TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name: GOOD "A" #2 — Test No. 1 — Date 6/26/92

Company: CHARTER PRODUCTION COMPANY — Zone TORONTO

Address: 224 EAST DOUGLAS WICHITA KS 67202 — Elevation 2718

Co. Rep./Geo.: CHUCK SCHMALTZ — Cont. ZENITH RIG #1 — Est. Ft. of Pay

Location: Sec. 20 — Twp. 34S — Rge. 31W — Co. SEWARD — State KS

Interval Tested: 4384-4435 — Drill Pipe Size: 4.5 XH

Anchor Length: 51 — Wt. Pipe I.D. - 2.7 Ft. Run:

Top Packer Depth: 4379 — Drill Collar – 2.25 Ft. Run: 624

Bottom Packer Depth: 4384 — Mud Wt.: 8.8 lb/Gal.

Total Depth: 4435 — Viscosity: 42 — Filtrate: 10.4

Tool Open @ 12:10 AM — Initial Blow: STRONG 12" BLOW IN 14 MINUTES

Final Blow: STRONG-12" BLOW IN 50 MINUTES

Recovery - Total Feet: 620 — Flush Tool? NO

Rec. 93 — Feet of GAS IN PIPE

Rec. 279 — Feet of GASSY MUD-10%GAS/90%MUD

Rec. 341 — Feet of GASSY WATER-10%GAS/90%WTR

Rec. — Feet of

Rec. — Feet of

BHT N/A °F — Gravity — °API — @ — °F Corrected Gravity — °API

RW 0.3 — @ 76 °F — Chlorides 23000 ppm Recovery — Chlorides 4000 ppm System

(A) Initial Hydrostatic Mud: 2165.3 PSI — AK1 Recorder No. 13851 — Range 4425

(B) First Initial Flow Pressure: 87.4 PSI — @ (depth) 4395 — w / Clock No. 17652

(C) First Final Flow Pressure: 131.2 PSI — AK1 Recorder No. 13850 — Range 4325

(D) Initial Shut-in Pressure: 1295.6 PSI — @ (depth) 4432 — w / Clock No. 27585

(E) Second Initial Flow Pressure: 183.4 PSI — AK1 Recorder No. — Range

(F) Second Final Flow Pressure: 325.6 PSI — @ (depth) — w / Clock No.

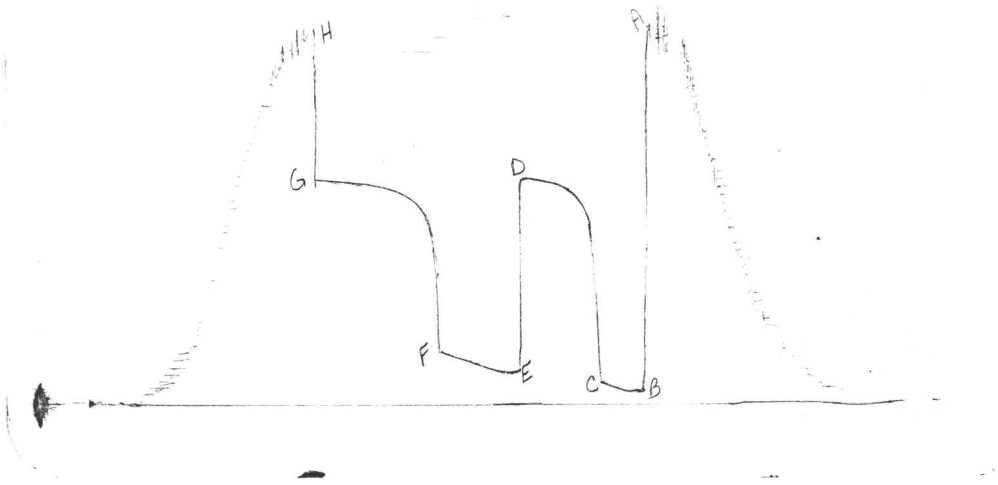
(G) Final Shut-in Pressure: 1296.3 PSI — Initial Opening 30 — Final Flow 60

(H) Final Hydrostatic Mud: 2094.5 PSI — Initial Shut-in 60 — Final Shut-in 90

Our Representative: STEVE BOWMAN

CHART PAGE

DST #1
13851 ft



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2159	2165.3
(B) FIRST INITIAL FLOW PRESSURE	85	87.4
(C) FIRST FINAL FLOW PRESSURE	128	131.2
(D) INITIAL CLOSED-IN PRESSURE	1293	1295.6
(E) SECOND INITIAL FLOW PRESSURE	181	183.4
(F) SECOND FINAL FLOW PRESSURE	320	325.6
(G) FINAL CLOSED-IN PRESSURE	1293	1296.3
(H) FINAL HYDROSTATIC MUD	2093	2094.5

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name GOOD "A" #2 Test No. 2 Date 6/27/92

Company CHARTER PRODUCTION COMPANY Zone LANSING "A"

Address 224 EAST DOUGLAS WICHITA KS 67202 Elevation 2718

Co. Rep./Geo. CHUCK SCHMALTZ Cont. ZENITH RIG #1 Est. Ft. of Pay

Location: Sec. 20 Twp. 34S Rge. 31W Co. SEWARD State KS

Interval Tested 4540-4555 Drill Pipe Size 4.5 XH

Anchor Length 15 Wt. Pipe I.D. - 2.7 Ft. Run

Top Packer Depth 4535 Drill Collar – 2.25 Ft. Run 624

Bottom Packer Depth 4540 Mud Wt. 8.7 lb/Gal.

Total Depth 4555 Viscosity 46 Filtrate 11.2

Tool Open @ 10:25 PM Initial Blow WEAK 1/4" BLOW

Final Blow NO BLOW

Recovery - Total Feet 10 Flush Tool? NO

Rec. 10 Feet of MUD

Rec. Feet of

Rec. Feet of

Rec. Feet of

Rec. Feet of

BHT 115 °F Gravity °API @ °F Corrected Gravity °API

RW @ °F Chlorides ppm Recovery Chlorides 4800 ppm System

(A) Initial Hydrostatic Mud 2296.3 PSI AK1 Recorder No. 13851 Range 4425

(B) First Initial Flow Pressure 22.3 PSI @ (depth) 4546 w / Clock No. 17652

(C) First Final Flow Pressure 22.3 PSI AK1 Recorder No. 13850 Range 4325

(D) Initial Shut-in Pressure 764.5 PSI @ (depth) 4552 w / Clock No. 27585

(E) Second Initial Flow Pressure 21.2 PSI AK1 Recorder No. Range

(F) Second Final Flow Pressure 21.2 PSI @ (depth) w / Clock No.

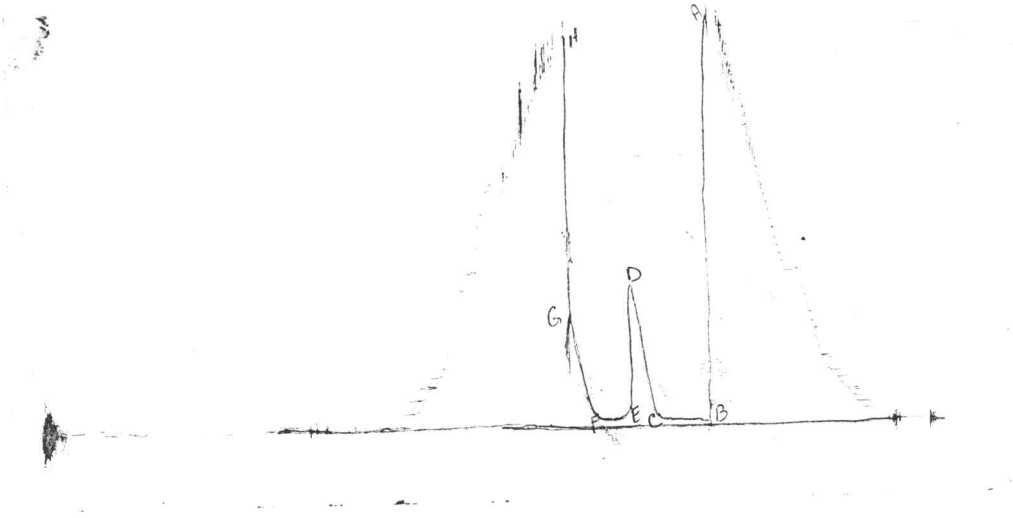
(G) Final Shut-in Pressure 582.3 PSI Initial Opening 30 Final Flow 15

(H) Final Hydrostatic Mud 2194.7 PSI Initial Shut-in 30 Final Shut-in 30

Our Representative STEVE BOWMAN

CHART PAGE

DST #2
13851



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2290	2296.3
(B) FIRST INITIAL FLOW PRESSURE	21	22.3
(C) FIRST FINAL FLOW PRESSURE	21	22.3
(D) INITIAL CLOSED-IN PRESSURE	768	764.5
(E) SECOND INITIAL FLOW PRESSURE	21	21.2
(F) SECOND FINAL FLOW PRESSURE	21	21.2
(G) FINAL CLOSED-IN PRESSURE	587	582.3
(H) FINAL HYDROSTATIC MUD	2192	2194.7

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name GOOD "A" #2 Test No. 3 Date 6/28/92

Company CHARTER PRODUCTION COMPANY Zone KS CITY

Address 224 EAST DOUGLAS WICHITA KS 67202 Elevation 2718

Co. Rep./Geo. CHUCK SCHMALTZ Cont. ZENITH RIG #1 Est. Ft. of Pay 10

Location: Sec. 20 Twp. 34S Rge. 31W Co. SEWARD State KS

Interval Tested 4820-4848 Drill Pipe Size 4.5 XH

Anchor Length 28 Wt. Pipe I.D. - 2.7 Ft. Run

Top Packer Depth 4815 Drill Collar – 2.25 Ft. Run 624

Bottom Packer Depth 4820 Mud Wt. 9 lb/Gal.

Total Depth 4848 Viscosity 42 Filtrate 10.8

Tool Open @ 11:55 PM Initial Blow GAS TO SURFACE IN 13 MINUTES

Final Blow SEE GAS VOLUME REPORT

Recovery - Total Feet 840 Flush Tool? NO

Rec. 3954 Feet of GAS IN PIPE

Rec. 365 Feet of GASSY OIL-60%GAS/40%OIL

Rec. 475 Feet of GASSY OIL CUT MUD-50%GAS/20%OIL/30%MUD

Rec. Feet of

Rec. Feet of

BHT 120 °F Gravity 40 °API @ 62 °F Corrected Gravity 38 °API

RW @ °F Chlorides ppm Recovery Chlorides 5200 ppm System

(A) Initial Hydrostatic Mud 2366.8 PSI AK1 Recorder No. 13851 Range 4425

(B) First Initial Flow Pressure 117.5 PSI @ (depth) 4823 w / Clock No. 17652

(C) First Final Flow Pressure 125.0 PSI AK1 Recorder No. 13850 Range 4325

(D) Initial Shut-in Pressure 1257.5 PSI @ (depth) 4845 w / Clock No. 27585

(E) Second Initial Flow Pressure 172.0 PSI AK1 Recorder No. Range

(F) Second Final Flow Pressure 241.4 PSI @ (depth) w / Clock No.

(G) Final Shut-in Pressure 1160.5 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 2312.2 PSI Initial Shut-in 60 Final Shut-in 60

Our Representative STEVE BOWMAN

CHART PAGE

DST #3
13851

This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2366	2366.8
(B) FIRST INITIAL FLOW PRESSURE	106	117.5
(C) FIRST FINAL FLOW PRESSURE	117	125
(D) INITIAL CLOSED-IN PRESSURE	1250	1257.5
(E) SECOND INITIAL FLOW PRESSURE	160	172
(F) SECOND FINAL FLOW PRESSURE	224	241.4
(G) FINAL CLOSED-IN PRESSURE	1142	1160.5
(H) FINAL HYDROSTATIC MUD	2312	2312.2

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

CHARTER PRODUCTION C GOOD "A" #2 DST 3

20 34S 31W SEWARD KS

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ELEVATION:	2718	KB	EST. PAY	10	FT
DATUM:	-4846		ZONE TESTED:	KS CITY	
TEST INTERVAL:	4820-4848		TIME INTERVALS:	30-60-60-60	
RECORDER DEPTH:	4845		VISCOSITY:	3.407	CP
BOTTOM HOLE TEMP:	120		HOLE SIZE:	7.875	IN

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CUBIC FEET OF GAS IN PIPE:	315.68			
TOTAL FEET OF RECOVERY:	840.00	CORRECTED PIPE FILLUP:	666.851	
TOTAL BARRELS OF RECOVERY:	6.12	CORR. BARRELS OF RECOVERY:	3.649	BBL
BARRELS IN DRILL PIPE:	3.07	API GRAVITY:	38	
BARRELS IN WEIGHT PIPE:	0.00	FLUID GRADIENT:	0.362	
BARRELS IN DRILL COLLARS:	3.05			
GAS OIL RATIO:	51.5582	CU.FT/BBL		
BUBBLE POINT PRESSURE:	317.278			
UNCORRECTED INITIAL PRODUCTION:			97.97	BBL
INITIAL PRODUCTION CORRECTED TO FINAL FLOW PRESSURE:			58.38	BBL/DAY
INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE:			87.408	

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INITIAL SLOPE	1006.20	PSI/CYCLE	FINAL SLOPE	575.35	PSI/CYCLE
INITIAL P*	1435	PSI	FINAL P*	1382	PSI

****

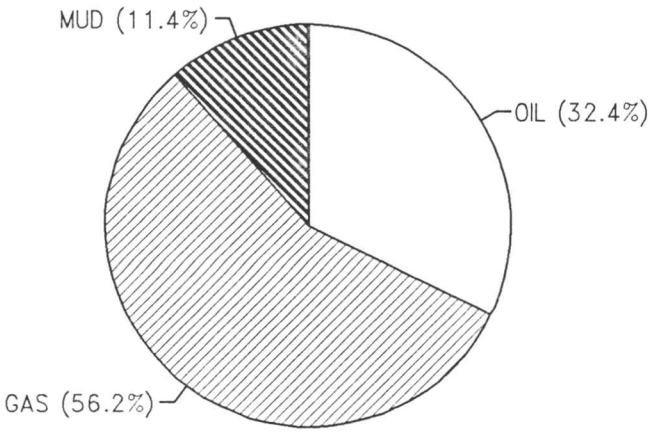
TRANSMISSIBILITY	16.50	(MD.-FT./CP.)
PERMEABILITY	5.62	(MD.)
INDICATED FLOW CAPACITY	56.21	)MD.FT)
PRODUCTIVITY INDEX	0.02	(BARRELS/DAY/PSI)
DAMAGE RATIO	0.36	
RADIUS OF INVESTIGATION	22.49	(FT,)
POTENTIOMETRIC SURFACE	-1639.65	(FT.)
DRAWDOWN FACTOR	3.657	(%)

CALCULATED RECOVERY ANALYSIS

DST # 3 TICKET # 4867

SAMPLE #	TOTAL FEET	%	GAS FEET	%	OIL FEET	%	WATER FEET	%	MUD FEET
DRILL 1	216	60	129.6	40	[illegible]	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	149	60	89.4	40	59.6	0	0	0	0
COLLAR 2	475	50	237.5	20	95	0	0	30	142.5
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
TOTAL	840		456.5		241		0		142.5

			HRS OPEN	BBL/DAY
BBL OIL=	1.984602	*	1.5	31.753632
BBL WATER=	0	*		0
BBL MUD=	0.696825			
BBL GAS =	3.441453			



INITIAL FLOW

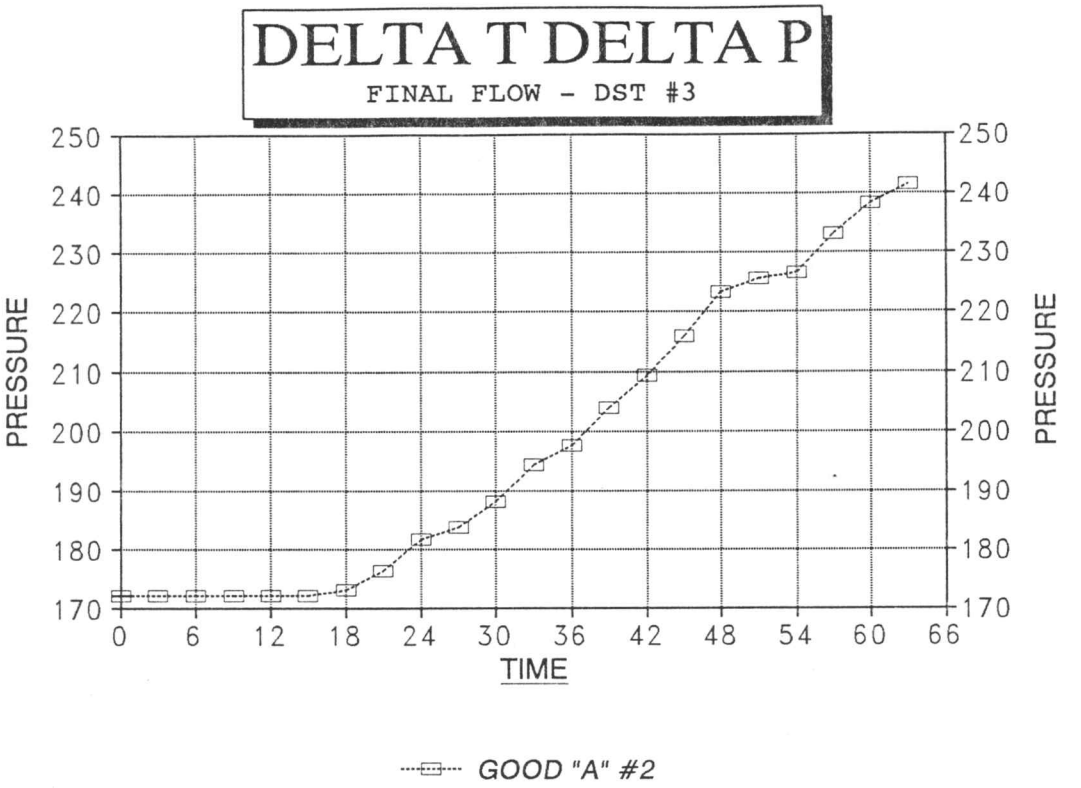
RECORDER # 13850 DST # 3

TIME(MIN)	PRESSURE	<>PRESSURE
0	117.5	117.5
3	117.5	0
6	117.5	0
9	117.5	0
12	117.5	0
15	117.5	0
18	121.7	4.2
21	123.9	2.2
24	123.9	0
27	125	1.1
30	125	0

FINAL FLOW

RECORDER # 13850 DST # 3

TIME(MIN)	PRESSURE	<> PRESSURE
0	172	172
3	172	0
6	172	0
9	172	0
12	172	0
15	172	0
18	173	1
21	176.2	3.2
24	181.6	5.4
27	183.7	2.1
30	188	4.3
33	194.4	6.4
36	197.6	3.2
39	204	6.4
42	209.4	5.4
45	215.8	6.4
48	223.2	7.4
51	225.4	2.2
54	226.5	1.1
57	232.9	6.4
60	238.2	5.3
63.0	241.4	3.2



INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE: 87.408

GOOD "A" #2 DST #3
INITIAL SHUTIN

30 TOTAL FLOW TIME

Slope 1006.20 psi/cycle
P * 1435 psi

	TIME(MIN)	Pws (psi)	Log Horn T	<> PRESSURE	Horn T
	3	408.1	1.041	408.1	11
	6	770.2	0.778	362.1	6
	9	880.8	0.637	110.6	4
	12	966.0	0.544	85.2	4
	15	1018.5	0.477	52.5	3
	18	1052.8	0.426	34.3	3
	21	1082.9	0.385	30.1	2
	24	1106.6	0.352	23.7	2
	27	1127.1	0.325	20.5	2
	30	1145.4	0.301	18.3	2
	33	1158.3	0.281	12.9	2
	36	1174.5	0.263	16.2	2
	39	1186.4	0.248	11.9	2
	42	1199.3	0.234	12.9	2
	45	1210.1	0.222	10.8	2
	48	1220.8	0.211	10.7	2
	51	1231.6	0.201	10.8	2
	54	1240.2	0.192	8.6	2
X	57	1249.9	0.184	9.7	2
X	60	1257.5	0.176	7.6	2

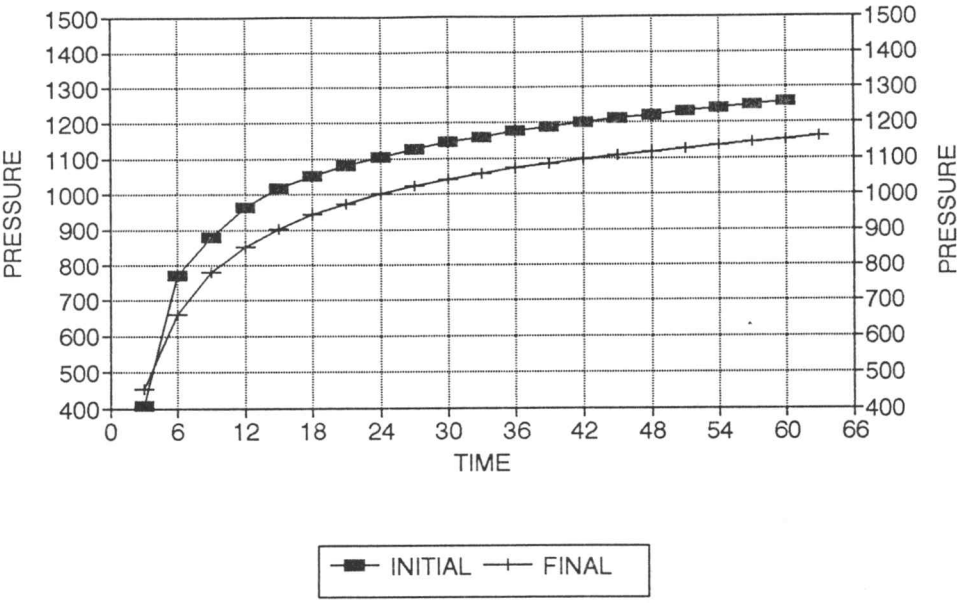
GOOD "A" #2 DST #3
FINAL SHUTIN

90 TOTAL FLOW TIME

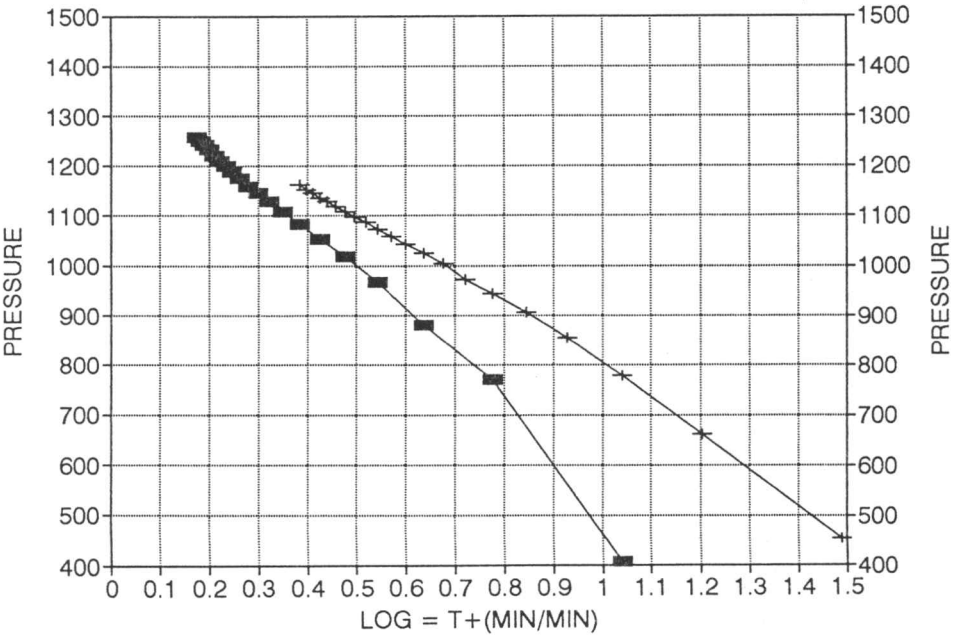
Slope 575.35 psi/cycle
P * 1382 psi

	TIME(MIN)	Pws (psi)	Log Horn T	<> PRESSURE	Horn T
	3	454.0	1.491	454.0	31
	6	661.7	1.204	207.7	16
	9	778.7	1.041	117.0	11
	12	853.1	0.929	74.4	9
	15	904.2	0.845	51.1	7
	18	943.6	0.778	39.4	6
	21	972.4	0.723	28.8	5
	24	1002.4	0.677	30.0	5
	27	1023.8	0.637	21.4	4
	30	1042.1	0.602	18.3	4
	33	1057.1	0.571	15.0	4
	36	1072.1	0.544	15.0	4
	39	1086.1	0.520	14.0	3
	42	1096.9	0.497	10.8	3
X	45	1107.7	0.477	10.8	3
	48	1117.4	0.459	9.7	3
	51	1127.1	0.442	9.7	3
	54	1134.6	0.426	7.5	3
	57	1144.3	0.411	9.7	3
	60	1151.9	0.398	7.6	3
X	63	1160.5	0.385	8.6	2

GOOD "A" #2 / DST #3
DELTA T DELTA P



HORNER PLOT



GAS VOLUME REPORT

CHARTER PRODUCTION COMPANY

GOOD "A" #2 DST # 3

MIN	PSIG	ORIFICE	MCF/D
5			
10			
15	32	0.25	9.5
20	36	0.25	10.1
25	40	0.25	10.6
30	40	0.25	10.6

MIN	PSIG	ORIFICE	MCF/D
5	10	0.25	5.32
10	90	0.25	15.9
15	50	0.25	11.9
20	40	0.25	10.6
25	30	0.25	9.2
30	24	0.25	8.22
35	20	0.25	7.51
40	15	0.25	6.55
45	10	0.25	5.32
50	20	0.25	7.51
55	10	0.25	5.32
60	5	0.25	3.71

Remarks:

ELL NAME Good "A" 2 DST # 3 RECORDER # 13850

NIT. HYD. MUD. 2200 FINAL HYD. MUD 2150

ITIAL FLOW NUTES 30 TERVAL 3		INITIAL SHUTIN MINUTES 60 INTERVAL 3			FINAL FLOW MINUTES 60 INTERVAL 3		FINAL SHUTIN MINUTES 60 INTERVAL 3	
10		117		1	161		226	
10		382		2	161		425	
10		722		3	161		620	
10		826		4	161		730	
0		906		5	161		800	
10		955		6	161		848	
14		987		7	162		885	
16		1015		8	165		912	
16		1037		9	170		940	
17		1056		10	172		960	
17		1073		11	176		977	
		1085		12	182		991	
		1100		13	185		1005	
		1111		14	191		1018	
		1123		15	196		1028	
		1133		16	202		1038	
		1143		17	209		1047	
		1153		18	211		1056	
		1161		19	212		1063	
		1170		20	218		1072	
		1177		21	223		1079	
				22	226		1087	
				23				
				24				
				25				
				26				
				27				

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name: GOOD "A" #2 | Test No. 4 | Date 6/29/92

Company: CHARTER PRODUCTION COMPANY | Zone KS CITY

Address: 224 EAST DOUGLAS WICHITA KS 67202 | Elevation 2718

Co. Rep./Geo.: CHUCK SCHMALTZ | Cont. ZENITH RIG #1 | Est. Ft. of Pay 10

Location: Sec. 20 | Twp. 34S | Rge. 31W | Co. SEWARD | State KS

Interval Tested: 4859-4876

Anchor Length: 17

Top Packer Depth: 4854

Bottom Packer Depth: 4859

Total Depth: 4876

Drill Pipe Size: 4.5 XH

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

Drill Collar – 2.25 Ft. Run: 624

Mud Wt.: 8.8 lb/Gal.

Viscosity: 60 | Filtrate: 10.6

Tool Open @: 5:30 PM | Initial Blow: GAS TO SURFACE IN 6 MINUTES

Final Blow: SEE GAS VOLUME REPORT

Recovery - Total Feet: 2140

Flush Tool?: NO

Rec. 2694	Feet of	GAS IN PIPE
Rec. 2047	Feet of	GASSY OIL-55%GAS/45%OIL
Rec. 93	Feet of	GASSY MUD CUT OIL-10%GAS/65%OIL/25%MUD
Rec.	Feet of	
Rec.	Feet of	

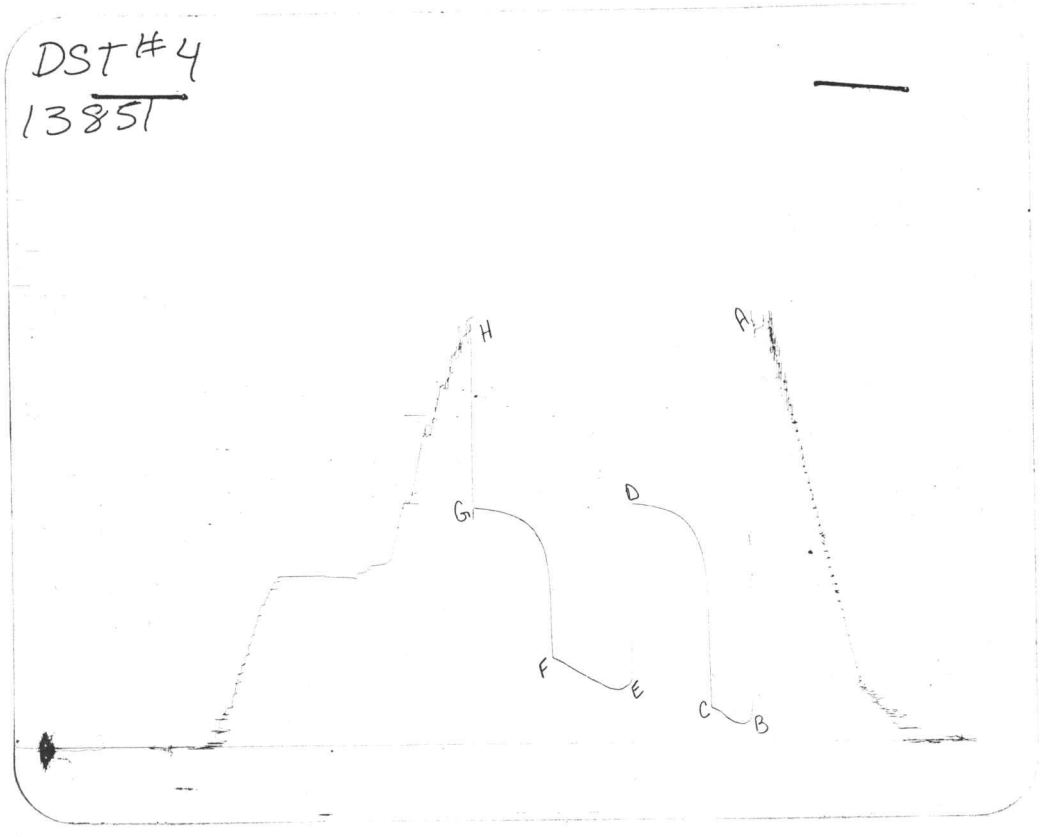
BHT: 120 °F | Gravity: 39 °API | @ 68 °F | Corrected Gravity: 38.4 °API

RW: @ °F | Chlorides: ppm Recovery | Chlorides: 5400 ppm System

(A) Initial Hydrostatic Mud	2392.9 PSI	AK1 Recorder No. 13851	Range 4425
(B) First Initial Flow Pressure	139.9 PSI	@ (depth) 4862	w / Clock No. 17652
(C) First Final Flow Pressure	229.7 PSI	AK1 Recorder No. 13850	Range 4325
(D) Initial Shut-in Pressure	1385.7 PSI	@ (depth) 4873	w / Clock No. 27585
(E) Second Initial Flow Pressure	338.6 PSI	AK1 Recorder No.	Range
(F) Second Final Flow Pressure	523.3 PSI	@ (depth)	w / Clock No.
(G) Final Shut-in Pressure	1371.7 PSI	Initial Opening 30	Final Flow 60
(H) Final Hydrostatic Mud	2283.8 PSI	Initial Shut-in 60	Final Shut-in 60

Our Representative: STEVE BOWMAN

CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2366	2392.9
(B) FIRST INITIAL FLOW PRESSURE	117	139.9
(C) FIRST FINAL FLOW PRESSURE	224	229.7
(D) INITIAL CLOSED-IN PRESSURE	1390	1385.7
(E) SECOND INITIAL FLOW PRESSURE	320	338.6
(F) SECOND FINAL FLOW PRESSURE	534	523.3
(G) FINAL CLOSED-IN PRESSURE	1357	1371.7
(H) FINAL HYDROSTATIC MUD	2323	2283.8

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

CHARTER PRODUCTION C GOOD "A" #2 DST 4

20 34S 31W SEWARD KS

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ELEVATION:	2718	KB	EST. PAY	10	FT
DATUM:	-4874		ZONE TESTED:	KS CITY	
TEST INTERVAL:	4859-4876		TIME INTERVALS:	30-60-60-60	
RECORDER DEPTH:	4873		VISCOSITY:	5.363	CP
BOTTOM HOLE TEMP:	120		HOLE SIZE:	7.875	IN

****

CUBIC FEET OF GAS IN PIPE:	215.09			
TOTAL FEET OF RECOVERY:	2140.00	CORRECTED PIPE FILLUP:	1445.580	
TOTAL BARRELS OF RECOVERY:	24.61	CORR. BARRELS OF RECOVERY:	14.726	BBL
BARRELS IN DRILL PIPE:	21.56	API GRAVITY:	38	
BARRELS IN WEIGHT PIPE:	0.00	FLUID GRADIENT:	0.362	
BARRELS IN DRILL COLLARS:	3.05			
GAS OIL RATIO:	8.7402	CU.FT/BBL		
BUBBLE POINT PRESSURE:	70.156			
UNCORRECTED INITIAL PRODUCTION:			393.74	BBL
INITIAL PRODUCTION CORRECTED TO FINAL FLOW PRESSURE:			235.62	BBL/DAY
INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE:			224.474	

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INITIAL SLOPE	438.47	PSI/CYCLE	FINAL SLOPE	216.33	PSI/CYCLE
INITIAL P*	1460	PSI	FINAL P*	1458	PSI

****

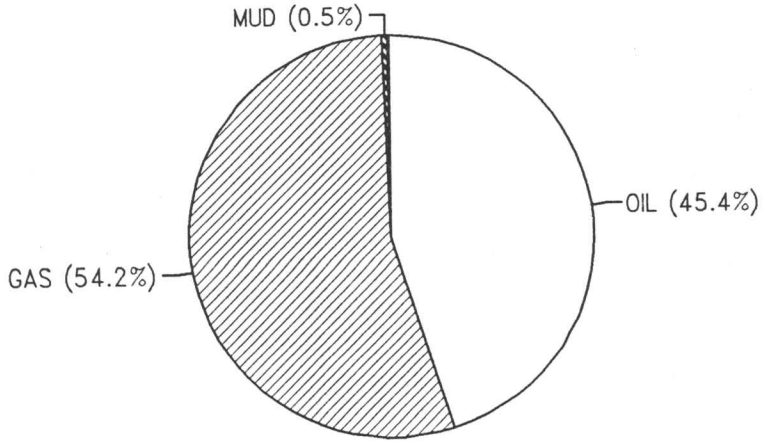
TRANSMISSIBILITY	177.09	(MD.-FT./CP.)
PERMEABILITY	94.97	(MD.)
INDICATED FLOW CAPACITY	949.68	)MD.FT)
PRODUCTIVITY INDEX	0.20	(BARRELS/DAY/PSI)
DAMAGE RATIO	0.79	
RADIUS OF INVESTIGATION	92.45	(FT,)
POTENTIOMETRIC SURFACE	-1492.39	(FT.)
DRAWDOWN FACTOR	0.142	(%)

CALCULATED RECOVERY ANALYSIS

DST # 4 TICKET # 4868

SAMPLE #	TOTAL FEET		GAS FEET	%	OIL FEET	%	WATER FEET	%	MUD FEET
DRILL 1	1516	55	833.8	45	682.2	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	531	55	292.05	45	238.95	0	0	0	0
COLLAR 2	93	10	9.3	65	60.45	0	0	25	23.25
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
TOTAL	2140		1135.15		981.6		0		23.25

			HRS OPEN	BBL/DAY
BBL OIL=	11.16495	*	1.5	178.6392
BBL WATER=	0	*		0
BBL MUD=	0.1136925			
BBL GAS =	13.3302375			



GOOD "A" #2 DST #4
INITIAL SHUTIN

30 TOTAL FLOW TIME

Slope 438.47 psi/cycle
P * 1460 psi

	TIME(MIN)	Pws (psi)	Log Horn T	<> PRESSURE	Horn T
	3	790.4	1.041	790.4	11
	6	989.5	0.778	199.1	6
	9	1092.6	0.637	103.1	4
	12	1173.4	0.544	80.8	4
	15	1232.7	0.477	59.3	3
	18	1268.3	0.426	35.6	3
X	21	1290.9	0.385	22.6	2
	24	1310.3	0.352	19.4	2
	27	1323.2	0.325	12.9	2
	30	1335.1	0.301	11.9	2
	33	1342.6	0.281	7.5	2
	36	1350.2	0.263	7.6	2
	39	1358.8	0.248	8.6	2
	42	1363.1	0.234	4.3	2
	45	1368.5	0.222	5.4	2
	48	1371.7	0.211	3.2	2
	51	1376.0	0.201	4.3	2
	54	1378.2	0.192	2.2	2
	57	1381.4	0.184	3.2	2
	60	1383.6	0.176	2.2	2
X	63	1385.7	0.169	2.1	1

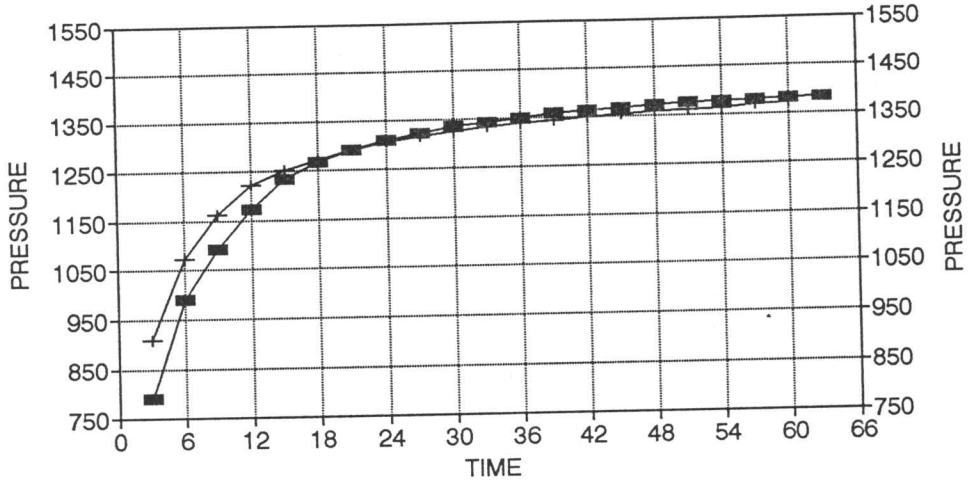
GOOD "A" #2 DST #4
FINAL SHUTIN

90 TOTAL FLOW TIME

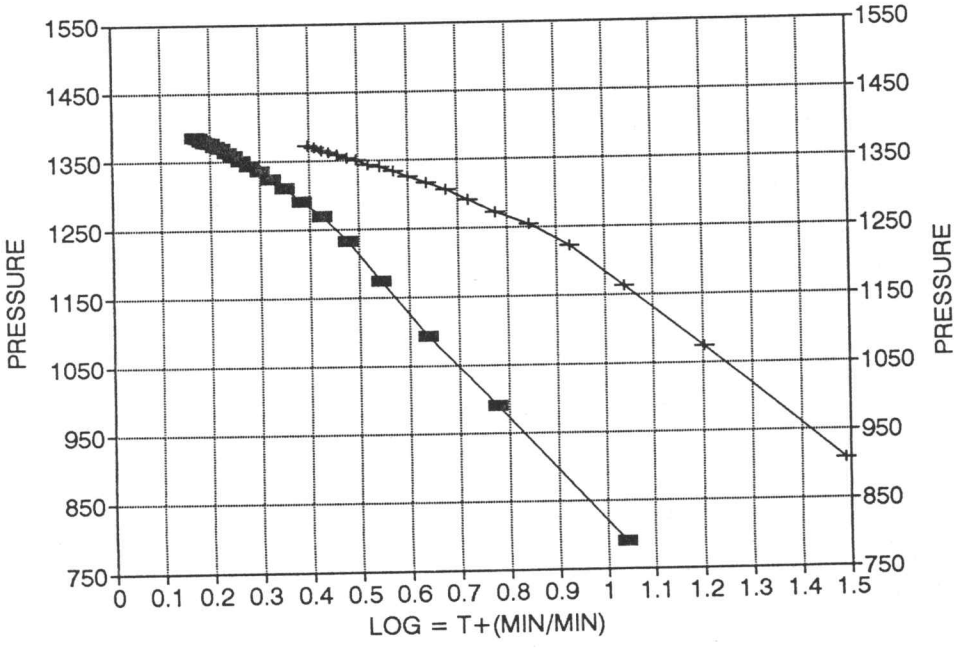
Slope 216.33 psi/cycle
P * 1458 psi

	TIME(MIN)	Pws (psi)	Log Horn T	<> PRESSURE	Horn T
	3	908.5	1.491	908.5	31
	6	1073.2	1.204	164.7	16
	9	1162.7	1.041	89.5	11
	12	1221.9	0.929	59.2	9
	15	1253.2	0.845	31.3	7
	18	1272.6	0.778	19.4	6
	21	1290.9	0.723	18.3	5
	24	1304.9	0.677	14.0	5
	27	1315.7	0.637	10.8	4
	30	1325.4	0.602	9.7	4
	33	1334.0	0.571	8.6	4
	36	1339.4	0.544	5.4	4
	39	1343.7	0.520	4.3	3
X	42	1350.2	0.497	6.5	3
	45	1354.5	0.477	4.3	3
	48	1358.8	0.459	4.3	3
	51	1360.9	0.442	2.1	3
	54	1364.2	0.426	3.3	3
	57	1369.6	0.411	5.4	3
X	60	1371.7	0.398	2.1	3

GOOD "A" #2 / DST #4
DELTA T DELTA P



HORNER PLOT



INITIAL FLOW

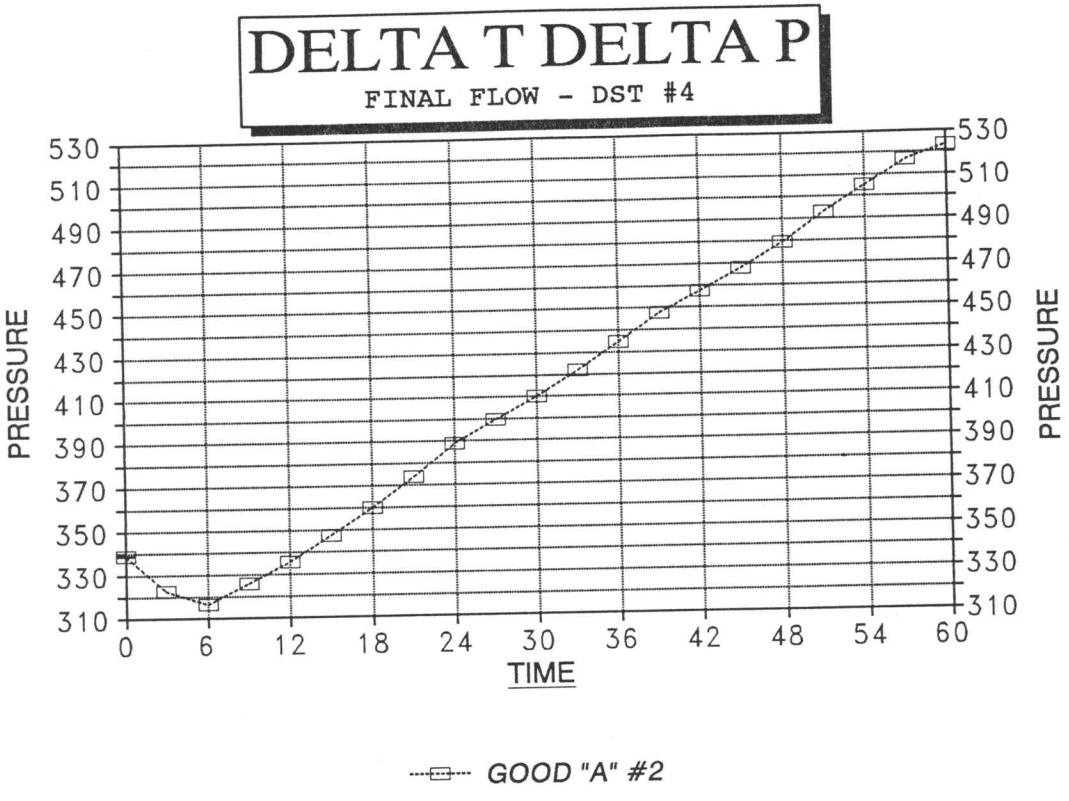
RECORDER # 13850 DST # 4

TIME(MIN)	PRESSURE	<>PRESSURE
0	139.9	139.9
3	128.2	-11.7
6	122.8	-5.4
9	132.4	9.6
12	145.3	12.9
15	157	11.7
18	175.2	18.2
21	197.6	22.4
24	214.7	17.1
27	222.2	7.5
30	229.7	7.5

FINAL FLOW

RECORDER # 13850 DST # 4

TIME(MIN)	PRESSURE	<> PRESSURE
0	338.6	338.6
3	322.6	-16
6	316.2	-6.4
9	325.8	9.6
12	335.4	9.6
15	347.2	11.8
18	360	12.8
21	373.9	13.9
24	388.8	14.9
27	399.5	10.7
30	410.2	10.7
33	422	11.8
36	434.8	12.8
39	447.6	12.8
42	457.2	9.6
45	467.8	10.6
48	479.6	11.8
51	493.5	13.9
54	505.2	11.7
57	516.9	11.7
60	523.3	6.4



INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE: 224.474

GAS VOLUME REPORT

CHARTER PRODUCTION COMPANY

GOOD "A" #2

DST # 4

MIN	PSIG	ORIFICE	MCF/D
5			
10	60	0.5	48600
15	70	0.5	52400
20	80	0.5	56100
25	100	0.5	62700
30	60	0.5	48600

MIN	PSIG	ORIFICE	MCF/D
5	5	0.5	14100
10	3	0.5	10900
15	5	0.5	14100
20	16	0.5	25100
25	28	0.5	33200
30	32	0.5	35500
35	66	0.5	50900
40	32	0.5	35500
45	12	0.5	21900
50	16	0.5	25100
55	8	0.5	17200
60	12	0.5	21900

Remarks:

~~0.215~~	~~229.7049~~
0.741	790.4351
0.928	989.5847
1.024	1092.655
1.099	1173.491
1.154	1232.74
1.187	1268.312
1.208	1290.946
1.226	1310.334
1.238	1323.263
1.249	1335.115
1.256	1342.659
1.263	1350.203
1.271	1358.825
1.275	1363.137
1.28	1368.527
1.283	1371.761
1.287	1376.073
1.289	1378.23
1.292	1381.464
1.294	1383.62

~~0.49~~	~~523.3737~~
0.852	908.5151
1.006	1073.27
1.089	1162.707
1.144	1221.964
1.173	1253.219
1.191	1272.625
1.208	1290.946
1.221	1304.948
1.231	1315.721
1.24	1325.417
1.248	1334.038
1.253	1339.426
1.257	1343.736
1.263	1350.203
1.267	1354.514
1.271	1358.825
1.273	1360.981
1.276	1364.215
1.281	1369.605
1.283	1371.761

0.131	139.9604
0.12	128.208
0.115	122.866
0.124	132.4816
0.136	145.3024
0.147	157.0548
0.164	175.2176
0.185	197.654
0.201	214.7483
0.208	222.2266
0.215	229.7049

0.317	338.6727
0.302	322.6468
0.296	316.2369
0.305	325.852
0.314	335.4675
0.325	347.2198
0.337	360.0406
0.35	373.9298
0.364	388.8874
0.374	399.5714
0.384	410.2555
0.395	422.008
0.407	434.8202
0.419	447.6256
0.428	457.2291
0.438	467.8992
0.449	479.6355
0.462	493.5048
0.473	505.2395
0.484	516.9736
0.49	523.3737

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name: GOOD "A" #2 — Test No. 5 — Date 7/1/92

Company: CHARTER PRODUCTION COMPANY — Zone MARMATON

Address: 224 EAST DOUGLAS WICHITA KS 67202 — Elevation 2718

Co. Rep./Geo.: CHUCK SCHMALTZ — Cont. ZENITH RIG #1 — Est. Ft. of Pay

Location: Sec. 20 — Twp. 34S — Rge. 31W — Co. SEWARD — State KS

Interval Tested: 5267-5318

Anchor Length: 51

Top Packer Depth: 5262

Bottom Packer Depth: 5267

Total Depth: 5318

Drill Pipe Size: 4.5 XH

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

Drill Collar – 2.25 Ft. Run: 624

Mud Wt.: 9 lb/Gal.

Viscosity: 39 — Filtrate: 9.8

Tool Open @ 3:35 PM — Initial Blow: STRONG 12" BLOW IN 3 MINUTES

NO BLOW ON SHUTIN

Final Blow: STRONG 12" BLOW IN 6 MINUTES

Recovery - Total Feet: 1860

Flush Tool? NO

Rec. 465	Feet of	GAS IN PIPE
Rec. 837	Feet of	GASSY MUD-5%GAS/95%MUD
Rec. 837	Feet of	MUD
Rec. 186	Feet of	MUDDY WATER-60%WTR/40%MUD
Rec.	Feet of	

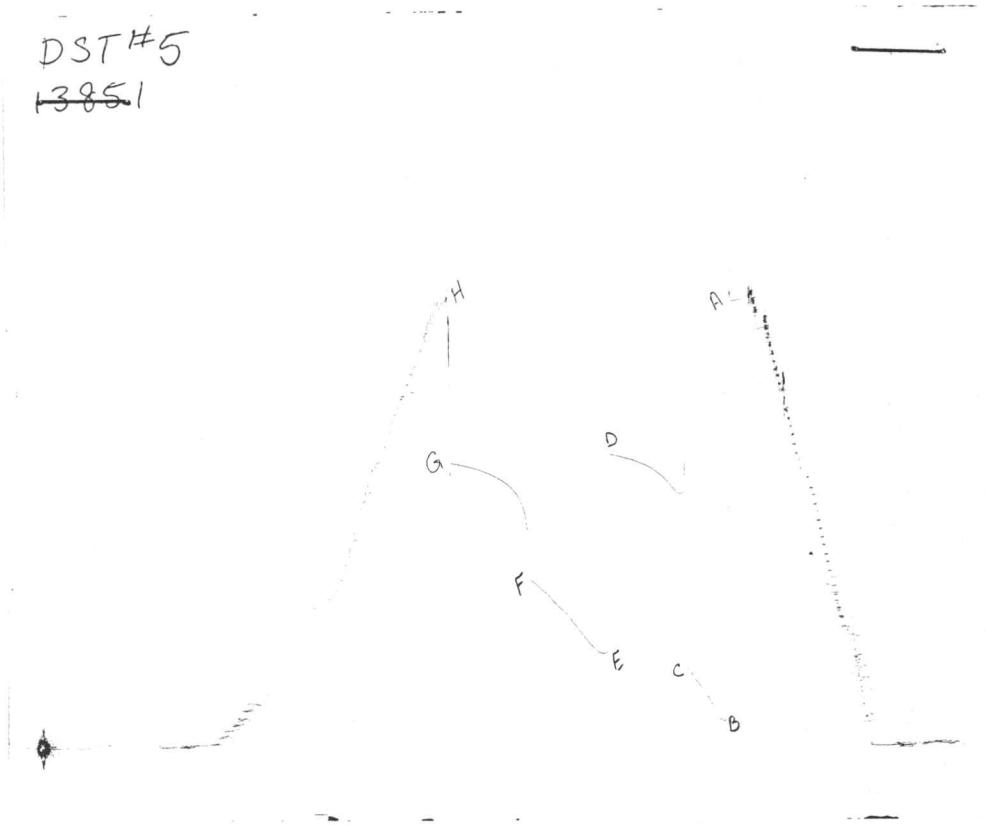
BHT 124 °F — Gravity °API — @ °F Corrected Gravity °API

RW 0.2 — @ 76 °F — Chlorides 31000 ppm Recovery — Chlorides 4100 ppm System

(A) Initial Hydrostatic Mud	2591.2 PSI	AK1 Recorder No. 13851	Range 4425
(B) First Initial Flow Pressure	169.3 PSI	@ (depth) 5273	w / Clock No. 17652
(C) First Final Flow Pressure	482.5 PSI	AK1 Recorder No. 13850	Range 4325
(D) Initial Shut-in Pressure	1674.3 PSI	@ (depth) 5315	w / Clock No. 27585
(E) Second Initial Flow Pressure	550.2 PSI	AK1 Recorder No.	Range
(F) Second Final Flow Pressure	948.3 PSI	@ (depth)	w / Clock No.
(G) Final Shut-in Pressure	1630.4 PSI	Initial Opening 30	Final Flow 60
(H) Final Hydrostatic Mud	2534.7 PSI	Initial Shut-in 60	Final Shut-in 60

Our Representative STEVE BOWMAN

CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2585	2591.2
(B) FIRST INITIAL FLOW PRESSURE	170	169.3
(C) FIRST FINAL FLOW PRESSURE	480	482.5
(D) INITIAL CLOSED-IN PRESSURE	1671	1674.3
(E) SECOND INITIAL FLOW PRESSURE	544	550.2
(F) SECOND FINAL FLOW PRESSURE	959	948.3
(G) FINAL CLOSED-IN PRESSURE	1627	1630.4
(H) FINAL HYDROSTATIC MUD	2530	2534.7

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name: GOOD "A" #2 Test No. 6 Date 7/4/92

Company: CHARTER PRODUCTION COMPANY Zone MORROW

Address: 224 EAST DOUGLAS WICHITA KS 67202 Elevation 2718

Co. Rep./Geo.: CHUCK SCHMALTZ Cont. ZENITH RIG #1 Est. Ft. of Pay

Location: Sec. 20 Twp. 34S Rge. 31W Co. SEWARD State KS

Interval Tested 5763-5830

Anchor Length 67

Top Packer Depth 5758

Bottom Packer Depth 5763

Total Depth 5830

Drill Pipe Size 4.5 XH

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

Drill Collar – 2.25 Ft. Run 624

Mud Wt. 8.7 lb/Gal.

Viscosity 50 Filtrate 8

Tool Open @ 3:40 AM Initial Blow GAS TO SURFACE IN 10 MINUTES-SEE GAS VOLUME REPORT

Final Blow

Recovery - Total Feet 190 Flush Tool? NO

Rec. 5553 Feet of GAS IN PIPE

Rec. 190 Feet of GAS CUT MUD-5%GAS/95%MUD

Rec. Feet of

Rec. Feet of

Rec. Feet of

BHT 125 °F Gravity °API @ °F Corrected Gravity °API

RW @ °F Chlorides ppm Recovery Chlorides 4100 ppm System

(A) Initial Hydrostatic Mud 2831.4 PSI AK1 Recorder No. 13851 Range 4425

(B) First Initial Flow Pressure 141.2 PSI @ (depth) 5766 w / Clock No. 17652

(C) First Final Flow Pressure 141.2 PSI AK1 Recorder No. 13850 Range 4325

(D) Initial Shut-in Pressure 1877.5 PSI @ (depth) 5827 w / Clock No. 27585

(E) Second Initial Flow Pressure 90.6 PSI AK1 Recorder No. Range

(F) Second Final Flow Pressure 102.3 PSI @ (depth) w / Clock No.

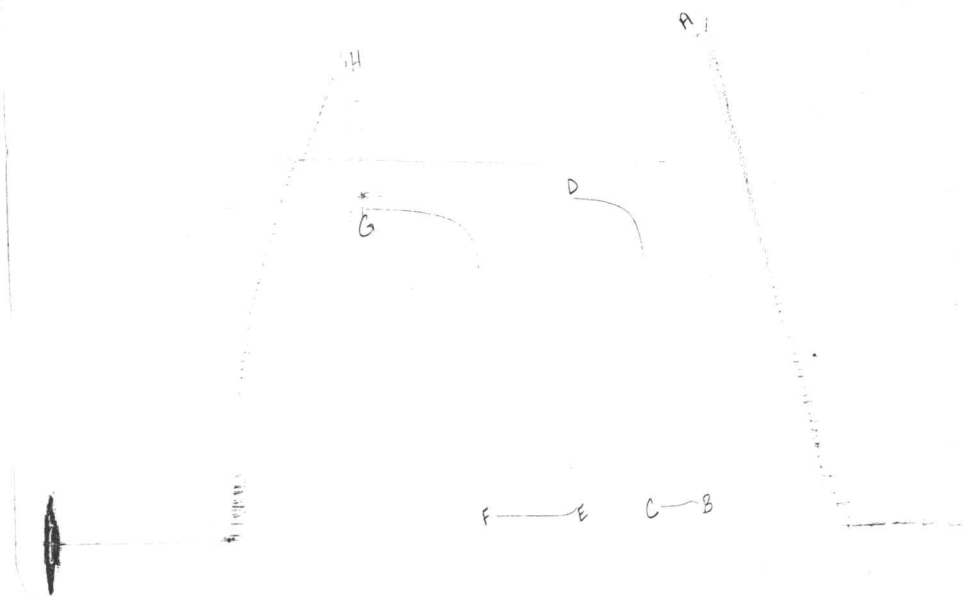
(G) Final Shut-in Pressure 1866.9 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 2750.8 PSI Initial Shut-in 60 Final Shut-in 90

Our Representative STEVE BOWMAN

CHART PAGE

DST #6
13851



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2825	2831.4
(B) FIRST INITIAL FLOW PRESSURE	138	141.2
(C) FIRST FINAL FLOW PRESSURE	138	141.2
(D) INITIAL CLOSED-IN PRESSURE	1876	1877.5
(E) SECOND INITIAL FLOW PRESSURE	85	90.6
(F) SECOND FINAL FLOW PRESSURE	96	102.3
(G) FINAL CLOSED-IN PRESSURE	1865	1866.9
(H) FINAL HYDROSTATIC MUD	2748	2750.8

GAS VOLUME REPORT

CHARTER PRODUCTION COMPANY

GOOD "A" #2

DST # 6

MIN	PSIG	ORIFICE	MCF/D
5			
10	20	1	115000
15	24	1	126000
20	26	1	132000
25	30	1	141000
30	32	1	146000

MIN	PSIG	ORIFICE	MCF/D
5	80	1	231000
10	60	1	200000
15	48	1	179000
20	40	1	163000
25	40	1	163000
30	40	1	163000
35	40	1	163000
40	40	1	163000
45	40	1	163000
50	40	1	163000
55	40	1	163000
60	40	1	163000

Remarks:

Final

0.226	~~241.4564~~
0.425	454.028
0.62	661.7142
0.73	778.7321
0.8	853.19
0.848	904.2599
0.885	943.6168
0.912	972.4322
0.94	1002.451
0.96	1023.899
0.977	1042.134
0.991	1057.153
1.005	1072.193
1.018	1086.192
1.028	1096.963
1.038	1107.736
1.047	1117.433
1.056	1127.131
1.063	1134.676
1.072	1144.377
1.079	1151.924
1.087	1160.55

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7. Flow

0.161	172.0124
0.161	172.0124
0.161	172.0124
0.161	172.0124
0.161	172.0124
0.161	172.0124
0.162	173.0808
0.165	176.286
0.17	181.628
0.172	183.7648
0.176	188.0384
0.182	194.4488
0.185	197.654
0.191	204.0644
0.196	209.4064
0.202	215.8167
0.209	223.295
0.211	225.4316
0.212	226.5
0.218	232.9099
0.223	238.2515
0.226	241.4564

Initia Sket 2

0.117	~~125.0028~~
0.382	408.1187
0.722	770.2202
0.826	880.8545
0.906	966.0009
0.955	1018.537
0.987	1052.862
1.015	1082.961
1.037	1106.658
1.056	1127.131
1.073	1145.455
1.085	1158.393
1.1	1174.57
1.111	1186.416
1.123	1199.34
1.133	1210.113
1.143	1220.887
1.153	1231.662
1.161	1240.284
1.17	1249.985
1.177	1257.531