TRILOBITE TESTING COMPANY, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name POWELL A-#2 Test No. 1 Date 4/10/92

Company HELMERICH & PAYNE INC Zone Tested LANSING

Address P.O. BOX 558 GARDEN CITY KS 67846 Elevation 2955 K.B.

Co. Rep./Geo. LARRY SEIGRIST Cont. CHEYENNE DRLG #3 Est. Ft. of Pay

Location: Sec. 22 Twp. 29S Rge. 33W Co. HASKELL State KS

Interval Tested 4158-4189 Drill Pipe Size 4.5 FH

Anchor Length 31 Wt. Pipe I.D. - 2.7 Ft. Run

Top Packer Depth 4153 Drill Collar — 2.25 Ft. Run 752

Bottom Packer Depth 4158

Total Depth 4189

Mud Wt. 9.1 lb / gal. Viscosity 41 Filtrate 12.8

Tool Open @ 1:35 PM Initial Blow STRONG BLOW-BUILT TO BOTTOM OF BUCKET IN 1 MIN
ISI:BLED OFF BLOW-SURFACE BLOW-BUILT TO 2"

Final Blow STRONG BLOW-BUILT TO BOTTOM IN 3 MINUTES
FSI:BLED OFF BLOW-SURFACE BLOW-BUILT TO BOTTOM OF BUCKET IN 45 MIN

Recovery — Total Feet 2140 Flush Tool? NO

Rec. 1000 Feet of GAS IN PIPE

Rec. 30 Feet of OIL CUT WTRY MUD-5%GAS/50%OIL/40%WTR/5%MUD

Rec. 560 Feet of SLTLY OIL CUT WTRY MUD-5%GAS/5%OIL/70%WTR/20%MUD

Rec. 1550 Feet of SALT WATER

Rec. Feet of

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

RW 0.28 @ 78 °F Chlorides 21000 ppm Recovery Chlorides 1800 ppm System

(A) Initial Hydrostatic Mud 1985.6 PSI Ak1 Recorder No. 13277 Range 4125

(B) First Initial Flow Pressure 302.5 PSI @ (depth) 4162 w/Clock No. 27594

(C) First Final Flow Pressure 537.8 PSI AK1 Recorder No. 11038 Range 5075

(D) Initial Shut-in Pressure 1001.2 PSI @ (depth 4186 w/Clock No. 30418

(E) Second Initial Flow Pressure 887.6 PSI AK1 Recorder No. Range

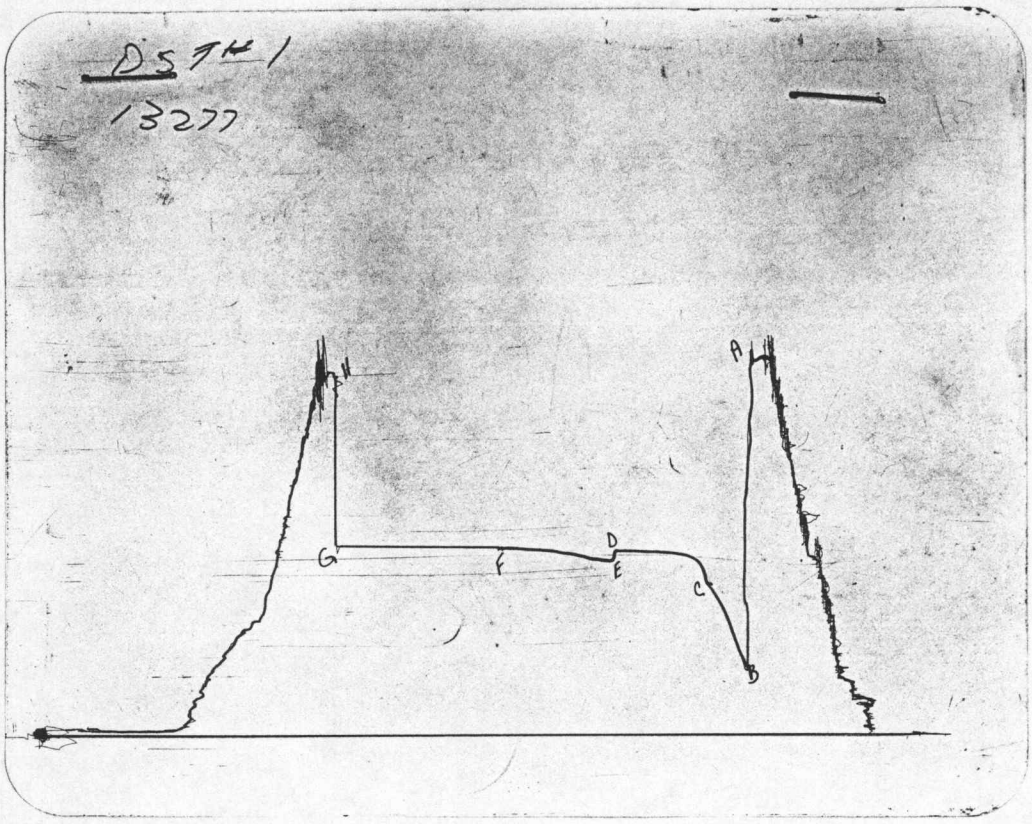
(F) Second Final Flow Pressure 988.6 PSI @ (depth) w/Clock No.

(G) Final Shut-in Pressure 1015.6 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 1955.4 PSI Initial Shut-in 60 Final Shut-in 120

Our Representative TOM HORACEK TOTAL PRICE $ 1000

Printcraft Printers - Hays, KS



This is an actual photograph of recorder chart

POINT	PRESSURE	
	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1978	1985.6
(B) FIRST INITIAL FLOW PRESSURE	297	302.5
(C) FIRST FINAL FLOW PRESSURE	533	537.8
(D) INITIAL CLOSED-IN PRESSURE	995	1001.2
(E) SECOND INITIAL FLOW PRESSURE	881	887.6
(F) SECOND FINAL FLOW PRESSURE	982	988.6
(G) FINAL CLOSED-IN PRESSURE	1008	1015.6
(H) FINAL HYDROSTATIC MUD	1953	1955.4

TRILOBITE TESTING COMPANY ,L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 4450 Date 4/10/92

Company Name HELMERICH & PAYNE INC

Lease POWELL A-#2 Test No. 1

County HASKELL Sec. 22 Twp. 29S Rng. 33W

SAMPLER RECOVERY

Gas _____ ML

Oil 50 ML

Mud _____ ML

Water 3150 ML

Other _____ ML

Pressure 250 PSI

Total 3200 ML

PIT MUD ANALYSIS

Chlorides 21000 ppm.

Resistivity _____ ohms @ _____ F

Viscosity 41

Mud Weight 9.1

Filtrate 12.8

Other _____

SAMPLER ANALYSIS

Resistivity 0.28 ohms @ 78 F

Chlorides 21000 ppm.

Gravity _____ corrected @ 60 F

PIPE RECOVERY

TOP

Resistivity 0.3 ohms @ 78 F

Chlorides 20000 ppm.

MIDDLE

Resistivity 0.28 ohms @ 78 F

Chlorides 21000 ppm.

BOTTOM

Resistivity 0.28 ohms @ 78 F

Chlorides 21000 ppm.

TRILOBITE TESTING COMPANY L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 4450 Date 4-10-92

Company Name Helmerich & Payne Inc.

Lease Powell A - #2 Test No. 1

County Haskell Sec. 22 Twp. 29 s Rng. 33w

SAMPLER RECOVERY

Gas _____ ML

Oil 50 ML

Mud _____ ML

Water 3150 ML

Other _____ ML

Pressure 250 PSI

Total 3200 ML

PIT MUD ANALYSIS

Chlorides _____ ppm.

Resistivity _____ ohms @ _____ F

Viscosity 41

Mud Weight 9.1

Filtrate 12.8

Other _____

SAMPLER ANALYSIS

Resistivity .28 ohms @ 78° F

Chlorides 21,000 ppm.

Gravity _____ corrected @ 60 F

PIPE RECOVERY

TOP
Resistivity .3 ohms @ 78° F

Chlorides 20,000 ppm.

MIDDLE
Resistivity .28 ohms @ 78° F

Chlorides 21,000 ppm.

BOTTOM
Resistivity .28 ohms @ 78° F

Chlorides 21,000 ppm.

TRILOBITE TESTING COMPANY L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

№ 4450

Well Name & No. Powell A#-2 Test No. 1 Date 4-10-92

Company Helmerich & Payne Inc. Zone Tested Lansing

Address Box 558 Garden City Ks. 67846 Elevation 2955 (KB)

Co. Rep./Geo. Larry Siegrist Cont. Cheyenne Drlg #3 Est. Ft. of Pay

Location: Sec. 22 Twp. 29 s Rge. 33 w Co. Haskell State Ks.

No. of Copies Distribution Sheet Yes X No Turnkey Yes No Evaluation

Interval Tested 4158-4189 Drill Pipe Size 4.5 F-Hole

Anchor Length 31 Top Choke — 1" Bottom Choke — ¾"

Top Packer Depth 4153 Hole Size — 7⅞" Rubber Size — 6¾"

Bottom Packer Depth 4158 Wt. Pipe I.D. — 2.7 Ft. Run –

Total Depth 4189 Drill Collar — 2.25 Ft. Run 752

Mud Wt. 9.1 lb/gal. Viscosity 41 Filtrate 12.8

Tool Open @ 1:35 pm. Initial Blow Strong blow - built to bottom of bucket 1 min.
ISI- bled off blow - surface blow- built to 2 in.

Final Blow Strong blow- built to bottom 3 min.
FSI- bled off blow- surface blow- built to bottom of bucket 45 min.

Recovery — Total Feet 2140 Feet of Gas in Pipe 1000' Flush Tool? NO

Rec.		Feet Of		%gas	%oil	%water	%mud	
Rec.	30	Feet Of	Ocwm	5 %gas	50 %oil	40 %water	5 %mud	
Rec.	560	Feet Of	SOcwm	5 %gas	5 %oil	70 %water	20 %mud	
Rec.	1550	Feet Of	Salt water	%gas	%oil	%water	%mud	
Rec.		Feet Of		%gas	%oil	%water	%mud	

BHT 118° °F Gravity ____ °API @ ____ °F Corrected Gravity ____ °API

RW .128 @ 78° °F Chlorides 21000 ppm Recovery Chlorides 1,800 ppm System

(A) Initial Hydrostatic Mud	1978 PSI	AK1 Recorder No.	13277	Range	4125
(B) First Initial Flow Pressure	297 PSI	@ (depth)	4162	w/Clock No.	27594
(C) First Final Flow Pressure	533 PSI	AK1 Recorder No.	11038	Range	5075
(D) Initial Shut-In Pressure	995 PSI	@ (depth)	4186	w/Clock No.	30418
(E) Second Initial Flow Pressure	881 PSI	AK1 Recorder No.		Range	
(F) Second Final Flow Pressure	982 PSI	@ (depth)		w/Clock No.	
(G) Final Shut-In Pressure	1008 PSI	Initial Opening	30	Test	X 550
(H) Final Hydrostatic Mud	1953 PSI	Initial Shut-In	60	Jars	X 200
		Final Flow	60	Safety Joint	X 50
		Final Shut-In	120	Straddle	
				Circ. Sub	
				Sampler	X 200
				Extra Packer	
				Other	
				TOTAL PRICE $	1000

Approved By [signature]

Our Representative Tom Horacek

Printcraft Printers - Hays, KS

TRILOBITE TESTING COMPANY ,L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name POWELL A-#2 Test No. 2 Date 4/11/92

Company HELMERICH & PAYNE INC Zone Tested LANSING "B"

Address P.O. BOX 558 GARDEN CITY KS 67846 Elevation 2955 K.B.

Co. Rep./Geo. LARRY SEIGRIST Cont. CHEYENNE DRLG #3 Est. Ft. of Pay 12

Location: Sec. 22 Twp. 29S Rge. 33W Co. HASKELL State KS

Interval Tested 4205-4225

Anchor Length 20

Top Packer Depth 4200

Bottom Packer Depth 4205

Total Depth 4225

Drill Pipe Size 4.5 FH

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

Drill Collar — 2.25 Ft. Run 752

Mud Wt. 9.1 lb / gal. Viscosity 41 Filtrate 12.8

Tool Open @ 6:35 AM Initial Blow STRONG BLOW - BOTTOM OF BUCKET IN 1 MINUTE
ISI:BLED OFF BLOW-WEAK BLOW-BUILT TO 8"

Final Blow STRONG BLOW-BUILT TO BOTTOM OF BUCKET IN 1 MINUTE
GAS TO SURFACE AS TOOL OPENED-GAUGED@1.50 MCF/DAY

Recovery — Total Feet 1830 Flush Tool? NO

Rec. 1710 Feet of CLEAN GASSY OIL-40%GAS/60%OIL

Rec. 120 Feet of SALT WATER

Rec. Feet of

Rec. Feet of

Rec. Feet of

BHT 118 °F Gravity 37 °API @ 68 °F Corrected Gravity 36.5 °API

RW 0.28 @ 70 °F Chlorides 22000 ppm Recovery Chlorides 1800 ppm System

(A) Initial Hydrostatic Mud 2006.4 PSI AK1 Recorder No. 13277 Range 4125

(B) First Initial Flow Pressure 147.1 PSI @ (depth) 4208 w/Clock No. 27594

(C) First Final Flow Pressure 360.7 PSI AK1 Recorder No. 11038 Range 5075

(D) Initial Shut-in Pressure 822.5 PSI @ (depth 4222 w/Clock No. 30418

(E) Second Initial Flow Pressure 445 PSI AK1 Recorder No. Range

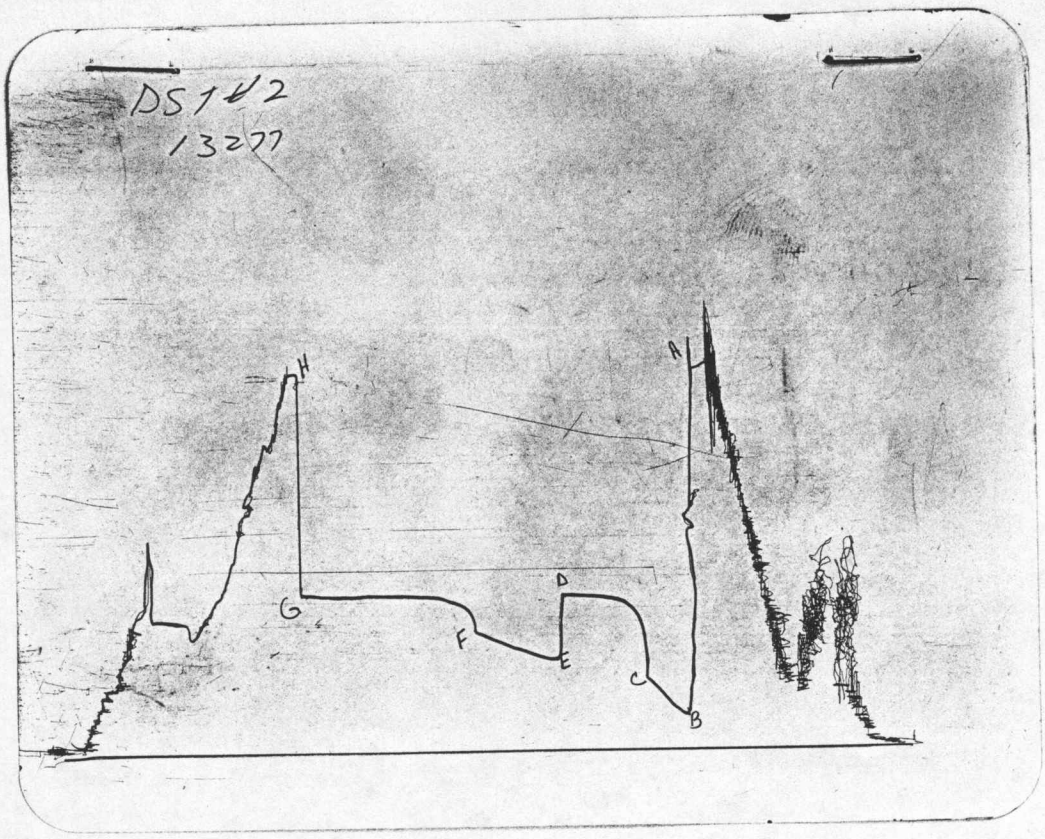
(F) Second Final Flow Pressure 618.3 PSI @ (depth) w/Clock No.

(G) Final Shut-in Pressure 827.7 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 1973.8 PSI Initial Shut-in 60 Final Shut-in 120

Our Representative TOM HORACEK TOTAL PRICE $ 1035

Printcraft Printers - Hays, KS



This is an actual photograph of recorder chart

POINT	PRESSURE FIELD READING	PRESSURE OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1991	2006.4
(B) FIRST INITIAL FLOW PRESSURE	136	147.1
(C) FIRST FINAL FLOW PRESSURE	363	360.7
(D) INITIAL CLOSED-IN PRESSURE	817	822.5
(E) SECOND INITIAL FLOW PRESSURE	429	445
(F) SECOND FINAL FLOW PRESSURE	611	618.3
(G) FINAL CLOSED-IN PRESSURE	817	827.7
(H) FINAL HYDROSTATIC MUD	1966	1973.8

COMPUTER EVALUATION BY TRILOBITE TESTING
HELMERICH & PAYNE
REPORT FOR DST#2 FOR THE POWELL A-#2
22-29S-33W HASKELL KANSAS

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TEST PARAMETERS

ELEVATION:	2955 KB	EST. PAY:	12 FT
DATUM:	-1268	ZONE TESTED:	LANSING "B"
TEST INTERVAL:	4205-4225		
		TIME INTERVALS:	30-60-60-120
RECORDER DEPTH:	4222	VISCOSITY:	5.959802 CP
BOTTOM HOLE TEMP:	118	HOLE SIZE:	7.875 IN

****

CALCULATIONS

CUBIC FEET OF GAS IN PIPE: 93.75

TOTAL FEET OF RECOVERY: 1830
BARRELS IN DRILL PIPE: 15.32916
BARRELS IN DRILL COLLARS: 3.67728
GAS OIL RATIO: 4.932539 CU.FT./BBL
BUBBLE POINT PRESSURE: ; .3501032
TOTAL BARRELS OF RECOVERY: 19.00644
UNCORR. INIT. PROD.: 304.1031 BBL/DAY
API GRAVITY: 36
FLUID GRADIENT: .366
CORRECTED PIPE FILLUP: 1689.344
CORR. BARRELS OF RECOVERY: 17.00142 BBL
INITIAL PRODUCTION CORRECTED TO FINAL FLOW PRESSURE: 272.0227 BBL/DAY
INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE
178.3983

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INITIAL SLOPE 132.78 PSI/CYCLE
INITIAL P* 846 PSI

FINAL SLOPE 69.97 PSI/CYCLE
FINAL P* 845 PSI

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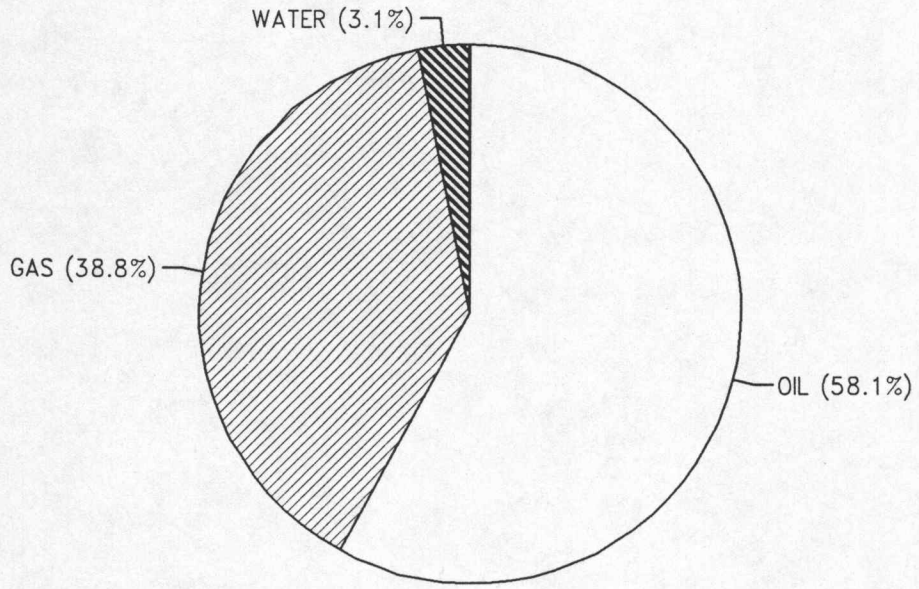
TRANSMISSIBILITY	632.1409 (MD.-FT./CP.)
PERMEABILITY	313.9529 (MD.)
INDICATED FLOW CAPACITY	3767.434 (MD.FT)
PRODUCTIVITY INDEX	.7143192 (BARRELS/DAY/PSI)
DAMAGE RATIO	.5929128
RADIUS OF INVESTIGATION	168.0945 (FT.)
POTENTIOMETRIC SURFACE	692.555 (FT.)
DRAWDOWN FACTOR	.118202 (%)

CALCULATED RECOVERY ANALYSIS

DST # 2 TICKET # 4926

SAMPLE #	TOTAL FEET		GAS FEET	%	OIL FEET	%	WATER FEET	%	MUD FEET
DRILL 1	1078	40	431.2	60	646.8	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	632	40	252.8	60	379.2	0	0	0	0
COLLAR 2	120	0	0	0	0	100	120	0	0
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
TOTAL	1830		684		1026		120		0

			HRS OPEN	BBL/DAY
BBL OIL=	11.051784	*	1.5	176.82854
BBL WATER=	0.5868	*		9.3888
BBL MUD=	0			
BBL GAS =	7.367856			



POWELL A-#2 DST #2
INITIAL SHUTIN

30 FLOW TIME

Slope -132.78 psi/cycle
P * 846 psi

	TIME(MIN)	Pws (psi)	Log Horn T	<> PRESSURE	Horn T
	6	655.7	0.778	655.7	6
	12	750.9	0.544	95.2	4
	18	784.2	0.426	33.3	3
	24	798.3	0.352	14.1	2
	30	808.5	0.301	10.2	2
	36	813.6	0.263	5.1	2
X	42	814.8	0.234	1.2	2
	48	817.5	0.211	2.7	2
	54	820.0	0.192	2.5	2
X	60	822.5	0.176	2.5	2

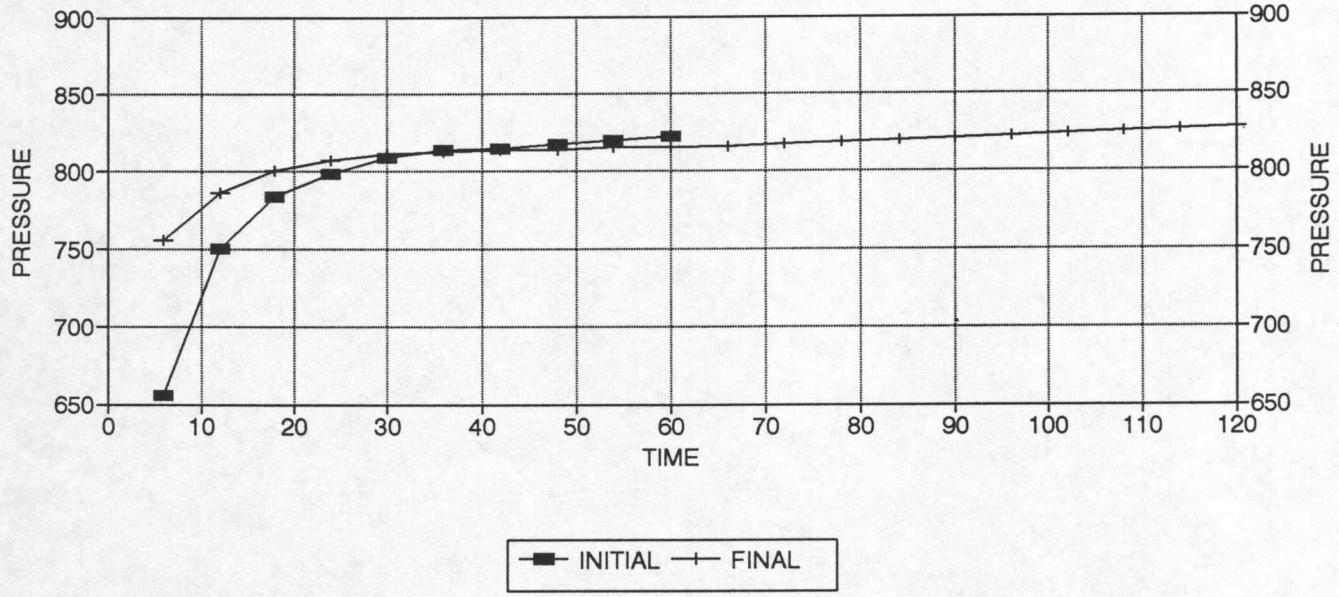
POWELL A-#2 DST #2
FINAL SHUTIN

90 TOTAL FLOW TIME

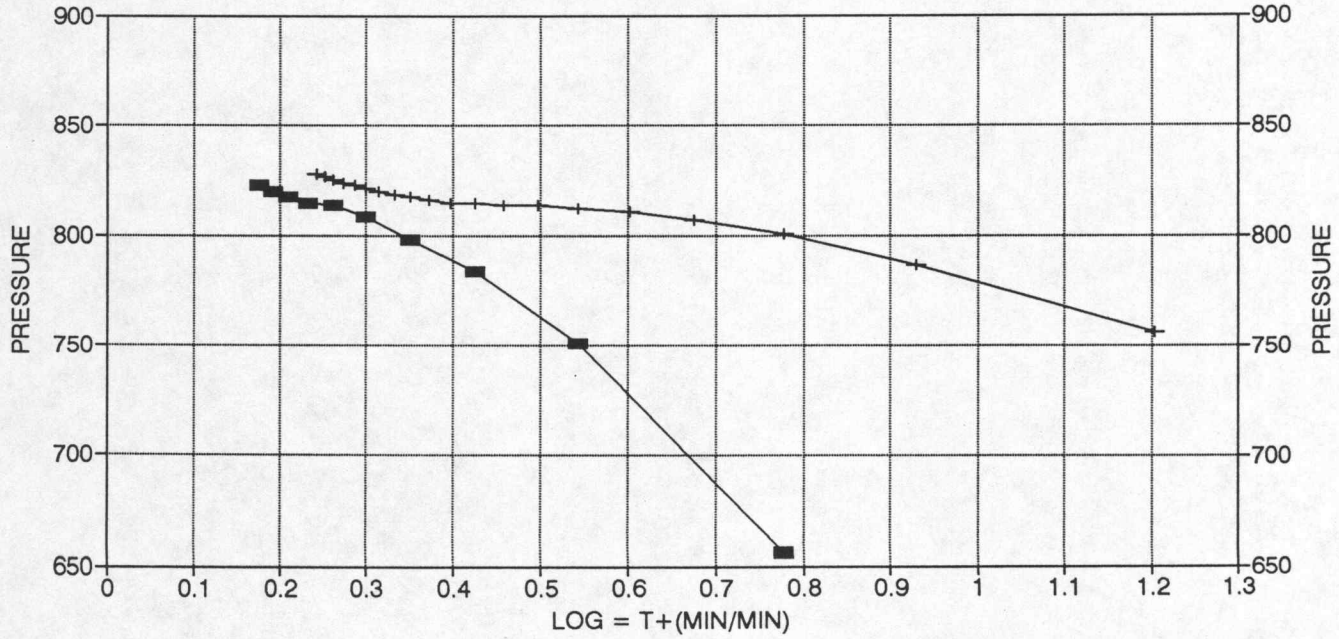
Slope -69.97 psi/cycle
P * 845 psi

	TIME(MIN)	Pws (psi)	Log Horn T	<> PRESSURE	Horn T
	6	756.1	1.204	756.1	16
	12	786.8	0.929	30.7	9
	18	800.8	0.778	14.0	6
	24	807.2	0.677	6.4	5
	30	811.1	0.602	3.9	4
	36	812.3	0.544	1.2	4
	42	813.6	0.497	1.3	3
	48	813.6	0.459	0.0	3
	54	814.9	0.426	1.3	3
	60	814.9	0.398	0.0	3
	66	816.2	0.374	1.3	2
	72	817.5	0.352	1.3	2
	78	818.7	0.333	1.2	2
X	84	820.0	0.316	1.3	2
	90	821.3	0.301	1.3	2
	96	822.6	0.287	1.3	2
	102	823.8	0.275	1.2	2
	108	825.1	0.263	1.3	2
	114	826.4	0.253	1.3	2
X	120	827.7	0.243	1.3	2

POWELL A -#2 / DST #2
DELTA T DELTA P



HORNER PLOT



INITIAL FLOW

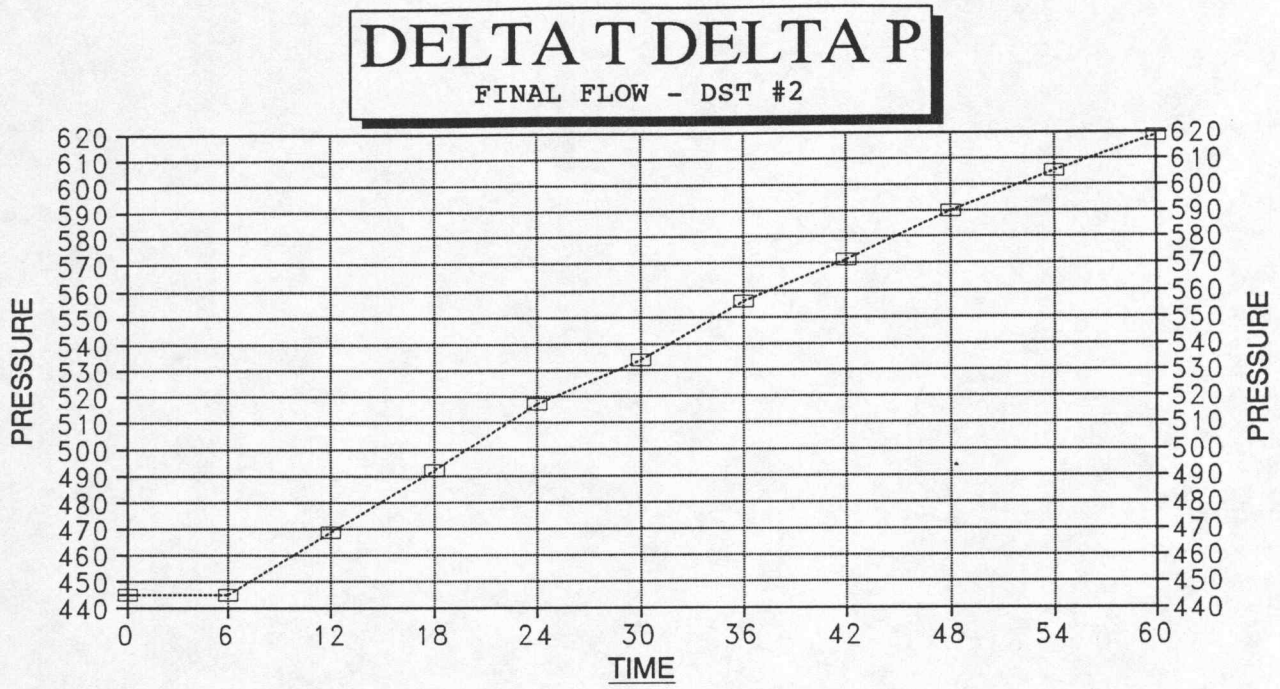
RECORDER # 11038
DST #2

DT(MIN)	PRESSURE	<> PRESSURE
0	147.1	147.1
6	211.6	64.5
12	266.4	54.79999
18	315.7	49.30002
24	358.1	42.4
30	360.7	2.600006

FINAL FLOW

RECORDER # 11038
DST #2

DT(MIN)	PRESSURE	<> PRESSURE
0	445	445
6	445	0
12	468.6	23.60001
18	492.1	23.5
24	516.9001	24.80002
30	533.9	17
36	556	22.09998
42	571.6	15.59998
48	589.8	18.20001
54	605.3	15.5
60	618.3	13



INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE: 176.940492

TRILOBITE TESTING COMPANY ,L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 4926 Date 4/11/92

Company Name HELMERICH & PAYNE INC

Lease POWELL A-#2 Test No. 2

County HASKELL Sec. 22 Twp. 29S Rng. 33W

SAMPLER RECOVERY

Gas 100 ML

Oil 2900 ML

Mud ML

Water 200 ML

Other 3 cu ft ML

Pressure 350 PSI

Total 3200 ML

PIT MUD ANALYSIS

Chlorides 22000 ppm.

Resistivity ohms @ F

Viscosity 41

Mud Weight 9.1

Filtrate 12.8

Other

SAMPLER ANALYSIS

Resistivity 0.28 ohms @ 70 F

Chlorides 22000 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

P.O. Box 362 • Hays, Kansas 67601 • (913) 625-4778

GAS VOLUME REPORT

HELMERICH & PAYNE INC — OPERATOR

POWELL A-#2 — WELL NAME AND NO.

2 — DST NO.

Min.	Ins. of Water PSIG	Orifice Size	MCF/D	Min.	Ins. of Water PSIG	Orifice Size	MCF/D
				10	5	0.125	1.18
				20	5	0.125	1.18
				30	28	0.125	2.79
				40	18	0.125	2.24
				50	10	0.125	1.67
				60	8	0.125	1.5

Remarks:

GAS TO SURFACE AS TOOL OPENED ON 2nd OPENING
GAS WILL BURN

TRILOBITE TESTING COMPANY, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name POWELL A-#2 Test No. 3 Date 4/11/92

Company HELMERICH & PAYNE INC Zone Tested LANSING "C"

Address P.O. BOX 558 GARDEN CITY KS 67846 Elevation 2955 K.B.

Co. Rep./Geo. LARRY SEIGRIST Cont. CHEYENNE DRLG #3 Est. Ft. of Pay 15

Location: Sec. 22 Twp. 29S Rge. 33W Co. HASKELL State KS

Interval Tested 4247-4267 Drill Pipe Size 4.5 FH

Anchor Length 20 Wt. Pipe I.D. - 2.7 Ft. Run

Top Packer Depth 4242 Drill Collar — 2.25 Ft. Run 752

Bottom Packer Depth 4247

Total Depth 4267

Mud Wt. 9 lb / gal. Viscosity 50 Filtrate 12.8

Tool Open @ 12:33 AM Initial Blow STRONG BLOW - BOTTOM OF BUCKET SOON AS TOOL OPENE
GAS TO SURFACE IN 15 MINUTES-GAUGED @9.20 MCF

Final Blow BOTTOM OF BUCKET SOON AS TOOL OPENED-GAUGED @3.37 MCF

Recovery — Total Feet 3525 Flush Tool? NO

Rec. 3525 Feet of CLEAN GASSY OIL

Rec. _____ Feet of _____

Rec. _____ Feet of _____

Rec. _____ Feet of _____

Rec. _____ Feet of _____

BHT 119 °F Gravity 37 °API @ 68 °F Corrected Gravity 36.5 °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 3800 ppm System

(A) Initial Hydrostatic Mud 2062.8 PSI AK1 Recorder No. 13277 Range 4125

(B) First Initial Flow Pressure 862.1 PSI @ (depth) 4250 w/Clock No. 27594

(C) First Final Flow Pressure 1157 PSI AK1 Recorder No. 11038 Range 5075

(D) Initial Shut-in Pressure 1177.1 PSI @ (depth 4264 w/Clock No. 30418

(E) Second Initial Flow Pressure 1177.1 PSI AK1 Recorder No. _____ Range _____

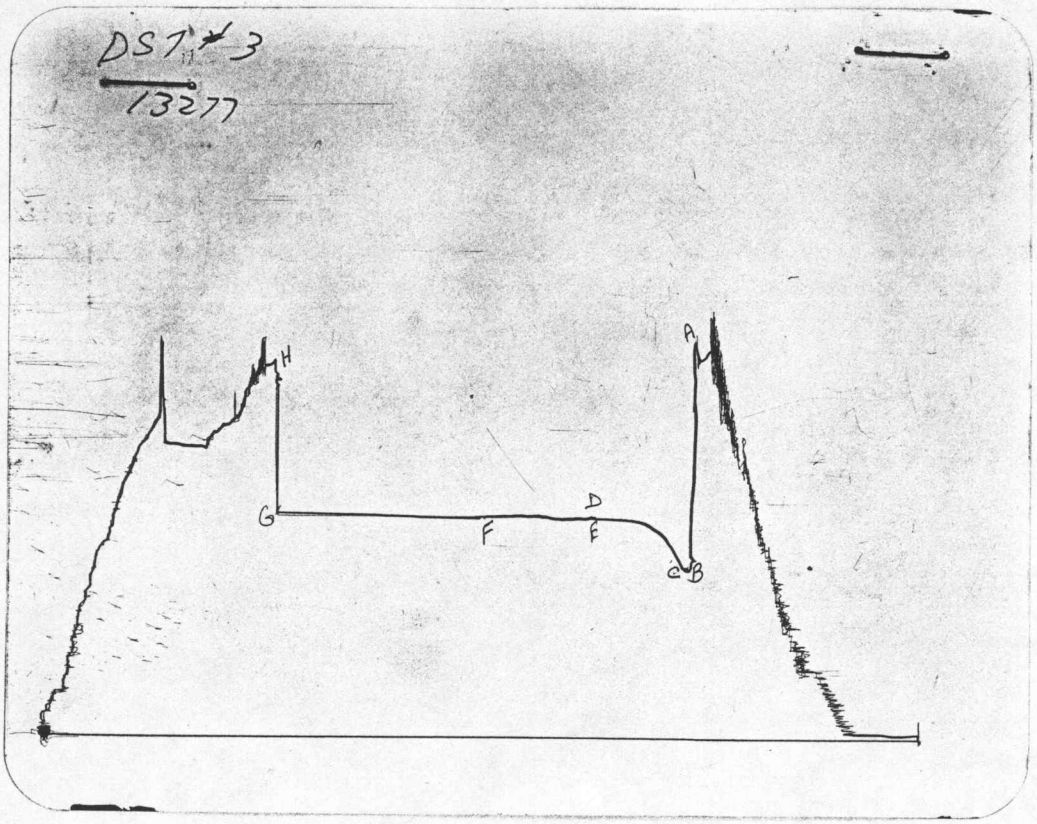
(F) Second Final Flow Pressure 1177.1 PSI @ (depth) _____ w/Clock No. _____

(G) Final Shut-in Pressure 1177.1 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 2042.5 PSI Initial Shut-in 60 Final Shut-in 120

Our Representative TOM HORACEK TOTAL PRICE $ 1035

Printcraft Printers - Hays, KS



This is an actual photograph of recorder chart

POINT	PRESSURE FIELD READING	PRESSURE OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2080	2062.8
(B) FIRST INITIAL FLOW PRESSURE	896	862.1
(C) FIRST FINAL FLOW PRESSURE	1019	1157
(D) INITIAL CLOSED-IN PRESSURE	1172	1177.1
(E) SECOND INITIAL FLOW PRESSURE	1183	1177.1
(F) SECOND FINAL FLOW PRESSURE	1183	1177.1
(G) FINAL CLOSED-IN PRESSURE	1193	1177.1
(H) FINAL HYDROSTATIC MUD	2060	2042.5

POWELL A-#2 INITIAL

DST #3
SHUTIN
30 FLOW TIME

Slope -3.26 psi/cycle
P * 1,178 psi

	TIME(MIN)	Pws (psi)	Log Horn T	<> PRESSURE	Horn T
	6	1174.6	0.778	1174.6	6
X	12	1175.9	0.544	1.3	4
	18	1177.1	0.426	1.2	3
	24	1177.1	0.352	0.0	2
	30	1177.1	0.301	0.0	2
	36	1177.1	0.263	0.0	2
	42	1177.1	0.234	0.0	2
	48	1177.1	0.211	0.0	2
	54	1177.1	0.192	0.0	2
X	60	1177.1	0.176	0.0	2

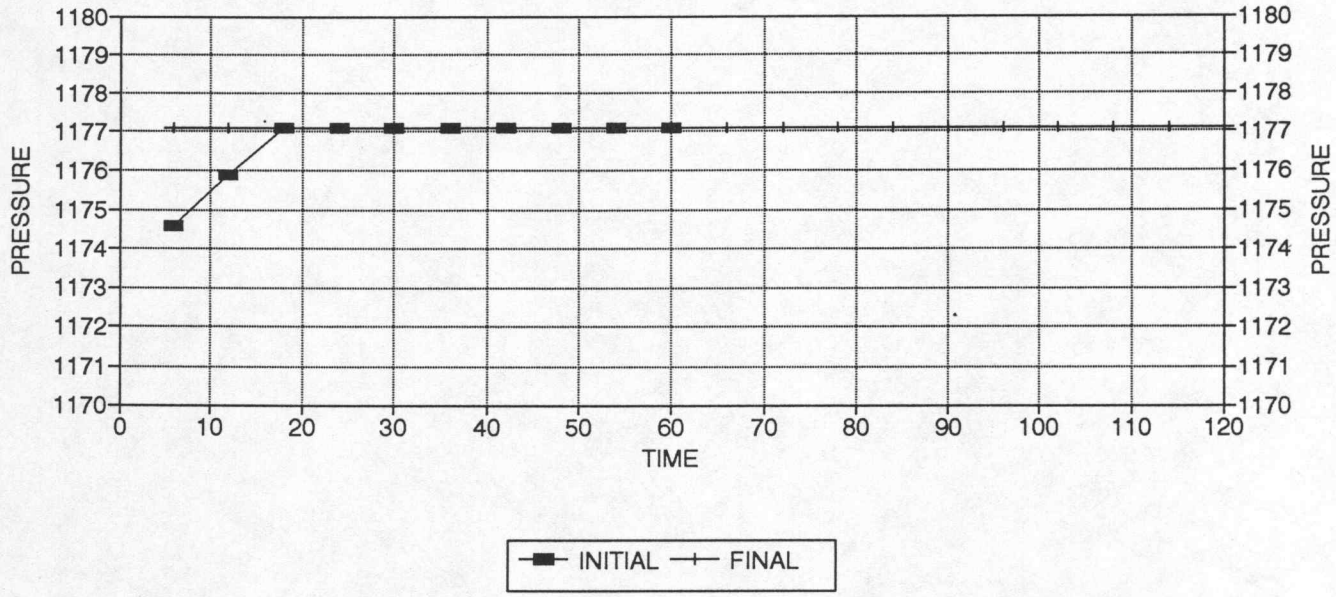
POWELL A-#2 FINAL

DST #3
SHUTIN
90 TOTAL FLOW TIME

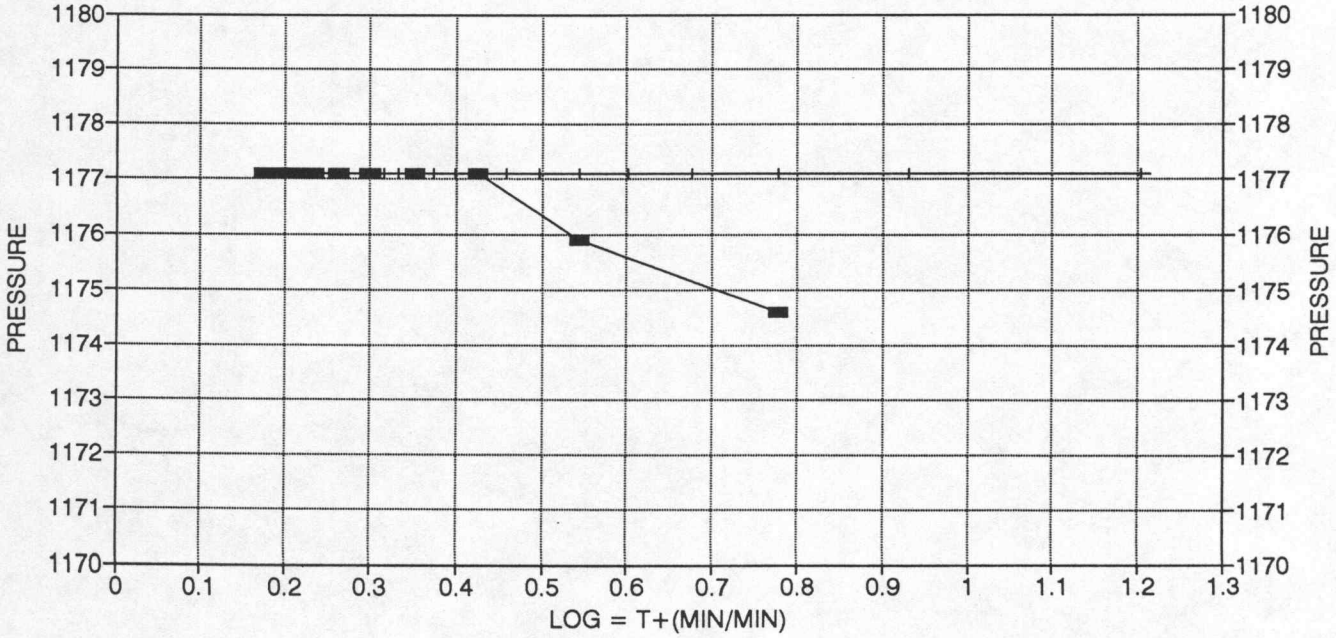
Slope 0.00 psi/cycle
P * 1,177 psi

	TIME(MIN)	Pws (psi)	Log Horn T	<> PRESSURE	Horn T
	6	1177.1	1.204	1177.1	16
	12	1177.1	0.929	0.0	9
	18	1177.1	0.778	0.0	6
	24	1177.1	0.677	0.0	5
	30	1177.1	0.602	0.0	4
	36	1177.1	0.544	0.0	4
	42	1177.1	0.497	0.0	3
	48	1177.1	0.459	0.0	3
	54	1177.1	0.426	0.0	3
	60	1177.1	0.398	0.0	3
	66	1177.1	0.374	0.0	2
	72	1177.1	0.352	0.0	2
	78	1177.1	0.333	0.0	2
	84	1177.1	0.316	0.0	2
	90	1177.1	0.301	0.0	2
	96	1177.1	0.287	0.0	2
	102	1177.1	0.275	0.0	2
	108	1177.1	0.263	0.0	2
X	114	1177.1	0.253	0.0	2
X	120	1177.1	0.243	0.0	2

POWELL A -#2 / DST #3
DELTA T DELTA P



HORNER PLOT



TRILOBITE TESTING COMPANY ,L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 4927 Date 4/11/92

Company Name HELMERICH & PAYNE INC

Lease POWELL A-#2 Test No. 3

County HASKELL Sec. 22 Twp. 29S Rng. 33W

SAMPLER RECOVERY

Gas _____ ML

Oil 3200 ML

Mud _____ ML

Water _____ ML

Other 1 cu ft ML

Pressure 250 PSI

Total 3200 ML

PIT MUD ANALYSIS

Chlorides _____ ppm.

Resistivity _____ ohms @ _____ F

Viscosity 50

Mud Weight 9

Filtrate 12.8

Other _____

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

P.O. Box 362 • Hays, Kansas 67601 • (913) 625-4778

GAS VOLUME REPORT

HELMERICH & PAYNE INC — OPERATOR

POWELL A-#2 — WELL NAME AND NO.

3 — DST NO.

Min.	Ins. of Water PSIG	Orifice Size	MCF/D	Min.	Ins. of Water PSIG	Orifice Size	MCF/D
20	40	0.25	10.6	10	4	0.25	3.37
30	30	0.25	9.2	20	4	0.25	3.37
				30	4	0.25	3.37
				40	6	0.25	4.12
				50	4	0.25	3.37
				60	4	0.25	3.37

Remarks:

GAS TO SURFACE IN 15 MINUTES 1st OPENING
GAS WILL BURN

TRILOBITE TESTING COMPANY ,L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name POWELL A-#2 Test No. 4 Date 4/12/92
Company HELMERICH & PAYNE INC Zone Tested LANSING "G"
Address P.O. BOX 558 GARDEN CITY KS 67846 Elevation 2955 K.B.
Co. Rep./Geo. LARRY SEIGRIST Cont. CHEYENNE DRLG #3 Est. Ft. of Pay 6
Location: Sec. 22 Twp. 29S Rge. 33W Co. HASKELL State KS

Interval Tested 4443-4463
Anchor Length 20
Top Packer Depth 4438
Bottom Packer Depth 4443
Total Depth 4463

Drill Pipe Size 4.5 FH
Wt. Pipe I.D. - 2.7 Ft. Run
Drill Collar — 2.25 Ft. Run 752

Mud Wt. 8.9 lb / gal. Viscosity 42 Filtrate 12

Tool Open @ 3:30 AM Initial Blow STRONG BLOW-BOTTOM OF BUCKET IN 15 SECONDS
GAS TO SURFACE IN 5 MINUTES-GAUGED @522 MCF/DAY
Final Blow BOTTOM OF BUCKET SOON AS TOOL OPENED-GAUGED @185 MCF

Recovery — Total Feet 1700 Flush Tool? NO

Rec. 1700 Feet of CLEAN GASSY OIL-40%GAS/60%OIL

Rec. Feet of

Rec. Feet of

Rec. Feet of

Rec. Feet of

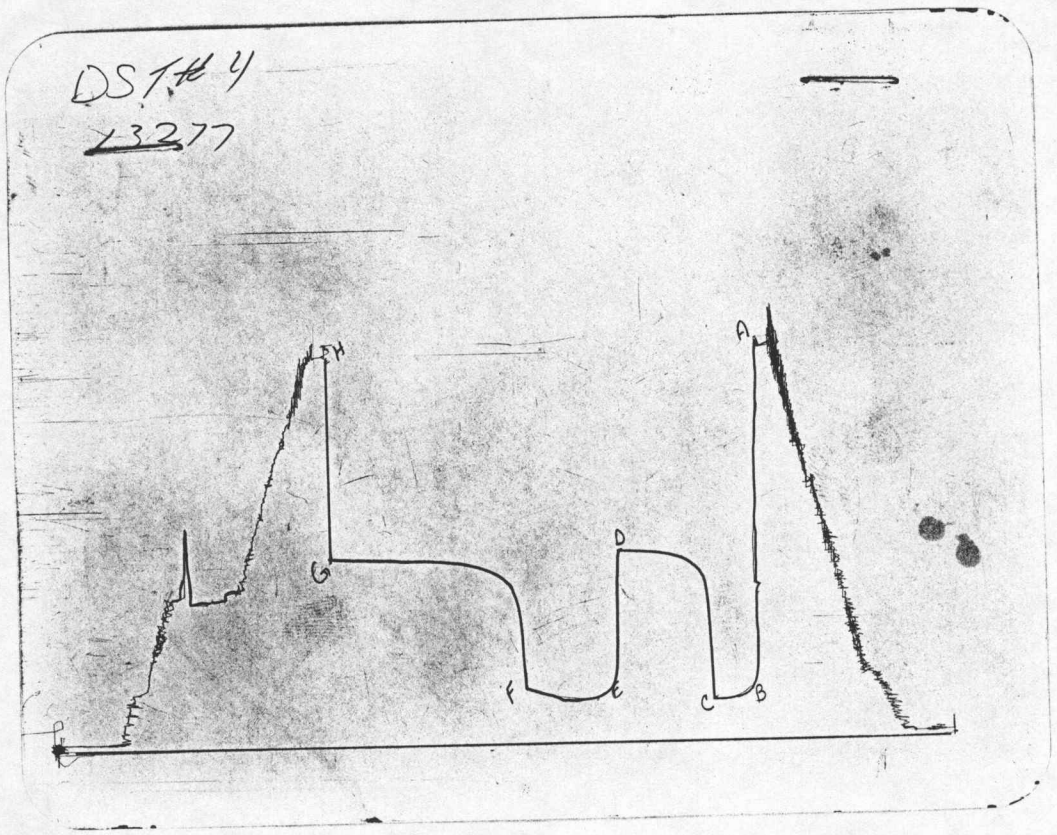
BHT 122 °F Gravity 33 °API @ 60 °F Corrected Gravity 33 °API

RW @ °F Chlorides ppm Recovery Chlorides 4300 ppm System

(A) Initial Hydrostatic Mud	2144.7 PSI	Ak1 Recorder No.	13277	Range	4125
(B) First Initial Flow Pressure	233 PSI	@ (depth)	4446	w/Clock No.	27594
(C) First Final Flow Pressure	180.8 PSI	AK1 Recorder No.	11038	Range	5075
(D) Initial Shut-in Pressure	1030.8 PSI	@ (depth	4460	w/Clock No.	30418
(E) Second Initial Flow Pressure	270.4 PSI	AK1 Recorder No.		Range	
(F) Second Final Flow Pressure	259.8 PSI	@ (depth)		w/Clock No.	
(G) Final Shut-in Pressure	1001.8 PSI	Initial Opening	30	Final Flow	60
(H) Final Hydrostatic Mud	2130.7 PSI	Initial Shut-in	60	Final Shut-in	120

Our Representative TOM HORACEK TOTAL PRICE $ 1035

Printcraft Printers - Hays, KS



This is an actual photograph of recorder chart

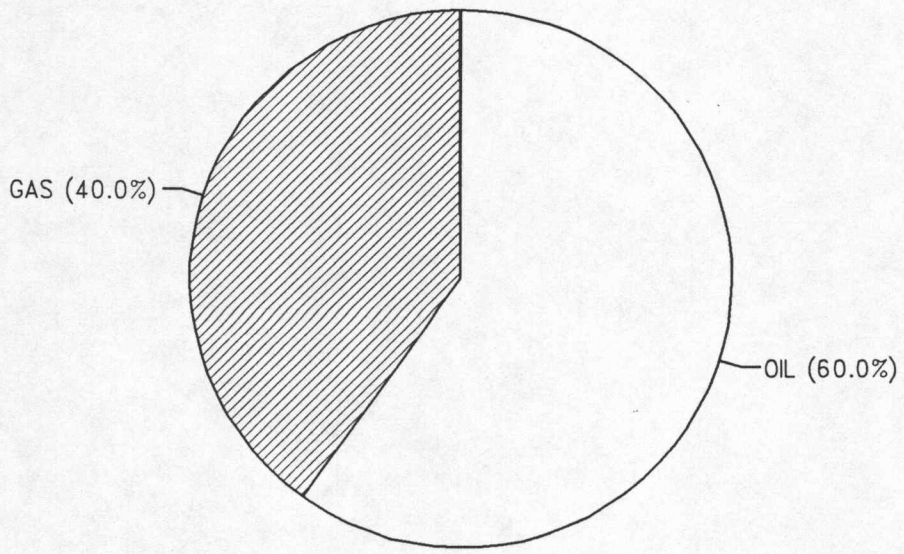
POINT	PRESSURE	FIELD READING	OFFICE READING
(A)	INITIAL HYDROSTATIC MUD	2142	2144.7
(B)	FIRST INITIAL FLOW PRESSURE	291	233
(C)	FIRST FINAL FLOW PRESSURE	226	180.8
(D)	INITIAL CLOSED-IN PRESSURE	1050	1030.8
(E)	SECOND INITIAL FLOW PRESSURE	248	270.4
(F)	SECOND FINAL FLOW PRESSURE	302	259.8
(G)	FINAL CLOSED-IN PRESSURE	1029	1001.8
(H)	FINAL HYDROSTATIC MUD	2122	2130.7

CALCULATED RECOVERY ANALYSIS

DST # 4 TICKET # 4928

SAMPLE #	TOTAL FEET		GAS FEET	%	OIL FEET	%	WATER FEET	%	MUD FEET
DRILL 1	948	40	379.2	60	568.8	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	752	40	300.8	60	451.2	0	0	0	0
COLLAR 2			0		0		0		0
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
TOTAL	1700		680		1020		0		0

			HRS OPEN	BBL/DAY
BBL OIL=	10.294704	*	1.5	164.71526
BBL WATER=	0	*		0
BBL MUD=	0			
BBL GAS =	6.863136			



COMPUTER EVALUATION BY TRILOBITE TESTING
HELMERICH & PAYNE
REPORT FOR DST#4 FOR THE POWELL A-#2
22-29S-33W HASKELL KANSAS

****

TEST PARAMETERS

ELEVATION: 2955 KB
DATUM: -1506
TEST INTERVAL: 4443-4463

RECORDER DEPTH: 4460
BOTTOM HOLE TEMP: 122

EST. PAY: 6 FT
ZONE TESTED: LANSING "G"

TIME INTERVALS: 30-60-60-120
VISCOSITY: .9802181 CP
HOLE SIZE: 7.875 IN

****

CALCULATIONS

CUBIC FEET OF GAS IN PIPE: 11562.5

TOTAL FEET OF RECOVERY: 1700
BARRELS IN DRILL PIPE: 13.48056
BARRELS IN DRILL COLLARS: 3.67728
GAS OIL RATIO: 673.8902 CU.FT./BBL
BUBBLE POINT PRESSURE: ; 44.27645
TOTAL BARRELS OF RECOVERY: 17.15784

UNCORR. INIT. PROD.: 274.5255 BBL/DAY

API GRAVITY: 33

FLUID GRADIENT: .373

CORRECTED PIPE FILLUP: 696.5147

CORR. BARRELS OF RECOVERY: 3.40344 BBL
INITIAL PRODUCTION CORRECTED TO FINAL FLOW PRESSURE: 54.45504 BBL/DAY
INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE
115.0507

****

INITIAL SLOPE 141.54 PSI/CYCLE
INITIAL P* 1054 PSI

FINAL SLOPE 202.13 PSI/CYCLE
FINAL P* 1051 PSI

****

TRANSMISSIBILITY	43.80542 (MD.-FT./CP.)
PERMEABILITY	7.156478 (MD.)
INDICATED FLOW CAPACITY	42.93887 (MD.FT)
PRODUCTIVITY INDEX	4.950013E-02 (BARRELS/DAY/PSI)
DAMAGE RATIO	.7163191
RADIUS OF INVESTIGATION	25.37879 (FT.)
POTENTIOMETRIC SURFACE	932.2691 (FT.)
DRAWDOWN FACTOR	.2846301 (%)

POWELL A-#2 DST #4
INITIAL SHUTIN

30 FLOW TIME

Slope -141.54 psi/cycle
P * 1,054 psi

	TIME(MIN)	Pws (psi)	Log Horn T	<> PRESSURE	Horn T
	6	862.1	0.778	862.1	6
	12	948.5	0.544	86.4	4
	18	980.2	0.426	31.7	3
	24	995.4	0.352	15.2	2
	30	1008.1	0.301	12.7	2
	36	1018.2	0.263	10.1	2
X	42	1020.7	0.234	2.5	2
	48	1023.3	0.211	2.6	2
	54	1025.8	0.192	2.5	2
	60	1028.3	0.176	2.5	2
X	66	1030.8	0.163	2.5	1

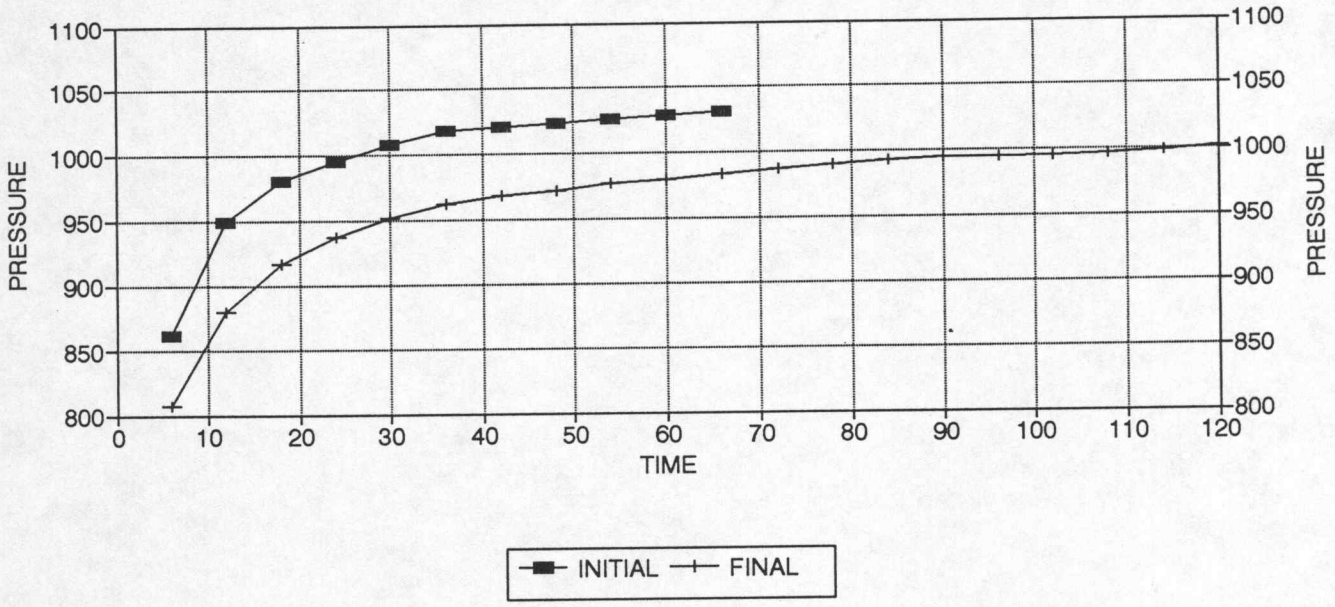
POWELL A-#2 DST #4
FINAL SHUTIN

90 TOTAL FLOW TIME

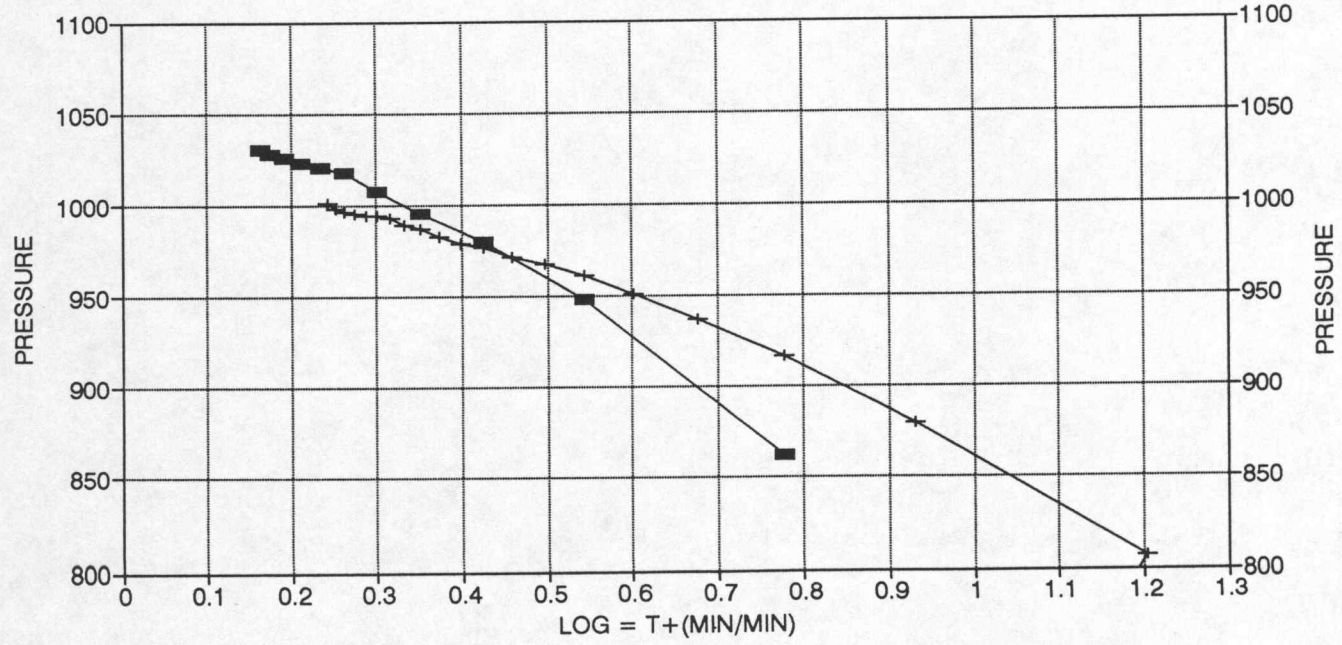
Slope -202.13 psi/cycle
P * 1,051 psi

	TIME(MIN)	Pws (psi)	Log Horn T	<> PRESSURE	Horn T
	6	807.2	1.204	807.2	16
	12	879.9	0.929	72.7	9
	18	916.8	0.778	36.9	6
	24	937.1	0.677	20.3	5
	30	951.1	0.602	14.0	4
	36	961.2	0.544	10.1	4
	42	967.6	0.497	6.4	3
	48	971.4	0.459	3.8	3
	54	976.4	0.426	5.0	3
	60	979.0	0.398	2.6	3
	66	982.8	0.374	3.8	2
	72	986.8	0.352	4.0	2
	78	989.1	0.333	2.3	2
	84	992.9	0.316	3.8	2
	90	994.2	0.301	1.3	2
	96	994.2	0.287	0.0	2
X	102	995.4	0.275	1.2	2
	108	996.7	0.263	1.3	2
	114	998.0	0.253	1.3	2
X	120	1001.8	0.243	3.8	2

POWELL A -#2 / DST #4
DELTA T DELTA P



HORNER PLOT



INITIAL FLOW

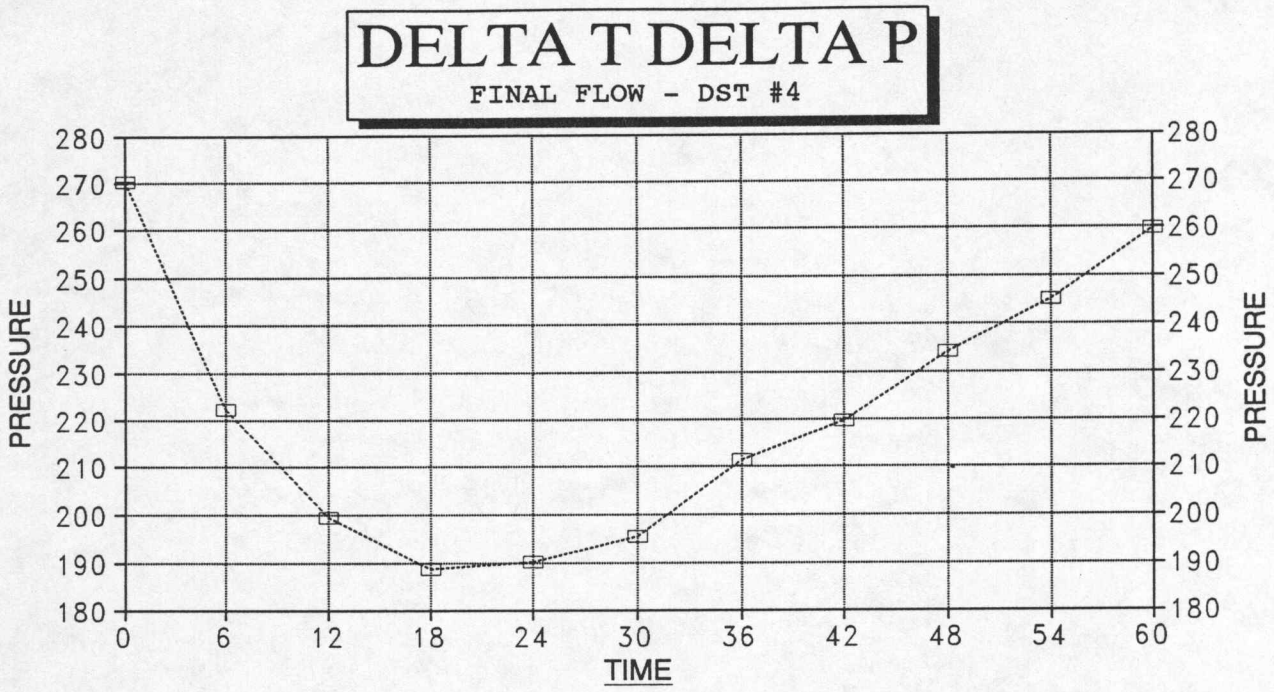
RECORDER # 11038
DST #4

DT(MIN)	PRESSURE	<> PRESSURE
0	233	233
6	200.9	-32.10001
12	184.8	-16.09999
18	183.4	-1.400009
24	180.8	-2.599991

FINAL FLOW

RECORDER # 11038
DST #4

DT(MIN)	PRESSURE	<> PRESSURE
0	270.4	270.4
6	222.3	-48.09999
12	199.5	-22.8
18	188.8	-10.7
24	190.2	1.399994
30	195.5	5.300003
36	211.6	16.10001
42	219.7	8.099991
48	234.4	14.7
54	245.1	10.70001
60	259.8	14.69998



INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE: 119.318735

TRILOBITE TESTING

P.O. Box 362 • Hays, Kansas 67601 • (913) 625-4778

GAS VOLUME REPORT

HELMERICH & PAYNE INC
OPERATOR

POWELL A-#2
WELL NAME AND NO.

4
DST NO.

Min.	Ins. of Water PSIG	Orifice Size	MCF/D	Min.	Ins. of Water PSIG	Orifice Size	MCF/D
10	60	0.75	872	10	45	0.75	697
20	40	0.75	639	20	30	0.75	522
30	30	0.75	522	30	18	0.75	370
				40	10	0.75	259
				50	8	0.75	227
				60	5	0.75	185

Remarks:

GAS TO SURFACE IN 5 MINUTES 1st OPENING

TRILOBITE TESTING COMPANY ,L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 4928 Date 4/12/92

Company Name HELMERICH & PAYNE INC

Lease POWELL A-#2 Test No. 4

County HASKELL Sec. 22 Twp. 29S Rng. 33W

SAMPLER RECOVERY

Gas 500 ML

Oil 2700 ML

Mud ML

Water ML

Other 6 cu ft ML

Pressure 250 PSI

Total 3200 ML

PIT MUD ANALYSIS

Chlorides ppm.

Resistivity ohms @ F

Viscosity 42

Mud Weight 8.9

Filtrate 12

Other

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

Drill-Stem Test Data

Well Name POWELL A-#2 Test No. 5 Date 4/14/92

Company HELMERICH & PAYNE INC Zone Tested KS CITY "A"

Address P.O. BOX 558 GARDEN CITY KS 67846 Elevation 2955 K.B.

Co. Rep./Geo. LARRY SEIGRIST Cont. CHEYENNE DRLG #3 Est. Ft. of Pay 10

Location: Sec. 22 Twp. 29S Rge. 33W Co. HASKELL State KS

Interval Tested 4585-4610 Drill Pipe Size 4.5 FH

Anchor Length 25 Wt. Pipe I.D. - 2.7 Ft. Run

Top Packer Depth 4580 Drill Collar — 2.25 Ft. Run 752

Bottom Packer Depth 4585

Total Depth 4610

Mud Wt. 8.9 lb / gal. Viscosity 40 Filtrate 13.6

Tool Open @ 2:30 AM Initial Blow STRONG BLOW-BOTTOM OF BUCKET IN 20 SECONDS GAS TO SURFACE IN 3 MINUTES-GAUGED @ 116 MCF

Final Blow BOTTOM OF BUCKET SOON AS TOOL OPENED-GAUGED @ 3.56 MCF

Recovery — Total Feet 2820 Flush Tool? NO

Rec. 2820 Feet of CLEAN GASSY OIL-20%GAS/80%OIL

Rec. _____ Feet of _____

Rec. _____ Feet of _____

Rec. _____ Feet of _____

Rec. _____ Feet of _____

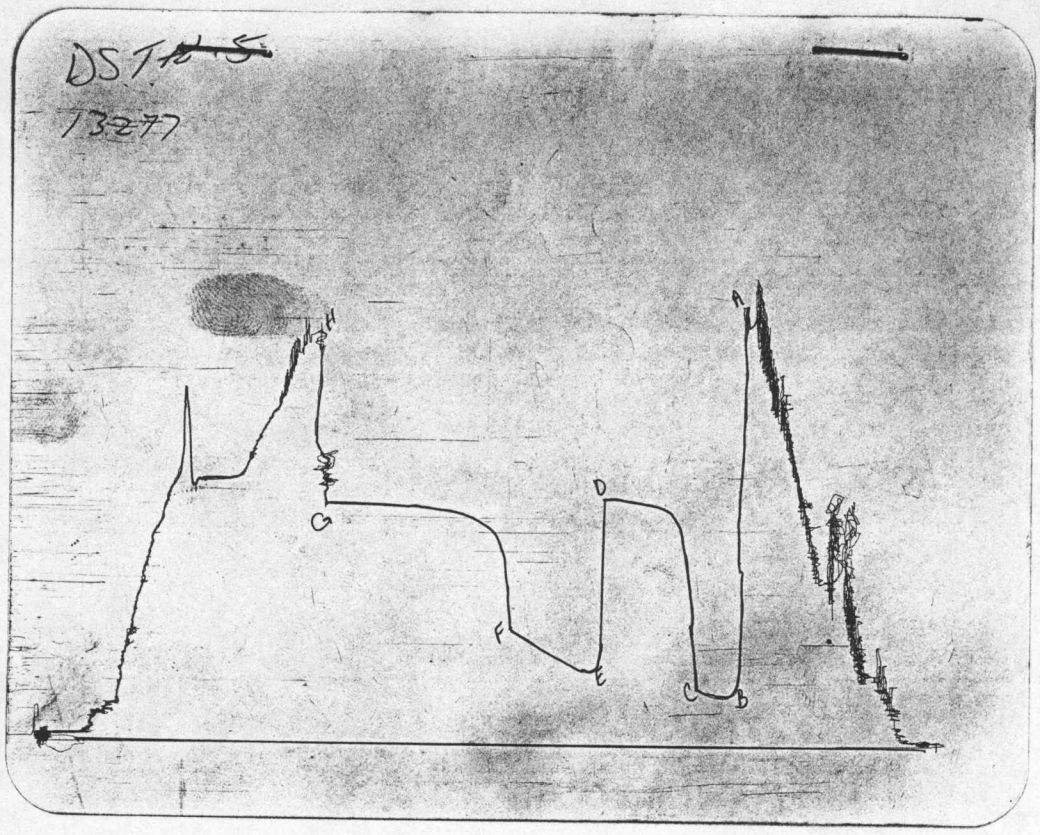
BHT 124 °F Gravity 38 °API @ 70 °F Corrected Gravity 37.3 °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 4800 ppm System

(A) Initial Hydrostatic Mud	2260.7 PSI	Ak1 Recorder No.	13277	Range	4125
(B) First Initial Flow Pressure	271 PSI	@ (depth)	4588	w/Clock No.	27594
(C) First Final Flow Pressure	311 PSI	AK1 Recorder No.	11038	Range	5075
(D) Initial Shut-in Pressure	1332.2 PSI	@ (depth	4607	w/Clock No.	27501
(E) Second Initial Flow Pressure	408.2 PSI	AK1 Recorder No.		Range	
(F) Second Final Flow Pressure	631.1 PSI	@ (depth)		w/Clock No.	
(G) Final Shut-in Pressure	1303.6 PSI	Initial Opening	30	Final Flow	60
(H) Final Hydrostatic Mud	2240.6 PSI	Initial Shut-in	60	Final Shut-in	120

Our Representative TOM HORACEK TOTAL PRICE $ 1035

Printcraft Printers - Hays, KS



This is an actual photograph of recorder chart

POINT	PRESSURE FIELD READING	PRESSURE OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2246	2260.7
(B) FIRST INITIAL FLOW PRESSURE	270	271
(C) FIRST FINAL FLOW PRESSURE	313	311
(D) INITIAL CLOSED-IN PRESSURE	1326	1332.2
(E) SECOND INITIAL FLOW PRESSURE	399	408.2
(F) SECOND FINAL FLOW PRESSURE	619	631.1
(G) FINAL CLOSED-IN PRESSURE	1295	1303.6
(H) FINAL HYDROSTATIC MUD	2236	2240.6

COMPUTER EVALUATION BY TRILOBITE TESTING
HELMERICH & PAYNE
REPORT FOR DST#5 FOR THE POWELL A-#2
22-29S-33W HASKELL KANSAS

****

TEST PARAMETERS

ELEVATION:	2955 KB	EST. PAY:	10 FT
DATUM:	-1634	ZONE TESTED:	KS CITY "A"
TEST INTERVAL:	4585-4610		
		TIME INTERVALS:	30-60-60-120
RECORDER DEPTH:	4588	VISCOSITY:	7.149416 CP
BOTTOM HOLE TEMP:	124	HOLE SIZE:	7.875 IN

****

CALCULATIONS

CUBIC FEET OF GAS IN PIPE: 222.5

TOTAL FEET OF RECOVERY: 2820
BARRELS IN DRILL PIPE: 29.40696
BARRELS IN DRILL COLLARS: 3.67728
GAS OIL RATIO: 6.725257 CU.FT./BBL
BUBBLE POINT PRESSURE: ; .5203151
TOTAL BARRELS OF RECOVERY: 33.08424
UNCORR. INIT. PROD.: 529.3478 BBL/DAY
API GRAVITY: 37
FLUID GRADIENT: .364
CORRECTED PIPE FILLUP: 1733.791
CORR. BARRELS OF RECOVERY: 17.6271 BBL
INITIAL PRODUCTION CORRECTED TO FINAL FLOW PRESSURE: 282.0336 BBL/DAY
INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE
231.2963

****

INITIAL SLOPE 418.41 PSI/CYCLE
INITIAL P* 1400 PSI

FINAL SLOPE 98.99 PSI/CYCLE
FINAL P* 1328 PSI

****

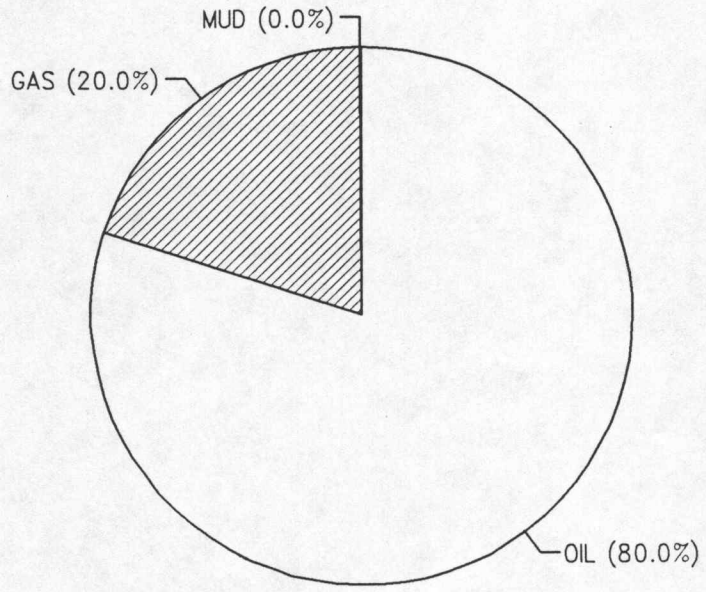
TRANSMISSIBILITY	463.2657 (MD.-FT./CP.)
PERMEABILITY	331.2078 (MD.)
INDICATED FLOW CAPACITY	3312.078 (MD.FT)
PRODUCTIVITY INDEX	.5234902 (BARRELS/DAY/PSI)
DAMAGE RATIO	1.288339
RADIUS OF INVESTIGATION	172.652 (FT.)
THEORETICAL POTENTIAL FROM FINAL FLOW PRESSURE	363.355 BBL/DAY
THEORITICAL POTENTIAL FROM PSEUDO STEADY FLOW STATE	297.9881 BBL/DAY
POTENTIOMETRIC SURFACE	1446.632 (FT.)
DRAWDOWN FACTOR	5.142856 (%)

CALCULATED RECOVERY ANALYSIS

DST # 5 TICKET # 4929

SAMPLE	TOTAL		GAS		OIL		WATER		MUD
#	FEET	%	FEET	%	FEET	%	FEET	%	FEET
DRILL 1	2068	20	413.6	80	1654.4	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	752	20	150.4	80	601.6	0	0	0	0
COLLAR 2			0		0		0		0
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
TOTAL	2820		564		2256		0		0

			HRS OPEN	BBL/DAY
BBL OIL=	26.467392	*	1.5	423.47827
BBL WATER=	0	*		0
BBL MUD=	0			
BBL GAS =	6.616848			



POWELL A-#2 INITIAL

DST #5
SHUTIN
30 FLOW TIME

Slope -418.41 psi/cycle
P * 1,400 psi

	TIME(MIN)	Pws (psi)	Log Horn T	<> PRESSURE	Horn T
	6	900.6	0.778	900.6	6
	12	1166.6	0.544	266.0	4
	18	1238.1	0.426	71.5	3
	24	1274.9	0.352	36.8	2
	30	1291.3	0.301	16.4	2
	36	1300.5	0.263	9.2	2
	42	1310.8	0.234	10.3	2
	48	1315.9	0.211	5.1	2
X	54	1320.0	0.192	4.1	2
	60	1326.1	0.176	6.1	2
X	66	1332.2	0.163	6.1	1

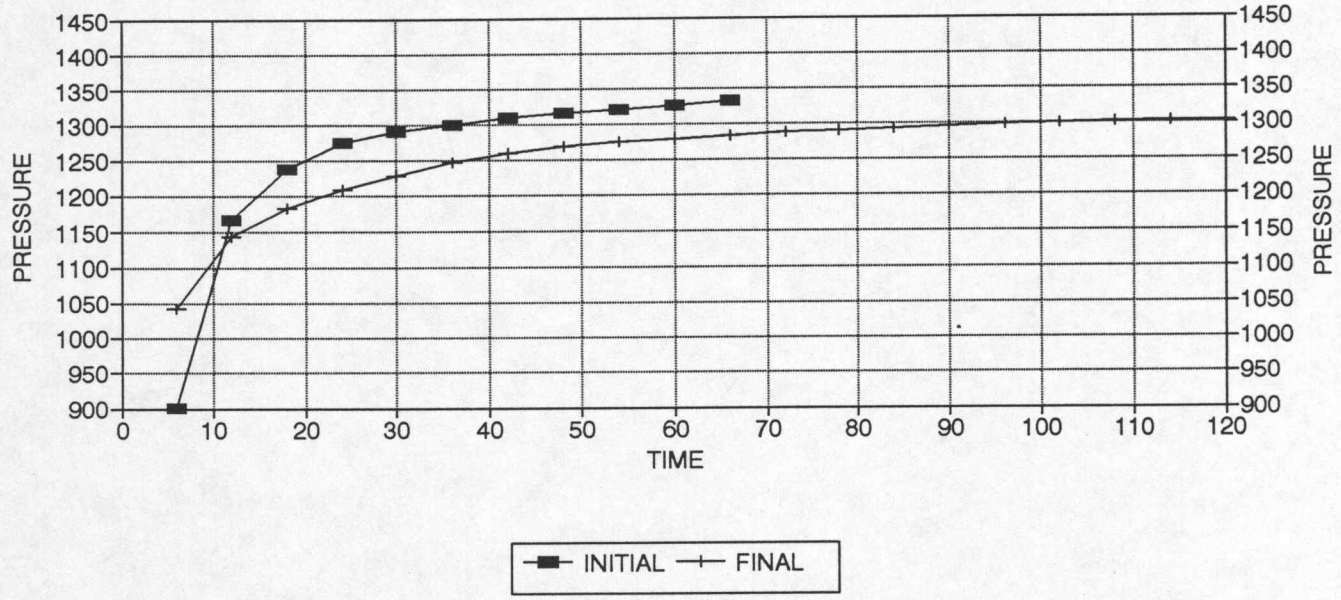
POWELL A-#2 FINAL

DST #5
SHUTIN
90 TOTAL FLOW TIME

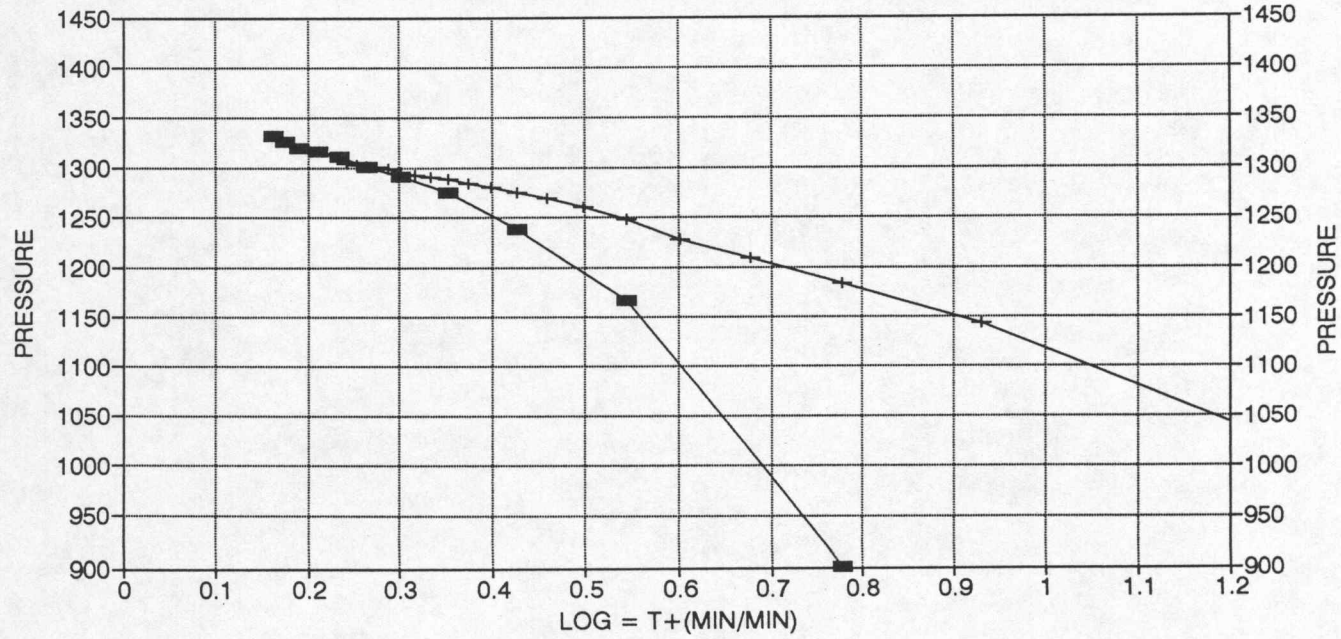
Slope -98.99 psi/cycle
P * 1,328 psi

	TIME(MIN)	Pws (psi)	Log Horn T	<> PRESSURE	Horn T
	6	1042.8	1.204	1042.8	16
	12	1144.1	0.929	101.3	9
	18	1183.0	0.778	38.9	6
	24	1209.5	0.677	26.5	5
	30	1227.9	0.602	18.4	4
	36	1247.9	0.544	20.0	4
	42	1260.6	0.497	12.7	3
	48	1269.8	0.459	9.2	3
	54	1274.9	0.426	5.1	3
	60	1280.1	0.398	5.2	3
	66	1284.2	0.374	4.1	2
	72	1288.2	0.352	4.0	2
	78	1290.3	0.333	2.1	2
	84	1292.3	0.316	2.0	2
	90	1295.4	0.301	3.1	2
	96	1298.5	0.287	3.1	2
	102	1300.5	0.275	2.0	2
X	108	1301.6	0.263	1.1	2
	114	1302.6	0.253	1.0	2
X	120	1303.6	0.243	1.0	2

POWELL A -#2 / DST #5
DELTA T DELTA P



HORNER PLOT



INITIAL FLOW

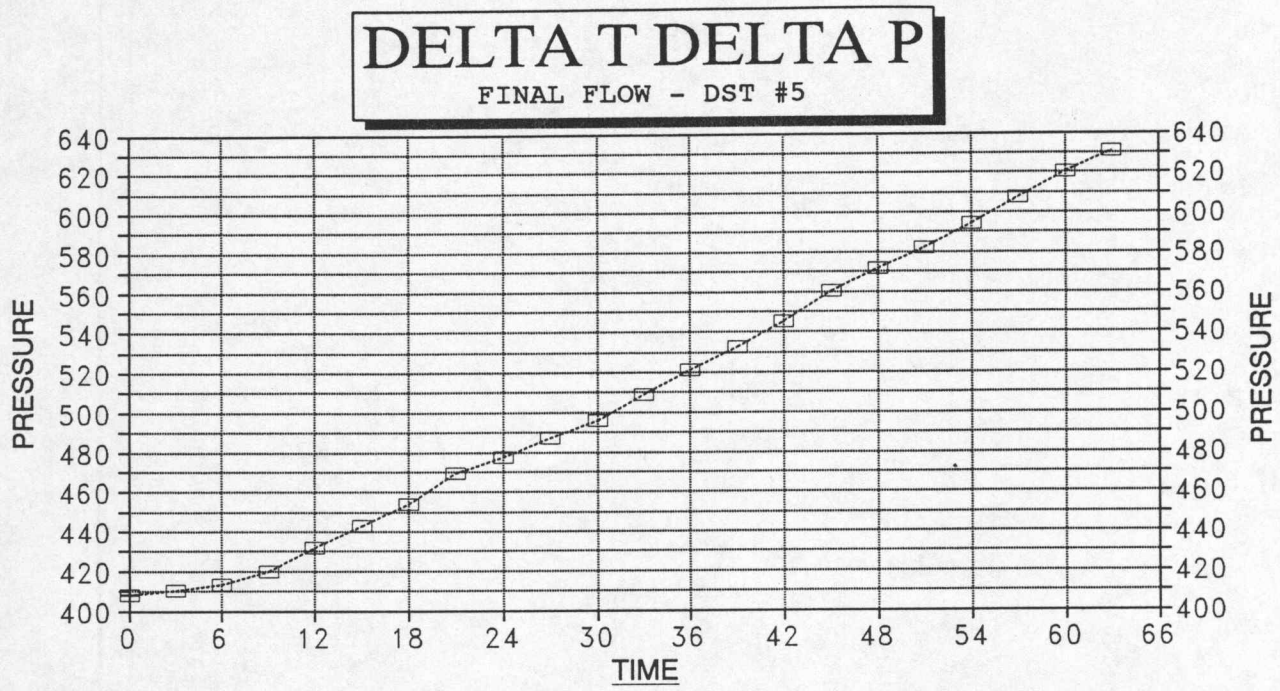
RECORDER # 13277
DST #5

DT(MIN)	PRESSURE	<> PRESSURE
0	271	271
3	274.3	3.299988
6	267.8	-6.5
9	267.8	0
12	267.8	0
15	270	2.200012
18	278.6	8.600006
21	284	5.399994
24	293.7	9.700012
27	302.4	8.699982
30	311	8.600006

FINAL FLOW

RECORDER # 13277
DST #5

DT(MIN)	PRESSURE	<> PRESSURE
0	408.2	408.2
3	410.4	2.199982
6	413.6	3.200012
9	420.1	6.5
12	432	11.89999
15	442.6	10.60001
18	454.3	11.69998
21	469.1	14.80002
24	477.6	8.5
27	487.1	9.5
30	495.6	8.5
33	509.3	13.69998
36	521	11.70001
39	532.6	11.59998
42	545.1	12.5
45	560.5	15.40003
48	571.8	11.29999
51	582.4	10.60004
54	594.4	12
57	607.7	13.29999
60	620.9	13.20001
63	631.1	10.19995



INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE 231.2963 BBL/DAY

TRILOBITE TESTING COMPANY ,L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 4929 Date 4/14/92

Company Name HELMERICH & PAYNE INC

Lease POWELL A-#2 Test No. 5

County HASKELL Sec. 22 Twp. 29S Rng. 33W

SAMPLER RECOVERY

Gas _____ ML

Oil 3200 ML

Mud _____ ML

Water _____ ML

Other .7 cu ft gas ML

Pressure 300 PSI

Total 3200 ML

PIT MUD ANALYSIS

Chlorides _____ ppm.

Resistivity _____ ohms @ _____ F

Viscosity 40

Mud Weight 8.9

Filtrate 13.6

Other _____

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 L.L.C.

P.O. Box 362 • Hays, Kansas 67601 • (913) 625-4778

GAS VOLUME REPORT

HELMERICH & PAYNE INC (OPERATOR) | POWELL A-#2 (WELL NAME AND NO.) | 5 (DST NO.)

Min.	Ins. of Water PSIG	Orifice Size	MCF/D	Min.	Ins. of Water PSIG	Orifice Size	MCF/D
10	20	0.5	177	10	10	0.375	65.3
20	17	0.5	159	20	12	0.375	72.6
30	10	0.5	116	30	3	0.375	6.18
				40	4	0.375	7.14
				50	2	0.375	5.05
				60	1	0.375	3.56

Remarks:

GAS TO SURFACE IN 3 MINUTES 1st OPENING
GAS WILL BURN

TRILOBITE TESTING COMPANY, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name POWELL A-#2 Test No. 6 Date 4/16/92
Company HELMERICH & PAYNE INC Zone Tested MORROW
Address P.O. BOX 558 GARDEN CITY KS 67846 Elevation 2955 K.B.
Co. Rep./Geo. LARRY SEIGRIST Cont. CHEYENNE DRLG #3 Est. Ft. of Pay
Location: Sec. 22 Twp. 29S Rge. 33W Co. HASKELL State KS

Interval Tested 5355-5375 Drill Pipe Size 4.5 FH
Anchor Length 20 Wt. Pipe I.D. - 2.7 Ft. Run
Top Packer Depth 5350 Drill Collar — 2.25 Ft. Run 752
Bottom Packer Depth 5355
Total Depth 5375

Mud Wt. 9.1 lb / gal. Viscosity 52 Filtrate 8

Tool Open @ 3:40 PM Initial Blow 1" BLOW-BUILT TO BOTTOM OF BUCKET IN 8 MIN
ISI:BLED OFF BLOW-NO BLOW BACK
Final Blow SURFACE BLOW BUILT TO BOTTOM OF BUCKET IN 25 MINUTES
FSI:BLED OFF BLOW-NO BLOW BACK

Recovery — Total Feet 1020 Flush Tool? NO

Rec. 300 Feet of GAS IN PIPE

Rec. 1020 Feet of SALT WATER

Rec. Feet of

Rec. Feet of

Rec. Feet of

BHT 136 °F Gravity °API @ °F Corrected Gravity °API

RW 0.1 @ 77 °F Chlorides 69000 ppm Recovery Chlorides 1800 ppm System

(A) Initial Hydrostatic Mud 2660.4 PSI AK1 Recorder No. 13277 Range 4125

(B) First Initial Flow Pressure 132.5 PSI @ (depth) 5358 w/Clock No. 27594

(C) First Final Flow Pressure 310.4 PSI AK1 Recorder No. 11038 Range 5075

(D) Initial Shut-in Pressure 1472.5 PSI @ (depth 5372 w/Clock No. 3948

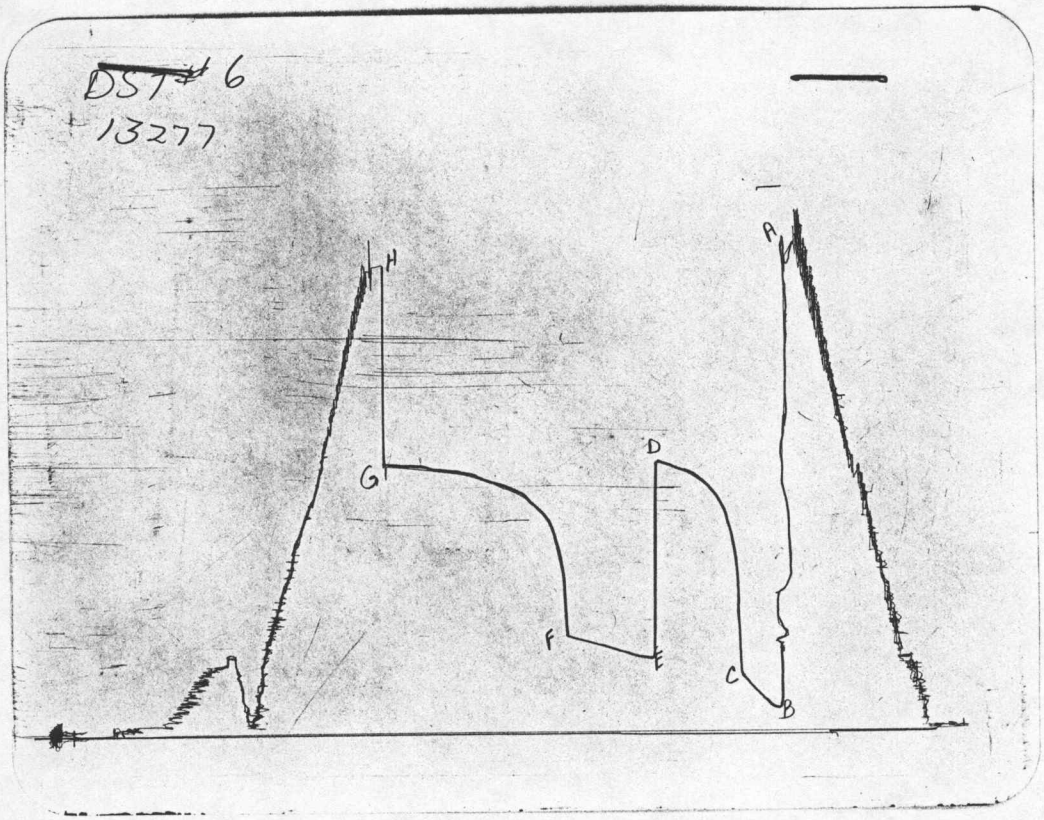
(E) Second Initial Flow Pressure 402.5 PSI AK1 Recorder No. Range

(F) Second Final Flow Pressure 540.9 PSI @ (depth) w/Clock No.

(G) Final Shut-in Pressure 1460.1 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 2577.4 PSI Initial Shut-in 60 Final Shut-in 120

Our Representative TOM HORACEK TOTAL PRICE $ 1100



This is an actual photograph of recorder chart

POINT	PRESSURE	
	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2657	2660.4
(B) FIRST INITIAL FLOW PRESSURE	129	132.5
(C) FIRST FINAL FLOW PRESSURE	302	310.4
(D) INITIAL CLOSED-IN PRESSURE	1469	1472.5
(E) SECOND INITIAL FLOW PRESSURE	399	402.5
(F) SECOND FINAL FLOW PRESSURE	537	540.9
(G) FINAL CLOSED-IN PRESSURE	1459	1460.1
(H) FINAL HYDROSTATIC MUD	2576	2577.4

TRILOBITE TESTING COMPANY ,L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 4930 Date 4/16/92

Company Name HELMERICH & PAYNE INC

Lease POWELL A-#2 Test No. 6

County HASKELL Sec. 22 Twp. 29S Rng. 33W

SAMPLER RECOVERY

Gas _____ ML

Oil _____ ML

Mud _____ ML

Water 3200 ML

Other _____ ML

Pressure 350 PSI

Total 3200 ML

PIT MUD ANALYSIS

Chlorides 69000 ppm.

Resistivity _____ ohms @ _____ F

Viscosity 52

Mud Weight 9.1

Filtrate 8

Other _____

SAMPLER ANALYSIS

Resistivity 0.1 ohms @ 77 F

Chlorides 69000 ppm.

Gravity _____ corrected @ 60 F

PIPE RECOVERY

TOP

Resistivity 0.11 ohms @ 77 F

Chlorides 68000 ppm.

MIDDLE

Resistivity _____ ohms @ _____ F

Chlorides _____ ppm.

BOTTOM

Resistivity 0.1 ohms @ 77 F

Chlorides 69000 ppm.

TRILOBITE TESTING COMPANY *L.L.C.*

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 4930 Date 4-16-92

Company Name Helmerich & Payne Inc.

Lease Powell A. #2 Test No. #6

County Haskell Sec. 22 Twp. 29S Rng. 33W

SAMPLER RECOVERY

Gas _____ ML

Oil _____ ML

Mud _____ ML

Water 3200 ML

Other _____ ML

Pressure 350 PSI

Total 3200 ML

PIT MUD ANALYSIS

Chlorides _____ ppm.

Resistivity _____ ohms @ _____ F

Viscosity 52

Mud Weight 9.1

Filtrate 8.0

Other _____

SAMPLER ANALYSIS

Resistivity .1 ohms @ 77 F

Chlorides 69000 ppm.

Gravity _____ corrected @ 60 F

PIPE RECOVERY

TOP

Resistivity .11 ohms @ 77 F

Chlorides 68000 ppm.

MIDDLE

Resistivity _____ ohms @ _____ F

Chlorides _____ ppm.

BOTTOM

Resistivity .1 ohms @ 77 F

Chlorides 69000 ppm.

TRILOBITE TESTING L.L.C.
P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No. 4930

Well Name & No. Powell A #2 Test No. 6 Date 4-16-92
Company Helmerich & Payne Inc. Zone Tested Morrow
Address Box 558 Garden City Ks. 67846 Elevation 2955 (KB)
Co. Rep./Geo. Steve Simonton Cont. Cheyenne Drlg #3 Est. Ft. of Pay
Location: Sec. 22 Twp. 29s Rge. 33w Co. Haskell State Ks
No. of Copies Distribution Sheet Yes No Turnkey Yes No Evaluation

Interval Tested 5355-5375 Drill Pipe Size 4.5 F. Hole
Anchor Length 20' Top Choke — 1" Bottom Choke — ¾"
Top Packer Depth 5350 Hole Size — 7⅞" Rubber Size — 6¾"
Bottom Packer Depth 5355 Wt. Pipe I.D. — 2.7 Ft. Run —
Total Depth 5375 Drill Collar — 2.25 Ft. Run 752'
Mud Wt. 9.1 lb / gal. Viscosity 52 Filtrate 8.0
Tool Open @ 3:40 pm Initial Blow 1 in blow - built to bottom of bucket 8 min.
ISI - bled off blow - NO blow back
Final Blow surface blow - built to bottom of bucket in 25 min.
FSI - bled off blow - NO blow back
Recovery — Total Feet 1020' Feet of Gas in Pipe 300' Flush Tool? NO

Rec.	Feet Of	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud
Rec. 1020'	Feet Of salt water	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud

BHT 136 °F Gravity °API @ °F Corrected Gravity °API
RW .1 @ 77 °F Chlorides 69000 ppm Recovery Chlorides 4800 ppm System

(A) Initial Hydrostatic Mud	2657 PSI	AK1 Recorder No.	13277	Range	4125
(B) First Initial Flow Pressure	129 PSI	@ (depth)	5358	w/Clock No.	27594
(C) First Final Flow Pressure	302 PSI	AK1 Recorder No.	11038	Range	5075
(D) Initial Shut-In Pressure	1469 PSI	@ (depth)	5372	w/Clock No.	3948
(E) Second Initial Flow Pressure	399 PSI	AK1 Recorder No.		Range	
(F) Second Final Flow Pressure	537 PSI	@ (depth)		w/Clock No.	
(G) Final Shut-In Pressure	1459 PSI	Initial Opening	30	Test	X 650.00
(H) Final Hydrostatic Mud	2576 PSI	Initial Shut-In	60	Jars	X 200.00
		Final Flow	60	Safety Joint	X 50.00
		Final Shut-In	120	Straddle	
				Circ. Sub	
				Sampler	X 200.00
				Extra Packer	
				Other	
				TOTAL PRICE $	1100.00

Approved By Steve Simonton
Our Representative Tom Horacek

Printcraft Printers - Hays, KS