

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

7-15-27W

Computer Inventoried

Drill-Stem Test Data

Well Name QUINCY #1 Test No. 1 Date 1/6/92
Company CASTLE RESOURCES Zone Tested FT SCOTT
Address BANK IV #1200 HAYS KS 6701 Elevation 2515 K.B.
Co. Rep./Geo. JERRY GREEN Cont. EMPHASIS #7 Est. Ft. of Pay 3
Location: Sec. 7 Twp. 15S Rge. 27W Co. GOVE State KS

Interval Tested 4225-4270 Drill Pipe Size 4.5 XH
Anchor Length 45 Wt. Pipe I.D. - 2.7 Ft. Run
Top Packer Depth 4220 Drill Collar — 2.25 Ft. Run 93
Bottom Packer Depth 4225
Total Depth 4270

Mud Wt. 9.2 lb / gal. Viscosity 52 Filtrate 10.8

Tool Open @ 8:42 AM Initial Blow WEAK SURACE BLOW TO BOTTOM IN 16 MIN

Final Blow GOOD BLOW TO BOTTOM IN 7 MINUTES-1" BLOW
ON FINAL SHUTIN

Recovery — Total Feet 201 Flush Tool? YES

Rec. 957 Feet of GAS IN PIPE

Rec. 15 Feet of OIL CUT MUD-5%GAS/10%OIL/85%MUD

Rec. 62 Feet of MUD CUT OIL-5%GAS/70%OIL/25%MUD

Rec. 124 Feet of CLEAN GASSY OIL-10%GAS/90%OIL

Rec. Feet of

BHT 121 °F Gravity 37 °API @ 70 °F Corrected Gravity 36 °API

RW @ °F Chlorides ppm Recovery Chlorides 6200 ppm System

(A) Initial Hydrostatic Mud 2113.3 PSI Ak1 Recorder No. 13308 Range 4700

(B) First Initial Flow Pressure 63 PSI @ (depth) 4232 w/Clock No. 27567

(C) First Final Flow Pressure 76.5 PSI AK1 Recorder No. 10248 Range 4400

(D) Initial Shut-in Pressure 1035.5 PSI @ (depth) 4265 w/Clock No. 14389

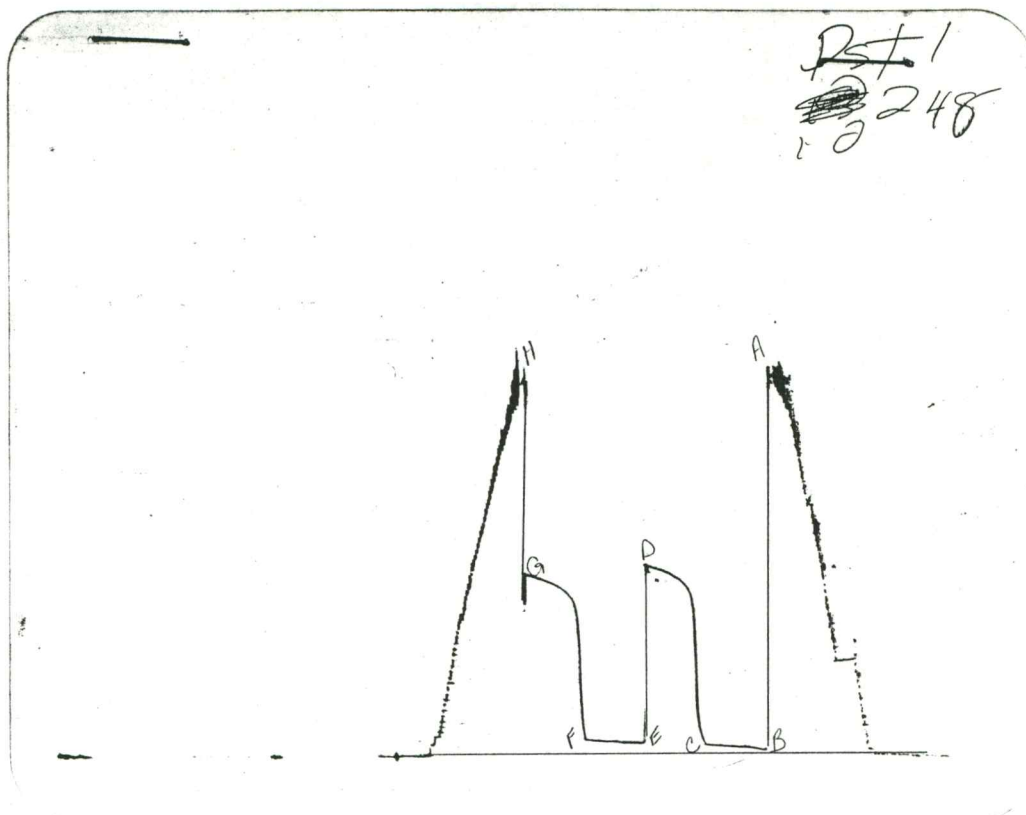
(E) Second Initial Flow Pressure 103.6 PSI AK1 Recorder No. Range

(F) Second Final Flow Pressure 103.6 PSI @ (depth) w/Clock No.

(G) Final Shut-in Pressure 991.1 PSI Initial Opening 45 Final Flow 45

(H) Final Hydrostatic Mud 2075.2 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative MARK HERSKOWITZ TOTAL PRICE \$ 550



This is an actual photograph of recorder chart
PRESSURE

POINT

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2113	2113.3
(B) FIRST INITIAL FLOW PRESSURE	56	63
(C) FIRST FINAL FLOW PRESSURE	78	76.5
(D) INITIAL CLOSED-IN PRESSURE	1040	1035.5
(E) SECOND INITIAL FLOW PRESSURE	90	103.6
(F) SECOND FINAL FLOW PRESSURE	101	103.6
(G) FINAL CLOSED-IN PRESSURE	984	991.1
(H) FINAL HYDROSTATIC MUD	2080	2075.2

COMPUTER EVALUATION BY TRILOBITE TESTING
CASTLE RESOURCES
REPORT FOR DST#1 FOR THE QUINCY #1
7-15S-27W GOVE KANSAS

TEST PARAMETERS

ELEVATION:	2515 KB	EST. PAY:	3 FT
DATUM:	-1718	ZONE TESTED:	FORT SCOTT
TEST INTERVAL:	4225-4270		
RECORDER DEPTH:	4232	TIME INTERVALS:	45-45-45-45
BOTTOM HOLE TEMP:	121	VISCOSITY:	4.92243 CP
		HOLE SIZE:	7.875 IN

CALCULATIONS

CUBIC FEET OF GAS IN PIPE: 76.40629

TOTAL FEET OF RECOVERY: 201

BARRELS IN DRILL PIPE: 1.53576

BARRELS IN DRILL COLLARS: .45477

GAS OIL RATIO: 38.3849 CU.FT./BBL

BUBBLE POINT PRESSURE: ; 2.296851

TOTAL BARRELS OF RECOVERY: 1.99053

UNCORR. INIT. PROD.: 31.84848 BBL/DAY

API GRAVITY: 36

FLUID GRADIENT: .366

CORRECTED PIPE FILLUP: 283.0601

CORR. BARRELS OF RECOVERY: 3.15657 BBL

INITIAL PRODUCTION CORRECTED TO FINAL FLOW PRESSURE: 50.50513 BBL/DAY

INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE

14.18361

INITIAL SLOPE 326.93 PSI/CYCLE

INITIAL P* 1139 PSI

FINAL SLOPE 380.8 PSI/CYCLE

FINAL P* 1180 PSI

TRANSMISSIBILITY	21.56548 (MD.-FT./CP.)
PERMEABILITY	35.38485 (MD.)
INDICATED FLOW CAPACITY	106.1545 (MD.FT)
PRODUCTIVITY INDEX	2.436899E-02 (BARRELS/DAY/PSI)
DAMAGE RATIO	.5172826
RADIUS OF INVESTIGATION	56.43259 (FT.)
POTENTIOMETRIC SURFACE	1019.42 (FT.)
DRAWDOWN FACTOR	-3.599644 (%)

INITIAL FLOW

RECORDER # 13308

DST #1

DT(MIN)	PRESSURE	<> PRESSURE
0	63	63
3	56.3	-6.700001
6	58.5	2.200001
9	58.5	0
12	60.8	2.299999
15	63	2.200001
18	63	0
21	65.3	2.300003
24	65.3	0
27	67.5	2.199997
30	69.8	2.300003
33	72	2.199997
36	74.3	2.300003
39	76.5	2.199997
42	76.5	0

FINAL FLOW

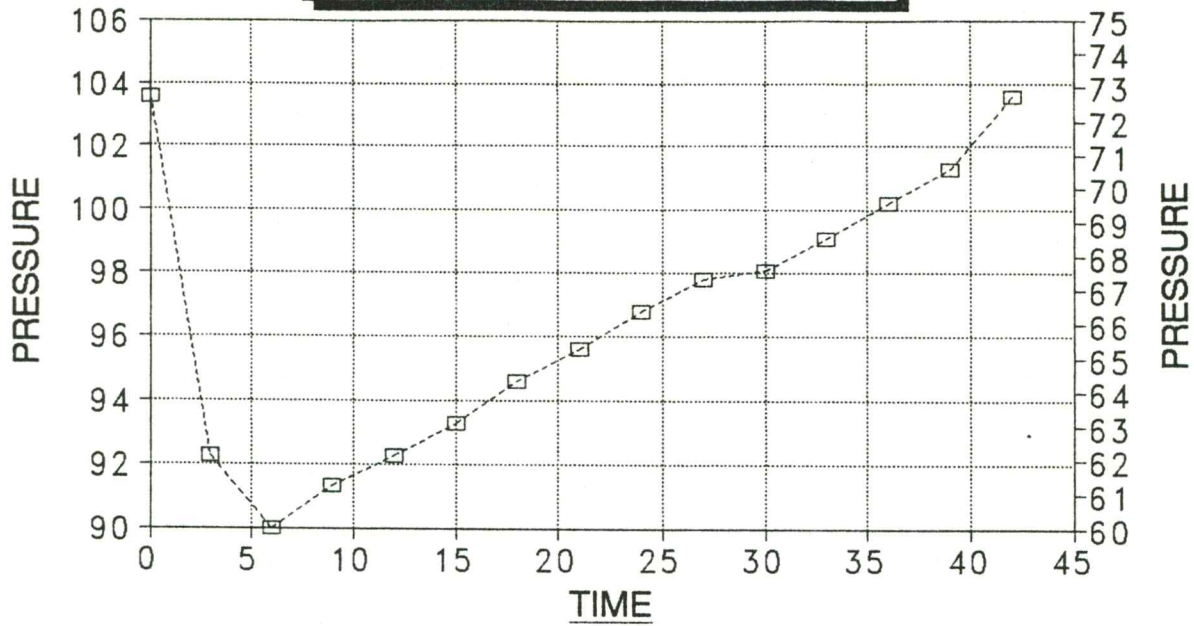
RECORDER # 13308

DST #1

DT(MIN)	PRESSURE	<> PRESSURE
0	103.6	103.6
3	92.3	-11.3
6	90	-2.300003
9	91.3	1.300003
12	92.3	1
15	93.3	1
18	94.6	1.299995
21	95.6	1
24	96.8	1.200005
27	97.8	1
30	98.1	.2999954
33	99.1	1
36	100.2	1.099999
39	101.3	1.100006
42	103.6	2.299996

DELTA T DELTA P

FINAL FLOW - DST #1



INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE 14.18361 BBL/DAY

QUINCY #1
INITIAL

DST #1
SHUTIN
45 INITIAL FLOW TIME

Slope -326.93 psi/cycle
P * 1,139 psi

TIME(MIN)	Pws (psi)	Log		<> PRESSURE
		Horn T	Horn T	
3	200.4	16	1.204	200.4
6	708.8	9	0.929	508.4
9	884.4	6	0.778	175.6
12	928.8	5	0.677	44.4
15	948.8	4	0.602	20.0
18	966.6	4	0.544	17.8
21	980.0	3	0.497	13.4
24	991.1	3	0.459	11.1
27	1000.0	3	0.426	8.9
X 30	1008.8	3	0.398	8.8
33	1017.7	2	0.374	8.9
36	1024.4	2	0.352	6.7
39	1028.8	2	0.333	4.4
X 42	1035.5	2	0.316	6.7

QUINCY #1
FINAL

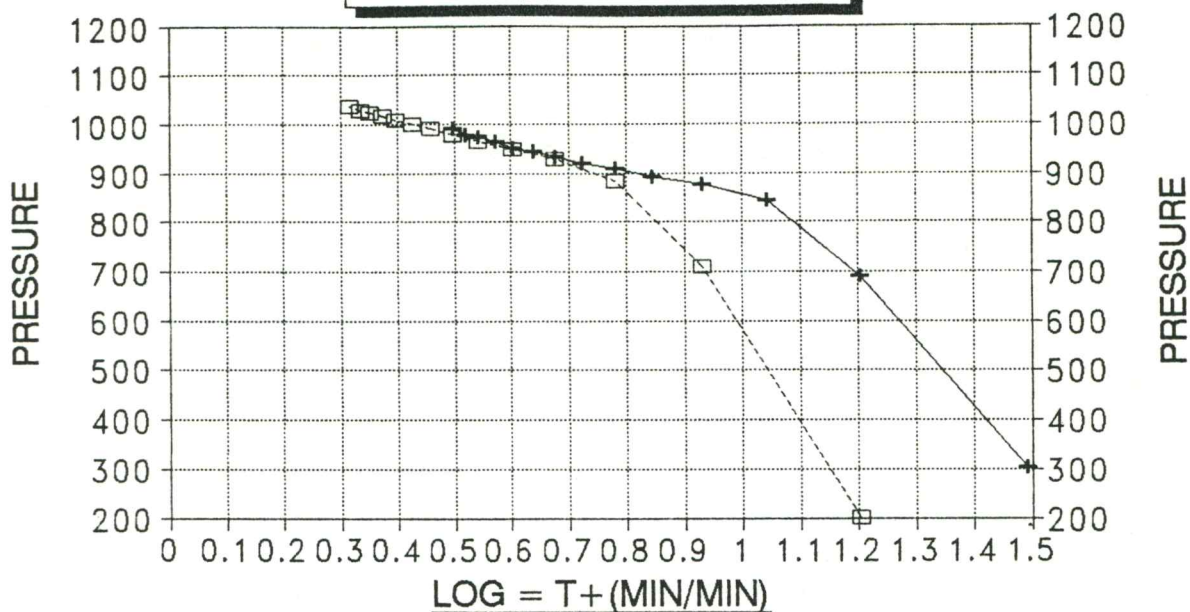
DST #1
SHUTIN
90 TOTAL FLOW TIME

Slope -380.80 psi/cycle
P * 1,180 psi

TIME(MIN)	Pws (psi)	Log		<> PRESSURE
		Horn T	Horn T	
3	304.0	31	1.491	304.0
6	691.1	16	1.204	387.1
9	844.4	11	1.041	153.3
12	877.7	9	0.929	33.3
15	891.1	7	0.845	13.4
18	911.1	6	0.778	20.0
21	922.2	5	0.723	11.1
24	933.3	5	0.677	11.1
27	944.4	4	0.637	11.1
30	953.3	4	0.602	8.9
33	964.4	4	0.571	11.1
X 36	973.3	4	0.544	8.9
39	980.0	3	0.520	6.7
X 42	991.1	3	0.497	11.1

HORNER PLOT

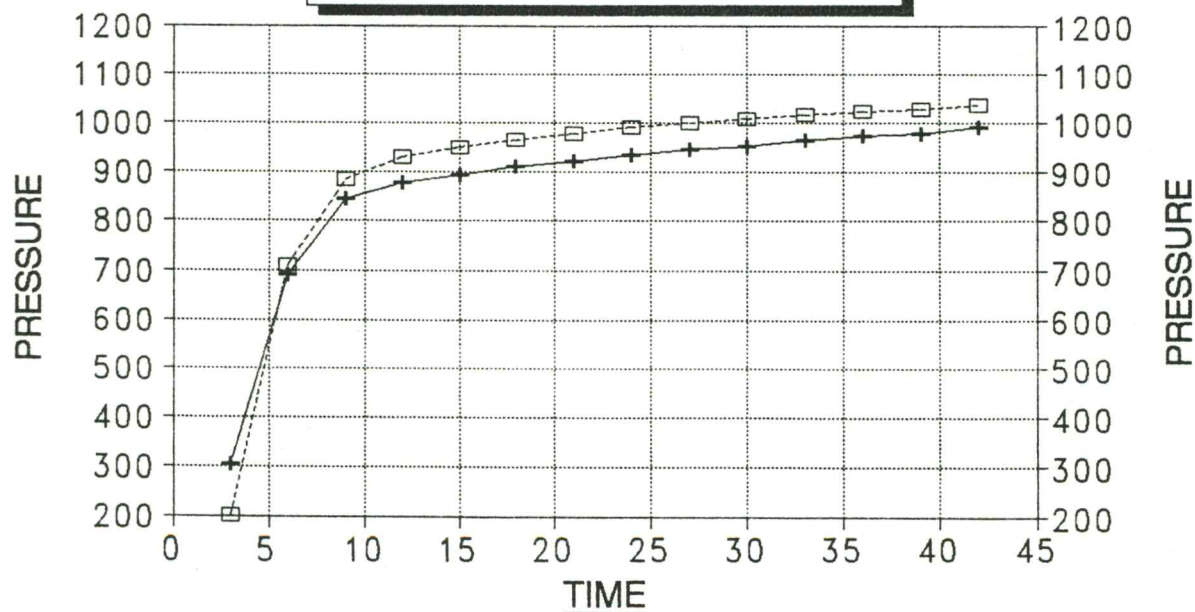
DST #1 / QUINCY #1



---□--- INITIAL —+— FINAL

DELTA T DELTA P

DST #1 / QUINCY #1



---□--- INITIAL —+— FINAL

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No. 4308

Well Name & No. <u>QUINCY 1#</u>	Test No. <u>1</u>	Date <u>1-6-91</u>
Company <u>CASTLE RIES</u>	Zone Tested <u>FT SCOTT</u>	
Address <u>1200E 27th BANK IV SUITE C HAYS</u>	Elevation <u>2515 KB</u>	
Co. Rep./Geo. <u>JERRY GREEN</u>	Cont. <u>EMPHASIS RIG 7</u>	Est. Ft. of Pay <u>3</u>
Location: Sec. <u>7</u>	Twp. <u>15s</u>	Rge. <u>27w</u> Co. <u>GORE</u> State <u>KS</u>
No. of Copies _____	Distribution Sheet _____	Yes _____ No _____ Turnkey _____ Yes _____ No _____ Evaluation _____

Interval Tested <u>41225 & 41270</u>	Drill Pipe Size <u>4 1/2 XH</u>
Anchor Length <u>45</u>	Top Choke — 1" _____ Bottom Choke — 3/4" _____
Top Packer Depth <u>41220</u>	Hole Size — 77/8" _____ Rubber Size — 63/4" _____
Bottom Packer Depth <u>41225</u>	Wt. Pipe I.D. — 2.7 Ft. Run _____
Total Depth <u>41270</u>	Drill Collar — 2.25 Ft. Run <u>93</u>
Mud Wt. <u>9.2 LCM 2#</u> lb/gal.	Viscosity <u>52</u> Filtrate <u>10.8</u>
Tool Open @ <u>8:42AM</u> Initial Blow <u>WEAK SUR BLOW TO BOTTOM IN 16 MIN</u>	

Final Blow Good Blow to Bottom in 7 min
1" Blow ON Final Shut-in

Recovery — Total Feet <u>201</u>	Feet of Gas in Pipe <u>957</u>	Flush Tool? _____
Rec. <u>15</u> Feet Of <u>O.A.C. Mud</u>	5% gas 10% oil	% water 85% mud
Rec. <u>42</u> Feet Of <u>MUD C.O.I</u>	5% gas 70% oil	% water 25% mud
Rec. <u>124</u> Feet Of <u>C.G.O.I</u>	10% gas 90% oil	% water _____ % mud _____
Rec. _____ Feet Of _____	% gas _____ % oil _____	% water _____ % mud _____
Rec. _____ Feet Of _____	% gas _____ % oil _____	% water _____ % mud _____

BHT 121 °F Gravity 37 °API @ 70 °F Corrected Gravity 36 °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 4200 ppm System

(A) Initial Hydrostatic Mud 2113 PSI AK1 Recorder No. 13308 Range 4700

(B) First Initial Flow Pressure 54 PSI @ (depth) 4232 w/Clock No. 27567

(C) First Final Flow Pressure 78 PSI AK1 Recorder No. 10248 Range 4400

(D) Initial Shut-In Pressure 1040 PSI @ (depth) 4265 w/Clock No. 14389

(E) Second Initial Flow Pressure 90 PSI AK1 Recorder No. _____ Range _____

(F) Second Final Flow Pressure 101 PSI @ (depth) _____ w/Clock No. _____

(G) Final Shut-In Pressure 984 PSI Initial Opening 45 Test ✓

(H) Final Hydrostatic Mud 2080 PSI Initial Shut-In 45 Jars _____

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 45 Safety Joint _____

Final Shut-In 45 Straddle _____

Circ. Sub ✓ NC

Sampler _____

Extra Packer _____

Other _____

TOTAL PRICE \$ _____

Approved By Tey Williams

Our Representative Mark Hershey