

# TRILOBITE TESTING COMPANY, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

## Drill-Stem Test Data

Well Name FLINT HILLS #1 Test No. 4 Date 4/7/92  
Company HELMERICH & PAYNE INC Zone Tested LANSING "A"  
Address P.O. BOX 558 GARDEN CITY KS 67846 Elevation 3013 K.B.  
Co. Rep./Geo. LARRY SEIGRIST Cont. CHEYENNE #1 Est. Ft. of Pay 3  
Location: Sec. 14 Twp. 26S Rge. 35W Co. KEARNY State KS

Interval Tested 3902-3920 Drill Pipe Size 4.5 XH  
Anchor Length 18 Wt. Pipe I.D. - 2.7 Ft. Run \_\_\_\_\_  
Top Packer Depth 3897-3902 Drill Collar - 2.25 Ft. Run 526  
Bottom Packer Depth 3920  
Total Depth HOOK @ 3922

Mud Wt. 9.1 lb / gal. Viscosity 68 Filtrate 10.4

Tool Open @ 3:15 AM Initial Blow HIT BRIDGE @ 2750' & 3700' / COULD NOT MAKE IT THROUGH 2nd BRIDGE

Final Blow \_\_\_\_\_

Recovery — Total Feet 2100 Flush Tool? NO

Rec. 2100 Feet of DRILLING MUD

Rec. \_\_\_\_\_ Feet of \_\_\_\_\_

Rec. \_\_\_\_\_ Feet of \_\_\_\_\_

Rec. \_\_\_\_\_ Feet of \_\_\_\_\_

Rec. \_\_\_\_\_ Feet of \_\_\_\_\_

BHT 106 °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API

RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 1000 ppm System

(A) Initial Hydrostatic Mud 1615.9 PSI Ak1 Recorder No. 13309 Range 4700

(B) First Initial Flow Pressure \_\_\_\_\_ PSI @ (depth) 3907 w/Clock No. 27566

(C) First Final Flow Pressure \_\_\_\_\_ PSI Ak1 Recorder No. 10332 Range 4050

(D) Initial Shut-in Pressure \_\_\_\_\_ PSI @ (depth) 3912 w/Clock No. 21058

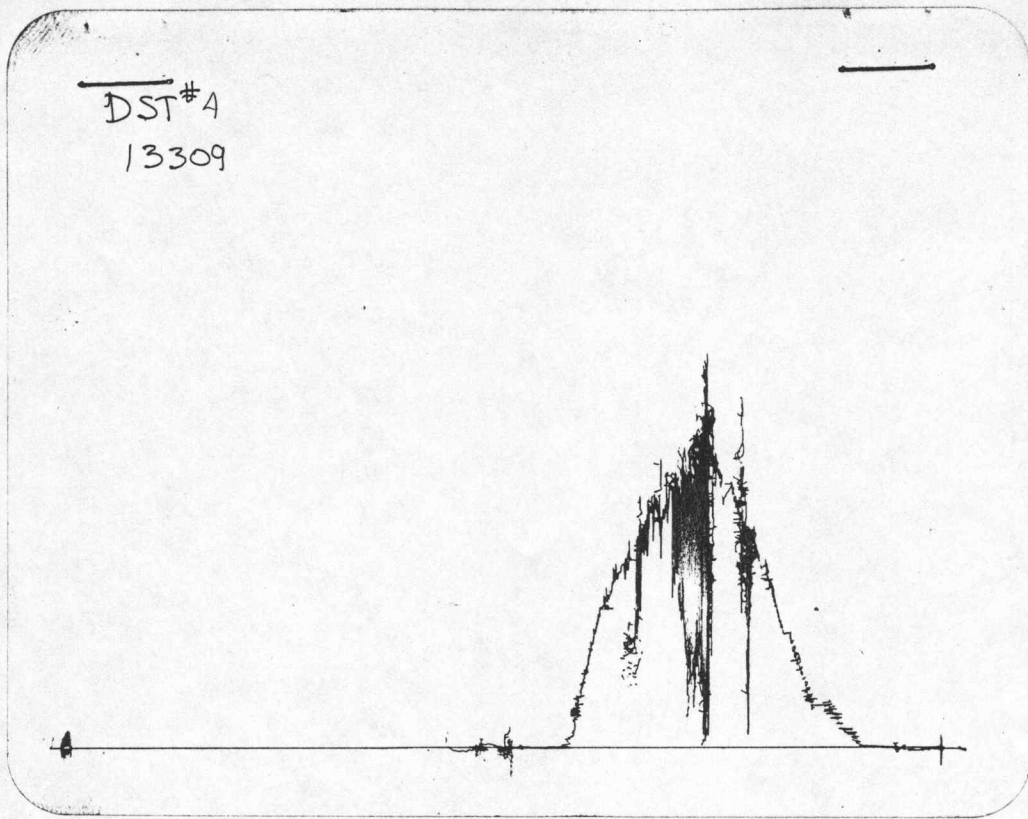
(E) Second Initial Flow Pressure \_\_\_\_\_ PSI Ak1 Recorder No. 13615 Range 4575

(F) Second Final Flow Pressure \_\_\_\_\_ PSI @ (depth) 3991 w/Clock No. 20272

(G) Final Shut-in Pressure \_\_\_\_\_ PSI Initial Opening \_\_\_\_\_ Final Flow \_\_\_\_\_

(H) Final Hydrostatic Mud 1559 PSI Initial Shut-in \_\_\_\_\_ Final Shut-in \_\_\_\_\_

Our Representative ROD STEINBRINK TOTAL PRICE \$ 1695

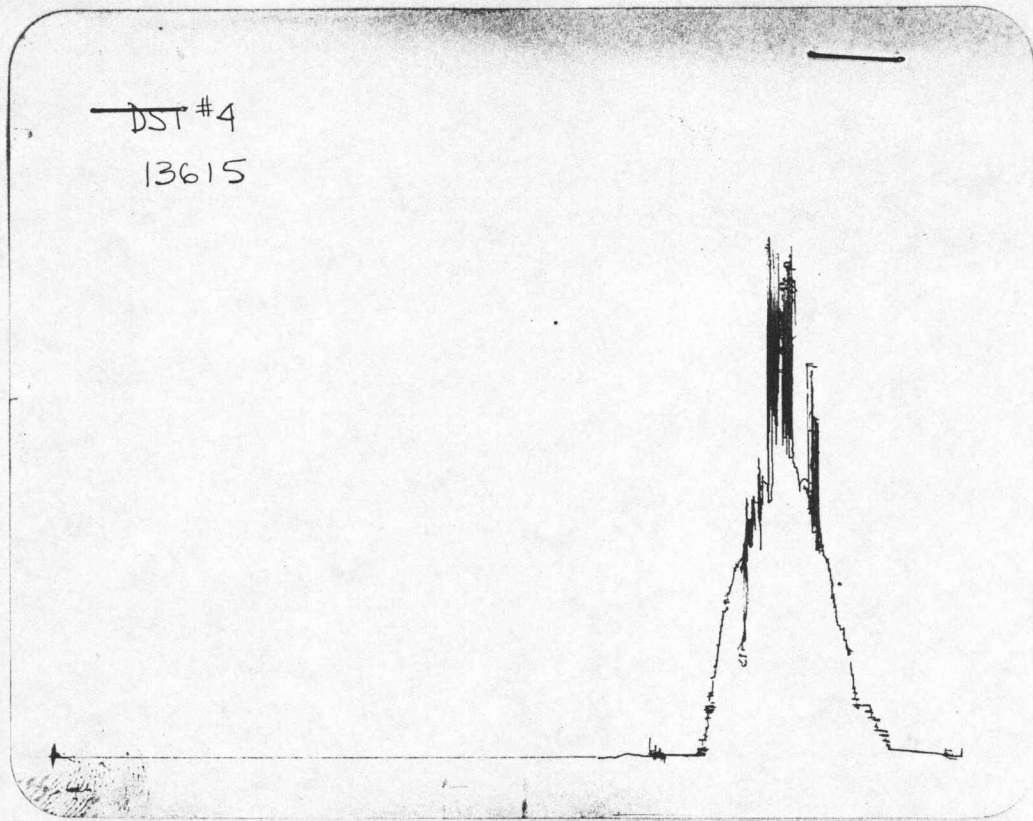


POINT This is an actual photograph of recorder chart PRESSURE

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



POINT This is an actual photograph of recorder chart PRESSURE

POINT	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1610	1615.9
(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	1559	1559

# TRILOBITE TESTING COMPANY

, L.L.C.

P.O. Box 362 - Hays, Kansas 67601

## FLUID SAMPLER DATA

Ticket No. 4596 Date 4/7/92  
Company Name HELMERICH & PAYNE INC  
Lease FLINT HILLS #1 Test No. 4  
County KEARNY Sec. 14 Twp. 26S Rng. 35W

### SAMPLER RECOVERY

Gas \_\_\_\_\_ ML  
Oil \_\_\_\_\_ ML  
Mud 3500 ML  
Water \_\_\_\_\_ ML  
Other \_\_\_\_\_ ML  
Pressure \_\_\_\_\_ PSI  
Total 3500 ML

### PIT MUD ANALYSIS

Chlorides \_\_\_\_\_ ppm.  
Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
Viscosity 68  
Mud Weight 9.1  
Filtrate 10.4  
Other \_\_\_\_\_

### SAMPLER ANALYSIS

Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
Chlorides \_\_\_\_\_ ppm.  
Gravty \_\_\_\_\_ corrected @ 60 F

### PIPE RECOVERY

TOP  
Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
Chlorides \_\_\_\_\_ ppm.  
MIDDLE  
Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
Chlorides \_\_\_\_\_ ppm.  
BOTTOM  
Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
Chlorides \_\_\_\_\_ ppm.

**TRILOBITE TESTING COMPANY L.L.C.**  
P.O. Box 362 - Hays, Kansas 67601

**FLUID SAMPLER DATA**

Ticket No. 4596 Date 4-7-92  
Company Name Helmerich & Payne, Inc. Cont. Cheyenne #1  
Lease Flint Hills #1 Test No. # 4 (Lansing)  
County Kearny KS. Sec. 14 Twp. 26 S Rng. 35 W

**SAMPLER RECOVERY**

Gas \_\_\_\_\_ ML  
Oil \_\_\_\_\_ ML  
Mud 3,500 ML  
Water \_\_\_\_\_ ML  
Other \_\_\_\_\_ ML  
Pressure — PSI  
Total 3,500 ML

**PIT MUD ANALYSIS**

Chlorides 1,000 ppm.  
Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
Viscosity 68  
Mud Weight 9.1  
Filtrate 10.4  
Other L.C.M. 2#

**SAMPLER ANALYSIS**

Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
Chlorides \_\_\_\_\_ ppm.  
Gravity \_\_\_\_\_ corrected @ 60 F

**PIPE RECOVERY**

TOP  
Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
Chlorides \_\_\_\_\_ ppm.  
MIDDLE  
Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
Chlorides \_\_\_\_\_ ppm.  
BOTTOM  
Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
Chlorides \_\_\_\_\_ ppm.

# TRILOBITE TESTING COMPANY L.L.C.

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## Test Ticket

No 4596

Well Name & No. Flint Hills #1 Test No. 4 Date 4-7-92  
Company Helmerich & Payne, Inc. Zone Tested Lansing 'A'  
Address P.O. Box 558 Garden City, KS. 67846 Elevation 3013 (KB)  
Co. Rep./Geo. Larry Seigrist cont. Cheyenne #1 Est. Ft. of Pay \_\_\_\_\_  
Location: Sec. 14 Twp. 26 S Rge. 35 W co. Kearny state KS  
No. of Copies \_\_\_\_\_ Distribution Sheet  Yes \_\_\_\_\_ No Turnkey \_\_\_\_\_ Yes  No \_\_\_\_\_ Evaluation \_\_\_\_\_

Interval Tested 3902 - 3920 Drill Pipe Size 4 1/2" XH  
Anchor Length 18' Top Choke — 1" \_\_\_\_\_ Bottom Choke — 3/4" \_\_\_\_\_  
Top Packer Depth 3897 - 3902 Hole Size — 77/8" \_\_\_\_\_ Rubber Size — 6 3/4" \_\_\_\_\_  
Bottom Packer Depth 3920 Wt. Pipe I.D. — 2.7 Ft. Run \_\_\_\_\_  
Total Depth Hook @ 3922 Drill Collar — 2.25 Ft. Run 526'  
Mud Wt. 9.1 lb/gal. Viscosity 68 Filtrate 10.4  
Tool Open @ 3:15 am Initial Blow Hit bridges @ 2750' & 3700' Could not make it through 2nd bridge.  
Final Blow \_\_\_\_\_

Recovery — Total Feet	Feet of Gas in Pipe	Flush Tool?				
Rec. _____	Feet Of _____	%gas	%oil	%water	%mud	
Rec. _____	Feet Of _____	%gas	%oil	%water	%mud	
Rec. <u>2100'</u>	Feet Of <u>Drlg. Mud</u>	%gas	%oil	%water	%mud	
Rec. _____	Feet Of _____	%gas	%oil	%water	%mud	
Rec. _____	Feet Of _____	%gas	%oil	%water	%mud	

BHT 106° °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 1,000 ppm System  
(A) Initial Hydrostatic Mud 1610 PSI Ak1 Recorder No. 13309 Range 4700  
(B) First Initial Flow Pressure \_\_\_\_\_ PSI @ (depth) 3907 w/Clock No. 27566  
(C) First Final Flow Pressure \_\_\_\_\_ PSI Ak1 Recorder No. 10332 Range 4050  
(D) Initial Shut-In Pressure \_\_\_\_\_ PSI @ (depth) 3912 w/Clock No. 21058  
(E) Second Initial Flow Pressure \_\_\_\_\_ PSI Ak1 Recorder No. 13615 Range 4575  
(F) Second Final Flow Pressure \_\_\_\_\_ PSI @ (depth) 3991 w/Clock No. 20272  
(G) Final Shut-In Pressure \_\_\_\_\_ PSI Initial Opening \_\_\_\_\_ Test Misrun 400.00  
(H) Final Hydrostatic Mud 1559 PSI Initial Shut-In \_\_\_\_\_ Jars  200.00

TRILOBITE TESTING COMPANY SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUBSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Final Flow \_\_\_\_\_ Safety Joint  50.00  
Final Shut-In \_\_\_\_\_ Straddle  250.00  
Circ. Sub  35.00  
Sampler  200.00  
Extra Packer  150.00  
~~Straddle~~ Other Hook  300.00

Approved By Larry Seigrist  
Our Representative Rod Steinbrink

TOTAL PRICE \$ 7685.00  
1385.00

# TRILOBITE TESTING COMPANY, L.L.C.

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## Drill-Stem Test Data

Well Name FLINT HILLS #1 Test No. 5 Date 4/7/92  
Company HELMERICH & PAYNE INC Zone Tested LANSING "A"  
Address P.O. BOX 558 GARDEN CITY KS 67846 Elevation 3013 K.B.  
Co. Rep./Geo. LARRY SEIGRIST Cont. CHEYENNE #1 Est. Ft. of Pay \_\_\_\_\_  
Location: Sec. 14 Twp. 26S Rge. 35W Co. KEARNY State KS

Interval Tested 3902-3920 Drill Pipe Size 4.5 XH  
Anchor Length 18 Wt. Pipe I.D. - 2.7 Ft. Run \_\_\_\_\_  
Top Packer Depth 3897-3902 Drill Collar - 2.25 Ft. Run 496  
Bottom Packer Depth 3920  
Total Depth HOOK @ 3922

Mud Wt. 8.8 lb / gal. Viscosity 58 Filtrate 8.8

Tool Open @ 4:40 PM Initial Blow BRIDGED OFF @ 3700' - NOT ABLE TO GO THROUGH  
TRIPPED OUT OF HOLE W/ TOOL

Final Blow \_\_\_\_\_

Recovery - Total Feet 900 Flush Tool? NO

Rec. 900 Feet of DRILLING MUD

Rec. \_\_\_\_\_ Feet of \_\_\_\_\_

Rec. \_\_\_\_\_ Feet of \_\_\_\_\_

Rec. \_\_\_\_\_ Feet of \_\_\_\_\_

Rec. \_\_\_\_\_ Feet of \_\_\_\_\_  
BHT 106 °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API

RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 1800 ppm System

(A) Initial Hydrostatic Mud 1735.9 PSI Ak1 Recorder No. 13309 Range 4700

(B) First Initial Flow Pressure \_\_\_\_\_ PSI @ (depth) 3907 w/Clock No. 27566

(C) First Final Flow Pressure \_\_\_\_\_ PSI AK1 Recorder No. 10332 Range 4050

(D) Initial Shut-in Pressure \_\_\_\_\_ PSI @ (depth) 3912 w/Clock No. 21058

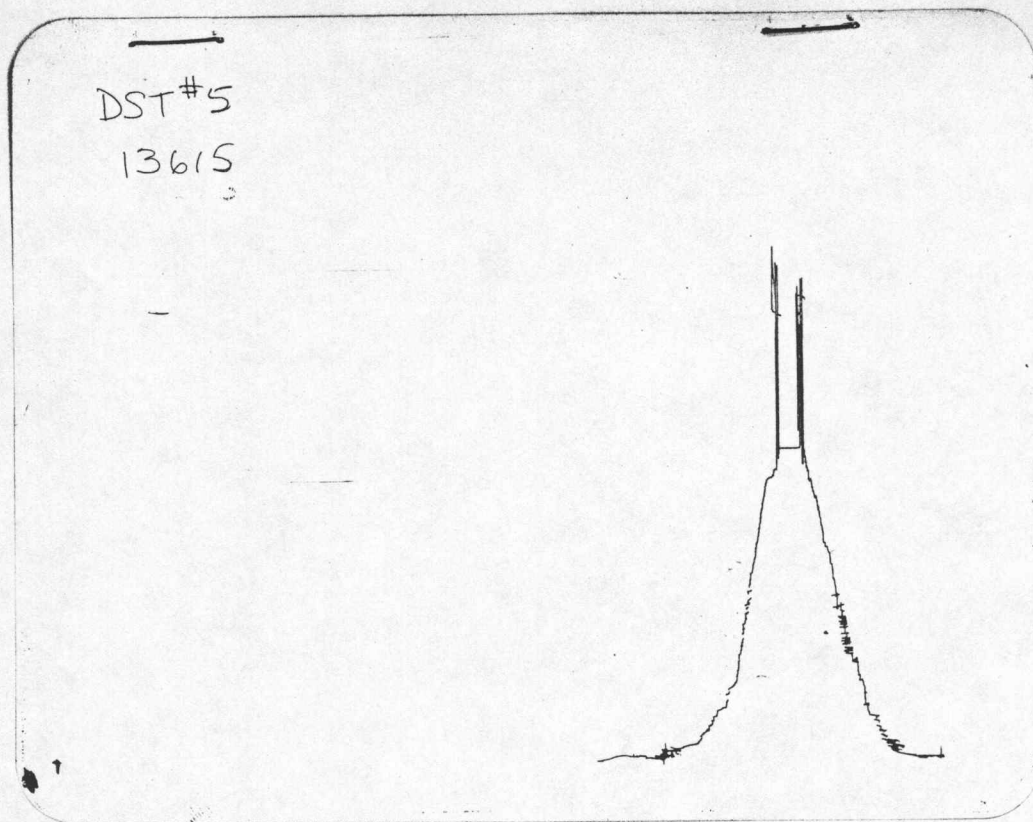
(E) Second Initial Flow Pressure \_\_\_\_\_ PSI AK1 Recorder No. 13615 Range 4575

(F) Second Final Flow Pressure \_\_\_\_\_ PSI @ (depth) 3991 w/Clock No. 20272

(G) Final Shut-in Pressure \_\_\_\_\_ PSI Initial Opening \_\_\_\_\_ Final Flow \_\_\_\_\_

(H) Final Hydrostatic Mud 1722 PSI Initial Shut-in \_\_\_\_\_ Final Shut-In \_\_\_\_\_

Our Representative ROD STEINBRINK TOTAL PRICE \$ 1935

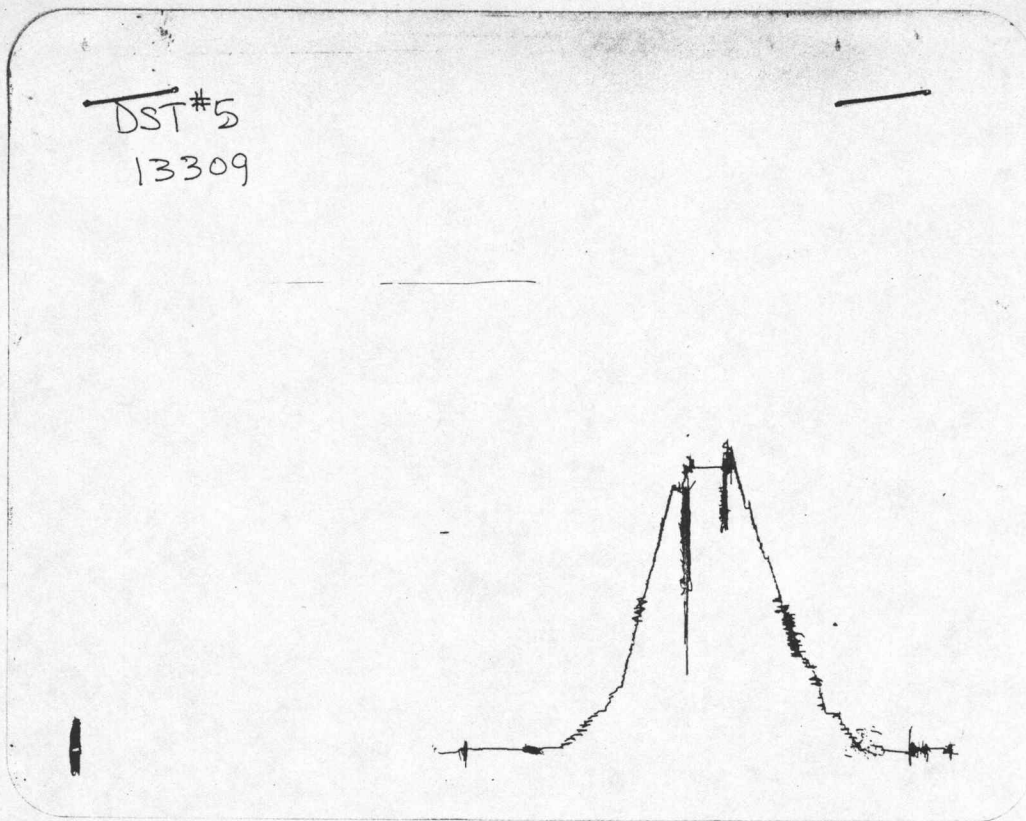


POINT This is an actual photograph of recorder chart PRESSURE

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



POINT This is an actual photograph of recorder chart  
PRESSURE

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1732	1735.9
(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	1722	1722

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## FLUID SAMPLER DATA

Ticket No. 4597 Date 4-7-92  
Company Name Helmerich & Payne, Inc. Cont. Cheyenne #1  
Lease Flint Hills #1 Test No. #5 Lansing  
County Kearny KS Sec. 14 Twp. 26 S Rng. 35 W

### SAMPLER RECOVERY

Gas \_\_\_\_\_ ML  
Oil \_\_\_\_\_ ML  
Mud 3,500 ML  
Water \_\_\_\_\_ ML  
Other \_\_\_\_\_ ML  
Pressure — PSI  
Total 3,500 ML

### PIT MUD ANALYSIS

Chlorides 1,800 ppm.  
Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
Viscosity 5B  
Mud Weight B.B  
Filtrate B.B  
Other L.C.M. 1#

### SAMPLER ANALYSIS

Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
Chlorides \_\_\_\_\_ ppm.  
Gravity \_\_\_\_\_ corrected @ 60 F

### PIPE RECOVERY

TOP  
Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
Chlorides \_\_\_\_\_ ppm.

MIDDLE  
Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
Chlorides \_\_\_\_\_ ppm.

BOTTOM  
Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
Chlorides \_\_\_\_\_ ppm.

# TRILOBITE TESTING COMPANY

, L.L.C.

P.O. Box 362 - Hays, Kansas 67601

## FLUID SAMPLER DATA

Ticket No. 4597 Date 4/7/92

Company Name HELMERICH & PAYNE INC

Lease FLINT HILLS #1 Test No. 5

County KEARNY Sec. 14 Twp. 26S Rng. 35W

### SAMPLER RECOVERY

Gas \_\_\_\_\_ ML Chlorides \_\_\_\_\_ ppm.

Oil \_\_\_\_\_ ML Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F

Mud 3500 ML Viscosity 58

Water \_\_\_\_\_ ML Mud Weight 8.8

Other \_\_\_\_\_ ML Filtrate 8.8

Pressure \_\_\_\_\_ PSI Other \_\_\_\_\_

Total 3500 ML \_\_\_\_\_

### PIT MUD ANALYSIS

### SAMPLER ANALYSIS

Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F TOP

Chlorides \_\_\_\_\_ ppm. Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F

Gravity \_\_\_\_\_ corrected @ 60 F Chlorides \_\_\_\_\_ ppm.

### PIPE RECOVERY

#### MIDDLE

Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F

Chlorides \_\_\_\_\_ ppm.

#### BOTTOM

Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F

Chlorides \_\_\_\_\_ ppm.

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## Test Ticket

No 4597

Well Name & No.	Flint Hills #1	Test No.	5	Date	4-7-92					
Company	Helmerich & Payne, Inc.	Zone Tested	Lansing 'A'							
Address	P.O. Box 558 Garden City, KS. 67846	Elevation	3013	(KB)						
Co. Rep./Geo.	Larry	cont.	Cheyenne #1	Est. Ft. of Pay						
Location: Sec.	14	Twp.	26 S	Rge.	35 W	Co.	Kearny	State	KS.	
No. of Copies	6	Distribution Sheet	X	Yes	No	Turnkey	Yes	X	No	Evaluation

Interval Tested	3902 - 3920	Drill Pipe Size	4 1/2" XH	
Anchor Length	18'	Top Choke — 1"	Bottom Choke — 3/4"	
Top Packer Depth	3897 - 3902	Hole Size — 7 7/8"	Rubber Size — 6 3/4"	
Bottom Packer Depth	3920	Wt. Pipe I.D. — 2.7 Ft. Run	—	
Total Depth	Hook @ 3922	Drill Collar — 2.25 Ft. Run	496'	
Mud Wt.	8.8	lb/gal.	Viscosity 58	Filtrate 8.8
Tool Open @	4:50 pm	Initial Blow	Bridged off @ 3700' not able to go through. T.O.H. w/Tool	

Final Blow \_\_\_\_\_

Recovery — Total Feet	900'	Feet of Gas in Pipe	Flush Tool?					
Rec.	Feet Of	% gas	% oil	% water	% mud			
Rec.	Feet Of	% gas	% oil	% water	% mud			
Rec.	900'	Feet Of	Drlg. Mud		% gas	% oil	% water	% mud
Rec.	Feet Of	% gas	% oil	% water	% mud			
Rec.	Feet Of	% gas	% oil	% water	% mud			

BHT 106° °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API

RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 1,800 ppm System

- (A) Initial Hydrostatic Mud 1732 PSI Ak1 Recorder No. 13309 Range 4700
- (B) First Initial Flow Pressure \_\_\_\_\_ PSI @ (depth) 3907 w/Clock No. 27566
- (C) First Final Flow Pressure \_\_\_\_\_ PSI Ak1 Recorder No. 10332 Range 4050
- (D) Initial Shut-In Pressure \_\_\_\_\_ PSI @ (depth) 3912 w/Clock No. 21058
- (E) Second Initial Flow Pressure \_\_\_\_\_ PSI Ak1 Recorder No. 13615 Range 4575
- (F) Second Final Flow Pressure \_\_\_\_\_ PSI @ (depth) 3991 w/Clock No. 20272
- (G) Final Shut-In Pressure \_\_\_\_\_ PSI Initial Opening — Test 550.00
- (H) Final Hydrostatic Mud 1722 PSI Initial Shut-In — Jars X 200.00

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Approved By Jerry August  
Our Representative Rod Steinbrink

- Final Flow — Safety Joint X 50.00
- Final Shut-In — Straddle X 250.00
- Circ. Sub X 35.00
- Sampler X 200.00
- Extra Packer X 150.00
- Other Hook X 300.00
- TOTAL PRICE \$ 1935.00