

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name POWELL #A-3 Test No. 1 Date 12/16/93
Company HELMERICH & PAYNE Zone LANSING "C"
Address 1579 EAST 21st ST TULSA OK 74114 Elevation 2955
Co. Rep./Geo. ART CHILDERS Cont. CHEYENNE RIG #4 Est. Ft. of Pay 8
Location: Sec. 22 Twp. 29S Rge. 33W Co. HASKELL State KS

Interval Tested 4251-4260 Drill Pipe Size 4.5" FH
Anchor Length 9 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 4246 Drill Collar - 2.25 Ft. Run 730
Bottom Packer Depth 4251 Mud Wt. 9.1 lb/Gal.
Total Depth 4260 Viscosity 50 Filtrate 10.4

Tool Open @ 11:05 AM Initial Blow STRONG BLOW OFF BOTTOM IN 30 SECONDS
ISI: BLED OFF BLOW-SURFACE RETURN OFF BOTTOM IN 2 MIN/GTS IN 30 MIN
Final Blow FAIR TO STRONG RETURN OFF BOTTOM IN 2 MINUTES-STAYED STEADY
GAS IS FLAMMABLE/TSTM-FSI: BLED OFF BLOW-SURFACE TO BOTTOM IN 20 MINUTES

Recovery - Total Feet 2370 Flush Tool? NO

Rec. 2370 Feet of REVERSED OUT-EST. 6.1 BBLS CLEAN GASSY OIL
Rec. _____ Feet of EST. 15.3 BBLS WATER
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT 120 °F Gravity 37 °API @ 52 °F Corrected Gravity 37.8 °API
RW 0.2 @ 60 °F Chlorides 43000 ppm Recovery Chlorides 2400 ppm System

(A) Initial Hydrostatic Mud 2228.4 PSI AK1 Recorder No. 13309 Range 4700

(B) First Initial Flow Pressure 732.4 PSI @ (depth) 4252 w / Clock No. 22992

(C) First Final Flow Pressure 1095.3 PSI AK1 Recorder No. 13339 Range 4025

(D) Initial Shut-in Pressure 1125.4 PSI @ (depth) 4255 w / Clock No. 19960

(E) Second Initial Flow Pressure 1125.4 PSI AK1 Recorder No. _____ Range _____

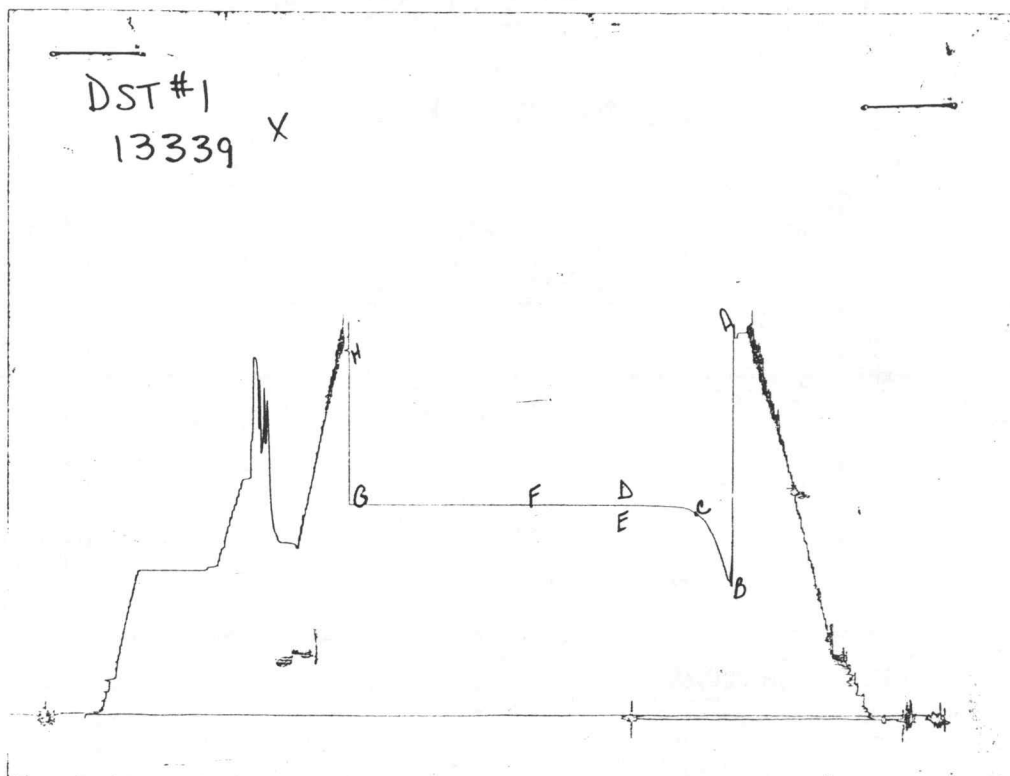
(F) Second Final Flow Pressure 1125.4 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 1125.4 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 2010.9 PSI Initial Shut-in 60 Final Shut-in 120

Our Representative ROD STEINBRINK

CHART PAGE



This is an actual photograph of recorder chart

FIELD
READING

OFFICE
READING

(A) INITIAL HYDROSTATIC MUD	2223	2228.4
(B) FIRST INITIAL FLOW PRESSURE	669	732.4
(C) FIRST FINAL FLOW PRESSURE	1040	1095.3
(D) INITIAL CLOSED-IN PRESSURE	1110	1125.4
(E) SECOND INITIAL FLOW PRESSURE	1110	1125.4
(F) SECOND FINAL FLOW PRESSURE	1110	1125.4
(G) FINAL CLOSED-IN PRESSURE	1110	1125.4
(H) FINAL HYDROSTATIC MUD	2003	2010.9

FLUID SAMPLER DATA

Ticket No.: 6810 Date: 12/16/92
Company: HELMERICH & PAYNE
Lease: POWELL #A-3 Test No.: 1
County: HASKELL Sec.: 22 Twp.: 29S Rng.: 33W

SAMPLER RECOVERY

Gas 500
Oil 800
Mud
Water 2700
Other
Pressure 800
TOTAL 4000

SAMPLER ANALYSIS

Resistivity 0.2 ohms@ 60 F
Chlorides 43000 ppm.
Gravity 37.8 corrected @60F

PIT MUD ANALYSIS

Chlorides 2400
Resistivity ohms@ F
Viscosity 50
Mud Wt. 9.1
Filtrate 10.4
Other

PIPE RECOVERY

TOP

Resistivity ohms@ F
Chlorides ppm

MIDDLE

Resistivity 0.25 ohms@ 50 F
Chlorides 40000 ppm

BOTTOM

Resistivity 0.22 ohms@ 55 F
Chlorides 43000 ppm

TRILOBITE TESTING L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 6810 Date 12-16-93
Company Name Helmerich & Payne, Inc. Cont. Cheyenne #4
Lease Powell #A-3 Test No. 1 Lang. 'C'
County Haskell KS Sec. 22 Twp. 29^S Rng. 33^W

SAMPLER RECOVERY

Gas 500 ML
Oil 800 ML
Mud _____ ML
Water 2700 ML
Other _____ ML
Pressure 800[#] PSI
Total 4,000 ML

SAMPLER ANALYSIS

Resistivity .20 ohms @ 60° F
Chlorides 43,000 ppm.
Gravity 37.8 corrected @ 60 F

PIT MUD ANALYSIS

Chlorides 2,400 ppm.
Resistivity _____ ohms @ _____ F
Viscosity 50
Mud Weight 9.1
Filtrate 10.4
Other L.C.M. Trc.
Amonia Nitrate 20 ppm.

PIPE RECOVERY

TOP
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.

MIDDLE
Resistivity .25 ohms @ 50° F
Chlorides 40,000 ppm.

BOTTOM
Resistivity .22 ohms @ 55° F
Chlorides 43,000 ppm.

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 6810

Well Name & No.	Powell #A-3	Test No.	1	Date	12-16-93
Company	Helmerich & Payne, Inc.	Zone Tested	Lans 'C'		
Address	P.O. Box 558 Garden City, KS. 67846	Elevation	2955	(KB)	
Co. Rep./Geo.	Art Childers	Cont.	Chieyenne #4	Est. Ft. of Pay	8'
Location: Sec.	22	Twp.	29 ^S	Rge.	33 ^W
		Co.	Haskell	State	KS.
No. of Copies	2	Distribution Sheet	X	Yes	No
		Turnkey		Yes	X
				No	
				Evaluation	

Interval Tested	4251 - 4260	Drill Pipe Size	4 1/2" FH
Anchor Length	9'	Top Choke — 1"	Bottom Choke — 3/4"
Top Packer Depth	4246	Hole Size — 8 1/4" 8 3/4"	Rubber Size — 6 3/4"
Bottom Packer Depth	4251	Wt. Pipe I.D. — 2.7 Ft. Run	—
Total Depth	4260	Drill Collar — 2.25 Ft. Run	4 1/2" x H 730'
Mud Wt.	9.1	Viscosity	50
		Filtrate	10.4
Tool Open @	11:05 am	Initial Blow	Strong blow off bottom in 30 secs.
		FSI: Bled off blow - surface return off bottom in 2 mins.	GTS@30 mins.
Final Blow	Fair to strong return off bottom in 2 mins. stayed steady		
	Gas is flammable - TSTM. FSI: Bled off blow - surface to bottom in 20 mins.		
Recovery — Total Feet	2370'	Feet of Gas in Pipe	TSTM @ surface
		Flush Tool?	No
Rec.	Feet Of	% gas	% oil
Rec.	2370'	% gas	% oil
Rec.	Reversed out	% gas	% oil
Rec.	Feet Of	est. 6.1 bbls CGO	% water
Rec.	Feet Of	est. 15.3 bbls Wtr.	% mud
Rec.	Feet Of	% gas	% oil
		% water	% mud
BHT	120°	°F Gravity	37
		°API @	52°
Corrected Gravity	37.8	°API	
RW	.20	@	60°
°F Chlorides	43,000	ppm Recovery	Chlorides
			2,400
			ppm System
(A) Initial Hydrostatic Mud	2223	PSI	AK1 Recorder No.
			13309
		Range	4700
(B) First Initial Flow Pressure	669	PSI	@ (depth)
			4252
		w/Clock No.	22992
(C) First Final Flow Pressure	1040	PSI	AK1 Recorder No.
			13339
		Range	4025
(D) Initial Shut-In Pressure	1110	PSI	@ (depth)
			4255
		w/Clock No.	19960
(E) Second Initial Flow Pressure	1110	PSI	AK1 Recorder No.
			—
		Range	—
(F) Second Final Flow Pressure	1110	PSI	@ (depth)
			—
		w/Clock No.	—
(G) Final Shut-In Pressure	1110	PSI	Initial Opening
			30
		Test	600
(H) Final Hydrostatic Mud	2003	PSI	Initial Shut-In
			60
		Jars	X 200
		Safety Joint	X 50
		Straddle	
		Circ. Sub	X 35.00
		Sampler	X 200
		Extra Packer	
		Other mileage	150.00
		TOTAL PRICE	1235.00

TRILOBITE TESTING L.L.C. 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 SUSTAINED, 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.

Approved By Arthur R. Childers

Our Representative Rod Steinbrink

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name POWELL #A-3 Test No. 2 Date 12/17/93
Company HELMERICH & PAYNE Zone LANSING "H"
Address 1579 EAST 21st ST TULSA OK 74114 Elevation 2955
Co. Rep./Geo. ART CHILDERS Cont. CHEYENNE RIG #4 Est. Ft. of Pay 9
Location: Sec. 22 Twp. 29S Rge. 33W Co. HASKELL State KS

Interval Tested 4493-4506 Drill Pipe Size 4.5" FH
Anchor Length 13 Wt. Pipe I.D. - 2.7 Ft. Run
Top Packer Depth 4488-4493 Drill Collar - 2.25 Ft. Run 730
Bottom Packer Depth 4506 Mud Wt. 9 lb/Gal.
Total Depth 4511 Viscosity 50 Filtrate 10.4

Tool Open @ 4:15 PM Initial Blow STRONG BLOW OFF BOTTOM IN 30 SECONDS-GAS TO SURFACE @2
ISI: BLED OFF BLOW-SURFACE TO OFF BOTTOM IN 2 MINUTES

Final Blow STRONG BLOW BUILT TO 30000 MCF/DAY @30 MINUTES-THEN DECREASED TSTM
FSI: BLED OFF BLOW-FAIR BLOW OFF BOTTOM IN 3 MINUTES

Recovery - Total Feet 1185 Flush Tool? NO

Rec. 1185 Feet of GAS TO SURFACE 1st OPEN
Rec. 1185 Feet of CLEAN GASSY OIL-NO SIGN OF WATER
Rec. 1185 Feet of REVERSED OUT 6.7 BBLs
Rec. 1185 Feet of
Rec. 1185 Feet of

BHT 118 °F Gravity 37 °API @ 60 °F Corrected Gravity 37 °API
RW 118 @ 60 °F Chlorides 3300 ppm Recovery Chlorides 3300 ppm System

(A) Initial Hydrostatic Mud 2245.4 PSI AK1 Recorder No. 13309 Range 4700

(B) First Initial Flow Pressure 99.8 PSI @ (depth) 4473 w / Clock No. 22992

(C) First Final Flow Pressure 130.9 PSI AK1 Recorder No. 13339 Range 4025

(D) Initial Shut-in Pressure 1157.5 PSI @ (depth) 4495 w / Clock No. 19960

(E) Second Initial Flow Pressure 251.5 PSI AK1 Recorder No. 13276 Range 4000

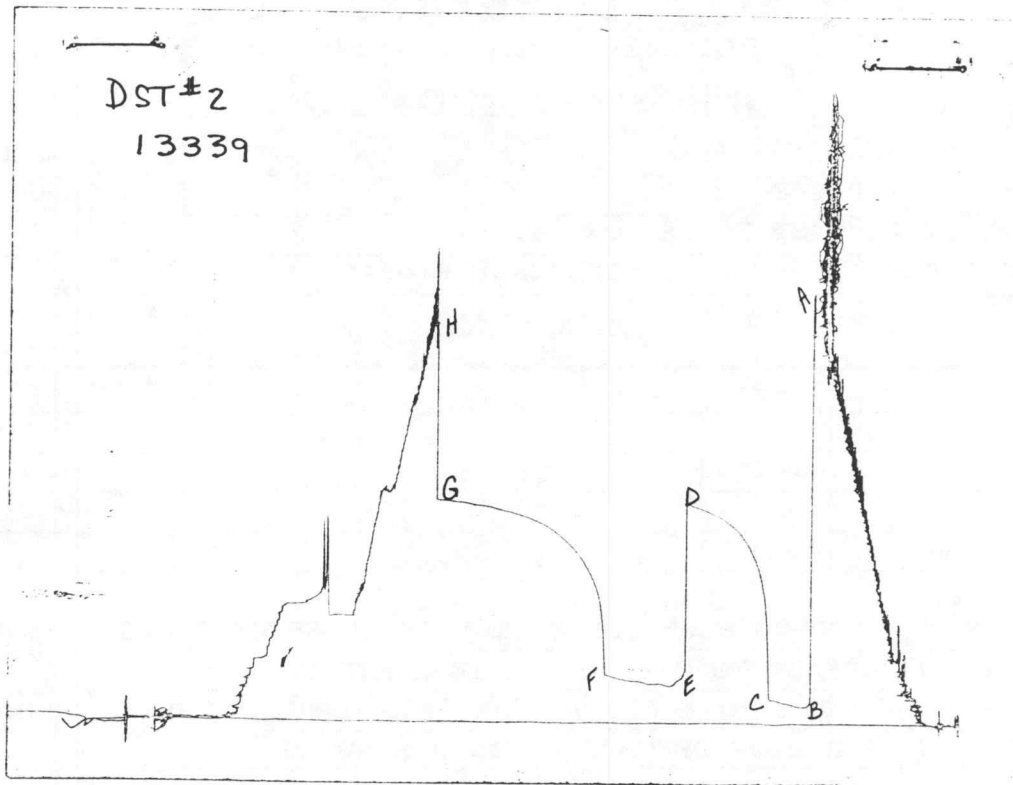
(F) Second Final Flow Pressure 259.8 PSI @ (depth) 4508 w / Clock No. 27501

(G) Final Shut-in Pressure 1170.6 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 2228.4 PSI Initial Shut-in 60 Final Shut-in 120

Our Representative ROD STEINBRINK

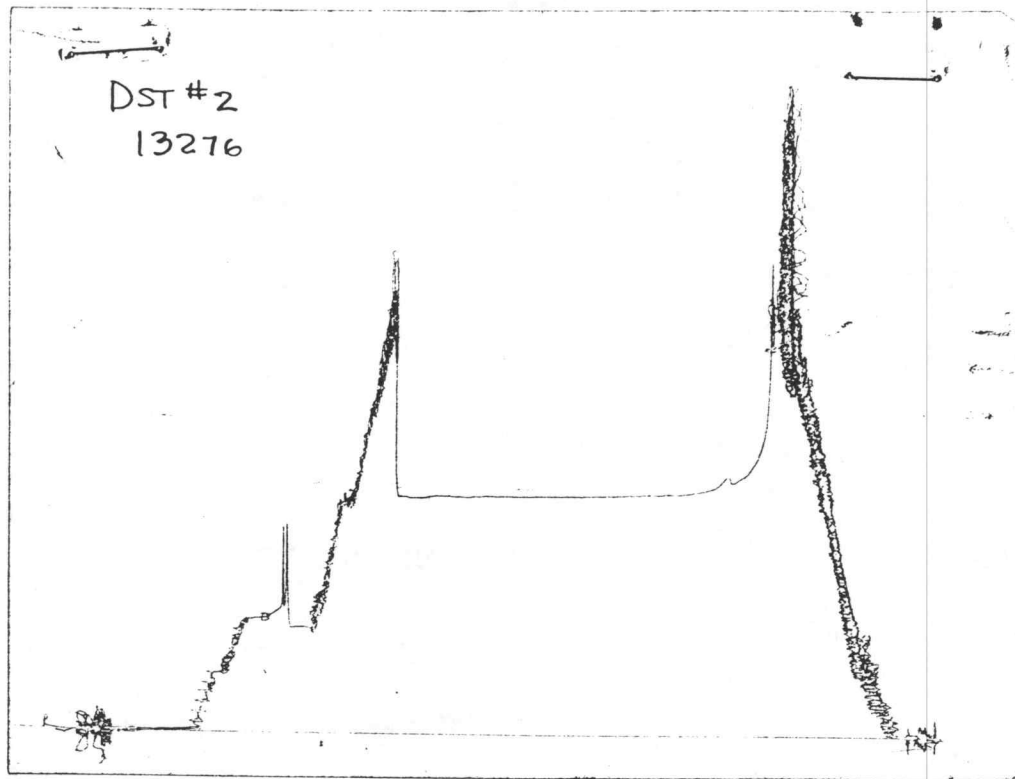
CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2263	2245.4
(B) FIRST INITIAL FLOW PRESSURE	72	99.8
(C) FIRST FINAL FLOW PRESSURE	124	130.9
(D) INITIAL CLOSED-IN PRESSURE	1140	1157.5
(E) SECOND INITIAL FLOW PRESSURE	187	251.5
(F) SECOND FINAL FLOW PRESSURE	239	259.8
(G) FINAL CLOSED-IN PRESSURE	1160	1170.6
(H) FINAL HYDROSTATIC MUD	2223	2228.4

CHART PAGE



This is an actual photograph of recorder chart

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

FLUID SAMPLER DATA

Ticket No.: 6811

Date: 12/17/92

Company: HELMERICH & PAYNE

Lease: POWELL #A-3

Test No.: 2

County: HASKELL

Sec.: 22

Twp.: 29S

Rng.: 33W

SAMPLER RECOVERY

Gas 3200

Oil 800

Mud

Water

Other

Pressure 850

TOTAL 4000

SAMPLER ANALYSIS

Resistivity ohms@

F

Chlorides

ppm.

Gravity 37

corrected @60F

PIT MUD ANALYSIS

Chlorides 3300

Resistivity ohms@ F

Viscosity 50

Mud Wt. 9

Filtrate 10.4

Other

PIPE RECOVERY

TOP

Resistivity ohms@ F

Chlorides ppm

MIDDLE

Resistivity ohms@ F

Chlorides ppm

BOTTOM

Resistivity ohms@ F

Chlorides ppm

GAS VOLUME REPORT

HELMERICH & PAYNE

POWELL #A-3

DST # 2

MIN	INCHES OF WTR	ORIFICE	MCF/D	MIN	INCHES OF WTR	ORIFICE	MCF/D
21	GTS	0.5		10	10	0.5	19.9
30	20	0.5	28	20	24	0.5	30.7
				30	12	0.5	21.9
				40	TSTM	0.5	
				50		0.5	
				60		0.5	

Remarks: GAS BURNS ORANGE FLAME

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FLUID SAMPLER DATA

Ticket No. 6811 Date 12-17-93
Company Name Helmrich & Payne, Inc. Cont. Cheyenne #4
Lease Powell #A-3 Test No. 2 Lans. 'H'
County Haskell, KS. Sec. 22 Twp. 29 S Rng. 33 W

SAMPLER RECOVERY

Gas 3,200 ML
Oil 800 ML
Mud — ML
Water — ML
Other — ML
Pressure 850# PSI
Total 4,000 ML

SAMPLER ANALYSIS

Resistivity — ohms @ — F
Chlorides — ppm.
Gravity 37 corrected @ 60 F

PIT MUD ANALYSIS

Chlorides 3,300 ppm.
Resistivity — ohms @ — F
Viscosity 50
Mud Weight 9.0
Filtrate 10.4
Other —

PIPE RECOVERY

TOP
Resistivity — ohms @ — F
Chlorides — ppm.

MIDDLE
Resistivity — ohms @ — F
Chlorides — ppm.

BOTTOM
Resistivity — ohms @ — F
Chlorides — ppm.



GAS VOLUME REPORT

Powell #A-3
WELL NAME AND NO.

2
DST NO.

Remarks:

Gas burns orange flame.

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 6811

Well Name & No.	Powell #A-3	Test No.	2	Date	12-17-93
Company	Helmrich & Payne, Inc.	Zone Tested	Lansing 'H'		
Address	P.O. Box 558 Garden City, KS. 67846	Elevation	2955 (KB)		
Co. Rep./Geo.	Art Childers	Cont.	Cheyenne #4	Est. Ft. of Pay	9'
Location: Sec.	22	Twp.	29 S	Rge.	33 W
		Co.	Haskell	State	KS.
No. of Copies	2	Distribution Sheet	X	Yes	No
		Turnkey	X	Yes	No
		Evaluation			

Interval Tested	4493 - 4506	Drill Pipe Size	4 1/2" FH
Anchor Length	13'	Top Choke — 1"	Bottom Choke — 3/4"
Top Packer Depth	4488 - 4493	Hole Size — 2 1/2 "	8 3/4" Rubber Size — 6 3/4"
Bottom Packer Depth	4506	Wt. Pipe I.D. — 2.7 Ft. Run	—
Total Depth	4511	Drill Collar — 2.25 Ft. Run	4 1/2" XH 730'
Mud Wt.	9.0	lb / gal.	Viscosity 50 Filtrate 10.4

Tool Open @ 4:15 pm Initial Blow Strong blow off bottom 30 secs. GTS @ 21 mins.
 ISI: Bled off blow - Surface to off bottom in 2 mins.

Final Blow Strong blow built to 30⁰⁰⁰ mcf/day @ 30 mins then decreased TSTM.
 FSI: Bled off blow - Fair blow off bottom in 3 mins.

Recovery — Total Feet 1185' Feet of Gas in Pipe GTS 1st open Flush Tool? No

Rec.	Feet Of	%gas	%oil	%water	%mud
Rec. 1185'	Feet Of CGO	%gas	%oil	%water	%mud
Rec.	Feet Of no sign of water	%gas	%oil	%water	%mud
Rec.	Feet Of Reversed out 6.7 bbls.	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud

BHT 118° °F Gravity 37 °API @ 60° °F Corrected Gravity 37 °API

RW @ °F Chlorides ppm Recovery Chlorides 3,300 ppm System

(A) Initial Hydrostatic Mud	2263	PSI	AK1 Recorder No.	13309	Range	4700
(B) First Initial Flow Pressure	72	PSI	@ (depth)	4473	w/Clock No.	22992
(C) First Final Flow Pressure	124	PSI	AK1 Recorder No.	13339	Range	4025
(D) Initial Shut-In Pressure	1140	PSI	@ (depth)	44935	w/Clock No.	219960
(E) Second Initial Flow Pressure	187	PSI	AK1 Recorder No.	13276	Range	4000
(F) Second Final Flow Pressure	239	PSI	@ (depth)	4508	w/Clock No.	27501
(G) Final Shut-In Pressure	1160	PSI	Initial Opening	30	Test	600
(H) Final Hydrostatic Mud	2223	PSI	Initial Shut-In	60	Jars	X 200

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Final Flow 60 Safety Joint X 50
 Final Shut-In 120 Straddle X 250

Approved By Arthur R. Childers

Our Representative Rod Steinbrink

Circ. Sub X dropped bar 35
 Sampler X 200
 Extra Packer X 150

Other

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name POWELL #A-3 Test No. 3 Date 12/18/98
Company HELMERICH & PAYNE Zone KS CITY "B"
Address 1579 EAST 21st ST TULSA OK 74114 Elevation 2955
Co. Rep./Geo. ART CHILDERS Cont. CHEYENNE RIG #4 Est. Ft. of Pay 6
Location: Sec. 22 Twp. 29S Rge. 33W Co. HASKELL State KS

Interval Tested	<u>4663-4669</u>	Drill Pipe Size	<u>4.5" FH</u>
Anchor Length	<u>6</u>	Wt. Pipe I.D. - 2.7 Ft. Run	
Top Packer Depth	<u>4658</u>	Drill Collar - 2.25 Ft. Run	<u>728</u>
Bottom Packer Depth	<u>4663</u>	Mud Wt.	<u>9</u> lb/Gal.
Total Depth	<u>4669</u>	Viscosity	<u>46</u>
		Filtrate	<u>11.2</u>

Tool Open @ 7:30 PM Initial Blow STRONG BLOW - BOTTOM OF BUCKET IN 30 SECONDS
GAS TO SURFACE IN 4 MINUTES

Final Blow BOTTOM OF BUCKET AS TOOL OPENED/OIL TO SURFACE
FINAL SHUTIN -(20 MINUTES)

Recovery - Total Feet 4669 Flush Tool? NO

Rec. <u>4549</u>	Feet of	<u>CLEAN GASSY OIL- 25%GAS/75%OIL</u>
Rec. <u>120</u>	Feet of	<u>SLTLY OIL CUT MUD-10% GAS/ 15%OIL/ 75% MUD</u>
Rec. _____	Feet of	_____
Rec. _____	Feet of	_____
Rec. _____	Feet of	_____

BHT 119 °F Gravity 27 °API @ 50 °F Corrected Gravity 27.6 °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 5400 ppm System

(A) Initial Hydrostatic Mud 2264.8 PSI AK1 Recorder No. 5495 Range 4200

(B) First Initial Flow Pressure 222.7 PSI @ (depth) 4648 w / Clock No. 25813

(C) First Final Flow Pressure 350.3 PSI AK1 Recorder No. 11038 Range 5075

(D) Initial Shut-in Pressure 1209.1 PSI @ (depth) 4666 w / Clock No. 25814

(E) Second Initial Flow Pressure 477.5 PSI AK1 Recorder No. _____ Range _____

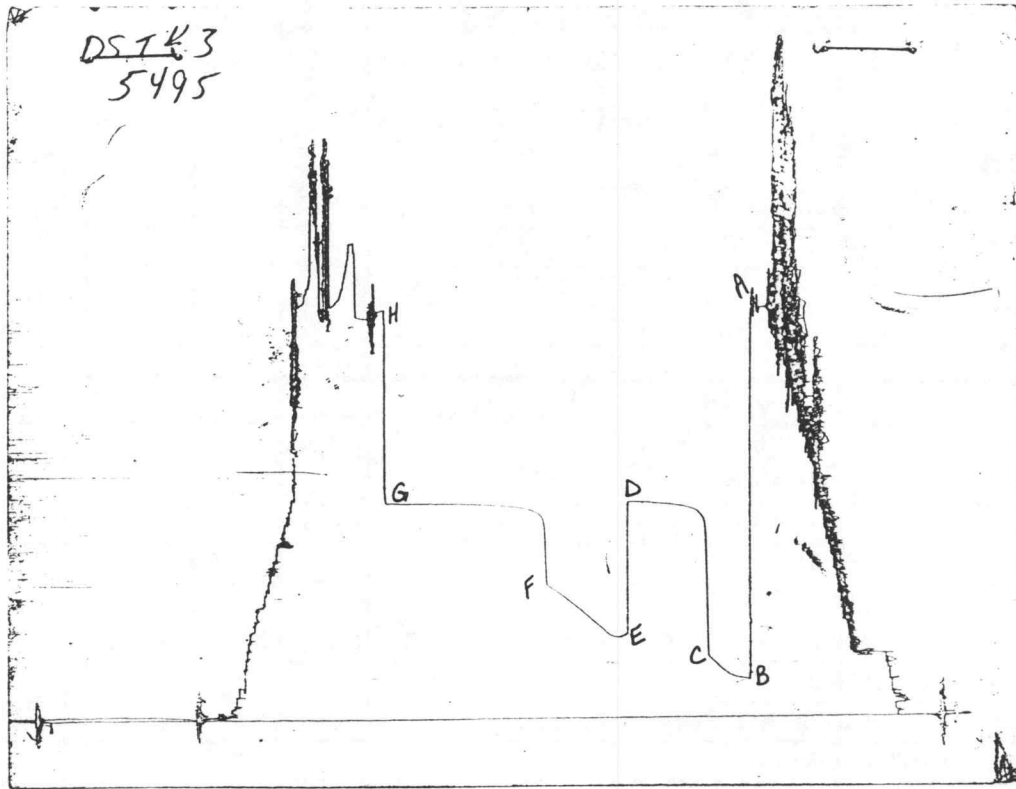
(F) Second Final Flow Pressure 751.3 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 1205.9 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 2248.1 PSI Initial Shut-in 60 Final Shut-in 120

Our Representative TOM HORACEK

CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2272	2264.8
(B) FIRST INITIAL FLOW PRESSURE	217	222.7
(C) FIRST FINAL FLOW PRESSURE	350	350.3
(D) INITIAL CLOSED-IN PRESSURE	1209	1209.1
(E) SECOND INITIAL FLOW PRESSURE	468	477.5
(F) SECOND FINAL FLOW PRESSURE	766	751.3
(G) FINAL CLOSED-IN PRESSURE	1209	1205.9
(H) FINAL HYDROSTATIC MUD	2246	2248.1

CALCULATED RECOVERY ANALYSIS

DST

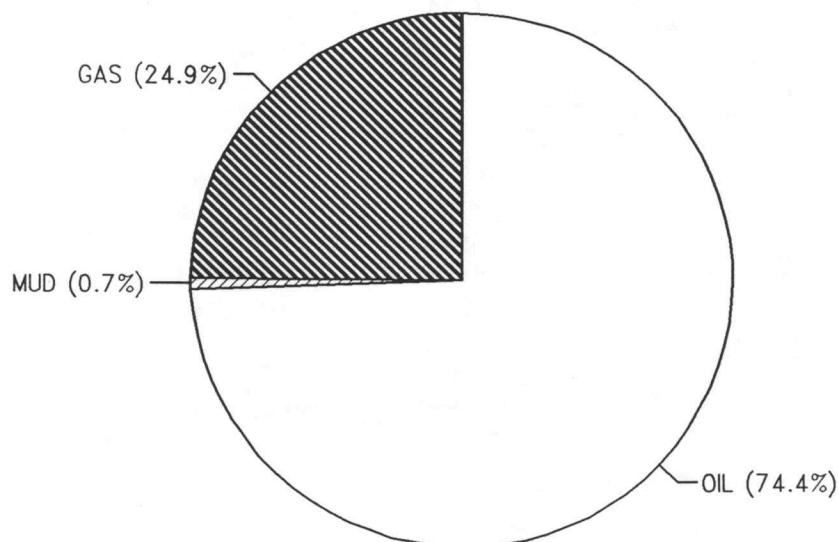
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TICKET #

6633

SAMPLE	TOTAL	GAS		OIL		WATER		MUD	
#	FEET	%	FEET	%	FEET	%	FEET	%	FEET
DRILL 1	3941	25	985.25	75	2955.75	0	0	0	0
PIPE 2			0		0		0		0
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
6			0		0		0		0
WEIGHT 1			0		0		0		0
PIPE 2			0		0		0		0
3			0		0		0		0
4			0		0		0		0
DRILL 1	608	25	152	75	456	0	0	0	0
COLLAR 2	120	10	12	15	18	0	0	75	90
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
TOTAL	4669		1149.25		3429.75		0		90

			HRS OPEN	BBL/DAY
BBL OIL=	44.348625	*	1.5	709.578
BBL WATER=	0	*		0
BBL MUD=	0.4401			.
BBL GAS =	14.812215			



GAS VOLUME REPORT

HELMERICH & PAYNE

POWELL #A-3

DST # 3

MIN	INCHES OF WTR	ORIFICE	MCF/D	MIN	INCHES OF WTR	ORIFICE	MCF/D
10	26	1	132	10	34	0.25	9.79
20	10	1	81.6	20	42	0.25	10.9
30	16	0.5	25.1	30	48	0.25	11.6
				40	20	0.25	7.51
				50	80	0.25	15
				60	70	0.25	14.1

Remarks: GAS TO SURFACE IN 4 MINUTES

FLUID SAMPLER DATA

Ticket No.: 6633 Date: 12/18/92
Company: HELMERICH & PAYNE
Lease: POWELL #A-3 Test No.: 3
County: HASKELL Sec.: 22 Twp.: 29S Rng.: 33W

SAMPLER RECOVERY

Gas 2000
Oil 2000
Mud
Water
Other
Pressure 1000
TOTAL 4000

SAMPLER ANALYSIS

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

PIT MUD ANALYSIS

Chlorides 6000
Resistivity 0.99 ohms@ 74 F
Viscosity 46
Mud Wt. 9
Filtrate 11.2
Other

PIPE RECOVERY

TOP

Resistivity ohms@ F
Chlorides ppm

MIDDLE

Resistivity ohms@ F
Chlorides ppm

BOTTOM

Resistivity ohms@ F
Chlorides ppm



GAS VOLUME REPORT

Powell A-3

WELL NAME AND NO.

DST NO.

Remarks: 6 TS in 4 min.

TRILOBITE TESTING L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 6633 Date 12-18-93
Company Name Helmerich & Payne Inc.
Lease Powell A-3 Test No. 43
County Haskell KS Sec. 22 Twp. 29 Rng. 33

SAMPLER RECOVERY

Gas 2000 ML
Oil 2000 ML
Mud _____ ML
Water _____ ML
Other _____ ML
Pressure 1000 PSI
Total 4000 ML

SAMPLER ANALYSIS

Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.
Gravity _____ corrected @ 60 F

PIT MUD ANALYSIS

Chlorides 6000 ppm.
Resistivity 699 ohms @ 74 F
Viscosity 46
Mud Weight 9.0
Filtrate 11.2
Other _____

PIPE RECOVERY

TOP
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.
MIDDLE
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.
BOTTOM
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.

TRILOBITE TESTING L.L.C.

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Test Ticket

No 6633

Well Name & No.	Powell A-3	Test No.	#3	Date	12-18-93
Company	Helmerich & Payne Inc.	Zone Tested	K.C. 'B'		
Address	Box 558, Garden City, KS. 67846	Elevation	2955 (KB)		
Co. Rep./Geo.	Art Childers	Cont.	Cheyenne Dds. #4	Est. Ft. of Pay	6'
Location: Sec.	22	Twp.	29	Rge.	33
		Co.	Haskell	State	KS.
No. of Copies	2	Distribution Sheet	X	Yes	No
		Turnkey		Yes	X
				No	
				Evaluation	

Interval Tested	4663-4669	Drill Pipe Size	4.5 F-Hole
Anchor Length	6'	Top Choke — 1"	Bottom Choke — 3/4"
Top Packer Depth	4658	Hole Size — 7 7/8"	Rubber Size — 6 3/4"
Bottom Packer Depth	4663	Wt. Pipe I.D. — 2.7 Ft. Run	—
Total Depth	4669	Drill Collar — 2.25 Ft. Run	728'
Mud Wt.	9.0	Viscosity	46
		Filtrate	11.2
Tool Open @	7:30 pm	Initial Blow	Strong blow- BOB in 30 sec.
			(GTS in 4 min.)
Final Blow	Bottom of bucket as tool opened.		

Recovery — Total Feet	4669	Feet of Gas in Pipe		Flush Tool?	NO
Rec.		Feet Of		%gas	%oil
Rec.		Feet Of		%gas	%oil
Rec.	4549'	Feet Of	C60	25 %gas	75 %oil
Rec.	120'	Feet Of	50cm	10 %gas	15 %oil
Rec.		Feet Of		%gas	%oil
				%water	%mud

BHT	119'	°F Gravity	27	°API @	50	°F Corrected Gravity	22.6	°API
RW		@		°F Chlorides		ppm Recovery	5400	ppm System

(A) Initial Hydrostatic Mud	2272	PSI	AK1 Recorder No.	5495	Range	4200
(B) First Initial Flow Pressure	217	PSI	@ (depth)	4648	w/Clock No.	25813
(C) First Final Flow Pressure	350	PSI	AK1 Recorder No.	11038	Range	5075
(D) Initial Shut-In Pressure	1209	PSI	@ (depth)	4666	w/Clock No.	25814
(E) Second Initial Flow Pressure	468	PSI	AK1 Recorder No.		Range	
(F) Second Final Flow Pressure	766	PSI	@ (depth)		w/Clock No.	
(G) Final Shut-In Pressure	1209	PSI	Initial Opening	30	Test	X 600.00
(H) Final Hydrostatic Mud	2246	PSI	Initial Shut-In	60	Jars	X 200.00

TRILOBITE TESTING L.L.C. 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 SUSTAINED, 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	60	Safety Joint	X 50.00
Final Shut-In	120	Straddle	
		Circ. Sub	X 35.00
		Sampler	X 200.00
		Extra Packer	
		Other	
		TOTAL PRICE \$	1085.00

Approved By Arthur S. Childers

Our Representative Tom Horacek