TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name: GLAVES #1 | Test No.: 1 | Date: 2/11/94

Company: CROSS BAR PETROLEUM INC. | Zone: MISS. DOL.

Address: 220 W. DOUGLAS WICHITA KS 67202 | Elevation: 2615 KB

Co. Rep./Geo.: KIM SHOEMAKER | Cont.: L.D. DRLG RIG #1 | Est. Ft. of Pay: 16

Location: Sec.: 11 | Twp.: 16S | Rge.: 26W | Co.: NESS | State: KS

Interval Tested: 4496-4535 | Drill Pipe Size: 4.5" XH

Anchor Length: 39 | Wt. Pipe I.D. - 2.7 Ft. Run:

Top Packer Depth: 4491 | Drill Collar – 2.25 Ft. Run:

Bottom Packer Depth: 4496 | Mud Wt.: 9.3 lb/Gal.

Total Depth: 4535 | Viscosity: 49 | Filtrate: 7.2

Tool Open @: 9:23 AM | Initial Blow: WEAK-BUILDING TO 6" FAIR BLOW

Final Blow: WEAK-BUILDING TO 3" FAIR BLOW

Recovery - Total Feet: 110 | Flush Tool?: NO

Rec. 60 | Feet of GAS IN PIPE

Rec. 50 | Feet of CLEAN OIL

Rec. 60 | Feet of SLTLY OIL CUT MUD-5% OIL/ 95% MUD

Rec. | Feet of

Rec. | Feet of

BHT: 110 °F | Gravity: °API | @ °F | Corrected Gravity: 34 °API

RW: @ °F | Chlorides: ppm Recovery | Chlorides: 3200 ppm System

(A) Initial Hydrostatic Mud: 2220.1 PSI | AK1 Recorder No.: 13754 | Range: 4000

(B) First Initial Flow Pressure: 15.4 PSI | @ (depth): 4500 | w / Clock No.: 27501

(C) First Final Flow Pressure: 26.4 PSI | AK1 Recorder No.: 7437 | Range: 4200

(D) Initial Shut-in Pressure: 1033.7 PSI | @ (depth): 4531 | w / Clock No.: 27567

(E) Second Initial Flow Pressure: 27.5 PSI | AK1 Recorder No.: | Range:

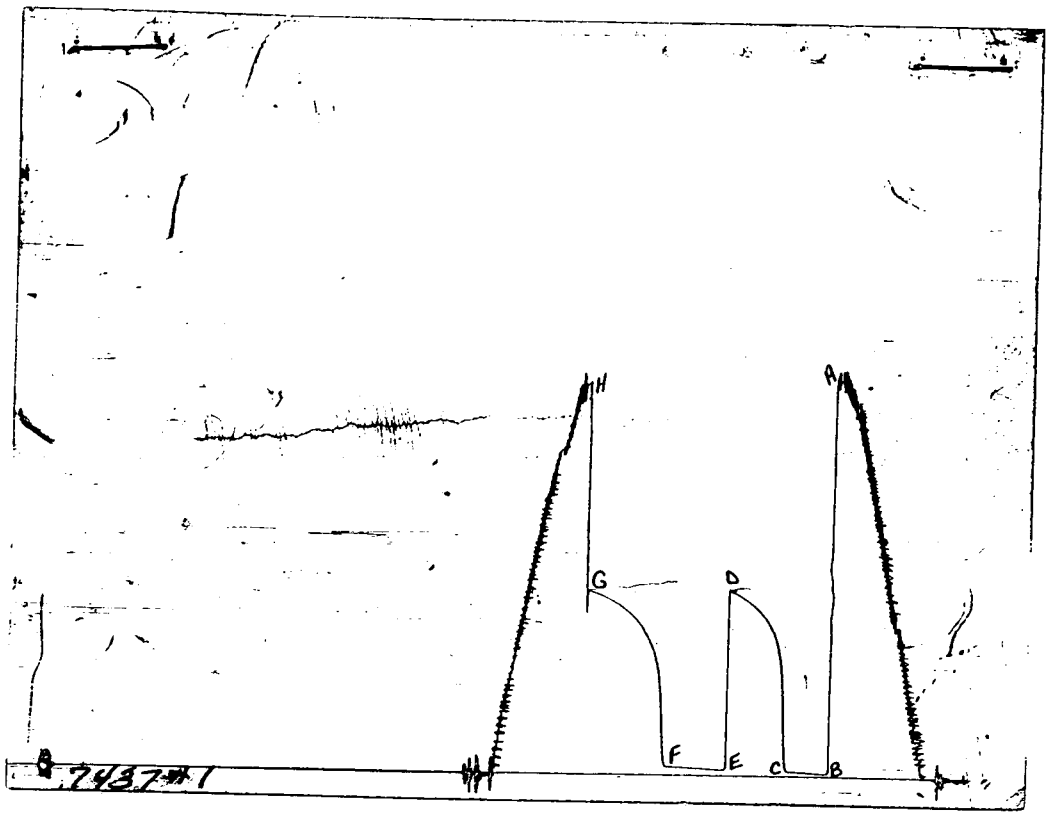
(F) Second Final Flow Pressure: 47.4 PSI | @ (depth): | w / Clock No.:

(G) Final Shut-in Pressure: 1024.3 PSI | Initial Opening: 30 | Final Flow: 45

(H) Final Hydrostatic Mud: 2154.1 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	2289	2220.1
(B) FIRST INITIAL FLOW PRESSURE	49	15.4
(C) FIRST FINAL FLOW PRESSURE	59	26.4
(D) INITIAL CLOSED-IN PRESSURE	1066	1033.7
(E) SECOND INITIAL FLOW PRESSURE	78	27.5
(F) SECOND FINAL FLOW PRESSURE	88	47.4
(G) FINAL CLOSED-IN PRESSURE	1056	1024.3
(H) FINAL HYDROSTATIC MUD	2218	2154.1

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

CROSS BAR PETROLEUM INC.

GLAVES #1 DST 1

11 16S 26W NESS KS

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ELEVATION:	2615	KB	EST. PAY	16	FT
DATUM:	-1917		ZONE TESTED:	MISS. DOL.	
TEST INTERVAL:	4496-4535		TIME INTERVALS:	30-45-45-60	
RECORDER DEPTH:	4531		VISCOSITY:	10.89	CP
BOTTOM HOLE TEMP:	110		HOLE SIZE:	7.875	IN

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CUBIC FEET OF GAS IN PIPE:	5			
TOTAL FEET OF RECOVERY:	110.00	CORRECTED PIPE FILLUP:	128.108	
TOTAL BARRELS OF RECOVERY:	1.56	CORR. BARRELS OF RECOVERY:	1.820	BBL
BARRELS IN DRILL PIPE:	1.56	API GRAVITY:	34	
BARRELS IN WEIGHT PIPE:	0.00	FLUID GRADIENT:	0.370	
BARRELS IN DRILL COLLARS:	0.00			
GAS OIL RATIO:	3.06	CU.FT/BBL		
BUBBLE POINT PRESSURE:	33			
UNCORRECTED INITIAL PRODUCTION:			30.03	BBL
INITIAL PRODUCTION CORRECTED TO FINAL FLOW PRESSURE:			34.95	BBL/DAY
INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE:			22.181	

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INITIAL SLOPE	862.79	PSI/CYCL	FINAL SLOPE	568.94	PSI/CYCLE
INITIAL P*	1215.62	PSI	FINAL P*	1224.67	PSI

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TRANSMISSIBILITY	9.99	(MD.-FT./CP.)
PERMEABILITY	6.80	(MD.)
INDICATED FLOW CAPACITY	108.75	(MD.FT)
PRODUCTIVITY INDEX	0.01	(BARREL/DAY/PSI)
DAMAGE RATIO	0.38	
RADIUS OF INVESTIGATION	22.58	(FT,)
POTENTIOMETRIC SURFACE	924.01	(FT.)
DRAWDOWN FACTOR	-0.744	(%)
THEORETICAL POTENTIAL FROM FINAL FLOW PRESSURE	0.00	
THEORETICAL POTENTIAL FROM PSEUDO STEADY FLOW STATE	0.00	

INITIAL FLOW

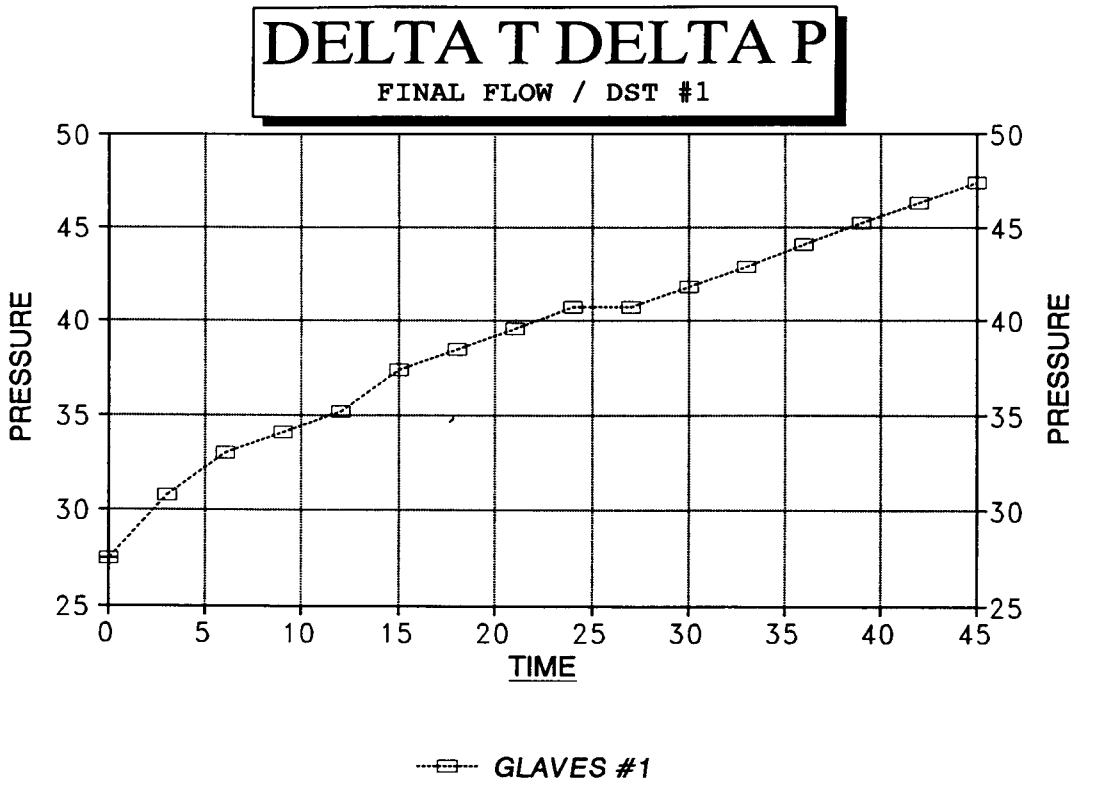
RECORDER 7437 DST # 1

TIME(MIN)	PRESSURE	<> PRESSURE
0	15.4	15.4
3	15.4	0.0
6	16.5	1.1
9	18.7	2.2
12	19.8	1.1
15	20.9	1.1
18	22.0	1.1
21	23.1	1.1
24	24.2	1.1
27	25.3	1.1
30	26.4	1.1

FINAL FLOW

RECORDER 7437 DST # 1

TIME(MIN)	PRESSURE	<> PRESSURE
0	27.5	27.5
3	30.8	3.3
6	33.0	2.2
9	34.1	1.1
12	35.2	1.1
15	37.4	2.2
18	38.5	1.1
21	39.6	1.1
24	40.7	1.1
27	40.7	0.0
30	41.8	1.1
33	42.9	1.1
36	44.1	1.2
39	45.2	1.1
42	46.3	1.1
45	47.4	1.1



INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE: 22.181

GLAVES #1 DST #1
INITIAL SHUTIN

30 INITIAL FLOW TIME

SLOPE 862.8 PSI/CYCLE
P* 1215.62 PSI

	TIME(MIN)	Pws (psi)	Log Horn T	<> PRESSURE	Horn T
	3	121.1	1.041	121.1	11
	6	606.0	0.778	484.9	6
	9	727.5	0.637	121.5	4
	12	805.1	0.544	77.6	4
	15	845.9	0.477	40.8	3
	18	876.3	0.426	30.4	3
	21	900.5	0.385	24.2	2
	24	922.5	0.352	22.0	2
	27	941.3	0.325	18.8	2
	30	959.1	0.301	17.8	2
	33	975.9	0.281	16.8	2
X	36	988.5	0.263	12.6	2
	39	1003.2	0.248	14.7	2
	42	1016.9	0.234	13.7	2
	45	1025.3	0.222	8.4	2
X	48	1033.7	0.211	8.4	2

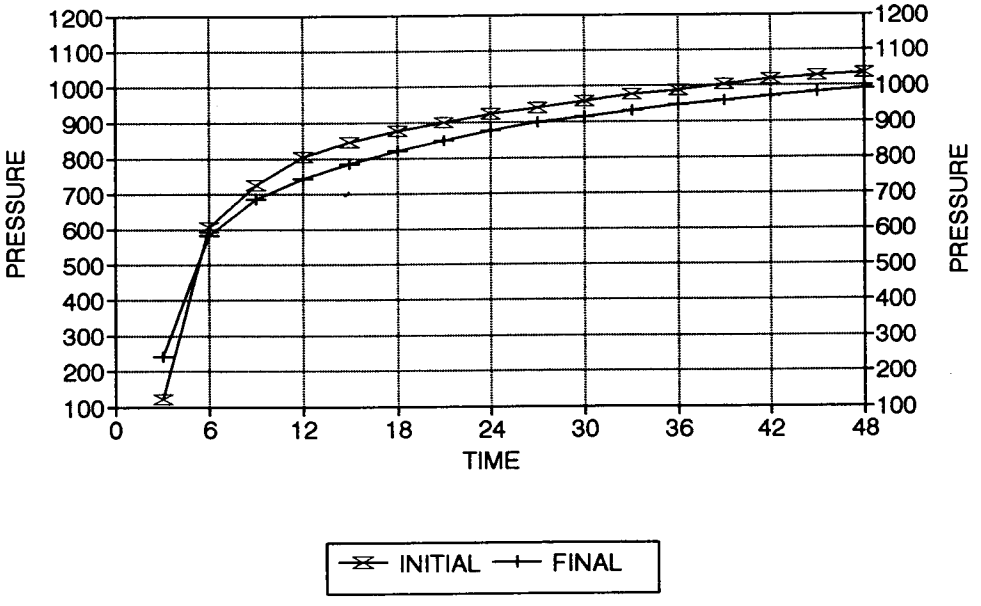
GLAVES #1 DST #1
FINAL SHUTIN

75 TOTAL FLOW TIME

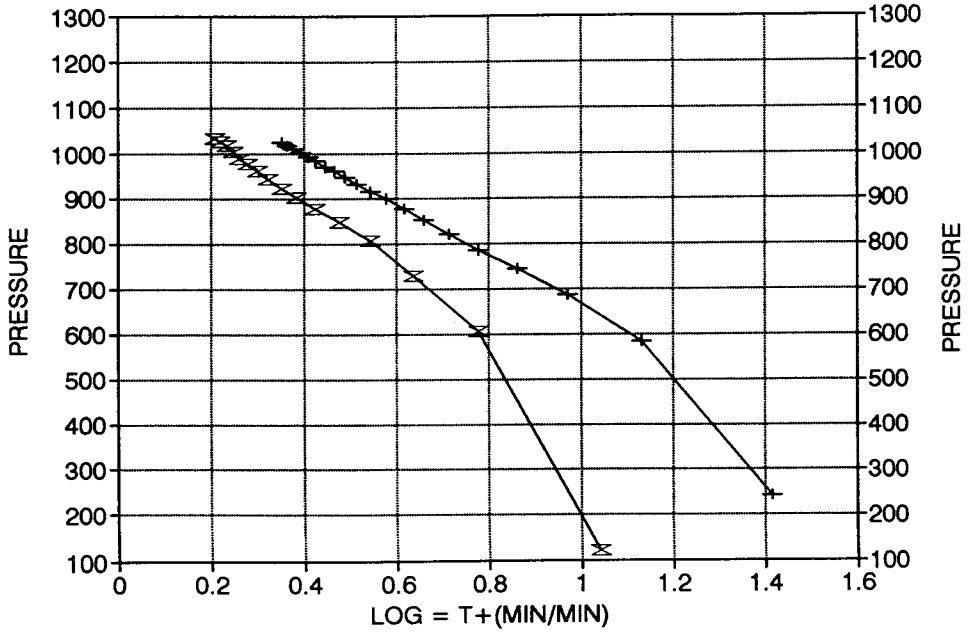
SLOPE 568.9 PSI/CYCLE
P* 1224.7 PSI

			Log Horn T	<> PRESSURE	Horn T
	3	241.2	1.415	241.2	26
	6	584.0	1.130	342.8	14
	9	685.6	0.970	101.6	9
	12	743.2	0.860	57.6	7
	15	785.2	0.778	42.0	6
	18	818.7	0.713	33.5	5
	21	850.1	0.660	31.4	5
	24	876.3	0.615	26.2	4
	27	898.4	0.577	22.1	4
	30	914.1	0.544	15.7	4
	33	930.8	0.515	16.7	3
	36	946.5	0.489	15.7	3
	39	959.1	0.466	12.6	3
	42	969.6	0.445	10.5	3
	45	982.2	0.426	12.6	3
	48	991.7	0.409	9.5	3
	51	1001.1	0.393	9.4	2
X	54	1009.5	0.378	8.4	2
	57	1016.9	0.365	7.4	2
X	60	1024.3	0.352	7.4	2

GLAVES #1 / DST #1
DELTA T DELTA P



HORNER PLOT

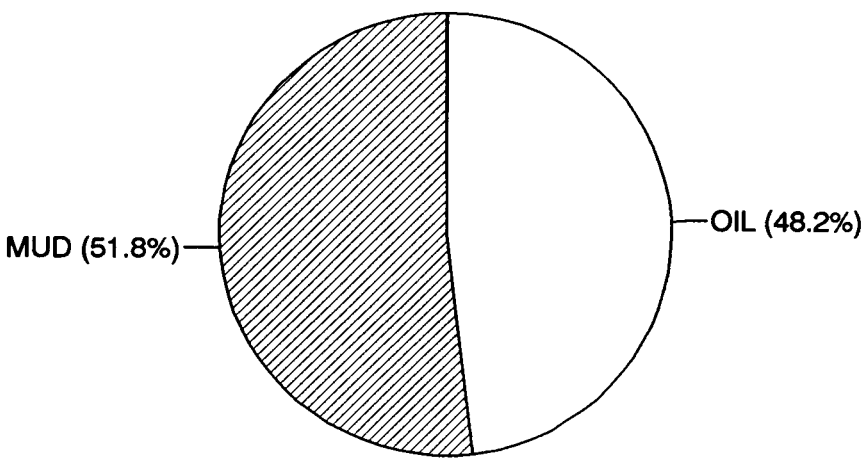


CALCULATED RECOVERY ANALYSIS DRILL PIPE

DST # 1 TICKET 6517

SAMPLE	TOTAL	GAS		OIL		WATER		MUD	
#	FEET	%	FEET	%	FEET	%	FEET	%	FEET
1	50	0	0	100	50	0	0	0	0
2	60	0	0	5	3	0	0	95	57
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
6			0		0		0		0
TOTAL	110	0	0	48.2	53	0	0	51.8	57

			HRS	BBL/DAY
BBL OIL=	0.75366	*	1.25	14.47
BBL WATER=	0	*		0
BBL MUD=	0.81054			
BBL GAS	0			



Cross Bar

WELL NAME Glores #1 DST # 1 RECORDER # 7437

INIT. HYD. MUD. 2060 ~~2220~~ 22201 FINAL HYD. MUD 2027 21541

	INITIAL FLOW MINUTES 30 INTERVAL		INITIAL SHUTIN MINUTES 45 INTERVAL			FINAL FLOW MINUTES 45 INTERVAL		FINAL SHUTIN MINUTES 60 INTERVAL	
	.014	~~.020~~ 154	—	—	1	.025	27.5	—	—
	.014		.110		2	.028		.219	
	.015		.555		3	.030		.534	
	.017		.671		4	.031		.631	
	.018		.745		5	.032		.686	
	.019		.784		6	.034		.726	
	.020		.813		7	.036		.756	
	.021		.836		8	"		.788	
	.022		.857		9	.037		.813	
	.023		.875		10	.037		.834	
	.024	26.4	.892		11	.038		.849	
			.908		12	.039		.865	
			.920		13	.040		.880	
			.934		14	.041		.892	
			.947		15	.042		.902	
			.955		16	.043	47.4	.914	
			.963	1033.7	17			.923	
					18			.932	
					19			.940	
					20			.947	
					21			.954	1024.3
					22				
					23				
					24				
					25				
					26				
					27				

0.014	15.4
0.014	15.4
0.015	16.5
0.017	18.7
0.018	19.8
0.019	20.9
0.02	22
0.021	23.1
0.022	24.2
0.023	25.3
0.024	26.4

1	0.025	27.5
2	0.028	30.8
3	0.03	33
4	0.031	34.10775
5	0.032	35.216
6	0.034	37.434
7	0.035	38.54375
8	0.036	39.654
9	0.037	40.76475
10	0.037	40.76475
11	0.038	41.876
12	0.039	42.98775
13	0.04	44.1
14	0.041	45.20045
15	0.042	46.3008
16	0.043	47.40105

1	0.11	121.1173
2	0.555	606.0397
3	0.671	727.5947
4	0.745	805.1674
5	0.784	845.9903
6	0.813	876.3622
7	0.836	900.5058
8	0.857	922.5187
9	0.875	941.3633
10	0.892	959.1408
11	0.908	975.9257
12	0.92	988.5584
13	0.934	1003.288
14	0.947	1016.957
15	0.955	1025.364
16	0.963	1033.769

J - 1194.7
F - 12325

1	0.219	241.2216
2	0.534	584.013
3	0.631	685.6392
4	0.686	743.2817
5	0.726	785.2315
6	0.758	818.7897
7	0.788	850.1698
8	0.813	876.3622
9	0.834	898.4077
10	0.849	914.1363
11	0.865	930.8968
12	0.88	946.594
13	0.892	959.1408
14	0.902	969.6067
15	0.914	982.2429
16	0.923	991.7155
17	0.932	1001.184
18	0.94	1009.598
19	0.947	1016.957
20	0.954	1024.314

C - 17
A44
A25
D36
D1