TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name: J & L LAND "A" #1 | Test No.: 1 | Date: 12/20/92

Company: CHARTER PRODUCTION COMPANY | Zone: PAWNEE SAND

Address: 224 EAST DOUGLAS #400 WICHITA KS 67202 | Elevation: 2366

Co. Rep./Geo.: TYLER SANDERS | Cont.: DUKE RIG #4 | Est. Ft. of Pay: 3

Location: Sec.: 27 | Twp.: 15S | Rge.: 21W | Co.: TREGO | State: KS

Interval Tested: 4169-4210 | Drill Pipe Size: 4.5" XH

Anchor Length: 41 | Wt. Pipe I.D. - 2.7 Ft. Run: 189

Top Packer Depth: 4164 | Drill Collar – 2.25 Ft. Run:

Bottom Packer Depth: 4169 | Mud Wt.: 9.2 lb/Gal.

Total Depth: 4210 | Viscosity: 50 | Filtrate: 10.4

Tool Open @: 3:47 AM | Initial Blow: STRONG-BOTTOM OF BUCKET IN 1 MINUTE 23 SECONDS

Final Blow:

Recovery - Total Feet: 581 | Flush Tool?:

Rec. 898 Feet of GAS IN PIPE

Rec. 452 Feet of CLEAN GASSY OIL-20%GAS/80%OIL

Rec. 129 Feet of OIL CUT GASSY MUD-20%GAS/20%OIL/60%MUD

Rec. Feet of

Rec. Feet of

BHT 121 °F | Gravity °API | @ °F | Corrected Gravity 36 °API

RW @ °F | Chlorides ppm Recovery | Chlorides 5000 ppm System

(A) Initial Hydrostatic Mud 2250.6 PSI | AK1 Recorder No. 13754 | Range 4000

(B) First Initial Flow Pressure 92.3 PSI | @ (depth) 4173 | w / Clock No. 8376

(C) First Final Flow Pressure 234.7 PSI | AK1 Recorder No. 7437 | Range 4200

(D) Initial Shut-in Pressure 0.0 PSI | @ (depth) 4206 | w / Clock No. 25828

(E) Second Initial Flow Pressure 0.0 PSI | AK1 Recorder No. | Range

(F) Second Final Flow Pressure 0.0 PSI | @ (depth) | w / Clock No.

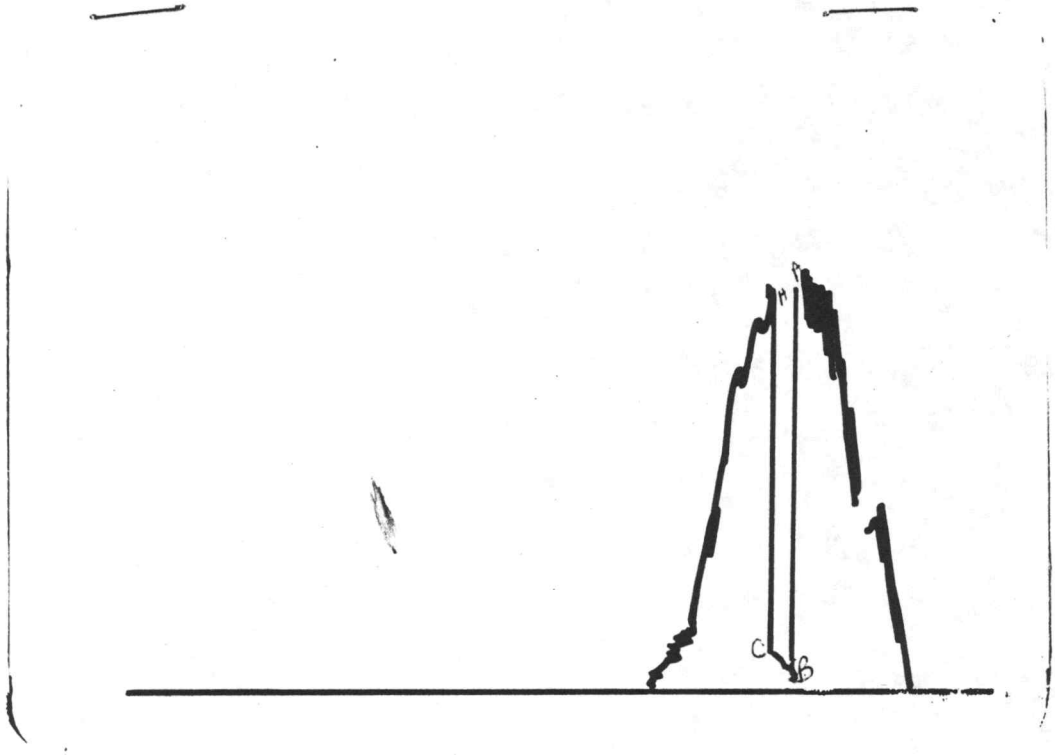
(G) Final Shut-in Pressure 0.0 PSI | Initial Opening 15 | Final Flow 0

(H) Final Hydrostatic Mud 2087.0 PSI | Initial Shut-in 0 | Final Shut-in 0

Our Representative: DAN BANGLE

Copy of Black Chart

CHART PAGE



This is an actual photograph of recorder chart

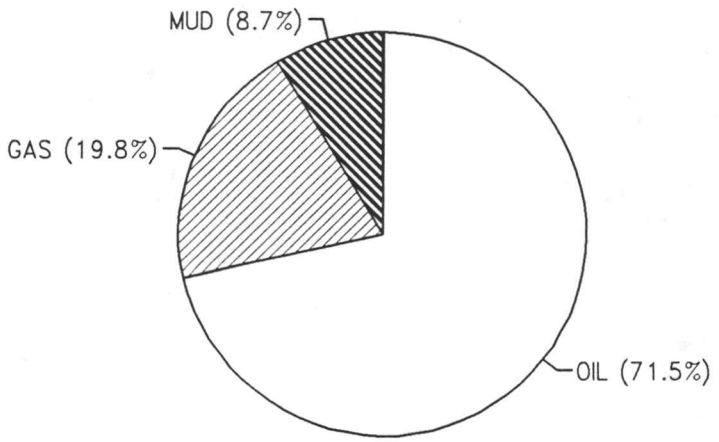
	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2238	2250.6
(B) FIRST INITIAL FLOW PRESSURE	88	92.3
(C) FIRST FINAL FLOW PRESSURE	226	234.7
(D) INITIAL CLOSED-IN PRESSURE	0	0
(E) SECOND INITIAL FLOW PRESSURE	0	0
(F) SECOND FINAL FLOW PRESSURE	0	0
(G) FINAL CLOSED-IN PRESSURE	0	0
(H) FINAL HYDROSTATIC MUD	2087	2087

CALCULATED RECOVERY ANALYSIS

DST # 1 TICKET # 5574

SAMPLE #	TOTAL FEET	GAS %	GAS FEET	OIL %	OIL FEET	WATER %	WATER FEET	MUD %	MUD FEET
DRILL 1	392	20	78.4	80	313.6	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	60	20	12	80	48	0	0	0	0
PIPE 2	129	20	25.8	20	25.8	0	0	60	77.4
3			0		0		0		0
4			0		0		0		0
DRILL 1			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	581		116.2		387.4		0		77.4

			HRS OPEN	BBL/DAY
BBL OIL=	4.975992	*	0.25	477.69523
BBL WATER=	0	*		0
BBL MUD=	0.60372			
BBL GAS =	1.379448			



TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

№ 5574

Well Name & No. I+L Land "A" #1 Test No. 1 Date 12-20-92

Company Charter Prod. Co. Zone Tested ~~cher.~~ Sd Pawnee Sand

Address 400 Kress Energy Ctr, 224 E. Douglas, Wichita, Ks 67202 Elevation 2366 K.B.

Co. Rep./Geo. Tyler Sanders Cont. Duke #4 Est. Ft. of Pay 3

Location: Sec. 27 Twp. 15 Rge. 21 Co. Trego State Ks.

No. of Copies 10 Distribution Sheet ____ Yes ____ No Turnkey ____ Yes ____ No ____ Evaluation

Interval Tested 4169-4210 Drill Pipe Size 4.5 XH

Anchor Length 41 Top Choke — 1" ____ Bottom Choke — ¾" ____

Top Packer Depth 4164 Hole Size — 7⁷/₈" ____ Rubber Size — 6³/₄" ____

Bottom Packer Depth 4169 Wt. Pipe I.D. — 2.7 Ft. Run 189

Total Depth 4210 Drill Collar — 2.25 Ft. Run ____

Mud Wt. 9.2 lb/gal. Viscosity 50 Filtrate 10.4

Tool Open @ 3:47 a.m. Initial Blow Strong - B.O.B. in 1 min 23 sec.

Final Blow ____

Recovery — Total Feet ____ Feet of Gas in Pipe 898 Flush Tool? ____

Rec.	Feet Of	%gas	%oil	%water	%mud
452	CGsyO	20	80		
129	OCGsyM	20	20		60

BHT 121 °F Gravity ____ °API @ ____ °F Corrected Gravity 36 °API

RW ____ @ ____ °F Chlorides ____ ppm Recovery Chlorides 5,000 ppm System

(A) Initial Hydrostatic Mud 2238 PSI AK1 Recorder No. 13754 Range 4000

(B) First Initial Flow Pressure 88 PSI @ (depth) 4173 w/Clock No. 8376

(C) First Final Flow Pressure 226 PSI AK1 Recorder No. 7437 Range 4200

(D) Initial Shut-In Pressure 0 PSI @ (depth) 4206 w/Clock No. 25828

(E) Second Initial Flow Pressure 0 PSI AK1 Recorder No. ____ Range ____

(F) Second Final Flow Pressure 0 PSI @ (depth) ____ w/Clock No. ____

(G) Final Shut-In Pressure 0 PSI Initial Opening 15 Test 600

(H) Final Hydrostatic Mud 2087 PSI Initial Shut-In 0 Jars X 200

Final Flow 0 Safety Joint X 50

Final Shut-In 0 Straddle ____

Circ. Sub ____

Sampler ____

Extra Packer ____

Other ____

TOTAL PRICE $ ____

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 Tyler H. Sanders

Our Representative Don Bangle

Printcraft Printers - Hays, KS

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name J & L LAND "A" #1 Test No. 2 Date 12/21/92

Company CHARTER PRODUCTION COMPANY Zone CHER SAND

Address 224 EAST DOUGLAS #400 WICHITA KS 67202 Elevation 2366

Co. Rep./Geo. TYLER SANDERS Cont. DUKE RIG #4 Est. Ft. of Pay 6

Location: Sec. 27 Twp. 15S Rge. 21W Co. TREGO State KS

Interval Tested 4214-4228

Anchor Length 14

Top Packer Depth 4209

Bottom Packer Depth 4214

Total Depth 4228

Drill Pipe Size 4.5" XH

Wt. Pipe I.D. - 2.7 Ft. Run 189

Drill Collar – 2.25 Ft. Run

Mud Wt. 9.2 lb/Gal.

Viscosity 50 Filtrate 10.4

Tool Open @ 3:20 AM Initial Blow STRONG- BOTTOM OF BUCKET IN 9 MINUTES

Final Blow WEAK - BUILDING TO 5" FAIR BLOW

Recovery - Total Feet 539 Flush Tool?

Rec. 325 Feet of GAS IN PIPE

Rec. 303 Feet of CLEAN GASSY OIL-20%GAS/80%OIL

Rec. 236 Feet of SLTLY OIL CUT MUDDY WATER-3%OIL/87%WTR/10%MUD

Rec. Feet of

Rec. Feet of

BHT 123 °F Gravity °API @ °F Corrected Gravity 34 °API

RW 0.42 @ 80 °F Chlorides 15000 ppm Recovery Chlorides 5000 ppm System

(A) Initial Hydrostatic Mud 2198.3 PSI AK1 Recorder No. 13754 Range 4000

(B) First Initial Flow Pressure 50.1 PSI @ (depth) 4218 w / Clock No. 8376

(C) First Final Flow Pressure 144.6 PSI AK1 Recorder No. 7437 Range 4200

(D) Initial Shut-in Pressure 751.9 PSI @ (depth) 4224 w / Clock No. 27567

(E) Second Initial Flow Pressure 172.2 PSI AK1 Recorder No. Range

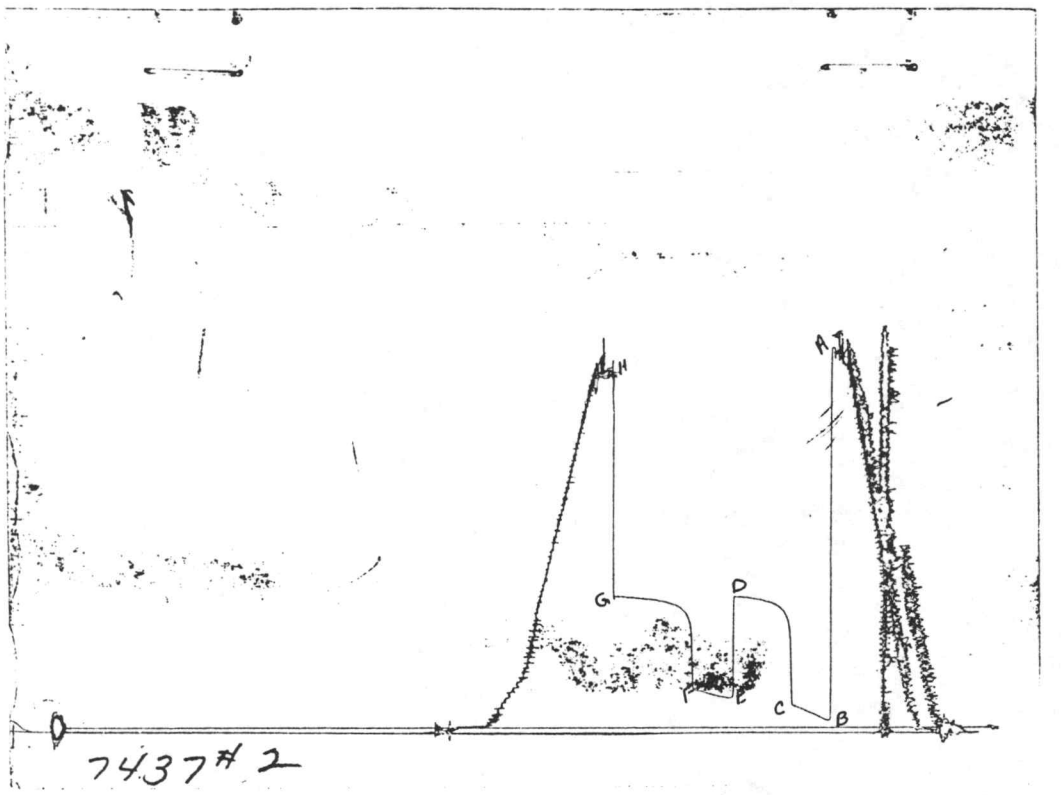
(F) Second Final Flow Pressure 226.3 PSI @ (depth) w / Clock No.

(G) Final Shut-in Pressure 755.9 PSI Initial Opening 30 Final Flow 30

(H) Final Hydrostatic Mud 2096.3 PSI Initial Shut-in 45 Final Shut-in 60

Our Representative DAN BANGLE

CHART PAGE



This is an actual photograph of recorder chart

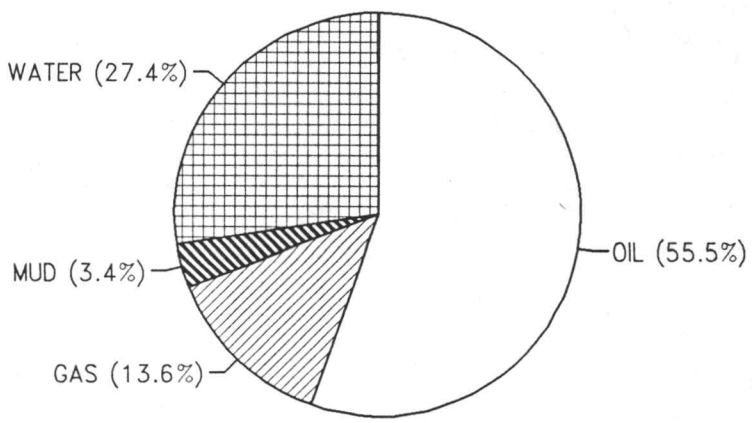
	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2208	2198.3
(B) FIRST INITIAL FLOW PRESSURE	49	50.1
(C) FIRST FINAL FLOW PRESSURE	137	144.6
(D) INITIAL CLOSED-IN PRESSURE	749	751.9
(E) SECOND INITIAL FLOW PRESSURE	167	172.2
(F) SECOND FINAL FLOW PRESSURE	226	226.3
(G) FINAL CLOSED-IN PRESSURE	739	755.9
(H) FINAL HYDROSTATIC MUD	2076	2096.3

CALCULATED RECOVERY ANALYSIS

DST # 2 TICKET # 5575

SAMPLE #	TOTAL FEET	GAS %	GAS FEET	OIL %	OIL FEET	WATER %	WATER FEET	MUD %	MUD FEET
DRILL 1	303	20	60.6	80	242.4	0	0	0	0
PIPE 2	47	0	0	3	1.41	87	40.89	10	4.7
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
6			0		0		0		0
WEIGHT 1	189	0	0	3	5.67	87	164.43	10	18.9
PIPE 2			0		0		0		0
3			0		0		0		0
4			0		0		0		0
DRILL 1			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	539		60.6		249.48		205.32		23.6

			HRS OPEN	BBL/DAY
BBL OIL=	3.5066682	*	1	84.160037
BBL WATER=	1.7324658	*		41.579179
BBL MUD=	0.214254			
BBL GAS =	0.861732			



COMPUTER EVALUATION BY TRILOBITE TESTING, L.L.C.

CHARTER PRODUCTION C J & L LAND "A" #1 DST 2

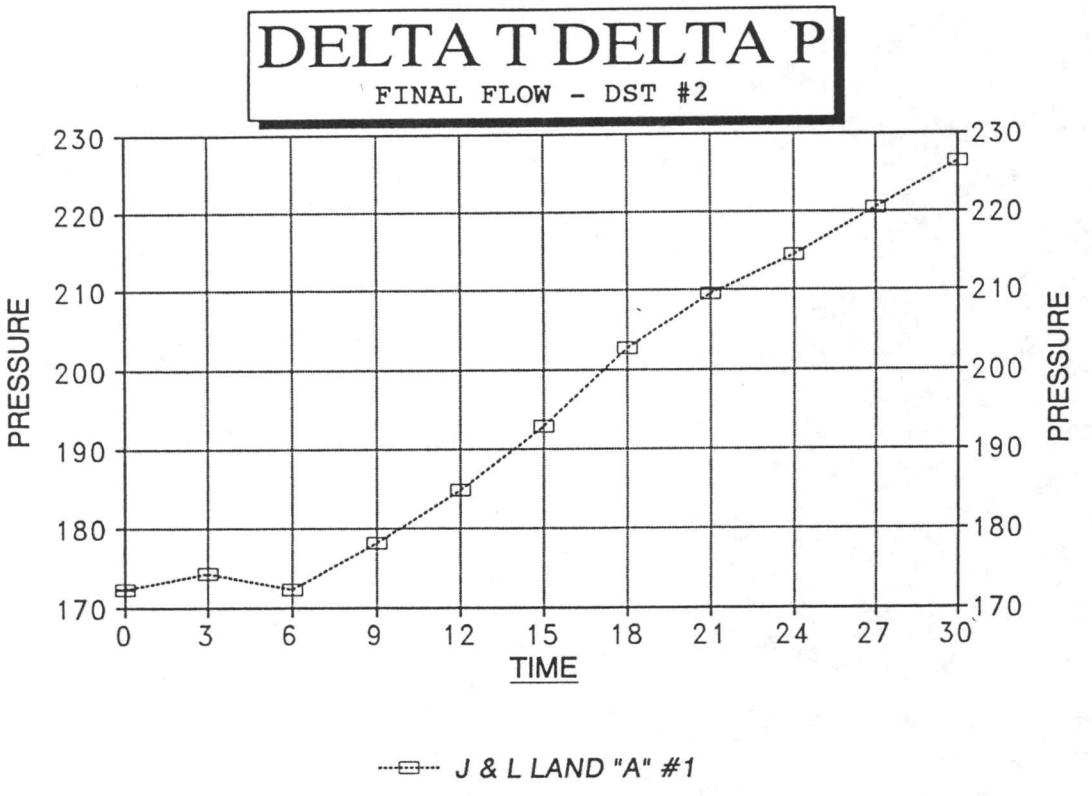
27 15S 21W TREGO KS

ELEVATION:	2366	KB	EST. PAY	6	FT
DATUM:	-1853		ZONE TESTED:	CHER SAND	
TEST INTERVAL:	4214-4228		TIME INTERVALS:	30-45-30-60	
RECORDER DEPTH:	4218		VISCOSITY:	6.561	CP
BOTTOM HOLE TEMP:	123		HOLE SIZE:	7.875	IN

CUBIC FEET OF GAS IN PIPE:	25.95			
TOTAL FEET OF RECOVERY:	539.00	CORRECTED PIPE FILLUP:	611.622	
TOTAL BARRELS OF RECOVERY:	6.30	CORR. BARRELS OF RECOVERY:	7.324	BBL
BARRELS IN DRILL PIPE:	4.98	API GRAVITY:	34	
BARRELS IN WEIGHT PIPE:	1.32	FLUID GRADIENT:	0.370	
BARRELS IN DRILL COLLARS:	0.00			
GAS OIL RATIO:	4.1187	CU.FT/BBL		
BUBBLE POINT PRESSURE:	43.624			
UNCORRECTED INITIAL PRODUCTION:			151.20	BBL
INITIAL PRODUCTION CORRECTED TO FINAL FLOW PRESSURE:			175.77	BBL/DAY
INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE:			104.136	

INITIAL SLOPE	202.34	PSI/CYCLE	FINAL SLOPE	106.47	PSI/CYCLE
INITIAL P*	799	PSI	FINAL P*	788	PSI

TRANSMISSIBILITY	268.44	(MD.-FT./CP.)
PERMEABILITY	293.52	(MD.)
INDICATED FLOW CAPACITY	1761.14	)MD.FT)
PRODUCTIVITY INDEX	0.30	(BARRELS/DAY/PSI)
DAMAGE RATIO	0.97	
RADIUS OF INVESTIGATION	132.71	(FT,)
POTENTIOMETRIC SURFACE	-24.74	(FT.)
DRAWDOWN FACTOR	1.416	(%)



INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE: 104.136

FINAL FLOW

RECORDER # 13754 DST # 2

TIME(MIN)	PRESSURE	<> PRESSURE
0	172.2	172.2
3	174.2	2
6	172.2	-2
9	178.1	5.9
12	185	6.9
15	192.9	7.9
18	202.7	9.8
21	209.6	6.9
24	214.5	4.9
27	220.4	5.9
30	226.3	5.9

J & L LAND "A" DST #2
INITIAL SHUTIN

30 TOTAL FLOW TIME

Slope 202.34 psi/cycle
P * 799 psi

	TIME(MIN)	Pws (psi)	Log Horn T	<> PRESSURE	Horn T
	3	660.0	1.041	660.0	11
	6	695.6	0.778	35.6	6
	9	710.4	0.637	14.8	4
	12	719.3	0.544	8.9	4
	15	727.2	0.477	7.9	3
	18	732.2	0.426	5.0	3
	21	735.1	0.385	2.9	2
	24	737.1	0.352	2.0	2
	27	739.1	0.325	2.0	2
	30	741.0	0.301	1.9	2
	33	744.0	0.281	3.0	2
X	36	746.0	0.263	2.0	2
	39	748.0	0.248	2.0	2
X	42	751.9	0.234	3.9	2

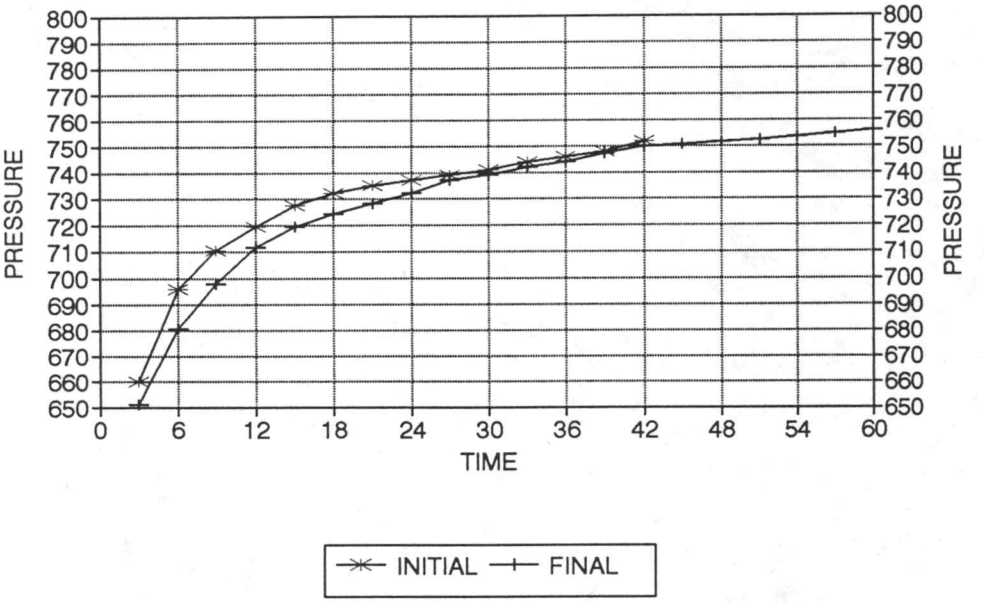
J & L LAND "A" DST #2
FINAL SHUTIN

60 TOTAL FLOW TIME

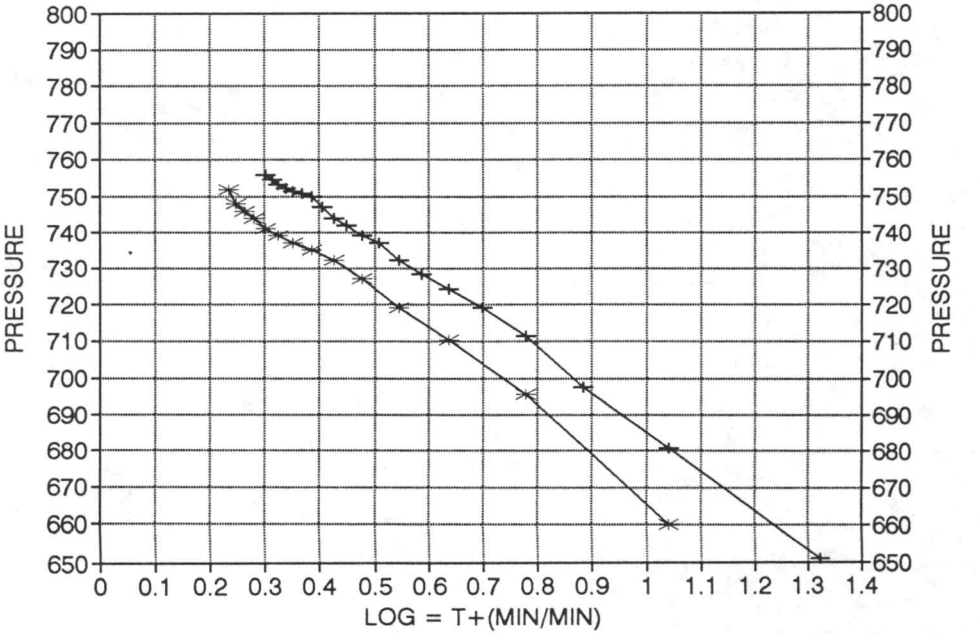
Slope 106.47 psi/cycle
P * 788 psi

		Pws (psi)	Log Horn T	<> PRESSURE	Horn T
	3	651.1	1.322	651.1	21
	6	680.8	1.041	29.7	11
	9	697.6	0.885	16.8	8
	12	711.4	0.778	13.8	6
	15	719.3	0.699	7.9	5
	18	722.3	0.637	3.0	4
	21	728.2	0.586	5.9	4
	24	732.2	0.544	4.0	4
	27	737.1	0.508	4.9	3
	30	739.1	0.477	2.0	3
	33	742.0	0.450	2.9	3
	36	744.0	0.426	2.0	3
	39	746.9	0.405	2.9	3
	42	749.9	0.385	3.0	2
	45	750.6	0.368	0.7	2
	48	751.3	0.352	0.7	2
	51	752.2	0.338	0.9	2
X	54	753.4	0.325	1.2	2
	57	754.6	0.312	1.2	2
X	60	755.9	0.301	1.3	2

J & L LAND "A" #1 / DST #2
DELTA T DELTA P



HORNER PLOT



TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

№ 5575

Well Name & No. I+L Land "A" #1 Test No. 2 Date 12-21-92

Company Charter Prod Co. Zone Tested Cher Sd.

Address _____ Elevation 2366 K.B.

Co. Rep./Geo. Tyler Sanders Cont. Duke #4 Est. Ft. of Pay 6

Location: Sec. 27 Twp. 15 Rge. 21 Co. Trego State Ks.

No. of Copies 10 Distribution Sheet _____ Yes _____ No Turnkey _____ Yes _____ No yes Evaluation

Interval Tested 4214 - 4228 Drill Pipe Size 4.5 XH

Anchor Length 14 Top Choke — 1" _____ Bottom Choke — ¾" _____

Top Packer Depth 4209 Hole Size — 7⅞" _____ Rubber Size — 6¾" _____

Bottom Packer Depth 4214 Wt. Pipe I.D. — 2.7 Ft. Run 189

Total Depth 4228 Drill Collar — 2.25 Ft. Run _____

Mud Wt. 9.2 lb / gal. Viscosity 50 Filtrate 10.4

Tool Open @ 3:20 a.m. Initial Blow Strong - B.O.B. in 9 min.

Final Blow Weak - building to 5" fair blow

Recovery — Total Feet 529 Feet of Gas in Pipe 325 Flush Tool? _____

Rec. 303	Feet Of	CGsyO	20 %gas	80 %oil	%water	%mud
Rec. 226	Feet Of	SlOCMdyWtr.	%gas	3 %oil	87 %water	10 %mud
Rec. _____	Feet Of	_____	%gas	%oil	%water	%mud
Rec. _____	Feet Of	_____	%gas	%oil	%water	%mud
Rec. _____	Feet Of	_____	%gas	%oil	%water	%mud

BHT 123 °F Gravity _____ °API @ _____ °F Corrected Gravity 34 °API

RW .42 @ 80 °F Chlorides 15,000 ppm Recovery Chlorides 5,000 ppm System

(A) Initial Hydrostatic Mud	2208 PSI	AK1 Recorder No.	13754	Range	4000
(B) First Initial Flow Pressure	49 PSI	@ (depth)	4218	w/Clock No.	8376
(C) First Final Flow Pressure	137 PSI	AK1 Recorder No.	7437	Range	4200
(D) Initial Shut-In Pressure	749 PSI	@ (depth)	4224	w/Clock No.	27567
(E) Second Initial Flow Pressure	167 PSI	AK1 Recorder No.	_____	Range	_____
(F) Second Final Flow Pressure	226 PSI	@ (depth)	_____	w/Clock No.	_____
(G) Final Shut-In Pressure	739 PSI	Initial Opening	30	Test	600
(H) Final Hydrostatic Mud	2076 PSI	Initial Shut-In	45	Jars X	200
		Final Flow	30	Safety Joint X	50
		Final Shut-In	60	Straddle	_____
				Circ. Sub	_____
				Sampler	_____
				Extra Packer	_____
				Other	(Equal)
				TOTAL PRICE $	850.00

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 Tyler D. Sanders

Our Representative Dan Ramsey

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