

15-063-20786

CHENEY TESTING COMPANY, INC.

34-15s-29w

P. O. Box 367

HILL CITY, KANSAS 67642

DRILL-STEM TEST DATA

Company	Abercrombie Drilling Inc.	Test No.	1
Well Name & Number	Dowell #1	Zone Tested	Kansas City
Company Address	801 Union Center Wichita Ks.	Date	7/30/84
Company Rep.	Raul Brito	Tester	Randy Keesling
Contractor	Abercrombie Drilling Inc.	Elevation	2602 KB
Location: Sec.	34 Twp.	15s Rge.	29w Co. Gove State Ks.
		Est. Feet of Pay	

Recorder No. 7456 Type Ak-1 Range 4150 PSI

Recorder Depth 3927 Clock # 25720

(A) Initial Hydrostatic Mud 2065 PSI

(B) First Initial Flow Pressure 200 PSI

(C) First Final Flow Pressure 269 PSI

(D) Initial Shut-in Pressure 1037 PSI

(E) Second Initial Flow Pressure 361 PSI

(F) Second Final Flow Pressure 417 PSI

(G) Final Shut-in Pressure 928 PSI

(H) Final Hydrostatic Mud 2065 PSI

Temperature 108

Mud Weight 10.4 Viscosity 46

Fluid Loss 11.2

Interval Tested 3886-3930

Anchor Length 44

Top Packer Depth 3881

Bottom Packer Depth 3886

Total Depth 3930

Drill Pipe Size 4½ Xh

Wt. Pipe I. D. 2.7 Ft. Run 620

Recovery-Total Feet 872

Recovered 562 Feet Of free oil, 60% oil, 40% gas.

Recovered 186 Feet Of heavy mud cut oil, 20% gas, 30% mud, 50% oil.

Recovered 124 Feet Of muddy water with oil specks, 10% mud, 5% oil, 85% water.

Recovered 180 Feet Of gas in pipe.

Recovered Feet Of Gravity: 36 API corrected.

Recovered Feet Of

Extra Equipment Price of Job \$625.00

Recorder No. 13278 Type Ak-1 Range 4400 PSI

Recorder Depth 3925 Clock # 27804

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

Initial Shut-in 45 Mins.

Flow Period 60 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 @ 4:46 AM

Blow Remarks 1st open: Strong blow, off bottom in 4 minutes.

2nd open: Off bottom in 8 minutes.

Mud Chlorides: 6,000 ppm

Recovery Chlorides: 70,000 ppm

Resistivity: .1 ohms @ 75°F

Abercrombie Drilling Inc.

INITIAL SHUT-IN

Dowell #1

DST #1

=====

RECORDER NO: 13278 DEPTH: 3930 FT.
INITIAL FLOW TIME (T): 30 MIN.

DT(MIN)	LOG((T+DT)/DT)	PRESSURE(PSIG)
=====		
0	0.000	246.1
5	0.845	565.0
10	0.602	796.8
15	0.477	874.0
20	0.398	914.8
25	0.342	946.8
30	0.301	967.8
35	0.269	985.5
40	0.243	1000.9
45	0.222	1020.8

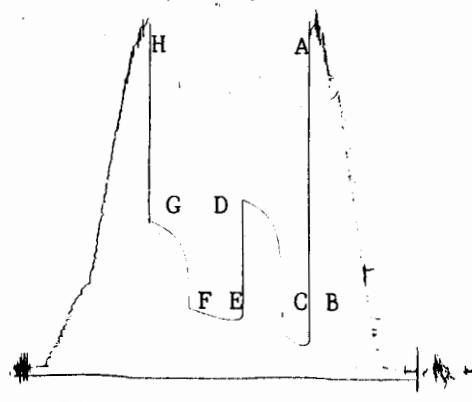
FINAL SHUT-IN

=====

RECORDER NO: 13278 DEPTH: 3930 FT.
TOTAL FLOW TIME: 90 MIN.

DT(MIN)	LOG((T+DT)/DT)	PRESSURE(PSIG)
=====		
0	0.000	336.6
5	1.279	677.6
10	1.000	749.3
15	0.845	789.0
20	0.740	818.8
25	0.663	839.8
30	0.602	855.3
35	0.553	871.8
40	0.512	882.8
45	0.477	898.3

13278 X PST#1



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	2065	2060 PSI
(B) First Initial Flow Pressure	200	190.9 PSI
(C) First Final Flow Pressure	269	246.1 PSI
(D) Initial Closed-in Pressure	1037	1020.8 PSI
(E) Second Initial Flow Pressure	361	336.6 PSI
(F) Second Final Flow Pressure	417	395.1 PSI
(G) Final Closed-in Pressure	928	898.3 PSI
(H) Final Hydrostatic Mud	2065	2060 PSI

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

FOR: ABERCROMBIE DRILLING INC.
DOWELL #1 DST # 1
SEC 34-15S-29W FORMATION: KANSAS CITY
GOVE COUNTY, KANSAS ELEVATION: 2602 KB

TEST PARAMETERS

TEST INTERVAL: 3886 - 3930	EST PAY: 4
TIME INTERVAL: 30 - 45 - 60 - 45	VISCOSITY OF FLUID: 5
INITIAL FLOW PRESS: 190.9- 246.1	HOLE SIZE: 7.875
FINAL FLOW PRESS: 336.6- 395.1	D.C. CAPACITY: 0.00492
SHUT-IN PRESS(I-F): 1020.8- 898.3	W.P. CAPACITY: 0.00708
BOTTOM HOLE TEMPERATURE: 108	D.P. CAPACITY: 0.01402
TOTAL FEET OF RECOVERY: 872	TOTAL BARRELS RECOVERY: 7.9215

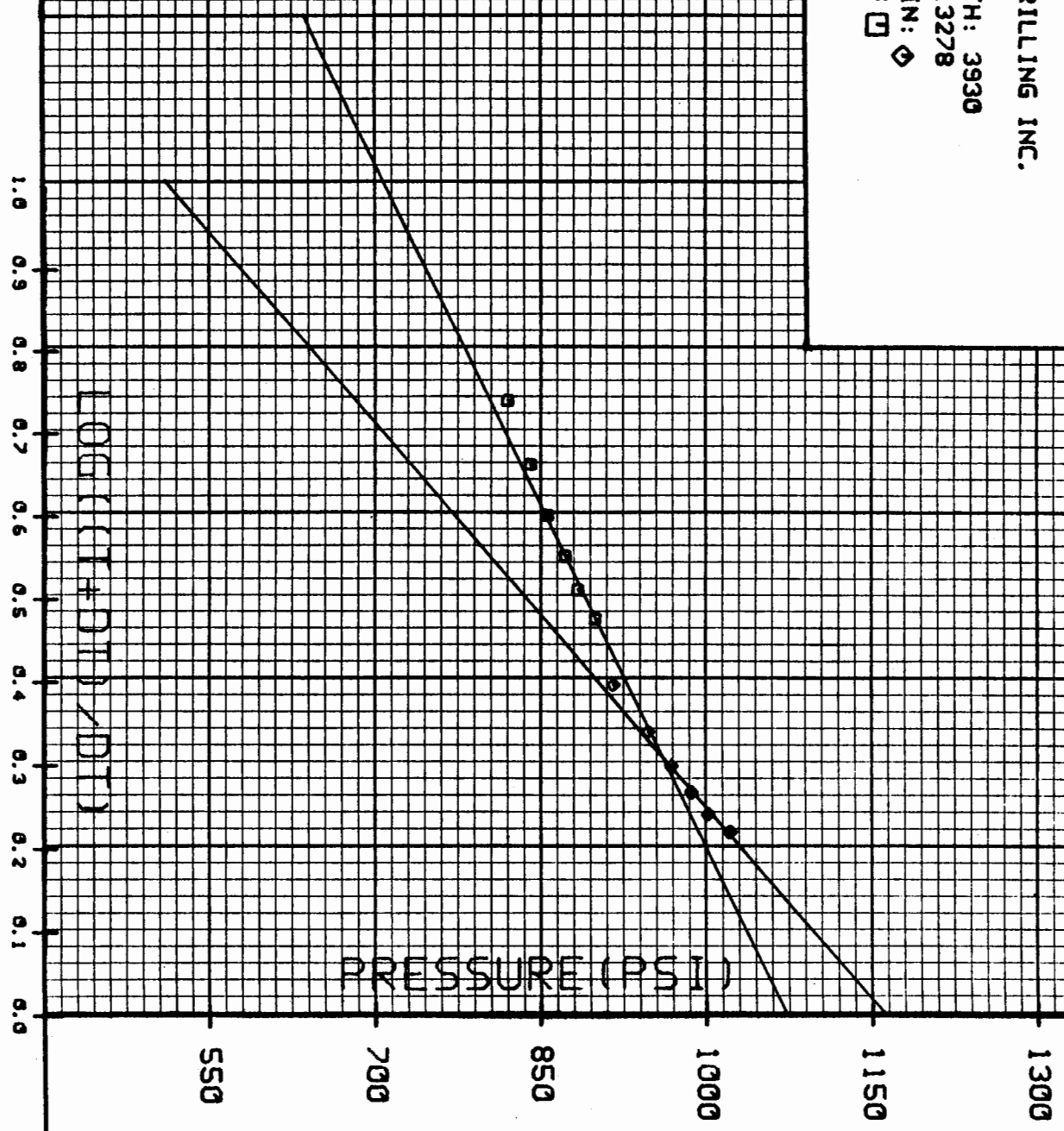
EXTRAPOLATED INITIAL SHUT-IN PRESSURE (PSI): 1163
SLOPE (PSI-CYCLE): 652 POINTS USED: 4

EXTRAPOLATED FINAL SHUT-IN PRESSURE (PSI): 1073
SLOPE (PSI-CYCLE): 366 POINTS USED: 4

CALCULATIONS

AVERAGE PRODUCTION RATE (B/D)	: 126.74
TRANSMISSIBILITY (MD-FT/CP)	: 56.31
PERMEABILITY (MD)	: 70.38
PRODUCTIVITY INDEX (B/D/PSI)	: 0.1181
DAMAGE RATIO	: 0.339
APPROXIMATE RADIUS OF INVESTIGATION (FT)	: 79.6
DRAWDOWN FACTOR (%)	: 7.739
POTENTIOMETRIC SURFACE (FT)	: 1160.29

HORNER PLOT
ABERCROMBIE DRILLING INC.
DOWELL #1 DEPTH: 3930
RECORDER NO. 13278
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	Abercrombie Drilling Inc.	Test No.	2
Well Name & Number	Dowell #1	Zone Tested	Kansas City 200'
Company Address	801 Union Center Wichita Ks.	Date	7/30/84
Company Rep.	Raul Brito	Tester	Randy Keesling
Contractor	Abercrombie Drilling Inc.	Elevation	2602 KB
Location: Sec.	34 Twp.	15s Rge.	29w Co. Gove State Ks.
		Est. Feet of Pay	

Recorder No. 7456 Type Ak-1 Range 4150 PSI

Recorder Depth 3974 Clock # 25720

(A) Initial Hydrostatic Mud 2065 PSI

(B) First Initial Flow Pressure 118 PSI

(C) First Final Flow Pressure 211 PSI

(D) Initial Shut-in Pressure 950 PSI

(E) Second Initial Flow Pressure 280 PSI

(F) Second Final Flow Pressure 429 PSI

(G) Final Shut-in Pressure 928 PSI

(H) Final Hydrostatic Mud 1999 PSI

Temperature 112

Mud Weight 9.2 Viscosity 48

Fluid Loss 10.4

Interval Tested 3958-3982

Anchor Length 24

Top Packer Depth 3953

Bottom Packer Depth 3958

Total Depth 3982

Drill Pipe Size 4 1/2 XH

Wt. Pipe I. D. 2.7 Ft. Run 620

Recovery-Total Feet 811

Recovered 5 Feet Of oil specked muddy water.

Recovered 806 Feet Of muddy water.

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Extra Equipment Price of Job \$625.00

Recorder No. 13278 Type Ak-1 Range 4400 PSI

Recorder Depth 3977 Clock # 27804

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

Initial Shut-in 45 Mins.

Flow Period 60 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 @ 10:48 PM

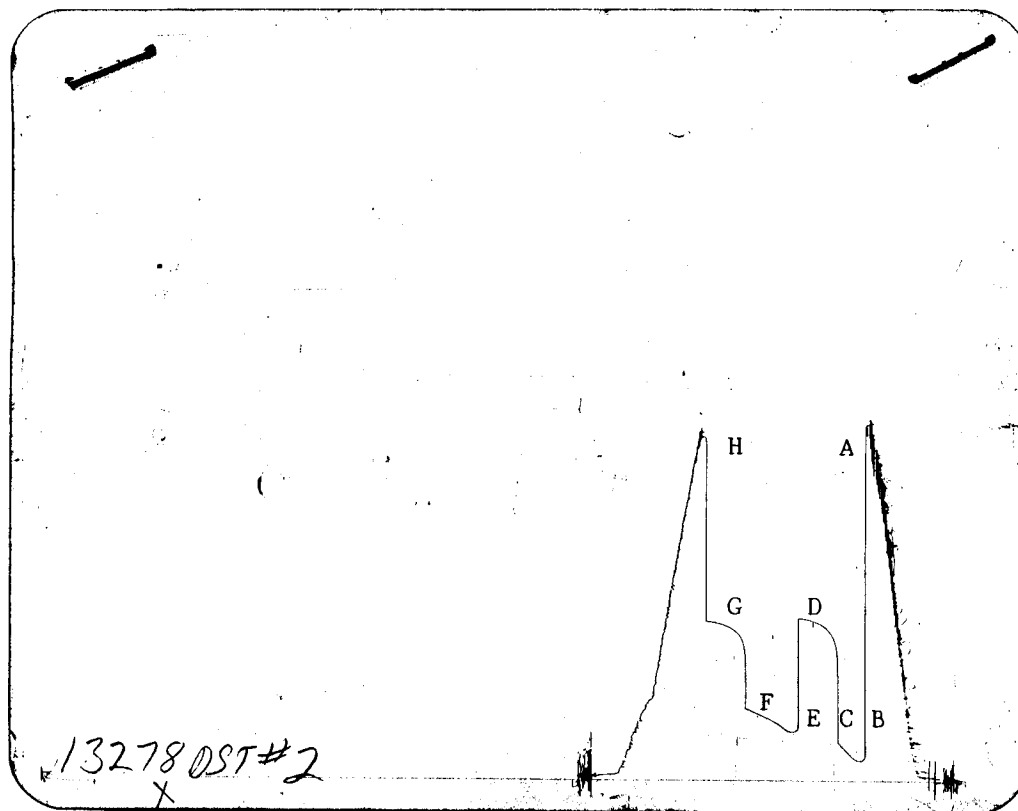
Blow Remarks 1st open: Strong blow, off bottom in 11 minutes.

2nd open: Off bottom in 20 minutes.

Well Chlorides: 6,000 ppm

Recovery Chlorides: 100,000 ppm

Resistivity: .08 ohms @ 70°F



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	2065	PSI
(B) First Initial Flow Pressure	118	PSI
(C) First Final Flow Pressure	211	PSI
(D) Initial Closed-in Pressure	950	PSI
(E) Second Initial Flow Pressure	280	PSI
(F) Second Final Flow Pressure	429	PSI
(G) Final Closed-in Pressure	928	PSI
(H) Final Hydrostatic Mud	1999	PSI

CHENEY TESTING COMPANY, INC.

P. O. Box 367

HILL CITY, KANSAS 67642

DRILL-STEM TEST DATA

Company	Abercrombie Drilling Inc.	Test No.	3
Well Name & Number	Dowell #1	Zone Tested	Kansas City 220'
Company Address	801 Union Center Wichita Ks.	Date	7/31/84
Company Rep.	Raul Brito	Tester	Randy Keesling
Contractor	Abercrombie Drilling Inc.	Elevation	2602 kB
Location: Sec.	34	Twp.	15s
Rge.	29w	Co.	Gove
State	Ks.	Est. Feet of Pay	

Recorder No. 7456 Type Ak-1 Range 4150 PSI

Recorder Depth 4004 Clock # 25720

(A) Initial Hydrostatic Mud 2098 PSI

(B) First Initial Flow Pressure 106 PSI

(C) First Final Flow Pressure 141 PSI

(D) Initial Shut-in Pressure 829 PSI

(E) Second Initial Flow Pressure 188 PSI

(F) Second Final Flow Pressure 292 PSI

(G) Final Shut-in Pressure 818 PSI

(H) Final Hydrostatic Mud 2054 PSI

Temperature 114

Mud Weight 9.6 Viscosity 47

Fluid Loss 10.4

Interval Tested 3996-4012

Anchor Length 16

Top Packer Depth 3991

Bottom Packer Depth 3996

Total Depth 4012

Drill Pipe Size 4 1/2 XH

Wt. Pipe I. D. 2.7 Ft. Run 620

Recovery-Total Feet 506

Recovered 5 Feet Of oil.

Recovered 501 Feet Of muddy water.

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Extra Equipment

Recorder No. 13278 Type AK-1 Range 4400 PSI

Recorder Depth 4007 Clock # 27804

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

Initial Shut-in 45 Mins.

Flow Period 60 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 @ 1:30 PM

Blow Remarks 1st open: No blow, flushed tool, good surge, weak blow, 4" in bucket.

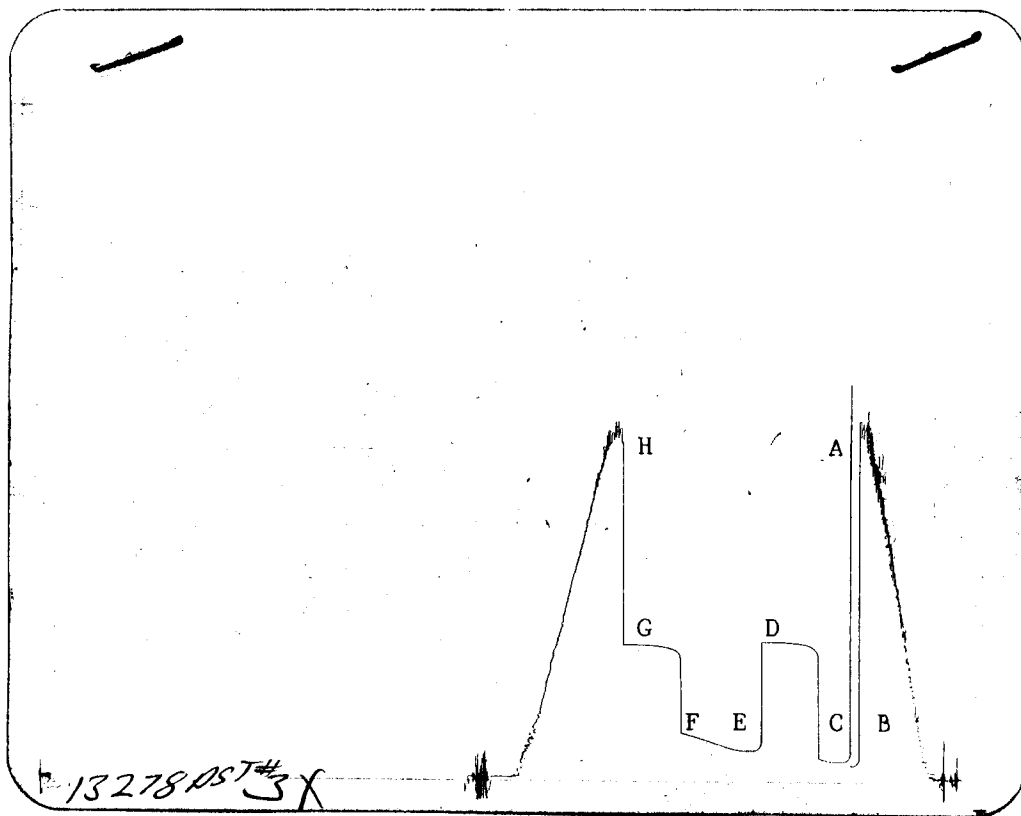
2nd open: Building blow, off bottom in 55 minutes.

Mud Chlorides: 7,000 ppm

Recovery Chlorides: 80,000 ppm

REsistivity: .08 ohms @ 85°F

Price of Job \$675.00



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	2098	PSI
(B) First Initial Flow Pressure	106	PSI
(C) First Final Flow Pressure	141	PSI
(D) Initial Closed-in Pressure	829	PSI
(E) Second Initial Flow Pressure	188	PSI
(F) Second Final Flow Pressure	292	PSI
(G) Final Closed-in Pressure	818	PSI
(H) Final Hydrostatic Mud	2054	PSI

CHENEY TESTING COMPANY, INC.

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DRILL-STEM TEST DATA

Company	Abercrombie Drilling Inc.	Test No.	4
Well Name & Number	Dowell #1	Zone Tested	Kansas City
Company Address	801 Union Center Wichita Ks.	Date	8/1/84
Company Rep.	Raul Brito	Tester	Randy Keesling
Contractor	Abercrombie Drilling Inc.	Elevation	2602 KB
Location: Sec. 34 Twp. 15s Rge. 29w Co. Gove State Ks.		Est. Feet of Pay	

Recorder No. 7456 Type AK-1 Range 4150 PSI

Recorder Depth 4041 Clock # 25720

(A) Initial Hydrostatic Mud 2076 PSI

(B) First Initial Flow Pressure 153 PSI

(C) First Final Flow Pressure 326 PSI

(D) Initial Shut-in Pressure 1005 PSI

(E) Second Initial Flow Pressure 406 PSI

(F) Second Final Flow Pressure 541 PSI

(G) Final Shut-in Pressure 972 PSI

(H) Final Hydrostatic Mud 2054 PSI

Temperature 116

Mud Weight 9.3 Viscosity 48

Fluid Loss 10.4

Interval Tested 4016-4049

Anchor Length 33

Top Packer Depth 4011

Bottom Packer Depth 4016

Total Depth 4049

Drill Pipe Size 4 1/2 XH

Wt. Pipe I. D. 2.7 Ft. Run 620

Recovery-Total Feet 1052

Recovered 1052 Feet Of muddy water.

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Extra Equipment

Recorder No. 13278 Type AK-1 Range 4400 PSI

Recorder Depth 4044 Clock # 27804

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

Initial Shut-in 45 Mins.

Flow Period 60 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 @ 3:35 AM

Blow Remarks 1st open: Strong blow, off bottom in 6 minutes.

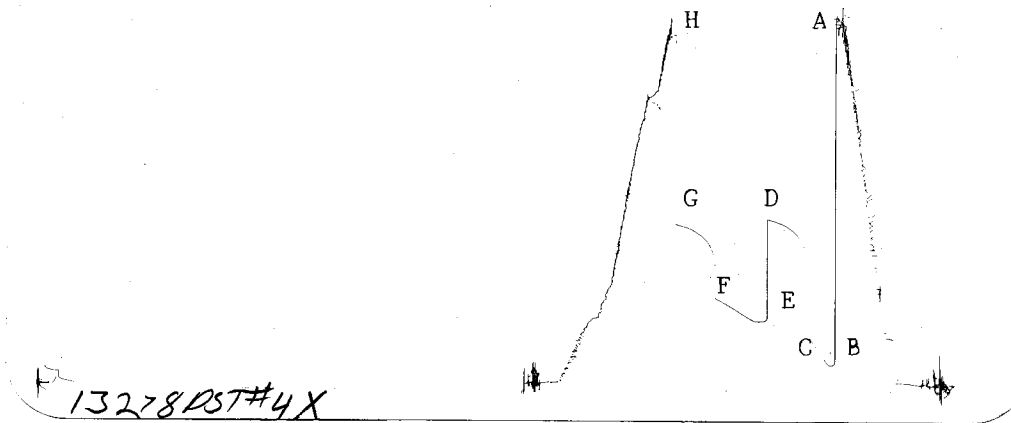
2nd open: Strong blow, off bottom in 10 minutes.

Mud Chlorides: 7,000 ppm

Recovery Chlorides: 60,000 ppm

resistivity: .10 ohms @ 85°F

Price of Job \$675.00



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	2076	PSI
(B) First Initial Flow Pressure	153	PSI
(C) First Final Flow Pressure	326	PSI
(D) Initial Closed-in Pressure	1005	PSI
(E) Second Initial Flow Pressure	406	PSI
(F) Second Final Flow Pressure	541	PSI
(G) Final Closed-in Pressure	972	PSI
(H) Final Hydrostatic Mud	2054	PSI

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DRILL-STEM TEST DATA

Company	Abercrombie Drilling Inc.	Test No.	5
Well Name & Number	Dowell #1	Zone Tested	Marmaton
Company Address	801 Union Center Wichita Ks.	Date	8/1/84
Company Rep.	Raul Brito	Tester	Randy Keesling
Contractor	Abercrombie Drilling Inc.	Elevation	2602 kB
Location: Sec. 34 Twp. 15s Rge. 29w Co. Gove State Ks.		Est. Feet of Pay	

Recorder No. 7456 Type AK-1 Range 4150 PSI

Recorder Depth 4068 Clock # 25720

(A) Initial Hydrostatic Mud 2173 PSI

(B) First Initial Flow Pressure 95 PSI

(C) First Final Flow Pressure 95 PSI

(D) Initial Shut-in Pressure 1157 PSI

(E) Second Initial Flow Pressure 95 PSI

(F) Second Final Flow Pressure 95 PSI

(G) Final Shut-in Pressure 1081 PSI

(H) Final Hydrostatic Mud 2164 PSI

Temperature 116

Mud Weight 9.3 Viscosity 48

Fluid Loss 10.4

Interval Tested 4048-4076

Anchor Length 28

Top Packer Depth 4043

Bottom Packer Depth 4048

Total Depth 4076

Drill Pipe Size 4 1/2 XH

Wt. Pipe I. D. 2.7 Ft. Run 620

Recovery-Total Feet 40

Recovered 40 Feet Of oil cut mud, 75% mud, 25% oil.

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Extra Equipment

Recorder No. 12378 Type Ak-1 Range 4400 PSI

Recorder Depth 4071 Clock # 27804

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

Initial Shut-in 45 Mins.

Flow Period 60 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 @ 5:55 AM

Blow Remarks 1st open: WEak blow 1 1/2" in bucket.

2nd open: Weak blow 1/4" in bucket.

Well Chlorides: 7,000 ppm

Recovery Chlorides: 7,000 ppm

Price of Job \$675.00

INITIAL SHUT-IN

=====

RECORDER NO: 13278 DEPTH: 4076 FT.
 INITIAL FLOW TIME (T): 30 MIN.

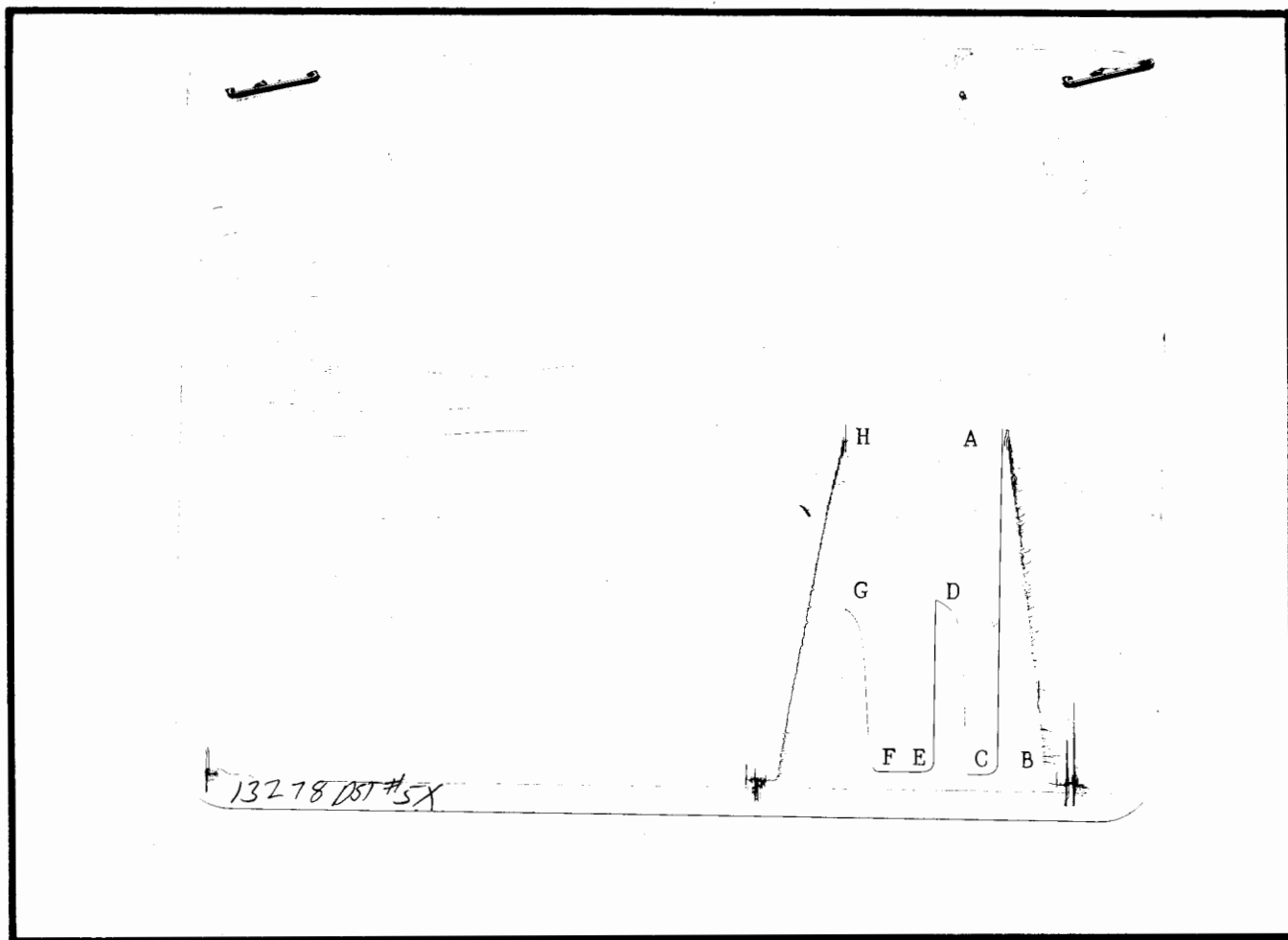
DT(MIN)	LOG((T+DT)/DT)	PRESSURE(P SIG)
=====		
0	0.000	101.5
5	0.845	214.1
10	0.602	619.1
15	0.477	860.8
20	0.398	1000.9
25	0.342	1059.4
30	0.301	1087.0
35	0.269	1110.2
40	0.243	1125.6
45	0.222	1140.0

FINAL SHUT-IN

=====

RECORDER NO: 13278 DEPTH: 4076 FT.
 TOTAL FLOW TIME: 90 MIN.

DT(MIN)	LOG((T+DT)/DT)	PRESSURE(P SIG)
=====		
0	0.000	110.4
5	1.279	135.7
10	1.000	277.0
15	0.845	526.4
20	0.740	823.2
25	0.663	945.7
30	0.602	1015.3
35	0.553	1049.5
40	0.512	1068.2
45	0.477	1077.1



This is an actual photograph of recorder chart.

POINT	PRESSURE		
	Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	2173	2168	PSI
(B) First Initial Flow Pressure	95	101.5	PSI
(C) First Final Flow Pressure	95	101.5	PSI
(D) Initial Closed-in Pressure	1157	1140.0	PSI
(E) Second Initial Flow Pressure	95	110.4	PSI
(F) Second Final Flow Pressure	95	110.4	PSI
(G) Final Closed-in Pressure	1081	1077.1	PSI
(H) Final Hydrostatic Mud	2164	2159	PSI

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

FOR: ABERCROMBIE DRILLING INC.
DOWELL #1 DST # 5
SEC 34-15S-29W FORMATION: MARMATON
GOVE COUNTY, KANSAS ELEVATION: 2602 KB

TEST PARAMETERS

TEST INTERVAL: 4048 - 4076	EST PAY: 8
TIME INTERVAL: 30 - 45 - 60 - 45	VISCOSITY OF FLUID: 5
INITIAL FLOW PRESS: 101.5- 101.5	HOLE SIZE: 7.875
FINAL FLOW PRESS: 110.4- 110.4	D.C. CAPACITY: 0.00492
SHUT-IN PRESS(I-F): 1140.0-1077.1	W.P. CAPACITY: 0.00708
BOTTOM HOLE TEMPERATURE: 116	D.P. CAPACITY: 0.01402
TOTAL FEET OF RECOVERY: 40	TOTAL BARRELS RECOVERY: 0.2831

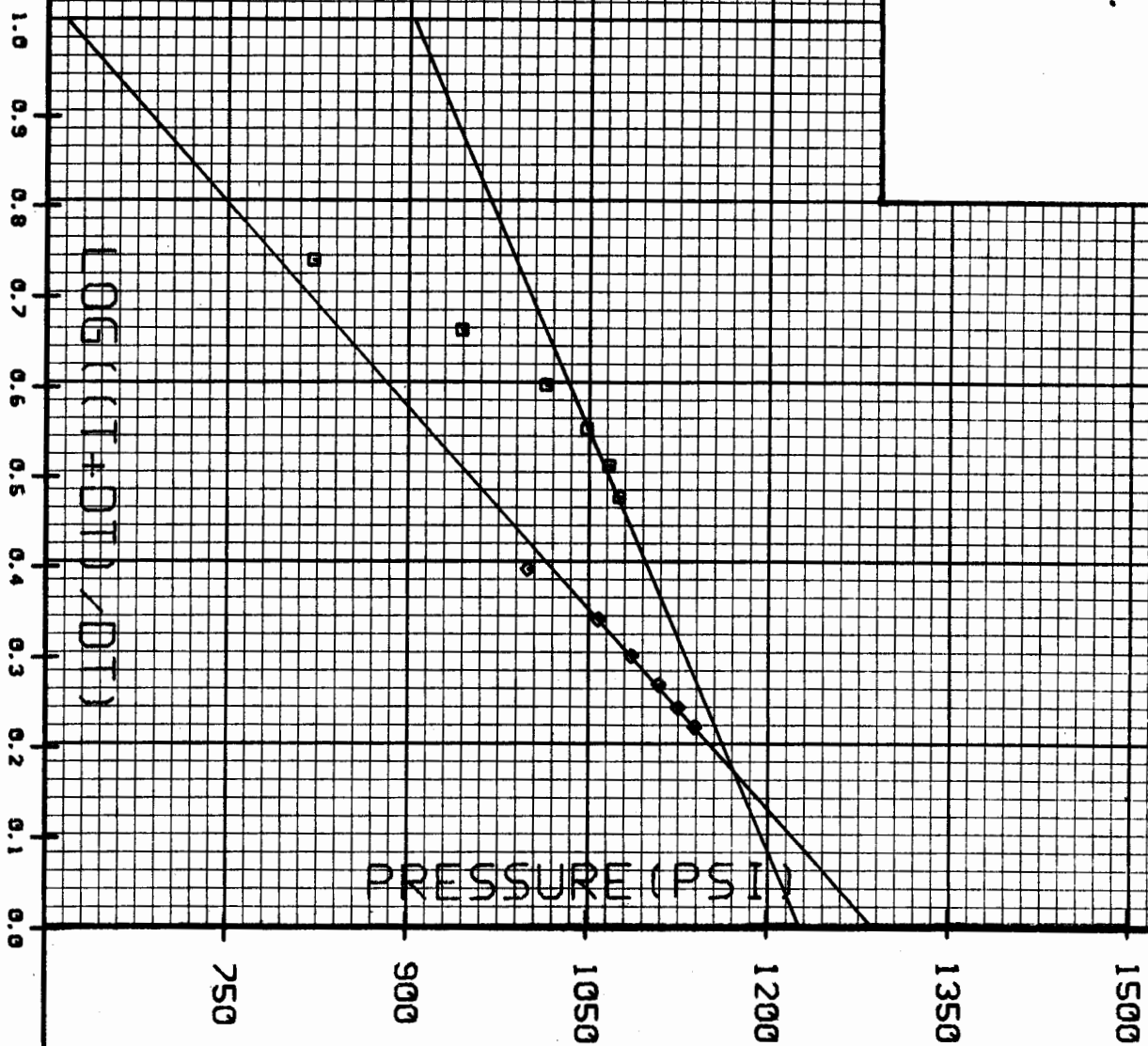
EXTRAPOLATED INITIAL SHUT-IN PRESSURE (PSI): 1283
SLOPE (PSI-CYCLE): 650 POINTS USED: 5

EXTRAPOLATED FINAL SHUT-IN PRESSURE (PSI): 1243
SLOPE (PSI-CYCLE): 338 POINTS USED: 3

CALCULATIONS

AVERAGE PRODUCTION RATE (B/D)	: 4.53
TRANSMISSIBILITY (MD-FT/CP)	: 2.18
PERMEABILITY (MD)	: 1.36
PRODUCTIVITY INDEX (B/D/PSI)	: 0.0036
DAMAGE RATIO	: 0.613
APPROXIMATE RADIUS OF INVESTIGATION (FT)	: 11.1
DRAWDOWN FACTOR (%)	: 3.118
POTENTIOMETRIC SURFACE (FT)	: 1408.52

HORNER PLOT
ABERCROMBIE DRILLING INC.
DOMEILL #1
DST # 5 DEPTH: 4076
REORDER NO. 13278
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	Abercrombie Drilling Inc.	Test No.	6
Well Name & Number	Thomas #2	Zone Tested	Arbuckle
Company Address	801 Union Center Wichita, Ks. 67202	Date	10/3/84
Company Rep.	Mark Galyon	Tester	Greg Bailey
Contractor	Abercrombie Rig 7	Elevation	1964 K.B.
Location: Sec. 28 Twp. 8s Rge. 16w Co. Rooks State Ks.		Est. Feet of Pay	

Recorder No. 13278 Type AK-1 Range 4400 PSI

Recorder Depth 3408 Clock # 25720

(A) Initial Hydrostatic Mud 1824 PSI

(B) First Initial Flow Pressure 176 PSI

(C) First Final Flow Pressure 176 PSI

(D) Initial Shut-in Pressure 303 PSI

(E) Second Initial Flow Pressure 176 PSI

(F) Second Final Flow Pressure 176 PSI

(G) Final Shut-in Pressure 303 PSI

(H) Final Hydrostatic Mud 1758 PSI

Temperature 105

Mud Weight 9.4 Viscosity 45

Fluid Loss 8

Interval Tested 3387-3414

Anchor Length 27

Top Packer Depth 3382

Bottom Packer Depth 3387

Total Depth 3414

Drill Pipe Size 4 1/2 X.H.

Wt. Pipe I. D. Ft. Run 484'

Recovery-Total Feet 150'

Recovered 150 Feet Of Mud - show of free oil in top of tool

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Extra Equipment Price of Job \$ 625.00

Recorder No. 7456 Type AK-1 Range 4150 PSI

Recorder Depth 3411 Clock # 25719

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"

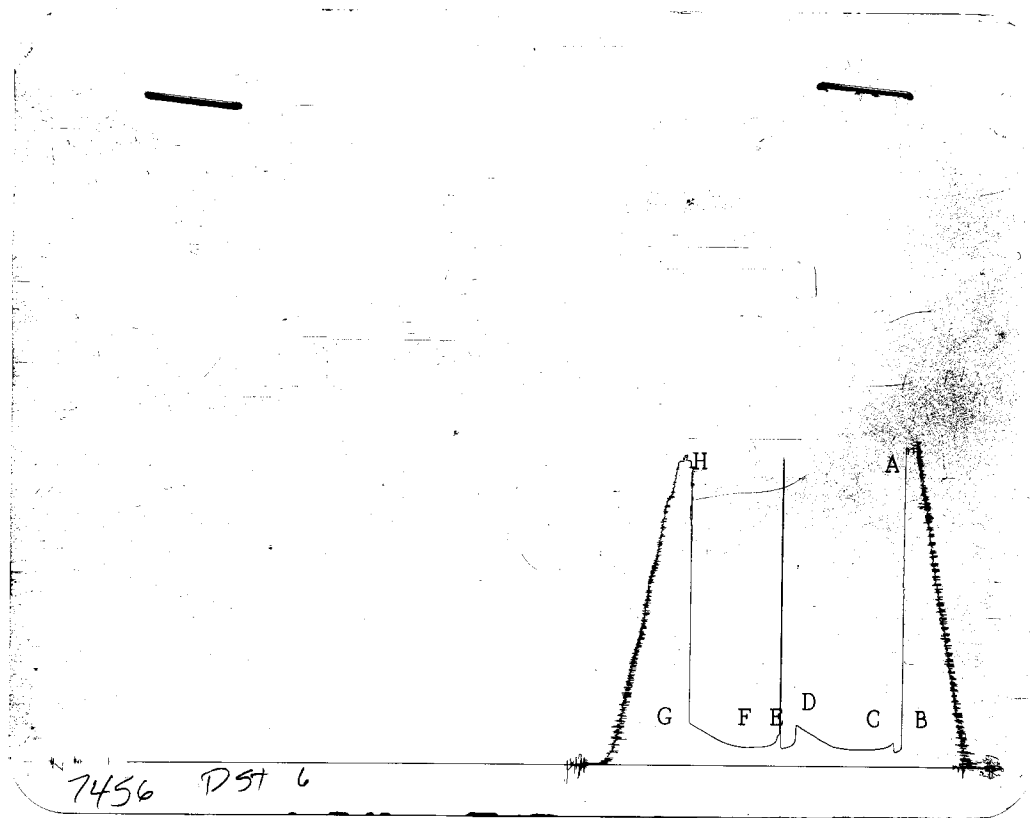
Tool Open @ 5:50 AM

Blow Remarks 1st open fair blow (8" in bucket) slowing to 3" in 30 minutes.

2nd open no blow- Flush tool- Good surge - weak blow and died in 2 minutes.

Well chlorides 22,000 ppm

Recovery chlorides 22,000 ppm



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	1824	PSI
(B) First Initial Flow Pressure	176	PSI
(C) First Final Flow Pressure	176	PSI
(D) Initial Closed-in Pressure	303	PSI
(E) Second Initial Flow Pressure	176	PSI
(F) Second Final Flow Pressure	176	PSI
(G) Final Closed-in Pressure	303	PSI
(H) Final Hydrostatic Mud	1758	PSI