TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name: ZIMMERMAN UNIT #1 | Test No.: 1 | Date: 4/2/94

Company: PICKRELL DRILLING COMPANY, INC. | Zone: KEYES SAND

Address: 110 N MARKET #205 WICHITA KS 67202 | Elevation: 3375

Co. Rep./Geo.: BILL KLAVER | Cont.: ABERCROMBIE DRLG RIG #4 | Est. Ft. of Pay:

Location: Sec.: 15 | Twp.: 30S | Rge.: 41W | Co.: STANTON | State: KS

Interval Tested: 5369-5385 | Drill Pipe Size: 4.5 XH

Anchor Length: 16 | Wt. Pipe I.D. - 2.7 Ft. Run: 634

Top Packer Depth: 5364 | Drill Collar – 2.25 Ft. Run:

Bottom Packer Depth: 5369 | Mud Wt.: 9.2 lb/Gal.

Total Depth: 5385 | Viscosity: 52 | Filtrate: 6.8

Tool Open @: 12:37 AM | Initial Blow: OPEN TOOL 2" TO NO BLOW IN 18 MINUTES
SLID TOOL 12' TO BOTTOM

Final Blow: NO BLOW - FLUSHED TOOL - NO BLOW (GOOD FLUSH)

Recovery - Total Feet: 60 | Flush Tool?: YES

Rec. 60 Feet of DRILLING MUD

Rec. Feet of

Rec. Feet of

Rec. Feet of

Rec. Feet of

BHT: 132 °F | Gravity: °API @ °F | Corrected Gravity: °API

RW: @ °F | Chlorides: ppm Recovery | Chlorides: 1200 ppm System

(A) Initial Hydrostatic Mud: 2632.2 PSI | AK1 Recorder No.: 11057 | Range: 4500

(B) First Initial Flow Pressure: 62.2 PSI | @ (depth): 5372 | w / Clock No.: 30401

(C) First Final Flow Pressure: 71.1 PSI | AK1 Recorder No.: 11058 | Range: 4500

(D) Initial Shut-in Pressure: 1433.3 PSI | @ (depth): 5380 | w / Clock No.: 25108

(E) Second Initial Flow Pressure: 65.5 PSI | AK1 Recorder No.: | Range:

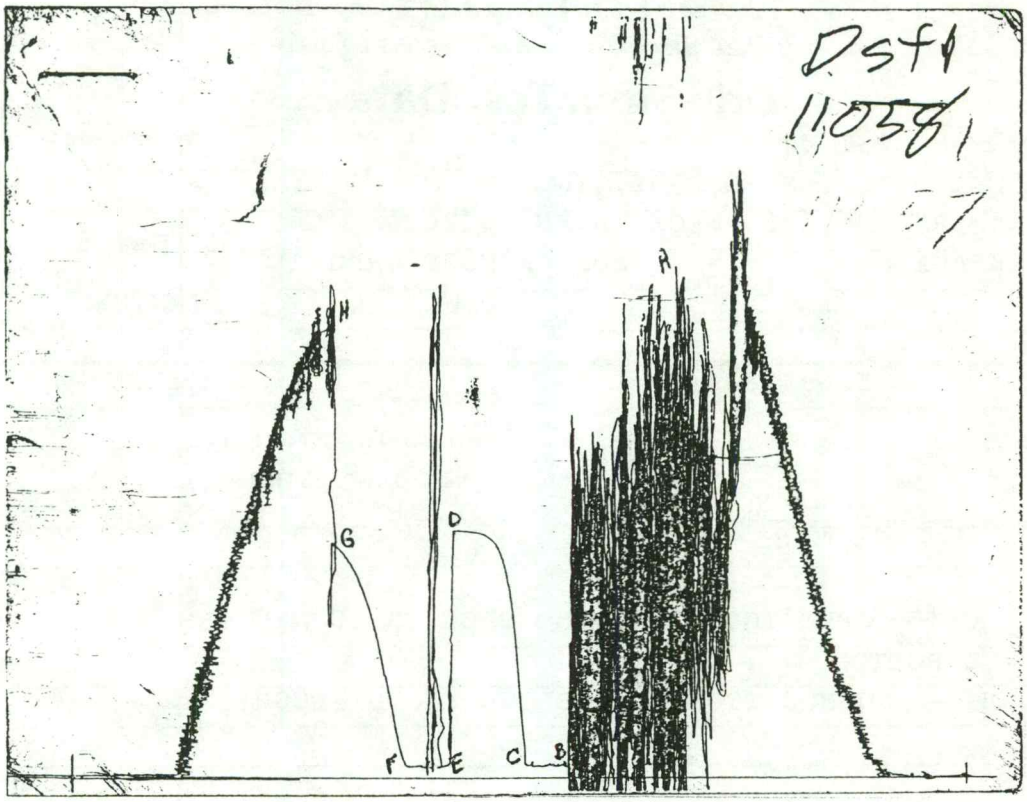
(F) Second Final Flow Pressure: 65.5 PSI | @ (depth): | w / Clock No.:

(G) Final Shut-in Pressure: 1362.2 PSI | Initial Opening: 30 | Final Flow: 30

(H) Final Hydrostatic Mud: 2630.1 PSI | Initial Shut-in: 60 | Final Shut-in: 60

Our Representative: MARK HERSKOWITZ

CHART PAGE



This is an actual photograph of recorder chart #11058

		FIELD READING	OFFICE READING
(A)	INITIAL HYDROSTATIC MUD	2626	2632.2
(B)	FIRST INITIAL FLOW PRESSURE	56	62.2
(C)	FIRST FINAL FLOW PRESSURE	67	71.1
(D)	INITIAL CLOSED-IN PRESSURE	1421	1433.3
(E)	SECOND INITIAL FLOW PRESSURE	67	65.5
(F)	SECOND FINAL FLOW PRESSURE	67	65.5
(G)	FINAL CLOSED-IN PRESSURE	1354	1362.2
(H)	FINAL HYDROSTATIC MUD	2581	2630.1

TRILOBITE TESTING, L.L.C.

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Drill-Stem Test Data

Well Name: ZIMMERMAN UNIT #1 | Test No.: 2 | Date: 4/3/94

Company: PICKRELL DRILLING COMPANY, INC. | Zone: LWR KEYES

Address: 110 N MARKET #205 WICHITA KS 67202 | Elevation: 3375

Co. Rep./Geo.: BILL KLAVER | Cont.: ABERCROMBIE DRLG RIG #4 | Est. Ft. of Pay:

Location: Sec.: 15 | Twp.: 30S | Rge.: 41W | Co.: STANTON | State: KS

Interval Tested: 5372-5426 | Drill Pipe Size: 4.5 XH

Anchor Length: 54 | Wt. Pipe I.D. - 2.7 Ft. Run: 602

Top Packer Depth: 5367 | Drill Collar – 2.25 Ft. Run:

Bottom Packer Depth: 5372 | Mud Wt.: 9.1 lb/Gal.

Total Depth: 5426 | Viscosity: 50 | Filtrate: 8.8

Tool Open @: 9:08 PM | Initial Blow: WEAK SURFACE BLOW FOR 9 MINUTES

Final Blow: NO BLOW - FLUSHED TOOL - NO BLOW

Recovery - Total Feet: 20 | Flush Tool?: YES

Rec. 20 Feet of DRILLING MUD

Rec. Feet of

Rec. Feet of

Rec. Feet of

Rec. Feet of

BHT: 132 °F | Gravity: °API | @ °F | Corrected Gravity: °API

RW: @ °F | Chlorides: ppm Recovery | Chlorides: 1000 ppm System

(A) Initial Hydrostatic Mud: 2560.5 PSI | AK1 Recorder No.: 11057 | Range: 4500

(B) First Initial Flow Pressure: 36.6 PSI | @ (depth): 5374 | w / Clock No.: 30401

(C) First Final Flow Pressure: 32.2 PSI | AK1 Recorder No.: 11058 | Range: 4500

(D) Initial Shut-in Pressure: 43.3 PSI | @ (depth): 5421 | w / Clock No.: 25108

(E) Second Initial Flow Pressure: 32.2 PSI | AK1 Recorder No.: | Range:

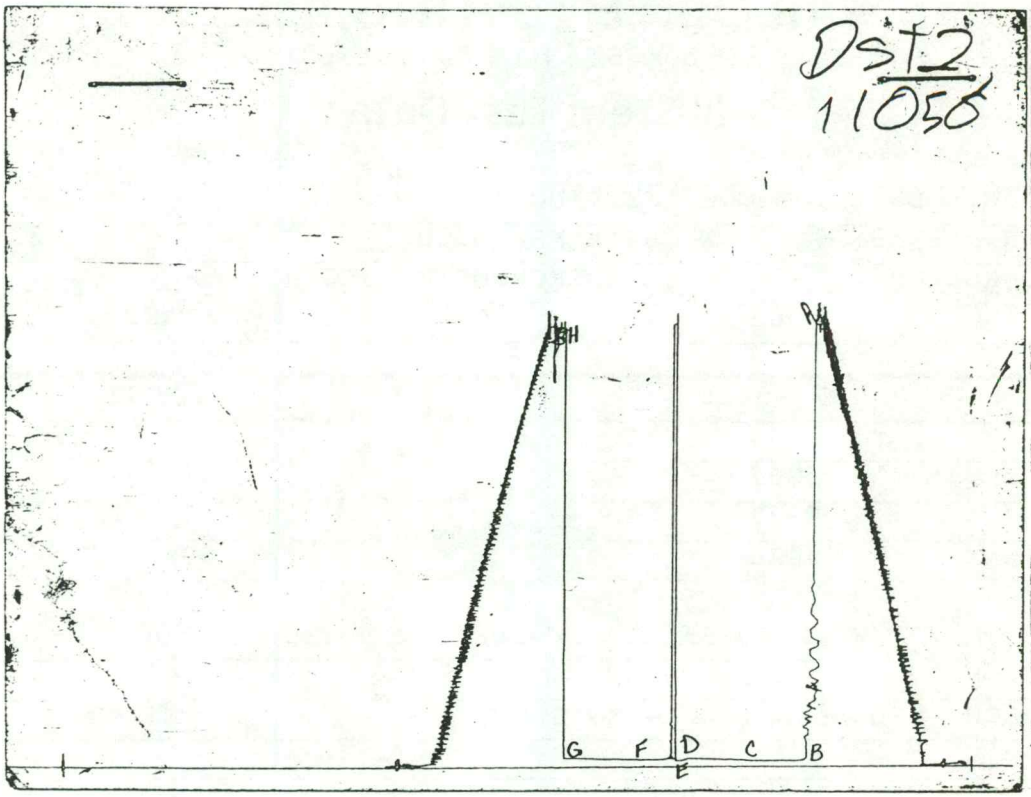
(F) Second Final Flow Pressure: 38.8 PSI | @ (depth): | w / Clock No.:

(G) Final Shut-in Pressure: 48.8 PSI | Initial Opening: 30 | Final Flow: 30

(H) Final Hydrostatic Mud: 2538.1 PSI | Initial Shut-in: 60 | Final Shut-in: 60

Our Representative: MARK HERSKOWITZ

CHART PAGE



This is an actual photograph of recorder chart #11058

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2581	2560.5
(B) FIRST INITIAL FLOW PRESSURE	22	36.6
(C) FIRST FINAL FLOW PRESSURE	22	32.2
(D) INITIAL CLOSED-IN PRESSURE	44	43.3
(E) SECOND INITIAL FLOW PRESSURE	22	32.2
(F) SECOND FINAL FLOW PRESSURE	22	38.8
(G) FINAL CLOSED-IN PRESSURE	44	48.8
(H) FINAL HYDROSTATIC MUD	2547	2538.1

TRILOBITE TESTING, L.L.C.

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Drill-Stem Test Data

Well Name: ZIMMERMAN UNIT #1 Test No. 3 Date 4/5/94

Company: PICKRELL DRILLING COMPANY, INC. Zone KEYES

Address: 110 N MARKET #205 WICHITA KS 67202 Elevation 3375

Co. Rep./Geo.: BILL KLAVER Cont. ABERCROMBIE DRLG RIG #4 Est. Ft. of Pay

Location: Sec. 15 Twp. 30S Rge. 41W Co. STANTON State KS

Interval Tested: 5436-5460

Anchor Length: 24

Top Packer Depth: 5431-5436

Bottom Packer Depth: 5460

Total Depth: 5575

Drill Pipe Size: 4.5 XH

Wt. Pipe I.D. - 2.7 Ft. Run: 508

Drill Collar – 2.25 Ft. Run:

Mud Wt.: 9.2 lb/Gal.

Viscosity: 55 Filtrate: 7.6

Tool Open @ 7:20 AM Initial Blow: SLID TOOL 10" OPEN-LOSS MUD / OPEN 2nd TIME
WEAK SURFACE BLOW 5 MINUTES- DIED OFF

Final Blow: NO BLOW

Recovery - Total Feet: 400 Flush Tool? NO

Rec. 400 Feet of MUD

Rec. Feet of

Rec. Feet of

Rec. Feet of

Rec. Feet of

BHT °F Gravity °API @ °F Corrected Gravity °API

RW @ °F Chlorides ppm Recovery Chlorides 1200 ppm System

(A) Initial Hydrostatic Mud 2748.8 PSI AK1 Recorder No. 11057 Range 4500

(B) First Initial Flow Pressure 236.6 PSI @ (depth) 5440 w / Clock No. 30401

(C) First Final Flow Pressure 234.4 PSI AK1 Recorder No. 11058 Range 4500

(D) Initial Shut-in Pressure 234.4 PSI @ (depth) 5455 w / Clock No. 25108

(E) Second Initial Flow Pressure 227.7 PSI AK1 Recorder No. 2023 Range 4000

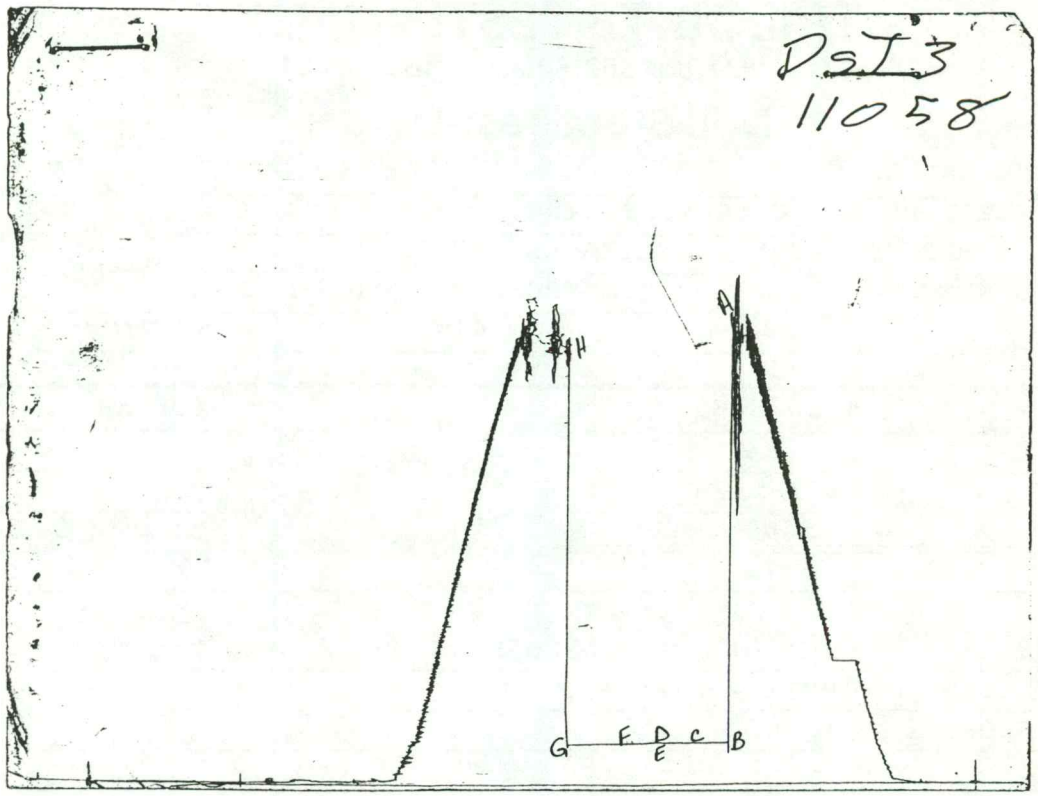
(F) Second Final Flow Pressure 228.8 PSI @ (depth) 5570 w / Clock No. 7452

(G) Final Shut-in Pressure 228.8 PSI Initial Opening 30 Final Flow 30

(H) Final Hydrostatic Mud 2636.7 PSI Initial Shut-in 30 Final Shut-in 30

Our Representative MARK HERSKOWITZ

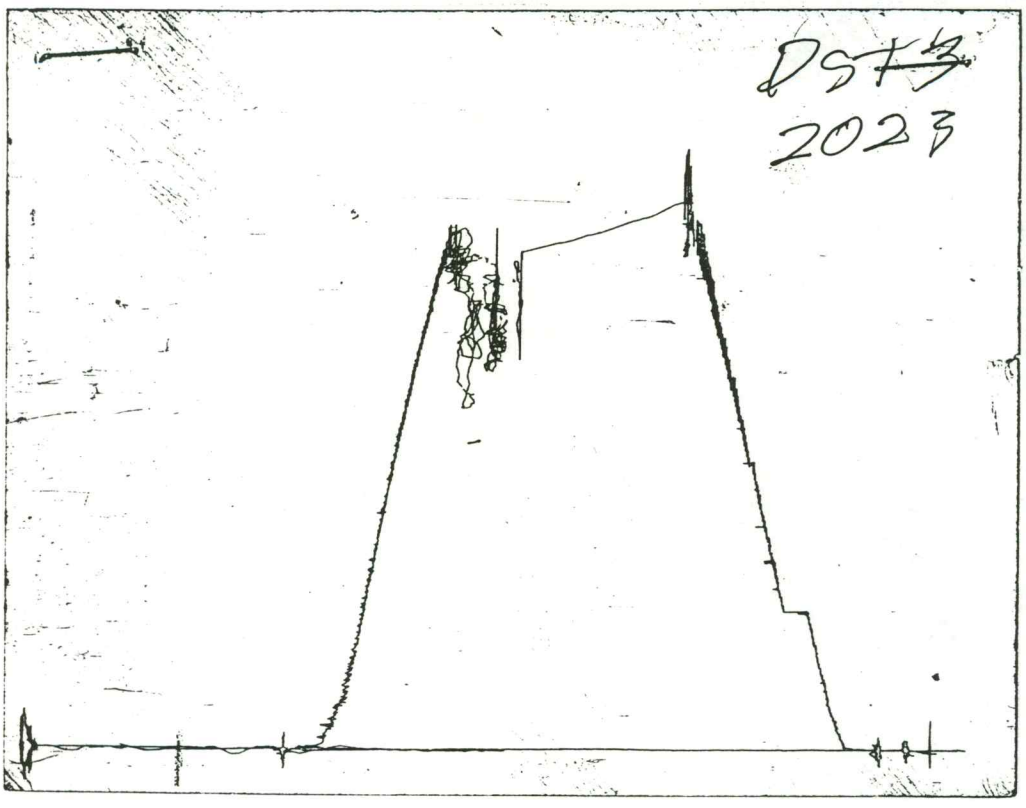
CHART PAGE



This is an actual photograph of recorder chart #11058

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2717	2748.8
(B) FIRST INITIAL FLOW PRESSURE	224	236.6
(C) FIRST FINAL FLOW PRESSURE	224	234.4
(D) INITIAL CLOSED-IN PRESSURE	224	234.4
(E) SECOND INITIAL FLOW PRESSURE	224	227.7
(F) SECOND FINAL FLOW PRESSURE	224	228.8
(G) FINAL CLOSED-IN PRESSURE	224	228.8
(H) FINAL HYDROSTATIC MUD	2671	2636.7

CHART PAGE STRADDLE



This is an actual photograph of recorder chart # 2023

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD		
(B) FIRST INITIAL FLOW PRESSURE		
(C) FIRST FINAL FLOW PRESSURE		
(D) INITIAL CLOSED-IN PRESSURE		
(E) SECOND INITIAL FLOW PRESSURE		
(F) SECOND FINAL FLOW PRESSURE		
(G) FINAL CLOSED-IN PRESSURE		
(H) FINAL HYDROSTATIC MUD		