

CHENEY TESTING COMPANY, INC.

P. O. Box 367

HILL CITY, KANSAS 67642

ORIGINAL

RELEASED FROM

KCC

APR 22 2003

CONFIDENTIAL

DRILL-STEM TEST

CONFIDENTIAL

Company	A. Scott Ritchie	Test No.	1
Well Name & Number	Keiswetter A #1	Zone Tested	Topeka
Company Address	125 N Market Suite 950 Wichita Ks.	Date	8/9/84
Company Rep.	LeaAnn Kasten	Tester	Dave Hunt
Contractor	Murfin Drilling Company	Elevation	2203 kB
Location: Sec. 12 Twp. 6 s Rge. 22w Co. Graham State Ks.		Est. Feet of Pay	

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Recorder No. 13276 Type AK-1 Range 3950 PSI

Recorder No. 13275 Type Ak- Range 3950 PSI

Recorder Depth 3390 Clock # 22345

Recorder Depth 3387 Clock # 25825

(A) Initial Hydrostatic Mud 1793 PSI

Tool Open Before I.S.I. 15 Mins.

(B) First Initial Flow Pressure 190 PSI

Initial Shut-in 30 Mins.

(C) First Final Flow Pressure 430 PSI

Flow Period 15 Mins.

(D) Initial Shut-in Pressure 1254 PSI

Final Shut-in 30 Mins.

(E) Second Initial Flow Pressure 519 PSI

Top Choke Size 1" Hole Size 7 7/8"

(F) Second Final Flow Pressure 628 PSI

Bottom Choke Size 3/4" Rubber Size 6 3/4"

(G) Final Shut-in Pressure 1254 PSI

Tool Open @ 1:30 AM

(H) Final Hydrostatic Mud 1753 PSI

Blow Remarks 1st open: Strong blow, off bottom of bucket in 1 1/2 minutes.

Temperature 104

2nd open: Off bottom of bucket in 2 minutes.

Mud Weight 9.7 Viscosity 44

Fluid Loss 7.2

Interval Tested 3330-3393

Anchor Length 63

Top Packer Depth 3325

Bottom Packer Depth 3330

Total Depth 3393

Drill Pipe Size 4 1/2 FH

Wt. Pipe I. D. 2.7 Ft. Run 1015

Recovery-Total Feet 1550

Recovered 735 Feet Of mud cut gassy oil, 52% oil, 5% gas, 43% mud.

Recovered 310 Feet Of clean gassy oil, 93% oil, 7% gas.

Recovered 505 Feet Of slightly mud cut gassy oil, 80% oil, 7% gas, 13% mud.

Recovered 60 Feet Of gas in pipe.

Recovered Feet Of Gravity: 33 API corrected.

Recovered Feet Of

Extra Equipment Price of Job \$625.00

Well chlorides: 3,000 ppm

Recovery Chlorides: 15,000 ppm

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Drill Collars: 2.25 Ft. Run: 238

INITIAL SHUT-IN

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RECORDER NO: 13275 DEPTH: 3393 FT.
INITIAL FLOW TIME (T): 15 MIN.

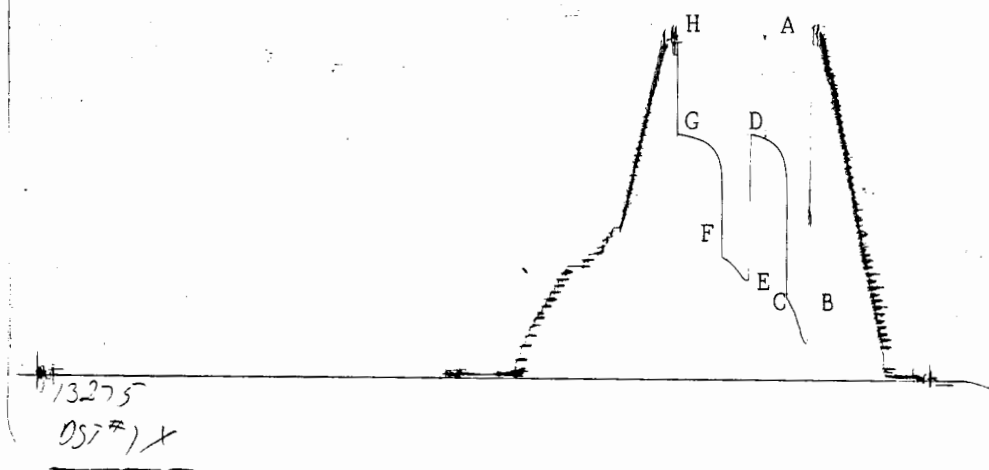
DT(MIN)	LOG((T+DT)/DT)	PRESSURE(P SIG)
0	0.000	408.3
5	0.602	1117.9
10	0.398	1187.3
15	0.301	1219.0
20	0.243	1236.8
25	0.204	1242.2
30	0.176	1248.1

FINAL SHUT-IN

=====

RECORDER NO: 13275 DEPTH: 3393 FT.
TOTAL FLOW TIME: 30 MIN.

DT(MIN)	LOG((T+DT)/DT)	PRESSURE(P SIG)
0	0.000	627.3
5	0.845	1190.2
10	0.602	1214.0
15	0.477	1228.9
20	0.398	1238.8
25	0.342	1241.2
30	0.301	1246.1



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	1793	1788 PSI
(B) First Initial Flow Pressure	190	189.3 PSI
(C) First Final Flow Pressure	430	408.3 PSI
(D) Initial Closed-in Pressure	1254	1248.1 PSI
(E) Second Initial Flow Pressure	519	508.4 PSI
(F) Second Final Flow Pressure	628	627.3 PSI
(G) Final Closed-in Pressure	1254	1246.1 PSI
(H) Final Hydrostatic Mud	1753	1748 PSI

CHENEY TESTING CO, INC.
CALCULATION OF FORMATION CHARACTERISTICS
FROM DST DATA

FOR: A. SCOTT RITCHIE
KEIWSETTER A #1
SEC 12-6S-22W
GRAHAM COUNTY, KS.

DST # 1
FORMATION: TOPEKA
ELEVATION: 2203 KB

TEST PARAMETERS

TEST INTERVAL: 3330 - 3393	EST PAY: 10
TIME INTERVAL: 15 - 30 - 15 - 30	VISCOSITY OF FLUID: 8
INITIAL FLOW PRESS: 189.3- 408.3	HOLE SIZE: 7.875
FINAL FLOW PRESS: 508.4- 627.3	D.C. CAPACITY: 0.00492
SHUT-IN PRESS(I-F): 1248.1-1246.1	W.P. CAPACITY: 0.00708
BOTTOM HOLE TEMPERATURE: 104	D.P. CAPACITY: 0.01402
TOTAL FEET OF RECOVERY: 1550	TOTAL BARRELS RECOVERY: 12.5181

EXTRAPOLATED INITIAL SHUT-IN PRESSURE (PSI): 1283
SLOPE (PSI-CYCLE): 204 POINTS USED: 4

EXTRAPOLATED FINAL SHUT-IN PRESSURE (PSI): 1276
SLOPE (PSI-CYCLE): 104 POINTS USED: 5

CALCULATIONS

AVERAGE PRODUCTION RATE (B/D)	: 600.87
TRANSMISSIBILITY (MD-FT/CP)	: 939.44
PERMEABILITY (MD)	: 751.55
PRODUCTIVITY INDEX (B/D/PSI)	: 0.4709
DAMAGE RATIO	: 1.141
APPROXIMATE RADIUS OF INVESTIGATION (FT)	: 150.2
DRAWDOWN FACTOR (%)	: 0.546
POTENTIOMETRIC SURFACE (FT)	: 1769.04

COMPANY A. SCOTT RITCHIE

LEASE AND WELL NO. KEIWSETTER #1 A SEC. 12 TWP. 6S RGE. 22W TEST NO. 1 DATE 8/9/84

A. SCOTT RITCHIE

LEASE AND WELL NO.

KEISWETTER #1 A

SEC.

12

TWP

6S

RGE. 22W

TEST NO.

DATE 8/9/84

HORNER PLOT

A. SCOTT RITCHIE

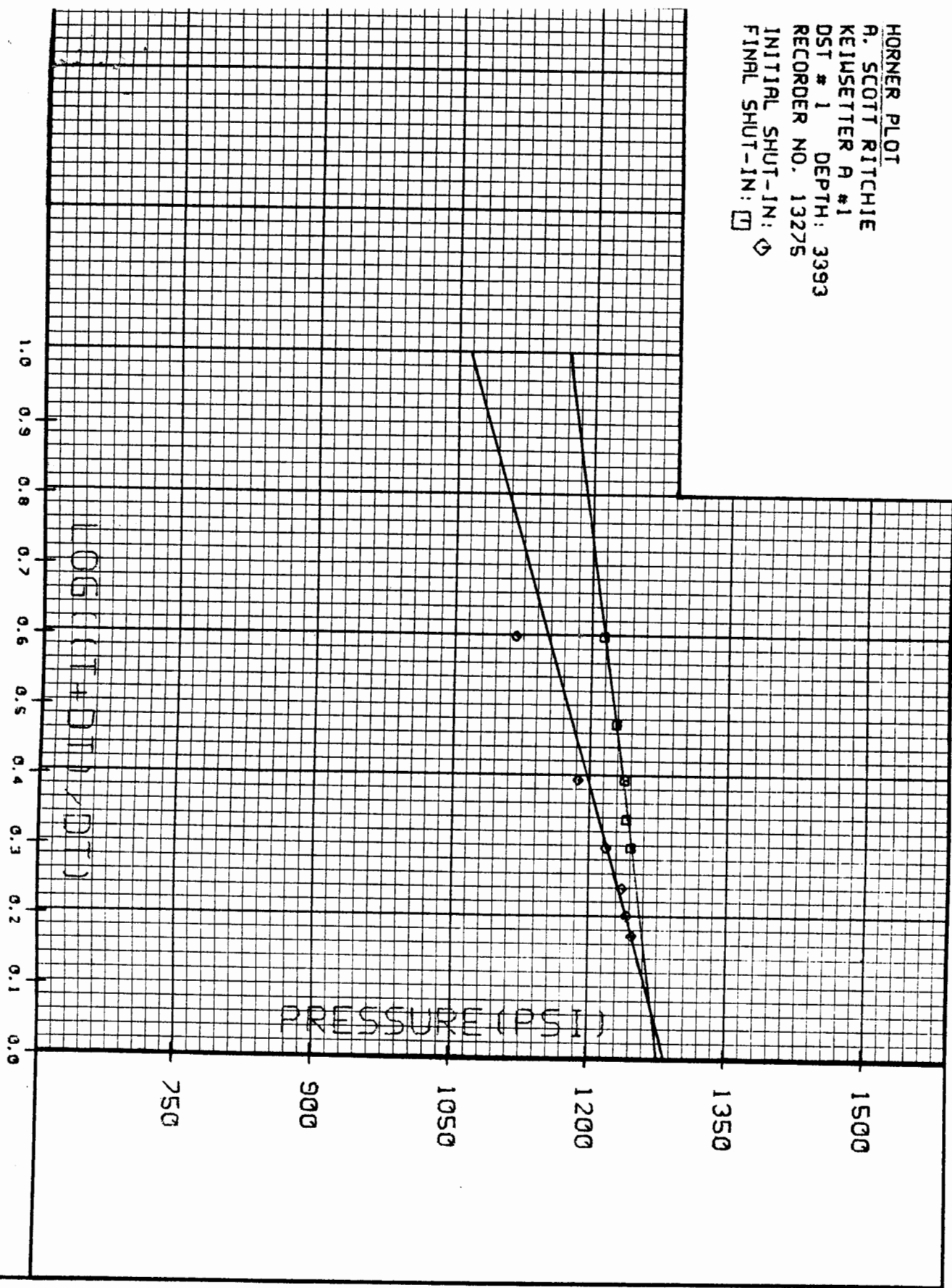
KEISWETTER A #1

DST # 1 DEPTH: 3393

RECORDER NO. 13275

INITIAL SHUT-IN: $\diamond$

FINAL SHUT-IN: $\square$



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DRILL-STEM TEST DATA

APR 22 2003

Company	A. Scott Ritchie	Test No.	2
Well Name & Number	Keiswetter A #1	Zone Tested	Toronto & Lansing
Company Address	125 N Market Suite 950 Wichita Ks.	Date	8/10/84
Company Rep.	Lea Ann Kasten	Tester	Dave Hunt
Contractor	Murfin Drilling Company	Elevation	2203 kR
Location: Sec. 12 Twp. 6 Rge. 22 Co. Graham State Ks.		Est. Feet of Pay	

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Recorder No. 13276 Type AK-1 Range 3950 PSI

Recorder Depth 3450 Clock # 22345

(A) Initial Hydrostatic Mud 1842 PSI

(B) First Initial Flow Pressure 160 PSI

(C) First Final Flow Pressure 420 PSI

(D) Initial Shut-in Pressure 1020 PSI

(E) Second Initial Flow Pressure 509 PSI

(F) Second Final Flow Pressure 578 PSI

(G) Final Shut-in Pressure 1020 PSI

(H) Final Hydrostatic Mud 1812 PSI

Temperature 104

Mud Weight 9.6 Viscosity 45

Fluid Loss 8.0

Interval Tested 3393-3456

Anchor Length 63

Top Packer Depth 3388

Bottom Packer Depth 3393

Total Depth 3456

Drill Pipe Size 4 1/2 FH

Wt. Pipe I. D. 2.7 Ft. Run 1045

Recovery-Total Feet 1475

Recovered 180 Feet Of mud cut oil, 50% oil, 45% mud, 5% gas.

Recovered 647 Feet Of slighrly mud cut gassy oil, 83% oil, 12% mud, 5% gas.

Recovered 648 Feet Of slighrly mud cut gassy oil, 90% oil, 3% mud, 7% gas.

Recovered 560 Feet Of gas in pipe.

Recovered Feet Of Gravity: 32 API corrected.

Recovered Feet Of

Extra Equipment Price of Job \$625.00

Recorder No. 13275 Type AK-1 Range 3950 PSI

Recorder Depth 3453 Clock # 25828

Tool Open Before I.S.I. 15 Mins.

Initial Shut-in 30 Mins.

Flow Period 15 Mins.

Final Shut-in 30 Mins.

Top Choke Size 1" Hole Size 7 7/8"

Bottom Choke Size 3/4" Rubber Size 6 3/4"

Tool Open @ 8:15 PM

Blow Remarks 1st open: Strong blow, off bottom in 1 1/2 minutes.

2nd open: Off bottom of bucket in 1 1/2 minutes.

Well Chlorides: 3,000 ppm

Recovery Chlorides: 12,000 ppm

Drill Collars: 2.25 Ft. Run: 233

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INITIAL SHUT-IN

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RECORDER NO: 13275 DEPTH: 3456 FT.
INITIAL FLOW TIME (T): 15 MIN.

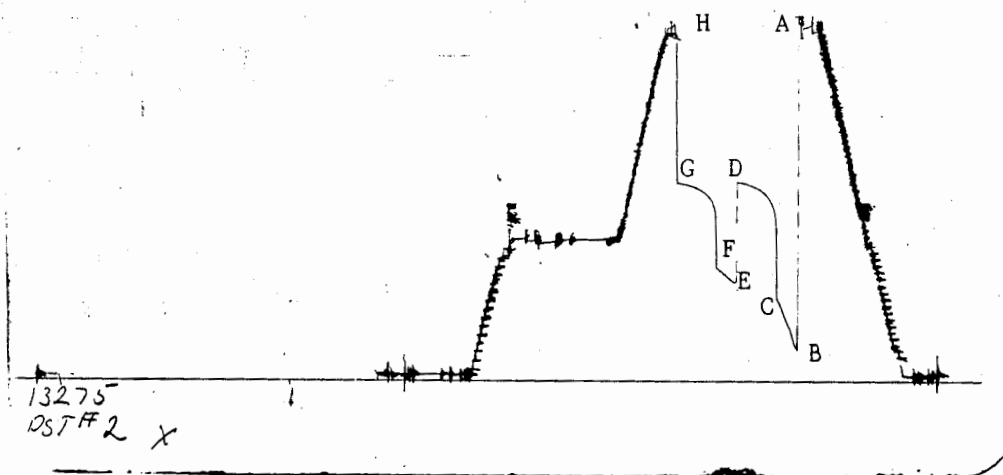
DT(MIN)	LOG((T+DT)/DT)	PRESSURE(P SIG)
0	0.000	429.1
5	0.602	911.8
10	0.398	962.3
15	0.301	986.1
20	0.243	1001.9
25	0.204	1012.8
30	0.176	1019.8

FINAL SHUT-IN

=====

RECORDER NO: 13275 DEPTH: 3456 FT.
TOTAL FLOW TIME: 30 MIN.

DT(MIN)	LOG((T+DT)/DT)	PRESSURE(P SIG)
0	0.000	581.7
5	0.845	933.6
10	0.602	967.3
15	0.477	986.1
20	0.398	999.0
25	0.342	1005.9
30	0.301	1010.9



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	1842	1837 PSI
(B) First Initial Flow Pressure	160	174.4 PSI
(C) First Final Flow Pressure	420	429.1 PSI
(D) Initial Closed-in Pressure	1020	1019.8 PSI
(E) Second Initial Flow Pressure	509	508.4 PSI
(F) Second Final Flow Pressure	578	581.7 PSI
(G) Final Closed-in Pressure	1020	1010.9 PSI
(H) Final Hydrostatic Mud	1812	1807 PSI

CHENEY TESTING CO, INC.
CALCULATION OF FORMATION CHARACTERISTICS
FROM DST DATA

FOR: A. SCOTT RITCHIE
KEISWETTER A #1
SEC 12-6S-22W
GRAHAM COUNTY, KS.

DST # 2
FORMATION: TORONTO & LANSING
ELEVATION: 2203 KB

TEST PARAMETERS

TEST INTERVAL: 3393 - 3456	EST PAY: 10
TIME INTERVAL: 15 - 30 - 15 - 30	VISCOSITY OF FLUID: 1
INITIAL FLOW PRESS: 174.4- 429.1	HOLE SIZE: 7.875
FINAL FLOW PRESS: 508.4- 581.7	D.C. CAPACITY: 0.00492
SHUT-IN PRESS(I-F): 1019.8-1010.9	W.P. CAPACITY: 0.00708
BOTTOM HOLE TEMPERATURE: 104	D.P. CAPACITY: 0.01402
TOTAL FEET OF RECOVERY: 1475	TOTAL BARRELS RECOVERY: 11.3039

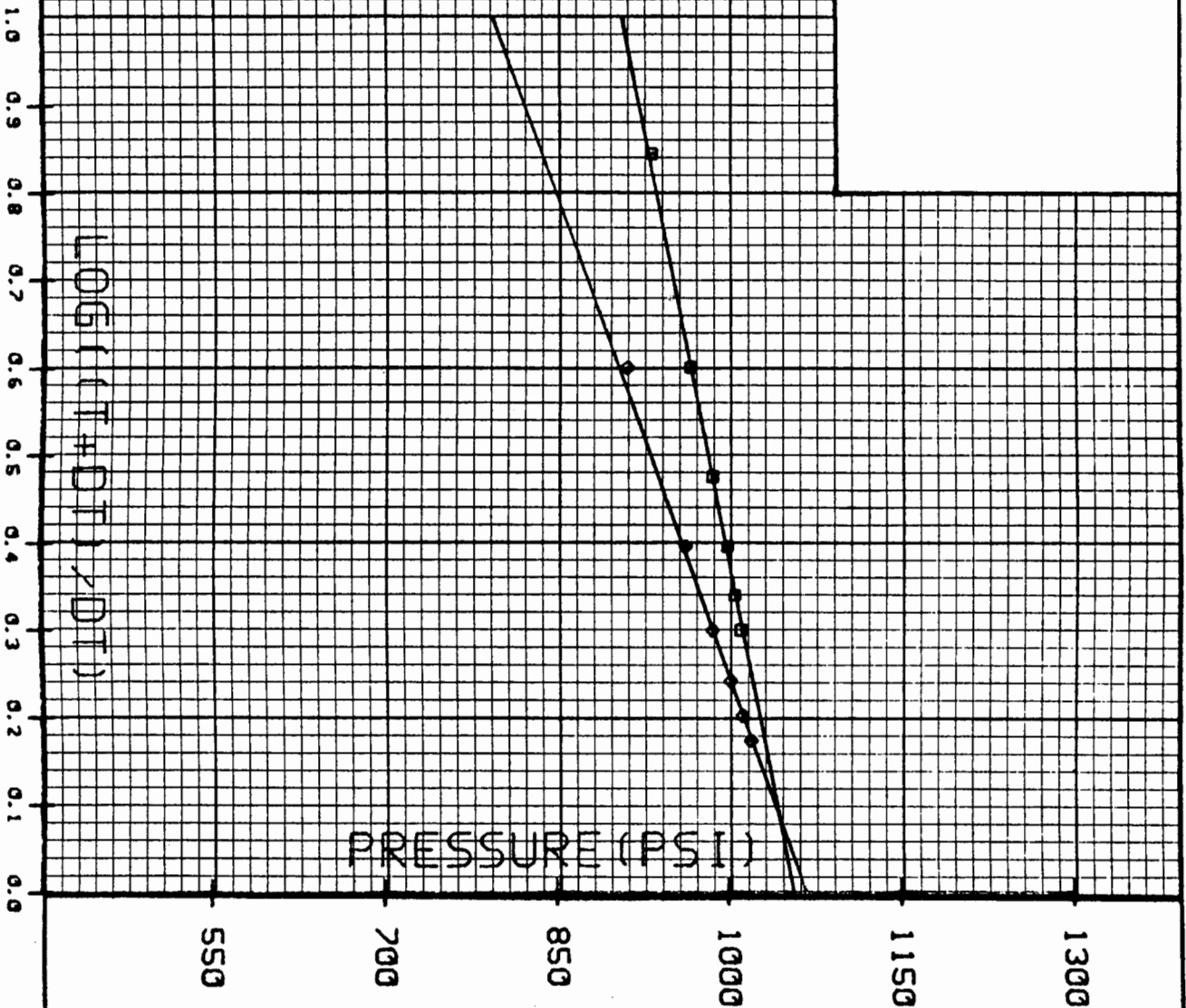
EXTRAPOLATED INITIAL SHUT-IN PRESSURE (PSI): 1065
SLOPE (PSI-CYCLE): 272 POINTS USED: 5

EXTRAPOLATED FINAL SHUT-IN PRESSURE (PSI): 1053
SLOPE (PSI-CYCLE): 295 POINTS USED: 5

CALCULATIONS

AVERAGE PRODUCTION RATE (B/D)	: 542.59
TRANSMISSIBILITY (MD-FT/CP)	: 299.07
PERMEABILITY (MD)	: 29.91
PRODUCTIVITY INDEX (B/D/PSI)	: 0.5153
DAMAGE RATIO	: 0.292
APPROXIMATE RADIUS OF INVESTIGATION (FT)	: 30.0
DRAWDOWN FACTOR (%)	: 1.127
POTENTIOMETRIC SURFACE (FT)	: 1188.91

HORNER PLOT
A. SCOTT RITCHIE
 KEISMETTER A #1
 DST # 2 DEPTH: 3456
 RECORDER NO. 13275
 INITIAL SHUT-IN: $\diamond$
 FINAL SHUT-IN: $\square$



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DRILL-STEM TEST DATA

APR 22 2003

Company <u>A. Scott Ritchie</u>	Test No. <u>3</u>
Well Name & Number <u>Keiswetter A #1</u>	Zone Tested <u>Lansing</u>
Company Address <u>125 N Market Suite 950 Wichita Ks.</u>	Date <u>8/11/84</u>
Company Rep. <u>Lea Ann Kasten</u>	Tester <u>Dave Hunt</u>
Contractor <u>Murfin Drilling Company</u>	Elevation <u>2203 KB</u>
Location: Sec. <u>12</u> Twp. <u>6</u> Rge. <u>22</u> Co <u>Graham</u> State <u>Ks.</u>	Est. Feet of Pay _____

Recorder No. 13276 Type AK-1 Range 3950 PSI

Recorder Depth 3481 Clock # 22345

(A) Initial Hydrostatic Mud 1842 PSI

(B) First Initial Flow Pressure 80 PSI

(C) First Final Flow Pressure 250 PSI

(D) Initial Shut-in Pressure 1205 PSI

(E) Second Initial Flow Pressure 290 PSI

(F) Second Final Flow Pressure 370 PSI

(G) Final Shut-in Pressure 1205 PSI

(H) Final Hydrostatic Mud 1812 PSI

Temperature 112

Mud Weight 9.6 Viscosity 44

Fluid Loss 6.4

Interval Tested 3460-3487

Anchor Length 27

Top Packer Depth 3455

Bottom Packer Depth 3460

Total Depth 3487

Drill Pipe Size 4 1/2 FH

Wt. Pipe l. D. 2.7 Ft. Run 1045

Recovery-Total Feet 740

Recorder No. 13275 Type AK-1 Range 3950 PSI

Recorder Depth 3484 Clock # 25825

Tool Open Before I.S.I. 30 Mins.

Initial Shut-in 45 Mins.

Flow Period 30 Mins.

Final Shut-in 45 Mins.

Top Choke Size 1" Hole Size 7 7/8"

Bottom Choke Size 3/4" Rubber Size 6 3/4"

Tool Open @ 4:05 PM

Blow Remarks 1st open: Strong blow, off bottom
of bucket in 11 minutes.

2nd open: Strong blow off bottom of bucket
in 18 minutes.

Well Chlorides: 3,000 ppm

Recovery Chlorides: 32,000 ppm

Drill Collars: 2.25 Ft. Run: 233

Recovered 60 Feet Of slightly muddy watery gas cut oil, 87% oil, 10% gas, 27% water.

Recovered 248 Feet Of slightly oily watery gas cut mud, 80% mud, 13% water, 5% oil, 2% gas.

Recovered 432 Feet Of mud cut gassy water, 18% mud, 2% gas, 80% water, scum of oil.

Recovered _____ Feet Of Gravity: 30 API corrected.

Recovered 240 Feet Of gas in pipe.

Recovered _____ Feet Of _____

Extra Equipment _____ Price of Job \$625.00

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INITIAL SHUT-IN

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RECORDER NO: 13275 DEPTH: 3487 FT.
 INITIAL FLOW TIME (T): 30 MIN.

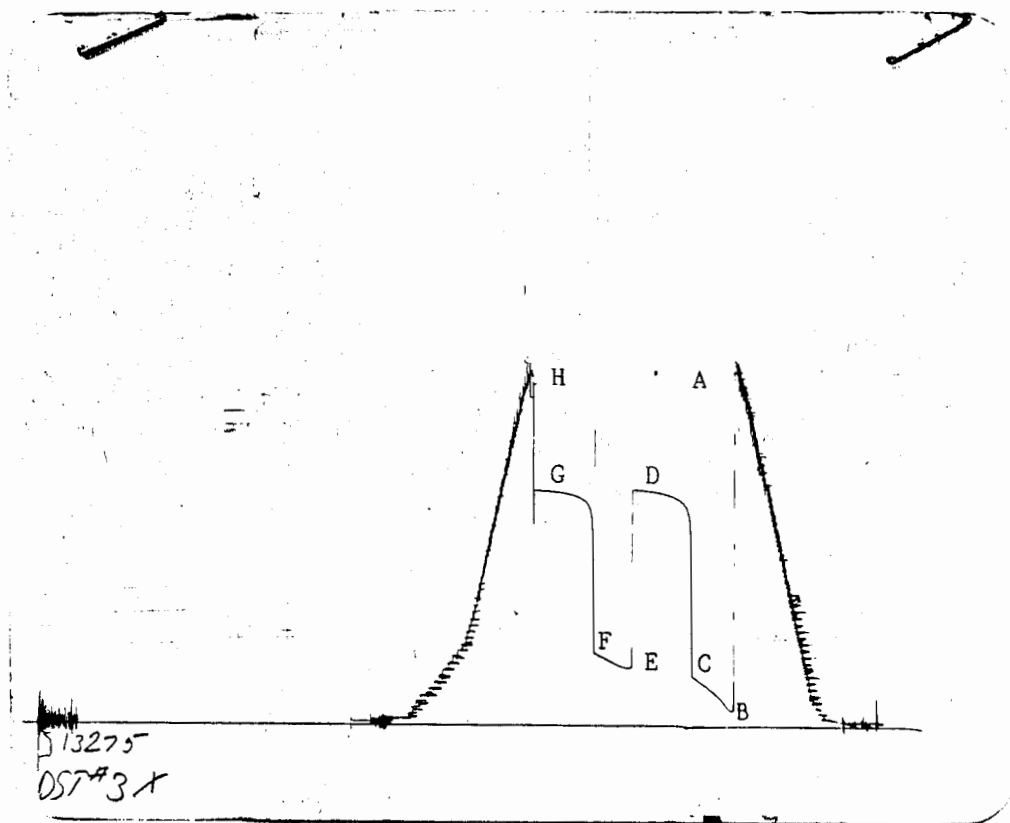
DT(MIN)	LOG((T+DT)/DT)	PRESSURE(P SIG)
=====		
0	0.000	251.7
5	0.845	1120.9
10	0.602	1155.6
15	0.477	1172.4
20	0.398	1185.3
25	0.342	1194.2
30	0.301	1199.2
35	0.269	1205.1
40	0.243	1207.1
45	0.222	1209.1

FINAL SHUT-IN

=====

RECORDER NO: 13275 DEPTH: 3487 FT.
 TOTAL FLOW TIME: 60 MIN.

DT(MIN)	LOG((T+DT)/DT)	PRESSURE(P SIG)
=====		
0	0.000	374.6
5	1.114	1139.7
10	0.845	1168.4
15	0.699	1181.3
20	0.602	1189.2
25	0.531	1195.2
30	0.477	1199.2
35	0.434	1201.1
40	0.398	1203.1
45	0.368	1205.1



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	1842	1837 PSI
(B) First Initial Flow Pressure	80	79.3 PSI
(C) First Final Flow Pressure	250	251.7 PSI
(D) Initial Closed-in Pressure	1205	1209.1 PSI
(E) Second Initial Flow Pressure	290	298.3 PSI
(F) Second Final Flow Pressure	370	374.6 PSI
(G) Final Closed-in Pressure	1205	1205.1 PSI
(H) Final Hydrostatic Mud	1812	1807 PSI

CHENEY TESTING CO, INC.
CALCULATION OF FORMATION CHARACTERISTICS
FROM DST DATA

FOR: A. SCOTT RITCHIE
KEISWETTER A #1
SEC 12-6S-22W
GRAHAM COUNTY, KS.

DST # 3
FORMATION: LANSING
ELEVATION: 2203 KB

TEST PARAMETERS

TEST INTERVAL: 3460 - 3487	EST PAY: 8
TIME INTERVAL: 30 - 45 - 30 - 45	VISCOSITY OF FLUID: 1
INITIAL FLOW PRESS: 79.3- 251.7	HOLE SIZE: 7.875
FINAL FLOW PRESS: 298.3- 374.6	D.C. CAPACITY: 0.00492
SHUT-IN PRESS(I-F): 1209.1-1205.1	W.P. CAPACITY: 0.00708
BOTTOM HOLE TEMPERATURE: 112	D.P. CAPACITY: 0.01402
TOTAL FEET OF RECOVERY: 740	TOTAL BARRELS RECOVERY: 4.7339

EXTRAPOLATED INITIAL SHUT-IN PRESSURE (PSI): 1240
SLOPE (PSI-CYCLE): 136 POINTS USED: 6

EXTRAPOLATED FINAL SHUT-IN PRESSURE (PSI): 1225
SLOPE (PSI-CYCLE): 58 POINTS USED: 6

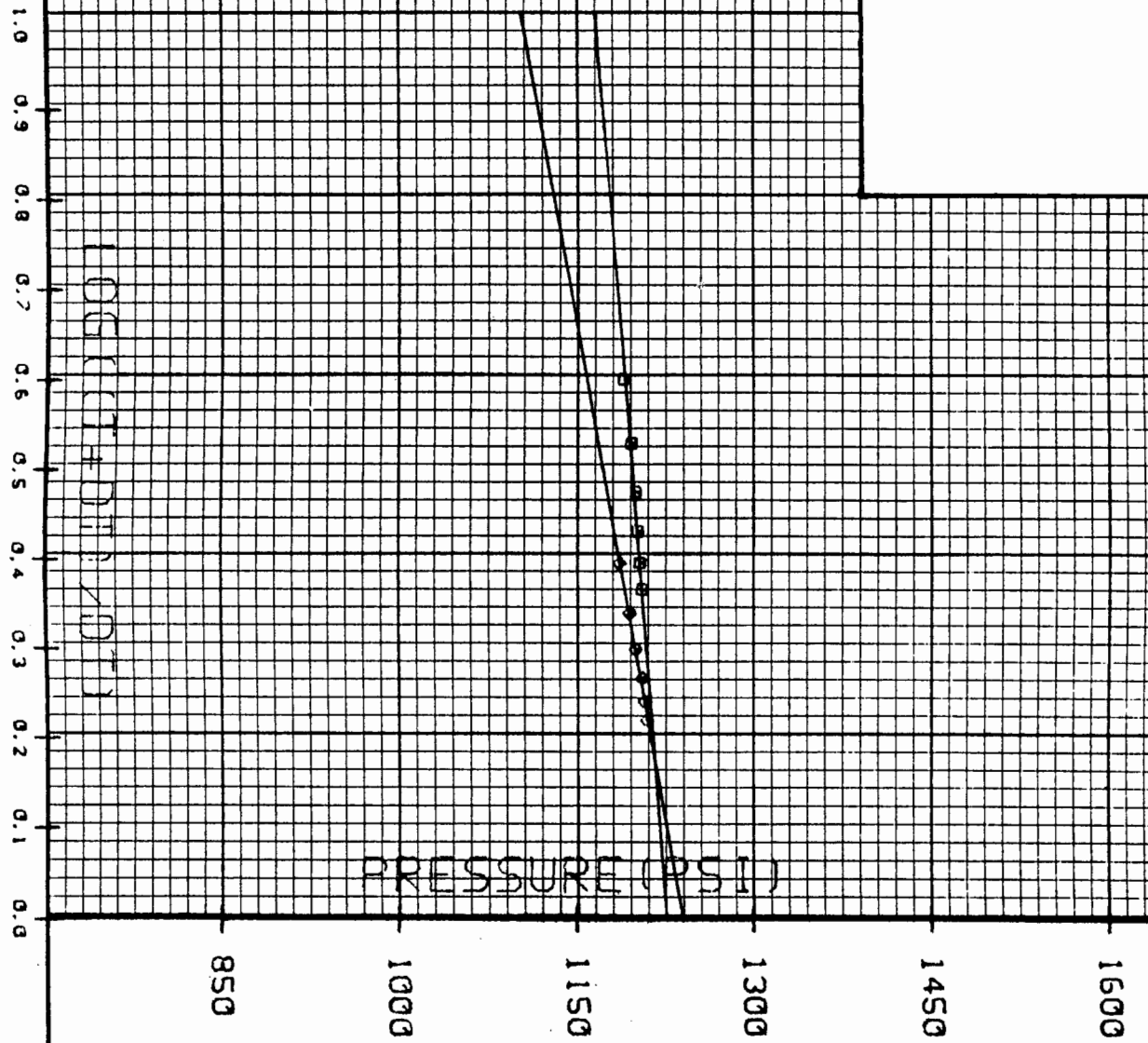
CALCULATIONS

AVERAGE PRODUCTION RATE (B/D)	: 113.61
TRANSMISSIBILITY (MD-FT/CP)	: 318.51
PERMEABILITY (MD)	: 39.81
PRODUCTIVITY INDEX (B/D/PSI)	: 0.0927
DAMAGE RATIO	: 2.683
APPROXIMATE RADIUS OF INVESTIGATION (FT)	: 48.9
DRAWDOWN FACTOR (%)	: 1.210
POTENTIOMETRIC SURFACE (FT)	: 1556.77

ANY A. SCOTT RITCHIE

LEASE AND WELL NO. KEISWETTER A #1 SEC. 12 TWP. 6 RGE. 22 TEST NO. 3 DATE 8/11/84

HORNER PLOT
A. SCOTT RITCHIE
KEISUMETER A #1
DST # 3 DEPTH: 3487
RECORDER NO. 13275
INITIAL SHUT-IN: $\diamond$
FINAL SHUT-IN: $\square$



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DRILL-STEM TEST DATA

APR 22 2003

Company	A. Scott Ritchie	Test No.	4 CONFIDENTIAL
Well Name & Number	Keiswetter A #1	Zone Tested	Lansing 70'
Company Address	125 N Market Suite 950 Wichita Ks.	Date	8/12/84
Company Rep.	Lea Ann Kasten	Tester	Dave Hunt
Contractor	Murfin Drilling Company	Elevation	2203 KB
Location: Sec. 12 Twp. 6s Rge. 22w Co. Graham State Ks.		Est. Feet of Pay	

Recorder No. 13276 Type AK-1 Range 3950 PSI

Recorder Depth 3494 Clock # 22345

(A) Initial Hydrostatic Mud 1822 PSI

(B) First Initial Flow Pressure 80 PSI

(C) First Final Flow Pressure 270 PSI

(D) Initial Shut-in Pressure 1039 PSI

(E) Second Initial Flow Pressure 340 PSI

(F) Second Final Flow Pressure 440 PSI

(G) Final Shut-in Pressure 1030 PSI

(H) Final Hydrostatic Mud 1802 PSI

Temperature 105

Mud Weight 9.6 Viscosity 44

Fluid Loss 6.4

Interval Tested 3484-3500

Anchor Length 16

Top Packer Depth 3479

Bottom Packer Depth 3484

Total Depth 3500

Drill Pipe Size 4 1/2 FH

Wt. Pipe I. D. 2.7 Ft. Run 1045

Recovery-Total Feet 1255

Recovered 1135 Feet Of gassy oil, 90% oil, 10% gas.

Recovered 120 Feet Of mud cut gassy oil, 48% mud, 5% gas, 47% oil.

Recovered 1920 Feet Of gas in pipe.

Recovered Feet Of Gravity: 37 API corrected.

Recovered Feet Of

Recovered Feet Of

Extra Equipment Price of Job \$625.00

Recorder No. 1327 Type Ak-1 Range 3950 PSI

Recorder Depth 3497 Clock # 25825

Tool Open Before I.S.I. 15 Mins.

Initial Shut-in 30 Mins.

Flow Period 15 Mins.

Final Shut-in 30 Mins.

Top Choke Size 1" Hole Size 7 7/8"

Bottom Choke Size 3/4" Rubber Size 6 3/4"

Tool Open @ 4:22 AM

Blow Remarks 1st open: Strong blow, off bottom in 1 1/2 minutes.

2nd open: Off bottom in 1 minute.

Well Chlorides: 3,000 ppm

Recovery Chlorides: 8,000 ppm

Drill Collars: 2.25 Ft. Run: 233

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INITIAL SHUT-IN

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RECORDER NO: 13275 DEPTH: 3500 FT.
INITIAL FLOW TIME (T): 15 MIN.

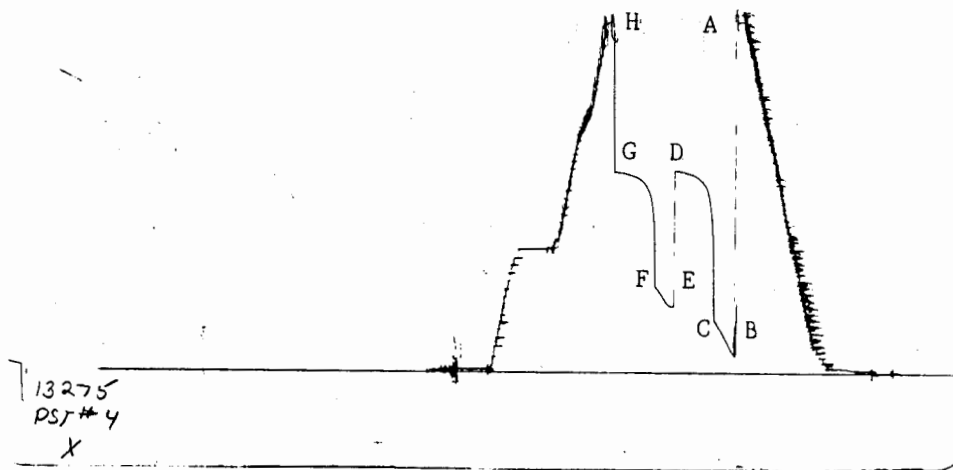
DT(MIN)	LOG((T+DT)/DT)	PRESSURE(PSIG)
0	0.000	272.5
5	0.602	949.4
10	0.398	997.0
15	0.301	1018.8
20	0.243	1030.7
25	0.204	1040.6
30	0.176	1045.5

FINAL SHUT-IN

=====

RECORDER NO: 13275 DEPTH: 3500 FT.
TOTAL FLOW TIME: 30 MIN.

DT(MIN)	LOG((T+DT)/DT)	PRESSURE(PSIG)
0	0.000	444.0
5	0.845	958.3
10	0.602	997.0
15	0.477	1013.8
20	0.398	1023.7
25	0.342	1030.7
30	0.301	1034.6



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	1822	1817 PSI
(B) First Initial Flow Pressure	80	99.1 PSI
(C) First Final Flow Pressure	270	272.5 PSI
(D) Initial Closed-in Pressure	1039	1045.5 PSI
(E) Second Initial Flow Pressure	340	346.9 PSI
(F) Second Final Flow Pressure	440	444.0 PSI
(G) Final Closed-in Pressure	1030	1034.6 PSI
(H) Final Hydrostatic Mud	1802	1798 PSI

CHENEY TESTING CO, INC.
CALCULATION OF FORMATION CHARACTERISTICS
FROM DST DATA

FOR: A. SCOTT RITCHIE
KEISWETTER A #1
SEC 12-6S-22W
GRAHAM COUNTY, KS.

DST # 4
FORMATION: LANSING
ELEVATION: 2203 KB

TEST PARAMETERS

TEST INTERVAL: 3484 - 3500	EST PAY: 8
TIME INTERVAL: 15 - 30 - 15 - 30	VISCOSITY OF FLUID: 9
INITIAL FLOW PRESS: 99.1- 272.5	HOLE SIZE: 7.875
FINAL FLOW PRESS: 346.9- 444.0	D.C. CAPACITY: 0.00492
SHUT-IN PRESS(I-F): 1045.5-1034.6	W.P. CAPACITY: 0.00708
BOTTOM HOLE TEMPERATURE: 105	D.P. CAPACITY: 0.01402
TOTAL FEET OF RECOVERY: 1255	TOTAL BARRELS RECOVERY: 8.3791

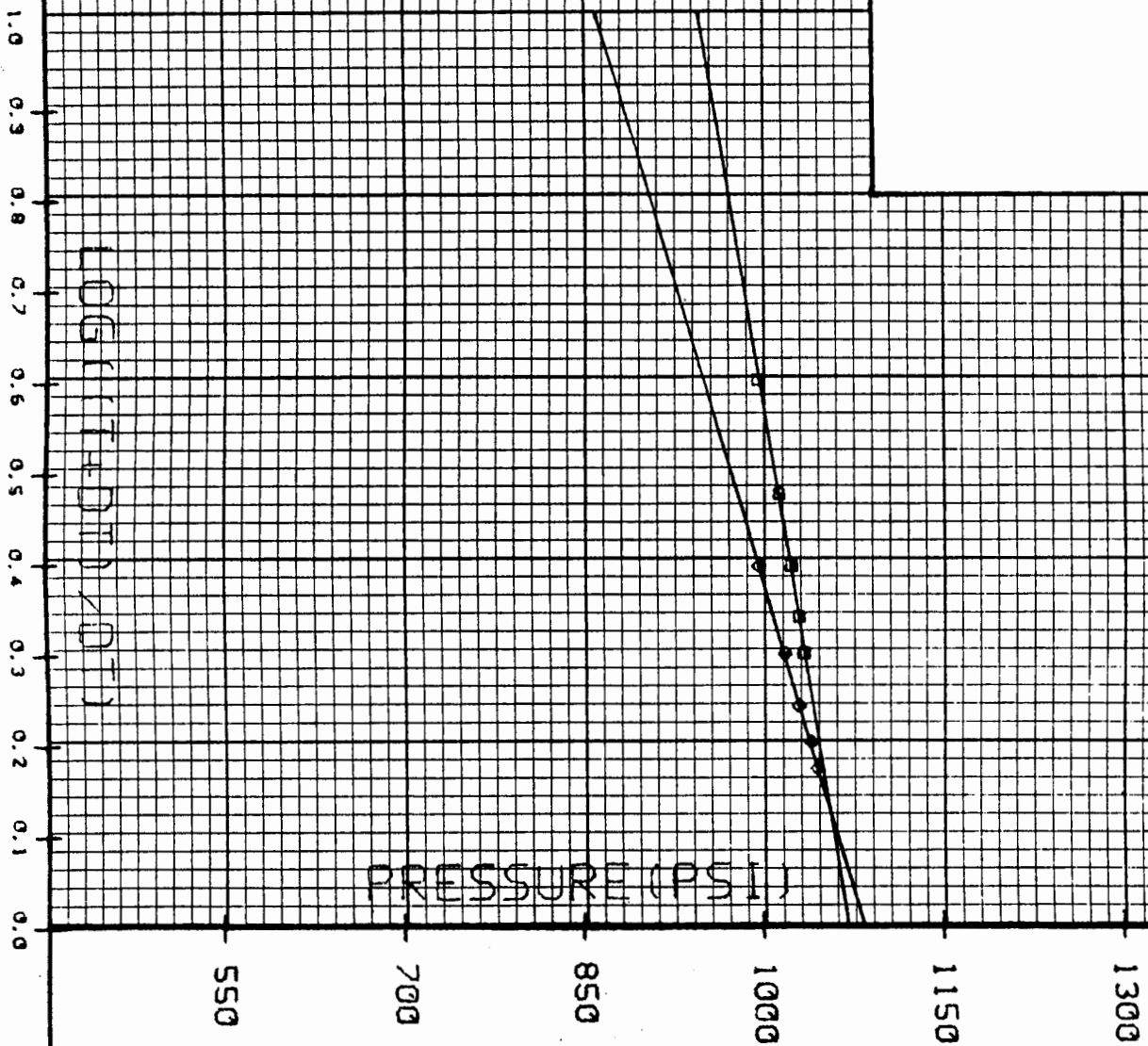
EXTRAPOLATED INITIAL SHUT-IN PRESSURE (PSI): 1083
SLOPE (PSI-CYCLE): 221 POINTS USED: 5

EXTRAPOLATED FINAL SHUT-IN PRESSURE (PSI): 1067
SLOPE (PSI-CYCLE): 123 POINTS USED: 5

CALCULATIONS

AVERAGE PRODUCTION RATE (B/D)	: 402.20
TRANSMISSIBILITY (MD-FT/CP)	: 531.68
PERMEABILITY (MD)	: 598.14
PRODUCTIVITY INDEX (B/D/PSI)	: 0.3769
DAMAGE RATIO	: 0.927
APPROXIMATE RADIUS OF INVESTIGATION (FT)	: 134.0
DRAWDOWN FACTOR (%)	: 1.477
POTENTIOMETRIC SURFACE (FT)	: 1177.37

HORNER PLOT
A. SCOTT RITCHIE
KEISMETTER A #1
DST # 4 DEPTH: 3500
RECORDER NO. 13275
INITIAL SHUT-IN: $\diamond$
FINAL SHUT-IN: $\square$



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CHENEY TESTING COMPANY INC.
P. O. Box 367 HILL CITY, KANSAS 67642

ORIGINAL KCC

APR 22 2003

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DRILL-STEM TEST DATA

Company	A. Scott Ritchie	Test No.	5	CONFIDENTIAL
Well Name & Number	Keiswetter A #1	Zone Tested	Lansing 140, 160, 180	
Company Address	125 N Market Suite 950 Wichita Ks.	Date	8/13/84	
Company Rep.	Lee Ann Kasten	Tester	Dave Hunt	
Contractor	Murfin Drilling Company	Elevation	2203 KB	
Location: Sec. 12 Twp. 6s Rge. 22w Co. Graham State Ks.		Est. Feet of Pay		

Recorder No. 13276 Type AK-1 Range 3950 PSI

Recorder Depth 3605 Clock # 22345

(A) Initial Hydrostatic Mud 1901 PSI

(B) First Initial Flow Pressure 50 PSI

(C) First Final Flow Pressure 50 PSI

(D) Initial Shut-in Pressure 1078 PSI

(E) Second Initial Flow Pressure 60 PSI

(F) Second Final Flow Pressure 60 PSI

(G) Final Shut-in Pressure 1020 PSI

(H) Final Hydrostatic Mud 1881 PSI

Temperature 106

Mud Weight 9.3 Viscosity 42

Fluid Loss 7.2

Interval Tested 3548-3608

Anchor Length 60

Top Packer Depth 3543

Bottom Packer Depth 3548

Total Depth 3608

Drill Pipe Size 4 1/2 FH

Wt. Pipe I. D. 2.7 Ft. Run 1045

Recovery-Total Feet 20

Recovered 20 Feet Of mud with few spots of oil.

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Extra Equipment Price of Job \$625.00

Recorder No. 13725 Type AK-1 Range 3950 PSI

Recorder Depth 3602 Clock # 25825

Tool Open Before I.S.I. 30 Mins.

Initial Shut-in 45 Mins.

Flow Period 30 Mins.

Final Shut-in 45 Mins.

Top Choke Size 1" Hole Size 7 7/8"

Bottom Choke Size 3/4" Rubber Size 6 3/4"

Tool Open @ 1:02 AM

Blow Remarks 1st open: Weak 1/2" blow, increasing to 1/2" .

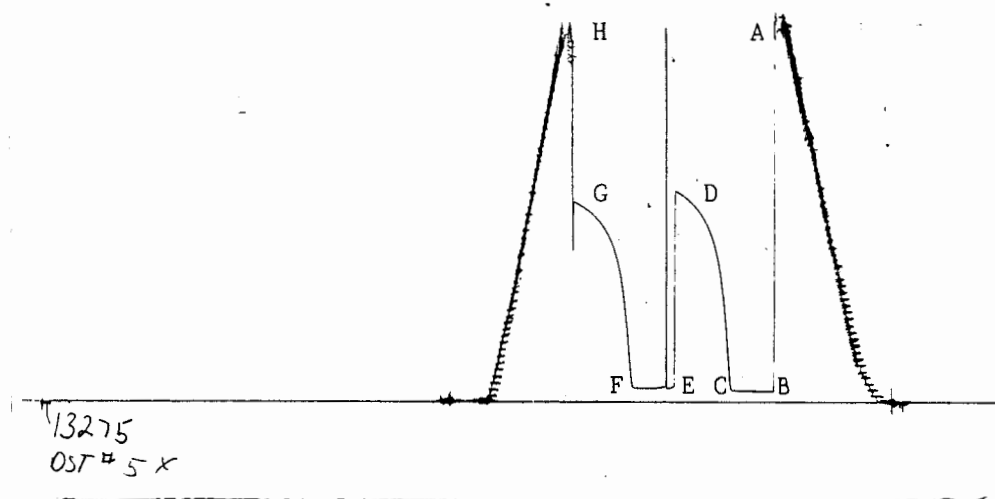
2nd open: No blow, flushed tool, good surge, no blow.

Well Chlorides: 3,000 ppm

Recovery Chlorides: 3,000 ppm

Drill Collars: 2.25 Ft. Run: 233

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This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	1901	PSI
(B) First Initial Flow Pressure	50	PSI
(C) First Final Flow Pressure	50	PSI
(D) Initial Closed-in Pressure	1078	PSI
(E) Second Initial Flow Pressure	60	PSI
(F) Second Final Flow Pressure	60	PSI
(G) Final Closed-in Pressure	1020	PSI
(H) Final Hydrostatic Mud	1881	PSI

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DRILL-STEM TEST DATA

APR 22 2003

Company <u>A. Scott Richie</u>	Test No. <u>6</u>
Well Name & Number <u>Keiswetter A #1</u>	Zone Tested <u>Lansing 200, 220</u>
Company Address <u>125 N Market Suite 950 Wichita Ks.</u>	Date <u>8/13/84</u>
Company Rep. <u>Lea Ann Kasten</u>	Tester <u>Dave Hunt</u>
Contractor <u>Murfin Drilling Company</u>	Elevation <u>2203 KB</u>
Location: Sec. <u>12</u> Twp <u>6s</u> Rge. <u>22w</u> Co. <u>Graham</u> State <u>Ks.</u>	Est. Feet of Pay _____

CONFIDENTIAL

Recorder No. 13276 Type AK-1 Range 3950 PSI

Recorder Depth 3634 Clock # 22345

(A) Initial Hydrostatic Mud 1968 PSI

(B) First Initial Flow Pressure 70 PSI

(C) First Final Flow Pressure 70 PSI

(D) Initial Shut-in Pressure 240 PSI

(E) Second Initial Flow Pressure 70 PSI

(F) Second Final Flow Pressure 70 PSI

(G) Final Shut-in Pressure 230 PSI

(H) Final Hydrostatic Mud 1940 PSI

Temperature 107

Mud Weight 9.8 Viscosity 40

Fluid Loss 8.8

Interval Tested 3601-3640

Anchor Length 39

Top Packer Depth 3596

Bottom Packer Depth 3601

Total Depth 3640

Drill Pipe Size 4 1/2 FH

Wt. Pipe I. D. 2.7 Ft. Run 1045

Recovery-Total Feet 15

Recovered 15 Feet Of very slightly oil cut mud, 1% oil, 99% mud.

Recovered _____ Feet Of _____

Recovered _____ Feet Of _____

Recovered _____ Feet Of _____

Recovered _____ Feet Of _____

Recovered _____ Feet Of _____

Extra Equipment _____ Price of Job \$625.00

Recorder No. 13275 Type AK-1 Range 3950 PSI

Recorder Depth 3637 Clock # 25825

Tool Open Before I.S.I. 30 Mins.

Initial Shut-in 30 Mins.

Flow Period 30 Mins.

Final Shut-in 30 Mins.

Top Choke Size 1" Hole Size 7 7/8"

Bottom Choke Size 3/4" Rubber Size 6 3/4"

Tool Open @ 3:13 PM

Blow Remarks 1st open: Weak blow died in
3 minutes.

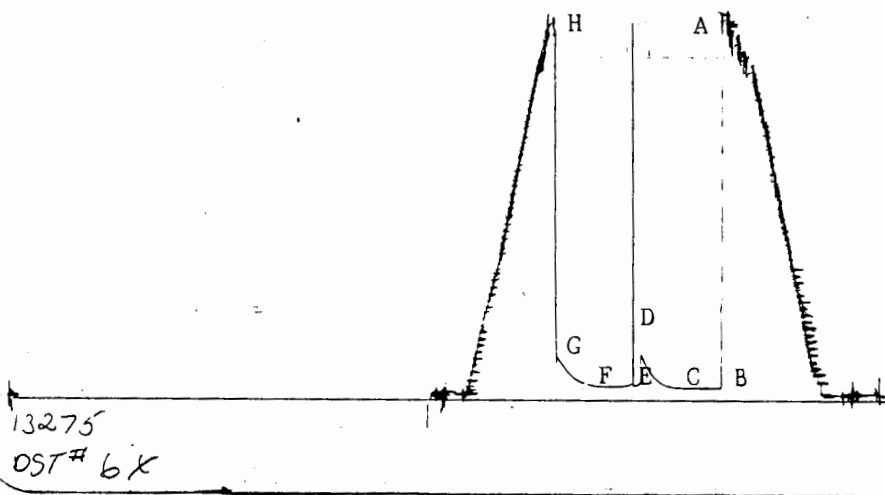
2nd open: No blow, flushed tool, good surge,
no blow.

Well chlorides: 4,000 ppm

Recovery Chlorides: 4,000 ppm

Drill Collars: 2.25 Ft. Run: 233

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This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	1968	PSI
(B) First Initial Flow Pressure	70	PSI
(C) First Final Flow Pressure	70	PSI
(D) Initial Closed-in Pressure	240	PSI
(E) Second Initial Flow Pressure	70	PSI
(F) Second Final Flow Pressure	70	PSI
(G) Final Closed-in Pressure	230	PSI
(H) Final Hydrostatic Mud	1940	PSI

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Company	A. Scott Ritchie	Test No.	7
Well Name & Number	Keiswetter A #1	Zone Tested	Cong.
Company Address	125 N Market Suite 950 Wichita Ks.	Date	8/14/84
Company Rep.	Lea Ann Kasten	Tester	Dave Hunt
Contractor	Murfin Drilling Company	Elevation	2203 KB
Location: Sec. 12 Twp. 6s Rge. 22w Co. Graham State Ks.	Est. Feet of Pay		

Recorder No. 13276 Type AK-1 Range 3950 PSI

Recorder Depth 3689 Clock # 22345

(A) Initial Hydrostatic Mud 1979 PSI

(B) First Initial Flow Pressure 80 PSI

(C) First Final Flow Pressure 80 PSI

(D) Initial Shut-in Pressure 824 PSI

(E) Second Initial Flow Pressure 80 PSI

(F) Second Final Flow Pressure 80 PSI

(G) Final Shut-in Pressure 667 PSI

(H) Final Hydrostatic Mud 1970 PSI

Temperature 107

Mud Weight 9.8 Viscosity 40

Fluid Loss 8.8

Interval Tested 3661-3695

Anchor Length 34

Top Packer Depth none

Bottom Packer Depth 3661

Total Depth 3695

Drill Pipe Size 4 1/2 FH

Wt. Pipe I. D. 2.7 Ft. Run 1045

Recovery-Total Feet 25

Recovered 25 Feet Of oil cut mud, 20% oil, 80% mud.

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Extra Equipment Price of Job \$625.00

Recorder No. 13275 Type AK-1 Range 3950 PSI

Recorder Depth 3692 Clock # 25825

Tool Open Before I.S.I. 30 Mins.

Initial Shut-in 45 Mins.

Flow Period 30 Mins.

Final Shut-in 45 Mins.

Top Choke Size 1" Hole Size 7 7/8"

Bottom Choke Size 3/4" Rubber Size 6 3/4"

Tool Open @ 4:10 AM

Blow Remarks 1st open: Weak 1/2" blow, decreasing to 1/4" blow.

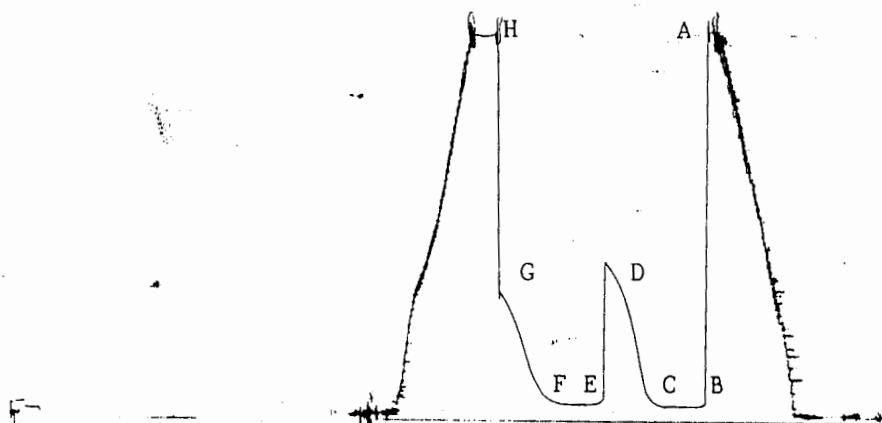
2nd open: 1/4" blow decreasing to surface blow.

Well chlorides: 4,000 ppm

Recovery Chlorides: 4,000 ppm

Drill Collars: 2.25 Ft. Run: 233

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13275
OST #7 X

This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	1979	PSI
(B) First Initial Flow Pressure	80	PSI
(C) First Final Flow Pressure	80	PSI
(D) Initial Closed-in Pressure	824	PSI
(E) Second Initial Flow Pressure	80	PSI
(F) Second Final Flow Pressure	80	PSI
(G) Final Closed-in Pressure	667	PSI
(H) Final Hydrostatic Mud	1970	PSI

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DRILL-STEM TEST DATA

APR 22 2003

Company <u>A. Scott Ritchie</u>	Test No. <u>8</u>
Well Name & Number <u>Keiswetter A #1</u>	Zone Tested <u>Granite Wash</u>
Company Address <u>125 N Market Suite 950 Wichita Ks.</u>	Date <u>8/14/84</u>
Company Rep. <u>Lea Ann Kasten</u>	Tester <u>Dave Hunt</u>
Contractor <u>Murfin Drilling Company</u>	Elevation <u>2203 KB</u>
Location: Sec. <u>12</u> Twp. <u>6</u> Rge. <u>22</u> <u>C Graham</u> State <u>Ks.</u>	Est. Feet of Pay _____

Recorder No. 13276 Type Ak-1 Range 3950 PSI
 Recorder Depth 3720 Clock # 22345
 (A) Initial Hydrostatic Mud 2029 PSI
 (B) First Initial Flow Pressure 80 PSI
 (C) First Final Flow Pressure 80 PSI
 (D) Initial Shut-in Pressure 824 PSI
 (E) Second Initial Flow Pressure 90 PSI
 (F) Second Final Flow Pressure 90 PSI
 (G) Final Shut-in Pressure 697 PSI
 (H) Final Hydrostatic Mud 1970 PSI
 Temperature 108
 Mud Weight 9.7 Viscosity 41
 Fluid Loss 10.6
 Interval Tested 3694-3726
 Anchor Length 32
 Top Packer Depth 3689
 Bottom Packer Depth 3694
 Total Depth 3726
 Drill Pipe Size 4 1/2 FH
 Wt. Pipe I. D. 2.7 Ft. Run 1045
 Recovery-Total Feet 75

Recorder No. 13275 Type AK-1 Range 3950 PSI
 Recorder Depth 3723 Clock # 25825
 Tool Open Before I.S.I. 30 Mins.
 Initial Shut-in 45 Mins.
 Flow Period 30 Mins.
 Final Shut-in 45 Mins.
 Top Choke Size 1" Hole Size 7 7/8"
 Bottom Choke Size 3/4" Rubber Size 6 3/4"
 Tool Open @ 6:25 PM
 Blow Remarks 1st open: Weak 1/2" decreasing
to 1/8" blow.
2nd open: Weak 1/8" blow decreasing to
no blow in 16 minutes.

Mud Chlorides: 4,000 ppm
 Recovery Chlorides: 4,000 ppm

Drill Collars: 2.25 Ft. Run: 233

Recovered 75 Feet Of very slightly oil cut mud, 1% oil, 99% mud.

Recovered _____ Feet Of _____

Recovered _____ Feet Of _____

Recovered _____ Feet Of _____

Recovered _____ Feet Of _____

Recovered _____ Feet Of _____

Extra Equipment _____ Price of Job \$625.00

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INITIAL SHUT-IN

=====

RECORDER NO: 13275 DEPTH: 3726 FT.
 INITIAL FLOW TIME (T): 30 MIN.

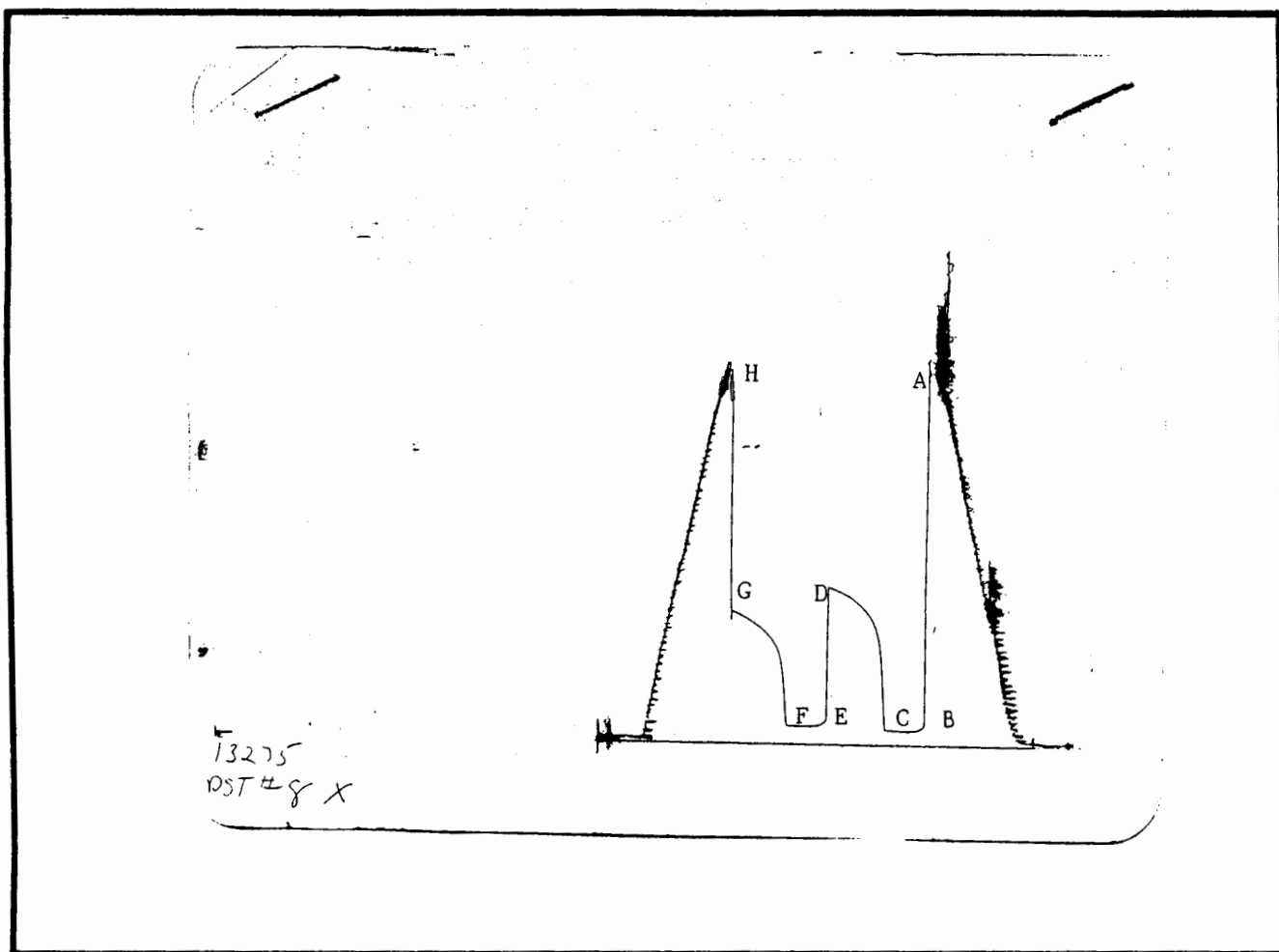
DT(MIN)	LOG((T+DT)/DT)	PRESSURE(PSIG)
0	0.000	78.3
5	0.845	539.1
10	0.602	645.2
15	0.477	695.7
20	0.398	734.4
25	0.342	760.1
30	0.301	781.9
35	0.269	798.8
40	0.243	813.6
45	0.222	825.5

FINAL SHUT-IN

=====

RECORDER NO: 13275 DEPTH: 3726 FT.
 TOTAL FLOW TIME: 60 MIN.

DT(MIN)	LOG((T+DT)/DT)	PRESSURE(PSIG)
0	0.000	95.1
5	1.114	378.6
10	0.845	509.4
15	0.699	559.9
20	0.602	596.6
25	0.531	623.4
30	0.477	646.2
35	0.434	666.0
40	0.398	681.8
45	0.368	695.7



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	2029	2024 PSI
(B) First Initial Flow Pressure	80	73.3 PSI
(C) First Final Flow Pressure	80	78.3 PSI
(D) Initial Closed-in Pressure	824	825.5 PSI
(E) Second Initial Flow Pressure	90	95.1 PSI
(F) Second Final Flow Pressure	90	95.1 PSI
(G) Final Closed-in Pressure	697	695.7 PSI
(H) Final Hydrostatic Mud	1970	1965 PSI

CHENEY TESTING CO, INC.
CALCULATION OF FORMATION CHARACTERISTICS
FROM DST DATA

FOR: A. SCOTT RITCHIE
KEISWETTER A #1 DST # 8
SEC 12-6S-22W FORMATION: GRANITE WASH
GRAHAM COUNTY, KANSAS ELEVATION: 2203 KB

TEST PARAMETERS

TEST INTERVAL: 3694 - 3726	EST PAY: 10
TIME INTERVAL: 30 - 45 - 30 - 45	VISCOSITY OF FLUID: 1
INITIAL FLOW PRESS: 73.3- 78.3	HOLE SIZE: 7.875
FINAL FLOW PRESS: 95.1- 95.1	D.C. CAPACITY: 0.00492
SHUT-IN PRESS(I-F): 825.5- 695.7	W.P. CAPACITY: 0.00708
BOTTOM HOLE TEMPERATURE: 108	D.P. CAPACITY: 0.01402
TOTAL FEET OF RECOVERY: 75	TOTAL BARRELS RECOVERY: 0.3687

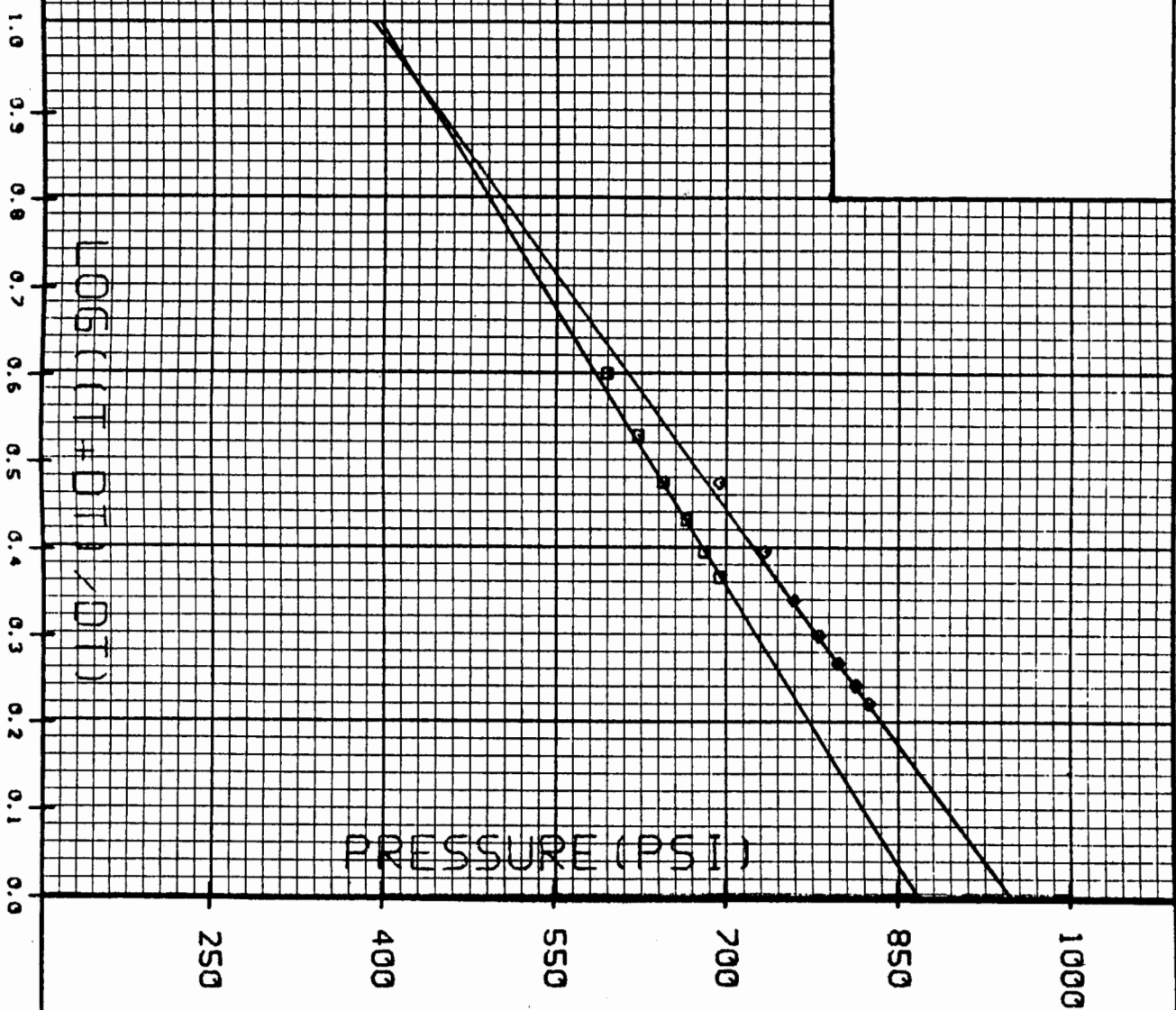
EXTRAPOLATED INITIAL SHUT-IN PRESSURE (PSI): 943
SLOPE (PSI-CYCLE): 547 POINTS USED: 5

EXTRAPOLATED FINAL SHUT-IN PRESSURE (PSI): 882
SLOPE (PSI-CYCLE): 483 POINTS USED: 4

CALCULATIONS

AVERAGE PRODUCTION RATE (B/D)	:	8.85
TRANSMISSIBILITY (MD-FT/CP)	:	2.98
PERMEABILITY (MD)	:	0.30
PRODUCTIVITY INDEX (B/D/PSI)	:	0.0100
DAMAGE RATIO	:	0.298
APPROXIMATE RADIUS OF INVESTIGATION (FT)	:	4.2
DRAWDOWN FACTOR (%)	:	6.469
POTENTIOMETRIC SURFACE (FT)	:	522.36

HORNER PLOT
A. SCOTT RITCHIE
KEISMETTER A #1
DST # 8 DEPTH: 3726
RECORDER NO. 13275
INITIAL SHUT-IN: $\diamond$
FINAL SHUT-IN: $\square$



CHENEY TESTING CO.

WELL FILE
DO NOT REMOVE

DRILL STEM TEST REPORT

NOMENCLATURE

b	= Approximate Radius of Investigation	Feet
b¹	= Approximate Radius of Investigation (Net Pay Zone h¹)	Feet
D.R.	= Damage Ratio	—
EI	= Elevation	Feet
GD	= B.T. Gauge Depth (From Surface Reference)	Feet
h	= Interval Tested	Feet
h¹	= Net Pay Thickness	Feet
K	= Permeability	md
K¹	= Permeability (From Net Pay Zone h¹)	md
m	= Slope Extrapolated Pressure Plot (Psi²/cycle Gas)	psi/cycle
OF¹	= Maximum Indicated Flow Rate	MCF/D
OF²	= Minimum Indicated Flow Rate	MCF/D
OF³	= Theoretical Open Flow Potential with/Damage Removed Max.	MCF/D
OF⁴	= Theoretical Open Flow Potential with/Damage Removed Min.	MCF/D
P^S	= Extrapolated Static Pressure	Psig.
P^F	= Final Flow Pressure	Psig.
P^{OT}	= Potentiometric Surface (Fresh Water*)	Feet
Q	= Average Adjusted Production Rate During Test	bbls/day
Q¹	= Theoretical Production w/Damage Removed	bbls/day
Q^g	= Measured Gas Production Rate	MCF/D
R	= Corrected Recovery	bbls
r^w	= Radius of Well Bore	Feet
t	= Flow Time	Minutes
t^o	= Total Flow Time	Minutes
T	= Temperature Rankine	°R
Z	= Compressibility Factor	—
u	= Viscosity Gas or Liquid	CP
Log	= Common Log	

* Potentiometric Surface Reference to Rotary Table When Elevation Not Given, Fresh Water Corrected to 100° F.

CHENEY TESTING COMPANY, INC.

P. O. Box 367

HILL CITY, KANSAS 67642

DRILL-STEM TEST DATA

Company	A. Scott Ritchie	Test No.	2
Well Name & Number	Keiswetter A #1	Zone Tested	Toronot & Lansing
Company Address	125 N Market Suite 950 Wichita Ks.	Date	8/10/84
Company Rep.	Lea Ann Kasten	Tester	Dave Hunt
Contractor	Murfin Drilling Company	Elevation	2203 kB
Location: Sec. 12 Twp. 6 Rge. 22 Co. Graham State Ks.	Est. Feet of Pay		

Recorder No. 13276 Type AK-1 Range 3950 PSI

Recorder Depth 3450 Clock # 22345

(A) Initial Hydrostatic Mud 1842 PSI

(B) First Initial Flow Pressure 160 PSI

(C) First Final Flow Pressure 420 PSI

(D) Initial Shut-in Pressure 1020 PSI

(E) Second Initial Flow Pressure 509 PSI

(F) Second Final Flow Pressure 578 PSI

(G) Final Shut-in Pressure 1020 PSI

(H) Final Hydrostatic Mud 1812 PSI

Temperature 104

Mud Weight 9.6 Viscosity 45

Fluid Loss 8.0

Interval Tested 3393-3456

Anchor Length 63

Top Packer Depth 3388

Bottom Packer Depth 3393

Total Depth 3456

Drill Pipe Size 4 1/2 FH

Wt. Pipe I. D. 2.7 Ft. Run 1045

Recovery-Total Feet 1475

Recovered 180 Feet Of mud cut oil, 50% oil, 45% mud, 5% gas.

Recovered 647 Feet Of slightly mud cut gassy oil, 83% oil, 12% mud, 5% gas.

Recovered 648 Feet Of slightly mud cut gassy oil, 90% oil, 3% mud, 7% gas.

Recovered 560 Feet Of gas in pipe.

Recovered Feet Of Gravity: 32 API corrected.

Recovered Feet Of

Extra Equipment Price of Job \$625.00

Recorder No. 13275 Type AK-1 Range 3950 PSI

Recorder Depth 3453 Clock # 25828

Tool Open Before I.S.I. 15 Mins.

Initial Shut-in 30 Mins.

Flow Period 15 Mins.

Final Shut-in 30 Mins.

Top Choke Size 1" Hole Size 7 7/8"

Bottom Choke Size 3/4" Rubber Size 6 3/4"

Tool Open @ 8:15 PM

Blow Remarks 1st open: Strong blow, off bottom in 1 1/2 minutes.

2nd open: Off bottom of bucket in 1 1/2 minutes.

Well Chlorides: 3,000 ppm

Recovery Chlorides: 12,000 ppm

Drill Collars: 2.25 Ft. Run: 233

CHENEY TESTING COMPANY, INC.

P. O. BOX 367

HILL CITY, KANSAS 67642

Dist. HAYS

TEST TICKET

Company <u>A. Scott Ritchie</u>	Test No. <u>2</u>
Well Name & Number <u>Keiswetter #A-1</u>	Zone Tested <u>Toronto + Top of Lansing</u>
Company Address <u>125 N. Market Suite 250 Pittsburg, KS</u>	Date <u>8-10-84</u>
Company Rep. <u>Lea Ann Kasten</u>	Tester <u>DAVE HUNT</u>
Contractor <u>Martin Drilling Co. #8</u>	Elevation <u>2203 K.B.</u>
Location: Sec. <u>12</u> Twp. <u>6</u> Rge. <u>22</u> Co. <u>Graham</u> State <u>Ks.</u>	Est. Feet of Pay

Recorder No. 13276 Type AK-1 Range 3950 PSI

Recorder Depth 3450 Clock # 22345

(A) Initial Hydrostatic Mud 1842 PSI

(B) First Initial Flow Pressure 160 PSI

(C) First Final Flow Pressure 420 PSI

(D) Initial Shut-in Pressure 1020 PSI

(E) Second Initial Flow Pressure 509 PSI

(F) Second Final Flow Pressure 578 PSI

(G) Final Shut-in Pressure 1020 PSI

(H) Final Hydrostatic Mud 1812 PSI

Temperature 104°

Mud Weight 9.6 45 Viscosity

Fluid Loss 8.0

Interval Tested 3393 - 3456

Anchor Length 63'

Top Packer Depth 3388

Bottom Packer Depth 3393

Total Depth 3456

Drill Pipe Size 4 1/2 F.H.

Wt. Pipe I. D. 2.70 Ft. Run 1045

Recovery—Total Feet 1475 233

Rec. 180' mud cut oil = 50% oil 45% mud 5% gas

Rec. 647' slightly mud cut oil = 83% oil 12% mud 5% gas

Rec. 648' slightly mud cut sandy oil = 90% oil 3% mud 7% gas

Rec. 560' gas in pipe

Rec. 32 Gravity

Recorder No. 13275 Type AK-1 Range 3950 PSI

Recorder Depth 3453 Clock # 25825

Tool Open Before I. S. I. 15 Mins.

Initial Shut-in 30 Mins.

Flow Period 15 Mins.

Final Shut-in 30 Mins.

T Choke Size 1" Hole Size 7 7/8"

B Choke Size 3/4" Rubber Size 6 3/4"

Tool Open @ 8:15 P.M.

Blow Setong blow off bottom in 1 1/2 mins.

Remarks on F.F.

OFF bottom of bucket in 1 1/2

Well Chlorides 3,000 ppm

Rec. Chlorides 12,000 ppm

Test \$ 625.00

Straddle

Bowen Jars

Safety Joint

Selective Zone Tool

Sampler

Extra Packer

Circulating Sub 35.00

Down Hole Insurance

Others 625.00

Price of Job \$ 625.00

CHENEY TESTING COMPANY, INC.

Approved By Lea Ann Kasten

Our Representative Dave Hunt

TICKET N° 9159

INITIAL SHUT-IN

=====

RECORDER NO: 13275 DEPTH: 3456 FT.
INITIAL FLOW TIME (T): 15 MIN.

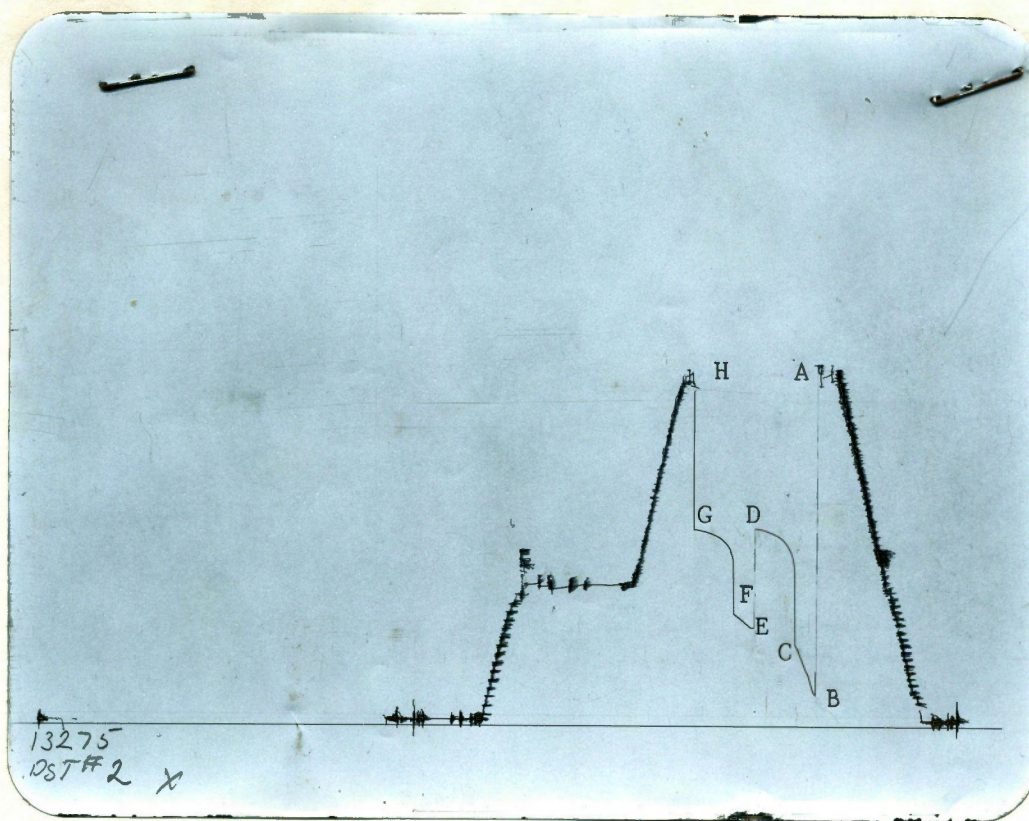
DT(MIN)	LOG((T+DT)/DT)	PRESSURE(P SIG)
=====		
0	0.000	429.1
5	0.602	911.8
10	0.398	962.3
15	0.301	986.1
20	0.243	1001.9
25	0.204	1012.8
30	0.176	1019.8

FINAL SHUT-IN

=====

RECORDER NO: 13275 DEPTH: 3456 FT.
TOTAL FLOW TIME: 30 MIN.

DT(MIN)	LOG((T+DT)/DT)	PRESSURE(P SIG)
=====		
0	0.000	581.7
5	0.845	933.6
10	0.602	967.3
15	0.477	986.1
20	0.398	999.0
25	0.342	1005.9
30	0.301	1010.9



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	1842	1837 PSI
(B) First Initial Flow Pressure	160	174.4 PSI
(C) First Final Flow Pressure	420	429.1 PSI
(D) Initial Closed-in Pressure	1020	1019.8 PSI
(E) Second Initial Flow Pressure	509	508.4 PSI
(F) Second Final Flow Pressure	578	581.7 PSI
(G) Final Closed-in Pressure	1020	1010.9 PSI
(H) Final Hydrostatic Mud	1812	1807 PSI

CHENEY TESTING CO, INC.
CALCULATION OF FORMATION CHARACTERISTICS
FROM DST DATA

FOR: A. SCOTT RITCHIE
KEISWETTER A #1
SEC 12-6S-22W
GRAHAM COUNTY, KS.
DST # 2
FORMATION: TORONTO & LANSING
ELEVATION: 2203 KB

TEST PARAMETERS

TEST INTERVAL: 3393 - 3456	EST PAY: 10
TIME INTERVAL: 15 - 30 - 15 - 30	VISCOSITY OF FLUID: 1
INITIAL FLOW PRESS: 174.4- 429.1	HOLE SIZE: 7.875
FINAL FLOW PRESS: 508.4- 581.7	D.C. CAPACITY:0.00492
SHUT-IN PRESS(I-F):1019.8-1010.9	W.P. CAPACITY:0.00708
BOTTOM HOLE TEMPERATURE: 104	D.P. CAPACITY:0.01402
TOTAL FEET OF RECOVERY: 1475	TOTAL BARRELS RECOVERY:11.3039

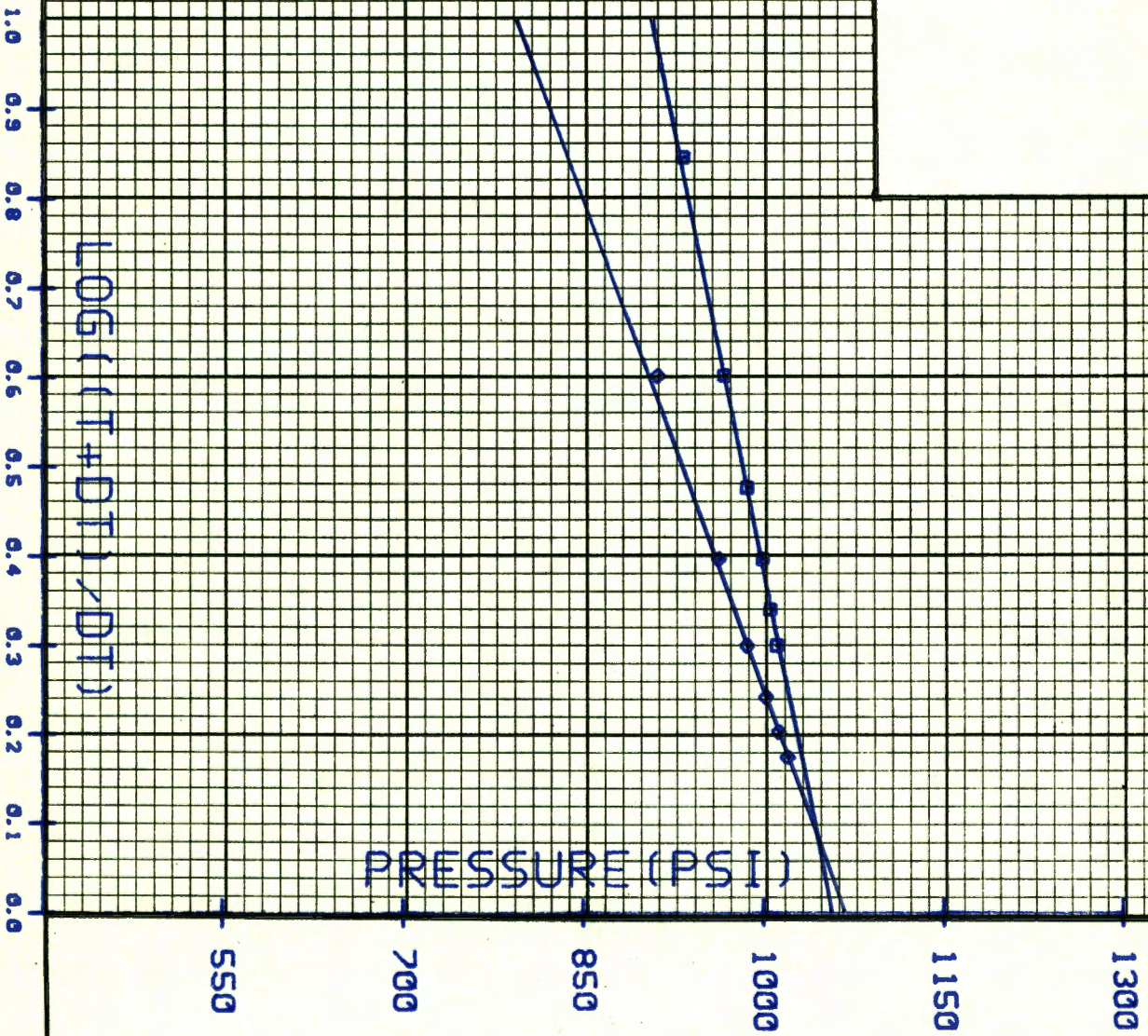
EXTRAPOLATED INITIAL SHUT-IN PRESSURE (PSI): 1065
SLOPE (PSI-CYCLE): 272 POINTS USED: 5

EXTRAPOLATED FINAL SHUT-IN PRESSURE (PSI): 1053
SLOPE (PSI-CYCLE): 295 POINTS USED: 5

CALCULATIONS

AVERAGE PRODUCTION RATE (B/D)	: 542.59
TRANSMISSIBILITY (MD-FT/CP)	: 299.07
PERMEABILITY (MD)	: 29.91
PRODUCTIVITY INDEX (B/D/PSI)	: 0.5153
DAMAGE RATIO	: 0.292
APPROXIMATE RADIUS OF INVESTIGATION (FT)	: 30.0
DRAWDOWN FACTOR (%)	: 1.127
POTENTIOMETRIC SURFACE (FT)	:1188.91

HORNER PLOT
A. SCOTT RITCHIE
KEISWETTER A #1
DST # 2 DEPTH: 3456
RECORDER NO. 13275
INITIAL SHUT-IN: $\diamond$
FINAL SHUT-IN: $\square$



CHENEY TESTING COMPANY, INC.

P. O. Box 367

HILL CITY, KANSAS 67642

DRILL-STEM TEST DATA

Company	A. Scott Ritchie	Test No.	3
Well Name & Number	Keiswetter A #1	Zone Tested	Lansing 50'
Company Address	125 N Market Suite 950 Wichita Ks.	Date	8/11/84
Company Rep.	Lea Ann Kasten	Tester	Dave Hunt
Contractor	Murfin Drilling Company	Elevation	2203 KB
Location: Sec. 12 Twp. 6 Rge. 22 Co.Graham State Ks.	Est. Feet of Pay		

Recorder No. 13276 Type AK-1 Range 3950 PSI

Recorder Depth 3481 Clock # 22345

(A) Initial Hydrostatic Mud 1842 PSI

(B) First Initial Flow Pressure 80 PSI

(C) First Final Flow Pressure 250 PSI

(D) Initial Shut-in Pressure 1205 PSI

(E) Second Initial Flow Pressure 290 PSI

(F) Second Final Flow Pressure 370 PSI

(G) Final Shut-in Pressure 1205 PSI

(H) Final Hydrostatic Mud 1812 PSI

Temperature 112

Mud Weight 9.6 Viscosity 44

Fluid Loss 6.4

Interval Tested 3460-3487

Anchor Length 27

Top Packer Depth 3455

Bottom Packer Depth 3460

Total Depth 3487

Drill Pipe Size 4 1/2 FH

Wt. Pipe I. D. 2.7 Ft. Run 1045

Recovery-Total Feet 740

Recovered 60 Feet Of slightly muddy watery gas cut oil, 87% oil, 10% gas, 27% water.

Recovered 248 Feet Of slightly oily watery gas cut mud, 80% mud, 13% water, 5% oil, 2% gas.

Recovered 432 Feet Of mud cut gassy water, 18% mud, 2% gas, 80% water, scum of oil.

Recovered Feet Of Gravity: 30 API corrected.

Recovered 240 Feet Of gas in pipe.

Recovered Feet Of

Extra Equipment Price of Job \$625.00

Recorder No. 13275 Type AK-1 Range 3950 PSI

Recorder Depth 3484 Clock # 25825

Tool Open Before I.S.I. 30 Mins.

Initial Shut-in 45 Mins.

Flow Period 30 Mins.

Final Shut-in 45 Mins.

Top Choke Size 1" Hole Size 7 7/8"

Bottom Choke Size 3/4" Rubber Size 6 3/4"

Tool Open @ 4:05 PM

Blow Remarks 1st open: Strong blow, off bottom of bucket in 11 minutes.

2nd open: Strong blow off bottom of bucket in 18 minutes.

Well Chlorides: 3,000 ppm

Recovery Chlorides: 32,000 ppm

Drill Collars: 2.25 Ft. Run: 233

CHENEY TESTING COMPANY, INC.

P. O. BOX 367

HILL CITY, KANSAS 67642

Dist. Hays

TEST TICKET

Company <u>A. Scott Ritchie</u>	Test No. <u>3</u>
Well Name & Number <u>Keiswetter * A-1</u>	Zone Tested <u>LANSING 50' zone</u>
Company Address <u>125 N. Market Suite 950 Wichita, KS</u>	Date <u>8-11-84</u>
Company Rep. <u>Lea Ann Kasten</u>	Tester <u>Dave Hunt</u>
Contractor <u>Martin Drilling Co. #8</u>	Elevation <u>2203 K.B.</u>
Location: Sec. <u>12</u> Twp. <u>6</u> Rge. <u>22</u> Co. <u>Graham</u> State <u>Ks.</u>	Est. Feet of Pay

Recorder No. 13276 Type AK-1 Range 3950 PSI

Recorder Depth 3481 Clock # 22345

(A) Initial Hydrostatic Mud 1842 PSI

(B) First Initial Flow Pressure 80 PSI

(C) First Final Flow Pressure 250 PSI

(D) Initial Shut-in Pressure 1205 PSI

(E) Second Initial Flow Pressure 290 PSI

(F) Second Final Flow Pressure 370 PSI

(G) Final Shut-in Pressure 1205 PSI

(H) Final Hydrostatic Mud 1812 PSI

Temperature 112.0

Mud Weight 9.6 Viscosity 44

Fluid Loss 6.4

Interval Tested 3460 - 3487

Anchor Length 27'

Top Packer Depth 3455

Bottom Packer Depth 3460

Total Depth 3487

Drill Pipe Size 4 1/2 F.H.

Wt. Pipe I. D. 2.70 Ft. Run 1045

Recovery—Total Feet 740' 233

Rec. 60' slightly mud, water, gas cut oil

Rec. 8770 oil - 1070 gas, 270 water, 170 mud

Rec. 248' slightly oil, water, gas cut mud

Rec. 80% mud, 1370 water, 570 oil, 270 gas

Rec. 432' mud cut water, with a scum of oil

Rec. 1870 mud, 270 gas, 80% water

Gravity 30, 240' gas in pipe

Recorder No. 13275 Type AK-1 Range 3950 PSI

Recorder Depth 3484 Clock # 25825

Tool Open Before I. S. I. 30 Mins.

Initial Shut-in 45 Mins.

Flow Period 30 Mins.

Final Shut-in 45 Mins.

T Choke Size 1" Hole Size 7 7/8"

B Choke Size 3/4" Rubber Size 6 3/4"

Tool Open @ 4:05 P.M.

Blow Strong blow, off bottom of bucket

Remarks in 11 min. on I.F.

Strong blow off bottom of bucket

in 18 min on F.F.

Well Chlorides 3,000 PPM

Rec. Chlorides 32,000 PPM

Test\$ 625.00

Straddle

Bowen Jars

Safety Joint

Selective Zone Tool

Sampler

Extra Packer

Circulating Sub

Down Hole Insurance

Others

Price of Job\$ 625.00

CHENEY TESTING COMPANY, INC.

Approved By Lea Ann Kasten

Our Representative Dave Hunt

TICKET N^o 9160

INITIAL SHUT-IN

=====

RECORDER NO: 13275 DEPTH: 3487 FT.
INITIAL FLOW TIME (T): 30 MIN.

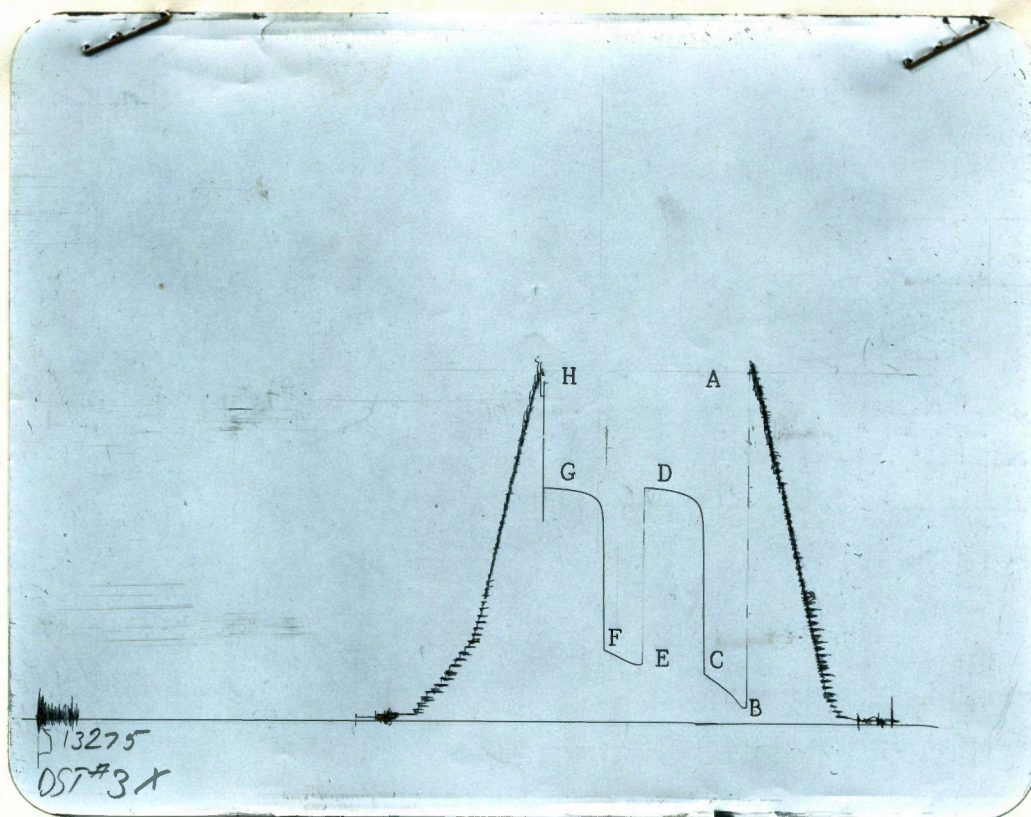
DT(MIN)	LOG((T+DT)/DT)	PRESSURE(P SIG)
=====		
0	0.000	251.7
5	0.845	1120.9
10	0.602	1155.6
15	0.477	1172.4
20	0.398	1185.3
25	0.342	1194.2
30	0.301	1199.2
35	0.269	1205.1
40	0.243	1207.1
45	0.222	1209.1

FINAL SHUT-IN

=====

RECORDER NO: 13275 DEPTH: 3487 FT.
TOTAL FLOW TIME: 60 MIN.

DT(MIN)	LOG((T+DT)/DT)	PRESSURE(P SIG)
=====		
0	0.000	374.6
5	1.114	1139.7
10	0.845	1168.4
15	0.699	1181.3
20	0.602	1189.2
25	0.531	1195.2
30	0.477	1199.2
35	0.434	1201.1
40	0.398	1203.1
45	0.368	1205.1



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	1842	1837 PSI
(B) First Initial Flow Pressure	80	79.3 PSI
(C) First Final Flow Pressure	250	251.7 PSI
(D) Initial Closed-in Pressure	1205	1209.1 PSI
(E) Second Initial Flow Pressure	290	298.3 PSI
(F) Second Final Flow Pressure	370	374.6 PSI
(G) Final Closed-in Pressure	1205	1205.1 PSI
(H) Final Hydrostatic Mud	1812	1807 PSI

CHENEY TESTING CO, INC.
CALCULATION OF FORMATION CHARACTERISTICS
FROM DST DATA

FOR: A. SCOTT RITCHIE
KEISWETTER A #1
SEC 12-6S-22W
GRAHAM COUNTY, KS.

DST # 3
FORMATION: LANSING
ELEVATION: 2203 KB

TEST PARAMETERS

TEST INTERVAL: 3460 - 3487	EST PAY: 8
TIME INTERVAL: 30 - 45 - 30 - 45	VISCOSITY OF FLUID: 1
INITIAL FLOW PRESS: 79.3- 251.7	HOLE SIZE: 7.875
FINAL FLOW PRESS: 298.3- 374.6	D.C. CAPACITY: 0.00492
SHUT-IN PRESS(I-F): 1209.1-1205.1	W.P. CAPACITY: 0.00708
BOTTOM HOLE TEMPERATURE: 112	D.P. CAPACITY: 0.01402
TOTAL FEET OF RECOVERY: 740	TOTAL BARRELS RECOVERY: 4.7339

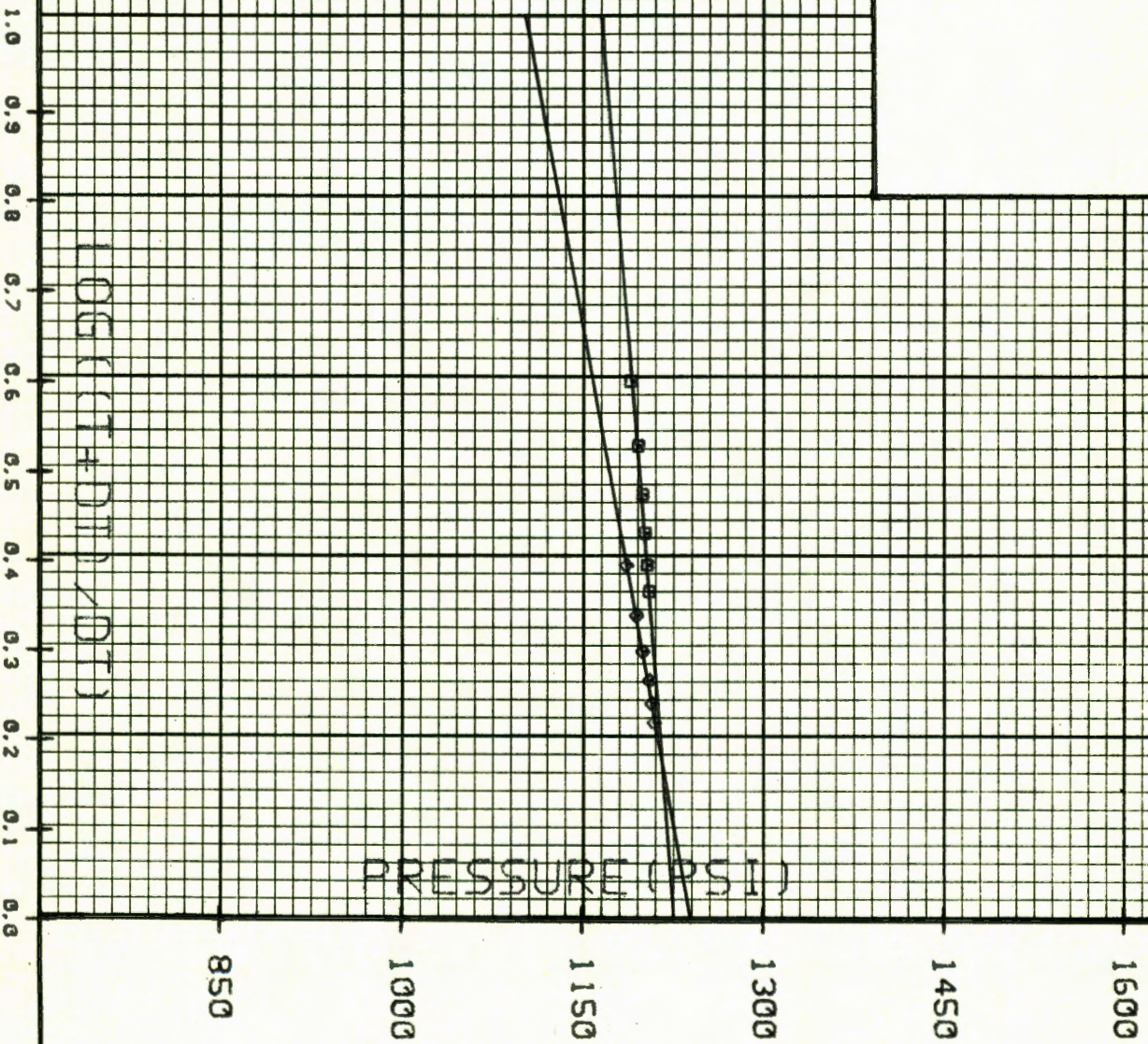
EXTRAPOLATED INITIAL SHUT-IN PRESSURE (PSI): 1240
SLOPE (PSI-CYCLE): 136 POINTS USED: 6

EXTRAPOLATED FINAL SHUT-IN PRESSURE (PSI): 1225
SLOPE (PSI-CYCLE): 58 POINTS USED: 6

CALCULATIONS

AVERAGE PRODUCTION RATE (B/D)	: 113.61
TRANSMISSIBILITY (MD-FT/CP)	: 318.51
PERMEABILITY (MD)	: 39.81
PRODUCTIVITY INDEX (B/D/PSI)	: 0.0927
DAMAGE RATIO	: 2.683
APPROXIMATE RADIUS OF INVESTIGATION (FT)	: 48.9
DRAWDOWN FACTOR (%)	: 1.210
POTENTIOMETRIC SURFACE (FT)	: 1556.77

HORNER PLOT
A. SCOTT RITCHIE
KEISMETTER A #1
DST # 3 DEPTH: 3487
RECORDER NO. 13275
INITIAL SHUT-IN: $\diamond$
FINAL SHUT-IN: $\square$



CHENEY TESTING COMPANY, INC.

P. O. Box 367

HILL CITY, KANSAS 67642

DRILL-STEM TEST DATA

Company	A. Scott Ritchie	Test No.	4
Well Name & Number	Keiswetter A #1	Zone Tested	Lansing 70'
Company Address	125 N Market Suite 950 Wichita Ks.	Date	8/12/84
Company Rep.	Lea Ann Kasten	Tester	Dave Hunt
Contractor	Murfin Drilling Company	Elevation	2203 KB
Location: Sec. 12 Twp. 6s Rge. 22w Co. Graham State Ks.	Est. Feet of Pay		

Recorder No. 13276 Type AK-1 Range 3950 PSI

Recorder Depth 3494 Clock # 22345

(A) Initial Hydrostatic Mud 1822 PSI

(B) First Initial Flow Pressure 80 PSI

(C) First Final Flow Pressure 270 PSI

(D) Initial Shut-in Pressure 1039 PSI

(E) Second Initial Flow Pressure 340 PSI

(F) Second Final Flow Pressure 440 PSI

(G) Final Shut-in Pressure 1030 PSI

(H) Final Hydrostatic Mud 1802 PSI

Temperature 105

Mud Weight 9.6 Viscosity 44

Fluid Loss 6.4

Interval Tested 3484-3500

Anchor Length 16

Top Packer Depth 3479

Bottom Packer Depth 3484

Total Depth 3500

Drill Pipe Size 4 1/2 FH

Wt. Pipe I. D. 2.7 Ft. Run 1045

Recovery-Total Feet 1255

Recovered 1135 Feet Of gassy oil, 90% oil, 10% gas.

Recovered 120 Feet Of mud cut gassy oil, 48% mud, 5% gas, 47% oil.

Recovered 1920 Feet Of gas in pipe.

Recovered Feet Of Gravity: 37 API corrected.

Recovered Feet Of

Recovered Feet Of

Extra Equipment Price of Job \$625.00

Recorder No. 13275 Type Ak-1 Range 3950 PSI

Recorder Depth 3497 Clock # 25825

Tool Open Before I.S.I. 15 Mins.

Initial Shut-in 30 Mins.

Flow Period 15 Mins.

Final Shut-in 30 Mins.

Top Choke Size 1" Hole Size 7 7/8"

Bottom Choke Size 3/4" Rubber Size 6 3/4"

Tool Open @ 4:22 AM

Blow Remarks 1st open: Strong blow, off bottom in 1 1/2 minutes.

2nd open: Off bottom in 1 minute.

Well Chlorides: 3,000 ppm

Recovery Chlorides: 8,000 ppm

Drill Collars: 2.25 Ft. Run: 233

CHENEY TESTING COMPANY, INC.

P. O. BOX 367

HILL CITY, KANSAS 67642

Dist. Hays

TEST TICKET

Company <u>A. Scott Ritchie</u>	Test No. <u>4</u>
Well Name & Number <u>Keiswetter # A-1</u>	Zone Tested <u>LANSING 70 zone</u>
Company Address <u>125 N. Market Suite 950, Wichita, KS</u>	Date <u>8-12-84</u>
Company Rep. <u>Lea Ann Kasten</u>	Tester <u>Dave Hunt</u>
Contractor <u>Martin Drilling Co. #8</u>	Elevation <u>2203 K.B.</u>
Location: Sec. <u>12</u> Twp. <u>6</u> Rge. <u>22</u> Col. <u>ASHAM</u> State <u>Ks</u>	Est. Feet of Pay

Recorder No. 13226 Type AK-1 Range 3950 PSI

Recorder Depth 3494 Clock # 22345

(A) Initial Hydrostatic Mud 1822 PSI

(B) First Initial Flow Pressure 80 PSI

(C) First Final Flow Pressure 270 PSI

(D) Initial Shut-in Pressure 1039 PSI

(E) Second Initial Flow Pressure 340 PSI

(F) Second Final Flow Pressure 440 PSI

(G) Final Shut-in Pressure 1030 PSI

(H) Final Hydrostatic Mud 1802 PSI

Temperature 105°

Mud Weight 9.6 Viscosity 44

Fluid Loss 6.4

Interval Tested 3484-3500

Anchor Length 16'

Top Packer Depth 3479

Bottom Packer Depth 3484

Total Depth 3500

Drill Pipe Size 4 1/2 F.H.

Wt. Pipe I. D. 2.70 Ft. Run 1045

Drill Collar 2.25 1255' 233

Recovery—Total Feet

Rec. 1135' Gassy Oil, 90% oil, 10% s.s.

Rec. 120' med cut gassy oil

Rec. 48% m.p., 5% gas, 47% oil

Rec. _____

Rec. _____

Rec. _____

Rec. _____

1920' Gas in Pipes; 37 Gravity Oil

Recorder No. 13225 Type AK-1 Range 3950 PSI

Recorder Depth 3497 Clock # 25825

Tool Open Before I. S. I. 15 Mins.

Initial Shut-in 30 Mins.

Flow Period 15 Mins.

Final Shut-in 30 Mins.

T Choke Size 1" Hole Size 7 7/8"

B Choke Size 3/4" Rubber Size 6 3/4"

Tool Open @ 4:22 A.M.

Blow Strong blow, off bottom 1 1/2 min

Remarks on F.F.

OFF bottom 1 min. on F.F.

Well Chlorides 3,000 PPM

Rec. Chlorides 8,000 PPM

Test \$ 625.00

Straddle |

Bowen Jars |

Safety Joint |

Selective Zone Tool |

Sampler |

Extra Packer |

Circulating Sub 30

Down Hole Insurance |

Others |

Price of Job \$ 655

CHENEY TESTING COMPANY, INC.

Approved By Lea Ann Kasten

Our Representative Dave Hunt

TICKET N°

9

INITIAL SHUT-IN

=====

RECORDER NO: 13275 DEPTH: 3500 FT.
 INITIAL FLOW TIME (T): 15 MIN.

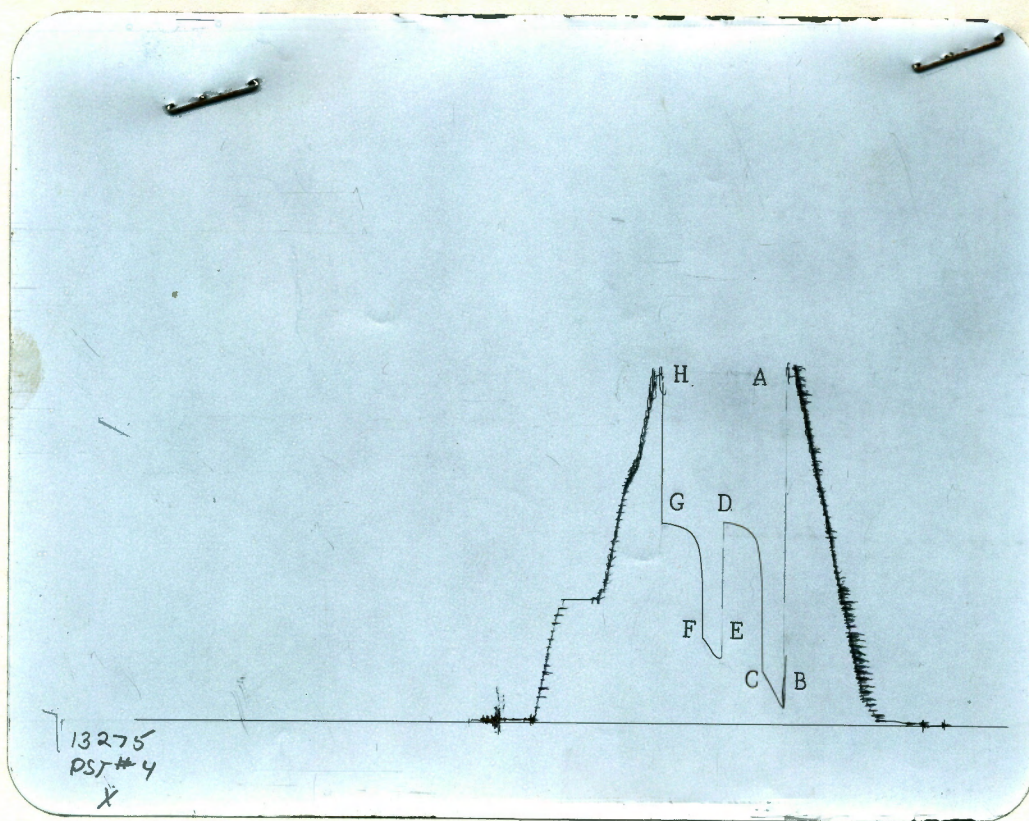
DT(MIN)	LOG((T+DT)/DT)	PRESSURE(P SIG)
=====		
0	0.000	272.5
5	0.602	949.4
10	0.398	997.0
15	0.301	1018.8
20	0.243	1030.7
25	0.204	1040.6
30	0.176	1045.5

FINAL SHUT-IN

=====

RECORDER NO: 13275 DEPTH: 3500 FT.
 TOTAL FLOW TIME: 30 MIN.

DT(MIN)	LOG((T+DT)/DT)	PRESSURE(P SIG)
=====		
0	0.000	444.0
5	0.845	958.3
10	0.602	997.0
15	0.477	1013.8
20	0.398	1023.7
25	0.342	1030.7
30	0.301	1034.6



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	1822	1817 PSI
(B) First Initial Flow Pressure	80	99.1 PSI
(C) First Final Flow Pressure	270	272.5 PSI
(D) Initial Closed-in Pressure	1039	1045.5 PSI
(E) Second Initial Flow Pressure	340	346.9 PSI
(F) Second Final Flow Pressure	440	444.0 PSI
(G) Final Closed-in Pressure	1030	1034.6 PSI
(H) Final Hydrostatic Mud	1802	1798 PSI

CHENEY TESTING CO, INC.
CALCULATION OF FORMATION CHARACTERISTICS
FROM DST DATA

FOR: A. SCOTT RITCHIE
KEISWETTER A #1
SEC 12-6S-22W
GRAHAM COUNTY, KS.

DST # 4
FORMATION: LANSING
ELEVATION: 2203 KB

TEST PARAMETERS

TEST INTERVAL: 3484 - 3500	EST PAY: 8
TIME INTERVAL: 15 - 30 - 15 - 30	VISCOSITY OF FLUID: 9
INITIAL FLOW PRESS: 99.1- 272.5	HOLE SIZE: 7.875
FINAL FLOW PRESS: 346.9- 444.0	D.C. CAPACITY: 0.00492
SHUT-IN PRESS(I-F): 1045.5-1034.6	W.P. CAPACITY: 0.00708
BOTTOM HOLE TEMPERATURE: 105	D.P. CAPACITY: 0.01402
TOTAL FEET OF RECOVERY: 1255	TOTAL BARRELS RECOVERY: 8.3791

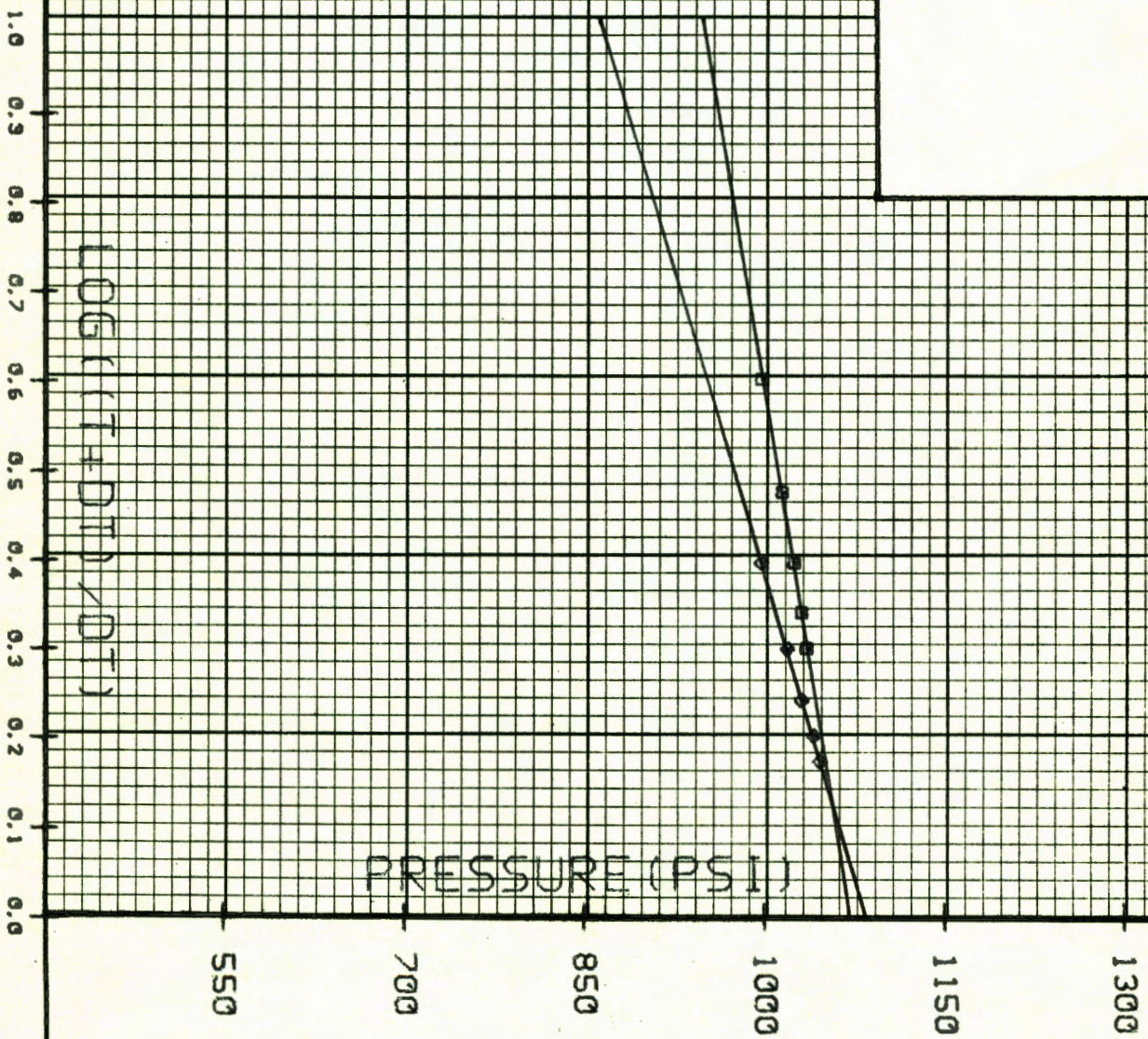
EXTRAPOLATED INITIAL SHUT-IN PRESSURE (PSI): 1083
SLOPE (PSI-CYCLE): 221 POINTS USED: 5

EXTRAPOLATED FINAL SHUT-IN PRESSURE (PSI): 1067
SLOPE (PSI-CYCLE): 123 POINTS USED: 5

CALCULATIONS

AVERAGE PRODUCTION RATE (B/D)	: 402.20
TRANSMISSIBILITY (MD-FT/CP)	: 531.68
PERMEABILITY (MD)	: 598.14
PRODUCTIVITY INDEX (B/D/PSI)	: 0.3769
DAMAGE RATIO	: 0.927
APPROXIMATE RADIUS OF INVESTIGATION (FT)	: 134.0
DRAWDOWN FACTOR (%)	: 1.477
POTENTIOMETRIC SURFACE (FT)	: 1177.37

HORNER PLOT
A. SCOTT RITCHIE
KEISWETTER A #1
DST # 4 DEPTH: 3500
RECORDER NO. 13275
INITIAL SHUT-IN: $\diamond$
FINAL SHUT-IN: $\square$



CHENEY TESTING COMPANY, INC.

P. O. Box 367

HILL CITY, KANSAS 67642

DRILL-STEM TEST DATA

Company	A. Scott Ritchie	Test No.	5
Well Name & Number	Keiswetter A #1	Zone Tested	Lansing 140, 160, 180
Company Address	125 N Market Suite 950 Wichita Ks.	Date	8/13/84
Company Rep.	Lee Ann Kasten	Tester	Dave Hunt
Contractor	Murfin Drilling Company	Elevation	2203 KB
Location: Sec. 12 Twp. 6s Rge. 22w Co. Graham State Ks.	Est. Feet of Pay		

Recorder No. 13276 Type AK-1 Range 3950 PSI

Recorder Depth 3605 Clock # 22345

(A) Initial Hydrostatic Mud 1901 PSI

(B) First Initial Flow Pressure 50 PSI

(C) First Final Flow Pressure 50 PSI

(D) Initial Shut-in Pressure 1078 PSI

(E) Second Initial Flow Pressure 60 PSI

(F) Second Final Flow Pressure 60 PSI

(G) Final Shut-in Pressure 1020 PSI

(H) Final Hydrostatic Mud 1881 PSI

Temperature 106

Mud Weight 9.3 Viscosity 42

Fluid Loss 7.2

Interval Tested 3548-3608

Anchor Length 60

Top Packer Depth 3543

Bottom Packer Depth 3548

Total Depth 3608

Drill Pipe Size 4 1/2 FH

Wt. Pipe I. D. 2.7 Ft. Run 1045

Recovery-Total Feet 20

Recovered 20 Feet Of mud with few spots of oil.

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Extra Equipment Price of Job \$625.00

Recorder No. 13725 Type AK-1 Range 3950 PSI

Recorder Depth 3602 Clock # 25825

Tool Open Before I.S.I. 30 Mins.

Initial Shut-in 45 Mins.

Flow Period 30 Mins.

Final Shut-in 45 Mins.

Top Choke Size 1" Hole Size 7 7/8"

Bottom Choke Size 3/4" Rubber Size 6 3/4"

Tool Open @ 1:02 AM

Blow Remarks 1st open: Weak 1/2" blow, increasing to 1/2" .

2nd open: No blow, flushed tool, good surge, no blow.

Well Chlorides: 3,000 ppm

Recovery Chlorides: 3,000 ppm

Drill Collars: 2.25 Ft. Run: 233

CHENEY TESTING COMPANY, INC.

P. O. BOX 367

HILL CITY, KANSAS 67642

Dist. Hays

TEST TICKET

Company <u>A. Scott Ritchie</u>	Test No. <u>5</u>
Well Name & Number <u>Keiswetter #A-1</u>	Zone Tested <u>Lansing 140, 160, 180</u>
Company Address <u>125 N. Market Suite 250 Wichita, Ks.</u>	Date <u>8-13-84</u>
Company Rep. <u>Lea Ann Kasten</u>	Tester <u>DAVE HUNT</u>
Contractor <u>Murfin Drilling Co. #8</u>	Elevation <u>2203 K.B.</u>
Location: Sec. <u>12</u> Twp. <u>6</u> Rge. <u>22</u> Co. <u>Graham State Ks.</u>	Est. Feet of Pay

Recorder No. 13276 Type AK-1 Range 3950 PSI

Recorder Depth 3605 Clock # 22345

(A) Initial Hydrostatic Mud 1901 PSI

(B) First Initial Flow Pressure 50 PSI

(C) First Final Flow Pressure 50 PSI

(D) Initial Shut-in Pressure 1078 PSI

(E) Second Initial Flow Pressure 60 PSI

(F) Second Final Flow Pressure 60 PSI

(G) Final Shut-in Pressure 1020 PSI

(H) Final Hydrostatic Mud 1881 PSI

Temperature 106°

Mud Weight 9.3 Viscosity 42

Fluid Loss 7.2

Interval Tested 3548 - 3608

Anchor Length 60'

Top Packer Depth 3543

Bottom Packer Depth 3548

Total Depth 3608

Drill Pipe Size 4 1/2 F.H.

Wt. Pipe I. D. 2.70 Ft. Run 1045

Recovery—Total Feet 20' 233

Rec. 20' m-d with a few spots of oil

Rec. _____
 Rec. _____
 Rec. _____
 Rec. _____
 Rec. _____

Recorder No. 13275 Type AK-1 Range 3950 PSI

Recorder Depth 3602 Clock # 25825

Tool Open Before I. S. I. 30 Mins.

Initial Shut-in 45 Mins.

Flow Period 30 Mins.

Final Shut-in 45 Mins.

T Choke Size 1" Hole Size 7 7/8"

B Choke Size 3/4" Rubber Size 6 3/4"

Tool Open @ 1:02 A.M.

Blow Weak 1/4" blow increasing to 1/2"

Remarks on F.F.

No blow on Final Flow, Flush tool good surge, no blow.

Well Chlorides 3000 PPM

Rec. Chlorides 3,000 PPM

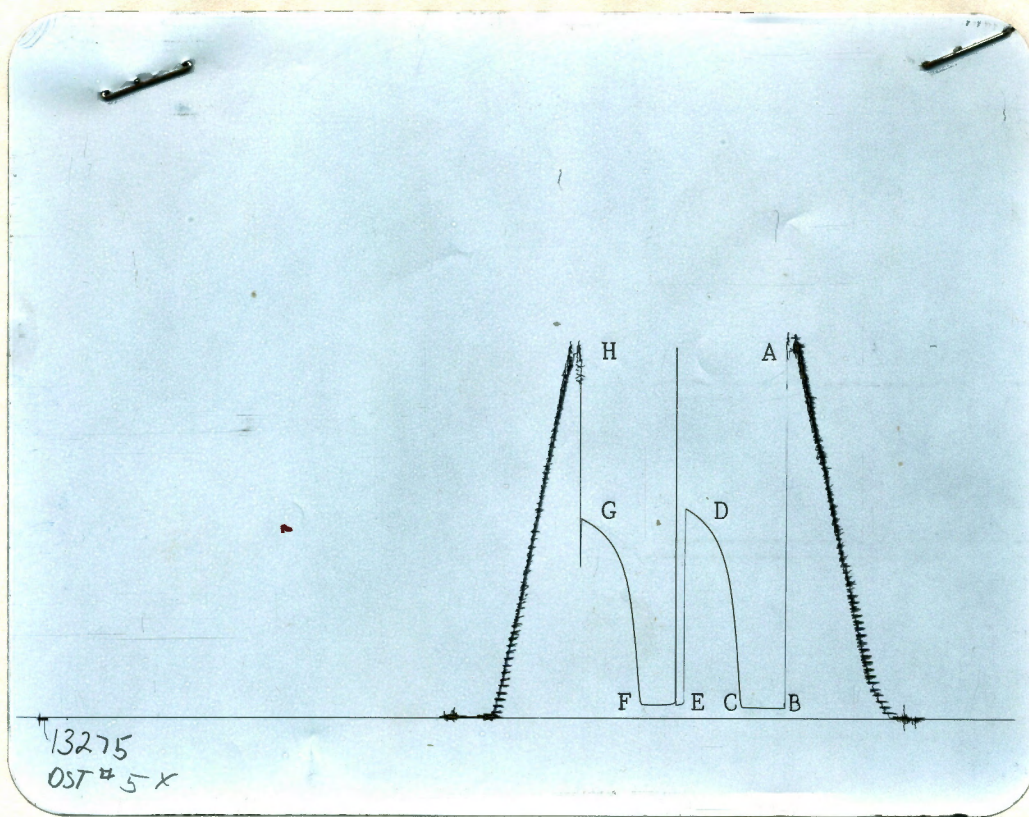
Test \$ 625.00
 Straddle
 Bowen Jars
 Safety Joint
 Selective Zone Tool
 Sampler
 Extra Packer
 Circulating Sub
 Down Hole Insurance
 Others
 Price of Job \$ 625.00

CHENEY TESTING COMPANY, INC.

Approved By Lea Ann Kasten

Our Representative Dave Hunt

TICKET N° **9162**



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	1901	PSI
(B) First Initial Flow Pressure	50	PSI
(C) First Final Flow Pressure	50	PSI
(D) Initial Closed-in Pressure	1078	PSI
(E) Second Initial Flow Pressure	60	PSI
(F) Second Final Flow Pressure	60	PSI
(G) Final Closed-in Pressure	1020	PSI
(H) Final Hydrostatic Mud	1881	PSI

CHENEY TESTING COMPANY, INC.

P. O. Box 367

HILL CITY, KANSAS 67642

DRILL-STEM TEST DATA

Company	A. Scott Richie	Test No.	6
Well Name & Number	Keiswetter A #1	Zone Tested	Lansing 200, 220
Company Address	125 N Market Suite 950 Wichita Ks.	Date	8/13/84
Company Rep.	Lea Ann Kasten	Tester	Dave Hunt
Contractor	Murfin Drilling Company	Elevation	2203 KB
Location: Sec. 12 Twp6s Rge. 22w Co.Graham State Ks.	Est. Feet of Pay		

Recorder No. 13276 Type AK-1 Range 3950 PSI

Recorder Depth 3634 Clock # 22345

(A) Initial Hydrostatic Mud 1968 PSI

(B) First Initial Flow Pressure 70 PSI

(C) First Final Flow Pressure 70 PSI

(D) Initial Shut-in Pressure 240 PSI

(E) Second Initial Flow Pressure 70 PSI

(F) Second Final Flow Pressure 70 PSI

(G) Final Shut-in Pressure 230 PSI

(H) Final Hydrostatic Mud 1940 PSI

Temperature 107

Mud Weight 9.8 Viscosity 40

Fluid Loss 8.8

Interval Tested 3601-3640

Anchor Length 39

Top Packer Depth 3596

Bottom Packer Depth 3601

Total Depth 3640

Drill Pipe Size 4 1/2 FH

Wt. Pipe I. D. 2.7 Ft. Run 1045

Recovery-Total Feet 15

Recovered 15 Feet Of very slightly oil cut mud, 1% oil, 99% mud.

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Extra Equipment Price of Job \$625.00

Recorder No. 13275 Type AK-1 Range 3950 PSI

Recorder Depth 3637 Clock # 25825

Tool Open Before I.S.I. 30 Mins.

Initial Shut-in 30 Mins.

Flow Period 30 Mins.

Final Shut-in 30 Mins.

Top Choke Size 1" Hole Size 7 7/8"

Bottom Choke Size 3/4" Rubber Size 6 3/4"

Tool Open @ 3:13 PM

Blow Remarks 1st open: Weak blow died in 3 minutes.

2nd open: No blow, flushed tool, good surge, no blow.

Well chlorides: 4,000 ppm

Recovery Chlorides: 4,000 ppm

Drill Collars: 2.25 Ft. Run: 233

CHENEY TESTING COMPANY, INC.

P. O. BOX 367

HILL CITY, KANSAS 67642

Dist. Hays

TEST TICKET

Company <u>A. Scott Ritchie</u>	Test No. <u>6</u>
Well Name & Number <u>Keiswetter #A-1</u>	Zone Tested <u>KANSAS 200-220</u>
Company Address <u>125 N. Market Suite 950 Wichita, Ks</u>	Date <u>8-13-84</u>
Company Rep. <u>Lea Ann Kasten</u>	Tester <u>DAVE HUNT</u>
Contractor <u>Martin Drilling Co. #8</u>	Elevation <u>2203 K.B.</u>
Location: Sec. <u>12</u> Twp. <u>6</u> Rge. <u>22</u> Co. <u>Graham</u> State <u>Ks.</u>	Est. Feet of Pay

Recorder No. 13276 Type AK-1 Range 3950 PSI

Recorder Depth 3634 Clock # 22345

(A) Initial Hydrostatic Mud 1768 PSI

(B) First Initial Flow Pressure 70 PSI

(C) First Final Flow Pressure 70 PSI

(D) Initial Shut-in Pressure 240 PSI

(E) Second Initial Flow Pressure 70 PSI

(F) Second Final Flow Pressure 70 PSI

(G) Final Shut-in Pressure 230 PSI

(H) Final Hydrostatic Mud 1940 PSI

Temperature 107°

Mud Weight 9.8 Viscosity 40

Fluid Loss 8.8

Interval Tested 3601-3640

Anchor Length 39'

Top Packer Depth 3596

Bottom Packer Depth 3601

Total Depth 3640

Drill Pipe Size 4 1/2 F.H.

Wt. Pipe I. D. 2.70 Ft. Run 1045

Recovery—Total Feet 2.25 15' 233'

Rec. very slightly oil out mud

Rec. _____

Rec. 170 oil 99% mud

Rec. _____

Rec. _____

Rec. _____

Rec. _____

Rec. _____

Rec. _____

Rec. _____

Rec. _____

Rec. _____

Rec. _____

Recorder No. 13275 Type AK-1 Range 3950 PSI

Recorder Depth 3637 Clock # 25825

Tool Open Before I. S. I. 30 Mins.

Initial Shut-in 30 Mins.

Flow Period 30 Mins.

Final Shut-in 30 Mins.

T Choke Size 1" Hole Size 7 1/8"

B Choke Size 3/4" Rubber Size 6 3/4"

Tool Open @ 3:13 PM

Blow weak blow died in 3 min on 1st

Remarks No blow on First Flow, Flow

Tool, good work, still no blow.

CHENEY TESTING COMPANY, INC.

Approved By Lea Ann Kasten

Our Representative Dave Hunt

Test\$ 425.00

Straddle\$

Bowen Jars\$

Safety Joint\$

Selective Zone Tool\$

Sampler\$

Extra Packer\$

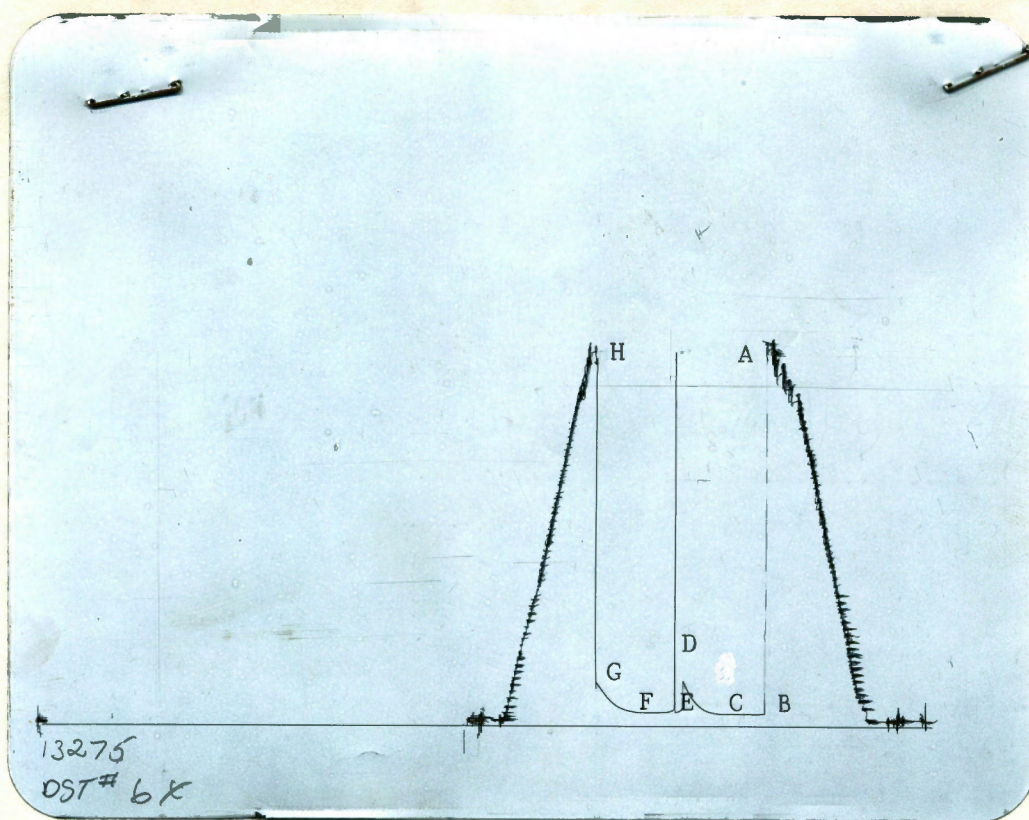
Circulating Sub\$

Down Hole Insurance\$

Others\$

Price of Job\$ 425.00

TICKET N° 9163



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	1968	PSI
(B) First Initial Flow Pressure	70	PSI
(C) First Final Flow Pressure	70	PSI
(D) Initial Closed-in Pressure	240	PSI
(E) Second Initial Flow Pressure	70	PSI
(F) Second Final Flow Pressure	70	PSI
(G) Final Closed-in Pressure	230	PSI
(H) Final Hydrostatic Mud	1940	PSI

CHENEY TESTING COMPANY, INC.

P. O. Box 367

HILL CITY, KANSAS 67642

DRILL-STEM TEST DATA

Company	A. Scott Ritchie	Test No.	7
Well Name & Number	Keiswetter A #1	Zone Tested	Cong.
Company Address	125 N Market Suite 950 Wichita Ks.	Date	8/14/84
Company Rep.	Lea Ann Kasten	Tester	Dave Hunt
Contractor	Murfin Drilling Company	Elevation	2203 KB
Location: Sec. 12 Twp. 6s Rge. 22w Co. Graham State Ks.	Est. Feet of Pay		

Recorder No. 13276 Type AK-1 Range 3950 PSI

Recorder Depth 3689 Clock # 22345

(A) Initial Hydrostatic Mud 1979 PSI

(B) First Initial Flow Pressure 80 PSI

(C) First Final Flow Pressure 80 PSI

(D) Initial Shut-in Pressure 824 PSI

(E) Second Initial Flow Pressure 80 PSI

(F) Second Final Flow Pressure 80 PSI

(G) Final Shut-in Pressure 667 PSI

(H) Final Hydrostatic Mud 1970 PSI

Temperature 107

Mud Weight 9.8 Viscosity 40

Fluid Loss 8.8

Interval Tested 3661-3695

Anchor Length 34

Top Packer Depth none

Bottom Packer Depth 3661

Total Depth 3695

Drill Pipe Size 4 1/2 FH

Wt. Pipe I. D. 2.7 Ft. Run 1045

Recovery-Total Feet 25

Recovered 25 Feet Of oil cut mud, 20% oil, 80% mud.

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Extra Equipment Price of Job \$625.00

Recorder No. 13275 Type AK-1 Range 3950 PSI

Recorder Depth 3692 Clock # 25825

Tool Open Before I.S.I. 30 Mins.

Initial Shut-in 45 Mins.

Flow Period 30 Mins.

Final Shut-in 45 Mins.

Top Choke Size 1" Hole Size 7 7/8"

Bottom Choke Size 3/4" Rubber Size 6 3/4"

Tool Open @ 4:10 AM

Blow Remarks 1st open: Weak 1/2" blow, decreasing to 1/4" blow.

2nd open: 1/2" blow decreasing to surface blow.

Well chlorides: 4,000 ppm

Recovery Chlorides: 4,000 ppm

Drill Collars: 2.25 Ft. Run: 233

CHENEY TESTING COMPANY, INC.

P. O. BOX 367

HILL CITY, KANSAS 67642

Dist. Hays

TEST TICKET

Company <u>A. Scott Ritchie</u>	Test No. <u>7</u>
Well Name & Number <u>Keiswetter # A-1</u>	Zone Tested <u>conglomerate</u>
Company Address <u>125 N. Market Suite 150 N. 1st, Ks.</u>	Date <u>8-14-84</u>
Company Rep. <u>Lea Ann Kasten</u>	Tester <u>Dave Hunt</u>
Contractor <u>Martin Drilling Co. #18</u>	Elevation <u>2203 K.B.</u>
Location: Sec. <u>12</u> Twp. <u>6</u> Rge. <u>22</u> Co. <u>Graham</u> State <u>Ks.</u>	Est. Feet of Pay

Recorder No. 13276 Type AK-1 Range 3950 PSI

Recorder Depth 3689 Clock # 22345

(A) Initial Hydrostatic Mud 1979 PSI

(B) First Initial Flow Pressure 80 PSI

(C) First Final Flow Pressure 80 PSI

(D) Initial Shut-in Pressure 824 PSI

(E) Second Initial Flow Pressure 80 PSI

(F) Second Final Flow Pressure 80 PSI

(G) Final Shut-in Pressure 667 PSI

(H) Final Hydrostatic Mud 1970 PSI

Temperature 107°

Mud Weight 9.8 Viscosity 40

Fluid Loss 8.8

Interval Tested 3661-3695

Anchor Length 34'

Top Packer Depth NONE

Bottom Packer Depth 3661

Total Depth 3695

Drill Pipe Size 4 1/2 F.H.

Wt. Pipe I. D. 2.70 Ft. Run 1045

Recovery—Total Feet 25' 233

Rec. 25 oil cut mud

Rec. 20 % oil 80 % mud

Rec. _____

Rec. _____

Rec. _____

Rec. _____

Rec. _____

Rec. _____

Rec. _____

Rec. _____

Rec. _____

Rec. _____

Rec. _____

Rec. _____

Recorder No. 13275 Type AK-1 Range 3950 PSI

Recorder Depth 3692 Clock # 25825

Tool Open Before I. S. I. 30 Mins.

Initial Shut-in 45 Mins.

Flow Period 30 Mins.

Final Shut-in 45 Mins.

T Choke Size 1" Hole Size 7 1/8"

B Choke Size 3/4" Rubber Size 6 3/4"

Tool Open @ 4:10 A.M.

Blow Weak 1/2" blow decreasing to 1/4"

Remarks blow on I.F.

1/4" blow decreasing to surface blow

on I.F.

CHENEY TESTING COMPANY, INC.

Approved By Lea Ann Kasten

Our Representative Dave Hunt

Test \$ 625.00

Straddle \$

Bowen Jars \$

Safety Joint \$

Selective Zone Tool \$

Sampler \$

Extra Packer \$

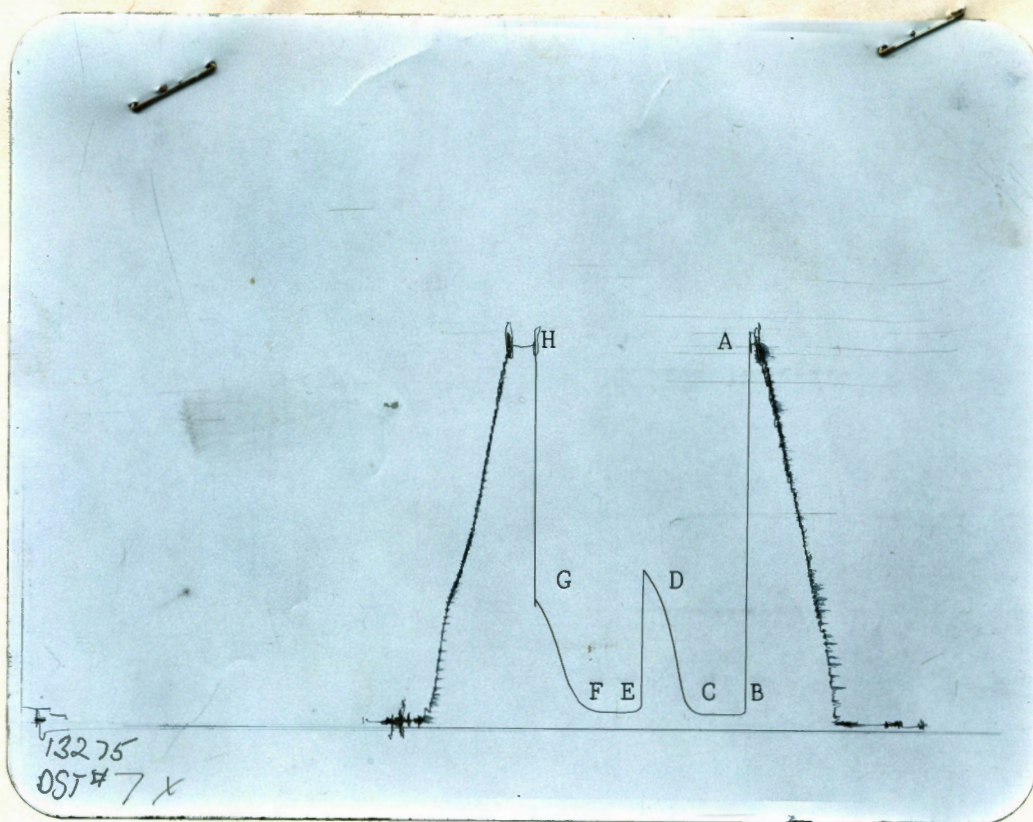
Circulating Sub \$

Down Hole Insurance \$

Others \$

Price of Job \$ 625.00

TICKET N° 9164



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	1979	PSI
(B) First Initial Flow Pressure	80	PSI
(C) First Final Flow Pressure	80	PSI
(D) Initial Closed-in Pressure	824	PSI
(E) Second Initial Flow Pressure	80	PSI
(F) Second Final Flow Pressure	80	PSI
(G) Final Closed-in Pressure	667	PSI
(H) Final Hydrostatic Mud	1970	PSI

CHENEY TESTING COMPANY, INC.

P. O. Box 367

HILL CITY, KANSAS 67642

DRILL-STEM TEST DATA

Company	A. Scott Ritchie	Test No.	8
Well Name & Number	Keiswetter A #1	Zone Tested	Granite Wash
Company Address	125 N Market Suite 950 Wichita Ks.	Date	8/14/84
Company Rep.	Lea Ann Kasten	Tester	Dave Hunt
Contractor	Murfin Drilling Company	Elevation	2203 KB
Location: Sec. 12 Twp. 6 Rge. 22 Co. Graham State Ks.	Est. Feet of Pay		

Recorder No. 13276 Type Ak-1 Range 3950 PSI

Recorder Depth 3720 Clock # 22345

(A) Initial Hydrostatic Mud 2029 PSI

(B) First Initial Flow Pressure 80 PSI

(C) First Final Flow Pressure 80 PSI

(D) Initial Shut-in Pressure 824 PSI

(E) Second Initial Flow Pressure 90 PSI

(F) Second Final Flow Pressure 90 PSI

(G) Final Shut-in Pressure 697 PSI

(H) Final Hydrostatic Mud 1970 PSI

Temperature 108

Mud Weight 9.7 Viscosity 41

Fluid Loss 10.6

Interval Tested 3694-3726

Anchor Length 32

Top Packer Depth 3689

Bottom Packer Depth 3694

Total Depth 3726

Drill Pipe Size 4 1/2 FH

Wt. Pipe I. D. 2.7 Ft. Run 1045

Recovery-Total Feet 75

Recovered 75 Feet Of very slightly oil cut mud, 1% oil, 99% mud.

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Extra Equipment Price of Job \$625.00

Recorder No. 13275 Type AK-1 Range 3950 PSI

Recorder Depth 3723 Clock # 25825

Tool Open Before I.S.I. 30 Mins.

Initial Shut-in 45 Mins.

Flow Period 30 Mins.

Final Shut-in 45 Mins.

Top Choke Size 1" Hole Size 7 7/8"

Bottom Choke Size 3/4" Rubber Size 6 3/4"

Tool Open @ 6:25 PM

Blow Remarks 1st open: Weak 1/4" decreasing to 1/8" blow.

2nd open: Weak 1/8" blow decreasing to no blow in 16 minutes.

Mud Chlorides: 4,000 ppm

Recovery Chlorides: 4,000 ppm

Drill Collars: 2.25 Ft. Run: 233

CHENEY TESTING COMPANY, INC.

P. O. BOX 367

HILL CITY, KANSAS 67642

Dist. HAYS

TEST TICKET

Company <u>A. Scott Ritchie</u>	Test No. <u>8</u>
Well Name & Number <u>Kiswetter #A-1</u>	Zone Tested <u>Graham NASH</u>
Company Address <u>125 N. Market Suite 950 Wita, Ks.</u>	Date <u>8-14-84</u>
Company Rep. <u>Lea Ann Kastan</u>	Tester <u>Dave Hunt</u>
Contractor <u>Martin Drilling Co. #8</u>	Elevation <u>2203 K.B.</u>
Location: Sec. <u>12</u> Twp. <u>6</u> Rge. <u>22</u> Co. <u>Graham</u> State <u>Ks.</u>	Est. Feet of Pay

Recorder No 13276 Type AK-1 Range 3950 PSI

Recorder Depth 3720 Clock # 22345

(A) Initial Hydrostatic Mud 2029 PSI

(B) First Initial Flow Pressure 80 PSI

(C) First Final Flow Pressure 80 PSI

(D) Initial Shut-in Pressure 824 PSI

(E) Second Initial Flow Pressure 90 PSI

(F) Second Final Flow Pressure 90 PSI

(G) Final Shut-in Pressure 697 PSI

(H) Final Hydrostatic Mud 1970 PSI

Temperature 108°

Mud Weight 9.7 Viscosity 41

Fluid Loss 10.6

Interval Tested 3694-3726

Anchor Length 32'

Top Packer Depth 3689

Bottom Packer Depth 3694

Total Depth 3726

Drill Pipe Size 4 1/2 F.H.

Wt. Pipe I. D. 2.70 Ft. Run 1045

Recovery—Total Feet 75' 233

Rec. 75' very slightly oil cut mud

Rec. 170 oil 99% mud

Rec. _____

Rec. _____

Rec. _____

Rec. _____

Rec. _____

Recorder No 13275 Type AK-1 Range 3950 PSI

Recorder Depth 3723 Clock # 25825

Tool Open Before I. S. I. 30 Mins.

Initial Shut-in 45 Mins.

Flow Period 30 Mins.

Final Shut-in 45 Mins.

T Choke Size 1" Hole Size 7 7/8"

B Choke Size 3/4" Rubber Size 6 3/4"

Tool Open @ 6:25 P.M.

Blow Weak 1/4" blow decreasing to 1/8"

Remarks blow on F.F.

Weak 1/8" blow decreasing to no blow

in 16 min on F.F.

Well charides 4,000 PPM.

Rec. charides 4,000 PPM.

Price of Job\$ 625.00

CHENEY TESTING COMPANY, INC.

Approved By Lea Ann Kastan

Our Representative Dave Hunt

TICKET N° 9165

INITIAL SHUT-IN

=====

RECORDER NO: 13275 DEPTH: 3726 FT.
 INITIAL FLOW TIME (T): 30 MIN.

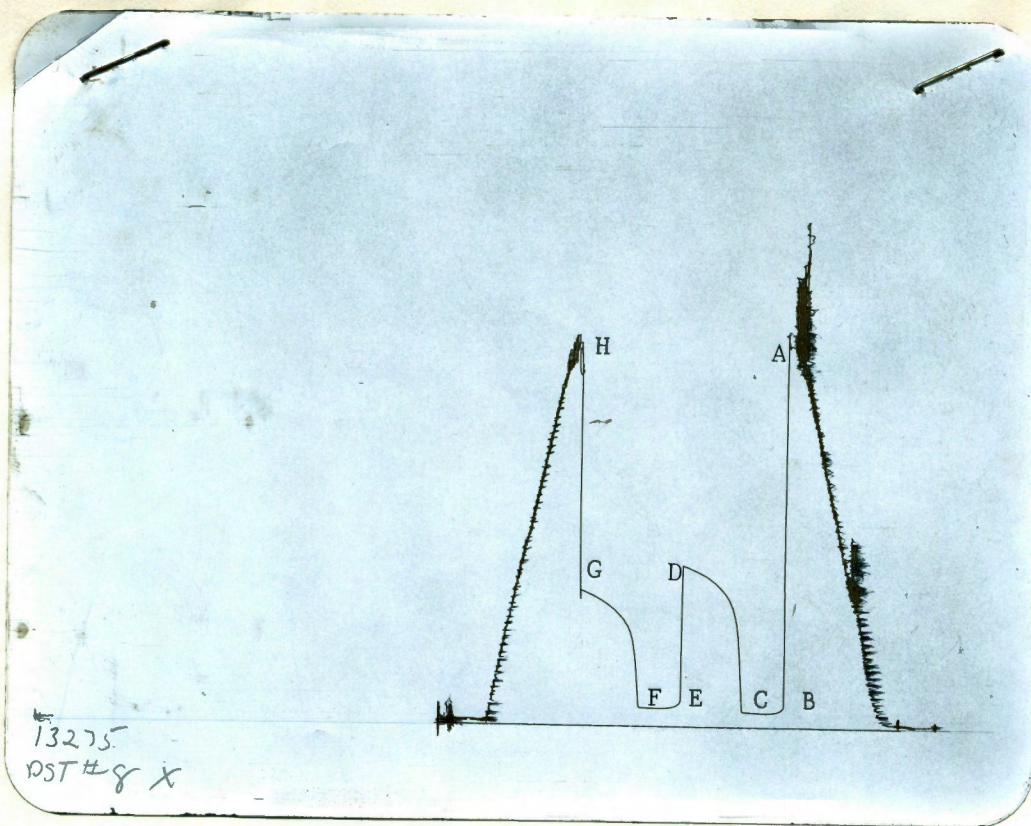
DT(MIN)	LOG((T+DT)/DT)	PRESSURE(P SIG)
0	0.000	78.3
5	0.845	539.1
10	0.602	645.2
15	0.477	695.7
20	0.398	734.4
25	0.342	760.1
30	0.301	781.9
35	0.269	798.8
40	0.243	813.6
45	0.222	825.5

FINAL SHUT-IN

=====

RECORDER NO: 13275 DEPTH: 3726 FT.
 TOTAL FLOW TIME: 60 MIN.

DT(MIN)	LOG((T+DT)/DT)	PRESSURE(P SIG)
0	0.000	95.1
5	1.114	378.6
10	0.845	509.4
15	0.699	559.9
20	0.602	596.6
25	0.531	623.4
30	0.477	646.2
35	0.434	666.0
40	0.398	681.8
45	0.368	695.7



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	2029	2024 PSI
(B) First Initial Flow Pressure	80	73.3 PSI
(C) First Final Flow Pressure	80	78.3 PSI
(D) Initial Closed-in Pressure	824	825.5 PSI
(E) Second Initial Flow Pressure	90	95.17 PSI
(F) Second Final Flow Pressure	90	95.1 PSI
(G) Final Closed-in Pressure	697	695.7 PSI
(H) Final Hydrostatic Mud	1970	1965 PSI

CHENEY TESTING CO, INC.
CALCULATION OF FORMATION CHARACTERISTICS
FROM DST DATA

FOR: A. SCOTT RITCHIE
KEISWETTER A #1
SEC 12-6S-22W
GRAHAM COUNTY, KANSAS
DST # 8
FORMATION: GRANITE WASH
ELEVATION: 2203 KB

TEST PARAMETERS

TEST INTERVAL: 3694 - 3726	EST PAY: 10
TIME INTERVAL: 30 - 45 - 30 - 45	VISCOSITY OF FLUID: 1
INITIAL FLOW PRESS: 73.3- 78.3	HOLE SIZE: 7.875
FINAL FLOW PRESS: 95.1- 95.1	D.C. CAPACITY: 0.00492
SHUT-IN PRESS(I-F): 825.5- 695.7	W.P. CAPACITY: 0.00708
BOTTOM HOLE TEMPERATURE: 108	D.P. CAPACITY: 0.01402
TOTAL FEET OF RECOVERY: 75	TOTAL BARRELS RECOVERY: 0.3687

EXTRAPOLATED INITIAL SHUT-IN PRESSURE (PSI): 943
SLOPE (PSI-CYCLE): 547 POINTS USED: 5

EXTRAPOLATED FINAL SHUT-IN PRESSURE (PSI): 882
SLOPE (PSI-CYCLE): 483 POINTS USED: 4

CALCULATIONS

AVERAGE PRODUCTION RATE (B/D)	:	8.85
TRANSMISSIBILITY (MD-FT/CP)	:	2.98
PERMEABILITY (MD)	:	0.30
PRODUCTIVITY INDEX (B/D/PSI)	:	0.0100
DAMAGE RATIO	:	0.298
APPROXIMATE RADIUS OF INVESTIGATION (FT)	:	4.2
DRAWDOWN FACTOR (%)	:	6.469
POTENTIOMETRIC SURFACE (FT)	:	522.36

HORNER PLOT
A. SCOTT RITCHIE
KEISWETTER A #1
DST # 8 DEPTH: 3726
RECORDER NO. 13275
INITIAL SHUT-IN: $\diamond$
FINAL SHUT-IN: $\square$

