15-191-22347

8-35s-1w

TRILOBITE TESTING L.L.C.

OPERATOR : HRF Exploration DATE 5-6-00
WELL NAME: Stuckey #1 KB 0.00 ft TICKET NO: 12583 DST #1
LOCATION : 8-35s-1w Sumner co KS GR 0.00 ft FORMATION: Mississippian
INTERVAL : 4140.00 To 4175.00 ft TD 4175.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins		Field	1	2	3	4
PF 15	Rec.	11019	11019			
SI 30	Range(Psi)	4500.0	4500.0	0.0	0.0	0.0
SF 60	Clock(hrs)	12	12			
FS 120	Depth(ft)	4175.0	4175.0	0.0	0.0	0.0

TIME DATA----------
PF Fr. 1302 to 1317 hr
IS Fr. 1317 to 1347 hr
SF Fr. 1347 to 1447 hr
FS Fr. 1447 to 1647 hr

	Field	1	2	3	4
A. Init Hydro	2068.0	2056.0	0.0	0.0	0.0
B. First Flow	169.0	178.0	0.0	0.0	0.0
B1. Final Flow	192.0	210.0	0.0	0.0	0.0
C. In Shut-in	1717.0	1719.0	0.0	0.0	0.0
D. Init Flow	305.0	302.0	0.0	0.0	0.0
E. Final Flow	508.0	511.0	0.0	0.0	0.0
F. Fl Shut-in	1728.0	1742.0	0.0	0.0	0.0
G. Final Hydro	1977.0	2039.0	0.0	0.0	0.0
Inside/Outside	O	O			

T STARTED 1030 hr
T ON BOTM 1257 hr
T OPEN 1302 hr
T PULLED 1647 hr
T OUT 2000 hr

RECOVERY
Tot Fluid 1090.00 ft of 355.00 ft in DC and 735.00 ft in DP
120.00 ft of Gas in pipe
30.00 ft of Oily watery mud
0.00 ft of 15% oil 45% water 40% mud
120.00 ft of Muddy water
0.00 ft of 70% water 30% mud
940.00 ft of Gas cut water
0.00 ft of 2% gas 98% water
0.00 ft of
SALINITY 80000.00 P.P.M. A.P.I. Gravity 0.00

TOOL DATA----------

Tool Wt.	1800.00 lbs
Wt Set On Packer	30000.00 lbs
Wt Pulled Loose	95000.00 lbs
Initial Str Wt	82000.00 lbs
Unseated Str Wt	90000.00 lbs
Bot Choke	0.75 in
Hole Size	7.78 in
D Col. ID	2.25 in
D. Pipe ID	3.80 in
D.C. Length	355.00 ft
D.P. Length	3767.00 ft

BLOW DESCRIPTION
Initial Flow:
Weak blow built to bottom of bucket in 7 minutes.
Initial Shut-In:
Bled 2" line. Had 3/4" blow back.
Final Flow:
Weak blow built to fair blow. Bottom of bucket in 6 minutes.
Final Shut-In:
Bled 2" line. 1 1/4" blow back.

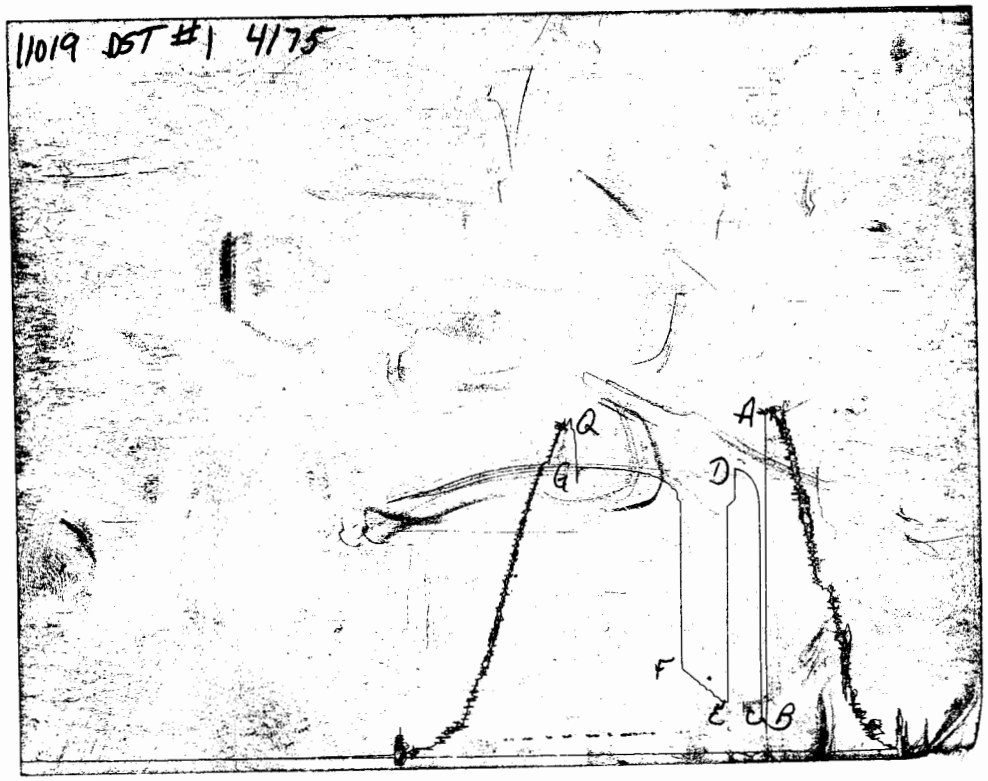
MUD DATA----------

Mud Type	Chemical
Weight	9.30 lb/cf
Vis.	55.00 S/L
W.L.	10.40 in3
F.C.	0.00 in
Mud Drop	
Amt. of fill	0.00 ft
Btm. H. Temp.	0.00 F
Hole Condition	
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00
Cushion Type	
Reversed Out	
Tool Chased	
Tester	Scott Bugbee
Co. Rep.	Donald Day
Contr.	Cruzen Drilling
Rig #	5
Unit #	
Pump T.	

SAMPLES:
SENT TO:

Test Successful: Y

CHART PAGE



This is a photocopy of the actual AK-1 recorder chart

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

№ 12583

Well Name & No. Stucker #1 Test No. #1 Date 5-6-00

Company H R F Exploration + Prod. Inc. [redacted] Zone Tested Mississippian

Address 990 S. Wisconsin Ave. Gaylord MI. 49735 Elevation _____ KB _____ GL

Co. Rep / Geo. Don Day Cont. Cruzen Drilling Rig 5 Est. Ft. of Pay ____ Por. ____ %

Location: Sec. 9 Twp. 35S Rge. 1W Co. Sumner State KS.

No. of Copies _____ Distribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 4140 - 4175 Initial Str Wt./Lbs. 82,000 Unseated Str Wt./Lbs. 90,000

Anchor Length 35' Wt. Set Lbs. 30,000 Wt. Pulled Loose/Lbs. [redacted] 95,000

Top Packer Depth 4135 Tool Weight 1400

Bottom Packer Depth 4140 Hole Size — 7 7/8" ✓ Rubber Size — 6 3/4" ✓

Total Depth 4175 Wt. Pipe Run _____ Drill Collar Run 355 6 stds

Mud Wt. 9.3 LCM — Vis. 55 WL 10.4 Drill Pipe Size 4½ XH Ft. Run 3767

Blow Description 1st open weak blow built to B.O.B. in 7 min.
Bled 2" Line had ½" Blow back
2nd open weak blow built to fair blow B.O.B. in 6 min.
Bled 2" Line 1¼" Blow back

Recovery — Total Feet 1090 GIP 120' Ft. in DC 355' Ft. in DP 735

Rec. 30'	Feet Of oily, watery Mud	%gas	15 %oil	45 %water	40 %mud
Rec. 120'	Feet Of muddy water	%gas	%oil	70 %water	30 %mud
Rec. 940	Feet Of Gas cut water	2 %gas	%oil	98 %water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud

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

RW .10 @ 69 °F Chlorides 90,000 ppm Recovery Chlorides _____ ppm System

	AK-1	Alpine					
(A) Initital Hydrostatic Mud	2068		PSI	Recorder No.	3026	T-On Location	7:45 A.M. 2:45
(B) First Initial Flow Pressure	169		PSI	(depth)	4147	T-Started	10:30 A.M.
(C) First Final Flow Pressure	192		PSI	Recorder No.	11019	T-Open	1:02 P.M. 9:30
(D) Initial Shut-In Pressure	1117		PSI	(depth)	4175	T-Pulled	4:47 P.M.
(E) Second Initial Flow Pressure	305		PSI	Recorder No.		T-Out	8:00 P.M.
(F) Second Final Flow Pressure	508		PSI	(depth)		T-Off Location	
(G) Final Shut-in Pressure	1128		PSI	Initial Opening	[redacted] 15	Test ✓	700 00
(Q) Final Hydrostatic Mud	1977		PSI	Initial Shut-in	30	Jars ✓	200 00
				Final Flow	60	Safety Joint ✓	50 00
				Final Shut-in	120	Straddle	
						Circ. Sub ✓	
						Sampler ✓	200 00
						Extra Packer	
						Elec. Rec. ✓	150 00
						Mileage	
						Other Shale Packer	150 00
						TOTAL PRICE $	1450 00

ext. 2.5 75
1525

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 Donald R Day

Our Representative Scott Bugbee

TRILOBITE TESTING L.L.C.

OPERATOR : HRF Exploration — DATE 5-8-00
WELL NAME: Stucky #1 — KB 0.00 ft — TICKET NO: 12584 DST #2
LOCATION : 8-35s-1w Sumner co KS — GR 0.00 ft — FORMATION: Simpson
INTERVAL : 4405.00 To 4415.00 ft — TD 4415.00 ft — TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins		Field	1	2	3	4
PF 15	Rec.	3026	3026			
SI 30	Range(Psi)	4995.0	4995.0	0.0	0.0	0.0
SF 60	Clock(hrs)	elect	elect			
FS 120	Depth(ft)	4413.0	4413.0	0.0	0.0	0.0

TIME DATA----------
PF Fr. 0512 to 0527 hr
IS Fr. 0527 to 0557 hr
SF Fr. 0557 to 0657 hr
FS Fr. 0657 to 0857 hr

	Field	1	2	3	4
A. Init Hydro	2204.0	0.0	0.0	0.0	0.0
B. First Flow	196.0	0.0	0.0	0.0	0.0
B1. Final Flow	286.0	0.0	0.0	0.0	0.0
C. In Shut-in	1733.0	0.0	0.0	0.0	0.0
D. Init Flow	301.0	0.0	0.0	0.0	0.0
E. Final Flow	797.0	0.0	0.0	0.0	0.0
F. Fl Shut-in	1738.0	0.0	0.0	0.0	0.0
G. Final Hydro	2197.0	0.0	0.0	0.0	0.0
Inside/Outside	I	I			

T STARTED 0200 hr
T ON BOTM 0511 hr
T OPEN 0512 hr
T PULLED 0857 hr
T OUT 1300 hr

RECOVERY
Tot Fluid 4375.00 ft of 355.00 ft in DC and 4054.00 ft in DP
4255.00 ft of Gassy oil
0.00 ft of 10% gas 90% oil
120.00 ft of Gassy oil cut mud
0.00 ft of 15% gas 5% oil 80% mud
0.00 ft of
0.00 ft of
0.00 ft of
0.00 ft of
SALINITY 0.00 P.P.M. A.P.I. Gravity 40.00

TOOL DATA----------

Tool Wt.	1800.00 lbs
Wt Set On Packer	30000.00 lbs
Wt Pulled Loose	95000.00 lbs
Initial Str Wt	86000.00 lbs
Unseated Str Wt	86000.00 lbs
Bot Choke	0.78 in
Hole Size	7.78 in
D Col. ID	2.25 in
D. Pipe ID	3.38 in
D.C. Length	355.00 ft
D.P. Length	4054.00 ft

BLOW DESCRIPTION
Initial Flow:
Strong blow. Bottom of bucket in 15 seconds. Gas to surface in 6 minutes. Gas will burn.
Initial Shut-In:
Bled 2" Blow never Died.
Final Flow:
Bottom of bucket as soon as tool opened.
Final Shut-In:
Blow never died. Oil to surface 1 hour into shut-in.

SAMPLES:
SENT TO:

MUD DATA----------

Mud Type	Chemical
Weight	8.90 lb/c
Vis.	45.00 S/L
W.L.	7.20 in3
F.C.	0.00 in
Mud Drop	
Amt. of fill	0.00 ft
Btm. H. Temp.	130.00 F
Hole Condition	good
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00
Cushion Type	
Reversed Out	Y
Tool Chased	
Tester	Scott Bugbee
Co. Rep.	Don Day
Contr.	Cruzen
Rig #	5
Unit #	
Pump T.	

Test Successful: Y

GAS RECOVERY

COMPANY: HRF Exploration DATE: 5-8-00
WELL NAME: Stucky #1 KB Elev: 0.00 ft TICKET #12584 DST #2
WELL LOCATION: 8-35s-1w Sumner co KS GR Elev: 0.00 ft FORMATION: Simpson
INTERVAL Fr.: 4405.00 To 4415.00 T.D.: 4415.00 ft TEST TYPE: CONVENTIONAL

GAS RECOVERY MEASURED WITH Merla

***** GAS RATES FOR FLOW #1

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
1	0.50	0	68	51700.0
3	0.50	0	60	48600.0
5	0.50	0	38	38600.0

***** GAS RATES FOR FLOW #2

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
1	0.50	0	60	48600.0
5	0.50	0	30	34300.0
10	0.50	0	12	21900.0
15	0.50	0	4	12500.0
20	0.38	0	100	35600.0
25	0.38	0	58	27100.0
30	0.38	0	12	12400.0
35	0.38	0	2	5050.0
40	0.25	0	16	6720.0
45	0.25	0	18	7120.0
50	0.25	0	16	6720.0
55	0.25	0	14	6330.0
60	0.25	0	14	6330.0

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Stucky #1

LOCATION : 8-35s-1w Sumner co KS

TICKET No. 12584 D.S.T. No. 2 DATE 5-8-00

TOTAL TOOL TO BOTTOM OF TOP PACKERS 30

INTERVAL TOOL .....

BOTTOM PACKERS AND ANCHOR 10

TOTAL TOOL 40

DRILL COLLAR ANCHOR IN INTERVAL .....

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY .....

D.C. ABOVE TOOLS.Stands6 Single Total 355

D.P. ABOVE TOOLS.Stands63 Single 1 Total 4054

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4449

TOTAL DEPTH 4415

TOTAL DRILL PIPE ABOVE K.B. 34

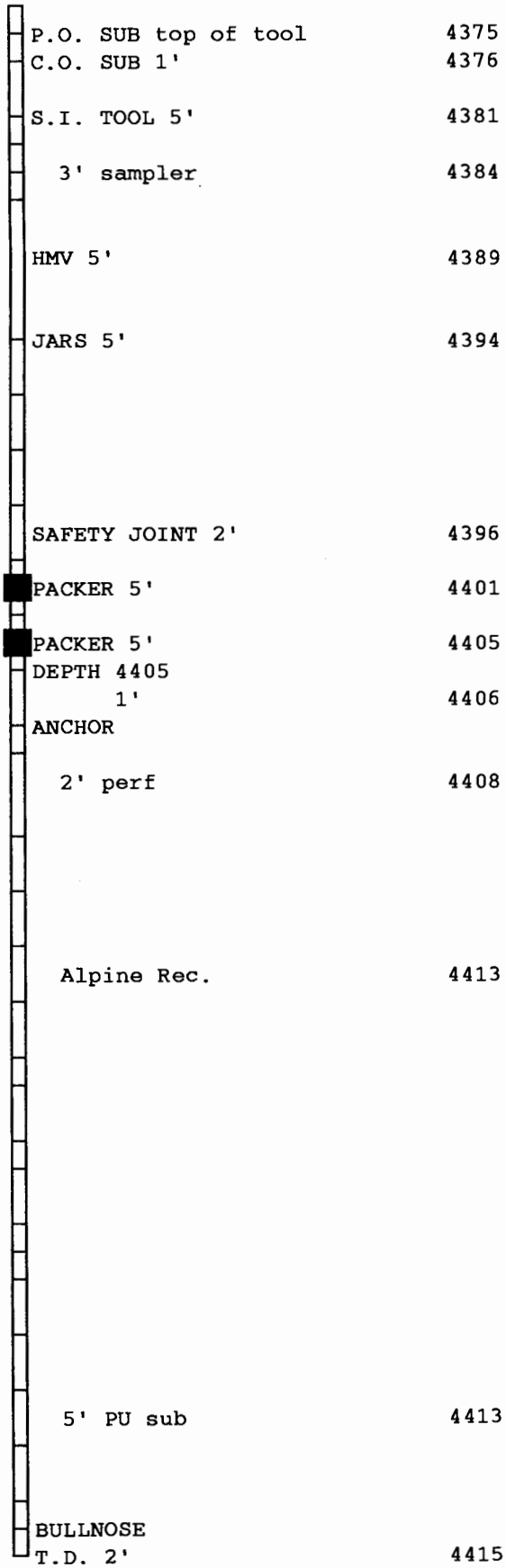
REMARKS:

Sampler Data

200 PSI all gas

2.3 CGF

Large pieces of shale in top of tool



NATURAL GAS ANALYSIS REPORT

Sampled by:
Trilobite Testing, L. L. C.
Hays, Kansas
Scott City, Kansas
Phone: 800-728-5369
Fax: 913-625-5620

Analyzed by:
Caraway Analytical, Inc
P. O. Box 2137
Liberal, Kansas 67905
Phone: 316-624-5389
Fax: 316-626-7108

Sample From:	Stucky #1 DST 2	Pressure:	
Producer:	HRF Exploration	Temperature:	
Time:		County:	Sumner
Sampler:		State:	Kansas
Source:		Formation:	Simpson

		Mole %	GPM
Helium	He:	0.136	0.000
Hydrogen	H2:	0.003	0.000
Oxygen	O2:	0.000	0.000
Nitrogen	N2:	12.907	0.000
Carbon Dioxide	CO2:	0.026	0.000
Methane	C1:	49.853	0.000
Ethane	C2:	11.875	3.176
Propane	C3:	10.424	2.872
Iso Butane	iC4:	1.332	0.436
Normal Butane	nC4:	4.826	1.522
Iso Pentane	iC5:	1.493	0.546
Normal Pentane	nC5:	2.443	0.885
Hexanes Plus	C6+:	4.682	2.043

TOTAL: 100.000 11.479

Z Fact: 0.9932
SP.GR.: 1.0635
BTU (SAT): 1561.3 @ 14.73 psia
BTU (DRY): 1588.9 @ 14.73 psia

OCTANE RATING: 96.3

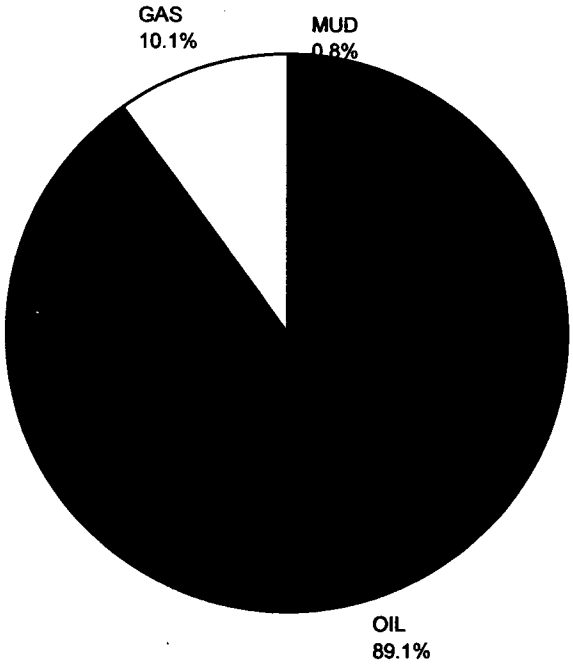
COMMENTS: 0.000

CALCULATED RECOVERY ANALYSIS

DST 2 TICKET 12584

SAMPLE #		TOTAL FEET	GAS %	GAS FEET	OIL %	OIL FEET	WATER %	WATER FEET	MUD %	MUD FEET
DRILL	1	4020	10	402	90	3618	0	0	0	0
PIPE	2	0	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0	0	0
WEIGHT	1	0	0	0	0	0	0	0	0	0
PIPE	2	0	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0
DRILL	1	235	10	23.5	90	211.5	0	0	0	0
COLLARS	2	120	15	18	5	0	0	0	80	96
	3	0	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0
TOTAL		4375	0	443.5	0	3829.5	0	0	0	96

			HRS OPEN		BBL/DAY
BBL OIL=	52.482195	*	1.25	=	1007.6581
BBL WATER=	0	*		=	0
BBL MUD=	0.46944				
BBL GAS =	5.919375				

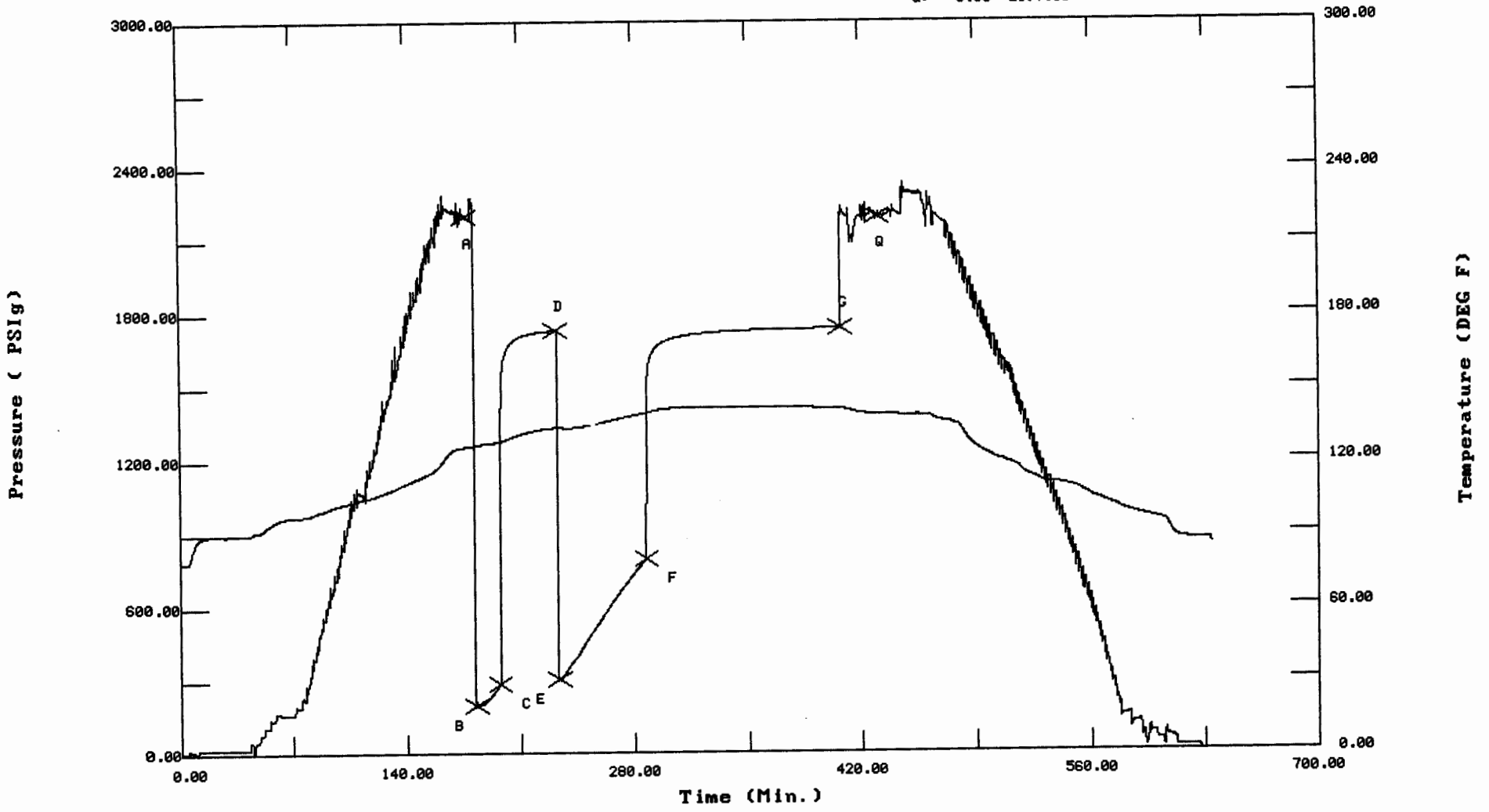


TEST HISTORY

12584 DST#2 Stuckey #1 HRF Exploration

Flag Points

	t(Min.)	P(PSIg)
A:	0.00	2204.64
B:	0.00	196.23
C:	14.50	286.31
D:	35.25	1733.24
E:	0.00	301.73
F:	53.50	797.33
G:	119.50	1738.19
Q:	0.00	2197.51



TRILOBITE TESTING L.L.C.
P.O. Box 362 • Hays, Kansas 67601 • (913) 625-4778

GAS VOLUME REPORT

HRE Exploration (OPERATOR) | Stucky #1 (WELL NAME AND NO.) | #2 (DST NO.)

Min.	Ins. of Water PSIG	Orifice Size	MCF/D	Min.	Ins. of Water PSIG	Orifice Size	MCF/D
1	68	1/2	51,700	1	60	1/2	48,600
3	60	1/2	48,600	5	30	1/2	39,300
5	38	1/2	38,600	10	12	1/2	21,900
				15	4	1/2	12,500
				20	100	3/8	35,600
				25	58	3/8	27,100
				30	12	3/8	12,400
				35	2	3/8	5,050
				40	16	1/4"	6,720
				45	18	1/4	7,120
				50	16	1/4	6,720
				55	14	1/4	6,330
				60	14	1/4	6,330

Remarks:

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

№ 12584

Well Name & No. Stuckey #1 Test No. #2 Date 5-8-00

Company HRF Exploration 49735 Zone Tested Simpson

Address Gaylord MI. Elevation ____ KB ____ GL

Co. Rep / Geo. Dan Day Cont. Cruzen Rig 5 Est. Ft. of Pay ____ Por. ____ %

Location: Sec. 8 Twp. 35S Rge. 1W Co. Sumner State Ks.

No. of Copies ____ Distribution Sheet (Y, N) ____ Turnkey (Y, N) ____ Evaluation (Y, N) ____

Interval Tested 4405 - 4415 Initial Str Wt./Lbs. 86,000 Unseated Str Wt./Lbs. 86,000

Anchor Length 10' Wt. Set Lbs. 30,000 Wt. Pulled Loose/Lbs. 98,000

Top Packer Depth 4400 Tool Weight 1800

Bottom Packer Depth 4405 Hole Size — 7 7/8" ✓ Rubber Size — 6 3/4" ✓

Total Depth 4415 Wt. Pipe Run ____ Drill Collar Run 355' 6 stds

Mud Wt. 8.9 LCM 4 Vis. 45 WL 7.2 Drill Pipe Size 4½ XH Ft. Run 4054 631

Blow Description 1st open strong blow B.O.B. in 15 sec.
Bled 2" blow never Died
2nd open B.O.B. as soon as tool opened
Blow never died Oil to Surface 1hr into final shut in

Recovery — Total Feet [redacted]435 GIP GTS Ft. in DC [redacted]355 Ft. in DP 4054

Rec. [redacted]4255	Feet Of	Gassy Oil	10 %gas	90 %oil	%water	%mud
Rec. 120	Feet Of	Gassy oil cut Mud	15 %gas	5 %oil	%water	80 %mud
Rec.	Feet Of		%gas	%oil	%water	%mud
Rec.	Feet Of		%gas	%oil	%water	%mud
Rec.	Feet Of		%gas	%oil	%water	%mud

BHT ____ °F Gravity 42 °API D@ 80 °F Corrected Gravity 40 °API

RW ____ @ ____ °F Chlorides ____ ppm Recovery Chlorides ____ ppm System

	AK-1	Alpine				
(A) Initital Hydrostatic Mud		2204	PSI	Recorder No.	3026	T-On Location 12:30 A.M.
(B) First Initial Flow Pressure		196	PSI	(depth)	4413	T-Started 2:00 A.M.
(C) First Final Flow Pressure		286	PSI	Recorder No.		T-Open 5:12 A.M.
(D) Initial Shut-In Pressure		1733	PSI	(depth)		T-Pulled 8:57 A.M.
(E) Second Initial Flow Pressure		301	PSI	Recorder No.		T-Out 9:00 P.M.
(F) Second Final Flow Pressure		797	PSI	(depth)		T-Off Location
(G) Final Shut-in Pressure		1738	PSI	Initial Opening	15	Test ✓ 700.00
(Q) Final Hydrostatic Mud		2197	PSI	Initial Shut-in	30	Jars ✓ 200.00
				Final Flow	60	Safety Joint ✓ 50.00
				Final Shut-in	120	Straddle ____
						Circ. Sub ✓ 350.00
						Sampler ✓ 200.00
						Extra Packer ____
						Elec. Rec. ✓ 150.00
						Mileage ____
						Other Shale packer 150.00
						TOTAL PRICE $ 1485.00

ext 3 hrs 90

1575

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 Donald McClay

Our Representative Scott Bugbee