

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name & No.	BRANDENBURG #11	Test No.	1	Date	10/22/89
Company	QUINOCO PETROLEUM INC	Zone Tested	TOPEKA'		
Address	P.O. BOX 404 PLAINVILLE KS 67663	Elevation	1838 KB		
Co. Rep./Geo.	E BAILEY/J MUSGROVE	Cont.	ALLEN RIG #3	Est. Ft. of Pay	6
Location: Sec.	20	Twp.	14S	Rge.	14W
		Co.	RUSSELL	State	KANSAS

Interval Tested	2860' -2880'	Drill Pipe Size	4.5" XH
Anchor Length	20	Top Choke — 1"	
Top Packer Depth	2855	Bottom Choke — 3/4"	
Bottom Packer Depth	2860	Hole Size — 7 7/8"	
Total Depth	2880	Rubber Size — 6 3/4"	
Wt. Pipe I.D. — 2.7		Ft. Run	0
Drill Collar — 2.25		Ft. Run	0
Mud Wt.	8.7	Viscosity	44
	lb./gal.	Filtrate	7.6
Tool Open @	8:19 AM	Initial Blow	1" BLOW INCREASING TO A STRONG 8" BLOW -
	NO RESIDUAL		

Final Blow 1" BLOW INCREASING TO A STRONG 8" BLOW-NO RESIDUAL

Recovery — Total Feet	75	Flush Tool?	
Rec.	230	Feet of	GAS IN PIPE
Rec.	5	Feet of	CLEAN OIL
Rec.	70	Feet of	SLIGHTLY OIL CUT WATERY MUD-10%OIL/30%WATER/60%MUD
Rec.	0	Feet of	
Rec.	0	Feet of	

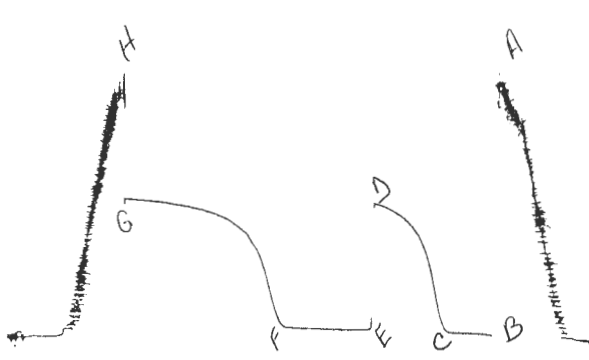
BHT	96	°F	Gravity	0	°API @	0	°F	Corrected Gravity	0	°API
RW	.286	@	54	°F	Chlorides	32000	ppm	Recovery	6000	ppm
									13308	System
										4700

(A) Initial Hydrostatic Mud		PSI	AK1 Recorder No.		Range	
(B) First Initial Flow Pressure	11.9	PSI	@ (depth)	2863	w/Clock No.	31154
(C) First Final Flow Pressure	33.3	PSI	AK1 Recorder No.	1055	Range	4325
(D) Initial Shut-In Pressure	734.6	PSI	@ (depth)	2876	w/Clock No.	25813
(E) Second Initial Flow Pressure	45.2	PSI	Initial Opening	30		
(F) Second Final Flow Pressure	66.7	PSI	Initial Shut-In	60		
(G) Final Shut-In Pressure	750.8	PSI	Final Flow	60		
(H) Final Hydrostatic Mud	1344.3	PSI	Final Shut-In	120		

Our Representative MR CARL F GOFF

TOTAL PRICE \$ 455

Printcraft Printers - Hays, KS

DST# 1RECORDER# 10551055 This is an actual photograph of recorder chart.

PRESSURE

POINT

Field
ReadingOffice
Reading

(A) Initial Hydrostatic Mud.....	1388	1345.7	PSI
(B) First Initial Flow Pressure.....	24	11.9	PSI
(C) First Final Flow Pressure.....	36	33.3	PSI
(D) Initial Closed-In Pressure.....	728	734.6	PSI
(E) Second Initial Flow Pressure.....	36	45.2	PSI
(F) Second Final Flow Pressure.....	60	66.7	PSI
(G) Final Closed-In Pressure.....	740	750.8	PSI
(H) Final Hydrostatic Mud.....	1353	1344.3	PSI

COMPUTER EVALUATION BY TRILOBITE TESTING
QUINOCO PETROLEUM INC
REPORT FOR DST#1 FOR THE BRANDENBURG #11
20-14S-14W RUSSELL KS

TEST PARAMETERS

ELEVATION:	1838 KB	EST. PAY:	6 FT
DATUM:	-1026	ZONE TESTED:	TOPEKA
TEST INTERVAL:	2860'-2880'		
RECORDER DEPTH:	2863	TIME INTERVALS:	30-60-60-120
BOTTOM HOLE TEMP:	96	VISCOSITY:	10.26073 CP
		HOLE SIZE:	7.875 IN

CALCULATIONS

CUBIC FEET OF GAS IN PIPE: .65

TOTAL FEET OF RECOVERY: 75
BARRELS IN DRILL PIPE: 1.0665
GAS OIL RATIO: 17.21806 CU.FT./BBL
BUBBLE POINT PRESSURE: ; .3731032
TOTAL BARRELS OF RECOVERY: 1.0665

UNCORR. INIT. PROD.: 17.064 BBL/DAY

API GRAVITY: 34

FLUID GRADIENT: .37

CORRECTED PIPE FILLUP: 180.2703

CORR. BARRELS OF RECOVERY: 2.563444 BBL

INITIAL PRODUCTION CORRECTED TO FINAL FLOW PRESSURE: 41.0151 BBL/DAY

INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE

59.02068

INITIAL SHUT-IN VALUES:

THEORETICAL STATIC PRESSURE 895.0296
SLOPE 911.2239

FINAL SHUT-IN VALUES

THEORETICAL STATIC PRESSURE 890.3306
SLOPE 574.2137

TRANSMISSIBILITY	11.61424 (MD.-FT./CP.)
PERMEABILITY	19.86176 (MD.)
INDICATED FLOW CAPACITY	119.1705 (MD.FT)
PRODUCTIVITY INDEX	1.312409E-02 (BARRELS/DAY/PSI)
DAMAGE RATIO	.2624883
RADIUS OF INVESTIGATION	42.27952 (FT.)
POTENTIOMETRIC SURFACE	1039.677 (FT.)
DRAWDOWN FACTOR	.5250096 (%)

INITIAL FLOW

RECORDER # 13308
DST #1

DT (MIN)	PRESSURE	<> PRESSURE
0	11.9	11.9
3	16.7	4.800001
6	16.7	0
9	17.9	1.199999
12	19.1	1.200001
15	21.4	2.299999
18	21.4	0
21	23.8	2.4
24	26.2	2.400002
27	27.2	1
30	33.3	6.099999

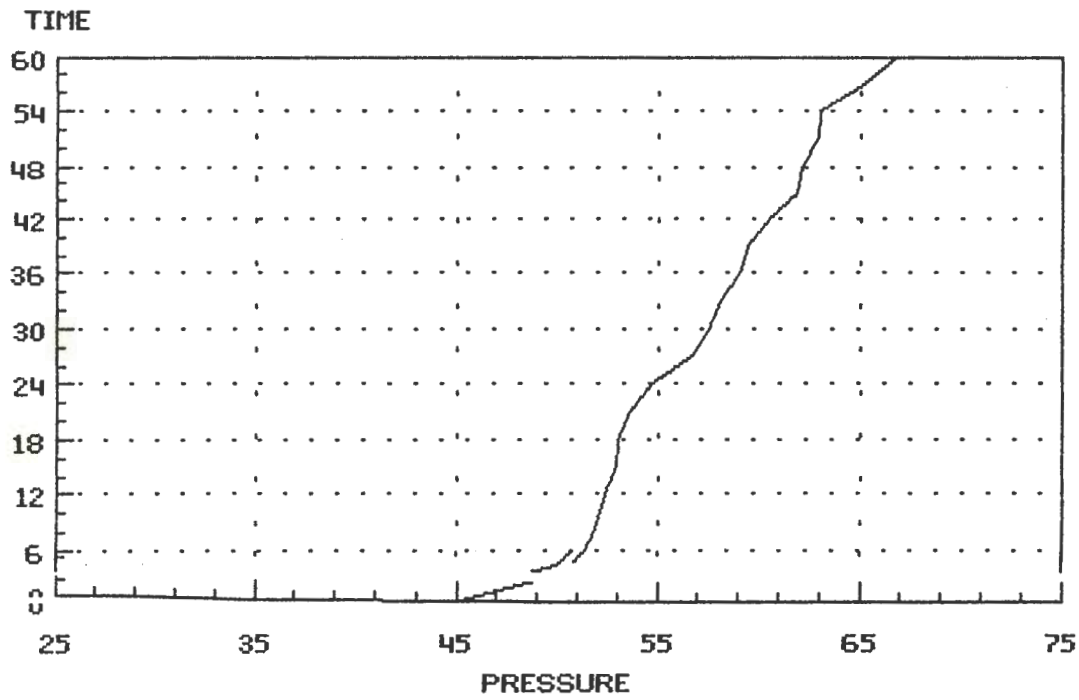
FINAL FLOW

RECORDER # 13308
DST #1

DT (MIN)	PRESSURE	<> PRESSURE
0	45.2	45.2
3	50	4.799999
6	52.4	2.400002
9	53.6	1.199997
12	53.6	0
15	53.6	0
18	53.6	0
21	53.6	0
24	56.7	3.100002
27	56.7	0
30	58.5	1.799999
33	58.5	0
36	59.5	1
39	59.5	0
42	60.5	1
45	61.9	1.400002
48	63.1	1.199997
51	63.1	0
54	63.1	0
57	63.1	0
60	66.7	3.599999

DELTA T DELTA P

DST #1 FINAL FLOW
RECORDER # 13308



INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE 59.02068 BBL/DAY

INITIAL SHUT-IN BUILDUP
DST #1

RECORDER # 13308

INITIAL FLOW TIME (MIN.): 30

MIN	LOG(T+MIN/MIN)	PRESSURE	<> PRESSURE
0	0	33.3	33.3
3	1.041205	59.5	26.2
6	.778011	119.1	59.6
9	.6367073	203.5	84.4
12	.5439701	307.1	103.6
15	.4770353	401.3	94.19998
18	.425892	469.1	67.80002
21	.3852815	523.7	54.60001
24	.352119	554.5	30.79999
27	.3244526	593.7	39.20001
30	.3009757	619.5	25.79999
33	.280776	644.6	25.09998
36	.263194	658.8	14.20001
39	.2477398	675.4	16.60004
42	.234041	689.6	14.19995
45	.2218087	699.1	9.5
48	.2108154	706.2	7.100037
51	.2008786	715.6	9.399963
54	.191851	725.1	9.5
57	.1836113	729.9	4.800049
60	.1760595	734.6	4.699951

FINAL SHUT-IN BUILDUP
DST #1

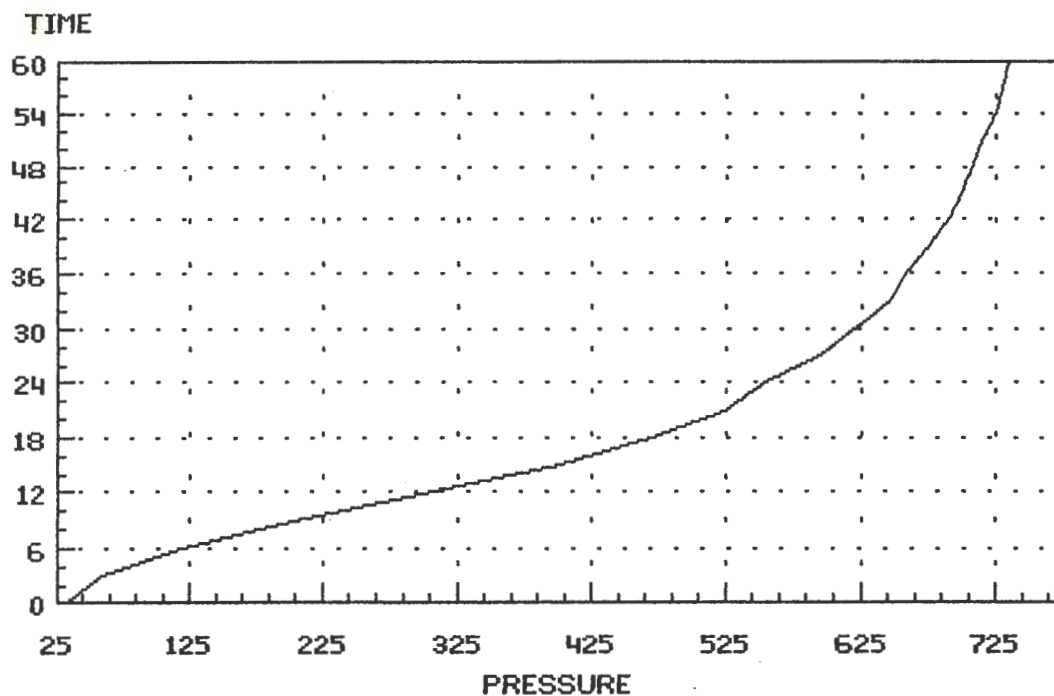
RECORDER # 13308

TOTAL FLOW TIME (MIN.): 90

MIN	LOG(T+MIN/MIN)	PRESSURE	<> PRESSURE
0	0	66.7	66.7
6	1.203903	109.5	42.80001
12	.9292515	233.3	123.8
18	.778011	391.5	158.2
24	.6765717	491.8	100.3
30	.6019515	556.9	65.10004
36	.5439701	598.3	41.39996
42	.4972351	627.9	29.60004
48	.4585552	638.5	10.59998
54	.425892	662.3	23.79999
60	.3978683	677.7	15.40003
66	.3735134	689.6	11.89996
72	.352119	703.8	14.20001
78	.3331547	710.9	7.100037
84	.316213	721.3	10.39996
90	.3009757	725.1	3.799988
96	.2871899	727.5	2.400025
102	.2746515	734.6	7.099976
108	.263194	742.9	8.300049
114	.2526798	745.1	2.199951
120	.2429943	750.8	5.700012

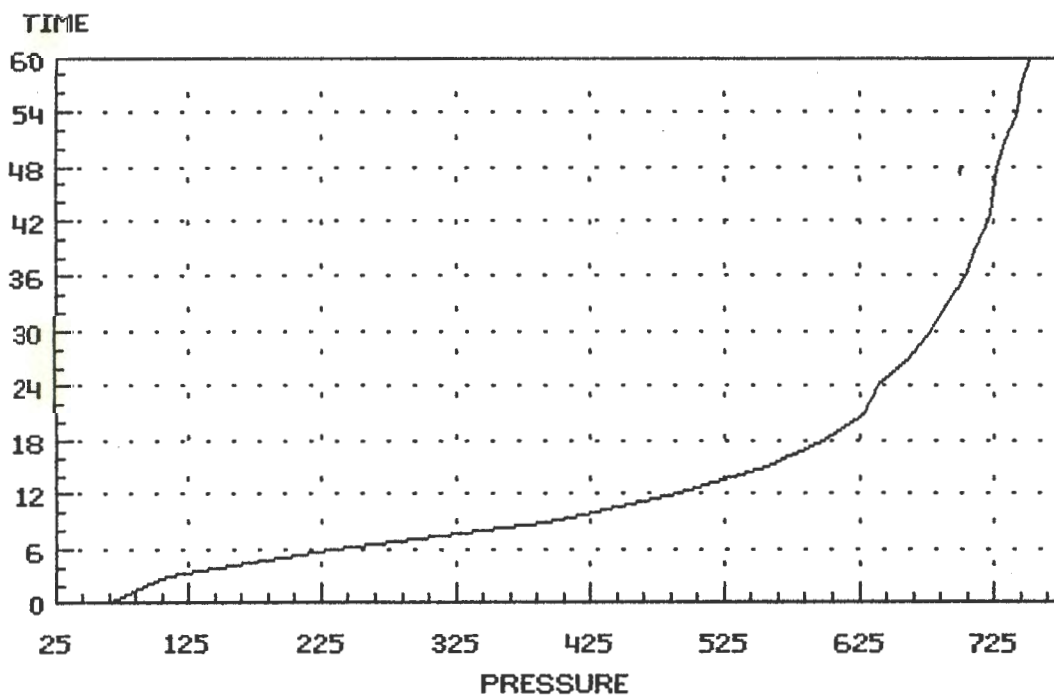
DELTA T DELTA P

DST #1 INITIAL SHUTIN
RECORDER # 13308



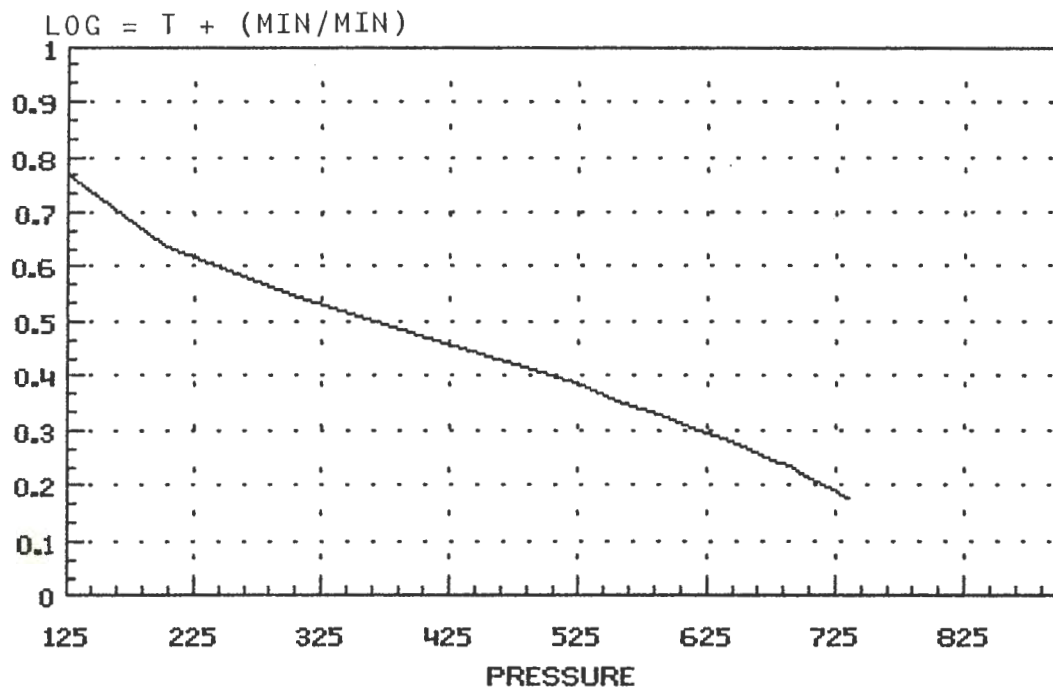
DELTA T DELTA P

DST #1 FINAL SHUTIN
RECORDER # 13308



HORNER PLOT

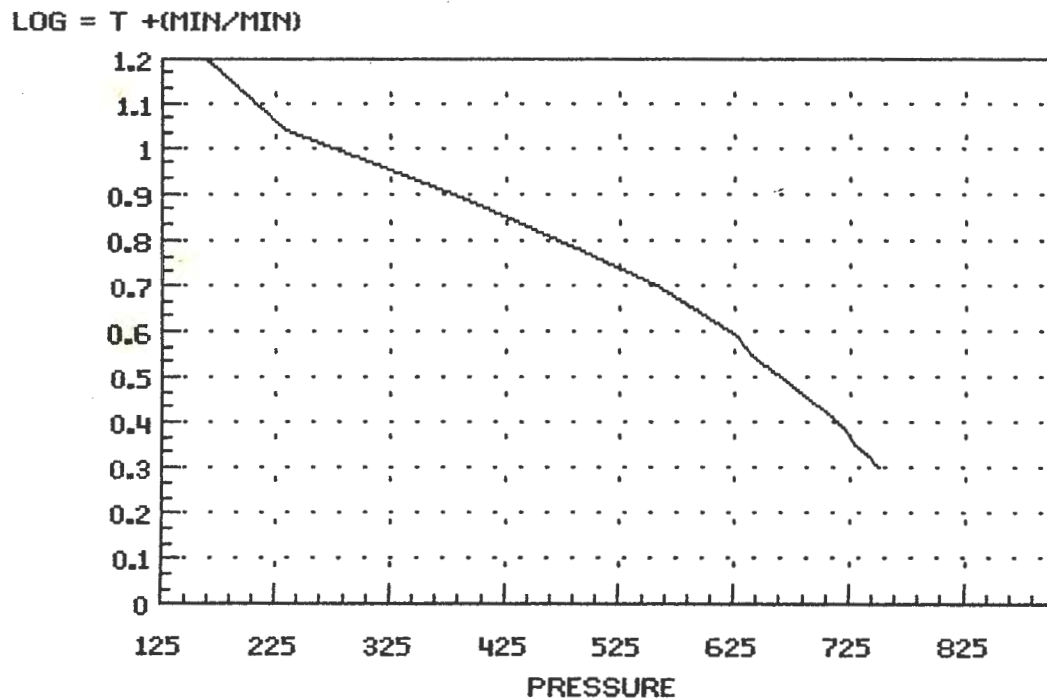
DST #1: INITIAL SHUT-IN
RECORDER # 13308



STATIC PRESSURE 895.0296
SLOPE 911.2239
POINTS USED 21

HORNER PLOT

DST #1 FINAL SHUTIN
RECORDER # 13308



STATIC PRESSURE 890.3306
SLOPE 574.2137
POINTS USED 20

TRILOBITE TESTING COMPANY

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 2145 Date 10/22/89
Company Name QUINOCO PETROLEUM INC
Lease BRANDENBURG #11 Test No. 1
County RUSSELL Sec. 20 Twp. 14S Rng. 14W

SAMPLER RECOVERY

Gas 0 ML Chlorides 6000 ppm.
Oil 300 ML Resistivity 0 ohms @ 0 F
Mud 0 ML Viscosity 44
Water 3700 ML Mud Weight 8.7
Other 0 ML Filtrate 7.6
Pressure 20 PSI Other _____
Total 4000 ML _____

SAMPLER ANALYSIS

.286 54
Resistivity _____ ohms @ _____ F
Chlorides 32000 ppm.
Gravity 0 corrected @ 60 F

PIPE RECOVERY

TOP
Resistivity 0 ohms @ 0 F
Chlorides 0 ppm.

MIDDLE
Resistivity 0 ohms @ 0 F
Chlorides 0 ppm.

BOTTOM
Resistivity 0 ohms @ 0 F
Chlorides _____ ppm.

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

TEST TICKET

No 2145

Well Name & No. <u>Brandenburg #11</u>	Test No. <u>1</u>	Date <u>10/22/89</u>
Company <u>Quinoco Petroleum Inc.</u>	Zone Tested <u>Tapoka</u>	
Address <u>Box 404, Plainville, Ks. 67463</u>	Elevation <u>1838 KB</u>	
Co. Rep./Geo. <u>Ed Bailey / Jim Musgrave</u>	Cont. <u>Allen</u>	Rig # <u>3</u> Est. Ft. of Pay <u>6'</u>
Location: Sec. <u>20</u> Twp. <u>14S</u> Rge. <u>14W</u>	Co. <u>Russell</u>	State <u>Ks.</u>

Interval Tested <u>2860-2880</u>	Drill Pipe Size <u>4 1/2 XH</u>
Anchor Length <u>20</u>	Top Choke — 1" _____
Top Packer Depth <u>2855</u>	Bottom Choke — 3/4" _____
Bottom Packer Depth <u>2860</u>	Hole Size — 7 7/8" _____
Total Depth <u>2880</u>	Rubber Size — 6 3/4" _____

Wt. Pipe I.D. — 2.7 _____	Ft. Run _____
Drill Collar — 2.25 _____	Ft. Run _____

Mud Wt. <u>8.25</u> lb./gal.	Viscosity <u>44</u>	Filtrate <u>2.5</u>
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Tool Open @ 8:19 am Initial Blow 1" blow increasing to a strong 8" blow
No residual

Final Blow 1" blow increasing to a strong 8" blow
No residual

Recovery — Total Feet 75 Flush Tool? _____

Rec. <u>230</u>	Feet of <u>Gas In Pipe</u>
Rec. <u>5</u>	Feet of <u>Clean Oil</u>
Rec. <u>70</u>	Feet of <u>Slightly Oil Cut Wttry Mud 10% oil 30% Wttr.</u>
Rec. _____	Feet of <u>60% Mud</u>
Rec. _____	Feet of _____

BHT 96 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW 286 @ 54 °F Chlorides 33,000 ppm Recovery Chlorides 6,000 ppm System

(A) Initial Hydrostatic Mud <u>1388</u>	PSI AK1 Recorder No. <u>13308</u>	Range <u>4700</u>
(B) First Initial Flow Pressure <u>24</u>	PSI @ (depth) <u>2863</u>	w/Clock No. <u>31154</u>
(C) First Final Flow Pressure <u>36</u>	PSI AK1 Recorder No. <u>1055</u>	Range <u>4325</u>
(D) Initial Shut-In Pressure <u>228</u>	PSI @ (depth) <u>2826</u>	w/Clock No. <u>25813</u>
(E) Second Initial Flow Pressure <u>36</u>	PSI Initial Opening <u>30</u>	Test <u>405⁰⁰</u>
(F) Second Final Flow Pressure <u>60</u>	PSI Initial Shut-In <u>60</u>	Jars <u>X</u>
(G) Final Shut-In Pressure <u>740</u>	PSI Final Flow <u>60</u>	Safety Joint <u>X</u>
(H) Final Hydrostatic Mud <u>1353</u>	PSI Final Shut-In <u>120</u>	Straddle _____

Approved By Jim Musgrave Circ. Sub X

Our Representative Carl F. Hoff Sampler X

Extra Packer _____ Other _____ TOTAL PRICE \$ _____

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name & No.	BRANDENBURG #11	Test No.	2	Date	10/23/89
Company	QUINOCO PETROLEUM INC	Zone Tested	LANSING		
Address	P.O. BOX 404 PLAINVILLE KS 67663	Elevation	1838 KB		
Co. Rep./Geo.	E BAILEY/J MUSGROVE	Cont.	ALLEN RIG #3	Est. Ft. of Pay	5
Location: Sec.	20	Twp.	14S	Rge.	14W
		Co.	RUSSELL	State	KANSAS

Interval Tested	2978' -3014'	Drill Pipe Size	4.5" XH
Anchor Length	36	Top Choke — 1"	
Top Packer Depth	2973	Bottom Choke — 3/4"	
Bottom Packer Depth	2978	Hole Size — 7 7/8"	
Total Depth	3014	Rubber Size — 6 3/4"	
Wt. Pipe I.D. — 2.7		Ft. Run	0
Drill Collar — 2.25		Ft. Run	0
Mud Wt.	9.0	Viscosity	46
	lb./gal.	Filtrate	7.6
Tool Open @	4:57 AM	Initial Blow	STRONG BLOW OFF BOTTOM IN 3 MINUTES-1"
RESIDUAL			

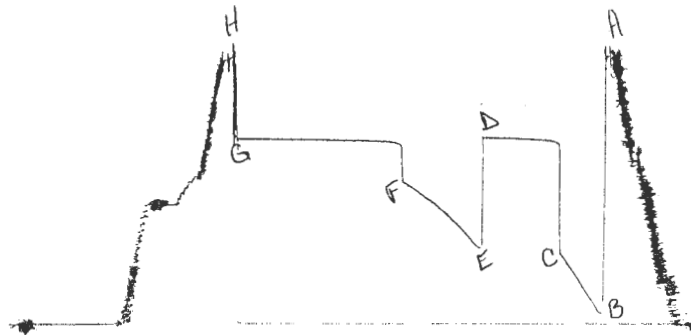
Final Blow STRONG BLOW OFF BOTTOM IN 3.5 MINUTES-2" RESIDUAL

Recovery — Total Feet	1605	Flush Tool?								
Rec.	180	Feet of	GAS IN PIPE							
Rec.	95	Feet of	CLEAN GASSY OIL							
Rec.	130	Feet of	OIL CUT MUDDY WATER-20%OIL/20%MUD/60%WATER							
Rec.	120	Feet of	SLIGHTLY OIL CUT MUDDY WATER-10%OIL/30%MUD/60%WATER							
Rec.	1260	Feet of	WATER WITH SHOW OF OIL (REVERSED WATER)							
BHT	106	°F	Gravity	36	°API @	66	°F	Corrected Gravity	34	°API
RW	.202	@	72	°F	Chlorides	35000	ppm	Recovery	6000	ppm
(A) Initial Hydrostatic Mud	1439.3	PSI	AK1 Recorder No.	13308	Range	4700				
(B) First Initial Flow Pressure	57.8	PSI	@ (depth)	2981	w/Clock No.	31154				
(C) First Final Flow Pressure	383.7	PSI	AK1 Recorder No.	1055	Range	4100				
(D) Initial Shut-In Pressure	996.9	PSI	@ (depth)	3010	w/Clock No.	25813				
(E) Second Initial Flow Pressure	410.4	PSI	Initial Opening	30						
(F) Second Final Flow Pressure	768.9	PSI	Initial Shut-In	60						
(G) Final Shut-In Pressure	958.9	PSI	Final Flow	60						
(H) Final Hydrostatic Mud	1431.2	PSI	Final Shut-In	120						

Our Representative MR CARL F GOFF

TOTAL PRICE \$ 475

Printcraft Printers - Hays, KS

DST# 2RECORDER# 1055#2
1055

This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud.....	1448	1439.3 PSI
(B) First Initial Flow Pressure.....	54	57.8 PSI
(C) First Final Flow Pressure.....	379	383.7 PSI
(D) Initial Closed-In Pressure.....	995	996.9 PSI
(E) Second Initial Flow Pressure.....	400	410.4 PSI
(F) Second Final Flow Pressure.....	764	768.9 PSI
(G) Final Closed-In Pressure.....	1448	1431.2 PSI
(H) Final Hydrostatic Mud.....		PSI

COMPUTER EVALUATION BY TRILOBITE TESTING
QUINOCO PETROLEUM INC
REPORT FOR DST#2 FOR THE BRANDENBURG #11
20-14S-14W RUSSELL KS

TEST PARAMETERS

ELEVATION:	1838 KB	EST. PAY:	5 FT
DATUM:	-1173	ZONE TESTED:	LANSING
TEST INTERVAL:	2978'-3014'	TIME INTERVALS:	30-60-60-120
RECORDER DEPTH:	3010	VISCOSITY:	12.3235 CP
BOTTOM HOLE TEMP:	106	HOLE SIZE:	7.875 IN

CALCULATIONS

CUBIC FEET OF GAS IN PIPE: .65

TOTAL FEET OF RECOVERY: 1605
BARRELS IN DRILL PIPE: 22.8231
GAS OIL RATIO: .629673 CU.FT./BBL
BUBBLE POINT PRESSURE: ; 4.506835E-02
TOTAL BARRELS OF RECOVERY: 22.8231

UNCORR. INIT. PROD.: 365.1696 BBL/DAY

API GRAVITY: 34
FLUID GRADIENT: .37

CORRECTED PIPE FILLUP: 2078.108
CORR. BARRELS OF RECOVERY: 29.54916 BBL

INITIAL PRODUCTION CORRECTED TO FINAL FLOW PRESSURE: 472.7866 BBL/DAY
INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE
675.0565

INITIAL SHUT-IN VALUES:
THEORETICAL STATIC PRESSURE 1005.083
SLOPE 46.48004

FINAL SHUT-IN VALUES
THEORETICAL STATIC PRESSURE 990.9932
SLOPE 20.95995

TRANSMISSIBILITY	3667.714 (MD.-FT./CP.)
PERMEABILITY	9039.811 (MD.)
INDICATED FLOW CAPACITY	45199.06 (MD.FT)
PRODUCTIVITY INDEX	4.144517 (BARRELS/DAY/PSI)
DAMAGE RATIO	1.939082
RADIUS OF INVESTIGATION	901.9883 (FT.)
THEORETICAL POTENTIAL	916.7718 BBL/DAY
POTENTIOMETRIC SURFACE	1126.113 (FT.)
DRAWDOWN FACTOR	1.401854 (%)

INITIAL FLOW

RECORDER # 1055
DST #2

DT(MIN)	PRESSURE	<> PRESSURE
0	57.8	57.8
3	71.8	14
6	99.6	27.8
9	137.9	38.3
12	165.5	27.60001
15	197.1	31.60001
18	233.6	36.5
21	267.1	33.5
24	295.1	28
27	321.9	26.79999
30	359.1	37.20001
33	383.7	24.60001

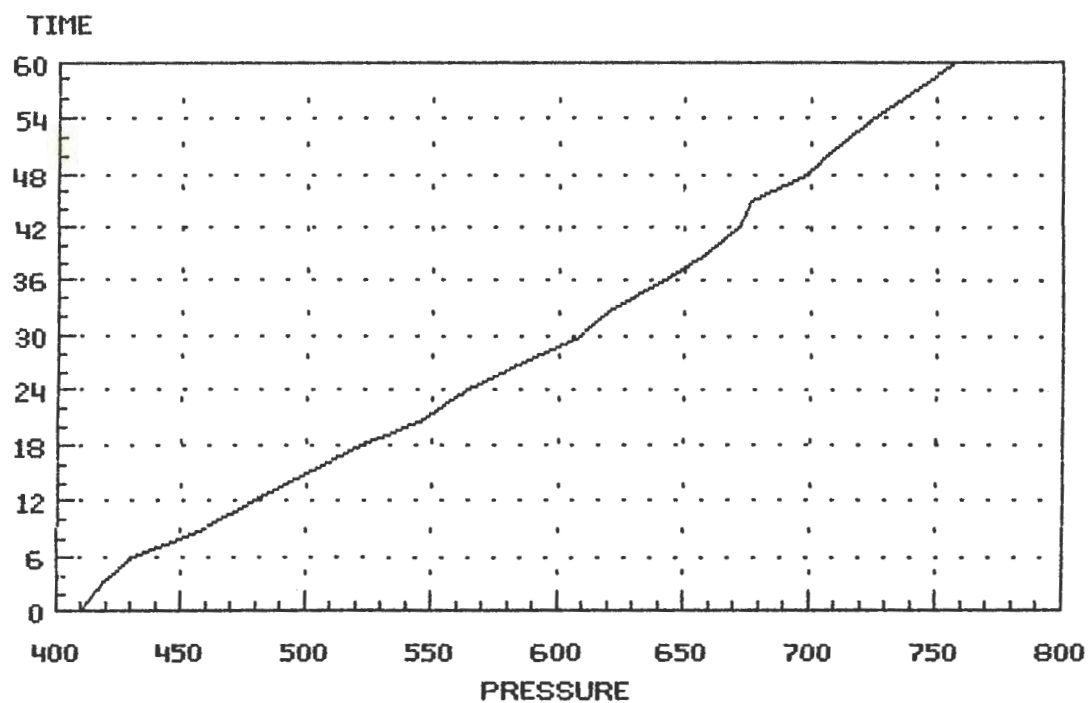
FINAL FLOW

RECORDER # 1055
DST #2

DT(MIN)	PRESSURE	<> PRESSURE
0	410.4	410.4
3	418.5	8.100006
6	430.8	12.29999
9	457.4	26.60001
12	479.8	22.4
15	500.1	20.30002
18	522.5	22.4
21	546.8	24.29999
24	564.1	17.29999
27	586.3	22.20001
30	608.6	22.29999
33	621.7	13.10004
36	641.9	20.20001
39	659.1	17.19995
42	672.2	13.10004
45	676.3	4.099976
48	698.4	22.10004
51	711.5	13.09998
54	725.6	14.09998
57	741.7	16.10004
60	757.8	16.09998
63	768.9	11.10004

DELTA T DELTA P

DST #2 FINAL FLOW
RECORDER # 1055



INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE 675.0565 BBL/DAY

INITIAL SHUT-IN BUILDUP
DST #2

RECORDER # 1055
INITIAL FLOW TIME (MIN.): 30

MIN	LOG(T+MIN/MIN)	PRESSURE	<> PRESSURE
0	0	383.7	383.7
3	1.041205	966.8	583.1
6	.778011	974.9	8.100037
9	.6367073	981.9	7
12	.5439701	984.9	3
15	.4770353	985.9	1
18	.425892	986.9	1
21	.3852815	986.9	0
24	.352119	988.9	2
27	.3244526	988.9	0
30	.3009757	988.9	0
33	.280776	988.9	0
36	.263194	988.9	0
39	.2477398	992.9	4
42	.234041	993.9	1
45	.2218087	993.9	0
48	.2108154	993.9	0
51	.2008786	994.9	1
54	.191851	995.9	1
57	.1836113	995.9	0
60	.1760595	996.9	1

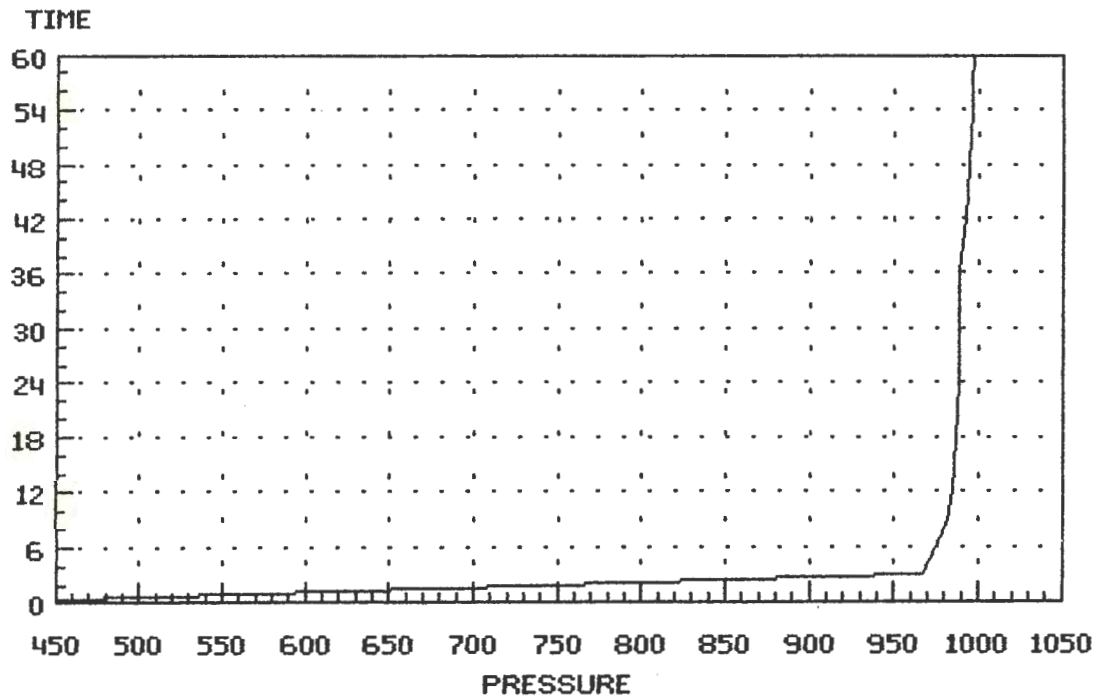
FINAL SHUT-IN BUILDUP
DST #2

RECORDER # 1055
TOTAL FLOW TIME (MIN.): 90

MIN	LOG(T+MIN/MIN)	PRESSURE	<> PRESSURE
0	0	768.9	768.9
6	1.203903	963.9	195
12	.9292515	969.9	6
18	.778011	973.9	4
24	.6765717	974.9	1
30	.6019515	977.9	3
36	.5439701	979.9	2
42	.4972351	979.9	0
48	.4585552	981.9	2
54	.425892	981.9	0
60	.3978683	981.9	0
66	.3735134	983.9	2
72	.352119	983.9	0
78	.3331547	983.9	0
84	.316213	984.9	1
90	.3009757	984.9	0
96	.2871899	985.9	1
102	.2746515	985.9	0
108	.263194	985.9	0
114	.2526798	985.9	0
120	.2429943	985.9	0

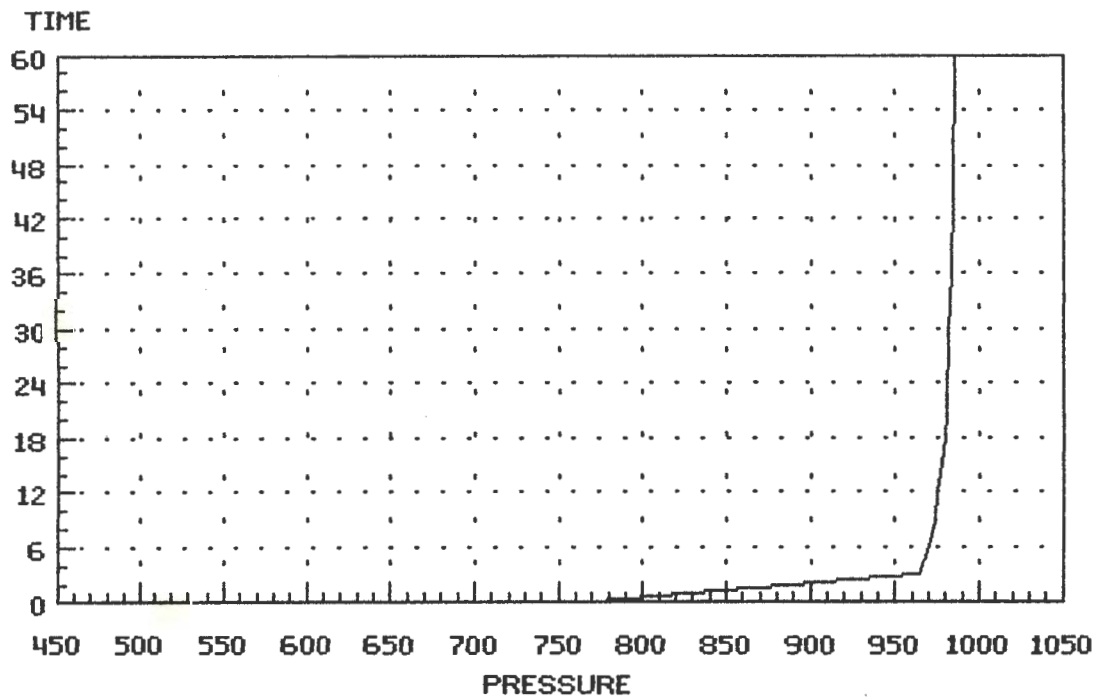
DELTA T DELTA P

DST #2 INITIAL SHUTIN
RECORDER # 1055



DELTA T DELTA P

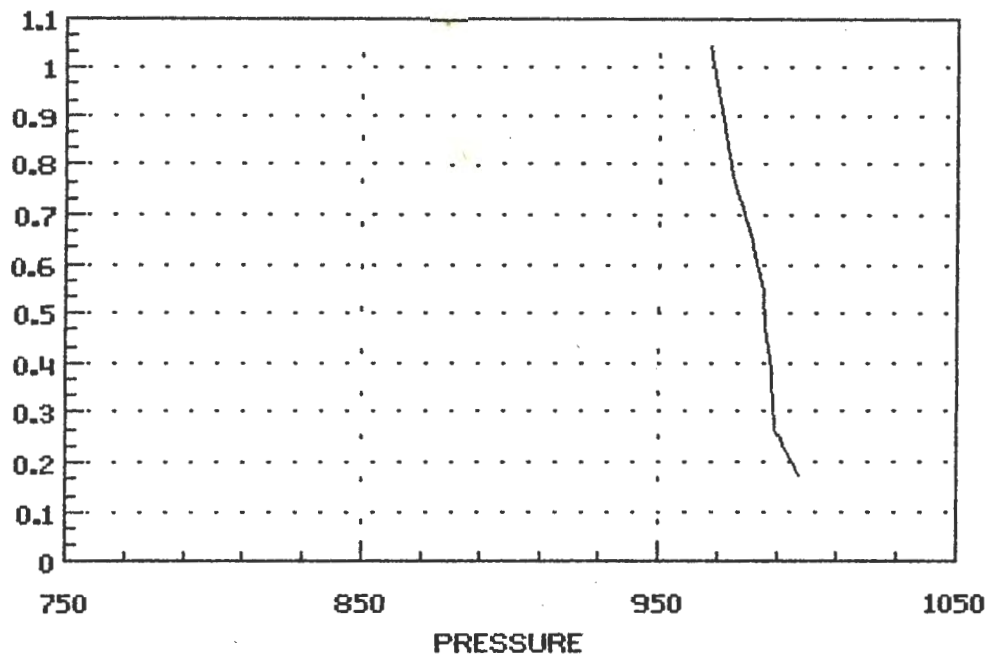
DST #2 FINAL SHUTIN
RECORDER # 1055



HORNER PLOT

DST #2 INITIAL SHUTIN
RECORDER # 1055

LOG = T +(MIN/MIN)

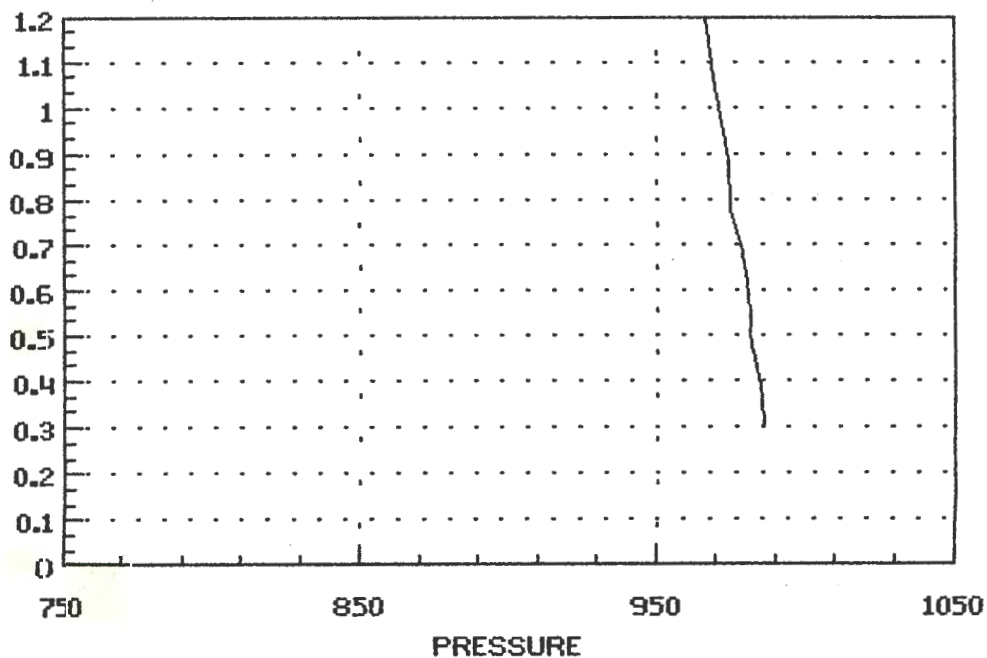


STATIC PRESSURE 1005.083
SLOPE 46.48004
POINTS USED 20

HORNER PLOT

DST #2 FINAL SHUTIN
RECORDER # 1055

LOG = T +(MIN/MIN)



STATIC PRESSURE 990.9932
SLOPE 20.95995
POINTS USED 20

TRILOBITE TESTING COMPANY

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 2146 Date 10/23/89
Company Name QUINOCO PETROLEUM INC
Lease BRANDENBURG #11 Test No. 2
County RUSSELL Sec. 20 Twp. 14S Rng. 14W

SAMPLER RECOVERY

Gas 200 ML Chlorides 6000 ppm.
Oil 800 ML Resistivity 0 ohms @ 0 F
Mud 0 ML Viscosity 46
Water 3000 ML Mud Weight 9.0
Other 0 ML Filtrate 7.6
Pressure 60 PSI Other _____
Total 4000 ML

PIT MUD ANALYSIS

SAMPLER ANALYSIS

Resistivity .286 ohms @ 54 F TOP
Chlorides 32000 ppm. Resistivity .202 ohms @ 72 F
Gravimetry 0 corrected @ 60 F Chlorides 35000 ppm.

PIPE RECOVERY

MIDDLE

Resistivity 0 ohms @ 0 F
Chlorides 0 ppm.

BOTTOM

Resistivity 0 ohms @ 0 F
Chlorides 0 ppm.

TRILOBITE TESTING COMPANY

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 2146 Date 10/23/89
Company Name Quinoco Petroleum Inc.
Lease Brandenburg #11 Test No. 2
County Russell Sec. 20 Twp. 14S Rng. 14W

SAMPLER RECOVERY

Gas 200 ML
Oil 800 ML
Mud _____ ML
Water 3,000 ML
Other _____ ML
Pressure 20 # PSI
Total 4000 ML

PIT MUD ANALYSIS

Chlorides _____ ppm.
Resistivity _____ ohms @ _____ F
Viscosity 46
Mud Weight 99
Filtrate 2.8
Other _____

SAMPLER ANALYSIS

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

PIPE RECOVERY

TOP
Resistivity .202 ohms @ 22 F
Chlorides 35,000 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. 2146

Well Name & No. <u>Brandenburg #11</u>	Test No. <u>2</u>	Date <u>10/23/89</u>
Company <u>Quinoco Petroleum Inc.</u>	Zone Tested <u>Leasing</u>	
Address <u>Box 404, Plainville, Ks. 67663</u>	Elevation <u>1838' ASL</u>	
Co. Rep./Geo. <u>Lauren Heel / Jim Musgrave cont. Allen Rig #3</u>	Est. Ft. of Pay <u>5'</u>	
Location: Sec. <u>20</u> Twp. <u>14S</u> Rge. <u>14W</u> Co. <u>Russell</u> State <u>Ks.</u>		

Interval Tested <u>2978 - 3014</u>	Drill Pipe Size <u>4 1/2 x 14</u>
Anchor Length <u>34</u>	Top Choke — 1" _____
Top Packer Depth <u>2923</u>	Bottom Choke — 3/4" _____
Bottom Packer Depth <u>2978</u>	Hole Size — 7 7/8" _____
Total Depth <u>3014</u>	Rubber Size — 6 3/4" _____
Wt. Pipe I.D. — 2.7 _____	Ft. Run _____
Drill Collar — 2.25 _____	Ft. Run _____
Mud Wt. <u>9.9</u> lb./gal.	Viscosity <u>44</u> Filtrate <u>2.5</u>
Tool Open @ <u>4:57 am</u> Initial Blow <u>Strong blow off bottom in 3 min.</u>	
<u>1" residual</u>	
Final Blow <u>Strong blow off bottom in 3 1/2 min.</u>	
<u>2" residual</u>	
Recovery — Total Feet <u>1405</u>	Flush Tool? _____
Rec. <u>180'</u> Feet of <u>gas in pipe</u>	
Rec. <u>95'</u> Feet of <u>clean gassy oil</u>	
Rec. <u>130'</u> Feet of <u>oil cut muddy water (20% oil, 20% mud, 60% H₂O)</u>	
Rec. <u>120'</u> Feet of <u>slightly oil cut muddy water (10% oil, 30% " ; 60% H₂O)</u>	
Rec. <u>1260</u> Feet of <u>water, show of oil. Reversed NTR</u>	
BHT <u>106</u> °F Gravity <u>36</u> °API @ <u>66</u> °F Corrected Gravity <u>34</u> °API	
RW <u>1.202</u> @ <u>22</u> °F Chlorides <u>35,000</u> ppm Recovery Chlorides <u>4,000</u> ppm System	
(A) Initial Hydrostatic Mud <u>1448</u> PSI AK1 Recorder No. <u>13308</u> Range <u>4700</u>	
(B) First Initial Flow Pressure <u>54</u> PSI @ (depth) <u>2981</u> w/Clock No. <u>31154</u>	
(C) First Final Flow Pressure <u>329</u> PSI AK1 Recorder No. <u>1055</u> Range <u>4100</u>	
(D) Initial Shut-In Pressure <u>995</u> PSI @ (depth) <u>3010</u> w/Clock No. <u>25813</u>	
(E) Second Initial Flow Pressure <u>400</u> PSI Initial Opening <u>30</u> Test <u>#405.00</u>	
(F) Second Final Flow Pressure <u>764</u> PSI Initial Shut-In <u>60</u> Jars <u>X</u>	
(G) Final Shut-In Pressure <u>995</u> PSI Final Flow <u>60</u> Safety Joint <u>X</u>	
(H) Final Hydrostatic Mud <u>1448</u> PSI Final Shut-In <u>120</u> Straddle _____	

Approved By Jim Musgrave

Our Representative Carl P. Hoff

Circ. Sub X 20.94

Sampler X

Extra Packer _____

Other _____

TOTAL PRICE \$ _____

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name & No.	BRANDENBURG #11	Test No.	3	Date	10/23/89
Company	QUINOCO PETROLEUM INC	Zone Tested	LANSING-KC		
Address	P.O. BOX 404 PLAINVILLE KS 67663		Elevation	1838 KB	
Co. Rep./Geo.	E BAILEY/J MUSGROVE	Cont.	ALLEN RIG #3	Est. Ft. of Pay	0
Location: Sec.	20	Twp.	14S	Rge.	14W
Co.	RUSSELL		State	KANSAS	

Interval Tested	3024-3064	Drill Pipe Size	4.5" XH
Anchor Length	40	Top Choke — 1"	
Top Packer Depth	3019	Bottom Choke — 3/4"	
Bottom Packer Depth	3024	Hole Size — 7 7/8"	
Total Depth	3064	Rubber Size — 6 3/4"	
Wt. Pipe I.D. — 2.7		Ft. Run	0
Drill Collar — 2.25		Ft. Run	0
Mud Wt.	9.0	Viscosity	43
	lb./gal.	Filtrate	44.1
Tool Open @	9:27 PM	Initial Blow STRONG BLOW BUILDING TO BOTTOM OF BUCKET IN 45 SECONDS	
Final Blow	3" BLOW BUILDING TO BOTTOM OF BUCKET IN 2 MINUTES		
	2060		

Recovery — Total Feet	60	Flush Tool?										
Rec.	60	Feet of	GAS IN PIPE									
Rec.	10	Feet of	CLEAN GASSY OIL									
Rec.	10	Feet of	OIL CUT WATER-15%OIL/85% WATER									
Rec.	1550	Feet of	OIL SPECKED WATER									
Rec.	0	Feet of										
BHT	101	°F	Gravity	41	°API @	60	°F	Corrected Gravity	41	°API		
RW	.145	@	58.5	°F	Chlorides	64000	ppm	Recovery	Chlorides	12000	ppm	System
(A) Initial Hydrostatic Mud	1530.6	PSI	AK1 Recorder No.	7437	Range	4200						
(B) First Initial Flow Pressure	155.9	PSI	@ (depth)	3061	w/Clock No.	25810						
(C) First Final Flow Pressure	752.3	PSI	AK1 Recorder No.	5495	Range	4200						
(D) Initial Shut-In Pressure	936.4	PSI	@ (depth)	3025	w/Clock No.	26199						
(E) Second Initial Flow Pressure	784.6	PSI	Initial Opening	30								
(F) Second Final Flow Pressure	936.4	PSI	Initial Shut-In	60								
(G) Final Shut-In Pressure	936.4	PSI	Final Flow	60								
(H) Final Hydrostatic Mud	1499.8	PSI	Final Shut-In	120								

Our Representative MR PAUL SIMPSON

TOTAL PRICE..... \$ 450

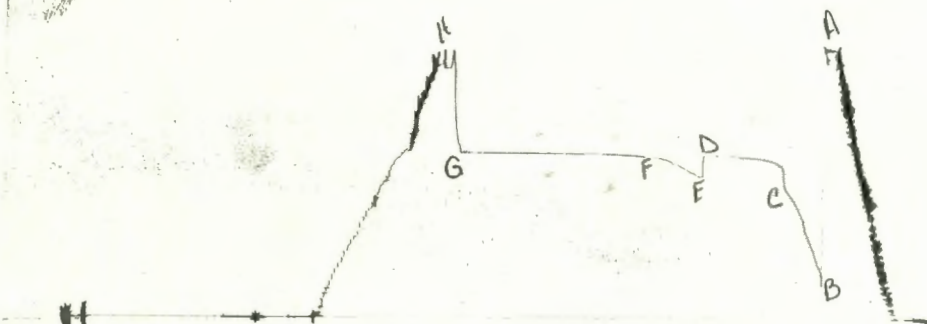
Printcraft Printers - Hays, KS

DST# 5

RECORDER#

7437

~~#3~~
7437



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud.....	1525	1530.6
(B) First Initial Flow Pressure.....	154	155.9
(C) First Final Flow Pressure.....	747	752.3
(D) Initial Closed-In Pressure.....	926	936.4
(E) Second Initial Flow Pressure.....	779	784.6
(F) Second Final Flow Pressure.....	926	936.4
(G) Final Closed-In Pressure.....	926	936.4
(H) Final Hydrostatic Mud.....	1494	1499.8

TRILOBITE TESTING COMPANY

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 2207 Date 10/23/89
Company Name QUINOCO PETROLEUM INC
Lease BRANDENBURG #11 Test No. 3
County RUSSELL Sec. 20 Twp. 14S Rng. 14W

SAMPLER RECOVERY

Gas 100 ML Chlorides 12000 ppm.
Oil 1000 ML Resistivity .65 ohms @ 62 F
Mud 0 ML Viscosity 43
Water 2900 ML Mud Weight 9.0
Other 0 ML Filtrate 44.1
Pressure 50 PSI Other _____
Total 4000 ML _____

SAMPLER ANALYSIS

Resistivity .143 ohms @ 65.6 F TOP
Chlorides 58000 ppm. Resistivity .19 ohms @ 55 F
Gravity 0 corrected @ 60 F Chlorides 50000 ppm.

PIPE RECOVERY

MIDDLE
Resistivity .183 ohms @ 55.2 F
Chlorides 53000 ppm.
BOTTOM
Resistivity .145 ohms @ 58.5 F
Chlorides 64000 ppm.

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

TEST TICKET

No 2207

Well Name & No. <u>Brandenberg #1</u>	Test No. <u>3</u>	Date <u>10/23/89</u>
Company <u>Quinoco</u>	Zone Tested <u>LKC</u>	
Address _____	Elevation <u>1838 KB</u>	
Co. Rep./Geo. <u>Jim Musgrave</u>	Cont. <u>Allen #3</u>	Est. Ft. of Pay _____
Location: Sec. <u>20</u> Twp. <u>14S</u>	Rge. <u>14W</u>	Co. <u>Russell</u> State <u>Ks</u>

Interval Tested <u>3024-3064</u>	Drill Pipe Size <u>4 1/2 XH</u>
Anchor Length <u>40</u>	Top Choke — 1" _____
Top Packer Depth <u>3019</u>	Bottom Choke — 3/4" _____
Bottom Packer Depth <u>3024</u>	Hole Size — 7 7/8" _____
Total Depth <u>3064</u>	Rubber Size — 6 3/4" _____
Wt. Pipe I.D. — 2.7 _____	Ft. Run _____
Drill Collar — 2.25 _____	Ft. Run _____
Mud Wt. <u>9</u> lb./gal.	Viscosity <u>43</u> Filtrate <u>11 1/2</u>
Tool Open @ <u>9:27 PM</u>	Initial Blow <u>strong blow building to bottom of bucket in 45 sec.</u>
Final Blow <u>3" blow building to bottom of bucket in 2 minutes</u>	

Recovery — Total Feet <u>2060</u>	Flush Tool? _____
Rec. <u>60</u> Feet of <u>GIP</u>	
Rec. <u>10</u> Feet of <u>cl gassy oil</u>	
Rec. <u>500</u> Feet of <u>ocw 15% oil 85% water</u>	
Rec. <u>1550</u> Feet of <u>oil specked water</u>	
Rec. _____ Feet of _____	
BHT _____ °F Gravity <u>41</u> °API @ <u>60</u> °F Corrected Gravity <u>41</u> °API	
RW <u>1145</u> @ <u>58.5</u> °F Chlorides <u>64,000</u> ppm Recovery Chlorides <u>17,600</u> ppm System	
(A) Initial Hydrostatic Mud <u>1525</u> PSI AK1 Recorder No. <u>7437</u> Range <u>4200</u>	
(B) First Initial Flow Pressure <u>154</u> PSI @ (depth) <u>3061</u> w/Clock No. <u>25810</u>	
(C) First Final Flow Pressure <u>747</u> PSI AK1 Recorder No. <u>5495</u> Range <u>4200</u>	
(D) Initial Shut-In Pressure <u>926</u> PSI @ (depth) <u>3025</u> w/Clock No. <u>26199</u>	
(E) Second Initial Flow Pressure <u>779</u> PSI Initial Opening <u>30</u> Test <u>400</u>	
(F) Second Final Flow Pressure <u>926</u> PSI Initial Shut-In <u>60</u> Jars <u>Y</u>	
(G) Final Shut-In Pressure <u>926</u> PSI Final Flow <u>60</u> Safety Joint <u>X</u>	
(H) Final Hydrostatic Mud <u>1494</u> PSI Final Shut-In <u>120</u> Straddle _____	

Approved By Jim Musgrave

Our Representative Don Simpson

Circ. Sub _____

Sampler Y 50

Extra Packer _____

Other _____

TOTAL PRICE \$ 450

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name & No.	BRANDENBURG #11	Test No.	4	Date	10/24/89
Company	QUINOCO PETROLEUM INC	Zone Tested	LANSING-KANS CITY		
Address	P.O. BOX 404 PLAINVILLE KS 67663	Elevation	1838 KB		
Co. Rep./Geo.	E BAILEY/ J MUSGROVE	Cont.	ALLEN RIG #3	Est. Ft. of Pay	11
Location: Sec.	20	Twp.	14S	Rge.	14W
		Co.	RUSSELL	State	KANSAS

Interval Tested	3071-3085	Drill Pipe Size	4.5" XH
Anchor Length	14	Top Choke—1"	
Top Packer Depth	3066	Bottom Choke— $\frac{3}{4}$ "	
Bottom Packer Depth	3071	Hole Size— $7\frac{7}{8}$ "	
Total Depth	3085	Rubber Size— $6\frac{3}{4}$ "	
Wt. Pipe I.D.—2.7		Ft. Run	0
Drill Collar—2.25		Ft. Run	0
Mud Wt.	9.0	Viscosity	58
	lb./gal.	Filtrate	9.0
Tool Open @	12:40 PM	Initial Blow STRONG BLOW BUILT TO BOTTOM OF BUCKET IN	
	50 SECONDS-BLOW BACK BUILT TO 5"		
Final Blow	STRONG BLOW BUILT TO BOTTOM IN 30 SECONDS-BLOW BACK		
	BUILT TO BOTTOM OF BUCKET IN 11 MINUTES		
Recovery—Total Feet	1466	Flush Tool?	
Rec.	835	Feet of	GAS IN PIPE
Rec.	75	Feet of	CLEAN GASSY OIL
Rec.	791	Feet of	OIL & GAS CUT WATER (15% OIL/85% WATER)
Rec.	0	Feet of	
Rec.	0	Feet of	
Rec.	104	Feet of	
BHT	104	°F	Gravity 39
		°API @	70
		°F	Corrected Gravity 38
RW	.173	@	67.5
		°F	Chlorides 46000
		ppm Recovery	Clorides 11000
		ppm System	
(A) Initial Hydrostatic Mud	1528.2	PSI	AK1 Recorder No. 7437
			Range 4200
(B) First Initial Flow Pressure	103.5	PSI	@ (depth) 3084
			w/Clock No. 26199
(C) First Final Flow Pressure	468.1	PSI	AK1 Recorder No. 5495
			Range 4200
(D) Initial Shut-In Pressure	701.6	PSI	@ (depth) 3072
			w/Clock No. 25810
(E) Second Initial Flow Pressure	490.3	PSI	Initial Opening 30
(F) Second Final Flow Pressure	667.8	PSI	Initial Shut-In 60
(G) Final Shut-In Pressure	703.7	PSI	Final Flow 60
(H) Final Hydrostatic Mud	1468.2	PSI	Final Shut-In 120

Our Representative MR PAUL SIMPSON

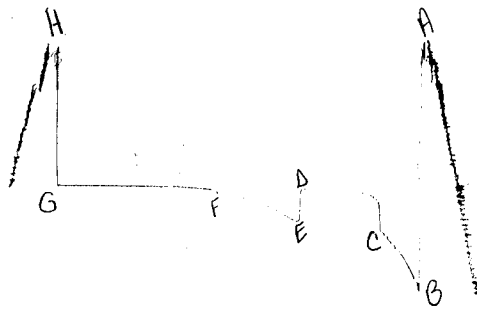
TOTAL PRICE \$ 470

Printcraft Printers - Hays, KS

DST# 4RECORDER# 7427

7437

#4



This is an actual photograph of recorder chart.

PRESSURE

POINT

Field
Reading

Office
Reading

(A) Initial Hydrostatic Mud.....	1536	1528.2	PSI
(B) First Initial Flow Pressure.....	99	103.5	PSI
(C) First Final Flow Pressure.....	474	468.1	PSI
(D) Initial Closed-In Pressure.....	716	701.6	PSI
(E) Second Initial Flow Pressure.....	506	490.3	PSI
(F) Second Final Flow Pressure.....	674	667.8	PSI
(G) Final Closed-In Pressure.....	716	703.7	PSI
(H) Final Hydrostatic Mud.....	1494	1468.2	PSI

COMPUTER EVALUATION BY TRILOBITE TESTING
QUINOCO PETROLEUM INC
REPORT FOR DST#4 FOR THE BRANDENBURG #11
20-14S-14W RUSSELL KS

TEST PARAMETERS

ELEVATION:	1838 KB	EST. PAY:	11 FT
DATUM:	-1235	ZONE TESTED:	LANSING-KS CITY
TEST INTERVAL:	3071-3085		
RECORDER DEPTH:	3072	TIME INTERVALS:	30-60-60-120
BOTTOM HOLE TEMP:	104	VISCOSITY:	6.499923 CP
		HOLE SIZE:	7.875 IN

CALCULATIONS

CUBIC FEET OF GAS IN PIPE: .65

TOTAL FEET OF RECOVERY: 1466
BARRELS IN DRILL PIPE: 20.84652
GAS OIL RATIO: 3.197939 CU.FT./BBL
BUBBLE POINT PRESSURE: ; 7.205643E-02
TOTAL BARRELS OF RECOVERY: 20.84652

UNCORR. INIT. PROD.: 333.5443 BBL/DAY

API GRAVITY: 38

FLUID GRADIENT: .362

CORRECTED PIPE FILLUP: 1844.752

CORR. BARRELS OF RECOVERY: 26.22168 BBL

INITIAL PRODUCTION CORRECTED TO FINAL FLOW PRESSURE: 419.5469 BBL/DAY
INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE
161.7365

INITIAL SHUT-IN VALUES:
THEORETICAL STATIC PRESSURE 711.5116
SLOPE 56.29695

FINAL SHUT-IN VALUES
THEORETICAL STATIC PRESSURE 706.9883
SLOPE 13.53182

TRANSMISSIBILITY	5041.327 (MD.-FT./CP.)
PERMEABILITY	2978.931 (MD.)
INDICATED FLOW CAPACITY	32768.24 (MD.FT)
PRODUCTIVITY INDEX	5.696699 (BARRELS/DAY/PSI)
DAMAGE RATIO	.5299691
RADIUS OF INVESTIGATION	517.7874 (FT.)
POTENTIOMETRIC SURFACE	405.5056 (FT.)
DRAWDOWN FACTOR	.6357431 (%)

INITIAL FLOW

REORDER # 5495
DST #4

DT (MIN)	PRESSURE	<> PRESSURE
0	103.5	103.5
3	115.2	11.7
6	155.2	40
9	208.2	53
12	252.6	44.40001
15	297.9	45.29999
18	333.9	36
21	371.9	38
24	399.4	27.5
27	424.8	25.4
30	445.9	21.10001
33	468.1	22.20001

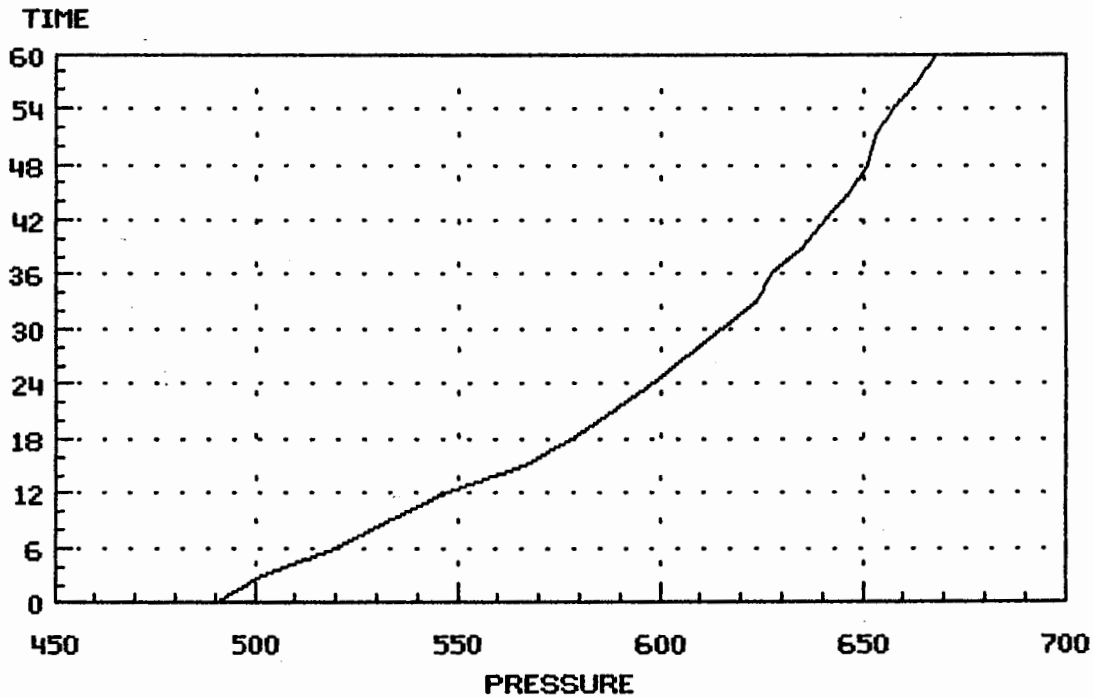
FINAL FLOW

REORDER # 5495
DST #4

DT (MIN)	PRESSURE	<> PRESSURE
0	490.3	490.3
3	501.9	11.60001
6	519.8	17.89999
9	532.6	12.79999
12	547.4	14.80005
15	566.4	19
18	578.1	11.69995
21	587.5	9.400024
24	598.1	10.59998
27	606.5	8.400024
30	614.9	8.400024
33	623.4	8.5
36	627.7	4.299988
39	635.1	7.399964
42	640.4	5.300049
45	646.7	6.299988
48	650.9	4.200012
51	653	2.099976
54	657.3	4.299988
57	663.6	6.299988
60	667.8	4.200012

DELTA T DELTA P

DST #4 FINAL FLOW
RECORDER # 5495



INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE 161.7365 BBL/DAY

INITIAL SHUT-IN BUILDUP
DST #4

RECORDER # 5495
INITIAL FLOW TIME (MIN.): 30

MIN	LOG(T+MIN/MIN)	PRESSURE	<> PRESSURE

0	0	468.1	468.1
3	1.041205	642.5	174.4
6	.778011	667.8	25.29999
9	.6367073	677.3	9.5
12	.5439701	681.5	4.200012
15	.4770353	684.7	3.200012
18	.425892	686.8	2.099976
21	.3852815	691.1	4.299988
24	.352119	693.2	2.100037
27	.3244526	695.3	2.099976
30	.3009757	696.2	.9000244
33	.280776	697.4	1.200012
36	.263194	697.4	0
39	.2477398	697.4	0
42	.234041	697.4	0
45	.2218087	697.4	0
48	.2108154	699.5	2.099976
51	.2008786	699.5	0
54	.191851	699.5	0
57	.1836113	699.5	0
60	.1760595	701.6	2.099976

FINAL SHUT-IN BUILDUP
DST #4

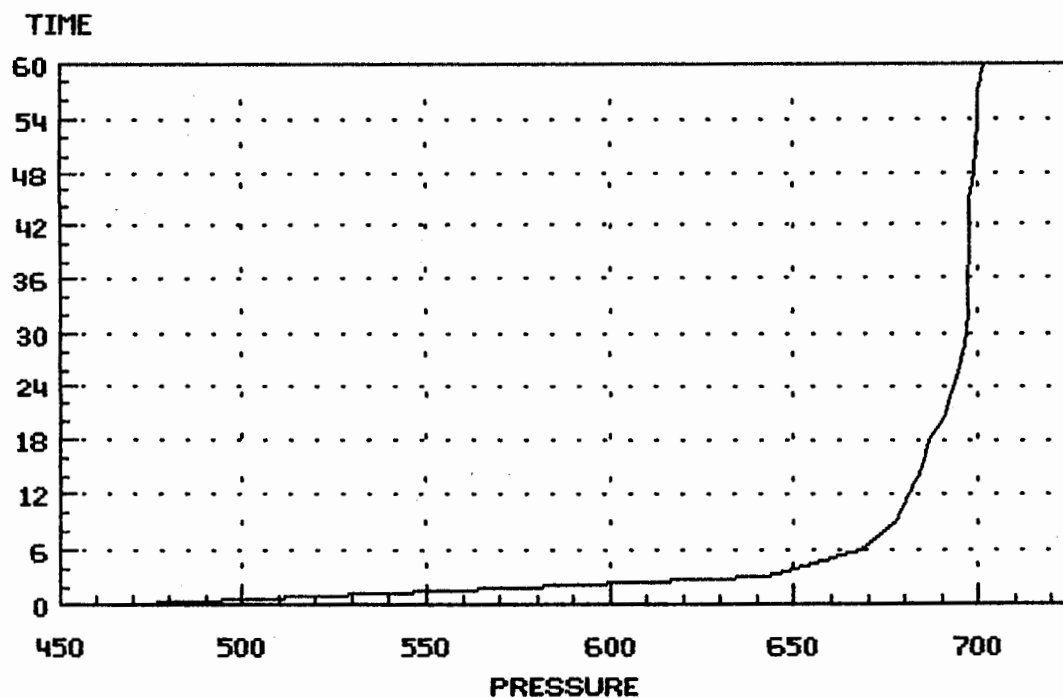
RECORDER # 5495
TOTAL FLOW TIME (MIN.): 90

MIN	LOG(T+MIN/MIN)	PRESSURE	<> PRESSURE

0	0	667.8	667.8
6	1.203903	669.9	2.100037
12	.9292515	694.2	24.29999
18	.778011	697.4	3.200012
24	.6765717	697.4	0
30	.6019515	699.5	2.099976
36	.5439701	699.5	0
42	.4972351	699.5	0
48	.4585552	701.6	2.099976
54	.425892	701.6	0
60	.3978683	702.7	1.100037
66	.3735134	703.7	1
72	.352119	703.7	0
78	.3331547	703.7	0
84	.316213	703.7	0
90	.3009757	703.7	0
96	.2871899	703.7	0
102	.2746515	703.7	0
108	.263194	703.7	0
114	.2526798	703.7	0
120	.2429943	703.7	0

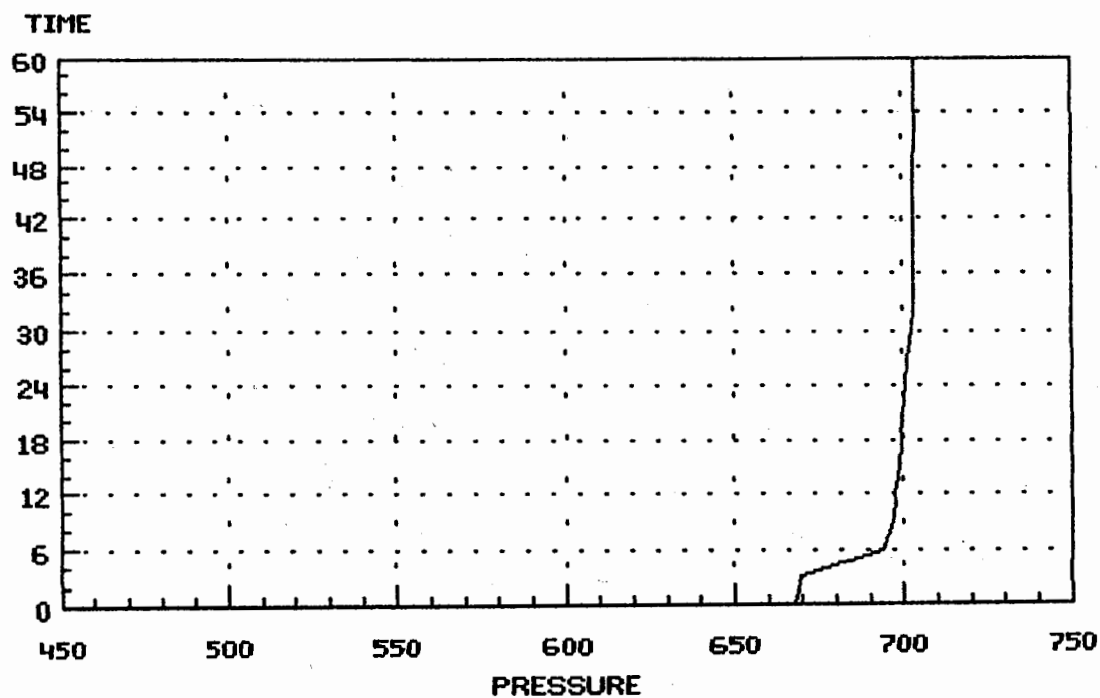
DELTA T DELTA P

DST #4 INITIAL SHUTIN
RECORDER # 5495



DELTA T DELTA P

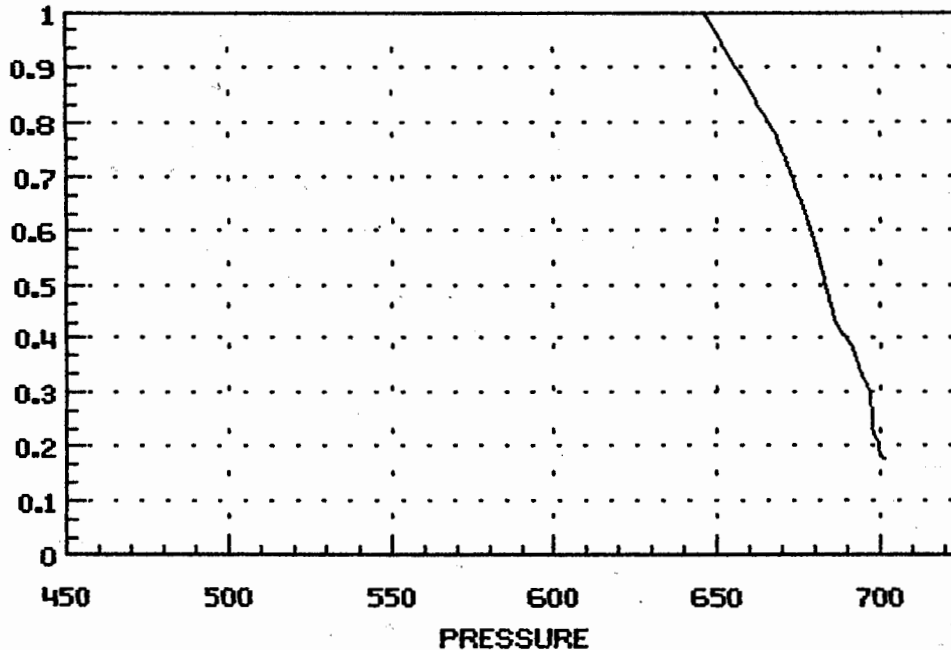
DST #4 FINAL SHUTIN
RECORDER # 5495



HORNER PLOT

DST #4 INITIAL SHUTIN
RECORDER # 5495

LOG = T + (MIN/MIN)

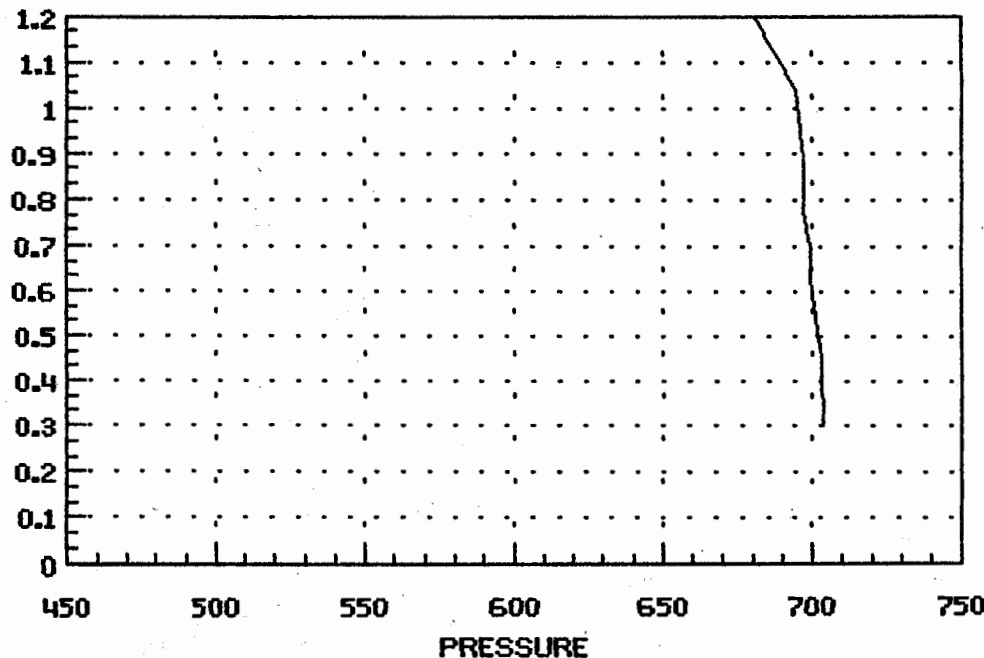


STATIC PRESSURE 711.5116
SLOPE 56.29695
POINTS USED 19

HORNER PLOT

DST #4 FINAL SHUTIN
RECORDER # 5495

LOG = T + (MIN/MIN)



STATIC PRESSURE 706.9882
SLOPE 13.53182
POINTS USED 21

TRILOBITE TESTING COMPANY

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 2208 Date 10/24/89
Company Name QUINOCO PETROLEUM INC
Lease BRANDENBURG #11 Test No. 4
County RUSSELL Sec. 20 Twp. 14S Rng. 14W

SAMPLER RECOVERY

Gas 500 ML
Oil 1000 ML
Mud 0 ML
Water 2500 ML
Other 0 ML
Pressure 100 PSI
Total 0 ML

PIT MUD ANALYSIS

Chlorides 11000 ppm.
Resistivity 0 ohms @ 0 F
Viscosity 58
Mud Weight 9.0
Filtrate 9.0
Other _____

SAMPLER ANALYSIS

Resistivity .151 ohms @ 66.2 F
Chlorides 55000 ppm.
Gravity 38 corrected @ 60 F

PIPE RECOVERY

TOP
Resistivity .242 ohms @ 79.3 F
Chlorides 25000 ppm.
MIDDLE
Resistivity .253 ohms @ 77.3 F
Chlorides 25000 ppm.
BOTTOM
Resistivity .173 ohms @ 67.5 F
Chlorides 46000 ppm.

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

TEST TICKET

No 2208

Well Name & No. <u>Brandenburg # 11</u>	Test No. <u>4</u>	Date <u>10/24/89</u>
Company <u>Quinoco</u>	Zone Tested <u>LKC 6'</u>	
Address _____	Elevation <u>1838</u>	
Co. Rep./Geo. <u>Jim Musgrave</u>	Cont. <u>Allen #1</u>	Est. Ft. of Pay <u>11</u>
Location: Sec. <u>20</u> Twp. <u>14S</u>	Rge. <u>14W</u>	Co. <u>Russell</u> State <u>Ks</u>

Interval Tested <u>3071-3085</u>	Drill Pipe Size <u>4 1/2 X 17</u>
Anchor Length <u>14</u>	Top Choke — 1" _____
Top Packer Depth <u>3066</u>	Bottom Choke — 3/4" _____
Bottom Packer Depth <u>3071</u>	Hole Size — 7 7/8" _____
Total Depth <u>3085</u>	Rubber Size — 6 3/4" _____
Wt. Pipe I.D. — 2.7 _____	Ft. Run _____
Drill Collar — 2.25 _____	Ft. Run _____
Mud Wt. <u>9.0</u> lb./gal.	Viscosity <u>58</u> Filtrate <u>9.0</u>
Tool Open @ <u>12:40 PM</u>	Initial Blow <u>strong blow built to bottom of bucket in 50 seconds (blow back built to 5")</u>
Final Blow <u>strong blow built to bottom in 30 seconds (blow back built to bottom of bucket in 11 minutes)</u>	
Recovery — Total Feet <u>1466</u>	Flush Tool? _____
Rec. <u>835</u> Feet of <u>6-1P (gas in pipe)</u>	
Rec. <u>75</u> Feet of <u>cl gassy oil</u>	
Rec. <u>791</u> Feet of <u>oil & gas cut water (15% oil 85% water)</u>	
Rec. <u>600</u> Feet of <u>salt water</u>	
Rec. _____ Feet of _____	
BHT <u>104</u> °F Gravity <u>39</u> °API @ <u>90</u> °F Corrected Gravity <u>38</u> °API	
RW <u>173</u> @ <u>67.5</u> °F Chlorides <u>46,000</u> ppm Recovery Chlorides <u>11,000</u> ppm System	
(A) Initial Hydrostatic Mud <u>1536</u> PSI AK1 Recorder No. <u>7437</u> Range <u>4200</u>	
(B) First Initial Flow Pressure <u>99</u> PSI @ (depth) <u>3084</u> w/Clock No. <u>26199</u>	
(C) First Final Flow Pressure <u>474</u> PSI AK1 Recorder No. <u>5495</u> Range <u>4200</u>	
(D) Initial Shut-In Pressure <u>716</u> PSI @ (depth) <u>3072</u> w/Clock No. <u>25810</u>	
(E) Second Initial Flow Pressure <u>506</u> PSI Initial Opening <u>30</u> Test <u>400</u>	
(F) Second Final Flow Pressure <u>674</u> PSI Initial Shut-In <u>60</u> Jars <u>Y</u>	
(G) Final Shut-In Pressure <u>716</u> PSI Final Flow <u>60</u> Safety Joint _____	
(H) Final Hydrostatic Mud <u>1494</u> PSI Final Shut-In <u>120</u> Straddle _____	

Approved By Jim Musgrave

Our Representative Paul Simpson

Circ. Sub 20

Sampler 50

Extra Packer _____

Other _____

TOTAL PRICE \$ 470.00

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name & No. BRANDENBURG #11 Test No. 5 Date 10/25/89
Company QUINOCO PETROLEUM INC Zone Tested LANSING-KANS CITY
Address P.O. BOX 404 PLAINVILLE KS 67663 Elevation 1838 KB
Co. Rep./Geo. E BAILEY/ J MUSGROVE Cont. ALLEN RIG #3 Est. Ft. of Pay 7
Location: Sec. 20 Twp. 14S Rge. 14W Co. RUSSELL State KANSAS

Interval Tested 3106-3144 Drill Pipe Size 4.5" XH
Anchor Length 38 Top Choke — 1" _____
Top Packer Depth 3101 Bottom Choke — 3/4" _____
Bottom Packer Depth 3106 Hole Size — 7 7/8" _____
Total Depth 3144 Rubber Size — 6 3/4" _____
Wt. Pipe I.D. — 2.7 _____ Ft. Run 0
Drill Collar — 2.25 _____ Ft. Run 0
Mud Wt. 9.1 lb./gal. Viscosity 46 Filtrate 13.2
Tool Open @ 6:07 AM Initial Blow 1/2" BLOW BUILDING TO BOTTOM OF BUCKET IN
3 MINUTES-BLOW BACK BUILT TO BOTTOM OF BUCKET IN 12 MINUTES

Final Blow STRONG BLOW BUILT TO BOTTOM OF BUCKET AS SOON AS
TOOL OPENED

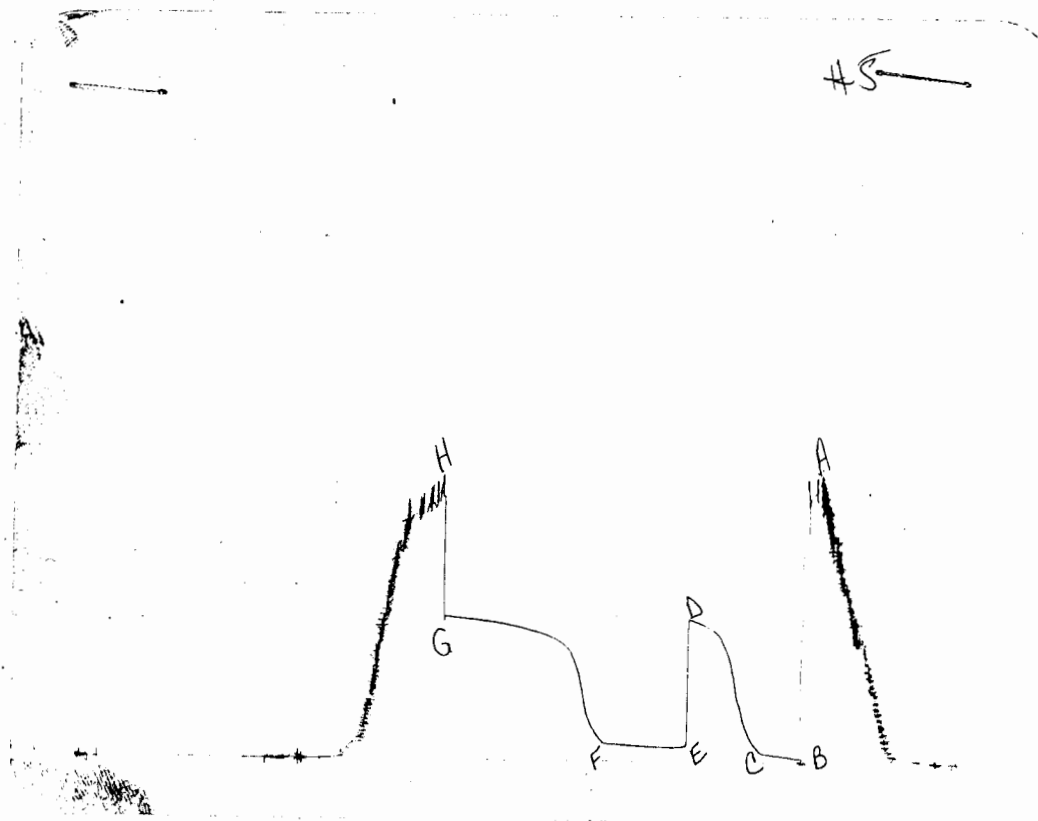
Recovery — Total Feet 200 Flush Tool? _____
Rec. 2160 Feet of GAS IN PIPE
Rec. 20 Feet of SLIGHT OIL CUT MUD-5%OIL/95%MUD
Rec. 60 Feet of GASSY OIL CUT MUD-25%GAS/15%OIL/60%MUD
Rec. 60 Feet of GASSY MUDDY OIL-55%GAS/35%OIL/10%MUD
Rec. 60 Feet of GASSY MUDDY OIL-35%GAS/60%OIL/5%MUD
BHT 102 °F Gravity 34 °API @ 70 °F Corrected Gravity 33 °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides _____ ppm System
(A) Initial Hydrostatic Mud 1567.1 PSI AK1 Recorder No. 7437 Range 4200
(B) First Initial Flow Pressure 30.7 PSI @ (depth) 3144 w/Clock No. 25810
(C) First Final Flow Pressure 54.9 PSI AK1 Recorder No. 5495 Range 4200
(D) Initial Shut-In Pressure 781.9 PSI @ (depth) 3018 w/Clock No. 26199
(E) Second Initial Flow Pressure 62.4 PSI Initial Opening 30
(F) Second Final Flow Pressure 90.9 PSI Initial Shut-In 60
(G) Final Shut-In Pressure 786.2 PSI Final Flow 60
(H) Final Hydrostatic Mud 1564 PSI Final Shut-In 120

Our Representative MR PAUL SIMPSON

TOTAL PRICE \$ 450

Printcraft Printers - Hays, KS

DST# 5RECORDER# 17437

This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud.....	1589	1567.1
(B) First Initial Flow Pressure.....	33	30.7
(C) First Final Flow Pressure.....	55	54.9
(D) Initial Closed-In Pressure.....	800	781.9
(E) Second Initial Flow Pressure.....	66	62.4
(F) Second Final Flow Pressure.....	99	90.9
(G) Final Closed-In Pressure.....	800	786.2
(H) Final Hydrostatic Mud.....	1578	1564

QUINOCO PETROLEUM INC
REPORT FOR DST#5 FOR THE BRANDENBERG #11
20-14S-14W RUSSELL KANSAS

TEST PARAMETERS

ELEVATION: 1838 KB EST. PAY: 7 FT
DATUM: -1271 ZONE TESTED: LANSING-KANS CITY
TEST INTERVAL: 3106-3144
TIME INTERVALS: 30-60-60-120
RECORDER DEPTH: 3108 VISCOSITY: 6.417984 CP
BOTTOM HOLE TEMP: 102 HOLE SIZE: 7.875 IN

CALCULATIONS

CUBIC FEET OF GAS IN PIPE: .65
TOTAL FEET OF RECOVERY: 200
BARRELS IN DRILL PIPE: 2.844
GAS OIL RATIO: 60.63751 CU.FT./BBL
BUBBLE POINT PRESSURE: ; 1.998493
TOTAL BARRELS OF RECOVERY: 2.844
UNCORR. INIT. PROD.: 45.504 BBL/DAY
API GRAVITY: 33
FLUID GRADIENT: .373
CORRECTED PIPE FILLUP: 243.6998
CORR. BARRELS OF RECOVERY: 3.45546 BBL
INITIAL PRODUCTION CORRECTED TO FINAL FLOW PRESSURE: 55.28736 BBL/DAY
INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE
80.44272

INITIAL SHUT-IN VALUES:
THEORETICAL STATIC PRESSURE 908.9747
LOPE 721.771

FINAL SHUT-IN VALUES
THEORETICAL STATIC PRESSURE 921.7511
LOPE 557.8362

TRANSMISSIBILITY 16.11535 (MD.-FT./CP.)
PERMEABILITY 14.77544 (MD.)
INDICATED FLOW CAPACITY 103.4281 (MD.FT)
PRODUCTIVITY INDEX 1.821034E-02 (BARRELS/DAY/PSI)
DAMAGE RATIO .2725634
RADIUS OF INVESTIGATION 36.46628 (FT.)
POTENTIOMETRIC SURFACE 867.5408 (FT.)
RAWDOWN FACTOR -1.405585 (%)

INITIAL FLOW

REORDER # 5495

DST #5

DT (MIN)	PRESSURE	<> PRESSURE
0	30.7	30.7
3	32.8	2.099999
6	33.8	1
9	34.7	.9000015
12	40.2	5.5
15	44.4	4.200001
18	45.8	1.399998
21	45.8	0
24	49.6	3.799999
27	49.6	0
30	54.9	5.300003

FINAL FLOW

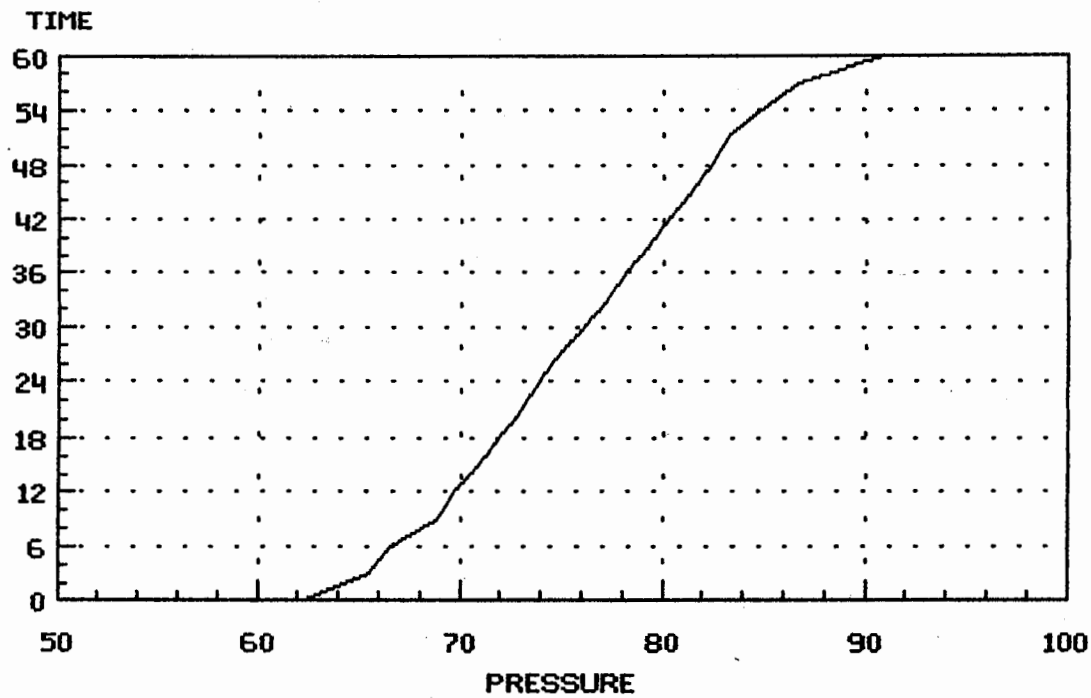
REORDER # 5495

DST #5

DT (MIN)	PRESSURE	<> PRESSURE
0	62.4	62.4
3	65.5	3.099999
6	66.6	1.099999
9	68.8	2.200005
12	69.7	.8999939
15	71.9	2.200005
18	71.9	0
21	71.9	0
24	73.9	2
27	76.1	2.199997
30	76.4	.3000031
33	78.2	1.799995
36	78.2	0
39	80.3	2.100006
42	80.3	0
45	82.4	2.099999
48	82.4	0
51	83.3	.9000015
54	86.7	3.399994
57	86.7	0
60	90.9	4.200005

DELTA T DELTA P

DST #5 FINAL FLOW
RECORDER # 5495



INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE 80.44272 BBL/DAY

DST #5

REORDER # 5495
INITIAL FLOW TIME (MIN.): 30

MIN	LOG(T+MIN/MIN)	PRESSURE	<> PRESSURE
0	0	54.9	54.9
3	1.041205	61.3	6.399998
6	.778011	76.1	14.8
9	.6367073	92.9	16.8
12	.5439701	122.6	29.7
15	.4770353	155.3	32.70001
18	.425892	213.5	58.2
21	.3852815	295.9	82.4
24	.352119	396.2	100.3
27	.3244526	526.2	130
30	.3009757	587.5	61.29999
33	.280776	640.4	52.90003
36	.263194	680.5	40.09998
39	.2477398	705.9	25.40003
42	.234041	728.1	22.19995
45	.2218087	739.7	11.60004
48	.2108154	749.1	9.399963
51	.2008786	764.1	15
54	.191851	770.2	6.100037
57	.1836113	775.6	5.399964
60	.1760595	781.9	6.300049

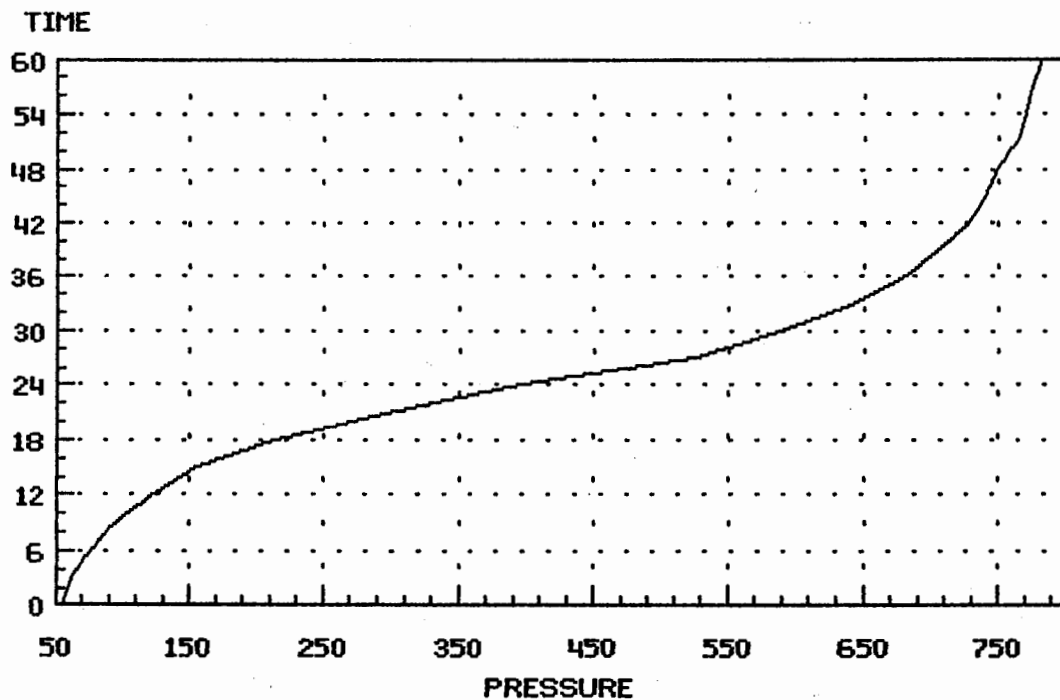
FINAL SHUT-IN BUILDUP
DST #5

REORDER # 5495
TOTAL FLOW TIME (MIN.): 90

MIN	LOG(T+MIN/MIN)	PRESSURE	<> PRESSURE
0	0	90.9	90.9
6	1.203903	131	40.1
12	.9292515	214.4	83.4
18	.778011	403.7	189.3
24	.6765718	560.1	156.4
30	.6019515	623.4	63.30005
36	.5439701	655.1	31.69995
42	.4972351	676.3	21.20001
48	.4585552	695.3	19
54	.425892	705.9	10.60004
60	.3978683	722.8	16.89996
66	.3735134	733.3	10.5
72	.352119	739.7	6.400025
78	.3331547	746	6.299988
84	.316213	753.3	7.299988
90	.3009757	760.8	7.5
96	.2871899	765	4.200012
102	.2746515	769.3	4.299988
108	.263194	775.6	6.299988
114	.2526798	780.9	5.300049
120	.2429943	786.2	5.299988

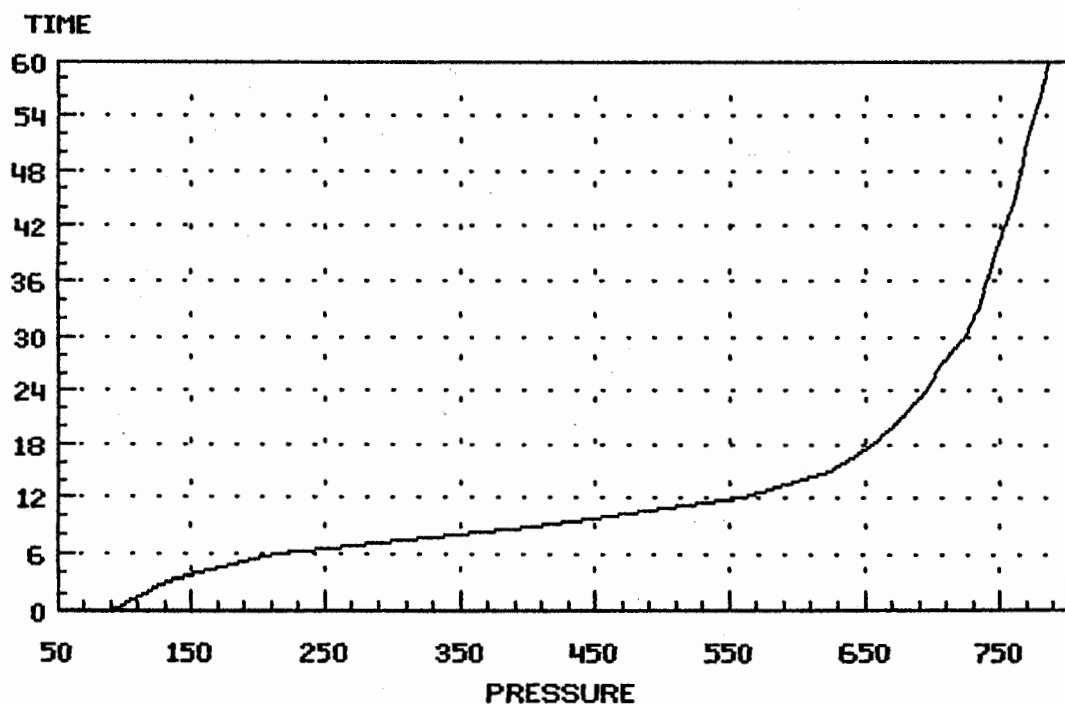
DELTA T DELTA P

DST #5 INITIAL SHUTIN
RECORDER # 5495



DELTA T DELTA P

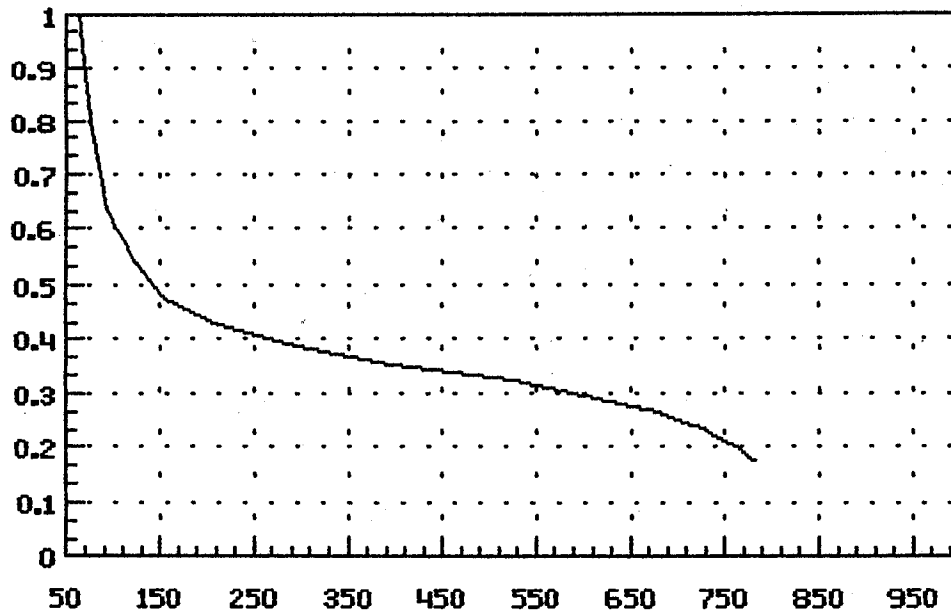
DST #5 FINAL SHUTIN
RECORDER # 5495



HORNER PLOT

DST #5 INITIAL SHUTIN
RECORDER # 5495

LOG = T +(MIN/MIN)

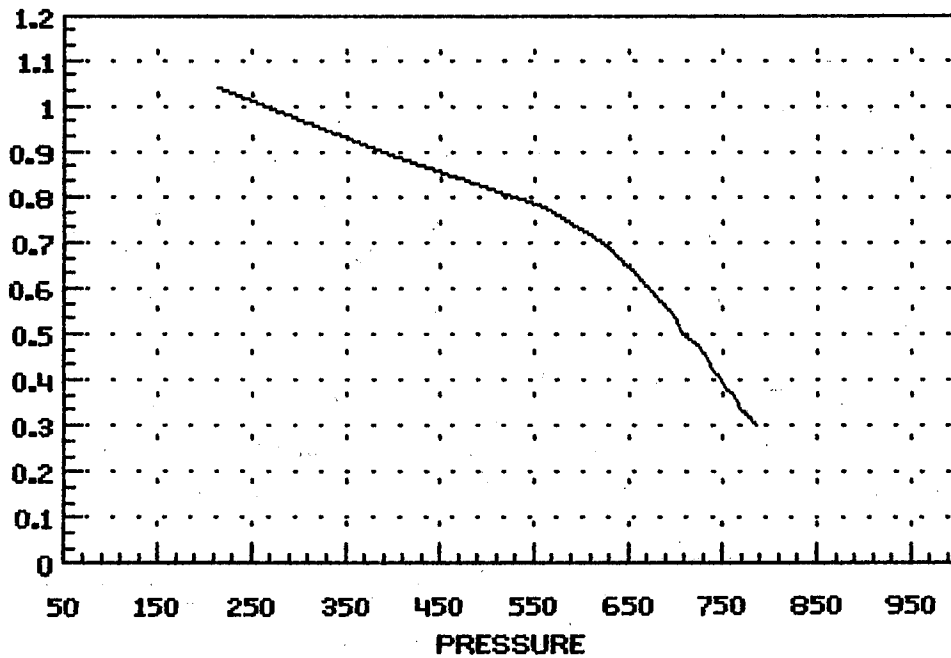


STATIC PRESSURE 908.9747
SLOPE 721.771
POINTS USED 4

HORNER PLOT

DST #5 FINAL SHUTIN
RECORDER # 5495

LOG = T +(MIN/MIN)



TATIC PRESSURE 921.7511
LOPE 557.8362
DINTS USED 20

TRILOBITE TESTING COMPANY

P.O. Box 382 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 2209 Date 10/25/89
Company Name QUINOCO PETROLEUM INC
Lease BRANDENBURG #11 Test No. 5
County RUSSELL Sec. 20 Twp. 14S Rng. 14W

SAMPLER RECOVERY

Gas 950 ML
Oil 3000 ML
Mud 50 ML
Water 0 ML
Other 0 ML
Pressure 600 PSI
Total 4000 ML

PIT MUD ANALYSIS

Chlorides _____ ppm.
Resistivity 0 ohms @ 0 F
Viscosity 46
Mud Weight 9.1
Filtrate 13.2
Other _____

SAMPLER ANALYSIS

Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.
Gravity 33 corrected @ 80 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 2209

Well Name & No. <u>Brandenberg #</u>	Test No. <u>5</u>	Date <u>10/25/89</u>
Company <u>Quinoco</u>	Zone Tested <u>LKC-H-I</u>	
Address <u>Jim Musgrave</u>	Elevation <u></u>	
Co. Rep./Geo. <u>Jim Musgrave</u>	Cont. <u>Allen #3</u>	Est. Ft. of Pay <u>7</u>
Location: Sec. <u>20</u> Twp. <u>14S</u>	Rge. <u>14W</u>	Co. <u>Russell</u> State <u>Ks</u>

Interval Tested <u>3106-3144</u>	Drill Pipe Size <u>4 1/2 XH</u>
Anchor Length <u>38</u>	Top Choke — 1" <u></u>
Top Packer Depth <u>3101</u>	Bottom Choke — 3/4" <u></u>
Bottom Packer Depth <u>3106</u>	Hole Size — 7 7/8" <u></u>
Total Depth <u>3144</u>	Rubber Size — 6 3/4" <u></u>
Wt. Pipe I.D. — 2.7 <u></u>	Ft. Run <u></u>
Drill Collar — 2.25 <u></u>	Ft. Run <u></u>
Mud Wt. <u>9.1</u> lb./gal.	Viscosity <u>46</u> Filtrate <u>13.2</u>
Tool Open @ <u>6:07 AM</u> Initial Blow <u>1/2" blow built to bottom of bucket in 3 minutes</u>	
Final Blow <u>Strong blow built to bottom of bucket as soon as tool opened</u>	
Recovery — Total Feet <u>200</u>	Flush Tool? <u></u>
Rec. <u>2160</u> Feet of <u>6 IP</u>	
Rec. <u>200</u> Feet of <u>sl oil cut mud 5% oil 95% mud</u>	
Rec. <u>60</u> Feet of <u>gassy oil cut mud 25% gas 15% oil 60% mud</u>	
Rec. <u>60</u> Feet of <u>gassy muddy oil 55% gas 35% oil 10% mud</u>	
Rec. <u>60</u> Feet of <u>gassy muddy oil 35% gas 60% oil 5% mud</u>	
BHT <u>102</u> °F Gravity <u>3.4</u> °API @ <u>70</u> °F Corrected Gravity <u>33</u> °API	
RW <u></u> @ <u></u> °F Chlorides <u></u> ppm Recovery Chlorides <u></u> ppm System	
(A) Initial Hydrostatic Mud <u>1589</u> PSI AK1 Recorder No. <u>7437</u> Range <u>4200</u>	
(B) First Initial Flow Pressure <u>33</u> PSI @ (depth) <u>3144</u> w/Clock No. <u>25810</u>	
(C) First Final Flow Pressure <u>55</u> PSI AK1 Recorder No. <u>5495</u> Range <u>4200</u>	
(D) Initial Shut-In Pressure <u>800</u> PSI @ (depth) <u>3108</u> w/Clock No. <u>26199</u>	
(E) Second Initial Flow Pressure <u>66</u> PSI Initial Opening <u>30</u> Test <u>400</u>	
(F) Second Final Flow Pressure <u>99</u> PSI Initial Shut-In <u>60</u> Jars <u></u>	
(G) Final Shut-In Pressure <u>800</u> PSI Final Flow <u>60</u> Safety Joint <u></u>	
(H) Final Hydrostatic Mud <u>1578</u> PSI Final Shut-In <u>120</u> Straddle <u></u>	

Approved By Jim Musgrave

Our Representative Paul Simpson

Circ. Sub

Sampler 50

Extra Packer

Other

TOTAL PRICE \$ 450