

ORIGINAL

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

CONFIDENTIAL

Computer Inventoried Drill-Stem Test Data

API# 15-175-21348

Well Name FELAN #1-31 Test No. 1 Date 11/17/93
Company ENSIGN OPERATING COMPANY Zone MORROW
Address 621 17th ST #1800 DENVER CO 80293 Elevation 2845
Co. Rep./Geo. DUANE MOREDOCK Cont. MURFIN DRLG RIG #21 Est. Ft. of Pay 11
Location: Sec. 31 Twp. 31S Rge. 31W Co. SEWARD State KS

Interval Tested 5478-5583 Drill Pipe Size 4.5" XH
Anchor Length 105 Wt. Pipe I.D. - 2.7 Ft. Run
Top Packer Depth 5473 Drill Collar - 2.25 Ft. Run 518
Bottom Packer Depth 5478 Mud Wt. 9
Total Depth 5583 Viscosity 43 Filtrate 9.2 lb/Gal.

Tool Open @ 4:15 AM Initial Blow FAIR BLOW BUILT TO 7" KCC

Final Blow WEAK SURFACE BLOW BUILT TO 3" NOV 24
FSI: WEAK BLOW BACK BUILT TO 2" CONFIDENTIAL

Recovery - Total Feet 60 Flush Tool? NO

Rec. 60 Feet of DRILLING MUD JAN 12 1995 RELEASED
Rec. Feet of
Rec. Feet of DEC 22 1994
Rec. Feet of FROM CONFIDENTIAL
Rec. Feet of

BHT 120 °F Gravity °API @ °F Corrected Gravity °API
RW @ °F Chlorides ppm Recovery Chlorides 1900 ppm System

(A) Initial Hydrostatic Mud 2633.1 PSI AK1 Recorder No. 13337 Range 3975

(B) First Initial Flow Pressure 65.3 PSI @ (depth) 5481 w / Clock No. 27573

(C) First Final Flow Pressure 74.2 PSI AK1 Recorder No. 10333 Range 4050

(D) Initial Shut-in Pressure 64.2 PSI @ (depth) 5580 w / Clock No. 25810

(E) Second Initial Flow Pressure 64.2 PSI AK1 Recorder No. Range

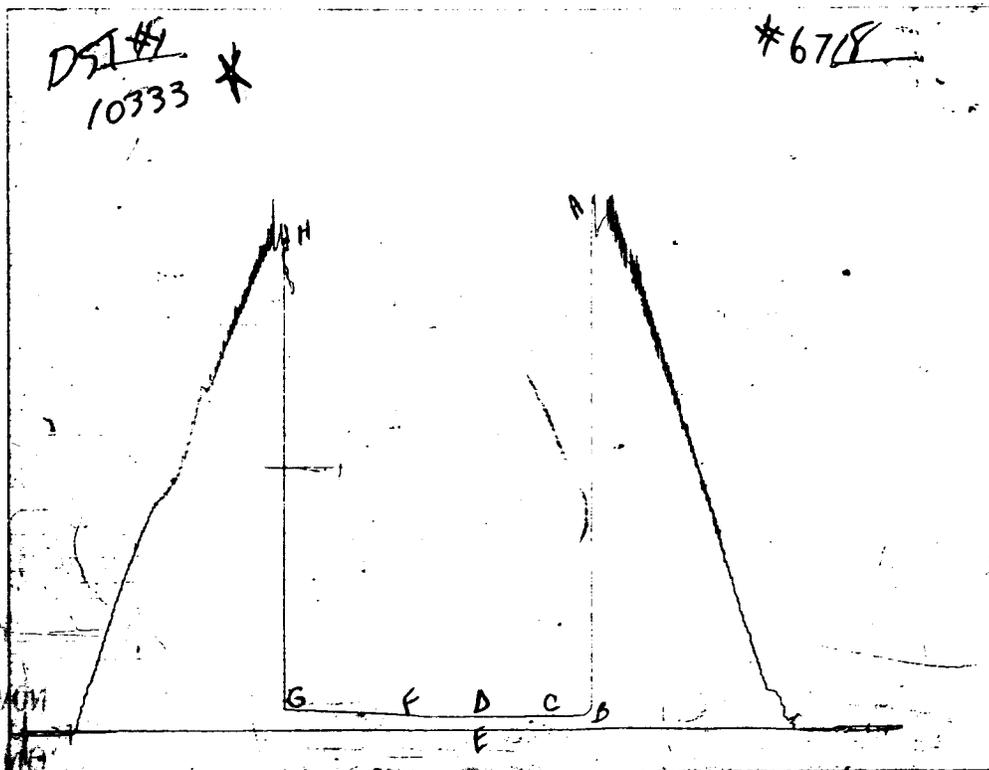
(F) Second Final Flow Pressure 64.2 PSI @ (depth) w / Clock No.

(G) Final Shut-in Pressure 105.3 PSI Initial Opening 15 Final Flow 60

(H) Final Hydrostatic Mud 2605.3 PSI Initial Shut-in 30 Final Shut-in 120

Our Representative ROBERT COLLINS

CHART PAGE



This is an actual photograph of recorder chart
 RELEASSED

DEC 5 5 1984

FROM CONFIDENTIAL

FIELD
 READING

OFFICE
 READING

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2630	2633.1
(B) FIRST INITIAL FLOW PRESSURE	60	65.3
(C) FIRST FINAL FLOW PRESSURE	71	74.2
(D) INITIAL CLOSED-IN PRESSURE	60	64.2
(E) SECOND INITIAL FLOW PRESSURE	60	64.2
(F) SECOND FINAL FLOW PRESSURE	60	64.2
(G) FINAL CLOSED-IN PRESSURE	101	105.3
(H) FINAL HYDROSTATIC MUD	2600	2605.3

FLUID SAMPLER DATA

ORIGINAL

KCC

CONFIDENTIAL

NOV 24

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Ticket No.: 6718

Date: 11/17/93

Company: ENSIGN OPERATING COMPANY

Lease: FELAN #1-31

Test No.: 1

County: SEWARD

Sec.: 31

Twp.: 31S

Rng.: 31W

SAMPLER RECOVERY

Gas 1000

Oil

Mud 3000

Water

Other

Pressure 50

TOTAL 4000

SAMPLER ANALYSIS

Resistivity ohms@ F

Chlorides ppm.

Gravity corrected @60F

PIT MUD ANALYSIS

Chlorides 1900

Resistivity 4.5 ohms@ 74 F

Viscosity 43

Mud Wt. 9

Filtrate 9.2

Other

RELEASED

DEC 22 1994

FROM CONFIDENTIAL

PIPE RECOVERY

TOP

Resistivity ohms@ F

Chlorides ppm

MIDDLE

Resistivity ohms@ F

Chlorides ppm

BOTTOM

Resistivity ohms@ F

Chlorides ppm