

**WELL NAME:** Amrein A-2  
**COMPANY:** Kenmark Corporation  
**LOCATION:** 32-12s-19w  
Ellis County, Kansas  
**DATE:** 8/11/98

TRILOBITE TESTING L.L.C.

OPERATOR : Kenmark Corporation DATE 8-10-98  
 WELL NAME: Amrein A-2 KB 2163.00 ft TICKET NO: 11046 DST #1  
 LOCATION : Sec32 12s 19w Ellis KS GR 2155.00 ft FORMATION: Arbuckle  
 INTERVAL : 3844.00 To 3870.00 ft TD 3870.00 ft TEST TYPE: CONV

RECORDER DATA

Mins		Field	1	2	3	4	TIME DATA-----
PF	15	Rec.	11084	11084	3246		PF Fr. 2102 to 2117 hr
SI	15	Range(Psi )	4300.0	4300.0	4995.0	0.0	0.0 IS Fr. 2117 to 2132 hr
SF	5	Clock(hrs)	12	12	batt		SF Fr. 2132 to 2135 hr
FS	0	Depth(ft )	3865.0	3865.0	3847.0	0.0	0.0 FS Fr. to hr

	Field	1	2	3	4	
A. Init Hydro	1841.0	1796.0	1806.0	0.0	0.0	T STARTED 1950 hr
B. First Flow	44.0	63.0	17.0	0.0	0.0	T ON BOTM 2058 hr
B1. Final Flow	44.0	63.0	19.0	0.0	0.0	T OPEN 2102 hr
C. In Shut-in	981.0	984.0	983.0	0.0	0.0	T PULLED 2135 hr
D. Init Flow	55.0	82.0	19.0	0.0	0.0	T OUT 2300 hr
E. Final Flow	55.0	76.0	19.0	0.0	0.0	
F. Fl Shut-in	0.0	0.0	0.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	1789.0	1771.0	1799.0	0.0	0.0	Tool Wt. 1700.00 lbs
Inside/Outside	o	o	i			Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 35000.00 lbs
						Initial Str Wt 35000.00 lbs
						Unseated Str Wt 35000.00 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 3838.00 ft

RECOVERY

Tot Fluid 40.00 ft of 0.00 ft in DC and 40.00 ft in DP  
 20.00 ft of mud  
 20.00 ft of oil specked mud 2% oil 98% mud  
 0.00 ft of  
 0.00 ft of show of oil in tool  
 0.00 ft of  
 0.00 ft of  
 0.00 ft of  
 SALINITY 0.00 P.P.M. A.P.I. Gravity 0.00

MUD DATA-----

Mud Type	Chemical
Weight	8.80 lb/c
Vis.	47.00 S/L
W.L.	10.40 in3
F.C.	0.00 in
Mud Drop	
Amt. of fill	0.00 ft
Btm. H. Temp.	114.00 F
Hole Condition	good
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00
Cushion Type	
Reversed Out N	
Tool Chased N	
Tester	Paul Simpson
Co. Rep.	Mark Kilian
Contr.	Discovery
Rig #	1
Unit #	
Pump T.	

BLOW DESCRIPTION

Initial Flow:  
 Weak blow surface blow died  
 in 10 minutes  
 Final Flow:  
 No blow, flushed tool, pulled and  
 partially unseated packers

SAMPLES:  
 SENT TO:

Test Successful: Y

\*\*\* TOOL DIAGRAM \*\*\* CONV

WELL NAME: Amrein A-2

LOCATION : Sec32 12s 19w Ellis KS

TICKET No. 11046 D.S.T. No. 1 DATE 8-10-98

TOTAL TOOL TO BOTTOM OF TOP PACKERS ..... 61

INTERVAL TOOL .....

BOTTOM PACKERS AND ANCHOR ..... 26

TOTAL TOOL ..... 47

DRILL COLLAR ANCHOR IN INTERVAL .....

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY ..... 47

D.C. ABOVE TOOLS.Stands Single Total

D.P. ABOVE TOOLS.Stands 62 Single Total 3838

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 3885

TOTAL DEPTH ..... 3870

TOTAL DRILL PIPE ABOVE K.B. .... 15

REMARKS:

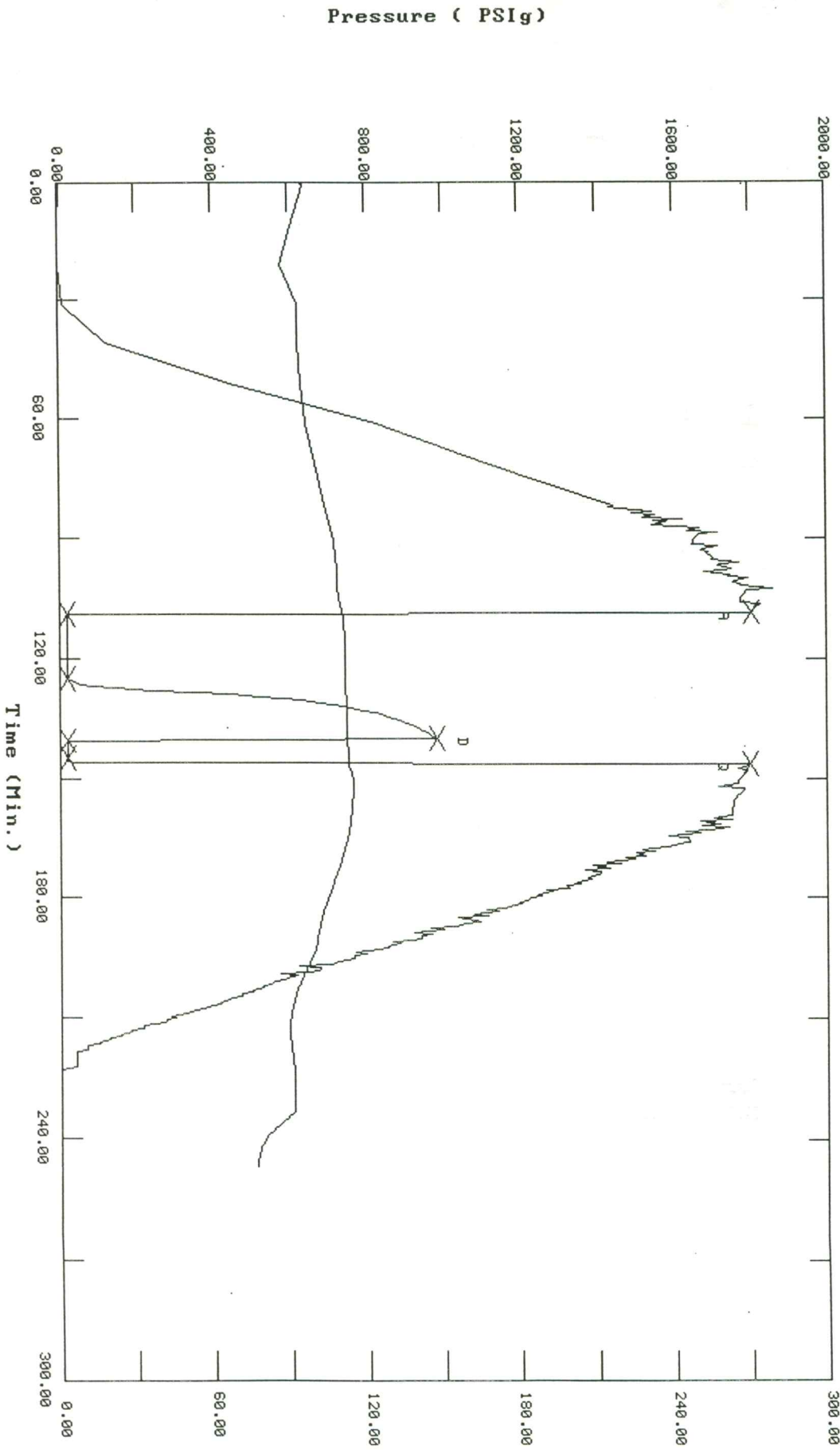
P.O. SUB	
C.O. SUB Top of tool @	3824
S.I. TOOL Sterling	3830
HMV Sterling	3835
JARS n/a	
SAFETY JOINT n/a	
PACKER Top	3839
PACKER Bottom	3844
DEPTH 3844	
STUBB 1'	3845
ANCHOR 2' perf	3847
Alpine Rec @ 3847	
5' pickup sub	3852
T.C. DEPTH	
5' perf	3857
5' perf	3862
5' perf	3867
AK-1 rec @ 3865	
BULLNOSE	
T.D. 3' bull plug to	3870

# TEST HISTORY

11046 Kenmark Corp Amrein #A-2 DST #1

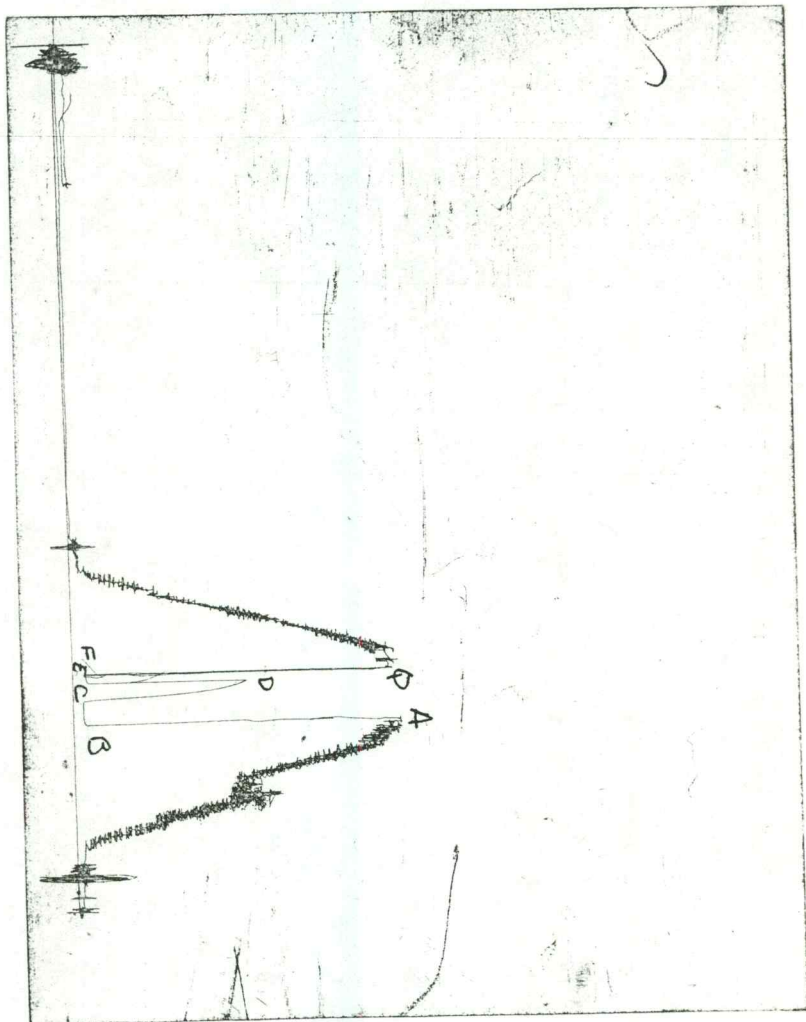
Flag Points

Flag Points	Time (Min.)	Pressure (PSIg)
A:	0.00	1805.54
B:	0.00	16.85
C:	16.00	19.23
D:	15.00	983.24
E:	0.00	19.79
F:	4.50	19.25
G:	0.00	1799.09



Temperature (DEG F)

CHART PAGE



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

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 ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 11046 Kenmark Corp Amrein #A-2 DST #1

DATE: 08/10/98

TIME: 19:12:24  
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	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P^2/10^6
***** Initial Hydro.	108.50	1805.5	0.0	110.39		
***** Start Flow 1	0.00	16.8	0.0	110.56		
	0.50	17.1	0.3	110.69		
	1.00	17.2	0.4	110.79		
	1.50	17.3	0.5	110.88		
	2.00	17.3	0.5	110.96		
	2.50	17.1	0.3	111.04		
	3.00	16.6	-0.2	111.11		
	3.50	16.7	-0.1	111.16		
	4.00	16.7	-0.1	111.21		
	4.50	16.9	0.0	111.25		
	5.00	16.8	-0.1	111.29		
	5.50	16.8	-0.0	111.33		
	6.00	16.9	0.1	111.35		
	6.50	17.0	0.2	111.38		
	7.00	17.1	0.3	111.41		
	7.50	17.1	0.3	111.43		
	8.00	17.1	0.3	111.45		
	8.50	17.0	0.2	111.46		
	9.00	16.9	0.1	111.48		
	9.50	17.0	0.2	111.50		
	10.00	17.1	0.3	111.51		
	10.50	17.2	0.4	111.52		
	11.00	17.3	0.5	111.54		
	11.50	17.3	0.5	111.55		
	12.00	17.3	0.5	111.56		
	12.50	17.3	0.5	111.58		
	13.00	17.5	0.7	111.59		
	13.50	17.6	0.8	111.60		
	14.00	17.9	1.0	111.62		
	14.50	18.0	1.1	111.63		
	15.00	18.2	1.4	111.63		
	15.50	18.4	1.6	111.65		
***** End Flow 1	16.00	19.2	2.4	111.66		
***** Start Shutin 1	0.00	19.2	0.0	111.66	0.0000	0.000
	0.50	25.8	6.5	111.67	33.0000	0.001
	1.00	36.6	17.3	111.69	17.0000	0.001
	1.50	55.4	36.2	111.70	11.6667	0.003
	2.00	83.7	64.5	111.71	9.0000	0.007
	2.50	147.5	128.3	111.73	7.4000	0.022
	3.00	243.4	224.1	111.75	6.3333	0.059
	3.50	352.2	333.0	111.77	5.5714	0.124
	4.00	445.1	425.9	111.79	5.0000	0.198
	4.50	520.2	500.9	111.82	4.5556	0.271
	5.00	577.6	558.3	111.84	4.2000	0.334
	5.50	630.1	610.8	111.87	3.9091	0.397
	6.00	673.8	654.6	111.90	3.6667	0.454
	6.50	710.9	691.7	111.95	3.4615	0.505
	7.00	742.6	723.4	111.96	3.2857	0.551
	7.50	770.2	751.0	111.99	3.1333	0.593
	8.00	795.5	776.3	112.02	3.0000	0.633

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 11046 Kenmark Corp Amrein #A-2 DST #1

DATE: 08/10/98

TIME: 19:12:24

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
	8.50	818.0	798.7	112.07	2.8824	0.669
	9.00	838.1	818.9	112.08	2.7778	0.702
	9.50	856.3	837.1	112.11	2.6842	0.733
	10.00	873.0	853.7	112.13	2.6000	0.762
	10.50	888.1	868.9	112.16	2.5238	0.789
	11.00	902.0	882.8	112.19	2.4545	0.814
	11.50	914.8	895.6	112.21	2.3913	0.837
	12.00	926.7	907.5	112.25	2.3333	0.859
	12.50	937.7	918.5	112.27	2.2800	0.879
	13.00	948.1	928.8	112.29	2.2308	0.899
	13.50	957.7	938.5	112.31	2.1852	0.917
	14.00	966.7	947.5	112.33	2.1429	0.935
	14.50	975.3	956.0	112.35	2.1034	0.951
***** End Shut-in 1	15.00	983.2	964.0	112.37	2.0667	0.967
***** Start Flow 2	0.00	19.8	0.0	112.40		
	0.50	19.9	0.1	112.41		
	1.00	20.0	0.2	112.40		
	1.50	19.9	0.1	112.41		
	2.00	19.7	-0.1	112.42		
	2.50	19.4	-0.4	112.44		
	3.00	19.3	-0.5	112.47		
	3.50	19.4	-0.4	112.48		
	4.00	19.2	-0.6	112.51		
***** End Flow 2	4.50	19.3	-0.5	112.52		
***** Start Shutin 2	0.00	19.3	0.0	112.52	0.0000	0.000
	0.50	18.9	-0.4	112.55	42.0000	0.000
	1.00	40.2	20.9	112.61	21.5000	0.002
***** End Shut-in 2	1.50	1799.1	1779.8	112.72	14.6667	3.237
***** Final Hydro.	146.50	1799.1	0.0	112.72		

# TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

No 11046

## Test Ticket

Well Name & No. Amrein A -2 Test No. 1 Date 8-10-98  
 Company Kenmark Corp Zone Tested Arbuckle  
 Address Box 572 Hays KS 67601 Elevation 2163 KB 2155 GL  
 Co. Rep / Geo. Nick Kilia Cont. Discovery #1 Est. Ft. of Pay      Por.     %  
 Location: Sec. 33 Twp. 12s Rge. 19w Co. Ellis State KS  
 No. of Copies      Distribution Sheet (Y, N)      Turnkey (Y, N)      Evaluation (Y, N)     

Interval Tested 3844-3870 Initial Str Wt./Lbs. 35,000 Unseated Str Wt./Lbs. 35,000  
 Anchor Length 26 Wt. Set Lbs. 20,000 Wt. Pulled Loose/Lbs. 35,000  
 Top Packer Depth 3839 Tool Weight 1700  
 Bottom Packer Depth 3844 Hole Size — 7 7/8" Rubber Size — 6 3/4"  
 Total Depth 3870 Wt. Pipe Run      Drill Collar Run       
 Mud Wt. 8.8 LCM      Vis. 45 WL      Drill Pipe Size 1/2 X H Ft. Run       
 Blow Description weak surface blow died in 10 minutes

SE - no blow - flushed tool - pulled & partially unseated packer -

Recovery — Total Feet	GIP	Ft. in DC	Ft. in DP	%gas	%oil	%water	%mud
Rec. <u>20</u>	Feet Of <u>mud</u>		<u>40</u>				
Rec. <u>20</u>	Feet Of <u>OSM</u>			<u>2</u>			<u>98</u>
Rec. <u>    </u>	Feet Of <u>    </u>						
Rec. <u>    </u>	Feet Of <u>show of oil in tool</u>						
Rec. <u>    </u>	Feet Of <u>    </u>						

BHT 114 °F Gravity      °API D@      °F Corrected Gravity      °API

RW      @      °F Chlorides      ppm Recovery Chlorides      ppm System

(A) Initial Hydrostatic Mud	<u>1843</u>	<u>1806</u>	PSI Recorder No. <u>11084</u>	T-Started <u>1950</u>
(B) First Initial Flow Pressure	<u>44</u>	<u>17</u>	PSI (depth) <u>3865</u>	T-Open <u>2102</u>
(C) First Final Flow Pressure	<u>44</u>	<u>19</u>	PSI Recorder No. <u>3246</u>	T-Pulled <u>2136</u>
(D) Initial Shut-in Pressure	<u>981</u>	<u>983</u>	PSI (depth) <u>3847</u>	T-Out <u>2300</u>
(E) Second Initial Flow Pressure	<u>55</u>	<u>19</u>	PSI Recorder No. <u>    </u>	
(F) Second Final Flow Pressure	<u>55</u>	<u>19</u>	PSI (depth) <u>    </u>	
(G) Final Shut-in Pressure	<u>    </u>	<u>    </u>	PSI Initial Opening <u>15</u>	Test <u>1000</u>
(H) Final Hydrostatic Mud	<u>1788</u>	<u>1799</u>	PSI Initial Shut-in <u>15</u>	Jars <u>    </u>

A/C1

Final Flow 5 Safety Joint       
 Final Shut-in      Straddle       
62 stands Circ. Sub       
 Sampler       
 Extra Packer       
 Elect. Rec. A 150  
 Other     

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*Maul Kilia*

Approved By