

FORMATION TESTING SERVICE

P.O.Box 518, Hays, Kansas 67601
Telephone (913) 628-1115

Test# 1

Zone Tested: Lansing

Lease Name: Schaffer "C" #1

Location: Sec. 24 Twp. 16S Rng. 14W

County Barton St. Kansas

Date: 7/1/84

Elevation: 1907 K.B.

Tester: Craig Bucl

Company: A.L. Abercrombie Drilling Company

Company Address: Wichita, Kansas

Company Representative: Mr. Steve Frankamp

Contractor: Abercrombie Rig #() Interval Tested: 3180'-3200'

Internal Recorder-Type: AK-1 Range: 3900 No: 13752 Depth: 3181'

External Recorder-Type: AK-1 Range: 3950 No: 13753 Depth: 3196'

Initial Hydrostatic Mud: 1669 S.I.

Initial Flow Pressure 28 To 38 P.S.I.

Initial Flow Period 30 Min.

Initial Shut-In Pressure 523 P.S.I.

Initial Shut-In 45 Min.

Final Flow Pressure 58 To 67 P.S.I.

Final Flow Period 60 Min.

Final Shut-In Pressure 513 P.S.I.

Final Shut-In 45 Min.

Final Hydrostatic Mud 1659 P.S.I.

Temperature: 105° Tool Open: 4:10 P.M.

Blow: Weak building slowly to six inch

Mud Weight 9.8 Viscosity 41 Water Loss 8.0

blow. Second opening weak building to

Total Depth: 3200'

to nine inch blow.

Anchor Length: 20'

Remarks _____

Bottom Packer: 3180'

Top Packer: 3175'

Surface Choke: 1"

Bottom Choke: 3/4"

Drill Pipe Size: 4 1/2" X.H.

Collars Run: - I.D. -

Wt. Pipe Run: 579' I.D. 2.75"

Main Hole Size: 7 7/8"

Rubber Size: 6 5/8"

130 Feet Total Recovery

Recovered 110 Feet Gas in pipe.

Recovered 20 Feet Oil and Gas cut mud 38% gas, 19% oil, 2% water, 41% mud.

Recovered 110 Feet Slightly oil cut watery mud, 17% gas, 2% oil, 20% water 61% mud.

Recovered _____ Feet 76,000 P.P.M. Cl⁻,

Extra Equipment: None.

Price of Job: 600.00

FORMATION TESTING SERVICE

P.O.Box 518, Hays, Kansas 67601
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Test# 1
Zone Tested: Leaning
Lease Name: Schaffer C-1
Location: Sec. 24 Twp. 16 Rng. 14
County Barber St. Kansas
Date: July 1, 1984

Company: A.L. Abercrombie Drilling Co
Company Address: 801 Main Center, Wichita Ks 67202 Elevation: 1967
Company Representative: Steve Frankamp Tester: Craig Buel
Contractor: Abercrombie Rq 9 Interval Tested: 3180 - 3200

Internal Recorder-Type: AK1 Range: 3900 No: 13752 Depth: 3181
External Recorder-Type: AK1 Range: 3900 No: 13753 Depth: 3196

Initial Hydrostatic Mud: 1069 P.S.I.
Initial Flow Pressure 28 To 38 P.S.I. Initial Flow Period 30 Min.
Initial Shut-In Pressure 523 P.S.I. Initial Shut-In 45 Min.
Final Flow Pressure 58 To 67 P.S.I. Final Flow Period 40 Min.
Final Shut-In Pressure 513 P.S.I. Final Shut-In 45 Min.
Final Hydrostatic Mud 1054 P.S.I.

Temperature: 105 Tool Open: 4:10 pm
Mud Weight 9.3 Viscosity 11 Water Loss 8
Total Depth: 3200
Anchor Length: 20
Bottom Packer: 3180
Top Packer: 3175
Surface Choke: 1 inch
Bottom Choke: 3/4 inch
Drill Pipe Size: 4 1/2 in
Collars Run: — I.D. —
Main Hole Size: 7 1/8

Blow: 1st flow weak building slowly to 6 inches in water, 2nd per-weak built slowly to 9" in water

Remarks _____
Wt. Pipe Run: 519 I.D. 2.75
Rubber Size: 6 3/4

Feet Total Recovery
Recovered 110 Feet gas in pipe
Recovered 20 Feet 0.4 GCM 32% gas 19% oil 2% w; 41 mud
Recovered 110 Feet Slightly oil & cut watery mud
Recovered _____ Feet 17% gas, 2% oil 20% cut 41% mud
Extra Equipment Chloride - 74.00, mud system 0300 Price of Job: 600.00

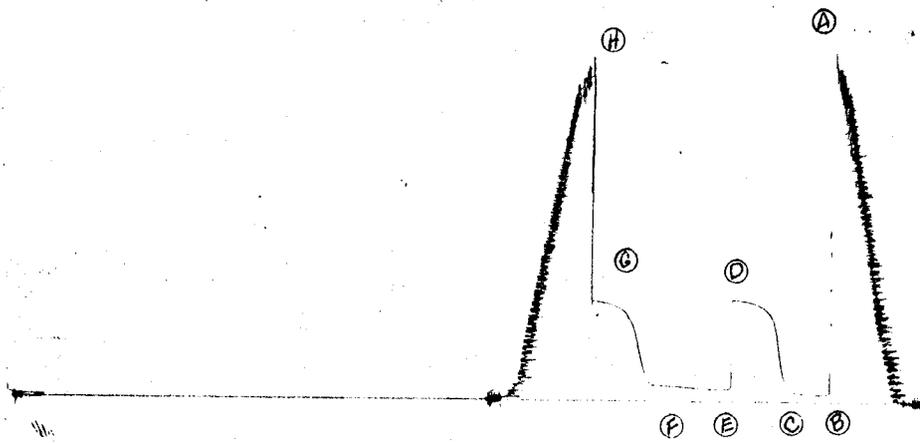
Approved By Steve Frankamp
Our Representative Craig Buel

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Wicket #452

Rec. # 13753

JST



POINT

(A) Initial Hydrostatic Mud	1669	PSI
(B) First Initial Flow Pressure	28	PSI
(C) First Final Flow Pressure	38	PSI
(D) Initial Closed-in Pressure	523	PSI
(E) Second Initial Flow Pressure	58	PSI
(F) Second Final Flow Pressure	67	PSI
(G) Final Closed-in Pressure	513	PSI
(H) Final Hydrostatic Mud	1659	PSI

A.L. ABERCROMBIE DRILLING COMPANY
SCHAFFER "C" #1 SECTION 24-16S-14W
BARTON COUNTY KANSAS
TEST #2 IN THE KANSAS CITY

D.S.T. EVALUATION

FLOW RATE (LIQUID)	70.65	BBL/DAY
FLOW RATE (GAS)	0	MCF/DAY
MAXIMUM RESERVOIR PRESSURE	821	P.S.I.
SLOPE OF SHUT-IN CURVE	289.96	P.S.I./LOG CYCL
ESTIMATED DAMAGE RATIO	.678854	
TRANSMISSIBILITY (LIQUID)	34.6827	MD-FT.CP.
FLOW CAPACITY	41.678	MD-FT.
PERMEABILITY	1.812	MD-29 FT.EFF.PAY
PRODUCTIVITY INDEX	.08605	BBL/DAY/PSI
POTENTIOMETRIC SURFACE	1896.07	FT.ASL
RADIUS OF INVESTIGATION	10.312	FT.
GAS - OIL RATIO	0	CF/BBL
THEORETICAL POTENTIAL WITH DAMAGE REMOVED	(NO DAMAGE)	BBL/DAY

0453 7/2/84

LIQUID FLOW RATE BASED UPON FINAL FLOW. 4.415 BLS WATER - 67.68 BLS.WATER.

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Test# 2

Zone Tested: Kansas City

Lease Name: Schaffer "C" #1

Location: Sec. 24 Twp. 16S Rng. 14W

County Barton St. Kansas

Date: 7/2/84

Elevation: 1967 K.B.

Tester: Craig Bucl

Company: A.L. Abercrombie Drilling Company

Company Address: Wichita, Kansas

Company Representative: Mr. Steve Frankamp

Contractor: Abercrombie Rig #9 Interval Tested: 3239'-3268'

Internal Recorder-Type: AK-1 Range: 3900 No: 13752 Depth: 3240'

External Recorder-Type: AK-1 Range: 3950 No: 13753 Depth: 3264'

Initial Hydrostatic Mud: 1708 P.S.I.

Initial Flow Pressure 77 To 155 P.S.I. Initial Flow Period 30 Min.

Initial Shut-In Pressure 809 P.S.I. Initial Shut-In 45 Min.

Final Flow Pressure 184 To 252 P.S.I. Final Flow Period 60 Min.

Final Shut-In Pressure 791 P.S.I. Final Shut-In 45 Min.

Final Hydrostatic Mud 1678 P.S.I.

Temperature: 104° Tool Open: 7:55 A.M.

Blow: Weak building to strong blow within 4 minutes. Similar second opening.

Mud Weight 9.8 Viscosity 42 Water Loss 11.2

Total Depth: 3268'

Remarks 2200' Gas in pipe.

Anchor Length: 29'

Bottom Packer: 3239'

Top Packer: 3234'

Surface Choke: 1"

Bottom Choke: 3/4"

Drill Pipe Size: 4 1/2" X.H.

Collars Run: - I.D. -

Wt. Pipe Run: 579 I.D. 2.75"

Main Hole Size: 7 7/8"

Rubber Size: 6 5/8"

595 Feet Total Recovery

Recovered 40 Feet Oil and gas cut mud, 22% gas, 4% oil, 3% water, 71% mud.

Recovered 60 Feet Oil and gas cut mud, 12% gas, 76% oil, 7% water, 5% mud.

Recovered 495 Feet Gassy slightly muddy oil, 3% gas, 88% oil, 4% water, 5% mud.

Recovered Feet 40° A.P.I. oil.

Extra Equipment: None

Price of Job: 600.00

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Test# 2

Zone Tested: Kans. City

Lease Name: Schaffer "C" 1

Location: Sec. 24 Twp. 14 Rng. 14

County Barton St. Ks

Date: July 2, 1984

Elevation: 1907 FB

Tester: Craig Bull

Company: A.L. Abercrombie Drilling Co.

Company Address: 801 Union Center, Wichita Ks 67202

Company Representative: Steve Funkamp

Contractor: Abercrombie Rig 9 Interval Tested: 3239 - 3248

Internal Recorder-Type: AKI Range: 3900 No: 13752 Depth: 3240

External Recorder-Type: AKI Range: 3950 No: 13753 Depth: 3241

Initial Hydrostatic Mud: 1708 P.S.I.

Initial Flow Pressure 77 To 155 P.S.I.

Initial Shut-In Pressure 809 P.S.I.

Final Flow Pressure 184 To 252 P.S.I.

Final Shut-In Pressure 791 P.S.I.

Final Hydrostatic Mud 1678 P.S.I.

Temperature: 104 Tool Open: 7:55 AM

Mud Weight 9.8 Viscosity 42 Water Loss 11.5

Total Depth: 3208

Anchor Length: 29

Bottom Packer: 3239

Top Packer: 3234

Surface Choke: light

Bottom Choke: 3/4 inch

Drill Pipe Size: 4 1/2 in

Collars Run: — I.D. —

Main Hole Size: 7 1/8

Initial Flow Period 30 Min.

Initial Shut-In 45 Min.

Final Flow Period 60 Min.

Final Shut-In 45 Min.

Blow: 1" open weak built to strong in 4 mins. 2" open weak built to strong in 3 mins.

Remarks _____

Wt. Pipe Run: 579 I.D. 2.75

Rubber Size: 6 3/4

595 Feet Total Recovery 2200' g.i.p.

Recovered 40 Feet 0.6 GCM 22 gas, 4% oil, 3% water, 71% mud

Recovered 600 Feet " " 12% gas, 7% oil, 7% w, 5% mud

Recovered 495 Feet gassy, slightly muddy oil, 5% gas, 8% oil, 1% water

Recovered 40 Feet 40' gravity corrected 5% mud

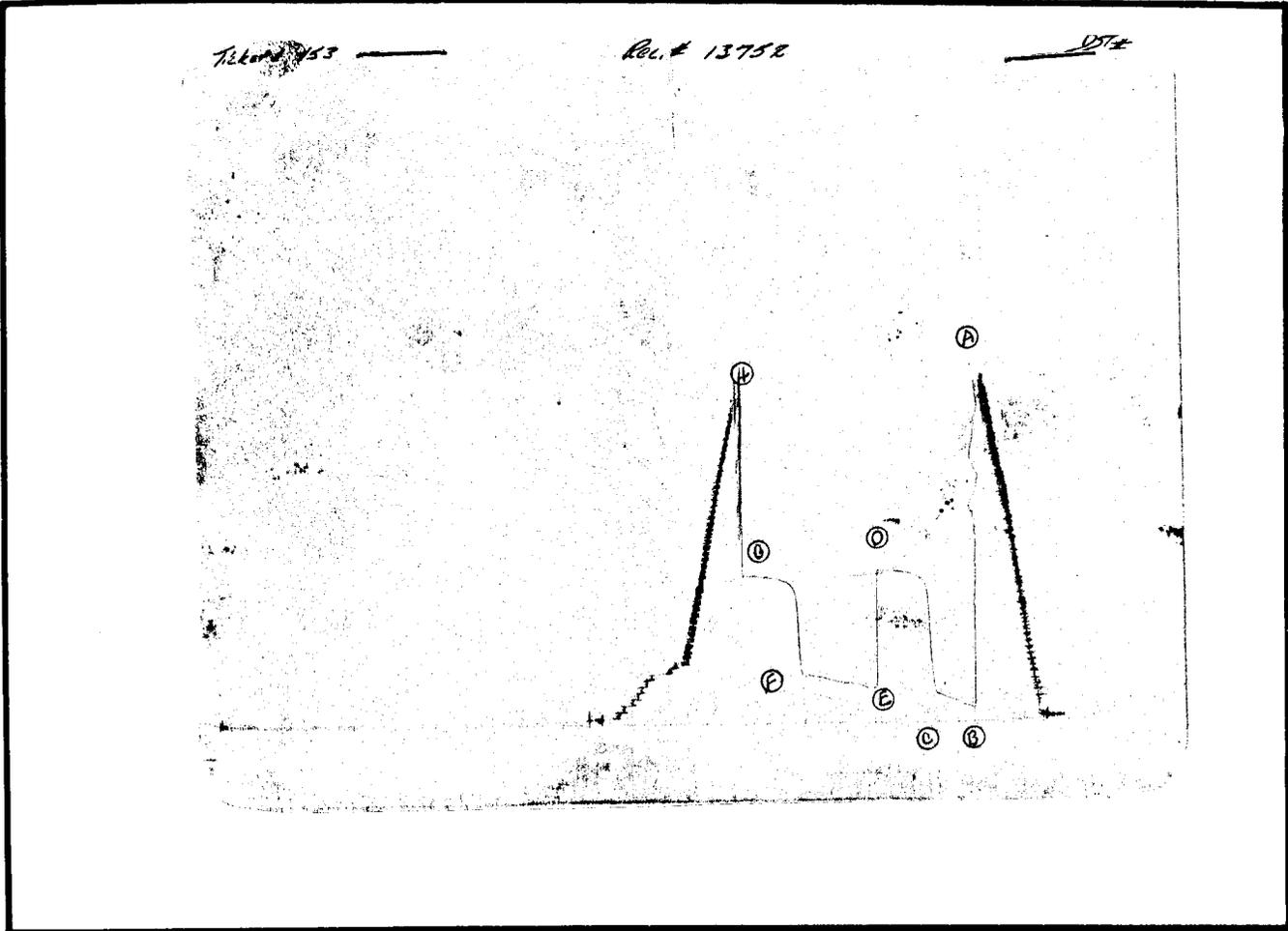
Extra Equipment: _____ Price of Job: \$1000

Approved By Steve Funkamp

Our Representative Craig Bull

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Ticket No 453



POINT

(A) Initial Hydrostatic Mud	1708	PSI
(B) First Initial Flow Pressure	77	PSI
(C) First Final Flow Pressure	155	PSI
(D) Initial Closed-in Pressure	809	PSI
(E) Second Initial Flow Pressure	184	PSI
(F) Second Final Flow Pressure	252	PSI
(G) Final Closed-in Pressure	791	PSI
(H) Final Hydrostatic Mud	1678	PSI

FORMATION TESTING SERVICE

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Test# 3

Zone Tested: Kansas City

Lease Name: Schaffer "C" #1

Location: Sec. 24 Twp. 16S Rng. 14W

County Barton St. Kansas

Date: 7/2/84

Elevation: 1967 K.B.

Tester: Craig Bucl

Company: A.L. Abercrombie Drilling Company

Company Address: Wichita, Kansas

Company Representative: Mr. Steve Frankamp

Contractor: Abercrombie Rig #9 Interval Tested: 3270'-3279'

Internal Recorder-Type: AK-1 Range: 3900 No: 13752 Depth: 3262'

External Recorder-Type: AK-1 Range: 3950 No: 13753 Depth: 3275'

Initial Hydrostatic Mud: 1708 P.S.I.

Initial Flow Pressure 19 To 19 P.S.I.

Initial Flow Period 30 Min.

Initial Shut-In Pressure 38 P.S.I.

Initial Shut-In 45 Min.

Final Flow Pressure 19 To 19 P.S.I.

Final Flow Period 30 Min.

Final Shut-In Pressure 29 P.S.I.

Final Shut-In 45 Min.

Final Hydrostatic Mud 1678 P.S.I.

Temperature: 106° Tool Open: 8:10 P.M.

Blow: Very weak dying in 14 minutes.

Mud Weight 9.8 Viscosity 43 Water Loss 10.4

No return second opening.

Total Depth: 3279'

Anchor Length: 9'

Remarks _____

Bottom Packer: 3270'

Top Packer: _____

Surface Choke: 1"

Bottom Choke: 3/4"

Drill Pipe Size: 4 1/2" X.H.

Collars Run: - I.D. -

Wt. Pipe Run: 579 I.D. 2.75"

Main Hole Size: 7 7/8"

Rubber Size: 6 5/8"

3 Feet Total Recovery

Recovered 3 Feet Mud with few oil specks.

Recovered _____ Feet _____

Recovered _____ Feet _____

Recovered _____ Feet _____

Extra Equipment: None Price of Job: 600.00

FORMATION TESTING SERVICE

P.O.Box 518, Hays, Kansas 67601
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Test# 3

Zone Tested: Kans City

Lease Name: Schaller C-1

Location: Sec. 24 Twp. 14 Rng. 14

County Barton St. Kans.

Date: July 2, 1984

Company: Al. Abercrombie Oil Co.

Company Address: 801 Union Center, Wichita Ks. 67202 Elevation: 1967 FB

Company Representative: Steve Finckamp Tester: Craig Buell

Contractor: Abercrombie Rig 9 Interval Tested: 3270 - 3279

Internal Recorder-Type: AKI Range: 3900 No: 13752 Depth: 3262

External Recorder-Type: AKI Range: 3950 No: 13753 Depth: 3275

Initial Hydrostatic Mud: 1908 P.S.I.

Initial Flow Pressure 19 To 19 P.S.I. Initial Flow Period 30 Min.

Initial Shut-In Pressure 38 P.S.I. Initial Shut-In 45 Min.

Final Flow Pressure 19 To 19 P.S.I. Final Flow Period 30 Min.

Final Shut-In Pressure 29 P.S.I. Final Shut-In 45 Min.

Final Hydrostatic Mud 11078 P.S.I.

Temperature: 104 Tool Open: 8:10 pm Blow: 1st open - weak that died in

Mud Weight 9.8 Viscosity 43 Water Loss 10.2 14 mins. 2nd open no blow

Total Depth: 3279

Anchor Length: 9 Remarks _____

Bottom Packer: 3270

Top Packer: none

Surface Choke: nick

Bottom Choke: 3/4 inch

Drill Pipe Size: 1 1/2 x 4

Collars Run: — I.D. — Wt. Pipe Run: 579 I.D. 2.75

Main Hole Size: 7 1/8 Rubber Size: 6 3/4

_____ Feet Total Recovery

Recovered 3 Feet mad w/ few oil specks

Recovered _____ Feet

Recovered _____ Feet

Recovered _____ Feet

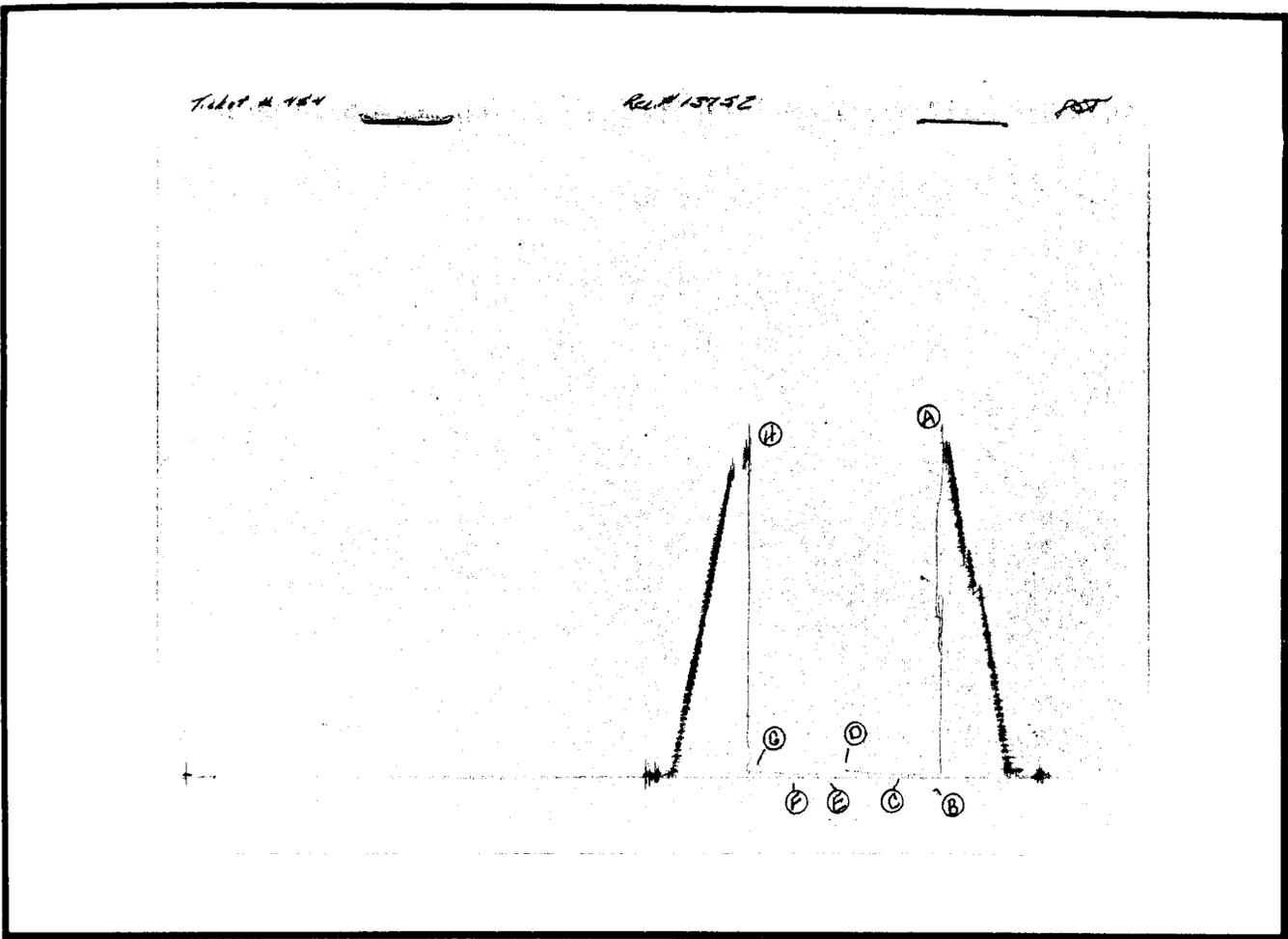
Extra Equipment: _____ Price of Job: 1000⁰⁰

Approved By _____

Our Representative Craig Buell

Ticket No 454

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POINT

(A) Initial Hydrostatic Mud	1708	PSI
(B) First Initial Flow Pressure	19	PSI
(C) First Final Flow Pressure	19	PSI
(D) Initial Closed-in Pressure	38	PSI
(E) Second Initial Flow Pressure	19	PSI
(F) Second Final Flow Pressure	19	PSI
(G) Final Closed-in Pressure	29	PSI
(H) Final Hydrostatic Mud	1678	PSI

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Test# 4

Zone Tested: Kansas City

Lease Name: Schaffer "C" #1

Location: Sec. 24 Twp. 16S Rng. 14W

County Barton St. Kansas

Date: 7/3/84

Elevation: 1967 K.B.

Tester: Craig Bucl

Company: A.I. Abercrombie Drilling Company

Company Address: Wichita, Kansas

Company Representative: Mr. Steve Frankamp

Contractor: Abercrombie Rig #9 Interval Tested: 3362'-3400'

Internal Recorder-Type: AK-1 Range: 3900 No: 13752 Depth: 3363'

External Recorder-Type: AK-1 Range: 3950 No: 13753 Depth: 3396'

Initial Hydrostatic Mud: 1767 P.S.I.

Initial Flow Pressure 77 To 320 P.S.I.

Initial Flow Period 30 Min.

Initial Shut-In Pressure 914 P.S.I.

Initial Shut-In 45 Min.

Final Flow Pressure 339 To 484 P.S.I.

Final Flow Period 60 Min.

Final Shut-In Pressure 819 P.S.I.

Final Shut-In 45 Min.

Final Hydrostatic Mud 1747 P.S.I.

Temperature: 107° Tool Open: 4:35 P.M.

Blow: Strong blow both openings.

Mud Weight 9.9 Viscosity 42 Water Loss 11.2

Total Depth: 3400'

Anchor Length: 38'

Bottom Packer: 3362'

Top Packer: 3357'

Surface Choke: 1"

Bottom Choke: 3/4"

Drill Pipe Size: 4 1/2" X.H.

Collars Run: - I.D. -

Wt. Pipe Run: 579 I.D. 2.75"

Main Hole Size: 7 7/8"

Rubber Size: 6 5/8"

1230 Feet Total Recovery

Recovered 1230 Feet Muddy salt water, 55,000 p.p.m. Cl-

Recovered _____ Feet _____

Recovered _____ Feet _____

Recovered _____ Feet _____

Extra Equipment: None Price of Job: 600.00

FORMATION TESTING SERVICE

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Test# 4

Zone Tested: Kans. City

Lease Name: Schafer 2-1

Location: Sec. 24 Twp. 11E Rng. 14

County Barton St. Kans.

Date: July 3, 1984

Company: A.L. Abercrombie Drig Co

Company Address: 801 Union Center, Wichita Ks. 67202 Elevation: 19107 KB

Company Representative: Steve Frankamp Tester: Craig Buel

Contractor: Abercrombie Rig 9 Interval Tested: 3362 - 3400

Internal Recorder-Type: AK1 Range: 3900 No: 13752 Depth: 3363

External Recorder-Type: AK1 Range: 3950 No: 13753 Depth: 3396

Initial Hydrostatic Mud: 1767 P.S.I.

Initial Flow Pressure 77 To 320 P.S.I. Initial Flow Period 30 Min.

Initial Shut-In Pressure 914 P.S.I. Initial Shut-In 45 Min.

Final Flow Pressure 539 To 484 P.S.I. Final Flow Period 120 Min.

Final Shut-In Pressure 819 P.S.I. Final Shut-In 45 Min.

Final Hydrostatic Mud 1747 P.S.I.

Temperature: 107 Tool Open: 4:35 pm

Mud Weight 9.2 Viscosity 42 Water Loss 11.2

Total Depth: 3400

Anchor Length: 38

Bottom Packer: 3362

Top Packer: 3357

Surface Choke: 1 inch

Bottom Choke: 3/4 inch

Drill Pipe Size: 4 1/2 in

Collars Run: - I.D. -

Main Hole Size: 7 7/8

Wt. Pipe Run: 579 I.D. 2.75

Rubber Size: 6 3/4

Feet Total Recovery

Recovered 1230 Feet muddy salt water

Recovered Feet (blowies 55,000)

Recovered Feet circul system 62,000

Recovered Feet

Extra Equipment: Price of Job: \$1000

Approved By Steve Frankamp

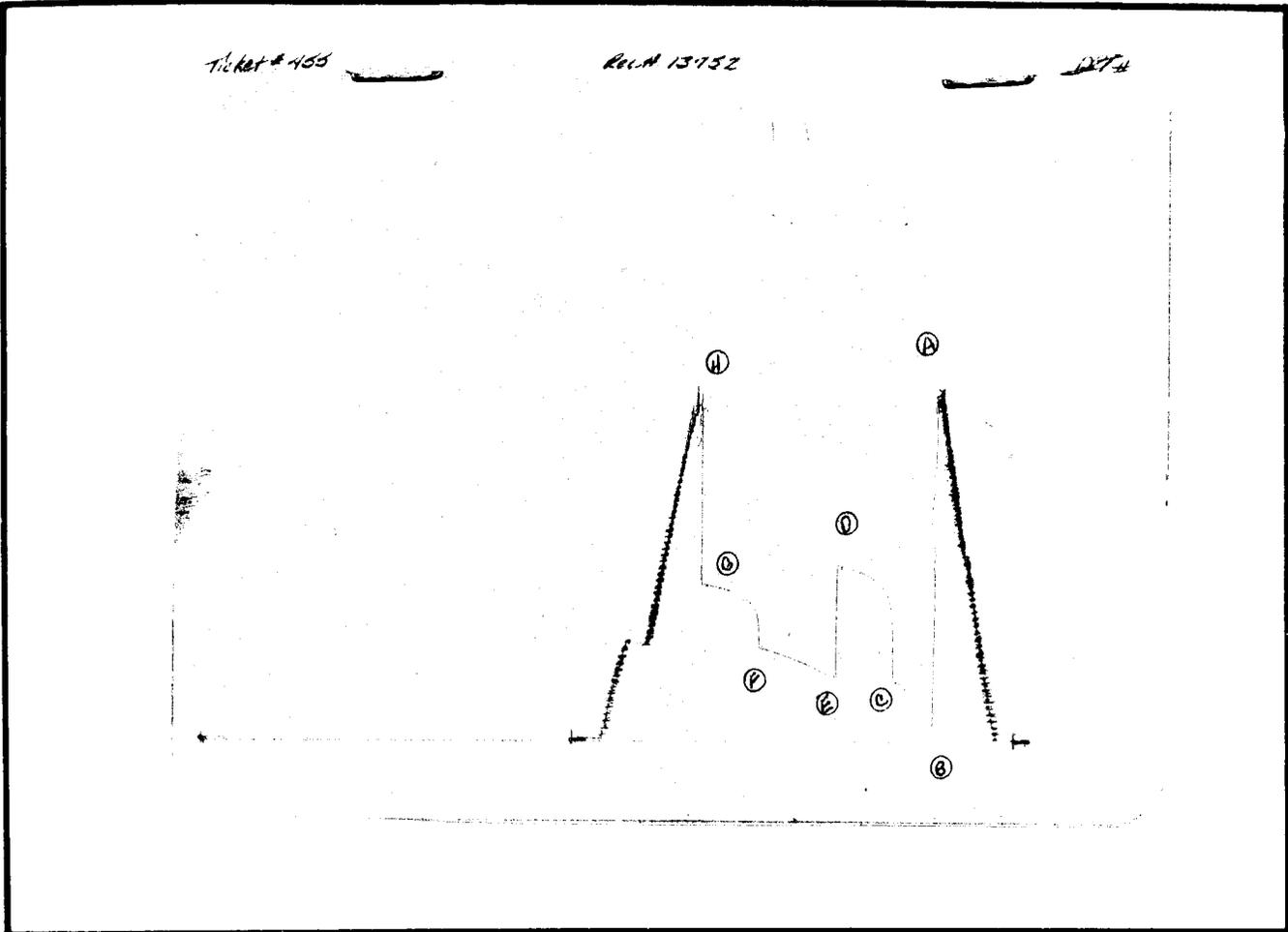
Our Representative Craig Buel

Blow: 1st open-weak built to string in 5 mins. 2nd open-weak built to string in 8 mins.

Remarks

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Ticket No 455



POINT

(A) Initial Hydrostatic Mud	1767	PSI
(B) First Initial Flow Pressure	77	PSI
(C) First Final Flow Pressure	320	PSI
(D) Initial Closed-in Pressure	914	PSI
(E) Second Initial Flow Pressure	339	PSI
(F) Second Final Flow Pressure	484	PSI
(G) Final Closed-in Pressure	819	PSI
(H) Final Hydrostatic Mud	1747	PSI

FORMATION TESTING SERVICE

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Test# 5

Zone Tested: Arbuckle

Lease Name: Schaffer "C" #1

Location: Sec. 24 Twp. 16S Rng. 14W

County Barton St. Kansas

Date: 7/4/84

Elevation: 1967 K.B.

Tester: Craig Bucl

Company: A.L. Abercrombie Drilling Company

Company Address: Wichita, Kansas

Company Representative: Mr. Steve Frankamp

Contractor: Abercrombie Rig #9 Interval Tested: 3399'-3424'

Internal Recorder-Type: AK-1 Range: 3900 No: 13752 Depth: 3400'

External Recorder-Type: AK-1 Range: 3950 No: 13753 Depth: 3420'

Initial Hydrostatic Mud: 1796 P.S.I.

Initial Flow Pressure 28 To 28 P.S.I.

Initial Flow Period 30 Min.

Initial Shut-In Pressure 39 P.S.I.

Initial Shut-In 45 Min.

Final Flow Pressure 28 To 28 P.S.I.

Final Flow Period 30 Min.

Final Shut-In Pressure 39 P.S.I.

Final Shut-In 45 Min.

Final Hydrostatic Mud 1767 P.S.I.

Temperature: 107° Tool Open: 5:10 A.M.

Blow: Very weak one inch blow, first

Mud Weight 9.9 Viscosity 42 Water Loss 11.3

opening. No return second opening,

Total Depth: 3424'

flushed tool, no return after surge.

Anchor Length: 25'

Remarks _____

Bottom Packer: 3399'

Top Packer: 3394'

Surface Choke: 1"

Bottom Choke: 3/4"

Drill Pipe Size: 4 1/2" X.H.

Collars Run: - I.D. -

Wt. Pipe Run: 579 I.D. 2.75"

Main Hole Size: 7 7/8"

Rubber Size: 6 5/8"

10 Feet Total Recovery

Recovered 10 Feet Mud with oil specks in tool.

Recovered _____ Feet _____

Recovered _____ Feet _____

Recovered _____ Feet _____

Extra Equipment: None

Price of Job: 600.00

FORMATION TESTING SERVICE

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Test# 5

Zone Tested: Achuckle

Lease Name: Scha Per "C" 1

Location: Sec. 24 Twp. 14 Rng. 14

County Barton St. Kans

Date: July 4, 1984

Elevation: 1967 MB

Tester: Craig Buel

Company: A.H. Abercrombie Dig Co.

Company Address: 801 Union Center, Wichita Ks 67102

Company Representative: Steve Frankamp

Contractor: Abercrombie Rig 9

Interval Tested: 3399 - 3424

Internal Recorder-Type: AK1 Range: 3900 No: 13752 Depth: 3400

External Recorder-Type: AK1 Range: 3950 No: 13753 Depth: 3420

Initial Hydrostatic Mud: P.S.I. 1794

Initial Flow Pressure 28 To 28 P.S.I. Initial Flow Period 30 Min.

Initial Shut-In Pressure 39 P.S.I. Initial Shut-In 15 Min.

Final Flow Pressure 28 To 28 P.S.I. Final Flow Period 30 Min.

Final Shut-In Pressure 39 P.S.I. Final Shut-In 15 Min.

Final Hydrostatic Mud 1767 P.S.I.

Temperature: 107 Tool Open: 5:10 AM

Mud Weight 9.2 Viscosity 42 Water Loss 11 1/2

Total Depth: 3424

Anchor Length: 25

Bottom Packer: 3399

Top Packer: 3394

Surface Choke: 1 inch

Bottom Choke: 3/4 inch

Drill Pipe Size: 4 1/2 x 4

Collars Run: — I.D. —

Main Hole Size: 7 7/8

Blow: Open work, built slowly to 2 inch in bucket - 2 inch rubber. Flushed for no help

Remarks _____

Wt. Pipe Run: 579 I.D. 2.45
Rubber Size: 6 3/4

Feet Total Recovery

Recovered 10 Feet mud w/ oil specks in tool

Recovered _____ Feet _____

Recovered _____ Feet _____

Recovered _____ Feet _____

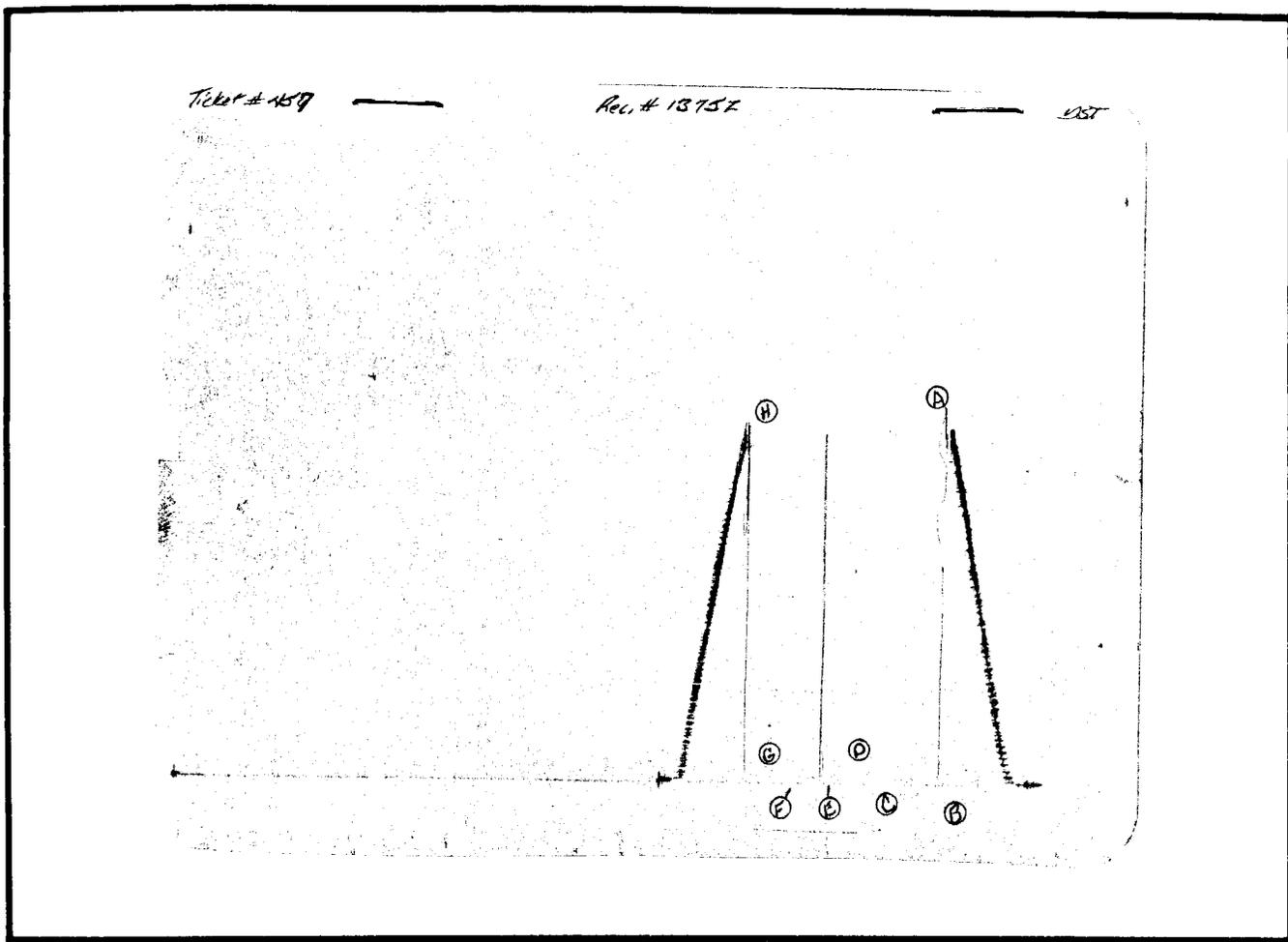
Extra Equipment: _____ Price of Job: 1000.00

Approved By Steve Frankamp

Our Representative Craig Buel

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Ticket No 457



POINT

(A) Initial Hydrostatic Mud	1796	PSI
(B) First Initial Flow Pressure	28	PSI
(C) First Final Flow Pressure	28	PSI
(D) Initial Closed-in Pressure	39	PSI
(E) Second Initial Flow Pressure	28	PSI
(F) Second Final Flow Pressure	28	PSI
(G) Final Closed-in Pressure	39	PSI
(H) Final Hydrostatic Mud	1767	PSI

FORMATION TESTING SERVICE

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Test# 6

Zone Tested: Arbuckle

Lease Name: Schaffer "C" #1

Location: Sec. 24 Twp. 16S Rng. 14W

County Barton St. Kansas

Date: July 4, 1984

Elevation: 1967 K.B.

Tester: Craig Bucl

Company: A.I. Abercrombie Drilling Company

Company Address: Wichita, Kansas

Company Representative: Mr. Steve Frankamp

Contractor: Abercrombie Rig #9 Interval Tested: 3397'-3429'

Internal Recorder-Type: AK-1 Range: 3900 No: 13752 Depth: 3399'

External Recorder-Type: AK-1 Range: 3950 No: 13753 Depth: 3425'

Initial Hydrostatic Mud: 1790 P.S.I.

Initial Flow Pressure 28 To 28 P.S.I.

Initial Flow Period 30 Min.

Initial Shut-In Pressure 100 P.S.I.

Initial Shut-In 45 Min.

Final Flow Pressure 28 To 28 P.S.I.

Final Flow Period 30 Min.

Final Shut-In Pressure 69 P.S.I.

Final Shut-In 45 Min.

Final Hydrostatic Mud 1767 P.S.I.

Temperature: 107° Tool Open: 3:45 P.M.

Blow: Weak opening dying in 22 minutes.

Mud Weight 9.7 Viscosity 43 Water Loss 10.0

No return second opening, no return

Total Depth: 3429'

after flush.

Anchor Length: 32'

Remarks _____

Bottom Packer: 3397'

Top Packer: 3392'

Surface Choke: 1"

Bottom Choke: 3/4"

Drill Pipe Size: 4 1/2" X.H.

Collars Run: - I.D. -

Wt. Pipe Run: 579 I.D. 2.75"

Main Hole Size: 7 7/8"

Rubber Size: 6 5/8"

10 Feet Total Recovery

Recovered 10 Feet Slightly oil specked mud.

Recovered _____ Feet _____

Recovered _____ Feet _____

Recovered _____ Feet _____

Extra Equipment: None Price of Job: 600.00

FORMATION TESTING SERVICE

P.O. Box 518, Hays, Kansas 67601
Telephone (913) 628-1115

Test# 60

Zone Tested: Hubbuck

Lease Name: Schaffer "C" - 1

Location: Sec. 24 Twp. 14 Rng. 14

County Barton St. Ks

Date: July 4, 1984

Elevation: 1907 KB

Tester: Craig Buel

Company: A.L. Abernambie Drilling Co.

Company Address: 801 Union Center, Wichita Ks 67202

Company Representative: Steve Frankamp

Contractor: Abernambie

Interval Tested: 3397 - 3429

Internal Recorder-Type: AKI Range: 3900 No: 13752 Depth: 3399

External Recorder-Type: AKI Range: 3950 No: 13753 Depth: 3425

Initial Hydrostatic Mud: P.S.I. 1790

Initial Flow Pressure 28 To 28 P.S.I. Initial Flow Period 30 Min.

Initial Shut-In Pressure 100 P.S.I. Initial Shut-In 45 Min.

Final Flow Pressure 28 To 28 P.S.I. Final Flow Period 30 Min.

Final Shut-In Pressure 69 P.S.I. Final Shut-In 45 Min.

Final Hydrostatic Mud 1767 P.S.I.

Temperature: 107 Tool Open: 3:45 pm

Mud Weight 97 Viscosity 43 Water Loss 10"

Total Depth: 3429

Anchor Length: 32

Bottom Packer: 3397

Top Packer: 3392

Surface Choke: 1 1/2

Bottom Choke: 3/4 inch

Drill Pipe Size: 1 1/2 x 14

Collars Run: — I.D. —

Main Hole Size: 7 7/8

Blow: 1st open weak that died in 22 mins. 2nd open no blow Flushed tool no help

Remarks

Wt. Pipe Run: 579 I.D. 2.75

Rubber Size: 6 3/4

Feet Total Recovery

Recovered 10 Feet Slightly oil specked mud

Recovered — Feet

Recovered — Feet

Recovered — Feet

Extra Equipment: —

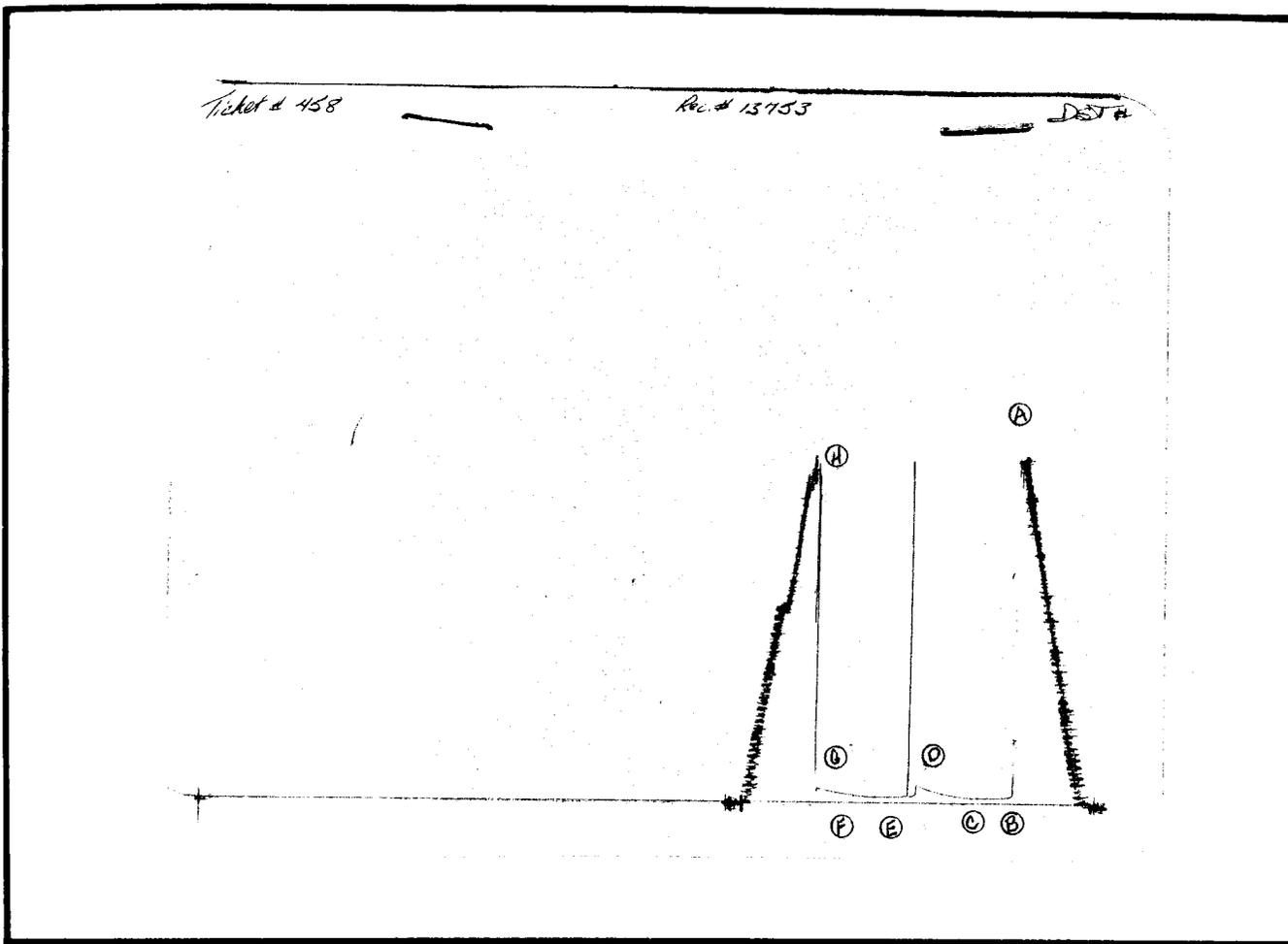
Price of Job: \$600⁰⁰

Approved By Steve Frankamp

Our Representative Craig Buel

Formation Testing Service Inc. shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained directly or indirectly through the use of its equipment, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

Ticket No 458



POINT

(A) Initial Hydrostatic Mud	1790	PSI
(B) First Initial Flow Pressure	28	PSI
(C) First Final Flow Pressure	28	PSI
(D) Initial Closed-in Pressure	100	PSI
(E) Second Initial Flow Pressure	28	PSI
(F) Second Final Flow Pressure	28	PSI
(G) Final Closed-in Pressure	69	PSI
(H) Final Hydrostatic Mud	1767	PSI

 A.L. ABERCROMBIE DRILLING COMPANY
 SCHAFFER "C" #1 SECTION 24-16S-14W
 BARTON COUNTY KANSAS
 TEST #7 IN THE ARBUCKLE

 D.S.T. EVALUATION

FLOW RATE (LIQUID)	28.49	BBL/DAY
FLOW RATE (GAS)	0	MCF/DAY
MAXIMUM RESERVOIR PRESSURE	1028	P.S.I.
SLOPE OF SHUT-IN CURVE	320.51	P.S.I./LOG CYCLE
ESTIMATED DAMAGE RATIO	.87321	
TRANSMISSIBILITY (LIQUID)	11.6884	MD-FT.CP.
FLOW CAPACITY	14.2789	MD-FT.
PERMEABILITY	.6167	MD-12 FT.EFF.PAY
PRODUCTIVITY INDEX	.027633	BBL/DAY/PSI
POTENTIOMETRIC SURFACE	2381.06	FT.ASL
RADIUS OF INVESTIGATION	6.3412	FT.
GAS - OIL RATIO	0	CF/BBL
THEORETICAL POTENTIAL WITH DAMAGE REMOVED	(NO DAMAGE)	BBL/DAY

1459 7/5/84

LIQUID FLOW RATE BASED UPON FINAL FLOW - 23.15 BLS. OIL - 5.35 BLS. WATER.

FORMATION TESTING SERVICE

P.O.Box 518, Hays, Kansas 67601
Telephone (913) 628-1115

Test# 7

Zone Tested: Arbuckle

Lease Name: Schaffer "C" #1

Location: Sec. 24 Twp. 16S Rng. 14W

County Barton St. Kansas

Date: 7/5/84

Elevation: 1967 K.B.

Tester: Craig Bucl

Company: A.L. Abercrombie Drilling Company

Company Address: Wichita, Kansas

Company Representative: Mr. Steve Frankamp

Contractor: Abercrombie Rig #9 Interval Tested: 3422'-3434'

Internal Recorder-Type: AK-1 Range: 3900 No: 13752 Depth: 3424'

External Recorder-Type: AK-1 Range: 3950 No: 13753 Depth: 3430'

Initial Hydrostatic Mud: 1790 P.S.I.

Initial Flow Pressure 58 To 76 P.S.I.

Initial Flow Period 30 Min.

Initial Shut-In Pressure 990 P.S.I.

Initial Shut-In 45 Min.

Final Flow Pressure 97 To 126 P.S.I.

Final Flow Period 60 Min.

Final Shut-In Pressure 895 P.S.I.

Final Shut-In 45 Min.

Final Hydrostatic Mud 1775 P.S.I.

Temperature: 107° Tool Open: 2:00 A.M.

Blow: Weak building to 10 inches in bucket.

Mud Weight 9.8 Viscosity 45 Water Loss 9.0

Weaker building to 7 inches second opening.

Total Depth: 3434'

Anchor Length: 12'

Remarks _____

Bottom Packer: 3422'

Top Packer: 3417'

Surface Choke: 1'

Bottom Choke: 3/4"

Drill Pipe Size: 4 1/2" X.H.

Collars Run: - I.D. -

Wt. Pipe Run: 579 I.D. 2.75"

Main Hole Size: 7 7/8"

Rubber Size: 6 5/8"

240 Feet Total Recovery

Recovered 60 Feet Mud and water cut oil. 18% gas 44% oil, 11% water, 28% mud.

Recovered 60 Feet Mud and water cut oil, 20% gas, 27% oil, 14% water, 39% mud.

Recovered 60 Feet Mud and water cut oil, 35% oil, 25% gas, 8% water, 32% mud.

Recovered 60 Feet Mud and water cut oil, 9% gas, 40% oil, 42% water, 9% mud.

Extra Equipment: None. Chlorides = 29,000 P.P.M. Cl⁻ Price of Job: 600.00

FORMATION TESTING SERVICE

P.O.Box 518, Hays, Kansas 67601
Telephone (913) 628-1115

Test# 1

Zone Tested: Arbuckle

Lease Name: Scha-Her C-1

Location: Sec. 24 Twp. 16E Rng. 14

County Burtaw St. Kan

Date: July 5, 1984

Elevation: 1907 M

Tester: Craig Beul

Company: A.L. Abernomb's Drilling Co

Company Address: 304 Union Center, Wichita KS 67202

Company Representative: Steve Frankamp

Contractor: Abernomb's Rig 9 Interval Tested: 3422 - 3434

Internal Recorder-Type: AKI Range: 3900 No: 13752 Depth: 3424

External Recorder-Type: AKI Range: 3950 No: 13753 Depth: 3430

Initial Hydrostatic Mud: P.S.I. 1790

Initial Flow Pressure 58 To 76 P.S.I. Initial Flow Period 30 Min.

Initial Shut-In Pressure 990 P.S.I. Initial Shut-In 45 Min.

Final Flow Pressure 97 To 124 P.S.I. Final Flow Period 60 Min.

Final Shut-In Pressure 845 P.S.I. Final Shut-In 45 Min.

Final Hydrostatic Mud 1775 P.S.I.

Temperature: 107 Tool Open: 2:00 AM Blow: 1st open - weak building to 10"

Mud Weight 9.5 Viscosity 45 Water Loss 9 in bucket. 2nd open weak, built

Total Depth: 3434 shaky to 7" in water

Anchor Length: 12 Remarks _____

Bottom Packer: 3422

Top Packer: 3417

Surface Choke: 1 inch

Bottom Choke: 3/4 inch

Drill Pipe Size: 1 1/2 in

Collars Run: _____ I.D. _____ Wt. Pipe Run: 579 I.D. 2.75

Main Hole Size: 7 7/8 Rubber Size: 6 3/4

Feet Total Recovery 3 ft, 400 cc

Recovered 60 Feet 18% gas 41% oil, 11% water, 28% mud

Recovered 60 Feet 20% gas 27% oil 14% water 39% mud

Recovered 60 Feet 25% gas 35% oil 8% water 32% mud

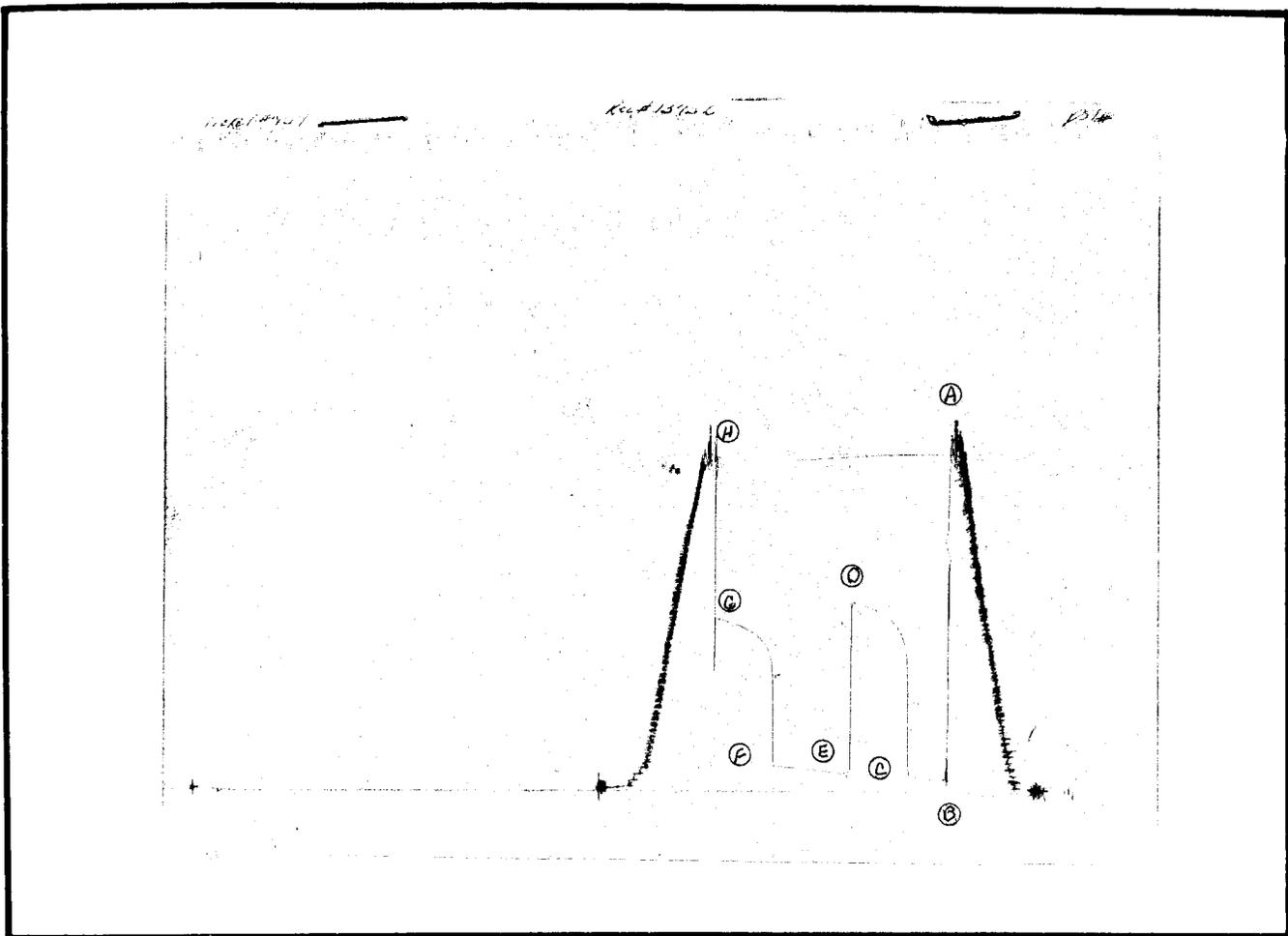
Recovered 60 Feet mud cutaway oil 9% gas 40% oil 42% water 9% mud

Extra Equipment: (Res-4) chlorides - 29,000 Price of Job: 4,000⁰⁰
mud system 6,000

Approved By: Steve Frankamp

Our Representative: Craig Beul

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POINT

(A) Initial Hydrostatic Mud	1790	PSI
(B) First Initial Flow Pressure	58	PSI
(C) First Final Flow Pressure	76	PSI
(D) Initial Closed-in Pressure	990	PSI
(E) Second Initial Flow Pressure	97	PSI
(F) Second Final Flow Pressure	126	PSI
(G) Final Closed-in Pressure	895	PSI
(H) Final Hydrostatic Mud	1775	PSI