

15-033-21002

36-33s-16w

Well Name: Merrill Ranch 36-5
Company: Sagebrush Operating LLC
Location: 36-33s-16w
Comanche County Kansas
Date: 3-15-99

TRILOBITE TESTING L.L.C.

OPERATOR : Sagebrush

DATE 03/04/199

WELL NAME: Merrill Ranch, #36-5

KB 1744.00 ft

TICKET NO: 11454 DST #1

LOCATION : 36-33s-16w Comanche co KS

GR 1735.00 ft

FORMATION: Elgin sd.

INTERVAL : 3960.00 To 4025.00 ft

TD 4025.00 ft

TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	13849	13849	2357			PF Fr. 1605 to 1635 hr
SI 45 Range (Psi)	4375.0	4375.0	4995.0	0.0	0.0	IS Fr. 1635 to 1720 hr
SF 45 Clock (hrs)	12hr.	12hr.	elec.			SF Fr. 1720 to 1805 hr
FS 60 Depth (ft)	4023.0	4023.0	3966.0	0.0	0.0	FS Fr. 1805 to 1905 hr

	Field	1	2	3	4	
A. Init Hydro	2082.0	2042.0	1993.0	0.0	0.0	T STARTED 1402 hr
B. First Flow	144.0	124.0	20.0	0.0	0.0	T ON BOTM 1603 hr
B1. Final Flow	144.0	106.0	31.0	0.0	0.0	T OPEN 1605 hr
C. In Shut-in	1537.0	1515.0	1468.0	0.0	0.0	T PULLED 1905 hr
D. Init Flow	144.0	136.0	40.0	0.0	0.0	T OUT 2020 hr
E. Final Flow	156.0	130.0	63.0	0.0	0.0	
F. Fl Shut-in	1493.0	1481.0	1439.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2060.0	2018.0	1917.0	0.0	0.0	Tool Wt. 2100.00 lbs
Inside/Outside	O	O	I			Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 65000.00 lbs
						Initial Str Wt 52000.00 lbs
						Unseated Str Wt 52000.00 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 3979.00 ft

RECOVERY

Tot Fluid 110.00 ft of 0.00 ft in DC and 110.00 ft in DP
 110.00 ft of Slight Mud & Gas Cut Water
 0.00 ft of 2% gas - 84% water - 14% mud
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of

SALINITY 50000.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:

Weak blow built to 4" in water

Initial Shutin:

Bled down for 20 minutes
 no blow back

Final Flow:

Weak blow built to 4" in water

Final Shutin:

Bled down for 10 minutes
 no blow back

SAMPLES:

SENT TO:

MUD DATA-----

Mud Type	Chemical
Weight	9.30 lb/cf
Vis.	48.00 S/L
W.L.	10.40 in3
F.C.	0.32 in
Mud Drop N	
Amt. of fill	0.00 ft
Btm. H. Temp.	112.00 F
Hole Condition	Good
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00 n
Cushion Type	none
Reversed Out N	
Tool Chased N	
Tester	Darren L. Amerine
Co. Rep.	Tom Williams
Contr.	Duke
Rig #	4
Unit #	none
Pump T.	no

Test Successful: Y

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Merrill Ranch, #36-5	P.O. SUB Top of tool @	3933
	C.O. SUB	3934
LOCATION : Sec.36 Twp.33s Rge.16w	S.I. TOOL	3939
TICKET No. 11454 D.S.T. No. 1 DATE 03/04/199		
TOTAL TOOL TO BOTTOM OF TOP PACKERS 28	HMV	3944
INTERVAL TOOL		
TOTAL PACKERS AND ANCHOR 33	JARS	3949
TOTAL TOOL 51		
DRILL COLLAR ANCHOR IN INTERVAL		
C. ANCHOR STND.Stands Single Total		
P. ANCHOR STND.Stands Single 1 Total 32	SAFETY JOINT	3951
TOTAL ASSEMBLY	PACKER	3955
C. ABOVE TOOLS.Stands Single Total	PACKER	3960
P. ABOVE TOOLS.Stands 63 Single 1 Total 3947	DEPTH 3960	
	STUBB 1'to	3961
	ANCHOR 28'of perfs,to	4020
TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4040	Alpine rec.@3966	
TOTAL DEPTH 4025		4020
TOTAL DRILL PIPE ABOVE K.B. 15		4020
MARKS:		
	T.C.	
	DEPTH	
		4020
	Ak-1 rec.@ 4023	
	BULLNOSE 5'bullnose to	4025
	T.D.	

TEST HISTORY

Tk#11454 DST#1 Merrill Ranch #36-5 Sagebrush Oper, I.I.C

Flag Points

t(Min.) PK PSig

A: 0.00 1993.17
 B: 0.00 20.45
 C: 29.75 30.59
 D: 47.00 1467.92
 E: 0.00 40.12
 F: 43.25 63.19
 G: 61.00 1439.16
 Q: 0.00 1917.15

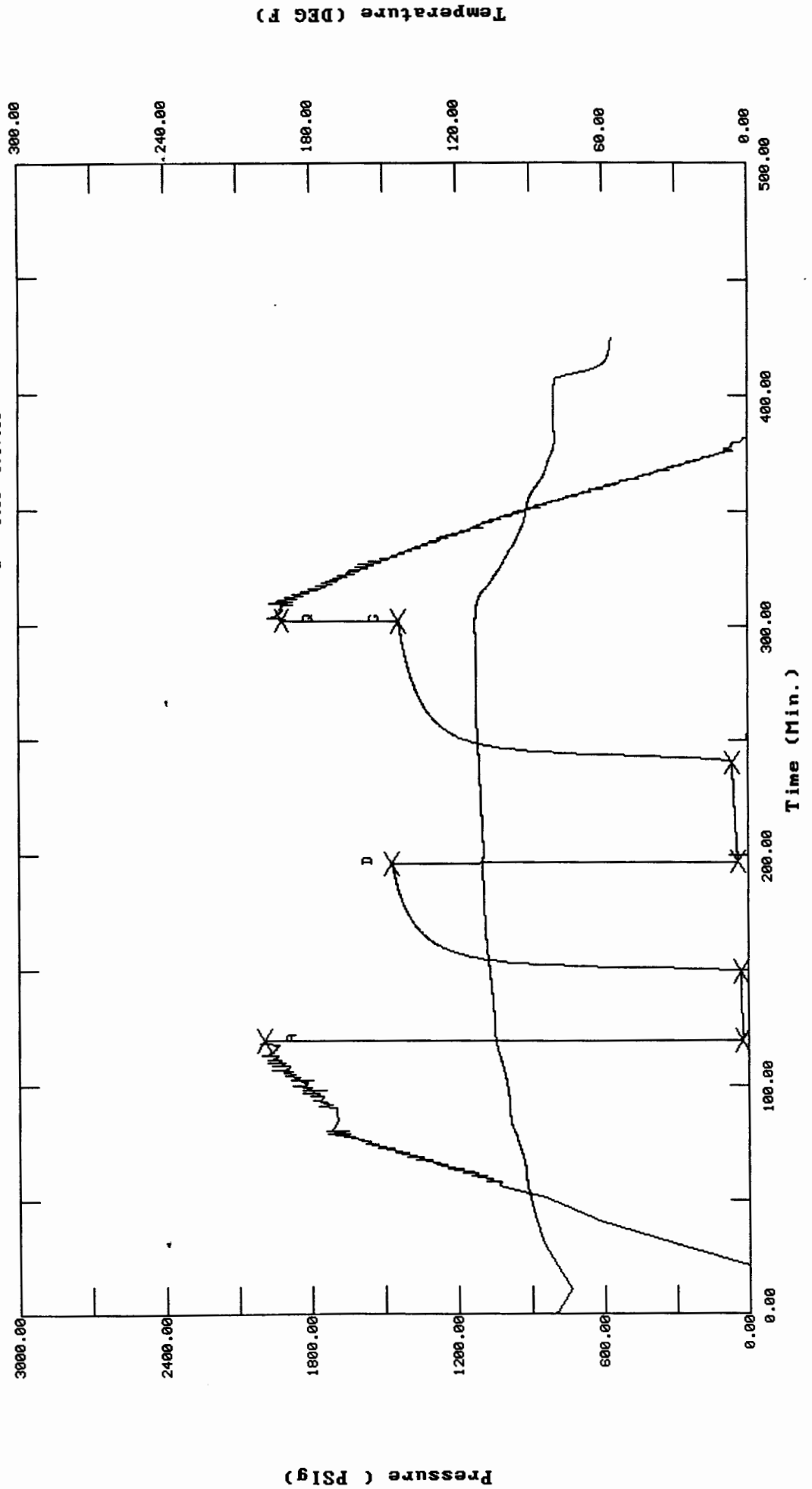
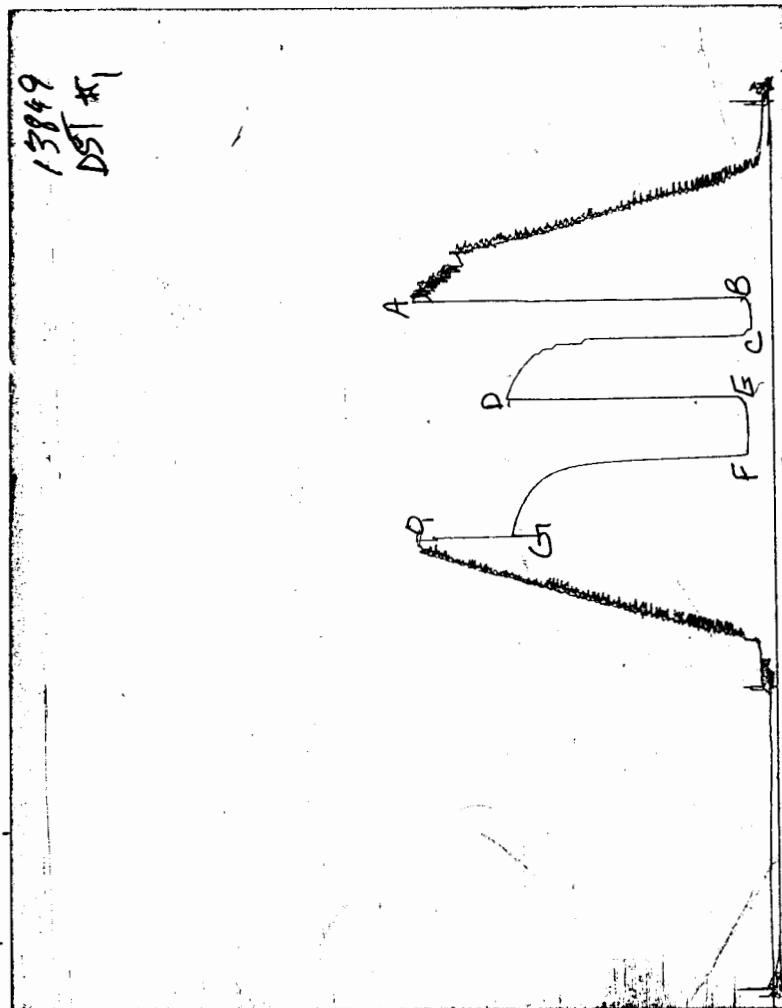


CHART PAGE



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 11454

Well Name & No.	<u>Merrill Ranch</u>	Test No.	<u>#1</u>	Date	<u>3/4/1999</u>
Company	<u>Sagebrush Operating Co</u>	Zone Tested	<u>Elgin Sh</u>		
Address	<u>1888 Sherman, St Suite 500 Denver Co 80203</u>	Elevation	<u>1744</u>	KB	<u>1735</u> GL
Co. Rep / Geo.	<u>Tom Williams</u>	Cont.	<u>Duke #4</u>	Est. Ft. of Pay	<u> </u> Por. <u> </u> %
Location: Sec.	<u>36</u>	Twp.	<u>33S</u>	Rge.	<u>16 W</u> Co. <u>Comanche</u> State <u>Ks</u>
No. of Copies	<u>5</u>	Distribution Sheet (Y, N)	<u> </u>	Turnkey (Y, N)	<u> </u> Evaluation (Y, N) <u> </u>

Interval Tested	<u>3860' - 4025'</u>	Initial Str Wt./Lbs.	<u>52000</u>	Unseated Str Wt./Lbs.	<u>52000</u>
Anchor Length	<u>65'</u>	Wt. Set Lbs.	<u>20000</u>	Wt. Pulled Loose/Lbs.	<u>65000</u>
Top Packer Depth	<u>3935'</u>	Tool Weight	<u>2100</u>		
Bottom Packer Depth	<u>3960'</u>	Hole Size — 7 7/8"	<u>✓</u>	Rubber Size — 6 3/4"	<u>✓</u>
Total Depth	<u>4025'</u>	Wt. Pipe Run	<u>N/A</u>	Drill Collar Run	<u>N/A</u>
Mud Wt. <u>9.3</u> LCM <u>3A</u> Vis. <u>48</u> WL <u>10.4</u>		Drill Pipe Size	<u>4 1/2 x 4</u>	Ft. Run	<u>3978</u>
Blow Description	<u>IF: Weak flow build to 4" in 120</u>				
	<u>TSI: Bled down for 20 mins no blow back</u>				
	<u>FF: Weak flow build to 4" in 120.</u>				
	<u>FST: Bled down 10 mins no BP.</u>				

Recovery — Total Feet	<u>110'</u>	GIP	<u>Trace</u>	Ft. in DC	<u> </u>	Ft. in DP	<u>110'</u>
Rec.	<u>110'</u>	Feet Of	<u>SMEGCW</u>	2 %gas	%oil <u>84</u>	%water <u>14</u>	%mud
Rec.		Feet Of		%gas	%oil	%water	%mud
Rec.		Feet Of		%gas	%oil	%water	%mud
Rec.		Feet Of		%gas	%oil	%water	%mud
Rec.		Feet Of		%gas	%oil	%water	%mud
BHT	<u>112°</u>	°F Gravity	<u> </u>	°API D@	<u> </u>	°F Corrected Gravity	<u> </u> °API
RW	<u>1/</u>	@ <u>55</u>	°F Chlorides	<u>5000</u>	ppm Recovery	Chlorides <u>5000</u>	ppm System

	AK-1	Alpine					
(A) Initial Hydrostatic Mud	<u>2082</u>	<u>1993</u>	PSI	Recorder No.	<u>13849</u>	T-On Location	<u>1330</u>
(B) First Initial Flow Pressure	<u>144</u>	<u>20</u>	PSI	(depth)	<u>4023</u>	T-Started	<u>1402</u>
(C) First Final Flow Pressure	<u>144</u>	<u>31</u>	PSI	Recorder No.	<u>2857</u>	T-Open	<u>1605</u>
(D) Initial Shut-In Pressure	<u>153</u>	<u>1468</u>	PSI	(depth)	<u>3966</u>	T-Pulled	<u>1905</u>
(E) Second Initial Flow Pressure	<u>144</u>	<u>40</u>	PSI	Recorder No.	<u> </u>	T-Out	<u>2020</u>
(F) Second Final Flow Pressure	<u>156</u>	<u>63</u>	PSI	(depth)	<u> </u>	T-Off Location	<u>2200</u>
(G) Final Shut-in Pressure	<u>1493</u>	<u>1439</u>	PSI	Initial Opening	<u>30</u>	Test	<u>700 ✓</u>
(Q) Final Hydrostatic Mud	<u>2060</u>	<u>1917</u>	PSI	Initial Shut-in	<u>45</u>	Jars	<u>200 ✓</u>
				Final Flow	<u>45</u>	Safety Joint	<u>50 ✓</u>
				Final Shut-in	<u>60</u>	Straddle	<u> </u>
						Circ. Sub	<u> </u>
						Sampler	<u> </u>
						Extra Packer	<u> </u>
						Elec. Rec.	<u>150 ✓</u>
						Mileage	<u> </u>
						Other	<u> </u>
						TOTAL PRICE \$	<u>1100</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 Tom Williams
Our Representative Darren Greiner

TRILOBITE TESTING L.L.C.

OPERATOR : Sagebrush oper.L.L.C

DATE 03/07/199

WELL NAME: Merrill

KB 1744.00 ft

TICKET NO: 11455

DST #2

LOCATION : 36-33s-16w Comanche co KS

GR 1735.00 ft

FORMATION: Miss

INTERVAL : 4854.00 To 4950.00 ft

TD 4950.00 ft

TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 0 Rec.	10332	10332	2357			PF Fr. mis to run hr
SI 0 Range(Psi)	4025.0	4025.0	4995.0	0.0	0.0	IS Fr. pake to fail hr
SF 0 Clock(hrs)	12HR.	12HR.	elec.			SF Fr. re. to hr
FS 0 Depth(ft)	4947.0	4947.0	4861.0	0.0	0.0	FS Fr. to hr

	Field	1	2	3	4	
A. Init Hydro	0.0	0.0	0.0	0.0	0.0	T STARTED hr
B. First Flow	0.0	0.0	0.0	0.0	0.0	T ON BOTM hr
B1. Final Flow	0.0	0.0	0.0	0.0	0.0	T OPEN hr
C. In Shut-in	0.0	0.0	0.0	0.0	0.0	T PULLED hr
D. Init Flow	0.0	0.0	0.0	0.0	0.0	T OUT hr
E. Final Flow	0.0	0.0	0.0	0.0	0.0	
F. Fl Shut-in	0.0	0.0	0.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	0.0	0.0	0.0	0.0	0.0	Tool Wt. 2100.00 lbs
Inside/Outside	0		I			Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 0.00 lbs
						Initial Str Wt 0.00 lbs
						Unseated Str Wt 0.00 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 4875.00 ft

RECOVERY

Tot Fluid 1800.00 ft of 0.00 ft in DC and 1800.00 ft in DP
1800.00 ft of drilling mud

0.00 ft of
0.00 ft of
0.00 ft of
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 0.00

BLOW DESCRIPTION

MUD DATA-----

Mud Type	Chemical
Weight	9.00 lb/cf
Vis.	52.00 S/L
W.L.	8.00 in3
F.C.	0.32 in
Mud Drop N	

Amt. of fill	0.00 ft
Btm. H. Temp.	115.00 F
Hole Condition	
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00 n
Cushion Type	none
Reversed Out N	
Tool Chased N	
Tester	Darren Amerine
Co. Rep.	Tom Williams
Contr.	Duke
Rig #	4
Unit #	no
Pump T.	none

SAMPLES:

SENT TO:

Test Successful: Y

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Merrill

LOCATION : 36-33s-16w Comanche co KS

WELL No. 11455 D.S.T. No. 2 DATE 03/07/199

TOTAL TOOL TO BOTTOM OF TOP PACKERS 28

INTERVAL TOOL

TOTAL PACKERS AND ANCHOR

TOTAL TOOL

WELL COLLAR ANCHOR IN INTERVAL

C. ANCHOR STAND.Stands Single Total

P. ANCHOR STAND.Stands Single Total

TOTAL ASSEMBLY

C. ABOVE TOOLS.Stands Single Total 32

P. ABOVE TOOLS.Stands Single Total

TOTAL DRILL COLLARS DRILL PIPE & TOOLS ..

TOTAL DEPTH

TOTAL DRILL PIPE ABOVE K.B.

MARKS:

P.O. SUB Top of tool @	4826
C.O. SUB	4827
S.I. TOOL	4832
HMV	4837
JARS	4842
SAFETY JOINT	4844
PACKER	4849
PACKER	4854
DEPTH 4854	
STUBB 1'to	4855
ANCHOR 25'of perfs.to	4880
Alpine rec.@ 4861	
T.C. DEPTH	
	4945
Ak-1 rec.@ 4947	
BULLNOSE 5'bullnose to T.D.	4950

TEST HISTORY

Tk#11455 DST#2 Merrill Ranch, Sagebrush, Pet

Flag Points
 t(Min.) P(PSig)
 R: 0.00 2402.81
 Q: 0.00 2319.52

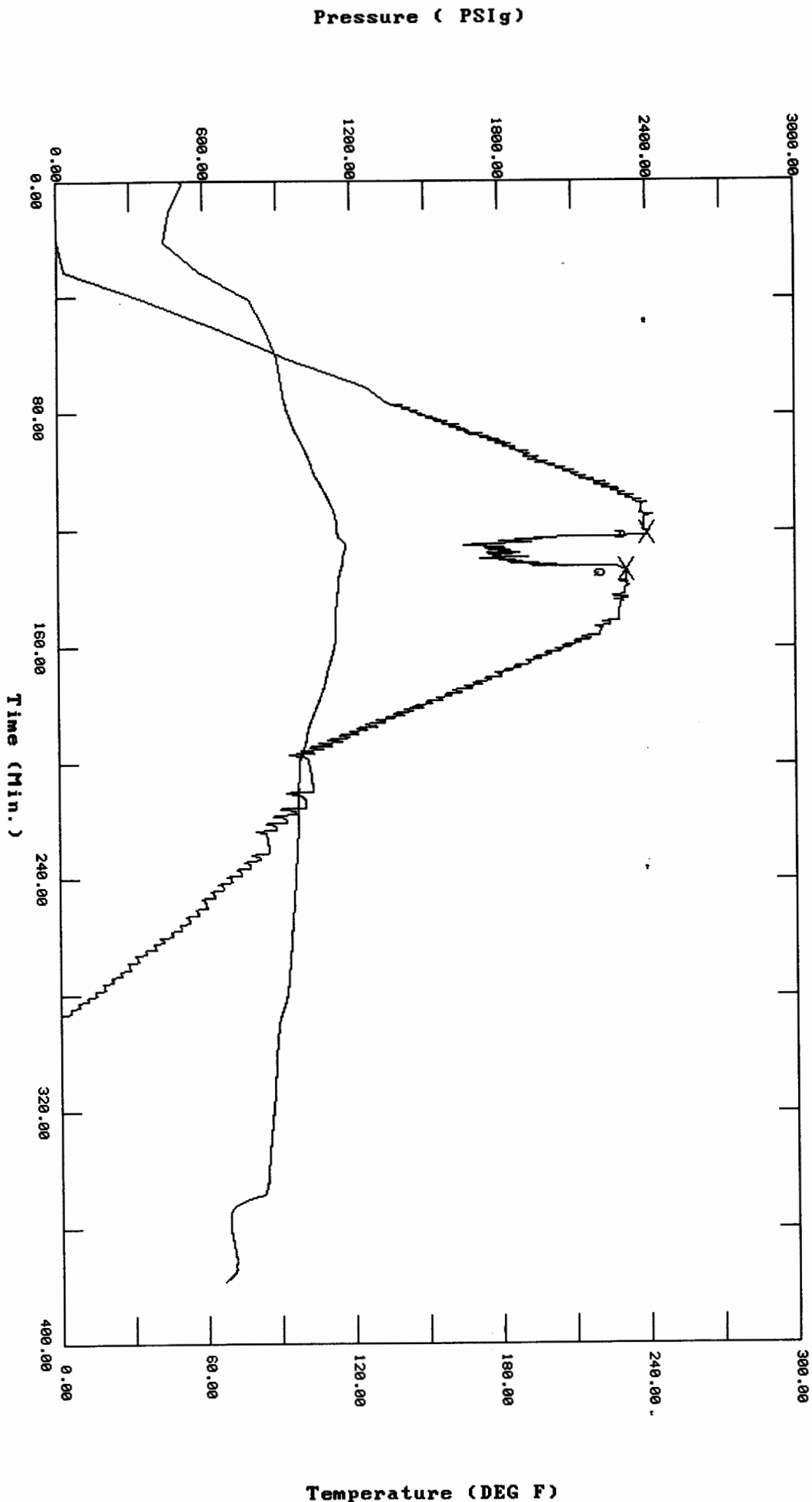
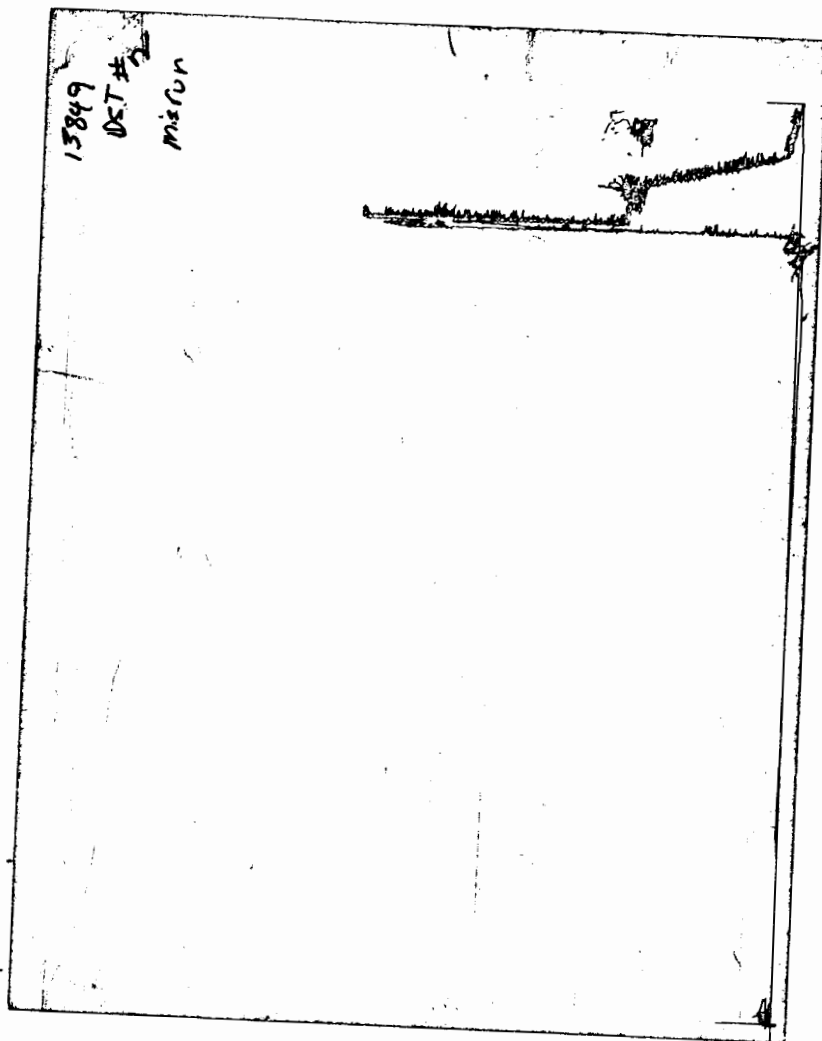


CHART PAGE



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

 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: Tk#11455 DST#2 Merrill Ranch, Sagebrush, Pet

DATE: 03/07/99 TIME: 21:42:34

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P ² /10 ⁶
***** Initial Hydro.	120.75	2402.8	0.0	114.17		
***** Start Flow 1	0.00	2319.5	0.0	115.48		
***** End Flow 1	0.25	2320.3	0.8	115.39		
***** End Shut-in 1	134.75	2320.3	0.0	115.39	0.0019	5.384
***** Final Hydro.	133.75	2320.3	0.0	115.39		

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 11455

Well Name & No.	Merrill Ranch 36-5	Test No.	#2	Date	10/00 03/07/09
Company	Sagebrush Oper, L.L.C	Zone Tested	(MIS)		
Address	1888 Sherman St. Suite 500 Denver, Co. 80203	Elevation	1744	KB	1735 GL
Co. Rep / Geo	Tom Williams	Cont.	Duke #4	Est. Ft. of Pay	Por. %
Location: Sec.	36	Twp.	33S	Rge.	16 W Co. Comanche State KS
No. of Copies	5	Distribution Sheet (Y, N)		Turnkey (Y, N)	
		Evaluation (Y, N)			

Interval Tested	4854' - 4950'	Initial Str Wt./Lbs.	58000	Unseated Str Wt./Lbs.	24000
Anchor Length	96'	Wt. Set Lbs.	20,000	Wt. Pulled Loose/Lbs.	80,000
Top Packer Depth	4849'	Tool Weight	2100		
Bottom Packer Depth	4854'	Hole Size — 7 7/8"		Rubber Size — 6 3/4"	✓
Total Depth	4950	Wt. Pipe Run	N/A	Drill Collar Run	N/A
Mud Wt. 9.0 LCM 4# Vis. 52 WL 8.0		Drill Pipe Size	4 1/2 KH	Ft. Run	
Blow Description	IF: Mis Run (Packer failure)				
	FF:				

Recovery — Total Feet	1800	GIP		Ft. in DC		Ft. in DP	1800
Rec.	1800	Feet Of	Drilling mud	%gas	%oil	%water	100 %mud
Rec.		Feet Of		%gas	%oil	%water	%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		°API D@		°F Corrected Gravity	
RW		@		°F Chlorides		ppm Recovery	Chlorides 2500 ppm System
		AK-1	Alpine				

(A) Initial Hydrostatic Mud		PSI Recorder No.	2357	T-On Location	1400
(B) First Initial Flow Pressure		PSI (depth)	4861	T-Started	2342
(C) First Final Flow Pressure		PSI Recorder No.	10800 13849	T-Open	0105
(D) Initial Shut-In Pressure		PSI (depth)	4947	T-Pulled	0135
(E) Second Initial Flow Pressure		PSI Recorder No.		T-Out	0415
(F) Second Final Flow Pressure		PSI (depth)		T-Off Location	0500
(G) Final Shut-in Pressure		PSI Initial Opening	\$ min	Test	500 ✓
(Q) Final Hydrostatic Mud		PSI Initial Shut-in		Jars	200 ✓
		Final Flow		Safety Joint	50 ✓
		Final Shut-in		Straddle	
				Circ. Sub	
				Sampler	
				Extra Packer	
				Elec. Rec.	150L
				Mileage	
				Other	

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Approved By Tom Williams
Our Representative Daren & Ameline

TOTAL PRICE \$ 900

TRILOBITE TESTING L.L.C.

OPERATOR : Sagebrush,oper.L.L.C

DATE 03/08/199

WELL NAME: Merrill Ranch 36-5

KB 1744.00 ft

TICKET NO: 11456

DST #3

LOCATION : 36-33s-16w Comanche co KS

GR 1735.00 ft

FORMATION: Miss

INTERVAL : 4810.00 To 4950.00 ft

TD 4950.00 ft

TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 45 Rec.	10991	10991	2357			PF Fr. 1330 to 1415 hr
SI 60 Range (Psi)	4200.0	4200.0	4995.0	0.0	0.0	IS Fr. 1415 to 1515 hr
SF 60 Clock (hrs)	12hr.	12hr.	elec.			SF Fr. 1515 to 1615 hr
FS 90 Depth (ft)	4947.0	4947.0	4820.0	0.0	0.0	FS Fr. 1615 to 1745 hr

	Field	1	2	3	4	
A. Init Hydro	0.0	0.0	2425.0	0.0	0.0	T STARTED 1113 hr
B. First Flow	0.0	0.0	1091.0	0.0	0.0	T ON BOTM 1326 hr
B1. Final Flow	0.0	0.0	1382.0	0.0	0.0	T OPEN 1330 hr
C. In Shut-in	0.0	0.0	1776.0	0.0	0.0	T PULLED 1730 hr
D. Init Flow	0.0	0.0	1463.0	0.0	0.0	T OUT 0030 hr
E. Final Flow	0.0	0.0	1614.0	0.0	0.0	
F. Fl Shut-in	0.0	0.0	1763.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	0.0	0.0	2171.0	0.0	0.0	Tool Wt. 2100.00 lbs
Inside/Outside	0		I			Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 90000.00 lbs
						Initial Str Wt 56000.00 lbs
						Unseated Str Wt 84000.00 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 4909.00 ft

RECOVERY

Tot Fluid 3840.00 ft of 0.00 ft in DC and 3840.00 ft in DP
 1000.00 ft of Oil & gas cut mud 6%gas Trace of oil 94%mda
 500.00 ft of Slight gas & oil cut mud 10%gas 2%oil 88%mda
 1000.00 ft of Oil & gas cut mud 14%gas 16%oil 70%mda
 1200.00 ft of Heavy oil & gas cut mud 50%gas 40%oil 10%mda
 140.00 ft of Slight oil & gas cut mud 16%gas 14%oil 70%mda
 0.00 ft of
 0.00 ft of
 0.00 ft of

SALINITY 0.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:IF:

Strong blow bottom of bucket in
 15 secs.

Initial Shut-in:

Bled down for 5 mins. built back
 to bottom of bucket in 30 mins.

Final Flow:

Strong blow bottom of bucket in
 30 secs.

Final Shut-in:

Bled down for 5 mins. built back to
 bottom of bucket.

SAMPLES:

SENT TO:

MUD DATA-----

Mud Type	Chemical
Weight	8.90 lb/cf
Vis.	68.00 S/L
W.L.	11.60 in3
F.C.	0.32 in
Mud Drop N	
Amt. of fill	0.00 ft
Btm. H. Temp.	134.00 F
Hole Condition	fair
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00 n
Cushion Type	none
Reversed Out N	
Tool Chased N	
Tester	Darren L.Amerine
Co. Rep.	Tom Williams
Contr.	Duke
Rig #	4
Unit #	none
Pump T.	no

Test Successful: Y

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Merrill Ranch 36-5

LOCATION : Sec.36 Twp.33s Rge.16w

TICKET No. 11456 D.S.T. No. 3 DATE 03/08/199

TOTAL TOOL TO BOTTOM OF TOP PACKERS 28

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 45

TOTAL TOOL 73

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands 1 Single 1 Total 95

TOTAL ASSEMBLY 168

D.C. ABOVE TOOLS.Stands Single Total

D.P. ABOVE TOOLS.Stands79 Single 1 Total 4814

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4970

TOTAL DEPTH 4950

TOTAL DRILL PIPE ABOVE K.B. 20

REMARKS:

P.O. SUB Top of tool @	4783
C.O. SUB	4784
S.I. TOOL	4789
HMV	4794
JARS	4799
SAFETY JOINT	4801
PACKER	4805
PACKER	4810
DEPTH 4810	
STUBB 1'to	4811
ANCHOR 39'of perfs.to	4850
Alpine rec. @ 4820	
	4850
	4850
95'of drillpipe to	4945
T.C.	
DEPTH	
	4945
Ak-1 rec.@ 4947	
BULLNOSE 5'bullnose to	4950
T.D.	

TEST HISTORY

Tk#11456 DST#3 Merrill Ranch, Sagebrush, Oper.

Flag Points

t (Min.) P (PSig)

A: 0.00 2425.26
 B: 0.00 1091.37
 C: 35.00 1382.38
 D: 62.25 1776.26
 E: 0.00 1462.83
 F: 56.50 1613.54
 G: 94.75 1762.52
 Q: 0.00 2171.04

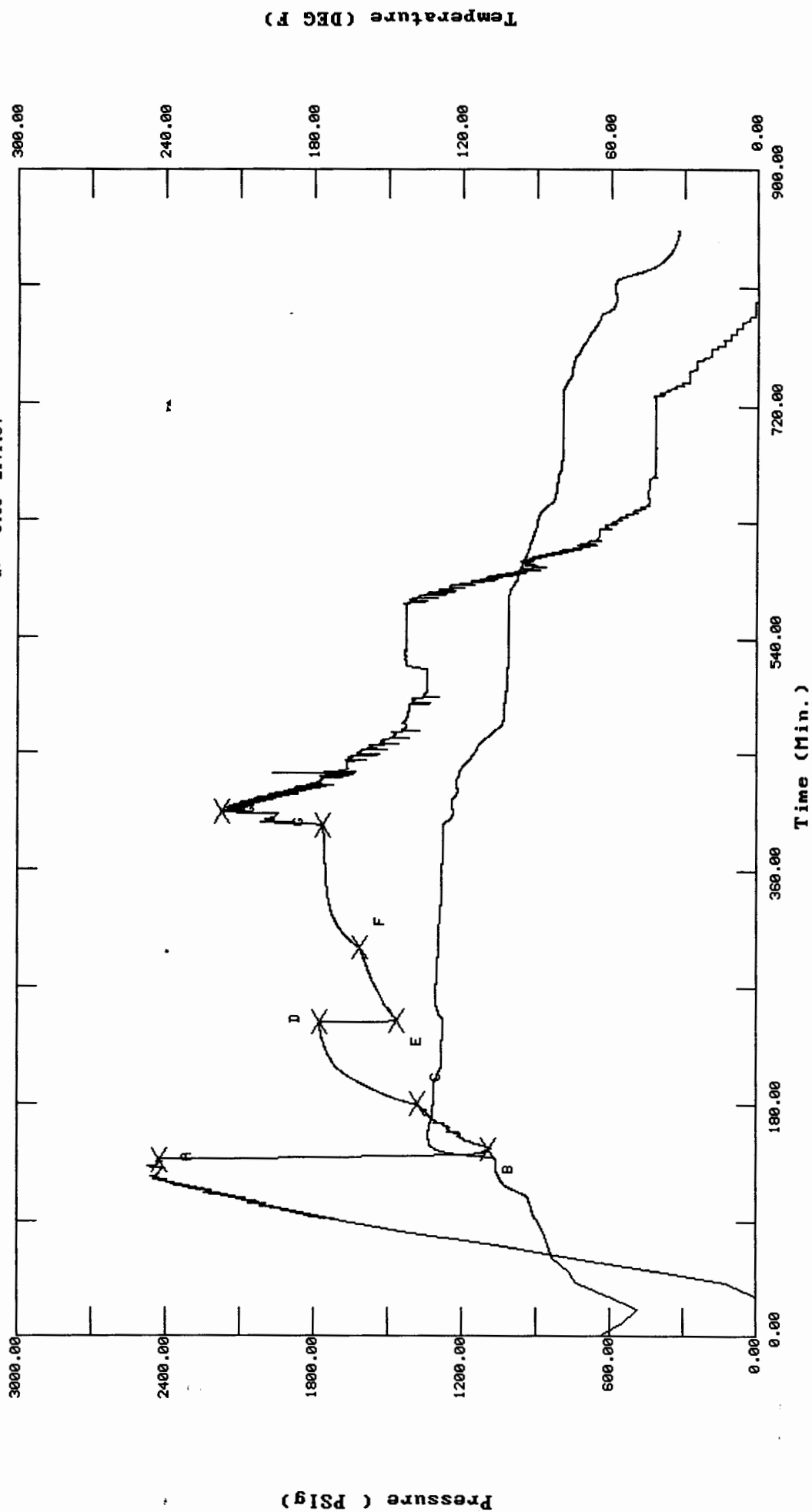
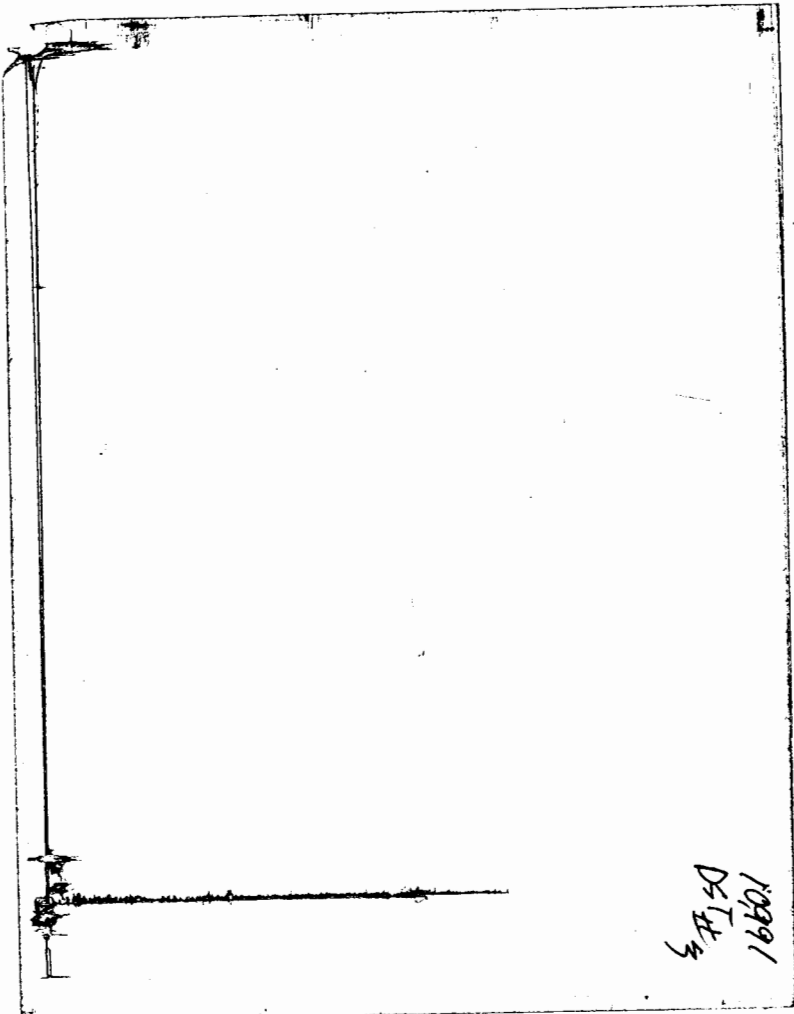


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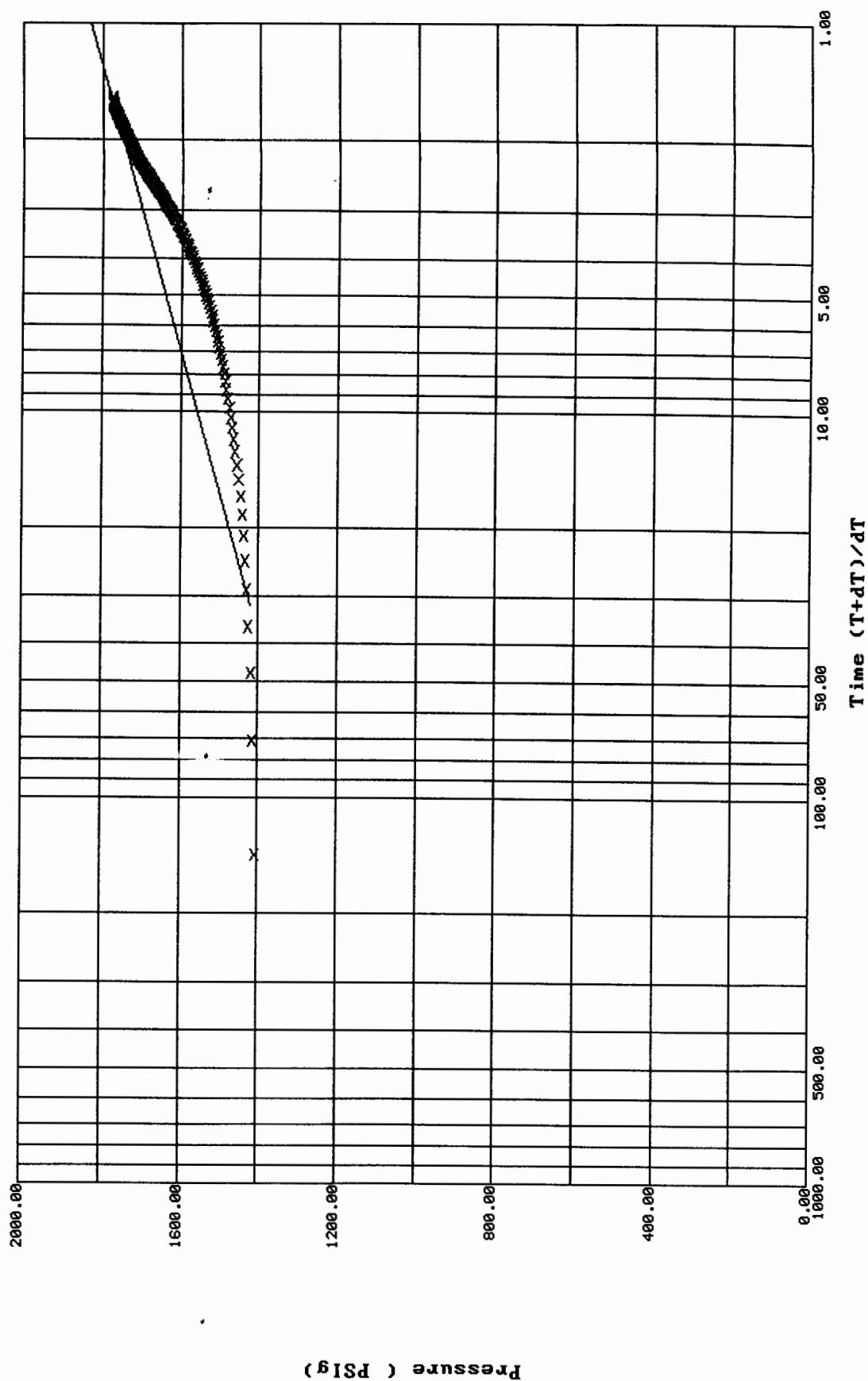
This is a photocopy of the actual AK-1 recorder chart

Horner Plot: shut-in #1

Tk#11456 DST#3 Merrill Ranch, Sagebrush, Oper.

Slope: 274.2558 PSig/cycle

Ext. Pressure: 1830.5151 PSig

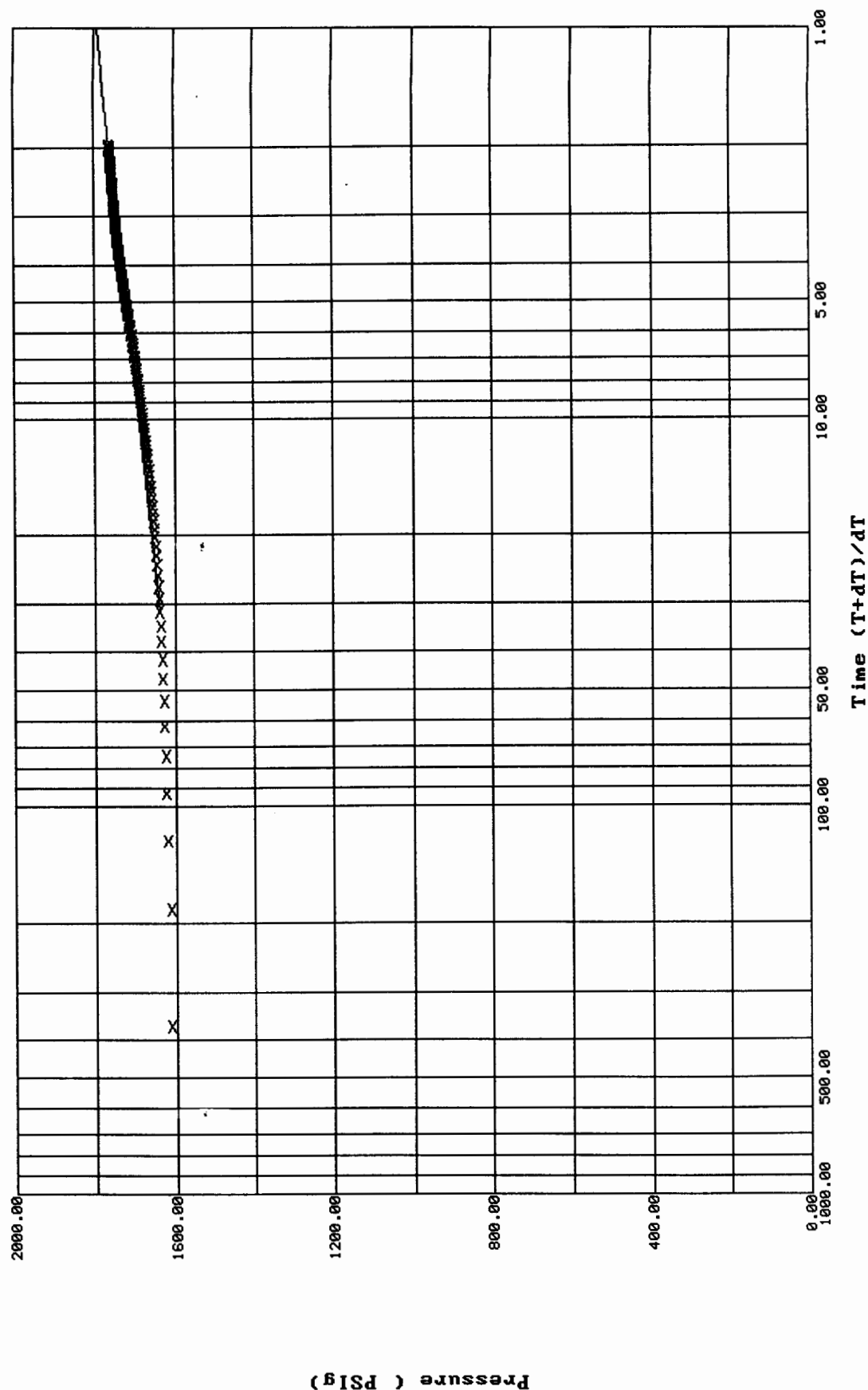


Horner Plot: shut-in #2

Tk#11456 DST#3 Merril Ranch, Sagebrush, Oper.

Slope: 102.1539 PSig/cycle

Ext. Pressure: 1792.5416 PSig



TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 11456

Well Name & No.	Merrill Ranch 36-5	Test No.	#3	Date	03/08/1999
Company	Sagebrush Oper LLC	1888 Sherman	Zone Tested	(M55)	
Address	St. Suite 500 Denver, Co 80203	Elevation	1244	KB	1235 GL
Co. Rep / Geo.	Tom Williams	Cont.	Duke #4	Est. Ft. of Pay	Por. %
Location: Sec.	36	Twp.	33S	Rge.	16W
		Co.	Cornache	State	Ks
No. of Copies	5	Distribution Sheet (Y, N)		Turnkey (Y, N)	
		Evaluation (Y, N)			

Interval Tested	4810' - 4950'	Initial Str Wt./Lbs.	56000	Unseated Str Wt./Lbs.	84000
Anchor Length	140'	Wt. Set Lbs.	20000	Wt. Pulled Loose/Lbs.	90000
Top Packer Depth	4805'	Tool Weight	2100		
Bottom Packer Depth	4810'	Hole Size — 7 7/8"	✓	Rubber Size — 6 3/4"	✓
Total Depth	4950	Wt. Pipe Run	N/A	Drill Collar Run	N/A
Mud Wt.	8.9	LCM	2 [#]	Vis.	68
		WL	11.6	Drill Pipe Size	4 1/2 X 14
Blow Description	IF: Strong blow b.o.b in 15 sec.				
	ISI: Bled down for 5 mins built back to b.o.b in 30 mins.				
	FF: Strong blow b.o.b in 30 sec.				
	FSI: Bled down for 5 mins. Built back to b.o.b.				
Recovery — Total Feet	3840'	GIP	1100	Ft. in DC	
		Ft. in DP	3840		
Rec.	1000'	Feet Of	90' 0.6CM	6 %gas	100%oil
				%water	94 %mud
Rec.	500'	Feet Of	56' 0.6CM	10 %gas	2 %oil
				%water	88 %mud
Rec.	1000'	Feet Of	0' 0.6CM	14 %gas	16 %oil
				%water	70 %mud
Rec.	1200'	Feet Of	40' 0.6CM	50 %gas	40 %oil
				%water	10 %mud
Rec.	140'	Feet Of	50' 0.6CM	16 %gas	14 %oil
				%water	70 %mud
BHT	134	°F Gravity		°API D@	
		°F Corrected Gravity		°API	
RW		@		°F Chlorides	
		ppm Recovery		Chlorides	10000
		ppm System			

	AK-1	Alpine				
(A) Initial Hydrostatic Mud	2425	PSI	Recorder No.	2357	T-On Location	1015
(B) First Initial Flow Pressure	1091	PSI	(depth)	4820'	T-Started	1113
(C) First Final Flow Pressure	1382	PSI	Recorder No.	10991	T-Open	1330
(D) Initial Shut-In Pressure	1776	PSI	(depth)	4947'	T-Pulled	800 7745
(E) Second Initial Flow Pressure	1463	PSI	Recorder No.		T-Out	0030
(F) Second Final Flow Pressure	1614	PSI	(depth)		T-Off Location	0130
(G) Final Shut-in Pressure	1763	PSI	Initial Opening	45	Test	700 ✓
(Q) Final Hydrostatic Mud	2171	PSI	Initial Shut-in	60	Jars	200 ✓
			Final Flow	60	Safety Joint	50 ✓
			Final Shut-in	90	Straddle	
					Circ. Sub	
					Sampler	
					Extra Packer	
					Elec. Rec.	150 ✓
					Mileage	
					Other	
					TOTAL PRICE \$	1100

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

Our Representative

Tom Williams
Daren Strain

TOTAL PRICE \$ 1100

TRILOBITE TESTING L.L.C.

OPERATOR : Sagebrush,oper.L.L.C

DATE 03/10/199

WELL NAME: Merrill Ranch #

KB 1744.00 ft

TICKET NO: 11457

DST #4

LOCATION : 36-33s-16w Comanche co KS

GR 1735.00 ft

FORMATION:

INTERVAL : 5320.00 To 5357.00 ft

TD 5357.00 ft

TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	13849	13849	2350			PF Fr. 2240 to 2310 hr
SI 60 Range(Psi)	4375.0	4375.0	4995.0	0.0	0.0	IS Fr. 2310 to 0010 hr
SF 60 Clock(hrs)	12hr.	12hr.	elec.			SF Fr. 0010 to 0110 hr
FS 90 Depth(ft)	5354.0	5354.0	5326.0	0.0	0.0	FS Fr. 0110 to 0240 hr

	Field	1	2	3	4	
A. Init Hydro	2598.0	0.0	2577.0	0.0	0.0	T STARTED 1918 hr
B. First Flow	156.0	0.0	52.0	0.0	0.0	T ON BOTM 2237 hr
B1. Final Flow	0.0	0.0	585.0	0.0	0.0	T OPEN 2240 hr
C. In Shut-in	0.0	0.0	2013.0	0.0	0.0	T PULLED 0240 hr
D. Init Flow	0.0	0.0	594.0	0.0	0.0	T OUT 0540 hr
E. Final Flow	0.0	0.0	1380.0	0.0	0.0	
F. Fl Shut-in	0.0	0.0	2013.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2598.0	0.0	2565.0	0.0	0.0	Tool Wt. 2100.00 lbs
Inside/Outside	0		I			Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 100000.00 lbs
						Initial Str Wt 62000.00 lbs
						Unseated Str Wt 76000.00 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 5315.00 ft

RECOVERY

Tot Fluid 2992.00 ft of 0.00 ft in DC and 2992.00 ft in DP
 120.00 ft of Gas in pipe
 200.00 ft of Slight gas cut muddy water
 0.00 ft of 7% gas 48% water 46% mud
 313.00 ft of Slight mud cut water 90% water 10% mud
 2479.00 ft of Salt water
 0.00 ft of
 0.00 ft of
 0.00 ft of

SALINITY 120000.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:

Fair blow bottom of bucket in
 3 1/2 mins.

Initial Shut-in:

Bled down for 5 mins. blow back to
 1 1/2"

Final Flow:

Fair blow bottom of bucket in 3 mins

Initial Shut-in:

Bled down for 5 mins. no blow back

SAMPLES:

SENT TO:

MUD DATA-----

Mud Type	Chemical
Weight	9.00 lb/cf
Vis.	45.00 S/L
W.L.	8.80 in3
F.C.	0.32 in
Mud Drop N	
Amt. of fill	0.00 ft
Btm. H. Temp.	146.00 F
Hole Condition	fair
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00 n
Cushion Type	none
Reversed Out N	
Tool Chased N	
Tester	Darren L.Amerine
Co. Rep.	Tom Williams
Contr.	Duke
Rig #	4
Unit #	no
Pump T.	none

Test Successful: Y

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Merrill Ranch #	P.O. SUB Top of tool @	5293
	C.O. SUB	5294
LOCATION : 36-33s-16w Comanche co KS	S.I. TOOL	5299
TICKET No. 11457 D.S.T. No. 4 DATE 03/10/199		
TOTAL TOOL TO BOTTOM OF TOP PACKERS 28	HMV	5304
INTERVAL TOOL	JARS	5309
TOTAL PACKERS AND ANCHOR 37		
TOTAL TOOL 65		
DRILL COLLAR ANCHOR IN INTERVAL		
C. ANCHOR STND.Stands Single Total	SAFETY JOINT	5311
P. ANCHOR STND.Stands Single Total	PACKER	5315
TOTAL ASSEMBLY	PACKER	5320
C. ABOVE TOOLS.Stands Single Total	DEPTH 5320	
P. ABOVE TOOLS.Stands86 Single 1 Total 5315	STUBB 1'to	5321
	ANCHOR 31'of perfs.to	5352
TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5380	Alpine rec @ 5326	
TOTAL DEPTH 5357		5352
TOTAL DRILL PIPE ABOVE K.B. 23		
REMARKS:		
	T.C.	
	DEPTH	
		5352
		5352
	Ak-1 rec.@ 5354	
	BULLNOSE 5'bullnose to	5357
	T.D.	

TEST HISTORY

TK#11457 DST#4 Merrill Ranch #36-5 Sagebrush oper.

Flag Points

t (Min.) P (PSig)

A: 0.00 2576.63
B: 0.00 52.09
C: 30.75 585.80
D: 60.50 2013.38
E: 0.00 594.05
F: 59.25 1379.54
G: 91.25 2013.00
Q: 0.00 2565.47

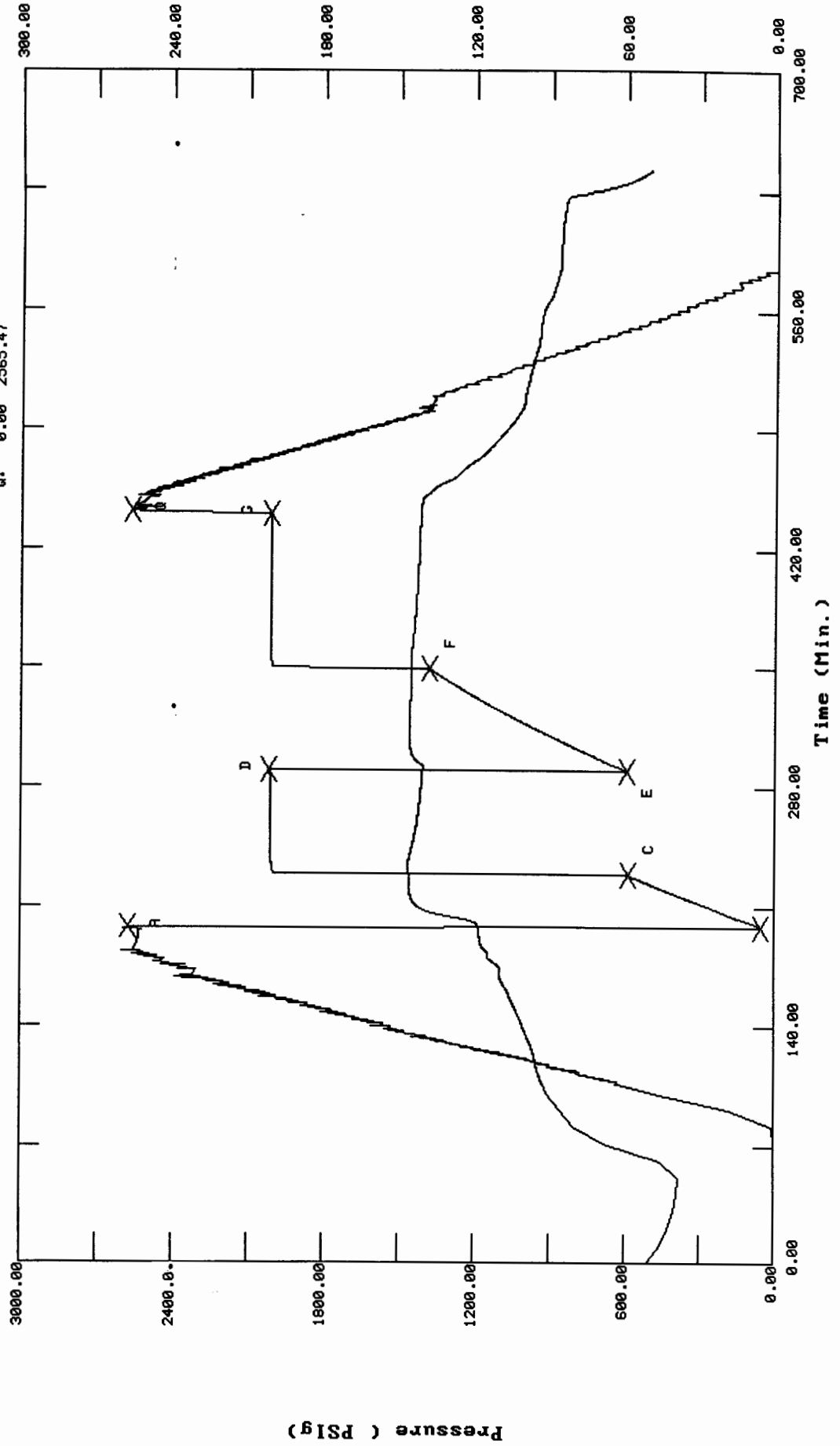
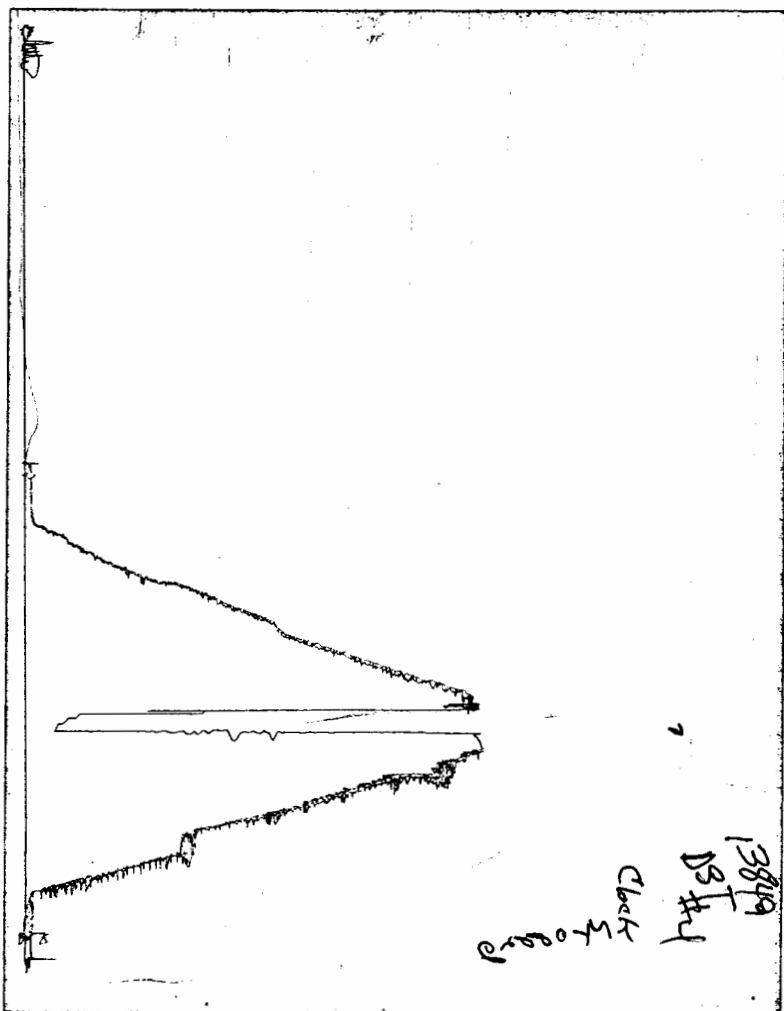


CHART PAGE



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 11457

Well Name & No. Merrill Ranch 36-5 Test No. #4 Date 03/10/1999
Company Sagebrush, Oper. L.L.C. 1888 Sherman St. Zone Tested (Viola)
Address Suite 500 Denver, Co. 80203 Elevation 1744 KB 1735 GL
Co. Rep / Geo. Tom Williams Cont. Duke #4 Est. Ft. of Pay Por. %
Location: Sec. 36 Twp. 33^s Rge. 16^w Co. Comanche State TX
No. of Copies 5 Distribution Sheet (Y, N) Turnkey (Y, N) Evaluation (Y, N)

Interval Tested 5320' - 5357' Initial Str Wt./Lbs. 62,000 Unseated Str Wt./Lbs. 76,000
Anchor Length 37' Wt. Set Lbs. 20,000 Wt. Pulled Loose/Lbs. 10,000
Top Packer Depth 5315' Tool Weight 2100
Bottom Packer Depth 5320' Hole Size — 7 7/8" ✓ Rubber Size — 6 3/4" ✓
Total Depth 5357 Wt. Pipe Run N/A Drill Collar Run N/A
Mud Wt. 9.0 LCM 8[#] Vis. 4.5 WL 8.8 Drill Pipe Size 4 1/2 XH Ft. Run
Blow Description IF: Fair blow built to bottom of the bucket in 3 1/2 min.
TSI: Bled down for 5 min. built back to 1 1/2" in 420 bucket.
FF: Fair blow built to b.o.b in 3 mins.
FSI: Bled down for 5 min. No blow back.
Recovery — Total Feet 2992 GIP 120 Ft. in DC Ft. in DP 2992
Rec. 200' Feet Of SGCMW %gas %oil %water 48 %mud 46
Rec. 313' Feet Of SMCW %gas %oil %water 90 %mud 10
Rec. 2479 Feet Of Salt Water %gas %oil %water 100 %mud
Rec. Feet Of %gas %oil %water %mud
Rec. Feet Of %gas %oil %water %mud
BHT 146° °F Gravity °API D@ °F Corrected Gravity °API
RW .06 @ 80 °F Chlorides 120,000 ppm Recovery Chlorides 5,500 ppm System

	AK-1	Alpine			
(A) Initial Hydrostatic Mud	<u>2598</u>	<u>2577</u>	PSI Recorder No.	<u>2357</u>	T-On Location <u>1830</u>
(B) First Initial Flow Pressure	<u>156</u>	<u>52</u>	PSI (depth)	<u>5326'</u>	T-Started <u>1918</u>
(C) First Final Flow Pressure	<u>5</u>	<u>585</u>	PSI Recorder No.	<u>13849</u>	T-Open <u>2240</u>
(D) Initial Shut-In Pressure	<u>2013</u>	<u>2013</u>	PSI (depth)	<u>5354'</u>	T-Pulled <u>0240</u>
(E) Second Initial Flow Pressure	<u>594</u>	<u>594</u>	PSI Recorder No.	<u> </u>	T-Out <u>0540</u>
(F) Second Final Flow Pressure	<u>1380</u>	<u>1380</u>	PSI (depth)	<u> </u>	T-Off Location <u>0630</u>
(G) Final Shut-in Pressure	<u>2013</u>	<u>2013</u>	PSI Initial Opening	<u>30</u>	Test <u>8.00</u> <u>✓</u>
(Q) Final Hydrostatic Mud	<u>2598</u>	<u>2565</u>	PSI Initial Shut-in	<u>60</u>	Jars <u>200</u> <u>✓</u>
			Final Flow	<u>60</u>	Safety Joint <u>50</u> <u>✓</u>
			Final Shut-in	<u>90</u>	Straddle <u> </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

Tom Williams

Our Representative

Darrell J. Amrine

Extra Packer

Elec. Rec. 150 ✓

Mileage

Other

TOTAL PRICE \$ 1200

TRILOBITE TESTING L.L.C.

OPERATOR : Sagebrush, Oper. L.L.C.

DATE 03/11/99

WELL NAME: Merrill Ranch#36-5

KB 1744.00 ft

TICKET NO: 11458

DST #5

LOCATION : 36-33s-16w Comanche co KS

GR 1735.00 ft

FORMATION: upper (Simpson)

INTERVAL : 5382.00 To 5390.00 ft

TD 5390.00 ft

TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	13849	13849	2357			PF Fr. 2025 to 2055 hr
SI 60 Range(Psi)	4375.0	4375.0	4995.0	0.0	0.0	IS Fr. 2055 to 2155 hr
SF 60 Clock(hrs)	12hr.	12hr.	elec.			SF Fr. 2155 to 2255 hr
FS 90 Depth(ft)	5357.0	5357.0	5389.0	0.0	0.0	FS Fr. 2255 to 0025 hr

	Field	1	2	3	4	
A. Init Hydro	0.0	0.0	2599.0	0.0	0.0	T STARTED 1748 hr
B. First Flow	0.0	0.0	59.0	0.0	0.0	T ON BOTM 2022 hr
B1. Final Flow	0.0	0.0	545.0	0.0	0.0	T OPEN 2025 hr
C. In Shut-in	0.0	0.0	2019.0	0.0	0.0	T PULLED 0025 hr
D. Init Flow	0.0	0.0	560.0	0.0	0.0	T OUT 0330 hr
E. Final Flow	0.0	0.0	1287.0	0.0	0.0	
F. Fl Shut-in	0.0	0.0	2009.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	0.0	0.0	2499.0	0.0	0.0	Tool Wt. 2100.00 lbs
Inside/Outside	0		I			Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 85000.00 lbs
						Initial Str Wt 62000.00 lbs
						Unseated Str Wt 72000.00 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 5379.00 ft

RECOVERY

Tot Fluid 2917.00 ft of 0.00 ft in DC and 2917.00 ft in DP
 90.00 ft of Gas in pipe
 180.00 ft of Slight mud cut water
 2737.00 ft of Salt water
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of

SALINITY 115000.00 P.P.M. A.P.I. Gravity 0.00

MUD DATA-----

Mud Type	CHEMICAL
Weight	8.80 lb/cf
Vis.	50.00 S/L
W.L.	10.40 in3
F.C.	0.32 in
Mud Drop N	

BLOW DESCRIPTION

Initial Flow:

Fair blow bottom of bucket in 3 mins.

Initial Shut-in:

Bled down for 5 mins. blow back to 1 1/2"

Final Flow:

Fair blow built to bottom of bucket in 4 mins.

Final Shut-in:

Bled down for 5 mins. no blow back.

Amt. of fill	0.00 ft
Btm. H. Temp.	146.00 F
Hole Condition	good
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00 n
Cushion Type	none
Reversed Out N	
Tool Chased N	
Tester	Darren L Amerine
Co. Rep.	Tom Williams
Contr.	Duke
Rig #	4
Unit #	no
Pump T.	none

SAMPLES:

SENT TO:

Test Successful: Y

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Merrill Ranch#36-5

LOCATION : 36-33s-16w Comanche co KS

TICKET No. 11458 D.S.T. No. 5 DATE 03/11/99

TOTAL TOOL TO BOTTOM OF TOP PACKERS 32

INTERVAL TOOL

OTTOM PACKERS AND ANCHOR 8

OTAL TOOL 40

RILL COLLAR ANCHOR IN INTERVAL

.C.	ANCHOR	STND.	Stands	Single	Total
-----	--------	-------	--------	--------	-------

.P.	ANCHOR	STND.	Stands	Single	Total
1					
2					
3					
4					
5					
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98					
99					
100					

TOTAL ASSEMBLY

.C.	ABOVE TOOLS.	Stands	Single	Total
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
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98				
99				
100				

.P. ABOVE TOOLS.Stands87 Single Total 5379

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5419

TOTAL DEPTH 5390

TOTAL DRILL PIPE ABOVE K.B. 29

EMARKS:

P.O. SUB top of tool @ 5351

C.O. SUB 5352

S.I. TOOL 5357

A/P carrier	5361
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Ak-1 rec.@ 5357

HMV 5366

JARS 5371

SAFETY JOINT	5373
--------------	------

PACKER 5377

PACKER 5382

DEPTH 5382

STUBB 1'to	5383
------------	------

ANCHOR 2'to 5385

T.C.	DEPTH
1	10
2	20
3	30
4	40
5	50
6	60
7	70
8	80
9	90
10	100
11	110
12	120
13	130
14	140
15	150
16	160
17	170
18	180
19	190
20	200
21	210
22	220
23	230
24	240
25	250
26	260
27	270
28	280
29	290
30	300
31	310
32	320
33	330
34	340
35	350
36	360
37	370
38	380
39	390
40	400
41	410
42	420
43	430
44	440
45	450
46	460
47	470
48	480
49	490
50	500
51	510
52	520
53	530
54	540
55	550
56	560
57	570
58	580
59	590
60	600
61	610
62	620
63	630
64	640
65	650
66	660
67	670
68	680
69	690
70	700
71	710
72	720
73	730
74	740
75	750
76	760
77	770
78	780
79	790
80	800
81	810
82	820
83	830
84	840
85	850
86	860
87	870
88	880
89	890
90	900
91	910
92	920
93	930
94	940
95	950
96	960
97	970
98	980
99	990
100	1000

5385

5385

alpine rec.@ 5389

BULLNOSE 5'	bullnose to	5390
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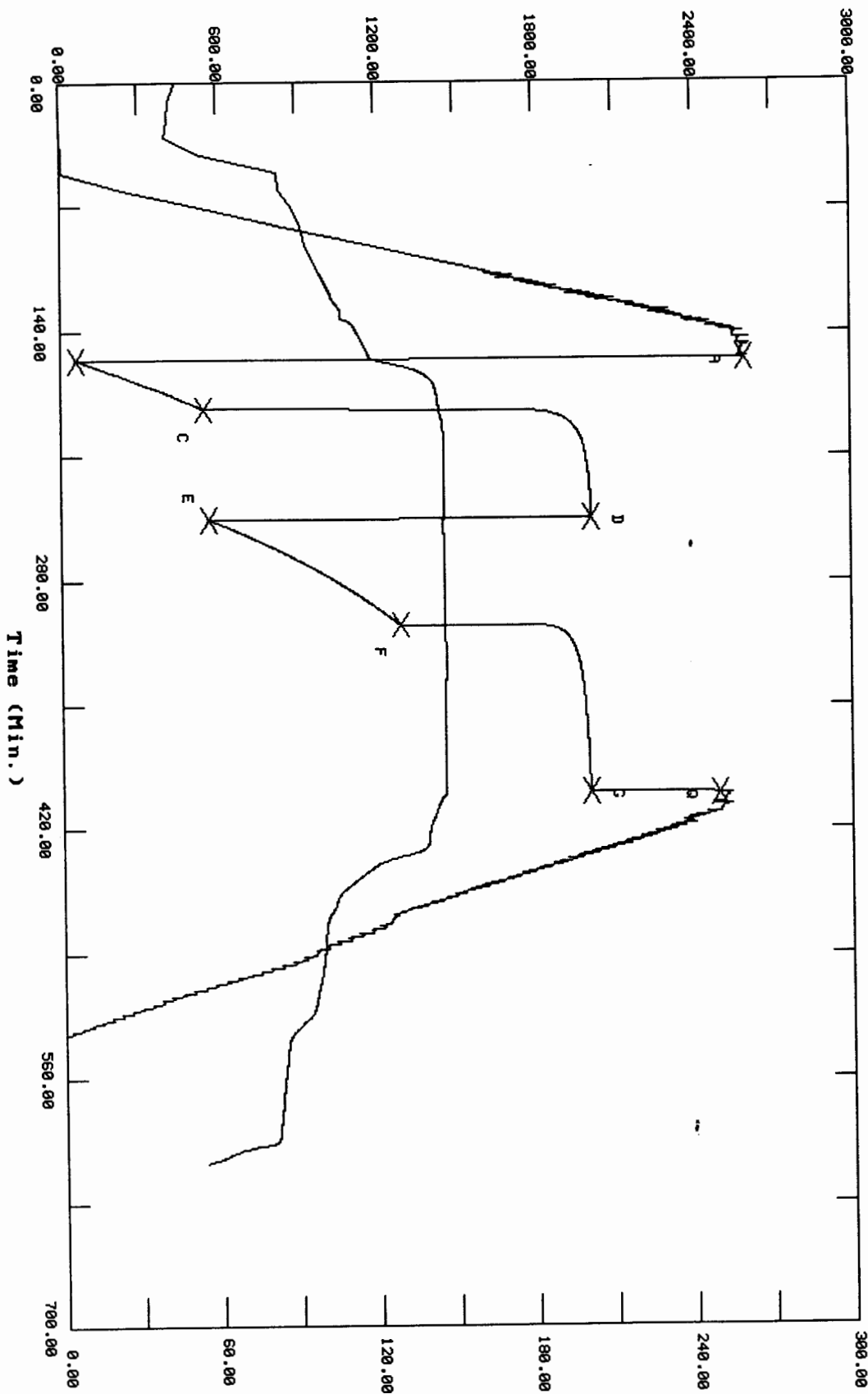
T.D.

TK#11458 DST#5 Merrill, Ranch. #36-5 Sagebrush, oper.

TEST HISTORY

Flag Points
t (Min.) P (PSig)

A: 0.00 2598.92
B: 0.00 59.10
C: 28.25 545.41
D: 61.00 2019.23
E: 0.00 559.65
F: 59.50 1286.71
G: 94.75 2008.88
H: 0.00 2499.32

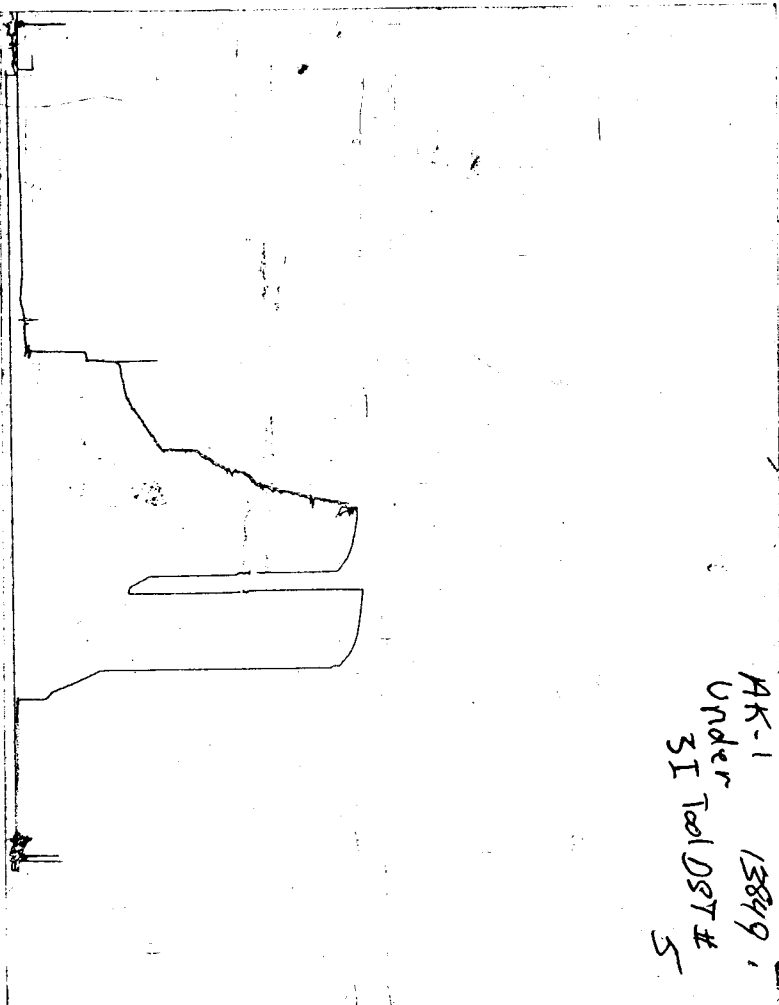


Pressure (PSig)

Temperature (DEG F)

Time (Min.)

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 11458

Well Name & No.	Merrill Ranch #36-5	Test No.	#5	Date	03/11/1999
Company	Sagebrush, Oper. LLC 1888 Sherman	Stone Tested	upper (Simpson)		
Address	Suite 500 Denver, Co 80203	Elevation	1744	KB	1735 GL
Co. Rep / Geo.	Tom Williams	Cont.	Dupe #4	Est. Ft. of Pay	Por. %
Location: Sec.	36	Twp.	33S	Rge.	16W
				Co.	Comanche State
No. of Copies	5	Distribution Sheet (Y, N)		Turnkey (Y, N)	
				Evaluation (Y, N)	

Interval Tested	5382' - 5390'	Initial Str Wt./Lbs.	62000	Unseated Str Wt./Lbs.	72000
Anchor Length	8'	Wt. Set Lbs.	20000	Wt. Pulled Loose/Lbs.	85000
Top Packer Depth	5377'	Tool Weight	2100		
Bottom Packer Depth	5382'	Hole Size — 7 7/8"	L	Rubber Size — 6 3/4"	L
Total Depth	5390'	Wt. Pipe Run	N/A	Drill Collar Run	N/A
Mud Wt.	LCM	Drill Pipe Size	4 1/2 KH	Ft. Run	5389'
Vis.	WL				

Blow Description TF: Fair blow b.o.b 3 mins.
ISI: Bled down for 5 mins built back to 1 1/2".
FF: Fair blow built to b.o.b in 4 mins.
FSI: Bled down for 5 mins No blow back

Recovery — Total Feet	2917'	GIP	90'	Ft. in DC		Ft. in DP	2917
Rec.	180'	Feet Of	SMCW	%gas	%oil	80	%water 20 %mud
Rec.	2737	Feet Of	Salt Water	%gas	%oil		%water %mud
Rec.		Feet Of		%gas	%oil		%water %mud
Rec.		Feet Of		%gas	%oil		%water %mud
Rec.		Feet Of		%gas	%oil		%water %mud

BHT 146° °F Gravity _____ °API D@ _____ °F Corrected Gravity _____ °API
RW .08 @ 65° °F Chlorides 115000 ppm Recovery Chlorides 7800 ppm System

(A) Initial Hydrostatic Mud	AK-1	Alpine	2599	PSI	Recorder No.	13849	T-On Location	1730
(B) First Initial Flow Pressure			59	PSI	(depth)	5357'	T-Started	1748
(C) First Final Flow Pressure			545	PSI	Recorder No.	2357	T-Open	2025
(D) Initial Shut-In Pressure			2019	PSI	(depth)	5389'	T-Pulled	0025
(E) Second Initial Flow Pressure			560	PSI	Recorder No.		T-Out	0330
(F) Second Final Flow Pressure			1287	PSI	(depth)		T-Off Location	0430
(G) Final Shut-in Pressure			2009	PSI	Initial Opening	30	Test	800 ✓
(Q) Final Hydrostatic Mud			2499	PSI	Initial Shut-in	60	Jars	200 ✓
					Final Flow	60	Safety Joint	60 ✓
					Final Shut-in	90	Straddle	
							Circ. Sub	
							Sampler	
							Extra Packer	
							Elec. Rec.	150 ✓
							Mileage	
							Other	A/P Carrier
							TOTAL PRICE \$	1200

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 Tom Williams
Our Representative Darren Schaefer