

**WELL NAME:** Pfannenstiel #1  
**COMPANY:** ESP Development Inc.  
**LOCATION:** 15-14s-16w  
Ellis County, Kansas  
**DATE:** 8/14/98

TRILOBITE TESTING L.L.C.

OPERATOR : ESP Development Inc.  
 WELL NAME: Pfannensteil #1  
 LOCATION : 15-14s-16w Ellis co. KS  
 INTERVAL : 3149.00 To 3175.00 ft

DATE 8-10-98

KB 1926.00 ft TICKET NO: 11273 DST #1  
 GR 1921.00 ft FORMATION: "A" LKC  
 TD 3175.00 ft TEST TYPE: CONV

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 45 Rec.	13754	13754	13248			PF Fr. 1656 to 1741 hr
SI 45 Range(Psi )	4000.0	4000.0	4250.0	0.0	0.0	IS Fr. 1741 to 1826 hr
SF 45 Clock(hrs)	12	12	12			SF Fr. 1826 to 1911 hr
FS 45 Depth(ft )	3156.0	3156.0	3172.0	0.0	0.0	FS Fr. 1911 to 1956 hr

	Field	1	2	3	4	
A. Init Hydro	1606.0	1613.0	0.0	0.0	0.0	T STARTED 1545 hr
B. First Flow	29.0	41.0	0.0	0.0	0.0	T ON BOTM 1650 hr
B1. Final Flow	29.0	41.0	0.0	0.0	0.0	T OPEN 1656 hr
C. In Shut-in	501.0	551.0	0.0	0.0	0.0	T PULLED 1956 hr
D. Init Flow	39.0	49.0	0.0	0.0	0.0	T OUT 2130 hr
E. Final Flow	39.0	49.0	0.0	0.0	0.0	
F. Fl Shut-in	492.0	531.0	0.0	0.0	0.0	
G. Final Hydro	1496.0	1510.0	0.0	0.0	0.0	TOOL DATA-----
Inside/Outside	0	0	I			Tool Wt. 1000.00 lbs
						Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 60000.00 lbs
						Initial Str Wt 33000.00 lbs
						Unseated Str Wt 40000.00 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 3149.00 ft

RECOVERY

Tot Fluid 92.00 ft of 0.00 ft in DC and 92.00 ft in DP  
 372.00 ft of Gas in pipe  
 92.00 ft of Slightly oil cut gassy mud  
 0.00 ft of 10% gas 4% oil 86% mud  
 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

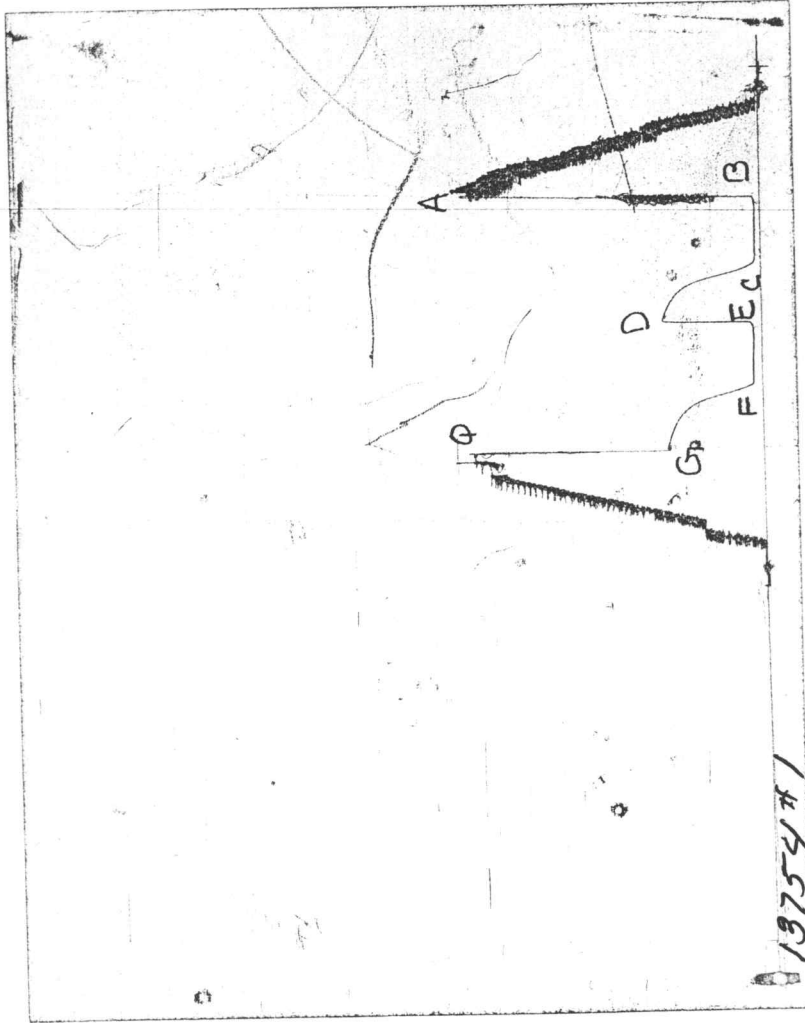
Initial Flow:  
 Slid tool 9' to bottom, blow built  
 to bottom of bucket in 25 mins.  
 Final Flow:  
 Weak building to 10" fair blow

SAMPLES:  
 SENT TO:

MUD DATA-----  
 Mud Type Chemical  
 Weight 9.00 lb/cf  
 Vis. 42.00 S/L  
 W.L. 10.00 in3  
 F.C. 0.00 in  
 Mud Drop  
 Amt. of fill 0.00 ft  
 Btm. H. Temp. 98.00 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 Dan Bangle  
 Co. Rep. Ron Nelson  
 Contr. Vonfeldt  
 Rig # 1  
 Unit #  
 Pump T.

Test Successful: Y

CHART PAGE



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

TRILOBITE TESTING L.L.C.

OPERATOR : ESP Development Inc.

DATE 8-11-98

WELL NAME: Pfannenstiel #1

KB 1926.00 ft

TICKET NO: 11274

DST #2

LOCATION : 15-14s-16w Ellis co. KS

GR 1921.00 ft

FORMATION: 'B' LKC

INTERVAL : 3177.00 To 3200.00 ft

TD 3200.00 ft

TEST TYPE: CONV

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 45 Rec.	13754	13754	13248			PF Fr. 0541 to 0626 hr
SI 45 Range(Psi )	4000.0	4000.0	4250.0	0.0	0.0	IS Fr. 0626 to 0711 hr
SF 45 Clock(hrs)	12	12	12			SF Fr. 0711 to 0756 hr
FS 45 Depth(ft )	3181.0	3181.0	3197.0	0.0	0.0	FS Fr. 0756 to 0841 hr

	Field	1	2	3	4	
A. Init Hydro	1566.0	1555.0	0.0	0.0	0.0	T STARTED 0415 hr
B. First Flow	39.0	39.0	0.0	0.0	0.0	T ON BOTM 0535 hr
B1. Final Flow	39.0	39.0	0.0	0.0	0.0	T OPEN 0541 hr
C. In Shut-in	324.0	318.0	0.0	0.0	0.0	T PULLED 0841 hr
D. Init Flow	39.0	41.0	0.0	0.0	0.0	T OUT 1015 hr
E. Final Flow	39.0	41.0	0.0	0.0	0.0	
F. Fl Shut-in	275.0	293.0	0.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	1526.0	1532.0	0.0	0.0	0.0	Tool Wt. 1000.00 lbs
Inside/Outside	0	0	I			Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 50000.00 lbs
						Initial Str Wt 38000.00 lbs
						Unseated Str Wt 38000.00 lbs
						Bot Choke 0.75 in
						Hole Size 7.88 in
						D Col. ID 2.25 in
						D. Pipe ID 3.50 in
						D.C. Length 0.00 ft
						D.P. Length 3180.00 ft

RECOVERY

Tot Fluid 45.00 ft of 0.00 ft in DC and 45.00 ft in DP  
 263.00 ft of Gas in pipe  
 45.00 ft of Heavy oil and gas cut mud  
 0.00 ft of 10% gas 12% oil 78% 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

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

BLOW DESCRIPTION

Initial Flow:  
 Weak building to 12" fair blow  
 Final Flow:  
 Weak building to 4" fair blow

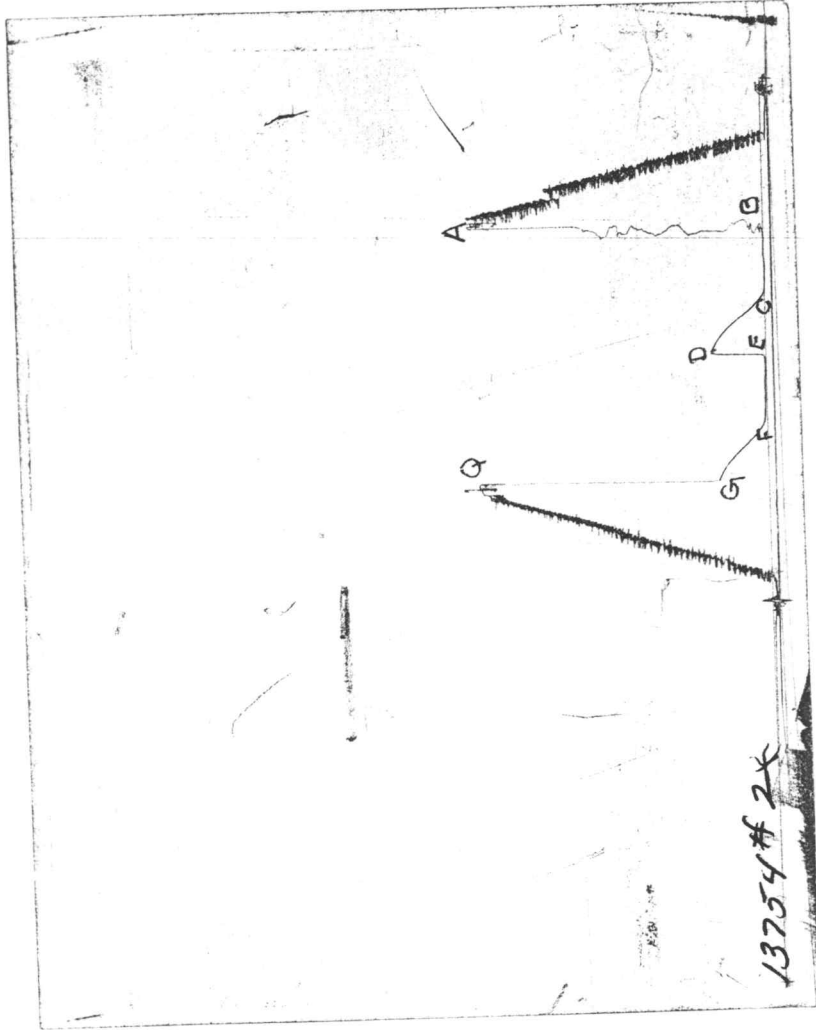
SAMPLES:  
 SENT TO:

MUD DATA-----

Mud Type	Chemical
Weight	9.00 lb/c
Vis.	42.00 S/L
W.L.	10.00 in3
F.C.	0.00 in
Mud Drop	
Amt. of fill	0.00 ft
Btm. H. Temp.	99.00 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	Dan Bangle
Co. Rep.	Ron Neslson
Contr.	Vonfeldt
Rig #	1
Unit #	
Pump T.	

Test Successful: Y

CHART PAGE



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

TRILOBITE TESTING L.L.C.

OPERATOR : ESP Development Inc.

DATE 8-11-98

WELL NAME: Pfannenstiel #1

KB 1926.00 ft TICKET NO: 11275 DST #3

LOCATION : 15-14s-16w Ellis co. KS

GR 1921.00 ft FORMATION: "C" LKC

INTERVAL : 3199.00 To 3215.00 ft

TD 3215.00 ft TEST TYPE: CONV

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30	Rec.	13754	13754	13248		PF Fr. 1731 to 1801 hr
SI 45	Range(Psi )	4000.0	4000.0	4250.0	0.0	0.0 IS Fr. 1801 to 1846 hr
SF 30	Clock(hrs)	12	12	12		SF Fr. 1846 to 1916 hr
FS 45	Depth(ft )	3202.0	3202.0	3212.0	0.0	0.0 FS Fr. 1916 to 2001 hr

	Field	1	2	3	4	
A. Init Hydro	1586.0	1570.0	0.0	0.0	0.0	T STARTED 1630 hr
B. First Flow	39.0	52.0	0.0	0.0	0.0	T ON BOTM 1725 hr
B1. Final Flow	196.0	194.0	0.0	0.0	0.0	T OPEN 1731 hr
C. In Shut-in	462.0	468.0	0.0	0.0	0.0	T PULLED 2001 hr
D. Init Flow	226.0	218.0	0.0	0.0	0.0	T OUT 2115 hr
E. Final Flow	305.0	302.0	0.0	0.0	0.0	
F. Fl Shut-in	453.0	458.0	0.0	0.0	0.0	
G. Final Hydro	1566.0	1522.0	0.0	0.0	0.0	

	Field	1	2	3	4	TOOL DATA-----
Inside/Outside	0	0	I			Tool Wt. 1000.00 lbs
						Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 50000.00 lbs
						Initial Str Wt 38000.00 lbs
						Unseated Str Wt 40000.00 lbs
						Bot Choke 0.76 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 3209.00 ft

RECOVERY

Tot Fluid 682.00 ft of 0.00 ft in DC and 682.00 ft in DP  
 60.00 ft of Gas in pipe  
 682.00 ft of Mud cut water 90% water 10% 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

SALINITY 125000.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:  
 Strong bottom of bucket in 4 mins.  
 Final Flow:  
 Strong bottom of bucket in 7 mins.

MUD DATA-----

Mud Type	Chemical
Weight	9.10 lb/c
Vis.	49.00 S/L
W.L.	10.40 in3
F.C.	0.00 in
Mud Drop	

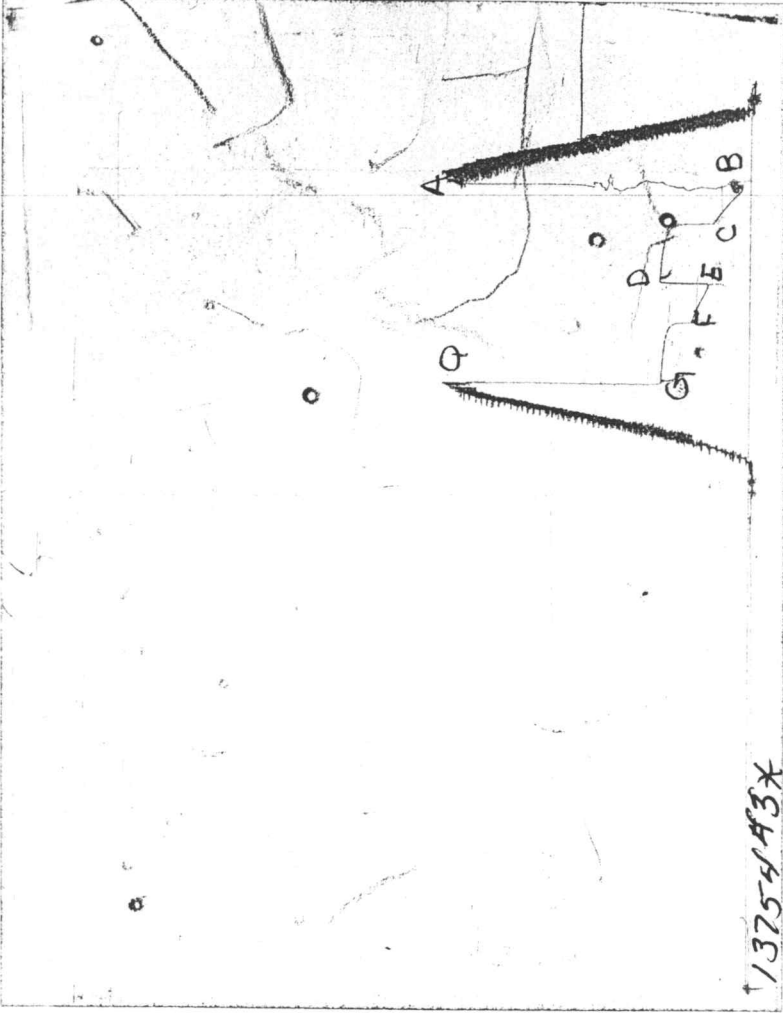
Amt. of fill	0.00 ft
Btm. H. Temp.	104.00 F
Hole Condition	
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00

SAMPLES:  
 SENT TO:

Tester	Dan Bangle
Co. Rep.	Ron Nelson
Contr.	Vonfeldt
Rig #	1
Unit #	
Pump T.	

Test Successful: Y

CHART PAGE



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

TRILOBITE TESTING L.L.C.

OPERATOR : ESP Development Inc. DATE 8-12-98  
 WELL NAME: Pfannenstiel #1 KB 1926.00 ft TICKET NO: 11526 DST #4  
 LOCATION : 15-14s-16w Ellis co. KS GR 1921.00 ft FORMATION: "F-G" LKC  
 INTERVAL : 3224.00 To 3270.00 ft TD 3270.00 ft TEST TYPE: CONV

RECORDER DATA

Mins		Field	1	2	3	4	TIME DATA-----
PF 45	Rec.	13754	13754	13248			PF Fr. 0803 to 0848 hr
SI 45	Range(Psi )	4000.0	4000.0	4250.0	0.0	0.0	IS Fr. 0840 to 0933 hr
SF 45	Clock(hrs)	12	12	12			SF Fr. 0933 to 1018 hr
FS 45	Depth(ft )	3228.0	3228.0	3267.0	0.0	0.0	FS Fr. 1018 to 1103 hr

	Field	1	2	3	4	
A. Init Hydro	1596.0	1550.0	0.0	0.0	0.0	T STARTED 0700 hr
B. First Flow	29.0	19.0	0.0	0.0	0.0	T ON BOTM 0800 hr
B1. Final Flow	39.0	41.0	0.0	0.0	0.0	T OPEN 0803 hr
C. In Shut-in	492.0	484.0	0.0	0.0	0.0	T PULLED 1103 hr
D. Init Flow	59.0	54.0	0.0	0.0	0.0	T OUT 1230 hr
E. Final Flow	68.0	71.0	0.0	0.0	0.0	
F. Fl Shut-in	472.0	471.0	0.0	0.0	0.0	
G. Final Hydro	1586.0	1550.0	0.0	0.0	0.0	
Inside/Outside	0	0	I			

TOOL DATA-----  
 Tool Wt. 1000.00 lbs  
 Wt Set On. Packer 20000.00 lbs  
 Wt Pulled Loose 45000.00 lbs  
 Initial Str Wt 38000.00 lbs  
 Unseated Str Wt 38000.00 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 3243.00 ft

RECOVERY

Tot Fluid 105.00 ft of 0.00 ft in DC and 105.00 ft in DP  
 105.00 ft of Watery mud 40% water 60% 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 75000.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:  
 Weak building to 3"  
 Final Flow:  
 Weak building to 2 1/2"

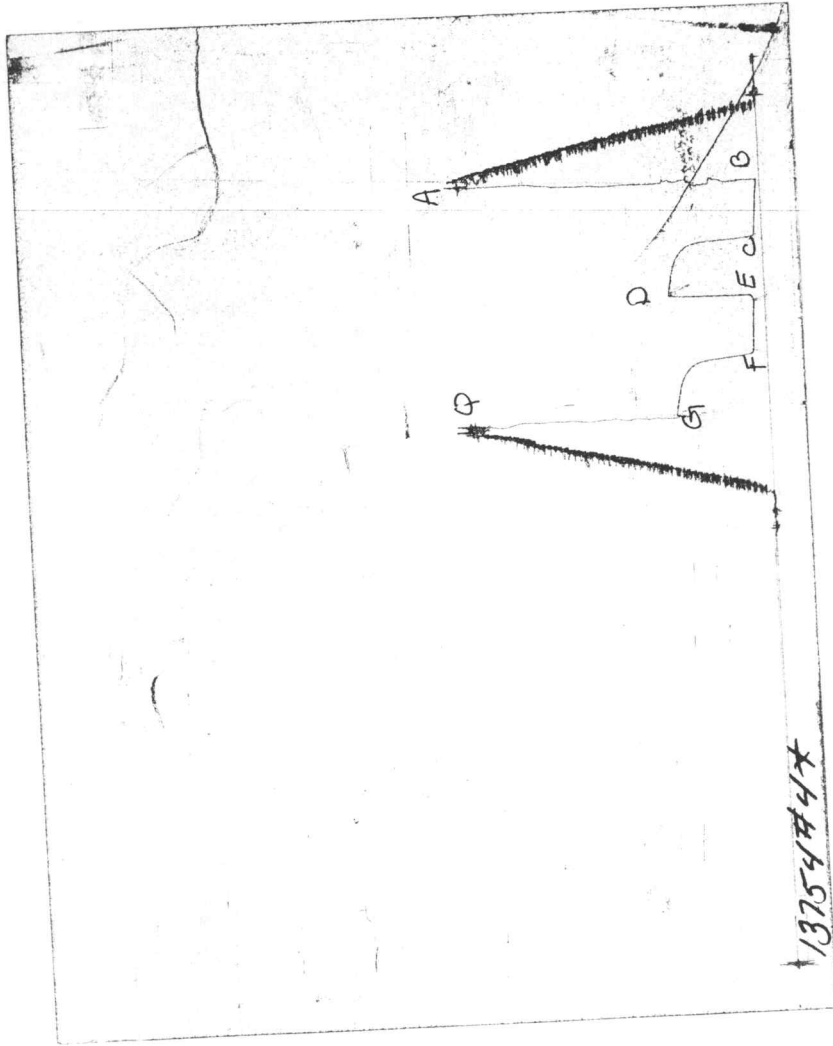
MUD DATA-----  
 Mud Type Chemical  
 Weight 9.30 lb/c  
 Vis. 41.00 S/L  
 W.L. 11.00 in3  
 F.C. 0.00 in  
 Mud Drop

Amt. of fill 0.00 ft  
 Btm. H. Temp. 102.00 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 Dan Bangle  
 Co. Rep. Ron Nelson  
 Contr. Vonfeldt  
 Rig # 1  
 Unit #  
 Pump T.

SAMPLES:  
 SENT TO:

Test Successful: Y

CHART PAGE



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TRILOBITE TESTING L.L.C.

OPERATOR : ESP Development Inc. DATE 8-13-98  
 WELL NAME: Pfannenstiel #1 KB 1926.00 ft TICKET NO: 11527 DST #5  
 LOCATION : 15-14s-16w Ellis co. KS GR 1921.00 ft FORMATION: Toronto  
 INTERVAL : 3113.00 To 3174.00 ft TD 3506.00 ft TEST TYPE: CONV-STRADDLE

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 45 Rec.	13754	13754	13248	7437		PF Fr. 1335 to 1420 hr
SI 45 Range (Psi )	4000.0	4000.0	4250.0	4200.0	0.0	IS Fr. 1420 to 1505 hr
SF 45 Clock (hrs)	12	12	12	12		SF Fr. 1505 to 1550 hr
FS 45 Depth (ft )	3121.0	3121.0	3167.0	3503.0	0.0	FS Fr. 1550 to 1635 hr

	Field	1	2	3	4	
A. Init Hydro	1616.0	1600.0	0.0	0.0	0.0	T STARTED 1205 hr
B. First Flow	39.0	41.0	0.0	0.0	0.0	T ON BOTM 1330 hr
B1. Final Flow	39.0	41.0	0.0	0.0	0.0	T OPEN 1335 hr
C. In Shut-in	620.0	616.0	0.0	0.0	0.0	T PULLED 1635 hr
D. Init Flow	49.0	51.0	0.0	0.0	0.0	T OUT 1750 hr
E. Final Flow	49.0	61.0	0.0	0.0	0.0	
F. Fl Shut-in	561.0	561.0	0.0	0.0	0.0	
G. Final Hydro	1526.0	1506.0	0.0	0.0	0.0	TOOL DATA-----
Inside/Outside	0	0	I	s		Tool Wt. 4500.00 lbs
						Wt Set On Packer 30000.00 lbs
						Wt Pulled Loose 55000.00 lbs
						Initial Str Wt 41000.00 lbs
						Unseated Str Wt 41000.00 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 3432.00 ft

RECOVERY

Tot Fluid 110.00 ft of 0.00 ft in DC and 110.00 ft in DP  
 110.00 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

Set packers, packer failure, reset packers

Initial Flow:

Weak building to 5"

Final Flow:

Weak steady surface blow

MUD DATA-----

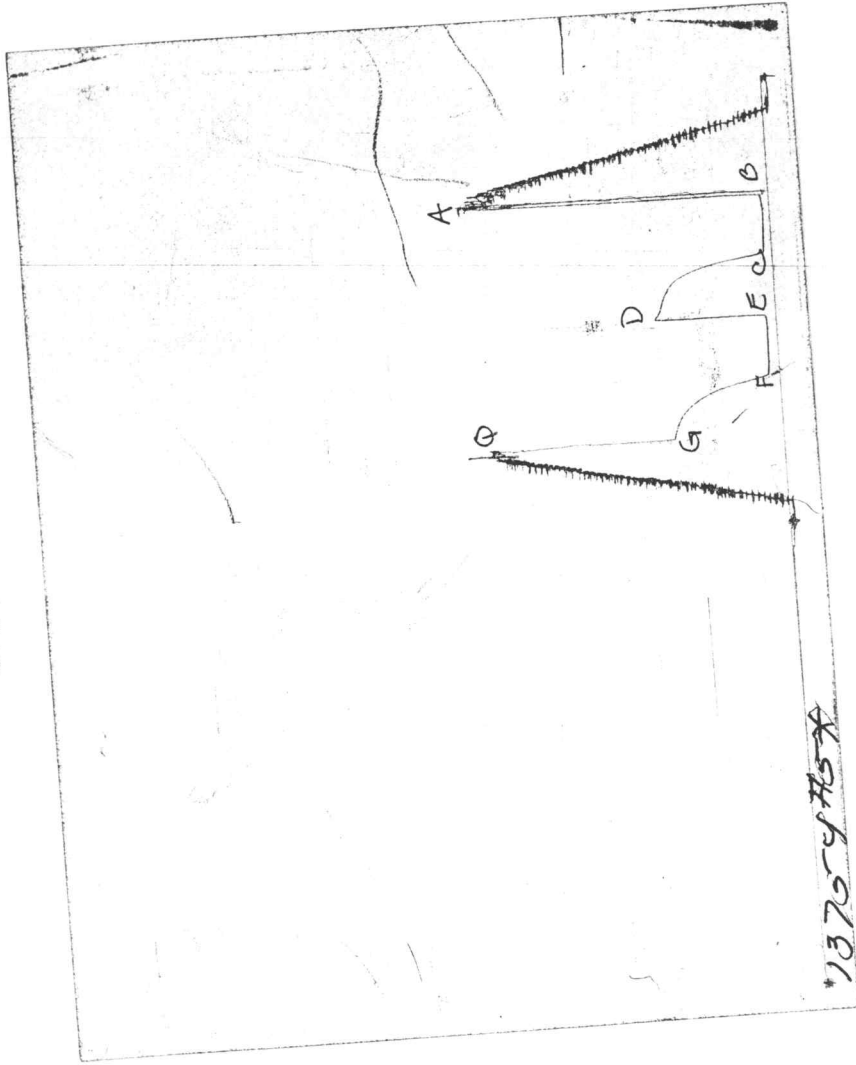
Mud Type	Chemical
Weight	9.30 lb/c
Vis.	41.00 S/L
W.L.	11.00 in3
F.C.	0.00 in
Mud Drop	

Amt. of fill	0.00 ft
Btm. H. Temp.	104.00 F
Hole Condition	
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	3
Cushion Amt.	0.00
Cushion Type	
Reversed Out	
Tool Chased	
Tester	Dan Bangle
Co. Rep.	Ron Nelson
Contr.	Vonfeldt
Rig #	1
Unit #	
Pump T.	

SAMPLES:  
 SENT TO:

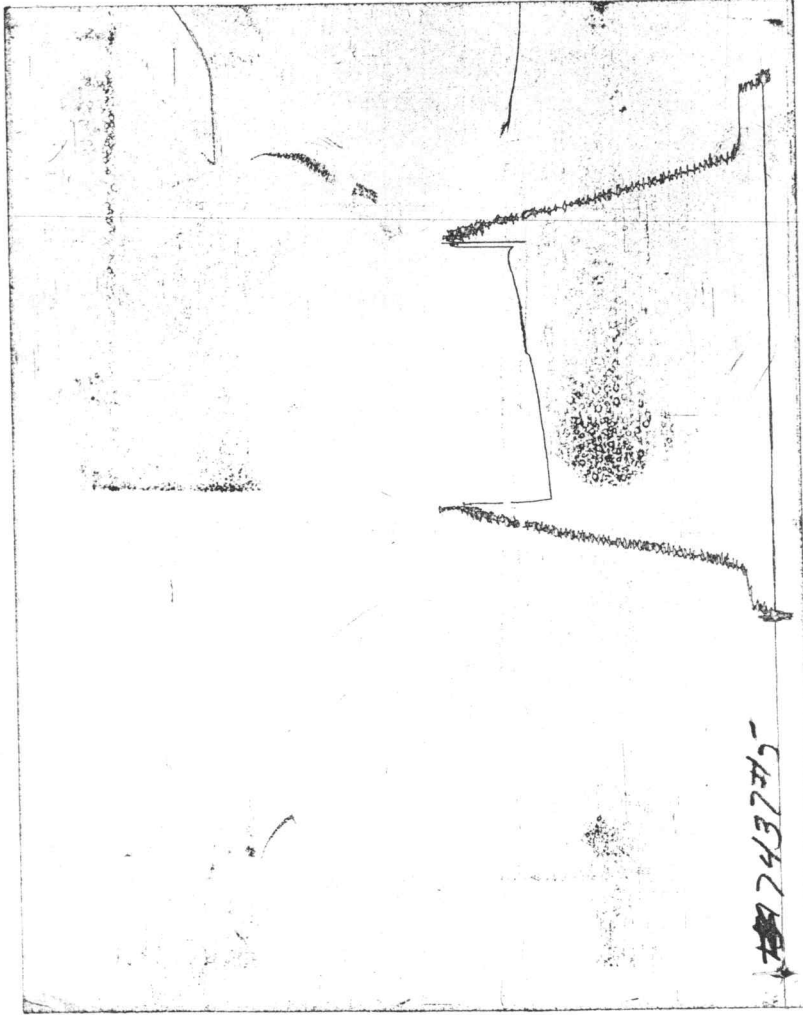
Test Successful: Y

CHART PAGE



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CHART PAGE



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# TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

## Test Ticket

No 11527

Well Name & No. <u>Pfannenstiel #1</u>	Test No. <u>5</u>	Date <u>8-13-98</u>
Company <u>ESP Development, Inc</u>	Zone Tested <u>Toronto</u>	
Address _____	Elevation <u>1926</u> KB <u>1921</u> GL	
Co. Rep / Geo. <u>Ron Nelson</u>	Cont. <u>Vonfeldt #1</u>	Est. Ft. of Pay _____ Por. _____ %
Location: Sec. <u>15</u> Twp. <u>14S</u> Rge. <u>16W</u> Co. <u>Ellis</u> State <u>Ks</u>		
No. of Copies _____	Distribution Sheet (Y, N) _____	Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested <u>3113 - 3174</u>	Initial Str Wt./Lbs. <u>41,000</u>	Unseated Str Wt./Lbs. <u>41,000</u>
Anchor Length <u>61</u>	Wt. Set Lbs. <u>30,000</u>	Wt. Pulled Loose/Lbs. <u>55,000</u>
Top Packer Depth <u>3113</u>	Tool Weight <u>1500</u>	
Bottom Packer Depth <u>3174</u>	Hole Size — <u>7 7/8"</u>	Rubber Size — <u>6 3/4"</u>
Total Depth <u>3506</u>	Wt. Pipe Run _____	Drill Collar Run _____
Mud Wt. <u>9.3</u> LCM _____ Vis. <u>41</u> WL <u>11</u>	Drill Pipe Size <u>4.5 X H</u>	Ft. Run <u>3432</u>
Blow Description <u>Set Packers - Packer failure - Reset packers</u> <u>F.F. Weak - building to 5"</u> <u>F.F. Weak - steady surface blow</u>		

Recovery — Total Feet <u>110</u>	GIP _____	Ft. in DC _____	Ft. in DP <u>110</u>
Rec. <u>110</u> Feet Of <u>D.M.</u>	%gas _____	%oil _____	%water <u>100</u> %mud _____
Rec. _____ Feet Of _____	%gas _____	%oil _____	%water _____ %mud _____
Rec. _____ Feet Of _____	%gas _____	%oil _____	%water _____ %mud _____
Rec. _____ Feet Of _____	%gas _____	%oil _____	%water _____ %mud _____
BHT <u>104</u> °F Gravity _____	°API D@ _____	°F Corrected Gravity _____	°API _____
RW _____ @ _____ °F	Chlorides _____ ppm	Recovery _____	Chlorides <u>11,500</u> ppm System

	AK-1	Alpine		
(A) Initial Hydrostatic Mud	<u>1616</u>		PSI Recorder No. <u>13754</u>	T-On Location <u>11:00</u>
(B) First Initial Flow Pressure	<u>39</u>		PSI (depth) <u>3121</u>	T-Started <u>12:05</u>
(C) First Final Flow Pressure	<u>39</u>		PSI Recorder No. <u>13248</u>	T-Open <u>13:35</u>
(D) Initial Shut-In Pressure	<u>620</u>		PSI (depth) <u>3167</u>	T-Pulled <u>16:35</u>
(E) Second Initial Flow Pressure	<u>49</u>		PSI Recorder No. <u>7437</u>	T-Out <u>17:50</u>
(F) Second Final Flow Pressure	<u>49</u>		PSI (depth) <u>3503</u>	T-Off Location <u>18:15</u>
(G) Final Shut-in Pressure	<u>561</u>		PSI Initial Opening <u>45</u>	Test _____
(Q) Final Hydrostatic Mud	<u>1526</u>		PSI Initial Shut-in <u>45</u>	Jars _____
			Final Flow <u>45</u>	Safety Joint _____
			Final Shut-in <u>45</u>	Straddle <u>X</u>

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Approved By Ron Nelson

Our Representative Ron Nelson

Circ. Sub \_\_\_\_\_  
 Sampler \_\_\_\_\_  
 Extra Packer X  
 Elec. Rec. \_\_\_\_\_  
 Mileage \_\_\_\_\_  
 Other \_\_\_\_\_