

# TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

## Drill-Stem Test Data

Well Name & No.	HUCK A #13	Test No.	1	Date	8/19/89				
Company	QUINOCO PETROLEUM INC	Zone Tested	LKC						
Address	P.O. BOX 37811 DENVER CO 80237	Elevation	2262						
Co. Rep./Geo.	JIM MUSGROVE	Cont.	RED TIGER #7	Est. Ft. of Pay	5				
Location: Sec.	31	Twp.	11S	Rge.	20W	Co.	ELLIS	State	KS

Interval Tested	3702-3750	Drill Pipe Size	5 IF		
Anchor Length	45	Top Choke - 1"			
Top Packer Depth	3697	Bottom Choke - 3/4"			
Bottom Packer Depth	3702	Hole Size - 7 7/8"			
Total Depth	3750	Rubber Size - 6 3/4"			
Wt. Pipe I.D. - 2.7		Ft. Run	377		
Drill Collar - 2.25		Ft. Run	0		
Mud Wt.	9.3 lb./gal.	Viscosity	47	Filtrate	10.4

Tool Open @ 11:40 Initial Blow 2" BLOW BUILDING TO BOTTOM OF BUCKET IN 90 SEC (BLOWBACK BUILT TO BOTTOM IN 12 MIN)

Final Blow 1" BLOW BUILDING TO BOTTOM OF BUCKET IN 6 MIN (BLOWBACK BUILT TO 6")

Recovery - Total Feet	1050	Flush Tool?	NO
Rec.	1250	Feet of	GAS IN PIPE
Rec.	990	Feet of	GASSY OIL
Rec.	60	Feet of	MUD CUT OIL 75% OIL 25% MUD
Rec.	0	Feet of	REVERSED OIL INTO TANK TRUCK
Rec.	0	Feet of	

BHT 113 °F Gravity 31 °API @ 80 °F Corrected Gravity 29 °API

RW	@	°F Chlorides	ppm Recovery Chlorides	ppm System
(A) Initial Hydrostatic Mud		1928.4	13277	4125
(B) First Initial Flow Pressure	PSI	247.3	AK1 Recorder No. 3749	Range 25828
(C) First Final Flow Pressure	PSI	363.9	@ (depth) 7437	w/Clock No. 4200
(D) Initial Shut-In Pressure	PSI	696.6	AK1 Recorder No. 3743	Range 26199
(E) Second Initial Flow Pressure	PSI	384.4	@ (depth) 30	w/Clock No.
(F) Second Final Flow Pressure	PSI	470.8	Initial Opening	60
(G) Final Shut-In Pressure	PSI	658.8	Initial Shut-In	60
(H) Final Hydrostatic Mud	PSI	1992.6	Final Flow	120
			Final Shut-In	

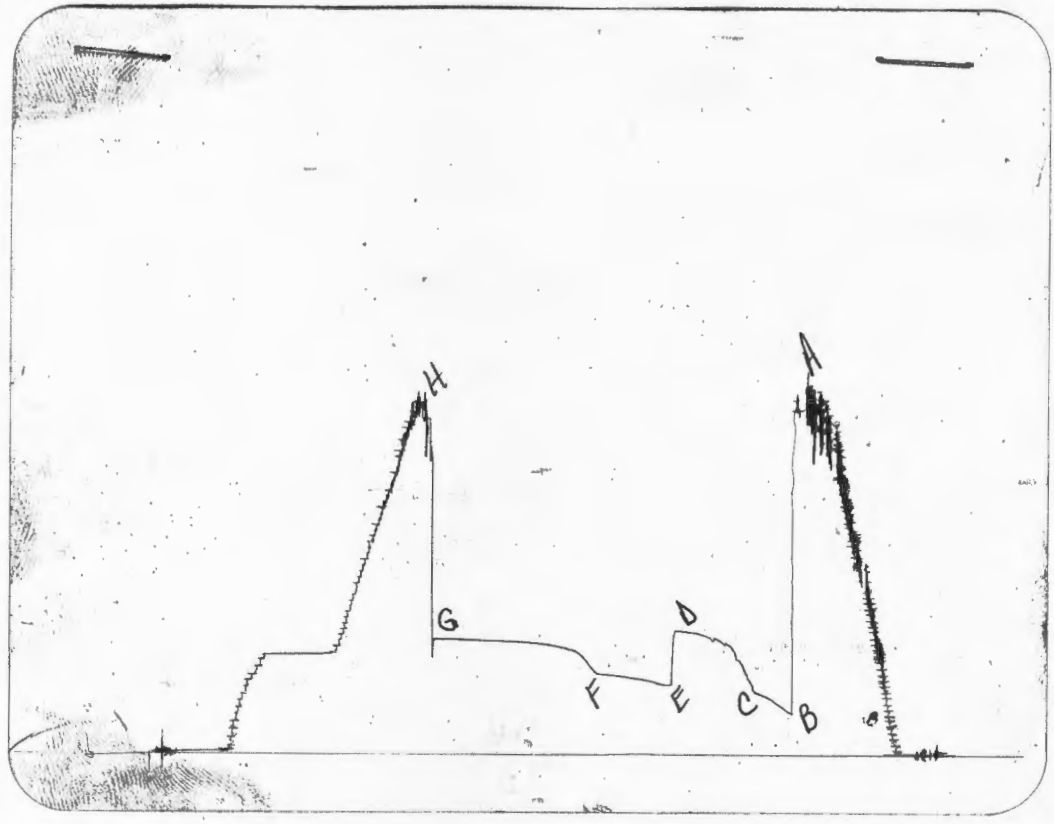
PAUL SIMPSON

Our Representative \_\_\_\_\_

TOTAL PRICE ..... \$ 470

Princraft Printers - Hays, KS

DST # 1



This is an actual photograph of recorder chart.

**PRESSURE**

POINT	Field Reading	Office Reading	
(A) Initial Hydrostatic Mud.....	1963	1928.4	PSI
(B) First Initial Flow Pressure.....	245	247.3	PSI
(C) First Final Flow Pressure.....	349	363.9	PSI
(D) Initial Closed-in Pressure.....	674	696.6	PSI
(E) Second Initial Flow Pressure.....	380	384.4	PSI
(F) Second Final Flow Pressure.....	451	470.8	PSI
(G) Final Closed-in Pressure.....	634	658.8	PSI
(H) Final Hydrostatic Mud.....	1933	1992.6	PSI

COMPUTER EVALUATION BY INTELLIGENT DESIGN  
QUINOCO PETROLEUM INC  
REPORT FOR DST#1 FOR THE HUCK A #13  
31-11S-20W ELLIS KS

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TEST PARAMETERS

ELEVATION: 2262 KB EST. PAY: 5 FT  
DATUM: -1488 ZONE TESTED: LOWER KC  
TEST INTERVAL: 3702-3750  
RECORDED DEPTH: 3749 TIME INTERVALS: 30-60-60-120  
BOTTOM HOLE TEMP: 113 VISCOSITY: 9 CP  
HOLE SIZE: 7.875 IN

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CALCULATIONS

CUBIC FEET OF GAS IN PIPE: 99.79923  
TOTAL FEET OF RECOVERY: 1050  
BARRELS IN DRILL PIPE: 12.3832  
BARRELS IN WEIGHT PIPE: 2.9406  
GAS OIL RATIO: 6.512696 CU.FT./BBL  
TOTAL BARRELS OF RECOVERY: 15.3238  
UNCORR. INIT. PROD.: 245.1808 BBL/DAY  
API GRAVITY: 30 FLUID GRADIENT: .379  
CORRECTED PIPE FILLUP: 1242.216  
CORR. BARRELS OF RECOVERY: 18.8566 BBL  
INITIAL PRODUCTION CORRECTED TO FINAL FLOW PRESSURE: 301.7056 BBL/DAY  
INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE  
68.58695

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INITIAL SHUT-IN VALUES:  
THEORETICAL STATIC PRESSURE 763.3563  
SLOPE 379.1693

FINAL SHUT-IN VALUES  
THEORETICAL STATIC PRESSURE 692.3544  
SLOPE 138.0871

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TRANSMISSIBILITY 355.2637 (MD.-FT./CP.)  
PERMEABILITY 639.4747 (MD.)  
INDICATED FLOW CAPACITY 3197.373 (MD.FT)  
PRODUCTIVITY INDEX .401448 (BARRELS/DAY/PSI)  
DAMAGE RATIO .2936151  
RADIUS OF INVESTIGATION 239.9015 (FT.)  
POTENTIOMETRIC SURFACE 118.5698 (FT.)  
DRAWDOWN FACTOR 9.301287 (%)

INITIAL FLOW

RECORDER # 13277  
DST #1

DT (MIN)	PRESSURE	<> PRESSURE
0	247.3	247.3
3	251.5	4.199997
6	260.2	8.700012
9	272.1	11.899999
12	299.1	27
15	309.9	10.799999
18	318.5	8.600006
21	342.4	23.9
24	344.4	2
27	351.9	7.5
30	363.9	12

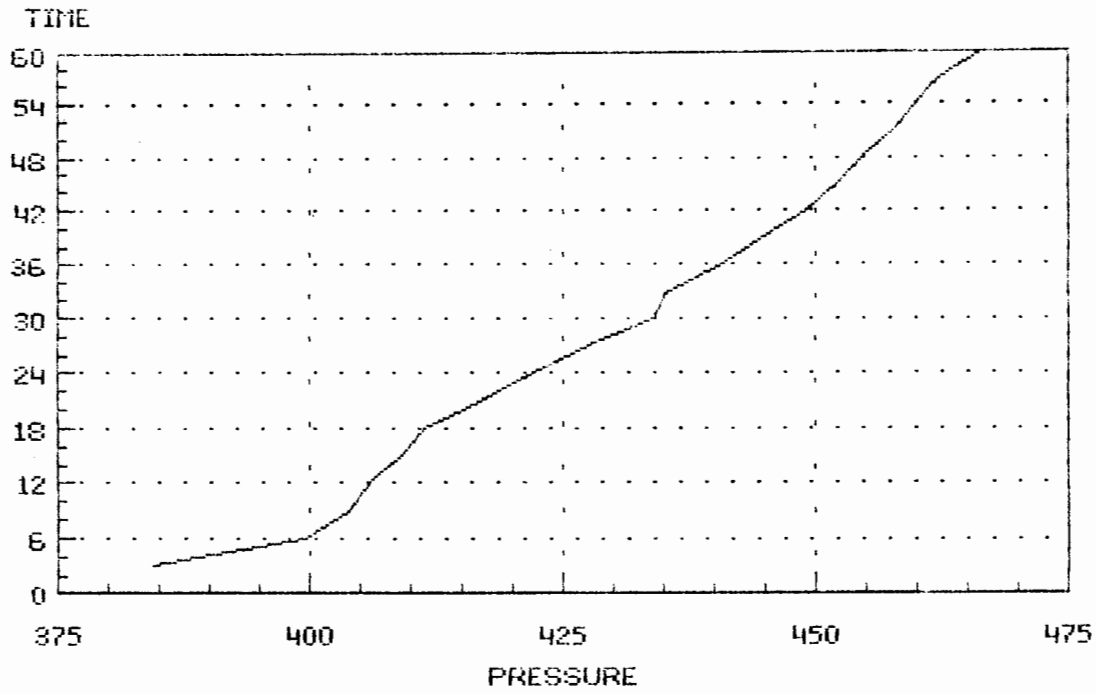
FINAL FLOW

RECORDER # 13277  
DST #1

DT (MIN)	PRESSURE	<> PRESSURE
0	384.4	384.4
3	399.6	15.20001
6	403.9	4.299988
9	406	2.100006
12	409.2	3.200012
15	411.4	2.199982
18	418.9	7.5
21	421.2	2.300018
24	427.6	6.399994
27	434.1	6.5
30	435.2	1.100006
33	442.8	7.599976
36	444.9	2.100006
39	450.2	5.300019
42	452.2	2
45	454.6	2.399994
48	457.9	3.299988
51	460	2.100006
54	462.2	2.200012
57	466.5	4.299988
60	470.8	4.299988

# DELTA T DELTA P

DST #1 FINAL FLOW  
RECORDER # 13277



INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE 68.58695 BBL/DAY

INITIAL SHUT-IN BUILDUP  
DST #1

RECORDER # 13277  
INITIAL FLOW TIME (MIN.): 30

MIN	LOG(T+MIN/MIN)	PRESSURE	<> PRESSURE
0	0	363.9	363.9
3	1.041205	403.9	40
6	.778011	444.9	41
9	.6367073	478.5	33.60001
12	.5439701	541.5	63
15	.4770353	577.8	36.29999
18	.425892	608.6	30.79999
21	.3852815	626	17.40003
24	.352119	635.2	9.200012
27	.3244526	648.5	13.29999
30	.3009757	653.6	5.099976
33	.280776	659.8	6.200012
36	.263194	668	8.200013
39	.2477398	672.1	4.099976
42	.234041	676.1	4
45	.2218087	681.3	5.200012
48	.2108154	684.4	3.100037
51	.2008786	691.5	7.099976
54	.191851	692.6	1.099976
57	.1836113	696.6	4
60	.1760595	696.6	0

FINAL SHUT-IN BUILDUP  
DST #1

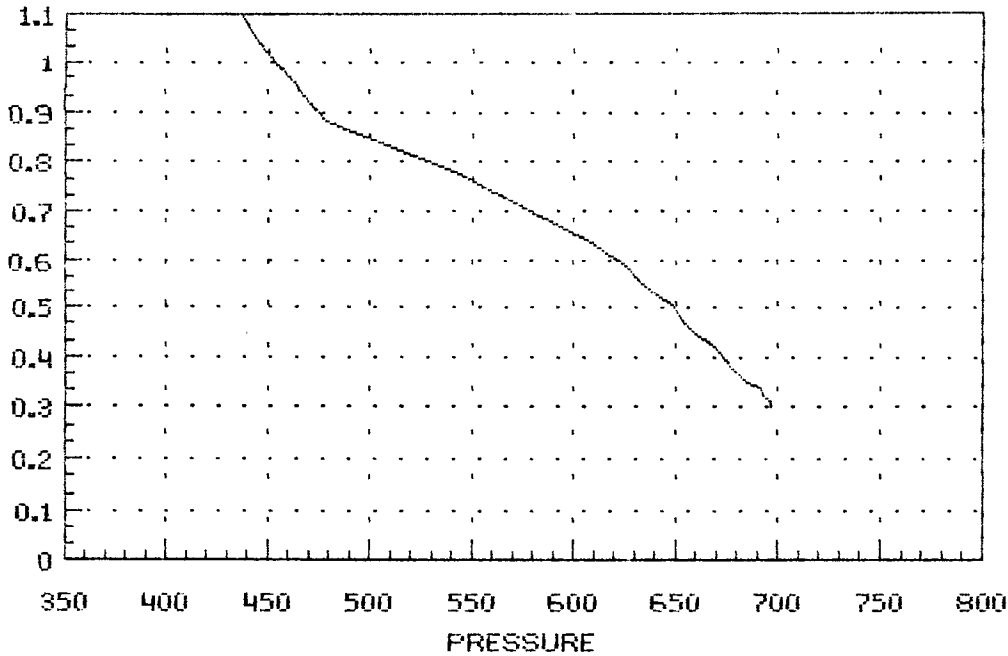
RECORDER # 13277  
TOTAL FLOW TIME (MIN.): 90

MIN	LOG(T+MIN/MIN)	PRESSURE	<> PRESSURE
0	0	470.8	470.8
6	1.203903	486	15.20001
12	.9292515	535.8	49.79999
18	.778011	576.8	41
24	.6765717	594.2	17.40003
30	.6019515	612.6	18.39996
36	.5439701	622.9	10.30005
42	.4972351	631.9	9
48	.4585552	634.2	2.299988
54	.425892	637.2	3
60	.3978683	641.4	4.200012
66	.3735134	642.4	1
72	.352119	644.4	2
78	.3331547	647.5	3.099976
84	.316213	650.6	3.099976
90	.3009757	654.7	4.100037
96	.2871899	654.7	0
102	.2746515	655.7	1
108	.263194	656.7	1
114	.2526798	657.8	1.099976
120	.2429943	658.8	1

# HORNER PLOT

DST #1 INITIAL SHUTIN  
RECORDER #13277

LOG=T+(MIN/MIN)

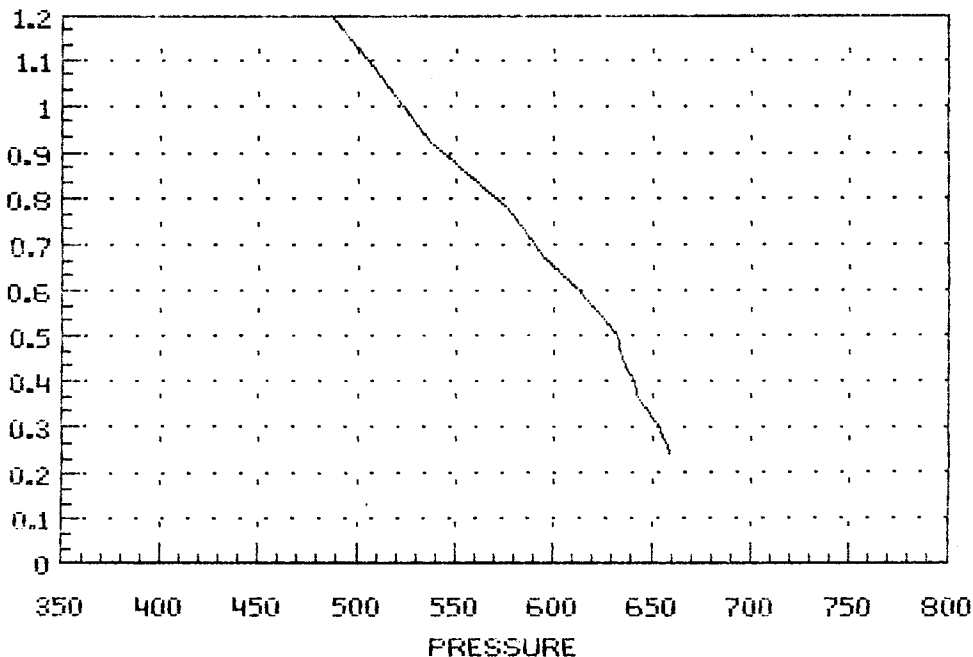


STATIC PRESSURE 763.3563  
SLOPE 379.1693  
POINTS USED 19

# HORNER PLOT

DST #1 FINAL SHUTIN  
RECORDER #13277

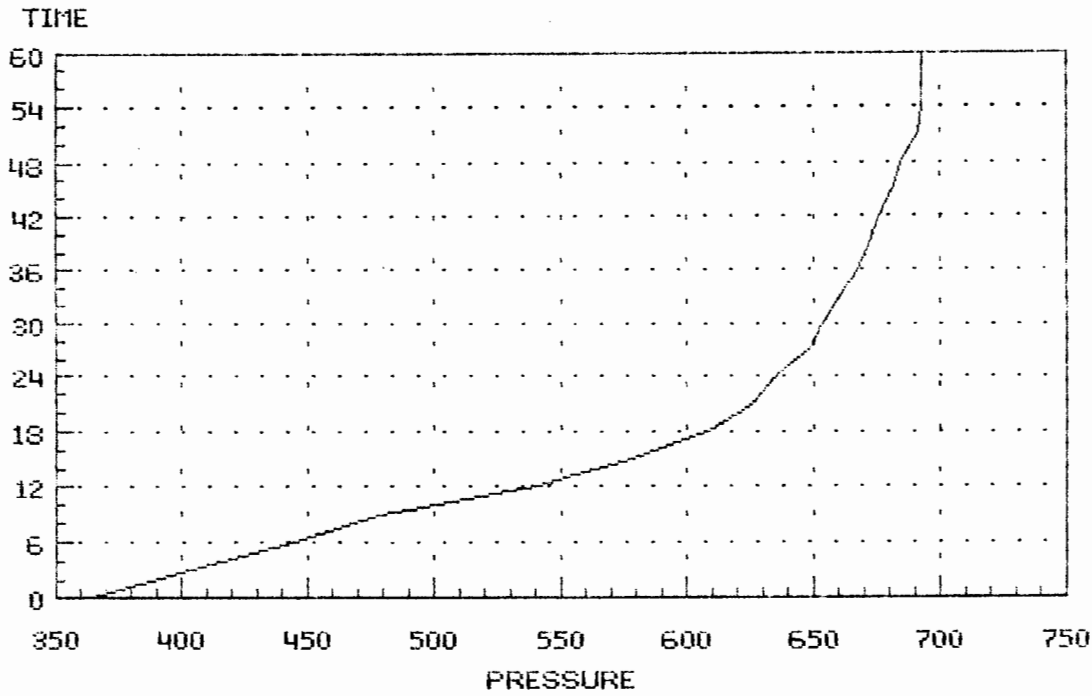
LOG = T + (MIN/MIN)



STATIC PRESSURE 692.3544  
SLOPE 138.0871  
POINTS USED 19

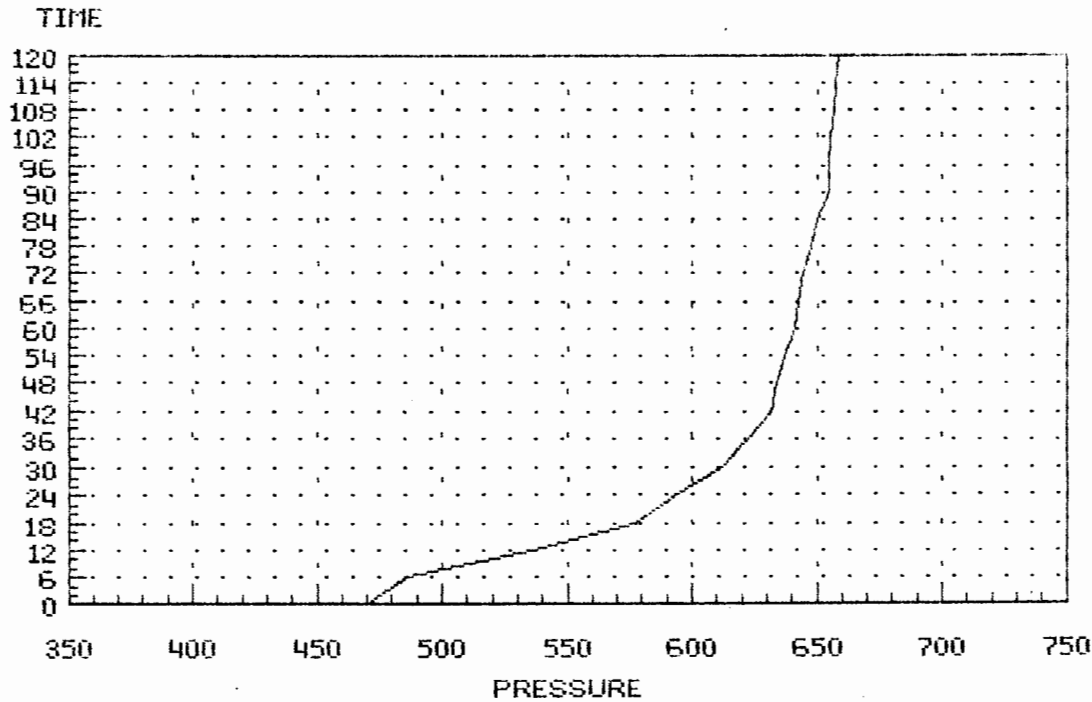
# DELTA T DELTA P

DST #1 INITIAL SHUTIN  
RECORDER #13277



# DELTA T DELTA P

DST #1 FINAL SHUTIN  
RECORDER #13277



# TRILOBITE TESTING COMPANY

P.O. Box 362 - Hays, Kansas 67601

## FLUID SAMPLER DATA

Ticket No. 2179 Date 8/19/89

Company Name QUINOCO PETROLEUM INC

Lease HUCK A # 13 Test No. 1

County ELLIS Sec. 31 Twp. 11s Rng. 20w

### SAMPLER RECOVERY

Gas 850 ML Chlorides 4100 ppm.  
Oil 3100 ML Resistivity 1.4 ohms @ 75 F  
Mud 50 ML Viscosity 47  
Water          ML Mud Weight 9.3  
Other          ML Filtrate 10.4  
Pressure 210 PSI Other           
Total 4000 ML         

### PIT MUD ANALYSIS

### SAMPLER ANALYSIS

Resistivity          ohms @          F  
Chlorides          ppm.  
Gravity 29 corrected @ 60 F

### PIPE RECOVERY

TOP  
Resistivity          ohms @          F  
Chlorides          ppm.  
MIDDLE  
Resistivity          ohms @          F  
Chlorides          ppm.  
BOTTOM  
Resistivity          ohms @          F  
Chlorides          ppm.

# TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

## TEST TICKET

No 2179

Well Name & No. Hudg A #13 Test No. 1 Date 8/19/89  
 Company Quindlo Petroleum Inc Zone Tested LKC  
 Address PO Box 37811 Denver Co 80237 Elevation 2762  
 Co. Rep./Geo. Jim Musgrave Cont. Red Tiger #7 Est. Ft. of Pay 5  
 Location: Sec. 31 Twp. 11S Rge. 20W Co. Ellis State KS

Interval Tested 3702-3750 Drill Pipe Size 5" IF  
 Anchor Length 48 Top Choke - 1" \_\_\_\_\_  
 Top Packer Depth 3697 Bottom Choke - 3/4" \_\_\_\_\_  
 Bottom Packer Depth 3702 Hole Size - 7 7/8" \_\_\_\_\_  
 Total Depth 3750 Rubber Size - 6 3/4" \_\_\_\_\_

Wt. Pipe I.D. - 2.7 \_\_\_\_\_ Ft. Run 377  
 Drill Collar - 2.25 \_\_\_\_\_ Ft. Run \_\_\_\_\_  
 Mud Wt. 93 lb./gal. Viscosity 47 Filtrate 10%

Tool Open @ 11:40 AM Initial Blow 2" blow building to bottom of bucket in 90 seconds (blowback built to bottom in 12 min)  
 Final Blow 1" blow building to bottom of bucket in 6 minutes (blowback built to 6")

Recovery - Total Feet 1050 Flush Tool? \_\_\_\_\_  
 Rec. 1250 Feet of 6 IP  
 Rec. 990 Feet of Bassy Oil  
 Rec. 60 Feet of MCO 1 75% O 25% OM  
 Rec. \_\_\_\_\_ Feet of \_\_\_\_\_  
 Rec. \_\_\_\_\_ Feet of \_\_\_\_\_

BHT 113 °F Gravity 31 °API @ 80 °F Corrected Gravity 29 °API

RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides \_\_\_\_\_ ppm System

(A) Initial Hydrostatic Mud	<u>1963</u>	PSI	AK1 Recorder No. <u>13277</u>	Range <u>4125</u>
(B) First Initial Flow Pressure	<u>245</u>	PSI	@ (depth) <u>3749</u>	w/Clock No. <u>25828</u>
(C) First Final Flow Pressure	<u>349</u>	PSI	AK1 Recorder No. <u>7437</u>	Range <u>4260</u>
(D) Initial Shut-In Pressure	<u>674</u>	PSI	@ (depth) <u>3743</u>	w/Clock No. <u>26199</u>
(E) Second Initial Flow Pressure	<u>380</u>	PSI	Initial Opening <u>30</u>	Test <u>400</u>
(F) Second Final Flow Pressure	<u>451</u>	PSI	Initial Shut-in <u>60</u>	Jars <u>x</u>
(G) Final Shut-In Pressure	<u>634</u>	PSI	Final Flow <u>60</u>	Safety Joint <u>x</u>
(H) Final Hydrostatic Mud	<u>1933</u>	PSI	Final Shut-In <u>120</u>	Straddle _____

Approved By Jim Musgrave  
 Our Representative Paul Simpson  
 Remarks: copies to Jim Musgrave Box 116 G.B. 67630  
 Circ. Sub 20  
 Sampler 50  
 Extra Packer \_\_\_\_\_  
 Other \_\_\_\_\_  
 TOTAL PRICE \$ 470

# TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

## Drill-Stem Test Data

Well Name & No.	HUCK A #13	Test No.	2	Date	8/21/89	
Company	QUINOCO PETROLEUM INC	Zone Tested	ARBUCKLE			
Address	P.O. BOX 37811 DENVER CO 80237	Elevation	2262			
Co. Rep./Geo.	JIM MUSGROVE	Cont.	RED TIGER #7	Est. Ft. of Pay	12	
Location: Sec.	31	Twp.	11S	Rge.	20W	
			ELLIS	Co.	State	KS

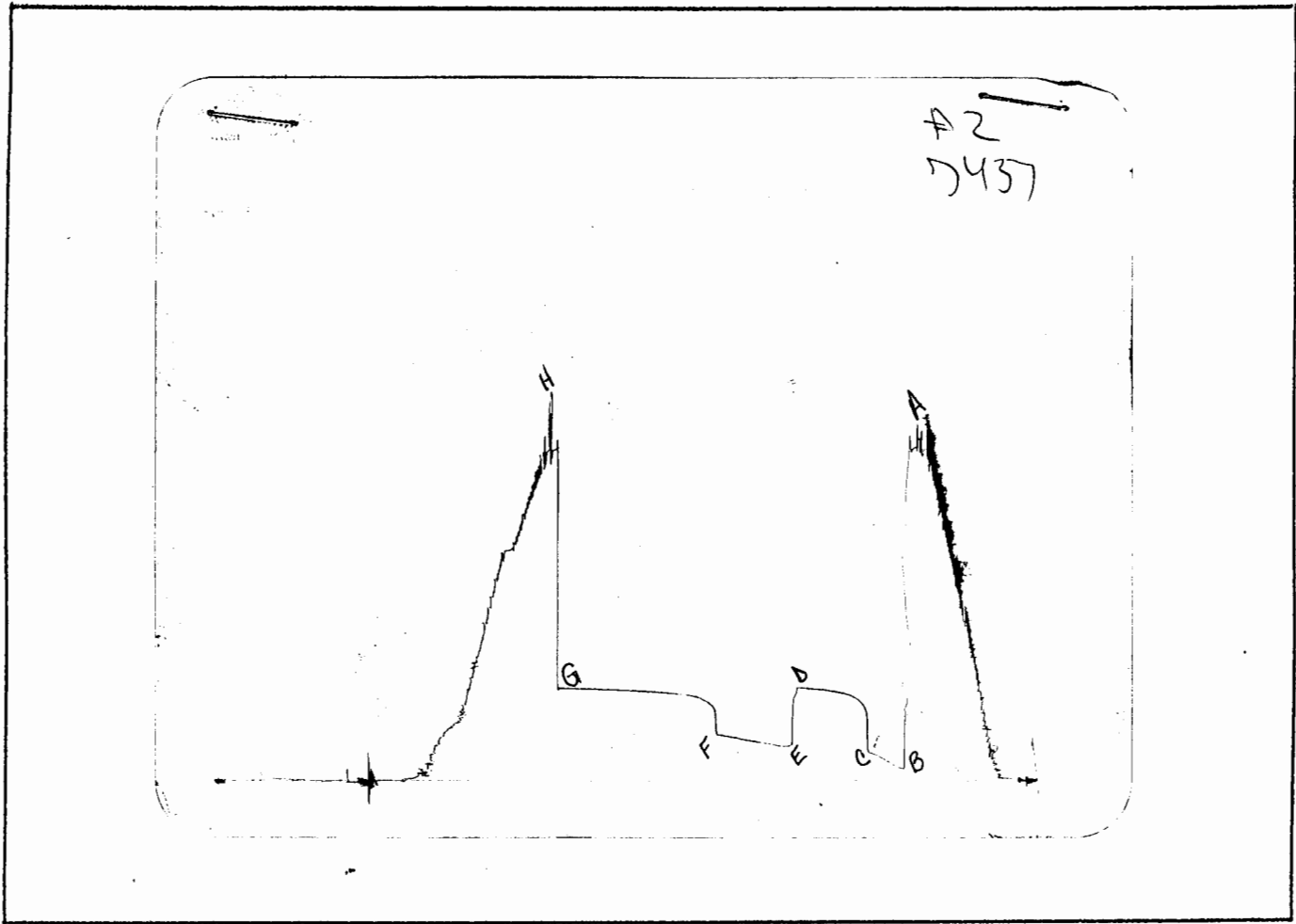
Interval Tested	3842-3854	Drill Pipe Size	5" IF
Anchor Length	12	Top Choke — 1"	
Top Packer Depth	3837	Bottom Choke — 3/4"	
Bottom Packer Depth	3842	Hole Size — 7 7/8"	
Total Depth	3854	Rubber Size — 6 3/4"	
Wt. Pipe I.D. — 2.7		Ft. Run	377
Drill Collar — 2.25		Ft. Run	0
Mud Wt.	9.4	Viscosity	51
		Filtrate	12
Tool Open @	1:53 AM	1" BLOW BUILDING TO BOTTOM OF BUCKET	
		IN 11 MIN (1/2" BLOW BACK ON SHUTIN)	
Final Blow		3/4" BLOW BUILDING TO BOTTOM OF BUCKET	
		IN 15 MIN (4" BLOW BACK ON SHUTIN)	

Recovery — Total Feet	646	Flush Tool?	
Rec.	180	Feet of	GAS IN PIPE
Rec.	194	Feet of	CLEAN GASSY OIL
Rec.	32	Feet of	MUD CUT OIL (TRACE WATER)
Rec.	420	Feet of	WATER-TRACE OF OIL
Rec.	0	Feet of	

BHT	112	°F	Gravity	34	°API @	78	°F	Corrected Gravity	32	°API
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RW	@	°F	Chlorides	ppm	Recovery	Clorides	ppm	System
(A) Initial Hydrostatic Mud		2030.1	PSI	AK1 Recorder No.	13277	Range	4125	
(B) First Initial Flow Pressure		72.3	PSI	@ (depth)	3853	w/Clock No.	14389	
(C) First Final Flow Pressure		182.4	PSI	AK1 Recorder No.	7437	Range	4200	
(D) Initial Shut-In Pressure		576.8	PSI	@ (depth)	3848	w/Clock No.	26199	
(E) Second Initial Flow Pressure		208.3	PSI	Initial Opening	30			
(F) Second Final Flow Pressure		300.2	PSI	Initial Shut-In	60			
(G) Final Shut-In Pressure		570.6	PSI	Final Flow	60			
(H) Final Hydrostatic Mud		2005.1	PSI	Final Shut-In	120			

Our Representative PAUL SIMPSON TOTAL PRICE ..... \$ 450  
Printcraft Printers - Hays, KS



This is an actual photograph of recorder chart.

**PRESSURE**

POINT	Field Reading	Office Reading	
(A) Initial Hydrostatic Mud.....	2084	2030.1	PSI
(B) First Initial Flow Pressure.....	77	72.3	PSI
(C) First Final Flow Pressure.....	176	182.4	PSI
(D) Initial Closed-in Pressure.....	509	576.8	PSI
(E) Second Initial Flow Pressure.....	209	208.3	PSI
(F) Second Final Flow Pressure.....	286	300.2	PSI
(G) Final Closed-in Pressure.....	569	570.6	PSI
(H) Final Hydrostatic Mud.....	1989	2005.1	PSI

COMPUTER EVALUATION BY TRILOBITE TESTING  
QUINOCO PETROLEUM INC  
REPORT FOR DST#2 FOR THE HUCK A #13  
31-11S-20W ELLIS KS

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TEST PARAMETERS

ELEVATION: 2262 KB EST. PAY: 12 FT  
DATUM: -1592 ZONE TESTED: ARBUCKLE  
TEST INTERVAL: 3842-3854  
RECORDED DEPTH: 3853 TIME INTERVALS: 30-60-60-120  
BOTTOM HOLE TEMP: 112 VISCOSITY: 6.9 CP  
HOLE SIZE: 7.875 IN

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CALCULATIONS

CUBIC FEET OF GAS IN PIPE: 14.37109  
TOTAL FEET OF RECOVERY: 646  
BARRELS IN DRILL PIPE: 4.9496  
BARRELS IN WEIGHT PIPE: 2.9406  
GAS OIL RATIO: 1.821385 CU.FT./BBL  
TOTAL BARRELS OF RECOVERY: 7.8902  
UNCORR. INIT. PROD.: 126.2432 BBL/DAY  
API GRAVITY: 32  
CORRECTED PIPE FILLUP: 800.5334  
CORR. BARRELS OF RECOVERY: 10.733 BBL  
INITIAL PRODUCTION CORRECTED TO FINAL FLOW PRESSURE: 171.728 BBL/DAY  
INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE  
76.99454

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INITIAL SHUT-IN VALUES:  
THEORETICAL STATIC PRESSURE 608.8721  
SLOPE 189.6503  
FINAL SHUT-IN VALUES  
THEORETICAL STATIC PRESSURE 593.709  
SLOPE 105.9962

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TRANSMISSIBILITY 263.4337 (MD.-FT./CP.)  
PERMEABILITY 151.4744 (MD.)  
INDICATED FLOW CAPACITY 1817.693 (MD.FT)  
PRODUCTIVITY INDEX .2976801 (BARRELS/DAY/PSI)  
DAMAGE RATIO .5067366  
RADIUS OF INVESTIGATION 116.7591 (FT.)  
POTENTIOMETRIC SURFACE -214.1889 (FT.)  
DRAWDOWN FACTOR 2.49036 (%)

RECORDER # 13277  
DST #2

DT (MIN)	PRESSURE	<> PRESSURE
0	72.3	72.3
3	74.4	2.099999
6	78.8	4.400002
9	91.7	12.899999
12	109.2	17.5
15	124.1	14.9
18	138.2	14.1
21	149	10.8
24	161.1	12.100001
27	171.5	10.899999
30	182.4	10.899999

FINAL FLOW

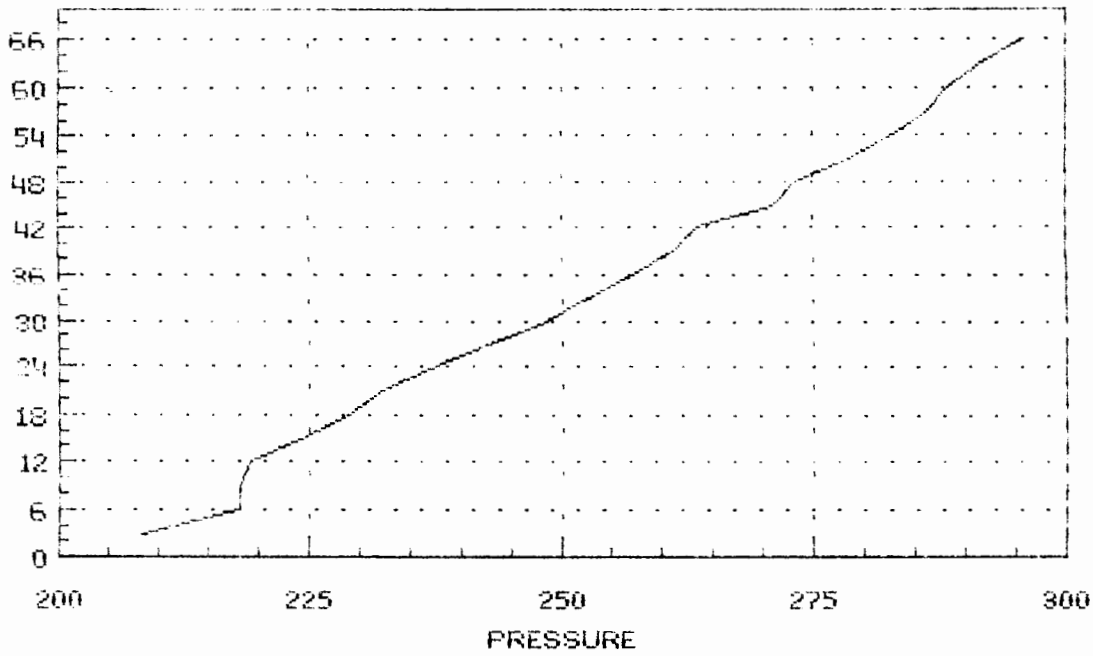
RECORDER # 13277  
DST #2

DT (MIN)	PRESSURE	<> PRESSURE
0	208.3	208.3
3	218.1	9.800003
6	216.1	0
9	219.2	1.099991
12	224.6	5.400009
15	228.9	4.299988
18	232.2	3.300003
21	237.6	5.400009
24	243.5	5.899994
27	248.4	4.899994
30	252.7	4.300003
33	257	4.300003
36	261.3	4.299988
39	263.5	2.200012
42	271.1	7.600006
45	273.2	2.100006
48	278.6	5.399994
51	282.9	4.299988
54	286.2	3.300018
57	288.3	2.099976
60	291.6	3.300018
63	295.9	4.299988
66	300.2	4.300019

# DELTA T DELTA P

DST #1 FINAL FLOW  
RECORDER # 13277

TIME



INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE 76.99454 BBL/DAY

INITIAL SHUT-IN BUILDUP  
DST #2

RECORDER # 13277  
INITIAL FLOW TIME (MIN.): 30

MIN	LOG(T+MIN/MIN)	PRESSURE	<> PRESSURE
0	0	182.4	182.4
3	1.041205	186.7	4.300003
6	.778011	450.2	263.5
9	.5367073	486	35.799999
12	.5439701	506.1	20.10001
15	.4770353	519.4001	13.30002
18	.425892	531.7	12.299999
21	.3852815	542	10.299999
24	.352119	544	2
27	.3244526	546.1	2.099976
30	.3009757	550.1	4
33	.280776	555.2	5.100037
36	.263194	558.3	3.099976
39	.2477398	560.4	2.100037
42	.234041	563.4	3
45	.2218087	566.5	3.099976
48	.2108154	568.6	2.099976
51	.2008786	569.6	1
54	.191851	570.6	1
57	.1836113	572.7	2.100037
60	.1760595	572.7	0
63	.1691119	576.8	4.099976
66	.162698	576.8	0

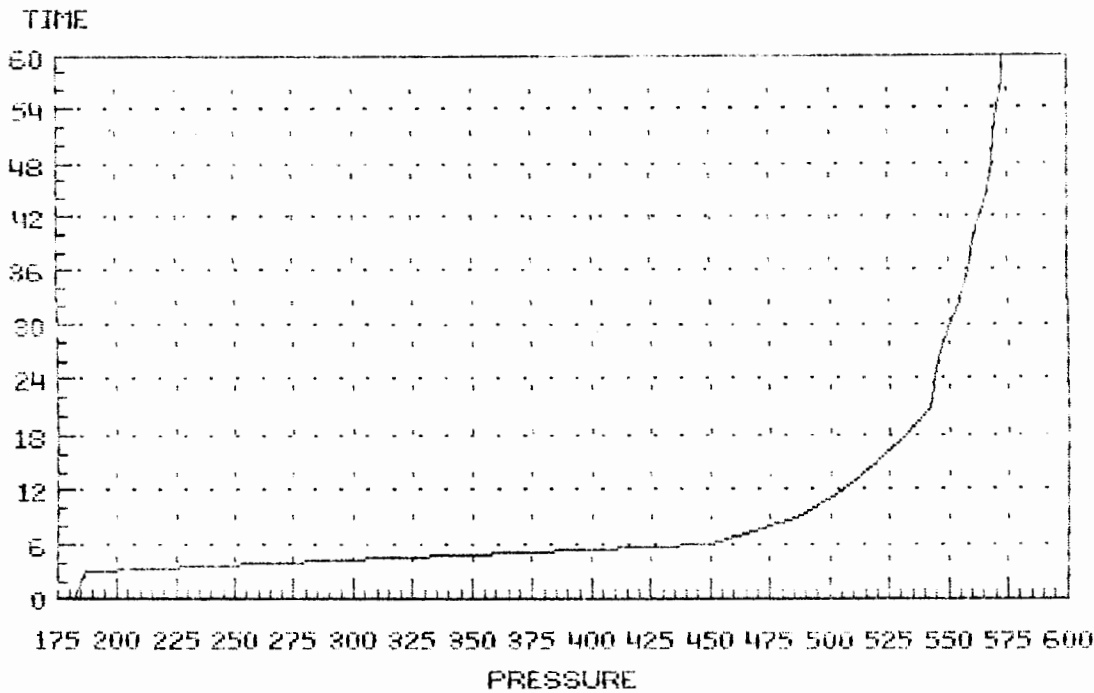
FINAL SHUT-IN BUILDUP  
DST #2

RECORDER # 13277  
TOTAL FLOW TIME (MIN.): 90

MIN	LOG(T+MIN/MIN)	PRESSURE	<> PRESSURE
0	0	300.2	300.2
6	1.203903	472.5	172.3
12	.9292515	501	29.5
18	.778011	511.2	10.20001
24	.6765717	523.5	12.299999
30	.6019515	531.7	8.200013
36	.5439701	537.9	6.200012
42	.4972351	544	6.099976
48	.4585552	545.1	1.099976
54	.425892	548.1	3
60	.3978683	550.1	2
66	.3735134	554.2	4.100037
72	.352119	555.2	1
78	.3331547	557.3	2.099976
84	.316213	559.3	2
90	.3009757	562.4	3.100037
96	.2871899	562.4	0
102	.2746515	564.5	2.099976
108	.263194	564.5	0
114	.2526798	565.5	1
120	.2429943	566.5	1
126	.234041	567.5	1
132	.2257384	570.6	3.099976
138	.2180165	570.6	0

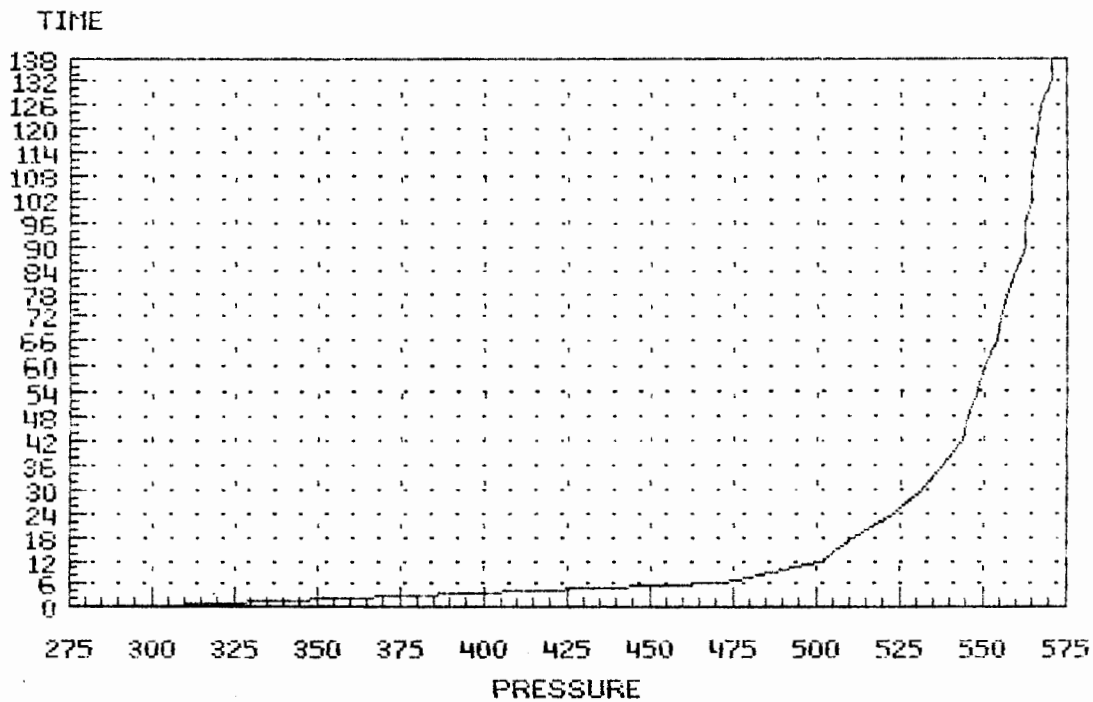
# DELTA T DELTA P

DST #2 INITIAL SHUTIN  
RECORDER #13277



# DELTA T DELTA P

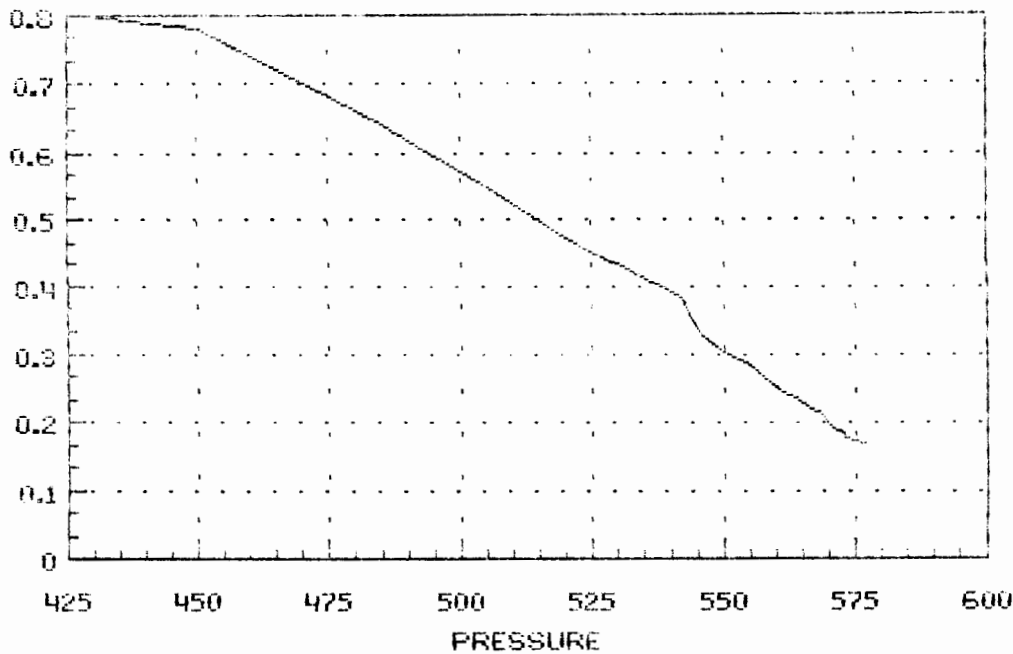
DST #2 FINAL SHUTIN  
RECORDER #13277



# HORNER PLOT

DST #2 INITIAL SHUTIN  
RECORDER #13277

LOG=T+(MIN/MIN)

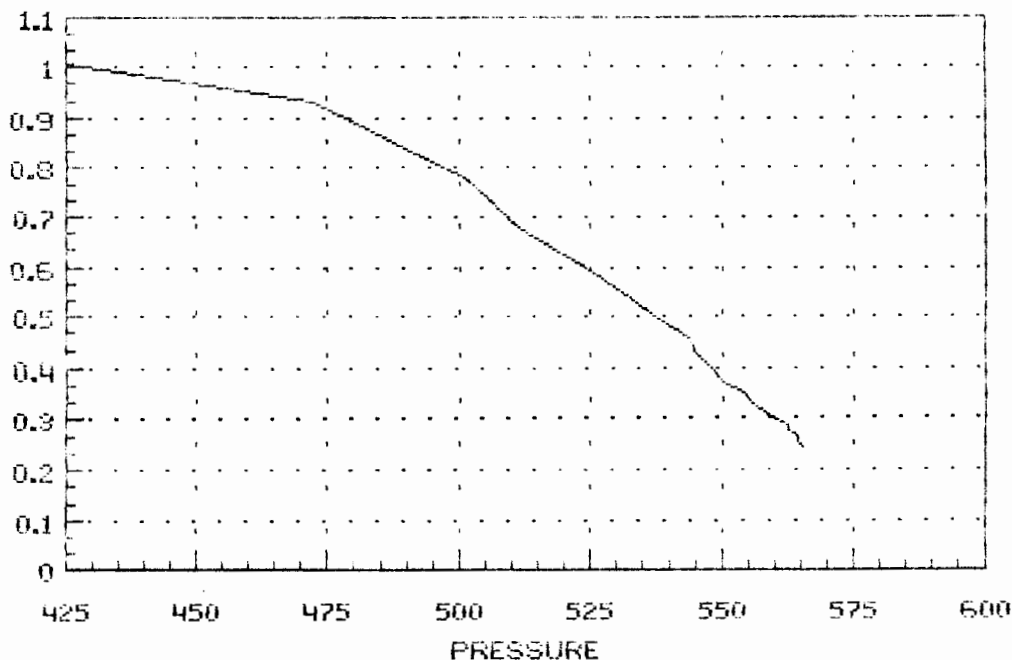


STATIC PRESSURE 608.8721  
SLOPE 189.6503  
POINTS USED 16

# HORNER PLOT

DST #2 FINAL SHUTIN  
RECORDER #13277

LOG=T+(MIN/MIN)



STATIC PRESSURE 593.709  
SLOPE 105.9962  
POINTS USED 22

# TRILOBITE TESTING COMPANY

P.O. Box 362 - Hays, Kansas 67601

## FLUID SAMPLER DATA

Ticket No. 2180 Date 8/21/89  
Company Name QUINOCO  
Lease HUCK A # 13 Test No. 2  
County ELLIS Sec. 31 Twp. 11s Rng. 20w

### SAMPLER RECOVERY

Gas \_\_\_\_\_ ML Chlorides 4200 \_\_\_\_\_ ppm.  
Oil 1400 \_\_\_\_\_ ML Resistivity 1.6 ohms @ 75 F  
Mud \_\_\_\_\_ ML Viscosity 51 \_\_\_\_\_  
Water 2600 \_\_\_\_\_ ML Mud Weight 9.4 \_\_\_\_\_  
Other \_\_\_\_\_ ML Filtrate 12 \_\_\_\_\_  
Pressure 50 \_\_\_\_\_ PSI Other \_\_\_\_\_  
Total 4000 \_\_\_\_\_ ML \_\_\_\_\_

### PIT MUD ANALYSIS

### SAMPLER ANALYSIS

Resistivity .268 ohms @ 75 F  
Chlorides 24,000 ppm.  
Gravity 32 corrected @ 60 F

### PIPE RECOVERY

TOP  
Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
Chlorides \_\_\_\_\_ ppm.  
MIDDLE  
Resistivity .28 ohms @ 75 F  
Chlorides 23,000 ppm.  
BOTTOM  
Resistivity .271 ohms @ 75 F  
Chlorides 24,000 ppm.

# TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

## TEST TICKET

No 2180

Well Name & No. Huck A #13 Test No. 2 Date 8/21  
 Company Quinoco Zone Tested A.B  
 Address \_\_\_\_\_ Elevation 2262  
 Co. Rep./Geo. Jim Musgrave cont. Red Tiger A7 Est. Ft. of Pay 12  
 Location: Sec. 31 Twp. 11S Rge. 20W Co. Ellis State Ks

Interval Tested 3842-3854 Drill Pipe Size 5" I F  
 Anchor Length 12 Top Choke - 1" \_\_\_\_\_  
 Top Packer Depth 3837 Bottom Choke - 3/4" \_\_\_\_\_  
 Bottom Packer Depth 3842 Hole Size - 7 7/8" \_\_\_\_\_  
 Total Depth 3854 Rubber Size - 6 3/4" \_\_\_\_\_

Wt. Pipe I.D. - 2.7 \_\_\_\_\_ Ft. Run 377  
 Drill Collar - 2.25 \_\_\_\_\_ Ft. Run \_\_\_\_\_  
 Mud Wt. 94 lb./gal. Viscosity 51 Filtrate 12

Tool Open @ 11:53 AM Initial Blow 1" blow building to bottom of bucket  
in 11 minutes (1/2" blow back on shut-in)  
 Final Blow 3/4" blow building to bottom of bucket in 15 minutes  
(1" blow back on shut-in)

Recovery - Total Feet \_\_\_\_\_ Flush Tool? \_\_\_\_\_  
 Rec. 180 Feet of gas in pipe  
 Rec. 194 Feet of clean gassy oil  
 Rec. 32 Feet of mud cut oil (trace water)  
 Rec. 420 Feet of water, trace of oil  
 Rec. \_\_\_\_\_ Feet of \_\_\_\_\_

BHT 112 °F Gravity 34 °API @ 78 °F Corrected Gravity 32 °API  
 RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides \_\_\_\_\_ ppm System

(A) Initial Hydrostatic Mud 2084 PSI AK1 Recorder No. 13277 Range 4125  
 (B) First Initial Flow Pressure 77 PSI @ (depth) 3853 w/Clock No. 14389  
 (C) First Final Flow Pressure 176 PSI AK1 Recorder No. 7437 Range 4200  
 (D) Initial Shut-In Pressure 569 PSI @ (depth) 3848 w/Clock No. 26199  
 (E) Second Initial Flow Pressure 209 PSI Initial Opening 30 Test 4100  
 (F) Second Final Flow Pressure 286 PSI Initial Shut-In 60 Jars \_\_\_\_\_  
 (G) Final Shut-In Pressure 569 PSI Final Flow 60 Safety Joint \_\_\_\_\_  
 (H) Final Hydrostatic Mud 1989 PSI Final Shut-In 120 Straddle \_\_\_\_\_

Approved By Jim Musgrave Circ. Sub \_\_\_\_\_  
Paul Simpson Sampler 50  
 Our Representative \_\_\_\_\_ Extra Packer \_\_\_\_\_  
 Other \_\_\_\_\_  
 TOTAL PRICE \$ 450

Copies  
Box 1162  
G.P. Ks.

Mail Invoice to Plainville