

15-175-21257

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

RELEASED

DEC 22 1994

Drill-Stem Test Data

Computer Inventoried

PITTMAN #1

Well Name CHARTER PRODUCTION COMPANY Test No. 1 Date 12/22/94 FROM CONFIDENTIAL
 Company 224 EAST DOUGLAS WICHITA KS 67202 Zone LKC-"C"
 Address ERNIE MORRISON Cont. ZENITH DRLG Elevation 2762
 Co. Rep./Geo. 10 Twp. 34S Rge. 32W Co. SEWARD State KS Est. Ft. of Pay 9
 Location: Sec. 10 Twp. 34S Rge. 32W Co. SEWARD State KS
API#15-175-21257

Interval Tested 4588-4631 Drill Pipe Size 4.5 XH
 Anchor Length 43 Wt. Pipe I.D. - 2.7 Ft. Run 520
 Top Packer Depth 4583 Drill Collar - 2.25 Ft. Run 8.9
 Bottom Packer Depth 4588 Mud Wt. 54 lb/Gal.
 Total Depth 4631 Viscosity 8.9 Filtrate 8.9

Tool Open @ 3:15 Initial Blow STRONG THROUGHOUT
GAS TO SURFACE IN 1 MINUTE
 Final Blow SAME AS INITIAL-SEE GAS FLOW REPORT

KCC

JAN 12 1995

Recovery - Total Feet 360 Flush Tool? NO

Rec. 90 Feet of GAS & MUD CUT OIL-65%GAS/25%OIL/10%MUD
 Rec. 90 Feet of GSY MUD & WTR CUT OIL-10%GAS/60%OIL/10%WTR/20%MUD
 Rec. 90 Feet of MUD & WTR CUT OIL-70%OIL/25%WTR/5%MUD
 Rec. 90 Feet of WATER
 Rec. 90 Feet of

BHT 116 °F Gravity 70 °API @ 36000 ppm Recovery Chlorides 2900 ppm System
 RW 0.2 @ 70 °F Chlorides 36000 ppm Recovery Chlorides 2900 ppm System

(A) Initial Hydrostatic Mud 2260.9 PSI AK1 Recorder No. 13851 Range 4425

(B) First Initial Flow Pressure 955.3 PSI @ (depth) 4593 w / Clock No. 26191

(C) First Final Flow Pressure 893.6 PSI AK1 Recorder No. 13850 Range 4325

(D) Initial Shut-in Pressure 1334.0 PSI @ (depth) 4631 w / Clock No. 27585

(E) Second Initial Flow Pressure 912.7 PSI AK1 Recorder No. Range

(F) Second Final Flow Pressure 753.1 PSI @ (depth) w / Clock No.

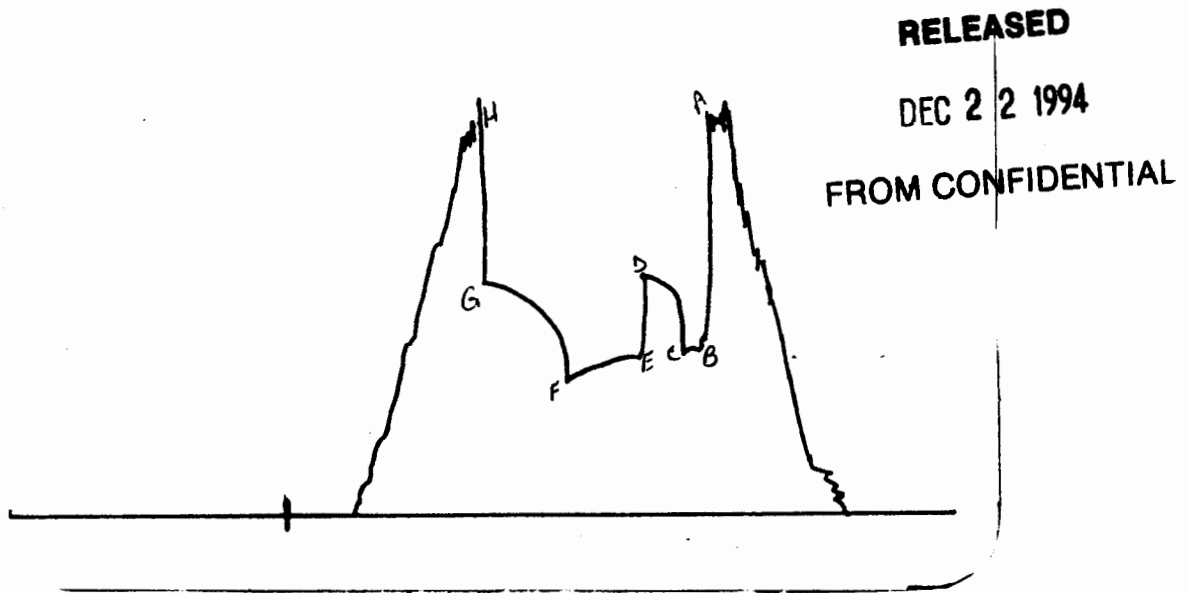
(G) Final Shut-in Pressure 1284.4 PSI Initial Opening 15 Final Flow 60

(H) Final Hydrostatic Mud 2260.9 PSI Initial Shut-in 30 Final Shut-in 60

Our Representative HARRY SCHMIDT

10-345-32w

CHART PAGE



This is an actual photograph of recorder chart

FIELD
READING

OFFICE
READING

(A) INITIAL HYDROSTATIC MUD	2257	2260.9
(B) FIRST INITIAL FLOW PRESSURE	906	955.3
(C) FIRST FINAL FLOW PRESSURE	885	893.6
(D) INITIAL CLOSED-IN PRESSURE	1336	1334
(E) SECOND INITIAL FLOW PRESSURE	885	912.7
(F) SECOND FINAL FLOW PRESSURE	746	753.1
(G) FINAL CLOSED-IN PRESSURE	1282	1284.4
(H) FINAL HYDROSTATIC MUD	2257	2260.9

DST #

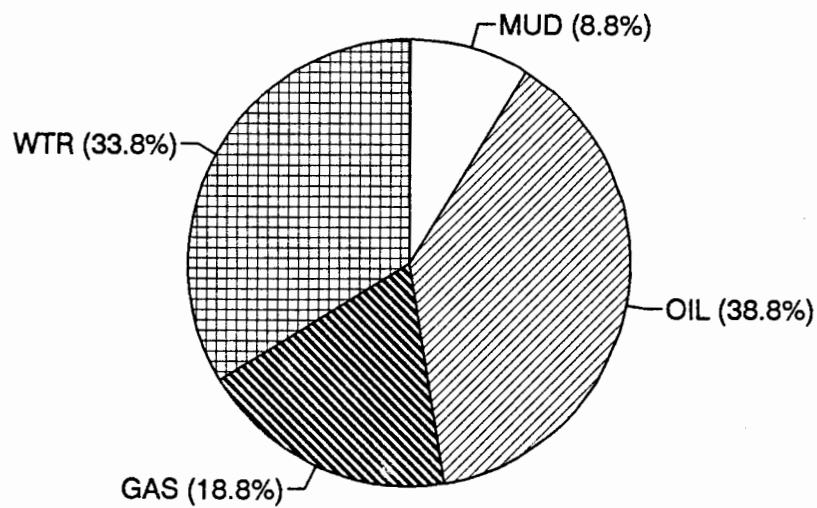
1

TICKET

4875

SAMPLE	TOTAL	GAS		OIL		WATER		MUD	
#	FEET	%	FEET	%	FEET	%	FEET	%	FEET
1	90	65	58.5	25	22.5	0	0	10	9
2	90	10	9	60	54	10	9	20	18
3	90	0	0	70	63	25	22.5	5	4.5
4	90	0	0	0	0	100	90	0	0
5			0		0		0		0
TOTAL	360	18.75	67.5	38.75	139.5	33.75	121.5	8.75	31.5

			HRS OP	BBL/DAY
BBL OIL=	0.682155	*	1.25	13.097376
BBL WATER=	0.594135	*		11.407392
BBL MUD=	0.154035			
BBL GAS=	0.330075			



MUD
OIL
GAS
WTR

COMPUTER EVALUATION BY TRILOBITE TESTING, L.L.C.
CHARTER PRODUCTION COMPANY

PITTMAN #1 DST #1
10 34S 32W SEWARD KS

ELEVATION: 2762 KB EST. PAY: 9 FT.
DATUM: -1870 ZONE TESTED: LKC-"C"
TEST INTERVAL: 4588-4631 TIME INTERVALS: 15-30-60-60
RECORDER DEPTH: 4631 VISCOSITY: 0.01422 CP
BOTTOM HOLE TEMP: 116 HOLE SIZE: 7.875 IN
COMPRESSIBILITY: 0.9975 GAS GRAVITY: 0.8569

TEMPERATURE RANKINE: 576.00 &
TRANSMISSIBILITY: 32291.51 Kh/%
THEORITICAL FLOW CAPICITY: 459.33 Kh
AVERAGE EFFECTIVE PERMEABILITY: 51.04 K(md.)
RADIUS OF INVESTIGATION: 61.87 FT.
DAMAGE RATIO: 0.86
ABSOLUTE OPEN FLOW(MAX) 8074.38 MCFD
ABSOLUTE OPEN FLOW(MIN) 6691.83 MCFD
THEORITICAL OPEN FLOW(MAX) 6949.67 MCFD
THEORITICAL OPEN FLOW(MIN) 5759.70 MCFD
POTENTIOMETRIC SURFACE 372738.35 (FT.)

INITIAL SHUT-IN VALUES:
SLOPE 130204.83
THEORETICAL STATIC PRESSURE 1382

FINAL SHUT-IN VALUES:
SLOPE 161538.31
THEORETICAL STATIC PRESSURE 1346

DRAWDOWN FACTOR: 2.61 (%)

GAS VOLUME REPORT

CHARTER PRODUCTION COMPANY

PITTMAN #1

DST # 1

MIN	PSIG	ORIFICE	MCF/D	MIN	PSIG	ORIFICE	MCF/D
5	100	1.25	4146				
10	140	1.25	5546				
15	140	1.25	5546				
20	160	1.25	6246				
25	160	1.25	6246				
30	150	1.25	5896				
35	150	1.25	5896				
40	140	1.25	5546				
45	140	1.25	5546				
50	140	1.25	5546				
50	140	1.25	5546				
55	140	1.25	5546				
60	140	1.25	5546				

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FROM CONFIDENTIAL

Remarks:

PITTMAN #1
INITIAL

DST #1
SHUTIN
15 TOTAL FLOW TIME

Slope 130204.83 psi/cycle
P * 1382 psi

Log <>
TIME(MIN) Pws (psi) Horn T PRESSURE Horn T

3	1189.6	0.778	1189.6	6
6	1241.3	0.544	51.7	4
9	1262.9	0.426	21.6	3
12	1278.0	0.352	15.1	2
15	1293.1	0.301	15.1	2
18	1311.4	0.263	18.3	2
21	1314.6	0.234	3.2	2
24	1323.2	0.211	8.6	2
X 27	1329.7	0.192	6.5	2
X 30	1334.0	0.176	4.3	2

PITTMAN #1
FINAL

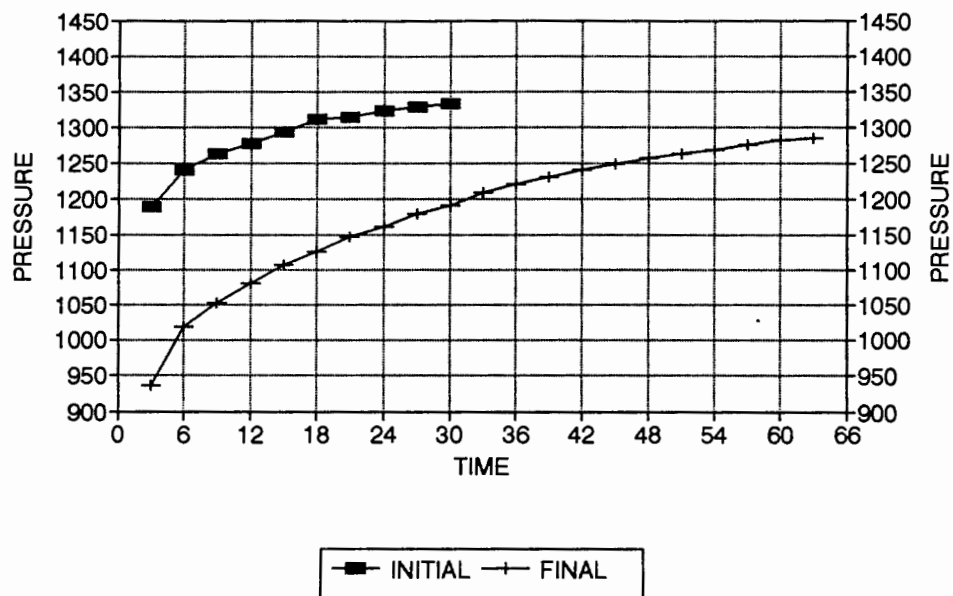
DST #1
SHUTIN
75 TOTAL FLOW TIME

Slope 161538.31 psi/cycle
P * 1346 psi

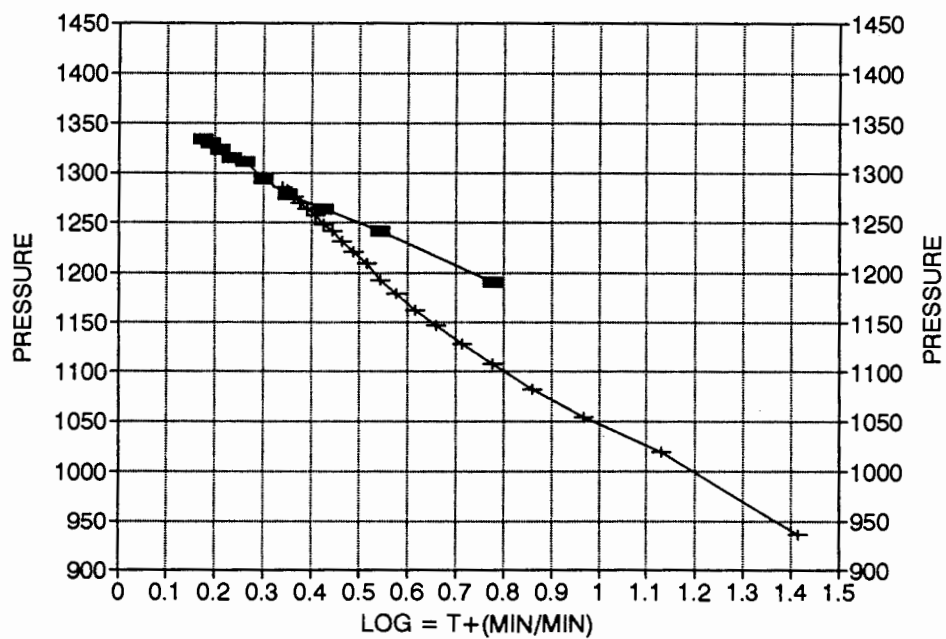
Log <>
TIME(MIN) Pws (psi) Horn T PRESSURE Horn T

3	936.1	1.415	936.1	26
6	1019.6	1.130	83.5	14
9	1053.9	0.970	34.3	9
12	1081.8	0.860	27.9	7
15	1107.7	0.778	25.9	6
18	1127.1	0.713	19.4	5
21	1146.5	0.660	19.4	5
24	1161.6	0.615	15.1	4
27	1178.8	0.577	17.2	4
30	1191.8	0.544	13.0	4
33	1209.0	0.515	17.2	3
36	1219.8	0.489	10.8	3
39	1230.5	0.466	10.7	3
42	1241.3	0.445	10.8	3
45	1247.8	0.426	6.5	3
48	1256.4	0.409	8.6	3
51	1262.9	0.393	6.5	2
54	1269.3	0.378	6.4	2
57	1275.8	0.365	6.5	2
X 60	1282.3	0.352	6.5	2
X 63	1284.4	0.341	2.1	2

PITTMAN #1 / DST #1 DELTA T DELTA P



HORNER PLOT



INITIAL FLOW

RECORDER #	13850	DST # 1
TIME(MIN)	PRESSURE	<>PRESSURE
0	955.3	955.3
3	911.7	-43.6
6	913.8	2.1
9	906.3	-7.5
12	901	-5.3
15	893.6	-7.4

FINAL FLOW

RECORDER #	13850	DST # 1
TIME(MIN)	PRESSURE	<> PRESSURE
0	912.7	912.7
3	878.7	-34
6	876.5	-2.2
9	876.5	0
12	874.4	-2.1
15	872.3	-2.1
18	870.2	-2.1
21	863.8	-6.4
24	855.3	-8.5
27	844.6	-10.7
30	836.1	-8.5
33	825.5	-10.6
36	814.9	-10.6
39	808.5	-6.4
42	800	-8.5
45	791.4	-8.6
48	782.9	-8.5
51	772.3	-10.6
54	765.9	-6.4
57	757.4	-8.5
60	753.1	-4.3

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DEC 22 1994

FROM CONFIDENTIAL

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 4875

Well Name & No. <u>PITTMAN #1</u>	Test No. <u>ONE</u>	Date <u>7-16-92</u>
Company <u>CHARTER PROD. CO.</u>	Zone Tested <u>4K6 - C</u>	
Address <u>224 E ROULEAS SUITE 400 WICHITA KS 67202</u>	Elevation <u>2762</u>	
Co. Rep./Geo. <u>ERNEST MORRISON</u>	Cont. <u>ZANITA</u>	Est. Ft. of Pay <u>9</u>
Location: Sec. <u>10</u>	Twp. <u>34 S</u>	Rge. <u>32 W</u> Co. <u>SARAWAD</u> State <u>KS</u>
No. of Copies _____	Distribution Sheet _____	Yes _____ No _____ Turnkey _____ Yes _____ No _____ Evaluation _____

Interval Tested <u>4588 TO 4631</u>	Drill Pipe Size <u>4 1/2" x 14</u>
Anchor Length <u>43'</u>	Top Choke — 1" Bottom Choke — 3/4"
Top Packer Depth <u>4583</u>	Hole Size — 7 7/8" Rubber Size — 6 3/4"
Bottom Packer Depth <u>4548</u>	Wt. Pipe I.D. — 2.7 Ft. Run _____
Total Depth <u>4631</u>	Drill Collar — 2.25 Ft. Run <u>520</u>
Mud Wt. <u>8.9</u> lb/gal.	Viscosity <u>54</u> Filtrate <u>8.9</u>
Tool Open @ <u>3:15</u>	Initial Blow <u>STRONG THROUGHOUT</u>
	<u>G.T.S. IN 1 MIN.</u>
Final Blow <u>SAME AS INITIAL SEIS GAS FLOW REPORT</u>	

Recovery — Total Feet <u>270'</u>	Feet of Gas in Pipe <u>TO SURFACE</u>	Flush Tool? <u>NO</u>
Rec. <u>90</u> Feet Of <u>G + MCO</u>	<u>65%</u> gas <u>25%</u> oil	%water <u>10%</u> mud
Rec. <u>90</u> Feet Of <u>G + M + WCO</u>	<u>10%</u> gas <u>60%</u> oil	<u>10%</u> water <u>20%</u> mud
Rec. <u>90</u> Feet Of <u>M + WCO</u>	%gas <u>70%</u> oil	<u>25%</u> water <u>5%</u> mud
Rec. <u>90</u> Feet Of <u>WATER</u>	%gas _____ %oil _____	%water _____ %mud _____
Rec. _____ Feet Of _____	%gas _____ %oil _____	%water _____ %mud _____

BHT _____ °F Gravity _____	°API @ _____	°F Corrected Gravity _____	°API _____
RW <u>0.2</u> @ <u>70</u> °F	Chlorides <u>36000</u> ppm	Recovery Chlorides <u>2900</u> ppm	System _____
(A) Initial Hydrostatic Mud <u>2257</u>	PSI	Ak1 Recorder No. <u>13851</u>	Range <u>4425</u>
(B) First Initial Flow Pressure <u>906</u>	PSI	@ (depth) <u>4593</u>	w/Clock No. <u>26191</u>
(C) First Final Flow Pressure <u>885</u>	PSI	Ak1 Recorder No. <u>13850</u>	Range <u>4325</u>
(D) Initial Shut-In Pressure <u>1336</u>	PSI	@ (depth) <u>4631</u>	w/Clock No. <u>27585</u>
(E) Second Initial Flow Pressure <u>885</u>	PSI	Ak1 Recorder No. _____	Range _____
(F) Second Final Flow Pressure <u>746</u>	PSI	@ (depth) _____	w/Clock No. _____
(G) Final Shut-In Pressure <u>1282</u>	PSI	Initial Opening <u>15</u>	Test <u>5500</u>
(H) Final Hydrostatic Mud <u>2257</u>	PSI	Initial Shut-In <u>30</u>	Jars <u>2000</u>

TRILOBITE TESTING COMPANY 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 SUBSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Final Flow <u>60</u>	Safety Joint <u>5000</u>
Final Shut-In <u>60</u>	Straddle _____
	Circ. Sub _____
	Sampler _____
	Extra Packer _____
	Other _____
	TOTAL PRICE \$ <u>800.00</u>

Approved By Ernie Morrison

Our Representative [Signature]

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name PITTMAN #1 Test No. 2 Date 7/20/92
Company CHARTER PRODUCTION COMPANY Zone MORROW
Address 224 EAST DOUGLAS WICHITA KS 67202 Elevation 2762
Co. Rep./Geo. ERNIE MORRISON Cont. ZENITH DRLG Est. Ft. of Pay _____
Location: Sec. 10 Twp. 34S Rge. 32W Co. SEWARD State KS

Interval Tested 5756-5840 Drill Pipe Size 4.5 XH
Anchor Length 84 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 5751 Drill Collar - 2.25 Ft. Run 520
Bottom Packer Depth 5756 Mud Wt. 9 lb/Gal.
Total Depth 5840 Viscosity 48 Filtrate 8.4

Tool Open @ 8:15 PM Initial Blow WEAK 1.5" BLOW

Final Blow NO BLOW

Recovery - Total Feet 30 Flush Tool? NO

Rec. 30 Feet of MUD
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT 130 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 2000 ppm System

(A) Initial Hydrostatic Mud 2860.9 PSI AK1 Recorder No. 13851 Range 4425

(B) First Initial Flow Pressure 62.3 PSI @ (depth) 5771 w / Clock No. 26191

(C) First Final Flow Pressure 63.4 PSI AK1 Recorder No. 13850 Range 4325

(D) Initial Shut-in Pressure 84.7 PSI @ (depth) 5837 w / Clock No. 17652

(E) Second Initial Flow Pressure 63.4 PSI AK1 Recorder No. _____ Range _____

(F) Second Final Flow Pressure 63.4 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 77.8 PSI Initial Opening 30 Final Flow 30

(H) Final Hydrostatic Mud 2744.6 PSI Initial Shut-in 60 Final Shut-in 60

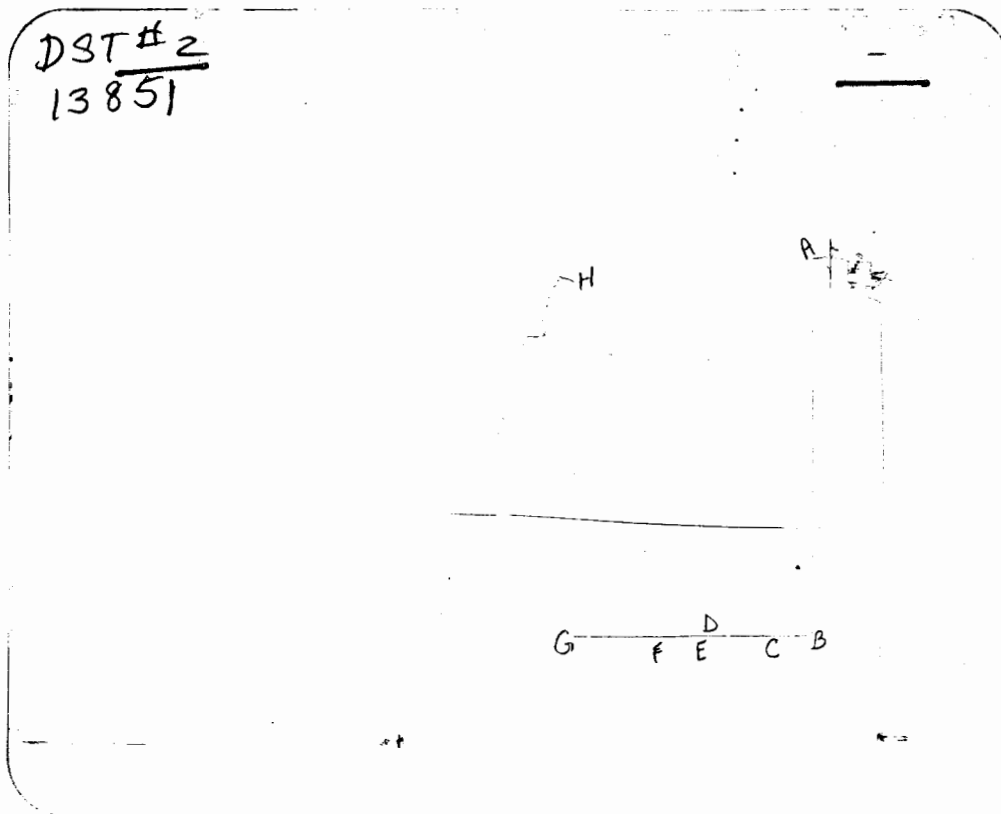
Our Representative STEVE BOWMAN

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CHART PAGE



This is an actual photograph of recorder chart

FIELD
READING

OFFICE
READING

(A) INITIAL HYDROSTATIC MUD	2858	2860.9
(B) FIRST INITIAL FLOW PRESSURE	64	62.3
(C) FIRST FINAL FLOW PRESSURE	64	63.4
(D) INITIAL CLOSED-IN PRESSURE	85	84.7
(E) SECOND INITIAL FLOW PRESSURE	64	63.4
(F) SECOND FINAL FLOW PRESSURE	64	63.4
(G) FINAL CLOSED-IN PRESSURE	74	77.8
(H) FINAL HYDROSTATIC MUD	2748	2744.6

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 5051

Well Name & No. Pittman #1 Test No. #2 Date 7-20-92
 Company Charter Production Company Zone Tested Morrow
 Address 224 E. Douglas Suite 400 Wichita, KS Elevation 2762
 Co. Rep./Geo. Ernie Morrison Cont. Zenth Drilling Rig #1 Est. Ft. of Pay _____
 Location: Sec. 10 Twp. 34 S Rge. 32 W Co. Seward State KS
 No. of Copies 10 Distribution Sheet _____ Yes ☒ No ☐ Turnkey _____ Yes ☒ No ☐ Evaluation _____

Interval Tested 5756 to 5840 Drill Pipe Size 4 1/2 x H
 Anchor Length 84' Top Choke — 1" Bottom Choke — 3/4"
 Top Packer Depth 5751 Hole Size — 7 7/8" Rubber Size — 6 3/4"
 Bottom Packer Depth 5756 Wt. Pipe I.D. — 2.7 Ft. Run —
 Total Depth 5840 Drill Collar — 2.25 Ft. Run 520
 Mud Wt. 9.0 + lb/gal. Viscosity 48 Filtrate 8.4
 Tool Open @ 8:15 P.M. Initial Blow weak 1 1/2 inch Blow

Final Blow No Blow

Recovery — Total Feet 30 Feet of Gas in Pipe 0 Flush Tool? NO

Rec.	Feet Of	%gas	%oil	%water	%mud
<u>30</u>	<u>mud</u>			<u>100</u>	

BHT 130 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 2000 ppm System

(A) Initial Hydrostatic Mud 2858 PSI AK1 Recorder No. 13851 Range 4425
 (B) First Initial Flow Pressure 64 PSI @ (depth) 5771 w/Clock No. 26191
 (C) First Final Flow Pressure 64 PSI AK1 Recorder No. 13850 Range 4325
 (D) Initial Shut-In Pressure 85 PSI @ (depth) 5837 w/Clock No. 17652
 (E) Second Initial Flow Pressure 64 PSI AK1 Recorder No. _____ Range _____
 (F) Second Final Flow Pressure 64 PSI @ (depth) _____ w/Clock No. _____
 (G) Final Shut-In Pressure 74 PSI Initial Opening 30 Test ✓ 650.00
 (H) Final Hydrostatic Mud 2748 PSI Initial Shut-In 60 Jars ✓ 200.00

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Final Flow 30 Safety Joint ✓ 500
 Final Shut-In 60 Straddle _____

Approved By Ernie Morrison

Our Representative Steve Bowman Thank you

Circ. Sub _____
 Sampler _____
 Extra Packer _____
 Other _____
 TOTAL PRICE \$ ✓ 900.00

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name PITTMAN #1 Test No. 3 Date 7/21/92
Company CHARTER PRODUCTION COMPANY Zone MORROW
Address 224 EAST DOUGLAS WICHITA KS 67202 Elevation 2762
Co. Rep./Geo. ERNIE MORRISON Cont. ZENITH DRLG Est. Ft. of Pay _____
Location: Sec. 10 Twp. 34S Rge. 32W Co. SEWARD State KS

Interval Tested 5912-5951 Drill Pipe Size 4.5 XH
Anchor Length 39 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 5907 Drill Collar - 2.25 Ft. Run 520
Bottom Packer Depth 5912 Mud Wt. 9 lb/Gal.
Total Depth 5951 Viscosity 45 Filtrate 8

Tool Open @ 6:20 PM Initial Blow STRONG 12" BLOW IN 1 MINUTE
VERY WEAK BLOW BACK AND DIED ON SHUT IN
Final Blow STRONG 12" BLOW IN 13 MINUTES
NO BLOW BACK ON SHUT IN

Recovery - Total Feet 1767 Flush Tool? NO

Rec. 93 Feet of MUD
Rec. 744 Feet of GAS & MUD CUT WATER-5%GAS/70%WTR/25%MUD
Rec. 930 Feet of GAS & MUD CUT WATER-5%GAS/85%WTR/10%MUD
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT _____ °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW 0.12 @ 86 °F Chlorides 30000 ppm Recovery Chlorides 2900 ppm System

(A) Initial Hydrostatic Mud 2916.5 PSI AK1 Recorder No. 1055 Range 4050

(B) First Initial Flow Pressure 151.2 PSI @ (depth) 5915 w / Clock No. 26191

(C) First Final Flow Pressure 584.7 PSI AK1 Recorder No. 13850 Range 4325

(D) Initial Shut-in Pressure 1684.3 PSI @ (depth) 5948 w / Clock No. 17652

(E) Second Initial Flow Pressure 639.8 PSI AK1 Recorder No. _____ Range _____

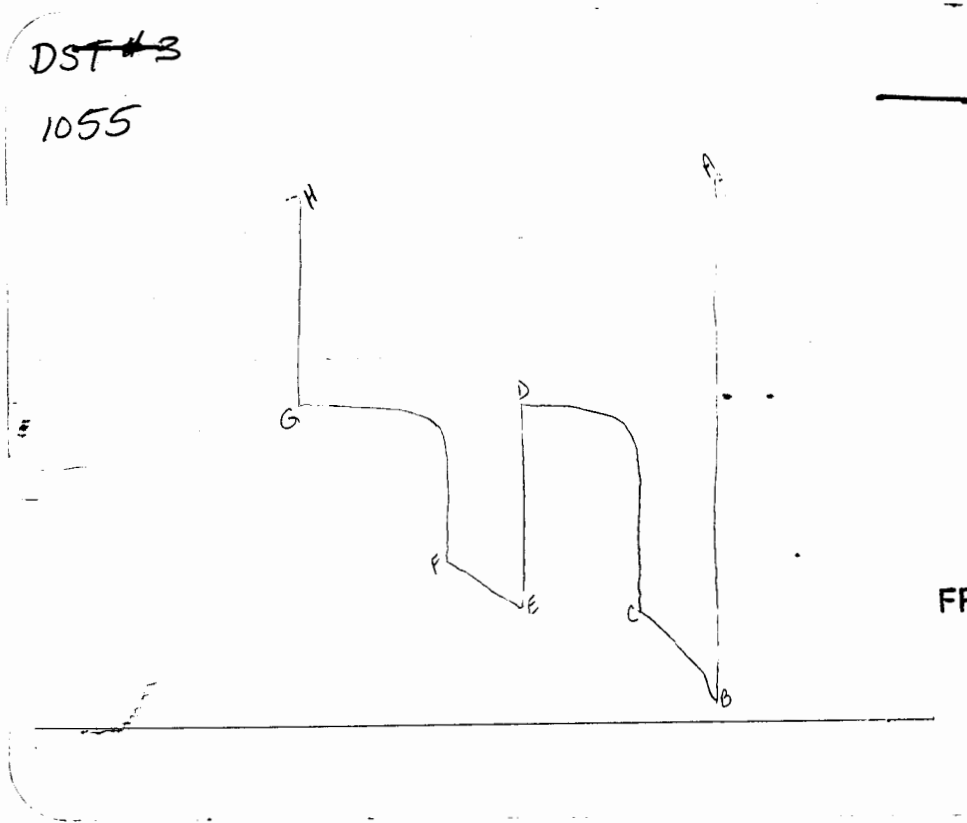
(F) Second Final Flow Pressure 873.2 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 1683.2 PSI Initial Opening 60 Final Flow 60

(H) Final Hydrostatic Mud 2780.4 PSI Initial Shut-in 90 Final Shut-in 90

Our Representative STEVE BOWMAN

CHART PAGE



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This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2912	2916.5
(B) FIRST INITIAL FLOW PRESSURE	149	151.2
(C) FIRST FINAL FLOW PRESSURE	587	584.7
(D) INITIAL CLOSED-IN PRESSURE	1681	1684.3
(E) SECOND INITIAL FLOW PRESSURE	640	639.8
(F) SECOND FINAL FLOW PRESSURE	874	873.2
(G) FINAL CLOSED-IN PRESSURE	1681	1683.2
(H) FINAL HYDROSTATIC MUD	2781	2780.4

Test Ticket

N^o 5052

Well Name & No. <u>Pittman #1</u>	Test No. <u>#3</u>	Date <u>7-21-92</u>
Company <u>Charter Production Company</u>	Zone Tested <u>Morrow</u>	
Address <u>224 E Douglas Suite 400 Wichita, KS</u>	Elevation <u>2762</u>	
Co. Rep./Geo. <u>Ernie Morrison</u>	Cont. <u>Zenith Rig #1</u>	Est. Ft. of Pay _____
Location: Sec. <u>10</u> Twp. <u>34S</u> Rge. <u>32W</u> Co. <u>Seward</u> State <u>KS</u>		
No. of Copies _____	Distribution Sheet _____	Yes ☒ No ☐ Turnkey _____ Yes ☒ No ☐ Evaluation _____

Interval Tested <u>5912 to 5951</u>	Drill Pipe Size <u>4 1/2 x H</u>
Anchor Length <u>39'</u>	Top Choke — 1" _____ Bottom Choke — 3/4" _____
Top Packer Depth <u>5907</u>	Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
Bottom Packer Depth <u>5912</u>	Wt. Pipe I.D. — 2.7 Ft. Run _____
Total Depth <u>5951</u>	Drill Collar — 2.25 Ft. Run <u>520</u>
Mud Wt. <u>9.0</u> lb./gal.	Viscosity <u>45</u> Filtrate <u>8.0</u>
Tool Open @ <u>6:20 P.M.</u> Initial Blow <u>Strong 12 inch Blow in 1 min</u>	
<u>Very weak Blow Back and died on Shut-in</u>	
Final Blow <u>Strong 12 inch Blow in 13 min</u>	
<u>no Blow Back on Shut-in</u>	

Recovery — Total Feet <u>1767</u>	Feet of Gas in Pipe <u>0</u>	Flush Tool? <u>NO</u>
Rec. <u>93</u> Feet Of <u>mud</u>	%gas _____ %oil _____ %water _____ %mud <u>100</u>	
Rec. <u>744</u> Feet Of <u>Gas + mud cut water</u>	5 %gas _____ %oil <u>70</u> %water _____ %mud <u>25</u>	
Rec. <u>930</u> Feet Of <u>Gas + mud cut water</u>	5 %gas _____ %oil <u>85</u> %water _____ %mud <u>10</u>	
Rec. _____ Feet Of _____	%gas _____ %oil _____ %water _____ %mud _____	
Rec. _____ Feet Of _____	%gas _____ %oil _____ %water _____ %mud _____	

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

RW 0.12 @ 86 °F Chlorides 30,000 ppm Recovery Chlorides 2900 ppm System

(A) Initial Hydrostatic Mud <u>2912</u>	PSI	AK1 Recorder No. <u>1055</u>	Range <u>4050</u>
(B) First Initial Flow Pressure <u>149</u>	PSI	@ (depth) <u>5915</u>	w/Clock No. <u>26191</u>
(C) First Final Flow Pressure <u>587</u>	PSI	AK1 Recorder No. <u>13850</u>	Range <u>4325</u>
(D) Initial Shut-In Pressure <u>1681</u>	PSI	@ (depth) <u>5948</u>	w/Clock No. <u>17652</u>
(E) Second Initial Flow Pressure <u>640</u>	PSI	AK1 Recorder No. _____	Range _____
(F) Second Final Flow Pressure <u>874</u>	PSI	@ (depth) _____	w/Clock No. _____
(G) Final Shut-In Pressure <u>1681</u>	PSI	Initial Opening <u>60</u>	Test ☒ <u>650.00</u>
(H) Final Hydrostatic Mud <u>2781</u>	PSI	Initial Shut-In <u>90</u>	Jars ☒ <u>200.00</u>

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Final Flow 60 Safety Joint ☒ 50.00
 Final Shut-In 90 Straddle _____

Approved By Ernie MorrisonOur Representative Steve Bowman Thank you

Sampler _____

Extra Packer _____

Other _____

TOTAL PRICE \$ ☒ 100.00