

TRILOBITE TESTING L.L.C.

OPERATOR : Sagebrush Pet1.LLC

DATE 04-09-99

WELL NAME: Merrill Ranch #11-11

KB 1777.00 ft

TICKET NO: 11404 DST #1

LOCATION : 11-34s-16w Comanche co KS

GR 1768.00 ft

FORMATION: Pawnee

INTERVAL : 4965.00 To 5034.00 ft

TD 5034.00 ft

TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 45 Rec.	10248	10248	2342			PF Fr. 1804 to 1849 hr
SI 60 Range(Psi)	4400.0	4400.0	4995.0	0.0	0.0	IS Fr. 1849 to 1949 hr
SF 45 Clock(hrs)	12 hr	12 hr	batt.			SF Fr. 1949 to 2034 hr
FS 60 Depth(ft)	5031.0	5031.0	4975.0	0.0	0.0	FS Fr. 2034 to 2134 hr

	Field	1	2	3	4	
A. Init Hydro	2415.0	2387.0	2356.0	0.0	0.0	T STARTED 1553 hr
B. First Flow	57.0	62.0	33.0	0.0	0.0	T ON BOTM 1800 hr
B1. Final Flow	62.0	62.0	35.0	0.0	0.0	T OPEN 1804 hr
C. In Shut-in	1602.0	1583.0	1586.0	0.0	0.0	T PULLED 2134 hr
D. Init Flow	71.0	74.0	37.0	0.0	0.0	T OUT 2355 hr
E. Final Flow	78.0	80.0	50.0	0.0	0.0	
F. Fl Shut-in	1605.0	1606.0	1589.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2393.0	2387.0	2330.0	0.0	0.0	Tool Wt. 2100.00 lbs
Inside/Outside	O	O	I	T		Wt Set On Packer 22000.00 lbs
						Wt Pulled Loose 72000.00 lbs
						Initial Str Wt 58000.00 lbs
						Unseated Str Wt 59000.00 lbs
						Bot Choke 0.75 in
						Hole Size 7.88 in
						D Col. ID 2.25 in
						D. Pipe ID 3.80 in
						D.C. Length 0.00 ft
						D.P. Length 4951.00 ft

RECOVERY

Tot Fluid 75.00 ft of 0.00 ft in DC and 75.00 ft in DP
 1500.00 ft of Gas in pipe. Faint oder.
 75.00 ft of Gas cut mud 10% gas 90% mud
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of Rw n.c. ohms @ degrees F.
 0.00 ft of EST.FT. of PAY----- 4
 SALINITY 4000.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:
 Strong blow bottom of bucket in
 1 min.
 Initial Shut-in:
 Weak blow. 1 - 3".
 Final Flow:
 Strong blow bottom of bucket in
 2-3 secs.
 Final Shut-in:
 No blow

SAMPLES: none

SENT TO:Caraway/Liberal

MUD DATA-----

Mud Type	Chemical
Weight	8.80 lb/cf
Vis.	50.00 S/L
W.L.	7.60 in3
F.C.	0.20 in
Mud Drop N	
Amt. of fill	0.00 ft
Btm. H. Temp.	122.00 F
Hole Condition	Good
% Porosity	12.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00 N
Cushion Type	None
Reversed Out N	
Tool Chased N	
Tester	Gary Pevoteaux
Co. Rep.	Tom Williams
Contr.	Duke Drilling
Rig #	4
Unit #	
Pump T.	LCM 5#/bl

Test Successful: Y

*** TOOL DIAGRAM *** CONVENTIONAL

LL NAME: Merrill Ranch #11-11

CATION : Sec.11 Twp.34s Rg.16w Ks

CKET No. 11404 D.S.T. No. 1 DATE 04-09-99

TAL TOOL TO BOTTOM OF TOP PACKERS 27

TERVAL TOOL

TTOM PACKERS AND ANCHOR 37

TAL TOOL 64

ILL COLLAR ANCHOR IN INTERVAL

C. ANCHOR STND.Stands Single Total

P. ANCHOR STND.Stands Single 1 Total 32

TAL ASSEMBLY 96

C. ABOVE TOOLS.Stands Single Total

P. ABOVE TOOLS.Stands79 Single 1 Total 4951

TAL DRILL COLLARS DRILL PIPE & TOOLS .. 5047

TAL DEPTH 5034

TAL DRILL PIPE ABOVE K.B. 13

MARKS:

omments:AK-1 chart stair stepping on shut-

s. Stylus on recorder dragging or some-

ing? Mechical error! Not the zone.

FLUID SAMPLER DATA (not run)

AS-----

L----- ML.

ID----- ML.

ATER----- ML.

HER-----

RESSURE----- PSI

/----- ohms @ deg. F.

FLORIDES----- ppm.

RAVITY-----n/a deg.API

P.O. SUB	
C.O. SUB @ top of tool	4938
S.I. TOOL Sterling	4944
Sampler (no)	
HMV Sterling	4949
JARS Bowen	4954
SAFETY JOINT Bowen	4956
PACKER Top	4960
PACKER Btm.	4965
DEPTH 4965	
STUBB 1 ft.	4966
ANCHOR	
6' perfs & sub to	4972
Alpine rec.@ 4975	
1 jt. pipe to	5004
T.C.	
DEPTH	
25'perfs & sub to	5029
AK-1 rec. @ 5031'	
BULLNOSE 5 ft. perforated	5034
T.D.	

TEST HISTORY

11404 DST#1 MERRILL RANCH #11-11 SAGEBRUSH PETL.

PAWNEE

Flag Points

t(Min.) P(PSIg)

A:	0.00	2355.76
B:	0.00	33.06
C:	43.50	34.91
D:	62.00	1586.14
E:	0.00	36.92
F:	43.00	49.68
G:	61.00	1589.33
Q:	0.00	2330.00

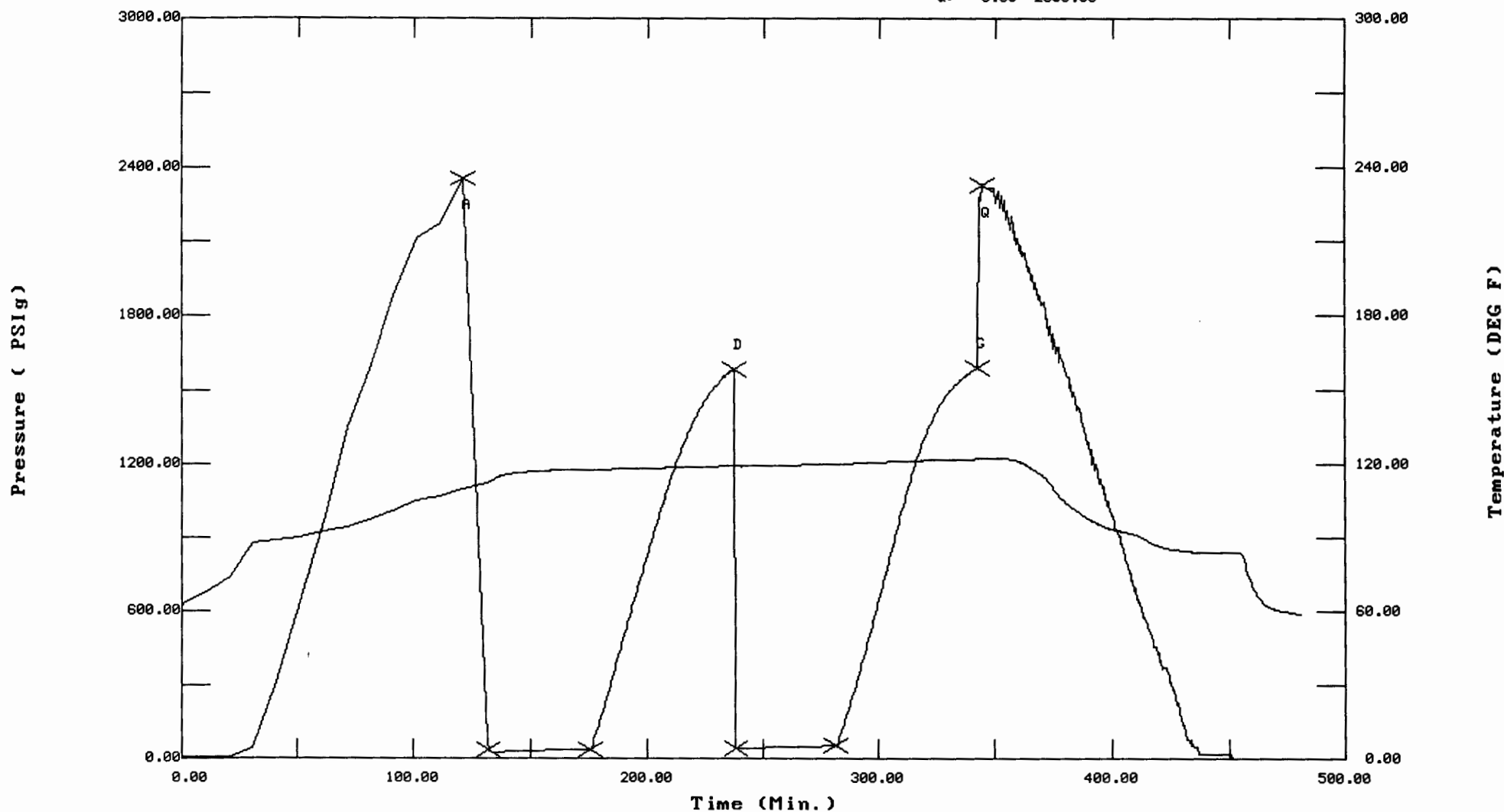
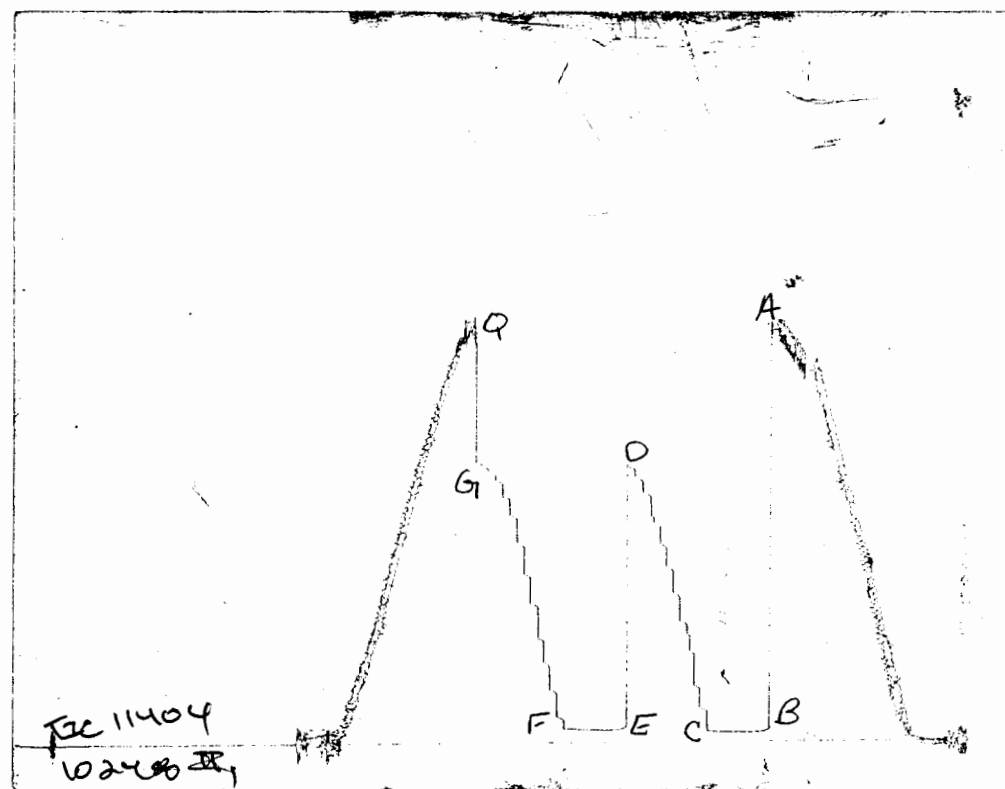


CHART PAGE



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

No 11404

Well Name & No.	MERRILL Ranch # 11-11	Test No.	1	Date	4-9-99
Company	SAGEBRUSH PETL. LLC	Zone Tested	PAWNEE		
Address	1878 SHERMAN ST. STE. 500, DENVER CO. 80203	Elevation	1777 KB	1768 GL	
Co. Rep / Geo.	TOM WILLIAMS	Cont.	DICK DREG #4	Est. Ft. of Pay	4 Por. 12 %
Location: Sec.	11	Twp.	34S	Rge.	16W Co. COMANCHE State KS.
No. of Copies	5	Distribution Sheet (Y, N)	N	Turnkey (Y, N)	
		Evaluation (Y, N)			

Interval Tested	4965 - 5034'	Initial Str Wt./Lbs.	58000	Unseated Str Wt./Lbs.	59,000
Anchor Length	69'	Wt. Set Lbs.	22,000	Wt. Pulled Loose/Lbs.	73,000
Top Packer Depth	4960'	Tool Weight	2100#		
Bottom Packer Depth	4965'	Hole Size — 7 7/8"	✓	Rubber Size — 6 3/4"	✓
Total Depth	5034'	Wt. Pipe Run	NONE	Drill Collar Run	NONE
Mud Wt. P.E. LCM 5# Vis. 50 WL 7.6cc.		Drill Pipe Size	4 1/2" X.H.	Ft. Run	4951'
Blow Description	IF: Strong below. Btm. of bucket in 1 min. IS: Weak below. 1-3" & FF: Strong blow. Btm. of bucket in 2-3 sec. FSI: No below.				
REMARKS: NOT THE 2000'S	COMMENT: AK-1 CHART STAIR STEPPING ON SHOWING. MECHANICAL				
Recovery — Total Feet	75	Fluid	GIP approx 1500'	Ft. in DC	75'
Rec.	75	Feet Of	G.C.M.	10 %gas	%oil %water 90 %mud
Rec.		Feet Of		%gas	%oil %water %mud
Rec.		Feet Of	Gas in pipe very	%gas	%oil %water %mud
Rec.		Feet Of	Paint 1.	%gas	%oil %water %mud
Rec.		Feet Of		%gas	%oil %water %mud
BHT	122	°F Gravity	N/A	°API D@	N/A
RW	N.C @	°F Chlorides	4000	ppm Recovery	Chlorides 4000 ppm System

(A) Initial Hydrostatic Mud	AK-1 2415	Alpine 2354	PSI	Recorder No.	alp. 2342	T-On Location	1435
(B) First Initial Flow Pressure	57	33	PSI	(depth)	4975'	T-Started	1553 #4
(C) First Final Flow Pressure	62	35	PSI	Recorder No.	10248	T-Open	1604
(D) Initial Shut-In Pressure	1602	1586	PSI	(depth)	5031'	T-Pulled	2134
(E) Second Initial Flow Pressure	71	37	PSI	Recorder No.		T-Out	2355
(F) Second Final Flow Pressure	78	50	PSI	(depth)		T-Off Location	2040
(G) Final Shut-in Pressure	1605	1589	PSI	Initial Opening	45	Test	✓ 800
(Q) Final Hydrostatic Mud	2393	2330	PSI	Initial Shut-in	60	Jars	✓ 200
				Final Flow	45	Safety Joint	✓ 50
				Final Shut-in	60	Straddle	
					6	Circ. Sub	
						Sampler	
						Extra Packer	
						Elec. Rec.	✓ 150
						Mileage	
						Other	
						TOTAL PRICE	✓ 1200.00

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.

Approved By Thomas M. Williams
Our Representative Tom Williams

TRILOBITE TESTING L.L.C.

OPERATOR : Sagebrush Petl.LLC

DATE 04-10-99

WELL NAME: Merrill Ranch #11-11

KB 1777.00 ft

TICKET NO: 11405 DST #2

LOCATION : 11-34s-16w Comanche co KS

GR 1768.00 ft

FORMATION: Conglomerate

INTERVAL : 5046.00 To 5141.00 ft

TD 5141.00 ft

TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 45 Rec.	13788	13788	2342			PF Fr. 2037 to 2122 hr
SI 60 Range(Psi)	4650.0	4650.0	4995.0	0.0	0.0	IS Fr. 2122 to 2222 hr
SF 45 Clock(hrs)	12 hr	12 hr	batt.			SF Fr. 2222 to 2307 hr
FS 90 Depth(ft)	5138.0	5138.0	5056.0	0.0	0.0	FS Fr. 2307 to 0037 hr

	Field	1	2	3	4	
A. Init Hydro	2437.0	2452.0	2372.0	0.0	0.0	T STARTED 1802 hr
B. First Flow	149.0	173.0	150.0	0.0	0.0	T ON BOTM 2031 hr
B1. Final Flow	307.0	295.0	259.0	0.0	0.0	T OPEN 2037 hr
C. In Shut-in	1696.0	1707.0	1669.0	0.0	0.0	T PULLED 0038 hr
D. Init Flow	348.0	367.0	296.0	0.0	0.0	T OUT 0330 hr
E. Final Flow	477.0	475.0	417.0	0.0	0.0	
F. Fl Shut-in	1694.0	1717.0	1664.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2402.0	2410.0	2351.0	0.0	0.0	Tool Wt. 2100.00 lbs
Inside/Outside	O	O	I	T		Wt Set On Packer 22000.00 lbs
						Wt Pulled Loose 72000.00 lbs
						Initial Str Wt 58000.00 lbs
						Unseated Str Wt 63000.00 lbs
						Bot Choke 0.75 in
						Hole Size 7.88 in
						D Col. ID 2.25 in
						D. Pipe ID 3.80 in
						D.C. Length 0.00 ft
						D.P. Length 5045.00 ft

RECOVERY

Tot Fluid 870.00 ft of 0.00 ft in DC and 870.00 ft in DP
 0.00 ft of Gas in all fluid free pipe.
 375.00 ft of Water mud 12% water 88% mud
 495.00 ft of Muddy Water 20% mud 80% water
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of Rw .07 ohms @ 60 degrees F.
 0.00 ft of EST.FT. of PAY----- 10
 SALINITY 146000.00 P.P.M. A.P.I. Gravity 0.00

MUD DATA-----

Mud Type	Chemical
Weight	8.80 lb/cf
Vis.	53.00 S/L
W.L.	8.00 in3
F.C.	0.20 in
Mud Drop N	
Amt. of fill	0.00 ft
Btm. H. Temp.	133.00 F
Hole Condition	Good
% Porosity	18.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00 N
Cushion Type	None
Reversed Out N	
Tool Chased N	
Tester	Gary Pevoteaux
Co. Rep.	Tom Williams
Contr.	Duke Drilling
Rig #	4
Unit #	
Pump T.	LCM 5#/bl

BLOW DESCRIPTION

Initial Flow:

Strong blow gas to surface in 13 mins. (see gas volume report)

Initial Shut-in:

Weak blow. 1 - 4".

Final Flow:

Strong blow (see gas volume report)

Final Shut-in:

Weak blow 1-4"

SAMPLES: Gas sample

SENT TO: Caraway/Liberal

Test Successful: Y

GAS RECOVERY

COMPANY: Sagebrush Pet1.LLC DATE: 04-10-99
 WELL NAME: Merrill Ranch #11-11 KB Elev: 1777.00 ft TICKET #11405 DST #2
 WELL LOCATION: 11-34s-16w Comanche co KS GR Elev: 1768.00 ft FORMATION: Conglomerate
 INTERVAL Fr.: 5046.00 To 5141.00 T.D.: 5141.00 ft TEST TYPE: CONVENTIONAL

AS RECOVERY MEASURED WITH Adjusting Choke

**** GAS RATES FOR FLOW #1

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
20	0.25	0	32	9500.0
30	0.25	0	52	12100.0
40	0.25	0	42	10900.0

**** GAS RATES FOR FLOW #2

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
10	0.25	0	38	10400.0
20	0.25	0	28	8890.0
30	0.25	0	22	7880.0
40	0.25	0	19	7320.0

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Merrill Ranch #11-11

LOCATION : Sec.11 Twp.34s Rg.16w Ks

TICKET No. 11405 D.S.T. No. 2 DATE 04-10-99

TOTAL TOOL TO BOTTOM OF TOP PACKERS 27

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 33

TOTAL TOOL 60

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands 1 Single Total 62

TOTAL ASSEMBLY 122

D.C. ABOVE TOOLS.Stands Single Total

D.P. ABOVE TOOLS.Stands81 Single Total 5045

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5167

TOTAL DEPTH 5141

TOTAL DRILL PIPE ABOVE K.B. 26

REMARKS:

Comments:

FLUID SAMPLER DATA (not run)

GAS-----
OIL----- ML.
MUD----- ML.
WATER----- ML.
OTHER-----
PRESSURE----- PSI
Rw ----- ohms @ deg. F.
CHLORIDES----- ppm.
GRAVITY-----n/a deg.API

P.O. SUB	
C.O. SUB @ top of tool	5019
S.I. TOOL Sterling	5025
Sampler (no)	
HMV Sterling	5030
JARS Bowen	5035
SAFETY JOINT Bowen	5037
PACKER Top	5041
PACKER Btm.	5046
DEPTH 5046	
STUBB 1 ft.	5047
ANCHOR	
6' perfs & sub to	5053
Alpine rec.@ 5056	
1 std.pipe to	5115
T.C.	
DEPTH	
21'perfs & sub to	5136
AK-1 rec. @ 5038'	
BULLNOSE 5 ft. perforated	5141
T.D.	

GAS RECOVERY

COMPANY: Sagebrush Petl.LLC DATE: 04-10-99
 WELL NAME: Merrill Ranch #11-11 KB Elev: 1777.00 ft TICKET #11405 DST #2
 WELL LOCATION: Sec.11 Twp.34s Rg.16w Ks GR Elev: 1768.00 ft FORMATION: Conglomerate
 INTERVAL Fr.: 5046.00 To 5141.00 T.D.: 5141.00 ft TEST TYPE: CONVENTIONAL

GAS RECOVERY MEASURED WITH Adjusting Choke

***** GAS RATES FOR FLOW #1

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
20	0.25	0	32	9500.0
30	0.25	0	52	12100.0
40	0.25	0	42	10900.0

***** GAS RATES FOR FLOW #2

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
10	0.25	0	38	10400.0
20	0.25	0	28	8890.0
30	0.25	0	22	7880.0
40	0.25	0	19	7320.0

TEST HISTORY

11405 DST#2 MERRILL RANCH #11-11 SAGEBRUSH PETL.

Flag Points

t(Min.) P(PSIg)

A:	0.00	2371.71
B:	0.00	149.63
C:	42.50	259.33
D:	60.50	1668.56
E:	0.00	296.26
F:	43.00	417.28
G:	92.50	1664.03
Q:	0.00	2350.64

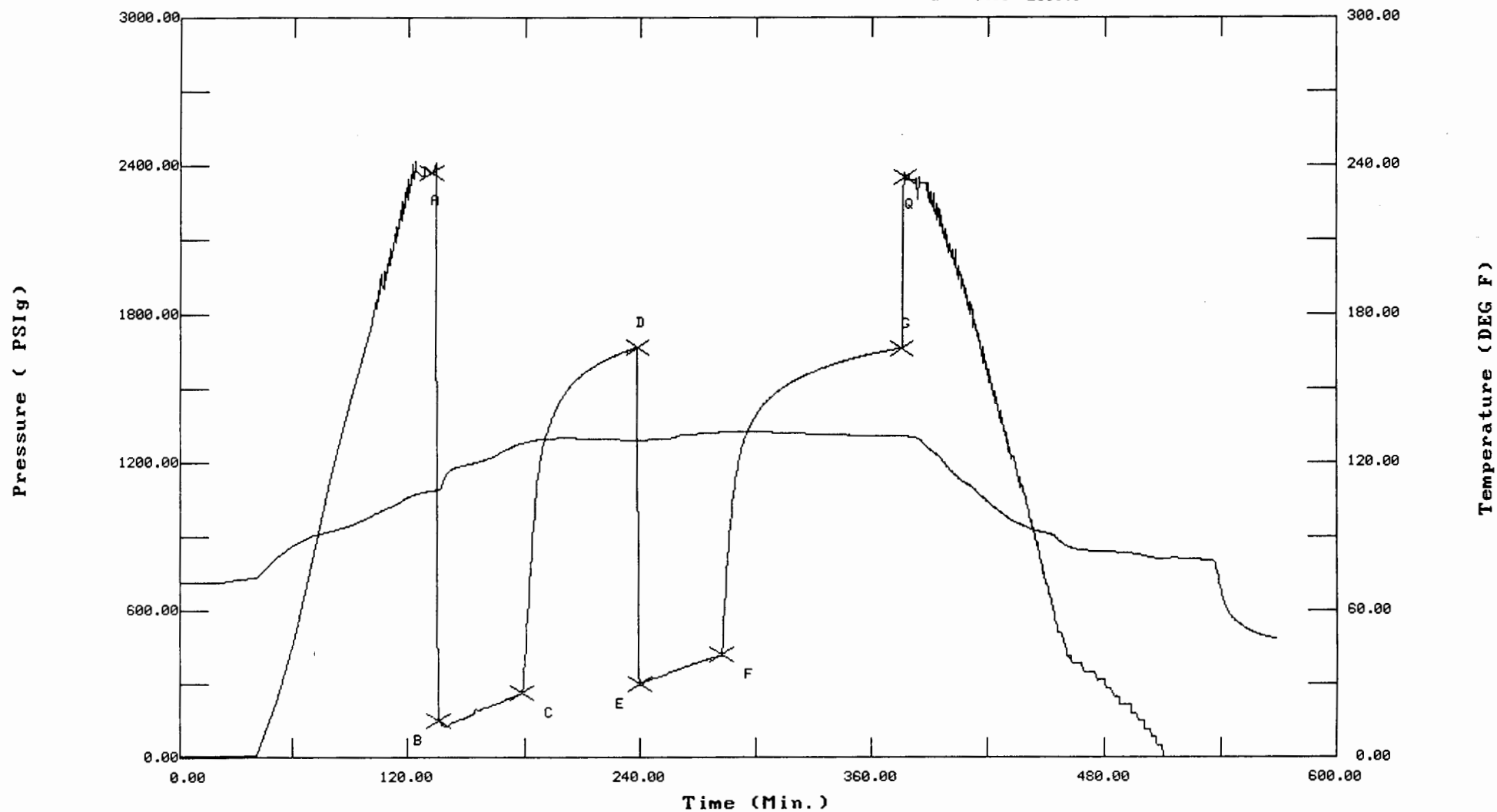
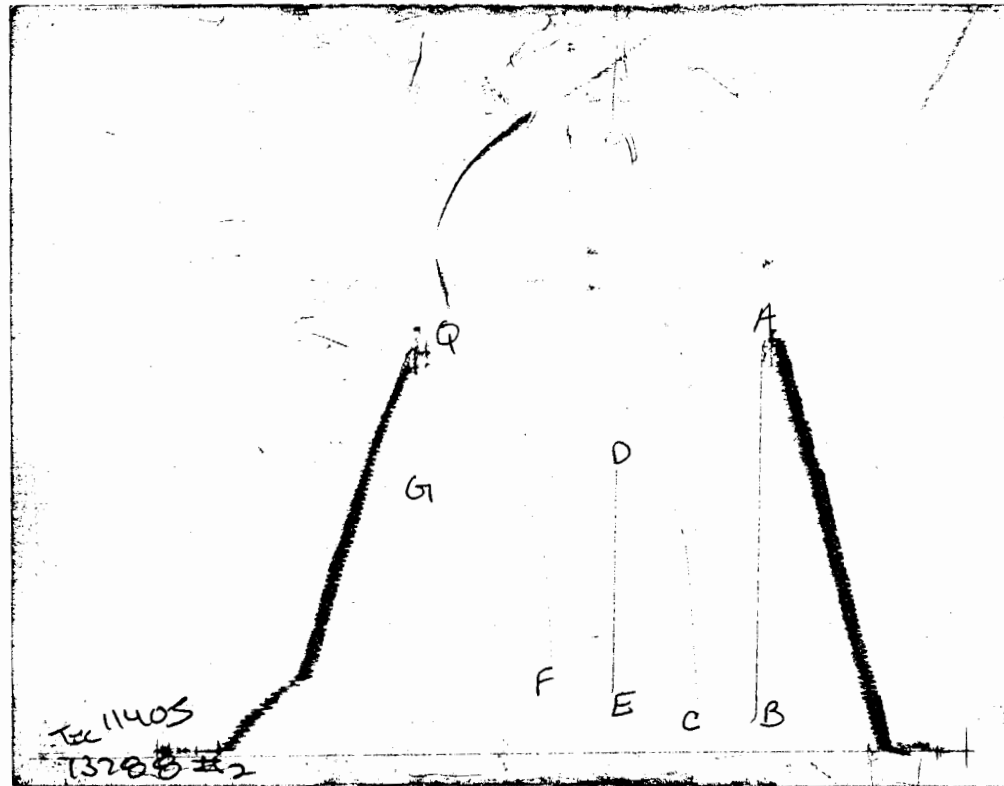


CHART PAGE



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



GAS VOLUME REPORT

VOLUME REPORT #
MERZILL RANCH 11-11

DST NO.

Remarks:

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 11405

Well Name & No.	MERRILL RANCH #11-11	Test No.	2	Date	4-10-99
Company	SAGEBRUSH PETL LLC	Zone Tested	CONGLOMERATE		
Address	1888 SHIRMAN ST. STE. 500, DENVER CO. 80203	Elevation	1777 KB	1760 GL	
Co. Rep / Geo.	TOM WILLIAMS	Cont.	DUKE DRUG #4	Est. Ft. of Pay	10 Por. 18 %
Location: Sec.	11	Twp.	34S	Rge.	16W Co. COMANCHE State KS
No. of Copies	5	Distribution Sheet (Y, N)	N	Turnkey (Y, N)	- Evaluation (Y, N) -

Interval Tested 5046 - 5141
Anchor Length 95'
Top Packer Depth 5041'
Bottom Packer Depth 5046'
Total Depth 5141'
Mud Wt. 8.9 LCM 5# Vis. 53 WL 8.0 cc.
Blow Description IF: Strong blow. GTS in 13 mins. (see gas volume report) ISI: Weak blow. 1-4"
FF: Strong blow (see gas volume report) FSI: Weak blow. 1-4"

Recovery — Total Feet 870 GIP yes Ft. in DC — Ft. in DP 870
Rec. 375 Feet Of W.M. %gas %oil 12 %water 88 %mud
Rec. 495 Feet Of M.W. %gas %oil 80 %water 20 %mud
Rec. — Feet Of — %gas %oil %water %mud
Rec. — Feet Of — %gas %oil %water %mud
Rec. — Feet Of — %gas %oil %water %mud
BHT 133 °F Gravity N/A °API D@ — °F Corrected Gravity N/A °API
RW .07 @ 60 °F Chlorides 146,000 ppm Recovery Chlorides 7,000 ppm System

	AK-1	Alpine	PSI	Recorder No.	T-On Location
(A) Initial Hydrostatic Mud	2437	2372	—	2342	1802
(B) First Initial Flow Pressure	149	150	—	5056'	1821
(C) First Final Flow Pressure	307	259	—	13788	2037
(D) Initial Shut-In Pressure	1696	1669	—	5138'	0037
(E) Second Initial Flow Pressure	348	296	—	—	0330
(F) Second Final Flow Pressure	477	417	—	—	0431
(G) Final Shut-in Pressure	1694	1664	—	45	800
(Q) Final Hydrostatic Mud	2402	2351	—	60	200

Final Flow 45 Safety Joint ✓ 50
Final Shut-in 90 Straddle —
Circ. Sub —
Sampler —
Extra Packer —
Elec. Rec. ✓ 150
Mileage —
Other —
TOTAL PRICE ✓ 1200.00

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.

Approved By Thomas M. Williams

Our Representative Gary F. Williams

TRILOBITE TESTING L.L.C.

OPERATOR : Sagebrush Pet1.LLC DATE 04-11-99
WELL NAME: Merrill Ranch #11-11 KB 1777.00 ft TICKET NO: 11406 DST #3
LOCATION : 11-34s-16w Comanche co KS GR 1768.00 ft FORMATION: Miss
INTERVAL : 5152.00 To 5200.00 ft TD 5215.00 ft TEST TYPE: CONV/STRADDLE

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	13788	13788	2342	10248		PF Fr. 1934 to 2004 hr
SI 45 Range(Psi)	4650.0	4650.0	4995.0	4400.0	0.0	IS Fr. 2004 to 2049 hr
SF 45 Clock(hrs)	12 hr	12 hr	batt.	12		SF Fr. 2049 to 2134 hr
FS 60 Depth(ft)	5194.0	5194.0	5162.0	5212.0	0.0	FS Fr. 2134 to 2234 hr

	Field	1	2	3	4	
A. Init Hydro	2484.0	2495.0	2449.0	0.0	0.0	T STARTED 1705 hr
B. First Flow	317.0	312.0	337.0	0.0	0.0	T ON BOTM 1930 hr
B1. Final Flow	1259.0	1255.0	1257.0	0.0	0.0	T OPEN 1934 hr
C. In Shut-in	1931.0	1865.0	1930.0	0.0	0.0	T PULLED 2235 hr
D. Init Flow	1390.0	1399.0	1534.0	0.0	0.0	T OUT 0245 hr
E. Final Flow	1880.0	1866.0	1900.0	0.0	0.0	
F. Fl Shut-in	1926.0	1921.0	1925.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2379.0	2393.0	2402.0	0.0	0.0	Tool Wt. 2100.00 lbs
Inside/Outside	O	O	I	T		Wt Set On Packer 22000.00 lbs
						Wt Pulled Loose 76000.00 lbs
						Initial Str Wt 58000.00 lbs
						Unseated Str Wt 75000.00 lbs

RECOVERY

Tot Fluid 3990.00 ft of 0.00 ft in DC and 3990.00 ft in DP
910.00 ft of Gas cut mud 20% gas 80% mud
780.00 ft of Gas & Mud Cut Water 10% gas 12% mud 78%water
2300.00 ft of Gas cut water 6% gas 94% water
0.00 ft of
0.00 ft of
0.00 ft of
0.00 ft of Rw .078 ohms @ 60 degrees F.
0.00 ft of EST.FT. of PAY----- 6
SALINITY 125000.00 P.P.M. A.P.I. Gravity 0.00

MUD DATA-----

Mud Type	Chemical
Weight	8.80 lb/cf
Vis.	55.00 S/L
W.L.	8.40 in3
F.C.	0.20 in

BLOW DESCRIPTION

Initial Flow:
Strong blow bottom of bucket in
10 secs.
Initial Shut-in:
No blow.
Final Flow:
Strong blow bottom of bucket in
20 secs.
Final Shut-in:
No blow

Mud Drop N

Amt. of fill	0.00 ft
Btm. H. Temp.	136.00 F
Hole Condition	Good
% Porosity	28.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00 N
Cushion Type	None
Reversed Out N	
Tool Chased N	

SAMPLES: none
SENT TO:Caraway/Liberal

Tester	Gary Pevoteaux
Co. Rep.	Tom Williams
Contr.	Duke Drilling
Rig #	4
Unit #	
Pump T.	LCM 5#/bl

Test Successful: Y

*** TOOL DIAGRAM *** CONV/STRADDLE

WELL NAME: Merrill Ranch #11-11

LOCATION : Sec.11 Twp.34s Rg.16w Ks

TICKET No. 11406 D.S.T. No. 3 DATE 04-11-99

TOTAL TOOL TO BOTTOM OF TOP PACKERS 27

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 32

TOTAL TOOL 59

DRILL COLLAR ANCHOR IN INTERVAL

C. ANCHOR STND.Stands Single Total

P. ANCHOR STND.Stands Single 1 Total 31

TOTAL ASSEMBLY 90

C. ABOVE TOOLS.Stands Single Total

P. ABOVE TOOLS.Stands 82 Single 1 Total 5142

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5232

TOTAL DEPTH 5215

TOTAL DRILL PIPE ABOVE K.B. 17

REMARKS:
Comments:

FLUID SAMPLER DATA (not run)

GAS-----

OIL----- ML.

MUD----- ML.

WATER----- ML.

OTHER-----

PRESSURE----- PSI

Rw ----- ohms @ deg. F.

CHLORIDES----- ppm.

GRAVITY-----n/a deg.API

P.O. SUB	
C.O. SUB @ top of tool	5125
S.I. TOOL Sterling	5131
Sampler (no)	
HMV Sterling	5136
JARS Bowen	5141
SAFETY JOINT Bowen	5143
PACKER Top	5147
PACKER Btm.	5152
DEPTH 5152	
STUBB 1 ft.	5153
ANCHOR	
4' perfs & sub to	5157
Alpine rec.@ 5162	
1 jt. pipe to	5188
AK-1 rec. @ 5194	
8' perfs & sub to	5196
blank sub too	5197
T.C. 3 ft. to	5200
DEPTH 5200	
stub 1ft.	5201
9'perfs & sub to	5210
AK-1 rec. @ 5212'	
BULLNOSE 5 ft. perforated	5215
T.D.	

TEST HISTORY

11406 DST#3 MERRILL RANCH #11-11 SAGEBRUSH PETL.

MISS

Flag Points

t(Min.) P(PSig)

A:	0.00	2448.75
B:	0.00	337.13
C:	27.00	1257.23
D:	44.50	1930.08
E:	0.00	1533.69
F:	45.00	1899.53
G:	60.50	1924.67
Q:	0.00	2401.84

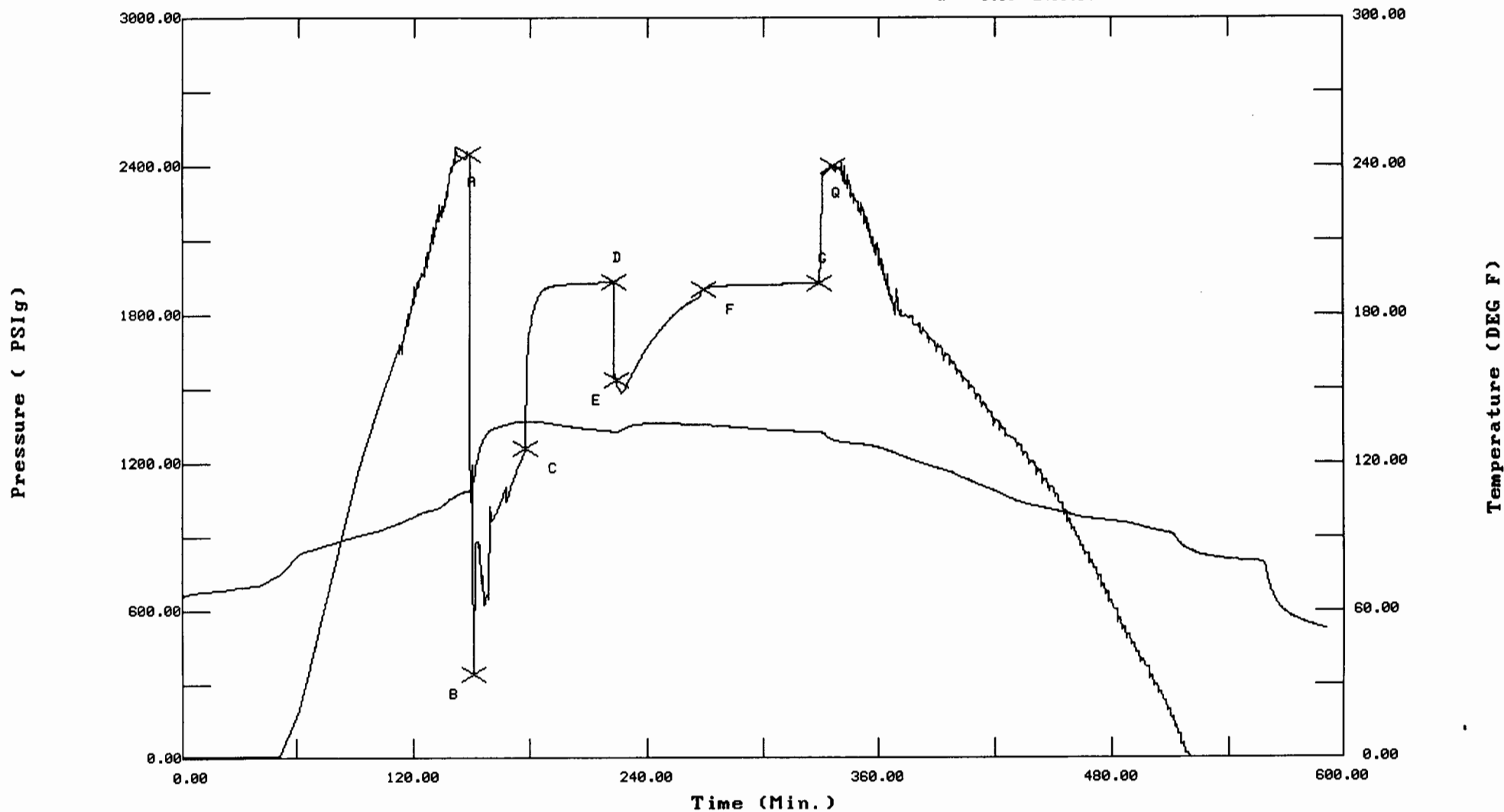
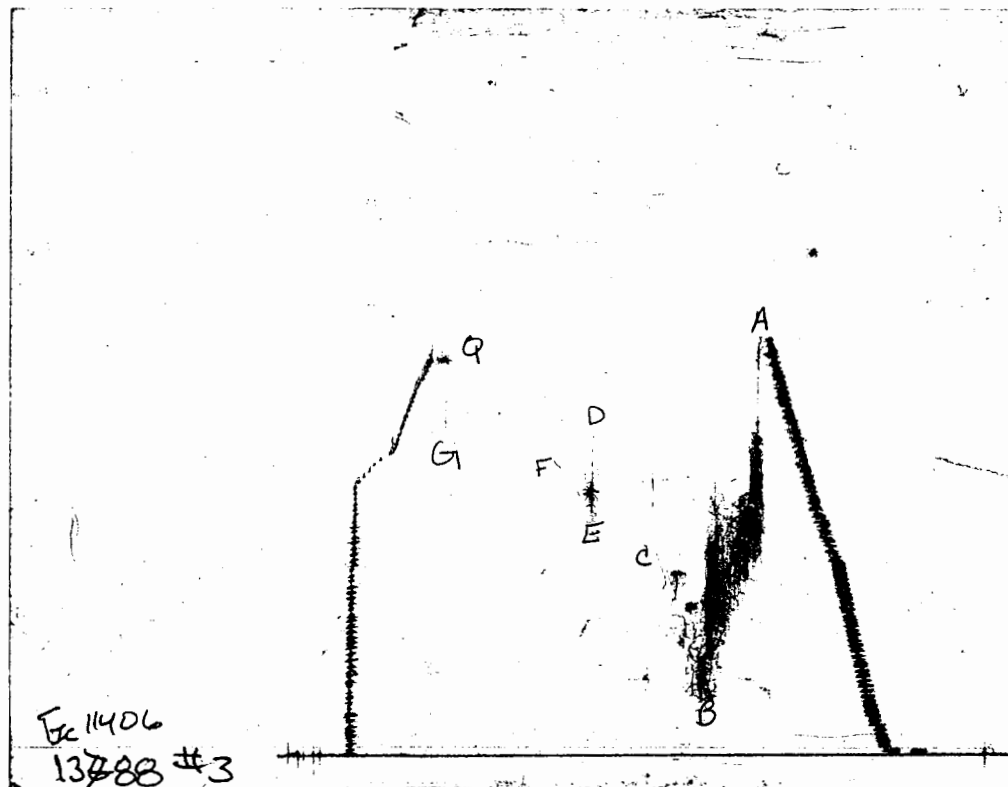
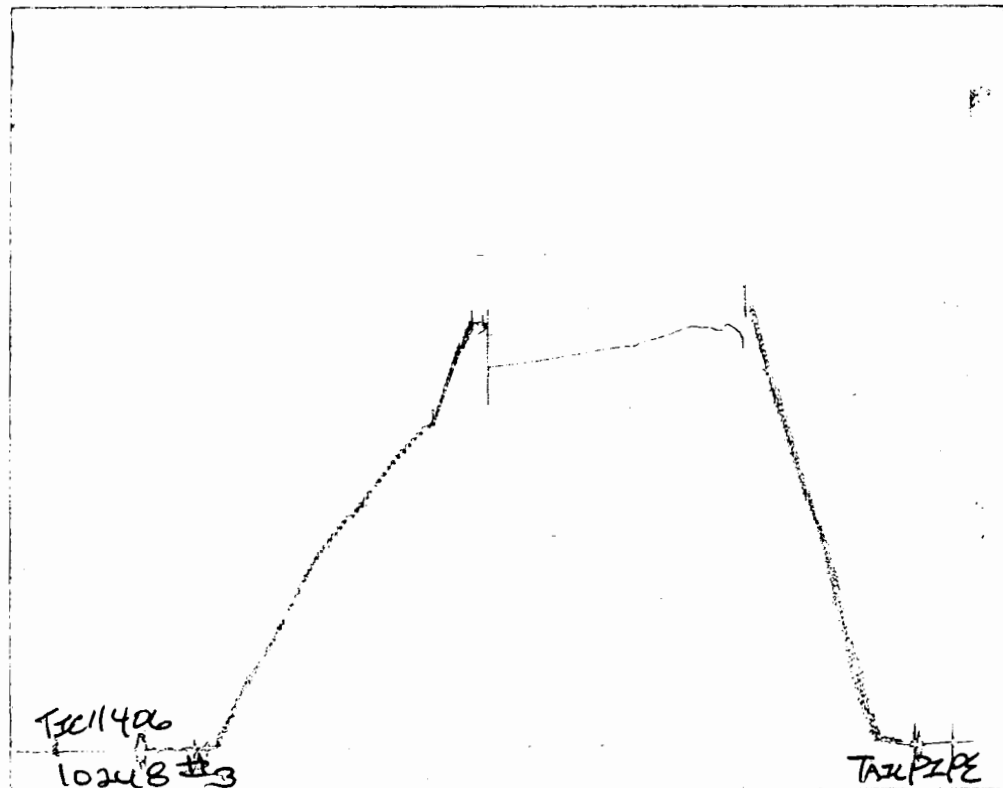


CHART PAGE



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

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

540087

Test Ticket

No 11406

Well Name & No. MERRILL RANCH #11-11 Test No. 3 Date 4-11-99
 Company SAGEBRUSH PETL LLC Zone Tested MISS.
 Address DENVER CO. 80203 Elevation 1777 KB 1768 GL
 Co. Rep / Geo. TOM WILLIAMS Cont. DICK DRUG #4 Est. Ft. of Pay 6 Por. 28%
 Location: Sec. 11 Twp. 34S Rge. 16W Co. Comanche State KS.
 No. of Copies 5 Distribution Sheet (Y, N) N Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 5152 - 5200' Initial Str Wt./Lbs. 50,000 Unseated Str Wt./Lbs. 75,000
 Anchor Length 48' Wt. Set Lbs. 22,000 Wt. Pulled Loose/Lbs. 76,000
 Top Packer Depth 5147' & 5152' Tool Weight 2100#
 Bottom Packer Depth 5200' Hole Size — 7 7/8" ✓ Rubber Size — 6 3/4" ✓
 Total Depth 5215' Wt. Pipe Run NONE Drill Collar Run NONE
 Mud Wt. 8.8 LCM S# Vis. SS WL 8.4cc Drill Pipe Size 4 1/2" x 11' Ft. Run ~~5142~~ 5142'
 Blow Description IF: Strong blow. Blm. of bucket in 10 secs.
FSI: No blow
FF: Strong blow. Blm. of bucket in 20 secs. FSI: No blow

Recovery — Total Feet 3990' GIP ~ Ft. in DC ~ Ft. in DP 3990'
 Rec. 910 Feet Of G.C.M. 20 %gas %oil %water 80 %mud
 Rec. 780 Feet Of G.E.M.C.W 10 %gas %oil 78 %water 12 %mud
 Rec. 2300 Feet Of G.C.W. 6 %gas %oil 94 %water %mud
 Rec. _____ Feet Of _____ %gas %oil %water %mud
 Rec. _____ Feet Of _____ %gas %oil %water %mud
 BHT 136 °F Gravity N/A °API D@ _____ °F Corrected Gravity N/A °API
 RW 1078 @ 60 °F Chlorides 125,000 ppm Recovery Chlorides 8,000 ppm System

	AK-1	Alpine				
(A) Initial Hydrostatic Mud	<u>2484</u>	<u>2449</u>	PSI	Recorder No. <u>2342</u>	T-On Location	<u>1645</u>
(B) First Initial Flow Pressure	<u>317</u>	<u>337</u>	PSI	(depth) <u>5162'</u>	T-Started	<u>1705</u>
(C) First Final Flow Pressure	<u>1259</u>	<u>1257</u>	PSI	Recorder No. <u>13708</u>	T-Open	<u>1934</u>
(D) Initial Shut-In Pressure	<u>1931</u>	<u>1930</u>	PSI	(depth) <u>5194'</u>	T-Pulled	<u>2235</u>
(E) Second Initial Flow Pressure	<u>1390</u>	<u>1534</u>	PSI	Recorder No. <u>10248</u>	T-Out	<u>0245</u>
(F) Second Final Flow Pressure	<u>1880</u>	<u>1900</u>	PSI	(depth) <u>5212'</u>	T-Off Location	<u>0430</u>
(G) Final Shut-in Pressure	<u>1926</u>	<u>1925</u>	PSI	Initial Opening <u>30</u>	Test	<u>✓ 800.00</u>
(Q) Final Hydrostatic Mud	<u>2379</u>	<u>2402</u>	PSI	Initial Shut-in <u>45</u>	Jars	<u>✓ 200.00</u>
				Final Flow <u>45</u>	Safety Joint	<u>✓ 50.00</u>
				Final Shut-in <u>60</u>	Straddle	<u>✓ 250.00</u>
					Circ. Sub	_____
					Sampler	_____
					Extra Packer	<u>✓ 150.00</u>
					Elec. Rec.	<u>✓ 150.00</u>
					Mileage	_____
					Other	_____
					TOTAL PRICE \$	<u>✓ 1300.00</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.

Approved By

Thomas M. Williams

Our Representative

Gary Hunsicker