial Blow OFF Bottom of bucket immediately,
weak surface blow back in 20 min. after 2" Bled off for 5 min
 Final Blow Blow off bottom of Bucket in 2 min. Bled 2" off for 5 min,
Blow back @ surface (weak) in 10 min, thru-out shut-in

Recovery — Total Feet 1080' Flush Tool?
 Rec. 60' Feet of Pit Mud
 Rec. 60 Feet of Muddy water
 Rec. 960 Feet of Water
 Rec. Feet of
 Rec. Feet of Strong gassy odor thru-out

BHT 125 °F Gravity °API @ °F Corrected Gravity °API
 RW .170 @ 79.8 °F Chlorides 3,000 ppm Recovery Chlorides 5,000 ppm System

(A) Initial Hydrostatic Mud 1681 PSI Ak1 Recorder No. 13615 Range 4575
 (B) First Initial Flow Pressure 225 PSI @ (depth) 4252 w/Clock No. 25813
 (C) First Final Flow Pressure 500 PSI AK1 Recorder No. 10248 Range 4400
 (D) Initial Shut-In Pressure 1406 PSI @ (depth) 4273 w/Clock No. 27567
 (E) Second Initial Flow Pressure 606 PSI AK1 Recorder No. Range
 (F) Second Final Flow Pressure 751 PSI @ (depth) w/Clock No.
 (G) Final Shut-In Pressure 1384 PSI Initial Opening 15 Test 400⁰⁰
 (H) Final Hydrostatic Mud 2113 PSI Initial Shut-In 30 Jars
 Final Flow 15 Safety Joint
 Final Shut-In 30 Straddle

Approved By Jeff Christian Circ. Sub X 35⁰⁰
 Our Representative Kent Sell Sampler
 Extra Packer
 Other
 TOTAL PRICE \$ 435⁰⁰

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name & No.	W STEGMAN #1	Test No.	3	Date	4/22/90
Company	RITCHIE EXPLORATION INC	Zone Tested	CHEROKEE		
Address	125 N MARKET SWT 1000 WICHITA KS 67201	Elevation	2289 GL		
Co. Rep./Geol.	MR JEFF CHRISTIAN	Cont.	RED TIGER RIG #6	Est. Ft. of Pay	6
Location: Sec.	1	Twp.	25S	Rge.	21W
		Co.	FORD	State	KANSAS

Interval Tested	4627-4688	Drill Pipe Size	4.5" XH
Anchor Length	61	Top Choke — 1"	Bottom Choke — 3/4"
Top Packer Depth	4622	Hole Size — 77/8"	Rubber Size — 63/4"
Bottom Packer Depth	4627	Wt. Pipe I.D. — 2.7 Ft. Run	625.64
Total Depth	4688	Drill Collar — 2.25 Ft. Run	0
Mud Wt.	9.4	lb/gal.	Viscosity 41 Filtrate 13.2
Tool Open @ 6:30 PM Initial Blow VERY WEAK BLOW AT SURFACE OF BUCKET BUILDING TO 1/8" THEN DYING OFF-BLOW DEAD IN 25 MIN INTO SHUT-IN			
Final Blow FAIR BLOW BUILDING TO 3" AT SHUT-IN/ NO BLOW BACK ON SHUT-IN			

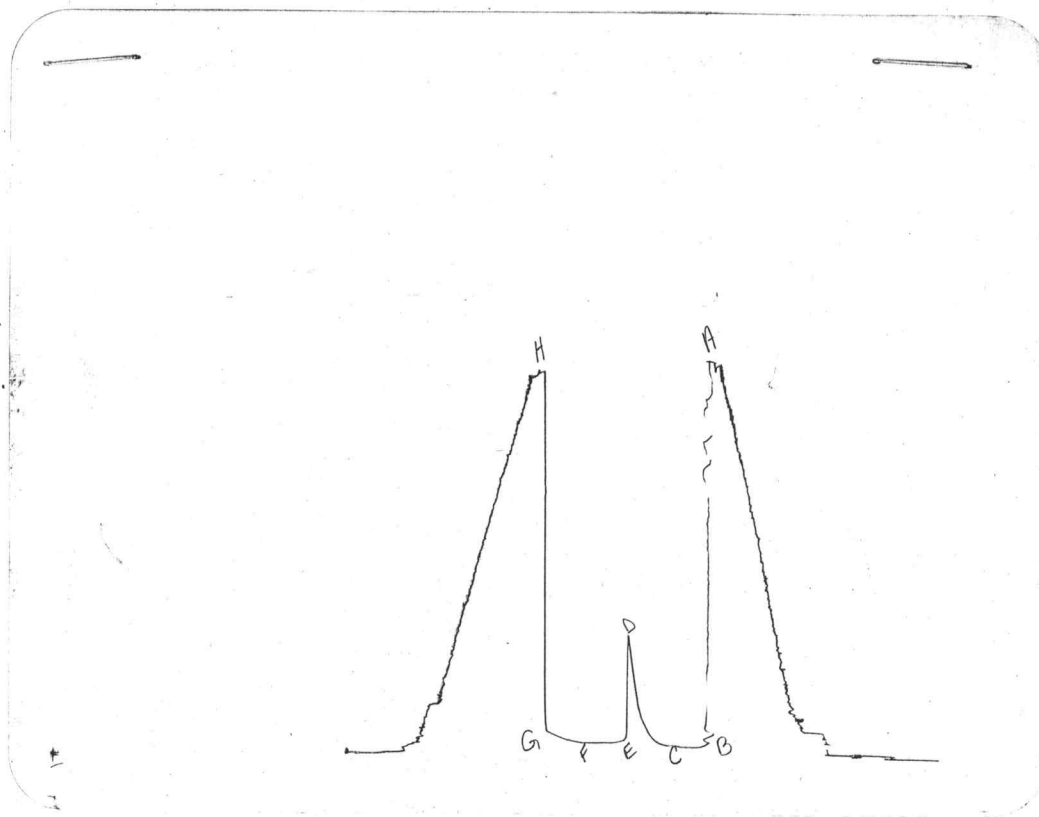
Recovery — Total Feet	90	Flush Tool?	
Rec. 90	Feet of	SLIGHTLY OIL CUT MUD-8% OIL/ 70% MUD/ 22% GAS	
Rec. 0	Feet of	GASSY ODOR	
Rec. 0	Feet of		
Rec. 0	Feet of		
Rec. 0	Feet of		
BHT 122	°F	Gravity	°API @ 0 °F Corrected Gravity 0 °API
RW	@	°F	Chlorides ppm Recovery Chlorides 7500 ppm System
(A) Initial Hydrostatic Mud	2460.3	PSI	AK1 Recorder No. 13615 Range 4575
(B) First Initial Flow Pressure	68.9	PSI	@ (depth) 4629 w/Clock No. 14389
(C) First Final Flow Pressure	88.7	PSI	AK1 Recorder No. 10248 Range 4400
(D) Initial Shut-In Pressure	845.6	PSI	@ (depth) 4685 w/Clock No. 27567
(E) Second Initial Flow Pressure	88.7	PSI	AK1 Recorder No. 0 Range 0
(F) Second Final Flow Pressure	116.3	PSI	@ (depth) 0 w/Clock No. 0
(G) Final Shut-In Pressure	210.2	PSI	Initial Opening 30
(H) Final Hydrostatic Mud	2430.6	PSI	Initial Shut-In 30
		Final Flow	30
		Final Shut-In	30

MR ROGER SELLS

400

Our Representative _____

TOTAL PRICE \$ _____

DST# 3RECORDER# 13615

This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud.....	2468	2460.3
(B) First Initial Flow Pressure.....	67	68.9
(C) First Final Flow Pressure.....	90	88.7
(D) Initial Closed-In Pressure.....	840	845.6
(E) Second Initial Flow Pressure.....	90	88.7
(F) Second Final Flow Pressure.....	112	116.3
(G) Final Closed-In Pressure.....	202	210.2
(H) Final Hydrostatic Mud.....	2424	2430.6

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

TEST TICKET

Nº 2860

Well Name & No. <u>W. Stegman #1</u>	Test No. <u>3</u>	Date <u>4-22-90</u>
Company <u>Ritchie Exploration, Inc.</u>	Zone Tested <u>Cherokee</u>	
Address <u>135 N. Market Suite 1000 Wichita, KS</u>	Elevation <u>2289 ft</u>	
Co. Rep. / Geo. <u>Jeff Christians</u>	Cont. <u>Red Tiger Rig #6</u>	Est. Ft. of Pay <u>6'</u>
Location: Sec. <u>1</u>	Twp. <u>25</u>	Rge. <u>21</u> Co. <u>Ford</u> State <u>KS</u>
No. of Copies <u>4</u>	Distribution Sheet <u>Yes</u>	Turnkey <u>Yes</u> No <u>X</u>

Interval Tested <u>4627-4688</u>	Drill Pipe Size <u>4 1/2 x 4</u>
Anchor Length <u>61'</u>	Top Choke — 1" Bottom Choke — 3/4"
Top Packer Depth <u>4622</u>	Hole Size — 7 7/8" Rubber Size — 6 3/4"
Bottom Packer Depth <u>4627</u>	Wt. Pipe I.D. — 2.7 Ft. Run <u>625.64</u>
Total Depth <u>4688</u>	Drill Collar — 2.25 Ft. Run <u>—</u>
Mud Wt. <u>9.4</u> lb / gal.	Viscosity <u>41</u> Filtrate <u>13.2</u>
Tool Open @ <u>6:30 PM</u> Initial Blow <u>very weak blow @ surface of bucket buildin</u> <u>to 1/8" churning off - blow dead 25 min. into opening.</u>	
Final Blow <u>five blow building to 3" @ shut in - no blow-back</u> <u>on shut-in</u>	
Recovery — Total Feet <u>90'</u>	Flush Tool? <u>—</u>
Rec. <u>90'</u> Feet of <u>slightly oil cut mud</u>	<u>8% oil, 70% mud, 22% gas</u>
Rec. <u>fair</u> Feet of <u>gassy odor</u>	
Rec. <u>—</u> Feet of <u>—</u>	
Rec. <u>—</u> Feet of <u>—</u>	
Rec. <u>—</u> Feet of <u>—</u>	
BHT <u>122</u> °F Gravity <u>—</u> °API @ <u>—</u> °F Corrected Gravity <u>—</u> °API	
RW <u>—</u> @ <u>—</u> °F Chlorides <u>—</u> ppm Recovery Chlorides <u>7500</u> ppm System	
(A) Initial Hydrostatic Mud <u>2468</u> PSI AK1 Recorder No. <u>131615</u> Range <u>457.5</u>	
(B) First Initial Flow Pressure <u>67</u> PSI @ (depth) <u>4629</u> w/Clock No. <u>14389</u>	
(C) First Final Flow Pressure <u>90</u> PSI AK1 Recorder No. <u>10248</u> Range <u>4400</u>	
(D) Initial Shut-In Pressure <u>840</u> PSI @ (depth) <u>4685</u> w/Clock No. <u>27567</u>	
(E) Second Initial Flow Pressure <u>90</u> PSI AK1 Recorder No. <u>—</u> Range <u>—</u>	
(F) Second Final Flow Pressure <u>112</u> PSI @ (depth) <u>—</u> w/Clock No. <u>—</u>	
(G) Final Shut-In Pressure <u>202</u> PSI Initial Opening <u>30</u> Test <u>400°</u>	
(H) Final Hydrostatic Mud <u>2424</u> PSI Initial Shut-In <u>30</u> Jars <u>—</u>	
Final Flow <u>30</u> Safety Joint <u>—</u>	
Final Shut-In <u>30</u> Straddle <u>—</u>	

Approved By Jeff Christians

Our Representative Roger L. Sell

Printcraft Printers - Hays, KS

Circ. Sub X

Sampler —

Extra Packer —

Other —

TOTAL PRICE \$ 400.00

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name & No.	W STEGMAN #1	Test No.	4	Date	4/23/90
Company	RITCHIE EXPLORATION INC	Zone Tested	MISSISSIPPI		
Address	125 N MARKET SWT 1000 WICHITA KS 67201	Elevation	2289 GL		
Co. Rep./Geo	MR JEFF CHRISTIAN	Cont.	RED TIGER RIG #6	Est. Ft. of Pay	5
Location: Sec.	1	Twp.	25S	Rge.	21W
		Co.	FORD	State	KANSAS

Interval Tested	4688-4730	Drill Pipe Size	4.5" XH			
Anchor Length	42	Top Choke — 1"	Bottom Choke — 3/4"			
Top Packer Depth	4683	Hole Size — 77/8"	Rubber Size — 63/4"			
Bottom Packer Depth	4688	Wt. Pipe I.D. — 2.7 Ft. Run	625.64			
Total Depth	4730	Drill Collar — 2.25 Ft. Run	0			
Mud Wt.	9.4	lb/gal.	Viscosity	48	Filtrate	12.4
Tool Open @	2:45 PM	Initial Blow	VERY WEAK BLOW AT SURFACE DYING IN 8 MIN			

Final Blow NO BLOW

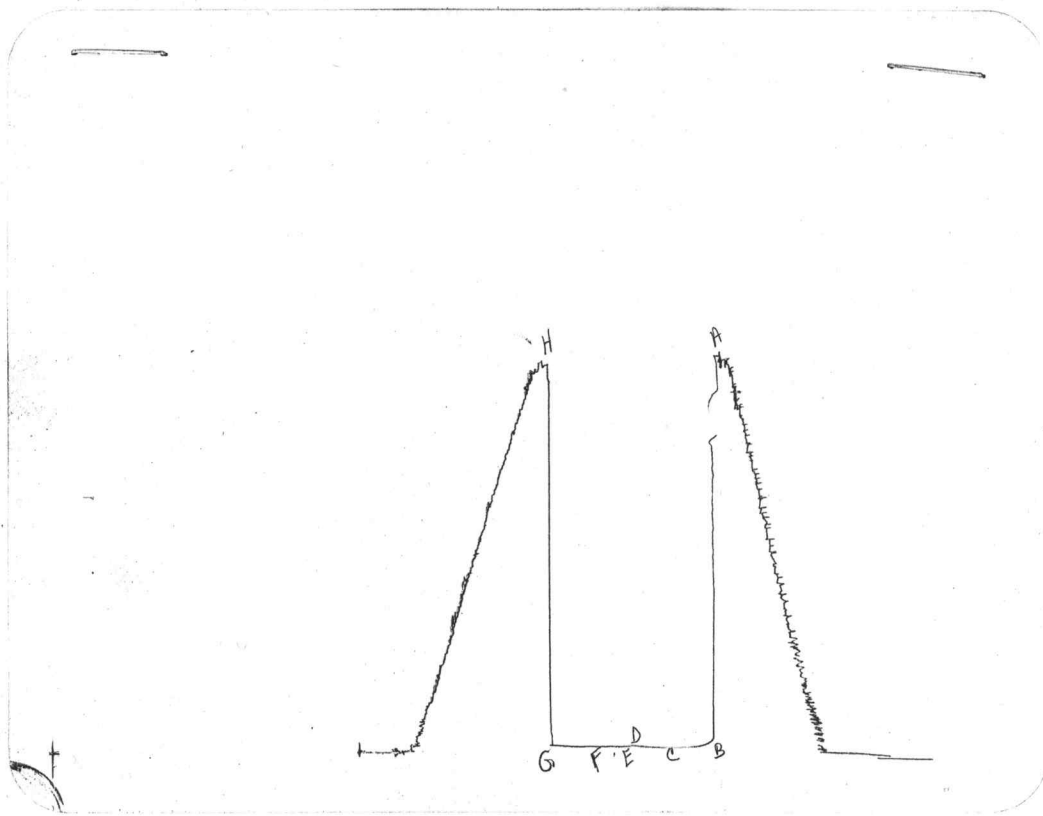
Recovery — Total Feet	5	Flush Tool?									
Rec.	5	Feet of	MUD								
Rec.	0	Feet of									
Rec.	0	Feet of									
Rec.	0	Feet of									
Rec.	0	Feet of									
BHT	124	°F Gravity		°API @	0	°F Corrected Gravity	0	°API			
RW		@		°F Chlorides		ppm Recovery		Chlorides	6800	ppm System	
(A) Initial Hydrostatic Mud	2451.3	PSI	Ak1 Recorder No.	13615	Range	4575					
(B) First Initial Flow Pressure	50.3	PSI	@ (depth)	4690	w/Clock No.	14389					
(C) First Final Flow Pressure	50.3	PSI	AK1 Recorder No.	10248	Range	4400					
(D) Initial Shut-In Pressure	92.1	PSI	@ (depth)	4727	w/Clock No.	27567					
(E) Second Initial Flow Pressure	49.9	PSI	AK1 Recorder No.	0	Range	0					
(F) Second Final Flow Pressure	49.9	PSI	@ (depth)	0	w/Clock No.	0					
(G) Final Shut-In Pressure	77.5	PSI	Initial Opening	30							
(H) Final Hydrostatic Mud	2394.8	PSI	Initial Shut-In	30							
			Final Flow	30							
			Final Shut-In	30							

MR ROGER SELLS

400

Our Representative

TOTAL PRICE \$

DST# 4RECORDER# 13615

This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud.....	2446	2451.3
(B) First Initial Flow Pressure.....	56	50.3
(C) First Final Flow Pressure.....	56	50.3
(D) Initial Closed-In Pressure.....	90	92.1
(E) Second Initial Flow Pressure.....	56	49.9
(F) Second Final Flow Pressure.....	56	49.9
(G) Final Closed-In Pressure.....	78	77.5
(H) Final Hydrostatic Mud.....	2391	2394.8

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

TEST TICKET

Nº 2861

Well Name & No. <u>W. Stegman #1</u>	Test No. <u>4</u>	Date <u>4-23-90</u>
Company <u>Ritchie Exploration, Inc.</u>	Zone Tested <u>Mississippi</u>	
Address <u>125 W. Market Suite 1000 Wichita, KS</u>	Elevation <u>2289' ±</u>	
Co. Rep. / Geo. <u>Jeff Christian</u>	Cont. <u>Red Tiger Rig #1</u>	Est. Ft. of Pay <u>5'</u>
Location: Sec. <u>1</u>	Twp. <u>25</u>	Rge. <u>21</u>
	Co. <u>Ford</u>	State <u>KS</u>
No. of Copies <u>4</u>	Distribution Sheet <u>X</u>	Yes <u>X</u> No <u>X</u> Turnkey <u>X</u> Yes <u>X</u> No <u>X</u>

Interval Tested 4688 - 4730 Drill Pipe Size 4 1/2 XH
 Anchor Length 42' Top Choke — 1" Bottom Choke — 3/4"
 Top Packer Depth 4683 Hole Size — 7 7/8" Rubber Size — 6 3/4"
 Bottom Packer Depth 4688 Wt. Pipe I.D. — 2.7 Ft. Run 625.64
 Total Depth 4730 Drill Collar — 2.25 Ft. Run
 Mud Wt. 9.4 lb / gal. Viscosity 48 Filtrate 12.4
 Tool Open @ 2:45 PM Initial Blow very weak blow at surface dying in 8 min.
 Final Blow no blow

Recovery — Total Feet 5' Flush Tool? _____
 Rec. 5 Feet of 1740
 Rec. _____ Feet of _____
 Rec. _____ Feet of _____
 Rec. _____ Feet of _____
 Rec. _____ Feet of _____
 BHT 124 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
 RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 6,800 ppm System
 (A) Initial Hydrostatic Mud 2446 PSI Ak1 Recorder No. 13615 Range 4575
 (B) First Initial Flow Pressure 56 PSI @ (depth) 4690 w/Clock No. 14389
 (C) First Final Flow Pressure 56 PSI AK1 Recorder No. 10248 Range 4400
 (D) Initial Shut-In Pressure 90 PSI @ (depth) 4727 w/Clock No. 27567
 (E) Second Initial Flow Pressure 56 PSI AK1 Recorder No. _____ Range _____
 (F) Second Final Flow Pressure 56 PSI @ (depth) _____ w/Clock No. _____
 (G) Final Shut-In Pressure 78 PSI Initial Opening 30 Test 400°
 (H) Final Hydrostatic Mud 2391 PSI Initial Shut-In 30 Jars _____
 Final Flow 30 Safety Joint _____
 Final Shut-In 30 Straddle _____

Approved By Jeff Christian

Our Representative Roger L. Sells

Printcraft Printers - Hays, KS

Circ. Sub X
 Sampler _____
 Extra Packer _____
 Other _____
 TOTAL PRICE \$ 400.00

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name & No.	W STEGMAN #1	Test No.	5	Date	4/24/90
Company	RITCHIE EXPLORATION INC	Zone Tested	MISSISSIPPI		
Address	125 N MARKET SWT 1000 WICHITA KS 67201	Elevation	2289 GL		
Co. Rep./Geo.	MR JEFF CHRISTIAN	Cont.	RED TIGER RIG #6	Est. Ft. of Pay	5
Location: Sec.	1	Twp.	25S	Rge.	21W
		Co.	FORD	State	KANSAS

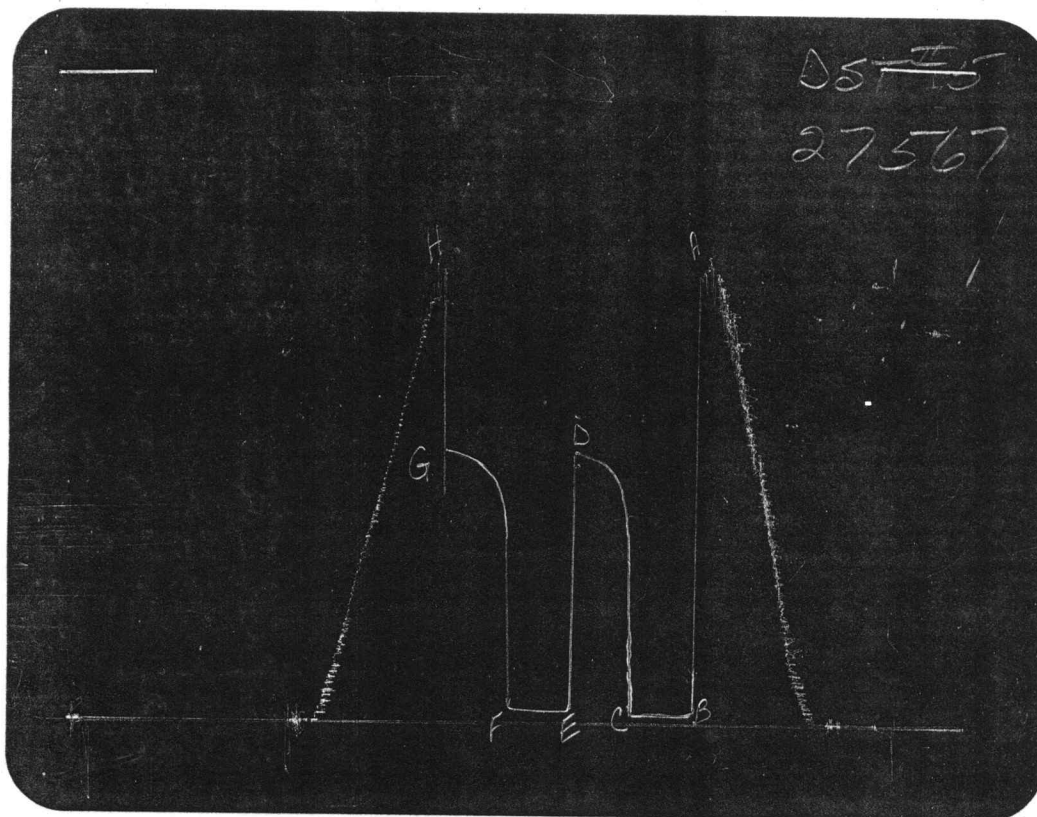
Interval Tested	4729-4736	Drill Pipe Size	4.5" XH									
Anchor Length	7	Top Choke — 1"	Bottom Choke — 3/4"									
Top Packer Depth	4724	Hole Size — 7 7/8"	Rubber Size — 6 3/4"									
Bottom Packer Depth	4729	Wt. Pipe I.D. — 2.7 Ft. Run	625.64									
Total Depth	4736	Drill Collar — 2.25 Ft. Run	0									
Mud Wt.	9.4	lb/gal.	Viscosity	46	Filtrate	12.4						
Tool Open @	4:04 AM	Initial Blow	WEAK TO FAIR BLOW AT SURFACE BUILDING TO 1 1/2" — NO BLOW BACK ON SHUT-IN									
Final Blow	NO BLOW AT OPENING—VERY WEAK SURFACE BLOW 15 MINUTES INTO OPENING—CONTINUED THOUGHOUT OPENING—NO BLOW BACK ON SHUT-IN											
Recovery — Total Feet	110	Flush Tool?										
Rec.	50	Feet of	MUDDY WATER									
Rec.	30	Feet of	WATER									
Rec.	30	Feet of	WATERY MUD-52%MUD/48%WATER/SLIGHT TRACE OF OIL									
Rec.	0	Feet of										
Rec.	0	Feet of										
BHT	0	°F	Gravity	°API @	0	°F	Corrected Gravity	0	°API			
RW	.490	@	70	°F	Chlorides	200000	ppm	Recovery	Chlorides	6800	ppm	System
(A) Initial Hydrostatic Mud	2620.3	PSI	Ak1 Recorder No.	13615	Range	4575						
(B) First Initial Flow Pressure	71.5	PSI	@ (depth)	4717	w/Clock No.	14389						
(C) First Final Flow Pressure	71.5	PSI	Ak1 Recorder No.	10248	Range	4400						
(D) Initial Shut-In Pressure	1588.3	PSI	@ (depth)	4733	w/Clock No.	27567						
(E) Second Initial Flow Pressure	81.2	PSI	Ak1 Recorder No.	0	Range	0						
(F) Second Final Flow Pressure	81.2	PSI	@ (depth)	0	w/Clock No.	0						
(G) Final Shut-In Pressure	1599.6	PSI	Initial Opening	45								
(H) Final Hydrostatic Mud	2440.3	PSI	Initial Shut-In	45								
			Final Flow	45								
			Final Shut-In	45								

MR ROGER SELLS

400

Our Representative _____

TOTAL PRICE \$ _____

DST# 5RECORDER# 10248

This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud.....	2623	2620.3
(B) First Initial Flow Pressure.....	67	71.5
(C) First Final Flow Pressure.....	67	71.5
(D) Initial Closed-In Pressure.....	1583	1588.3
(E) Second Initial Flow Pressure.....	78	81.2
(F) Second Final Flow Pressure.....	78	81.2
(G) Final Closed-In Pressure.....	1594	1599.6
(H) Final Hydrostatic Mud.....	2446	2440.3

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

TEST TICKET

Nº 2862

Well Name & No. W. Stogman #1 Test No. 5 Date 4-24-90
 Company Ritchie Explor., Inc. Zone Tested Miss.
 Address 125 N. Market Suite 1000 Wichita, KS Elevation 2289 HL
 Co. Rep. / Geo. Jeff Christian Cont. Red Tiger Rig #6 Est. Ft. of Pay 5'
 Location: Sec. 1 Twp. 25 Rge. 21 Co. Ford State Ks
 No. of Copies 4 Distribution Sheet Yes ☒ No ☐ Turnkey Yes ☒ No ☐

Interval Tested 4729 - 4736 Drill Pipe Size 4 1/2 x H
 Anchor Length 7' Top Choke — 1" Bottom Choke — 3/4"
 Top Packer Depth 4724 Hole Size — 77/8" Rubber Size — 63/4"
 Bottom Packer Depth 4729 Wt. Pipe I.D. — 2.7 Ft. Run 625.64
 Total Depth 4736 Drill Collar — 2.25 Ft. Run —
 Mud Wt. 9.4 lb / gal. Viscosity 46 Filtrate 12.4
 Tool Open @ 4:04 AM Initial Blow weak to fair blow @ surface building to 1 1/2".
no blow back on shut in.
 Final Blow no blow @ opening ~ very weak surface blow 15 min. in
opening ~ continued thru opening ~ no blow back on shut in.
 Recovery — Total Feet 110' Flush Tool? —
 Rec. 50 Feet of Muddy water
 Rec. 30 Feet of Water
 Rec. 30 Feet of Watery Mud 52% Mud ~ 48% Water
 Rec. — Feet of Slight trace of oil
 Rec. — Feet of —
 BHT — °F Gravity — °API @ — °F Corrected Gravity — °API
 RW .490 @ 70° °F Chlorides 200,000 ppm Recovery Chlorides 6,800 ppm System
 (A) Initial Hydrostatic Mud 2623 PSI AK1 Recorder No. 13615 Range 4525
 (B) First Initial Flow Pressure 67 PSI @ (depth) 4717 w/Clock No. 14389
 (C) First Final Flow Pressure 67 PSI AK1 Recorder No. 10248 Range 4400
 (D) Initial Shut-In Pressure 1583 PSI @ (depth) 4733 w/Clock No. 27567
 (E) Second Initial Flow Pressure 78 PSI AK1 Recorder No. — Range —
 (F) Second Final Flow Pressure 78 PSI @ (depth) — w/Clock No. —
 (G) Final Shut-In Pressure 1594 PSI Initial Opening 45 Test 400°
 (H) Final Hydrostatic Mud 2446 PSI Initial Shut-In 45 Jars —
 Final Flow 45 Safety Joint —
 Final Shut-In 45 Straddle —

Approved By Jeff Christian

Our Representative Roger F. Sell

Printcraft Printers - Hays, KS

Circ. Sub ☒

Sampler —

Extra Packer —

Other —

TOTAL PRICE \$ —