

Computer Inventoried

15-033-21095

WELL NAME:

Herd #2-10

COMPANY:

R.J. Patrick Operating Co.

LOCATION:

10-33s-19w

Comanche co Kansas

DATE:

6/8/00

ORIGINAL

TRILOBITE TESTING L.L.C.

ORIGINAL

OPERATOR : R.J.Patrick Oper.Co.

DATE 05-30-000

WELL NAME: Herd #2-10

KB 2029.00 ft

TICKET NO: 12854

DST #1

LOCATION : 10-33s-19w Comanche co KS

GR 2018.00 ft

FORMATION: Altamont

INTERVAL : 5073.00 To 5086.00 ft

TD 5086.00 ft

TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 0 Rec.	10248	10248	2342			PF Fr. to hr
SI 0 Range(Psi)	4400.0	4400.0	4995.0	0.0	0.0	IS Fr. to hr
SF 0 Clock(hrs)	12 hr	12 hr	batt.			SF Fr. to hr
FS 0 Depth(ft)	5083.0	5083.0	5078.0	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 2347 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 0030 hr
D. Init Flow	0.0	0.0	0.0	0.0	0.0	T OUT 0130 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	
G. Final Hydro	0.0	0.0	0.0	0.0	0.0	TOOL DATA-----
Inside/Outside	O	O	I	T		Tool Wt. 2100.00 lbs
						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 1100.00 ft

RECOVERY

Tot Fluid 0.00 ft of 0.00 ft in DC and 0.00 ft in DP
 0.00 ft of Gas in pipe.
 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 Rw n.c. ohms @ degrees F.
 0.00 ft of EST.FT. of PAY-----4
 SALINITY 8000.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

IF:n/a

ISI:

FF:n/a

FSI:

SAMPLES: None

SENT TO:Caraway/Liberal

MUD DATA-----

Mud Type	Chemical
Weight	9.10 lb/cf
Vis.	57.00 S/L
W.L.	8.00 in3
F.C.	0.20 in
Mud Drop N	

Amt. of fill	0.00 ft
Btm. H. Temp.	121.00 F
Hole Condition	poor
% Porosity	10.00
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.	Marvin Harvey
Contr.	Duke Drlg.
Rig #	5
Unit #	
Pump T.	LCM 6 #/bl

Test Successful: N

P.O. SUB		
C.O. SUB @ top of tool		5046
S.I. TOOL Sterling		5052
HMV Sterling		5057
JARS bowen		5062
SAFETY JOINT bowen		5064
PACKER Top		5068
PACKER Btm.		5073
DEPTH	5073	
1 ft.		5074
ANCHOR		
perfs		
Alpine rec. @ 5078		
2' perfs to		5076
AK-1 rec. @ 5083		
BULLNOSE 5 ft. perforated		5086
T.D.		

GAS-----	cubic ft
OIL-----	ML.
MUD-----	ML.
WATER-----	ML.
OTHER-----	
PRESSURE-----	PSI
Rw -----	ohms @ deg. F.
CHLORIDES-----	ppm.
GRAVITY-----	deg.API

TEST HISTORY

12854 DST#1 HERD #2-10 R.J. PATRICK OPERATING CO.

Flag Points
 t(Min.) P(PSig)
 A: 0.00 608.89
 Q: 0.00 92.40

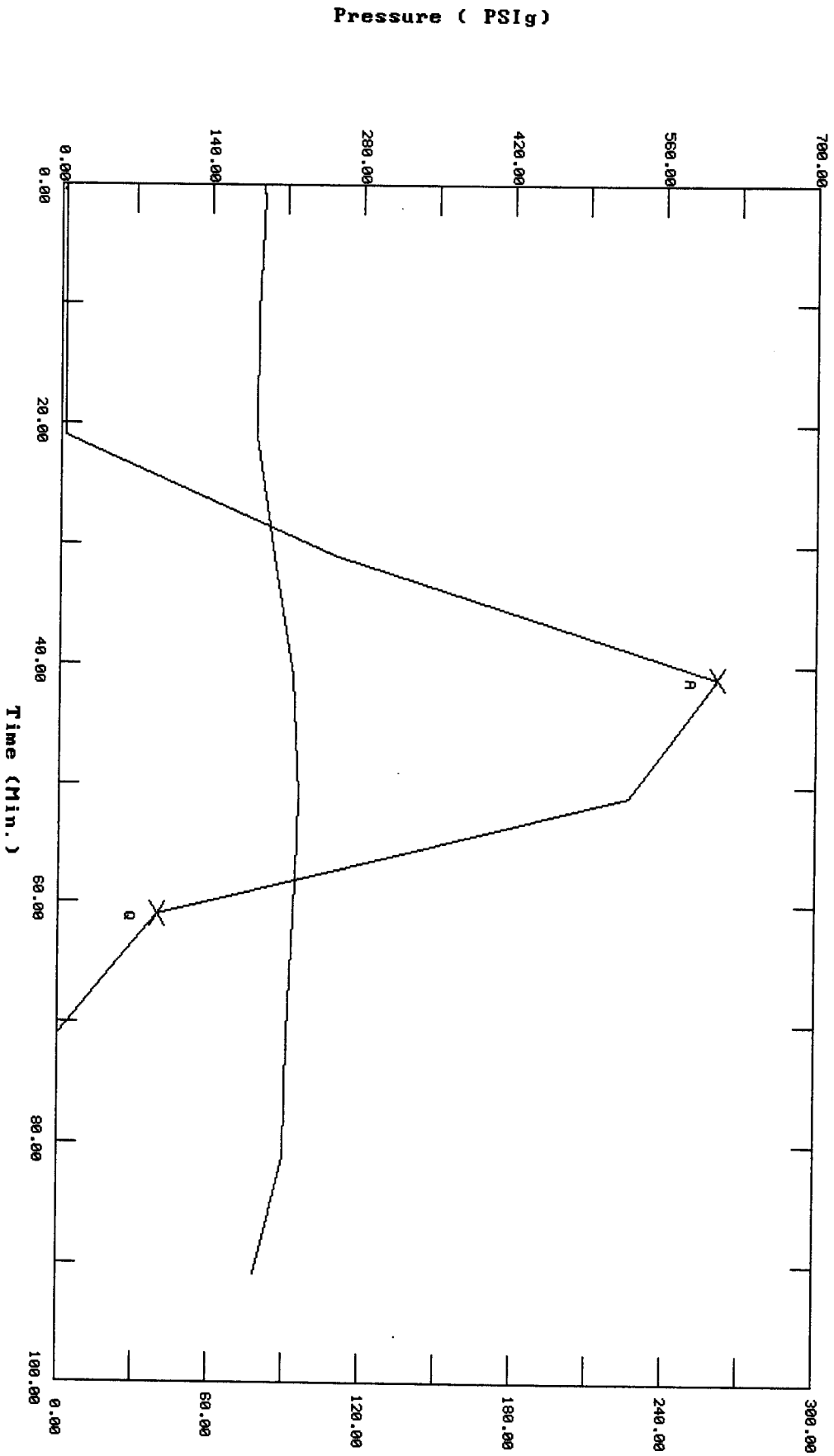
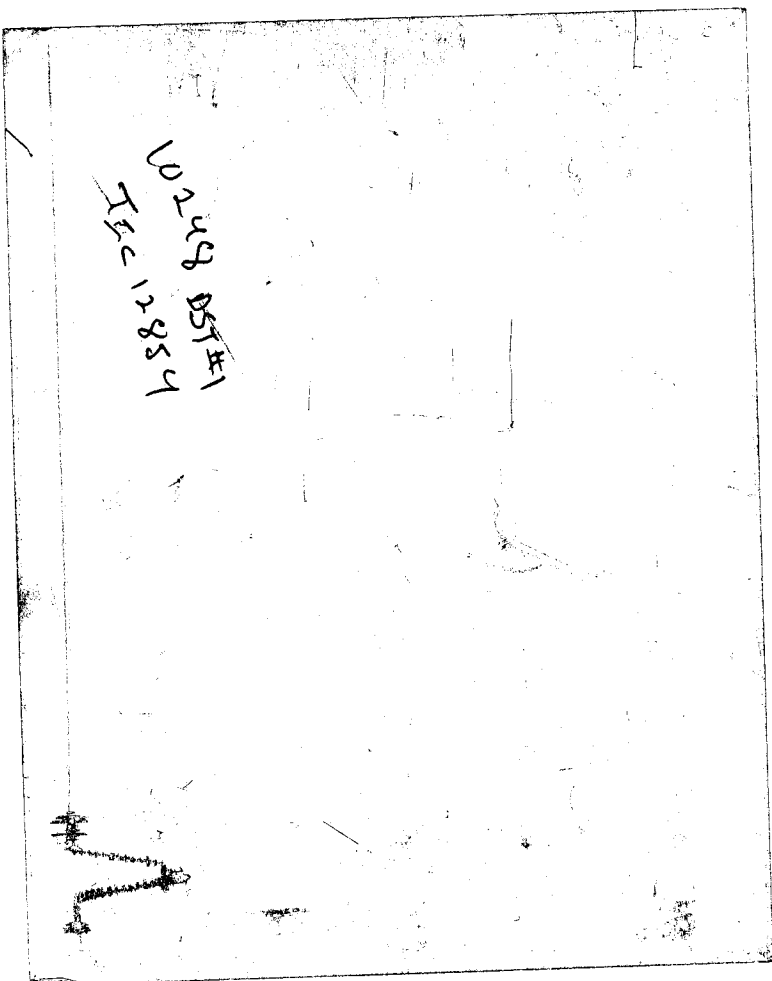


CHART PAGE



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 12854

Well Name & No.	<u>Herd #2-10</u>	Test No.	<u>1</u>	Date	<u>5-30-2000</u>
Company	<u>R.S. Patrick Oper. Co.</u>	Zone Tested	<u>Altamont</u>		
Address	<u>P.O. Box 1157, Liberal 16-0905</u>	Elevation	<u>2029</u> KB <u>2018</u> GL		
Co. Rep / Geo.	<u>Marian Harvey</u>	Cont.	<u>Duke Dalg. #5</u>	Est. Ft. of Pay	<u>4</u> Por. <u>%</u>
Location: Sec.	<u>10</u>	Twp.	<u>33S</u>	Rge.	<u>19W</u> Co. <u>Comanche</u> State <u>Ks</u>
No. of Copies		Distribution Sheet (Y, N)		Turnkey (Y, N)	
		Evaluation (Y, N)			

Interval Tested	<u>5073 - 5086'</u>	Initial Str Wt./Lbs.	<u>N/A</u>	Unseated Str Wt./Lbs.	<u>N/A</u>
Anchor Length	<u>13'</u>	Wt. Set Lbs.	<u>N/A</u>	Wt. Pulled Loose/Lbs.	<u>N/A</u>
Top Packer Depth	<u>5068</u>	Tool Weight	<u>2100#</u>		
Bottom Packer Depth	<u>5073</u>	Hole Size — 7 7/8"	<u>✓</u>	Rubber Size — 6 3/4"	<u>✓</u>
Total Depth	<u>5086'</u>	Wt. Pipe Run	<u>None</u>	Drill Collar Run	<u>None</u>
Mud Wt.	<u>9.1</u> LCM <u>6H</u> Vis. <u>57</u> WL <u>8.0cc</u>	Drill Pipe Size	<u>4 1/2" x 14</u>	Ft. Run	<u>1100'</u>

Blow Description None

COMMENT: Hit bridge @ approx. 1100'. Trich several times to break through but were unsuccessful. Mission!

Recovery — Total Feet	<u>0</u>	GIP	<u>0</u>	Ft. in DC	<u>0</u>	Ft. in DP	<u>0</u>
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		
Rec.	Feet Of	%gas	%oil	%water	%mud		
BHT	<u>N/A</u>	°F Gravity	<u>N/A</u>	°API D@	<u>N/A</u>	°F Corrected Gravity	<u>N/A</u>
RW	<u>N/A</u>	°F Chlorides	<u>N/A</u>	ppm Recovery	<u>8,000</u>	ppm System	

(A) Initial Hydrostatic Mud	AK-1	Alpine	PSI Recorder No.	<u>2342</u>	T-On Location	<u>2307</u>
(B) First Initial Flow Pressure			PSI (depth)	<u>5078'</u>	T-Started	<u>2347</u>
(C) First Final Flow Pressure			PSI Recorder No.	<u>10248</u>	T-Open	<u>N/A</u>
(D) Initial Shut-In Pressure			PSI (depth)	<u>5083'</u>	T-Pulled	<u>0030</u>
(E) Second Initial Flow Pressure			PSI Recorder No.		T-Out	<u>0130</u>
(F) Second Final Flow Pressure			PSI (depth)		T-Off Location	<u>N/A</u>
(G) Final Shut-in Pressure			PSI Initial Opening		Test Mission	<u>600⁰⁰</u>
(Q) Final Hydrostatic Mud			PSI Initial Shut-in		Jars	<u>200⁰⁰</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 _____

Our Representative Cary P. [Signature]

Final Flow		Safety Joint	<u>✓</u>	<u>50⁰⁰</u>
Final Shut-in		Straddle		
		Circ. Sub		
		Sampler		
		Extra Packer		
		Elec. Rec.	<u>✓</u>	<u>150⁰⁰</u>
		Mileage		
		Other		
		TOTAL PRICE \$	<u>✓</u>	<u>1000⁰⁰</u>

TRILOBITE TESTING L.L.C.

OPERATOR : R.J.Patrick Oper.Co.

DATE 05-31-000

WELL NAME: Herd #2-10

KB 2029.00 ft

TICKET NO: 12855 DST #2

LOCATION : 10-33s-19w Comanche co KS

GR 2018.00 ft

FORMATION: Altamont

INTERVAL : 5073.00 To 5086.00 ft

TD 5086.00 ft

TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	10248	10248	2342			PF Fr. 0940 to 1010 hr
SI 60 Range(Psi)	4400.0	4400.0	4995.0	0.0	0.0	IS Fr. 1010 to 1110 hr
SF 45 Clock(hrs)	12 hr	12 hr	batt.			SF Fr. 1110 to 1155 hr
FS 120 Depth(ft)	5083.0	5083.0	5078.0	0.0	0.0	FS Fr. 1155 to 1355 hr

	Field	1	2	3	4	
A. Init Hydro	2503.0	2536.0	2503.0	0.0	0.0	T STARTED 0705 hr
B. First Flow	12.0	15.0	26.0	0.0	0.0	T ON BOTM 0930 hr
Bl. Final Flow	16.0	1.0	23.0	0.0	0.0	T OPEN 0940 hr
C. In Shut-in	341.0	328.0	354.0	0.0	0.0	T PULLED 1357 hr
D. Init Flow	14.0	8.0	22.0	0.0	0.0	T OUT 1610 hr
E. Final Flow	14.0	8.0	25.0	0.0	0.0	
F. Fl Shut-in	659.0	649.0	671.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2437.0	2348.0	2387.0	0.0	0.0	Tool Wt. 2100.00 lbs
Inside/Outside	O	O	I	T		Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 90000.00 lbs
						Initial Str Wt 74000.00 lbs
						Unseated Str Wt 74000.00 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 120.00 ft
						D.P. Length 4951.00 ft

RECOVERY

Tot Fluid 20.00 ft of 20.00 ft in DC and 0.00 ft in DP
 530.00 ft of Gas in pipe.
 20.00 ft of Drilling mud
 0.00 ft of 100% 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 8000.00 P.P.M. A.P.I. Gravity 0.00

MUD DATA-----

Mud Type	Chemical
Weight	9.10 lb/cf
Vis.	57.00 S/L
W.L.	8.00 in3
F.C.	0.20 in
Mud Drop N	

BLOW DESCRIPTION

Initial Flow:
 Fair to strong blow. Bottom of bucket
 in 29 minutes.
 Initial Shut-In:
 No blow.

Final Flow:

Strong blow. Bottom of bucket in 8
 minutes.

Final Shut-In:

No blow.

SAMPLES: None

SENT TO: Caraway/Liberal

Amt. of fill	1.00 ft
Btm. H. Temp.	119.00 F
Hole Condition	Fair
% Porosity	10.00
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.	Marvin Harvey
Contr.	Duke Drlg.
Rig #	5
Unit #	
Pump T.	LCM 6 #/bl

Test Successful: Y

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Herd #2-10

LOCATION : 10-33s-19w Comanche co KS

TICKET No. 12855 D.S.T. No. 2 DATE 05-31-000

TOTAL TOOL TO BOTTOM OF TOP PACKERS 27

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 13

TOTAL TOOL 40

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY 40

D.C. ABOVE TOOLS.Stands2 Single Total 120

D.P. ABOVE TOOLS.Stands79 Single 1 Total 4951

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5111

TOTAL DEPTH 5086

TOTAL DRILL PIPE ABOVE K.B. 25

REMARKS:

Comments:

FLUID SAMPLER DATA (not run)

GAS----- cubic ft
OIL----- ML.
MUD----- ML.
WATER----- ML.
OTHER-----
PRESSURE----- PSI
Rw ----- ohms @ deg. F.
CHLORIDES----- ppm.
GRAVITY----- deg.API

P.O. SUB
C.O. SUB @ top of tool 5046

S.I. TOOL Sterling 5052

HMV Sterling 5057

JARS bowen 5062

SAFETY JOINT bowen 5064

PACKER Top 5068

PACKER Btm. 5073

DEPTH 5073
1 ft. 5074

ANCHOR

perfs

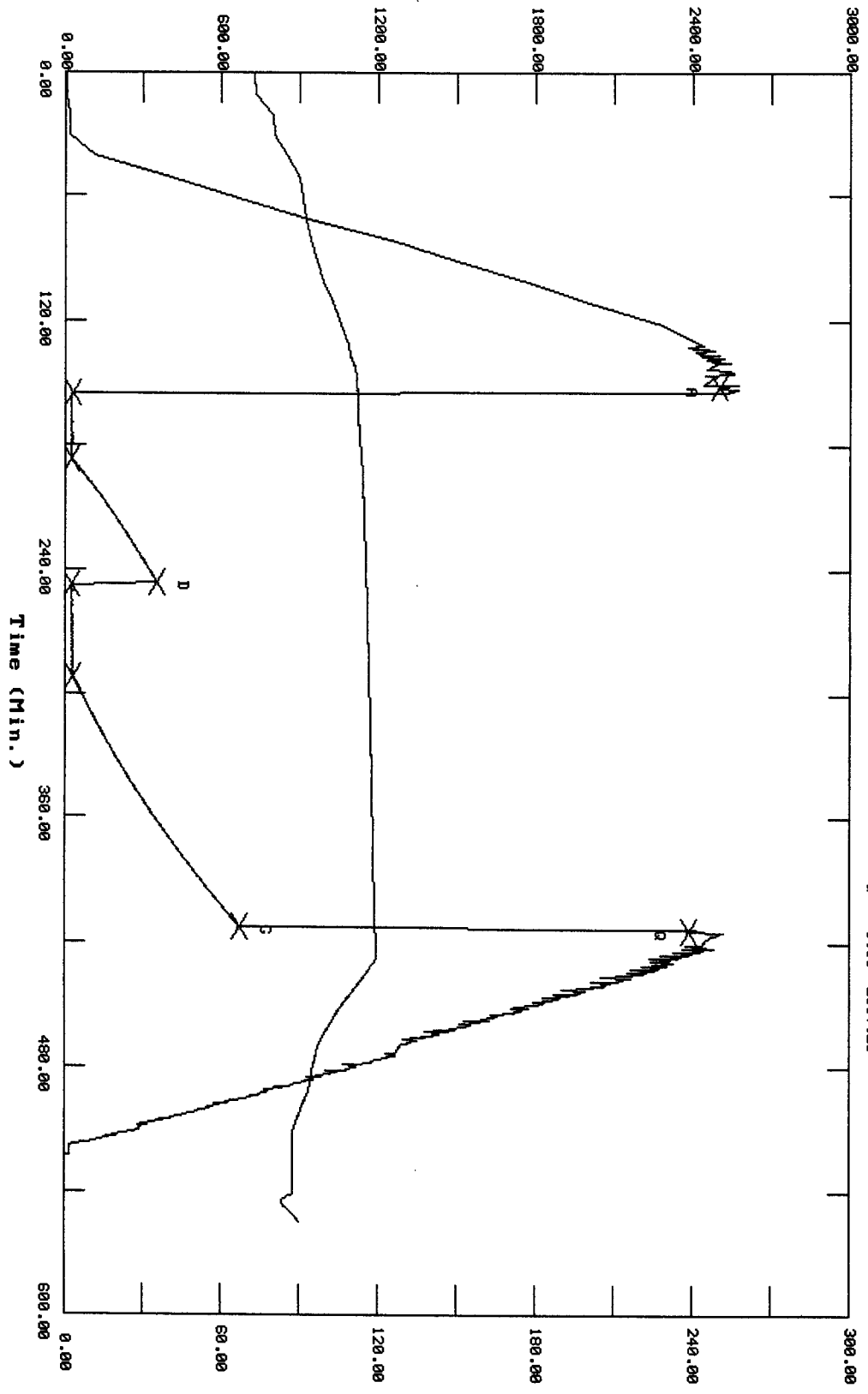
Alpine rec. @ 5078

2' perfs to 5076

AK-1 rec. @ 5083

BULLNOSE 5 ft. perforated 5086
T.D.

TEST HISTORY 12055 DST#2 HERD #2-10 R.J. PATRICK OPERATING CO.



Flag Points

t (Min.)	P (PSIg)
a: 0.00	2503.14
b: 0.00	26.34
c: 32.00	22.90
d: 59.50	353.75
e: 0.00	21.90
f: 44.50	24.75
g: 120.50	670.74
h: 0.00	2387.23

Temperature (DEG F)

12855
 TC
 X 10248

12855
 TC
 X 10248

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

Nº 12855

Well Name & No.	<u>Herc #2-10</u>	Test No.	<u>2</u>	Date	<u>5-31-2000</u>
Company	<u>R.S. Patrick Oper. Co.</u>	Zone Tested	<u>Altamont</u>		
Address	<u>P.O. Box 1137, Liberal KS 67903</u>	Elevation	<u>2029</u> KB <u>2018</u> GL		
Co. Rep / Geo.	<u>Marvin Harvey</u>	Cont.	<u>Duke Dalg. #5</u>	Est. Ft. of Pay	<u>4</u> Por. %
Location: Sec.	<u>10</u>	Twp.	<u>33S</u>	Rge.	<u>19W</u> Co. <u>Comanche</u> State <u>KS</u>
No. of Copies	<u>5</u>	Distribution Sheet (Y, N)	<u>N</u>	Turnkey (Y, N)	<u></u> Evaluation (Y, N) <u></u>

Interval Tested	<u>5073-5086'</u>	Initial Str Wt./Lbs.	<u>74,000</u>	Unseated Str Wt./Lbs.	<u>74,000</u>
Anchor Length	<u>13'</u>	Wt. Set Lbs.	<u>29,000</u>	Wt. Pulled Loose/Lbs.	<u>90,000</u>
Top Packer Depth	<u>5068</u>	Tool Weight	<u>2100#</u>		
Bottom Packer Depth	<u>5073</u>	Hole Size — 7 7/8"	<u>✓</u>	Rubber Size — 6 3/4"	<u>✓</u>
Total Depth	<u>5086</u>	Wt. Pipe Run	<u>None</u>	Drill Collar Run	<u>120</u>
Mud Wt.	<u>9.1</u> LCM <u>6#</u> Vis. <u>57</u> WL <u>8.0cc</u>	Drill Pipe Size	<u>4 1/2" x 11</u>	Ft. Run	<u>4981</u>
Blow Description	<u>IF: Fair to strong blow BOB in 29 mins.</u>				
	<u>ISI: No blow.</u>				
	<u>FF: Strong blow BOB in 8 mins. FSI: No blow.</u>				

Recovery — Total Feet	<u>20 fluid</u>	GIP	<u>530</u>	Ft. in DC	<u>20</u>	Ft. in DP	<u>0</u>
Rec.	<u>20</u>	Feet Of	<u>Drill Mud.</u>	%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
Rec.		Feet Of		%gas	%oil	%water	%mud
BHT	<u>119</u>	°F Gravity	<u>N/A</u>	°API D@	<u></u>	°F Corrected Gravity	<u>N/A</u> °API
RW	<u>N.C. @</u>	°F Chlorides	<u>8,000</u>	ppm Recovery	<u>8,000</u>	ppm System	<u></u>

(A) Initial Hydrostatic Mud	<u>2503</u>	AK-1	<u>2503</u>	Alpine	<u>alp</u>	PSI Recorder No.	<u>2342</u>	T-On Location	<u>2307</u>
(B) First Initial Flow Pressure	<u>12</u>		<u>26</u>			PSI (depth)	<u>5078'</u>	T-Started	<u>0745</u>
(C) First Final Flow Pressure	<u>12</u>		<u>23</u>			PSI Recorder No.	<u>10248</u>	T-Open	<u>0940</u>
(D) Initial Shut-In Pressure	<u>341</u>		<u>354</u>			PSI (depth)	<u>5083'</u>	T-Pulled	<u>1357</u>
(E) Second Initial Flow Pressure	<u>14</u>		<u>22</u>			PSI Recorder No.	<u></u>	T-Out	<u>1410</u>
(F) Second Final Flow Pressure	<u>14</u>		<u>25</u>			PSI (depth)	<u></u>	T-Off Location	<u>1650</u>
(G) Final Shut-in Pressure	<u>659</u>		<u>671</u>			PSI Initial Opening	<u>30</u>	Test	<u>✓ 800°</u>
(Q) Final Hydrostatic Mud	<u>2437</u>		<u>2387</u>			PSI Initial Shut-in	<u>60</u>	Jars	<u>✓ 200°</u>
						Final Flow	<u>45</u>	Safety Joint	<u>✓ 80°</u>
						Final Shut-in	<u>120</u>	Straddle	<u></u>
							<u>5</u>	Circ. Sub	<u></u>
							<u>5</u>	Sampler	<u></u>
								Extra Packer	<u></u>
								Elec. Rec.	<u>✓ 180°</u>
								Mileage	<u></u>
								Other	<u></u>
								TOTAL PRICE \$	<u>✓ 1200°</u>

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Approved By

Our Representative Gary Wolcott

TRILOBITE TESTING L.L.C.

OPERATOR : R.J.Patrick Oper.Co.

DATE 06-01-000

WELL NAME: Herd #2-10

KB 2029.00 ft

TICKET NO: 12856

DST #3

LOCATION : 10-33s-19w Comanche co KS

GR 2018.00 ft

FORMATION: Pawnee

INTERVAL : 5088.00 To 5152.00 ft

TD 5152.00 ft

TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	10248	10248	2342			PF Fr. 0555 to 0625 hr
SI 60 Range(Psi)	4400.0	4400.0	4995.0	0.0	0.0	IS Fr. 0625 to 0725 hr
SF 60 Clock(hrs)	12 hr	12 hr	batt.			SF Fr. 0725 to 0825 hr
FS 120 Depth(ft)	5149.0	5149.0	5098.0	0.0	0.0	FS Fr. 0825 to 1025 hr

	Field	1	2	3	4	
A. Init Hydro	2536.0	2528.0	2519.0	0.0	0.0	T STARTED 0350 hr
B. First Flow	57.0	65.0	48.0	0.0	0.0	T ON BOTM 0550 hr
Bl. Final Flow	73.0	74.0	60.0	0.0	0.0	T OPEN 0555 hr
C. In Shut-in	1655.0	1654.0	1657.0	0.0	0.0	T PULLED 1025 hr
D. Init Flow	73.0	84.0	51.0	0.0	0.0	T OUT 1258 hr
E. Final Flow	78.0	84.0	68.0	0.0	0.0	
F. Fl Shut-in	1794.0	1781.0	1776.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2426.0	2386.0	2374.0	0.0	0.0	Tool Wt. 2100.00 lbs
Inside/Outside	O	O	I	T		Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 96000.00 lbs
						Initial Str Wt 74000.00 lbs
						Unseated Str Wt 78000.00 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 120.00 ft
						D.P. Length 4949.00 ft

RECOVERY

Tot Fluid 130.00 ft of 120.00 ft in DC and 10.00 ft in DP
 310.00 ft of Gas in pipe.
 130.00 ft of Heavy mud.
 0.00 ft of 100% 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-----8
 SALINITY 8000.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:
 Strong blow. Bottom of bucket in 12 minutes.
 Initial Shut-In:
 No blow.

Final Flow:
 Strong blow. Bottom of bucket in 3-5 seconds.

Final Shut-In:
 No blow.

SAMPLES: None

SENT TO:Caraway/Liberal

MUD DATA-----

Mud Type	Chemical
Weight	9.10 lb/cf
Vis.	57.00 S/L
W.L.	8.00 in3
F.C.	0.20 in
Mud Drop N	

Amt. of fill	1.00 ft
Btm. H. Temp.	120.00 F
Hole Condition	Fair
% Porosity	9.00
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.	Marvin Harvey
Contr.	Duke Drlg.
Rig #	5
Unit #	
Pump T.	LCM 4 #/bl

Test Successful: Y

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Herd #2-10

LOCATION : 10-33s-19w Comanche co KS

TICKET No. 12856 D.S.T. No. 3 DATE 06-01-000

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 Single 1 Total 31

TOTAL ASSEMBLY 91

D.C. ABOVE TOOLS.Stands2 Single Total 120

D.P. ABOVE TOOLS.Stands79 Single 1 Total 4949

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5160

TOTAL DEPTH 5152

TOTAL DRILL PIPE ABOVE K.B. 8

REMARKS:

Comments:

FLUID SAMPLER DATA (not run)

GAS----- cubic ft
OIL----- ML.
MUD----- ML.
WATER----- ML.
OTHER-----
PRESSURE----- PSI
Rw ----- ohms @ deg. F.
CHLORIDES----- ppm.
GRAVITY----- deg.API

P.O. SUB	
C.O. SUB @ top of tool	5061
S.I. TOOL Sterling	5067
HMV Sterling	5072
JARS bowen	5077
SAFETY JOINT bowen	5079
PACKER Top	5083
PACKER Btm.	5088
DEPTH 5088	
1 ft.	5089
ANCHOR	
4'perfs & sub to	5093
Alpine rec. @ 5098	
1 jt. pipe to	5124
23' perfs & sub to	5147
AK-1 rec. @ 5149	
BULLNOSE 5 ft. perforated	5152
T.D.	

12856 DST#3 HERD #2-10 R.J.PATRICK OPERATING CO.

TEST HISTORY

Flag Points
t(Min.) P(PSig)

R:	0.00	2519.42
B:	0.00	47.66
C:	30.50	60.34
D:	60.00	1656.98
E:	0.00	50.68
F:	58.50	67.81
G:	119.50	1775.65
H:	0.00	2373.89

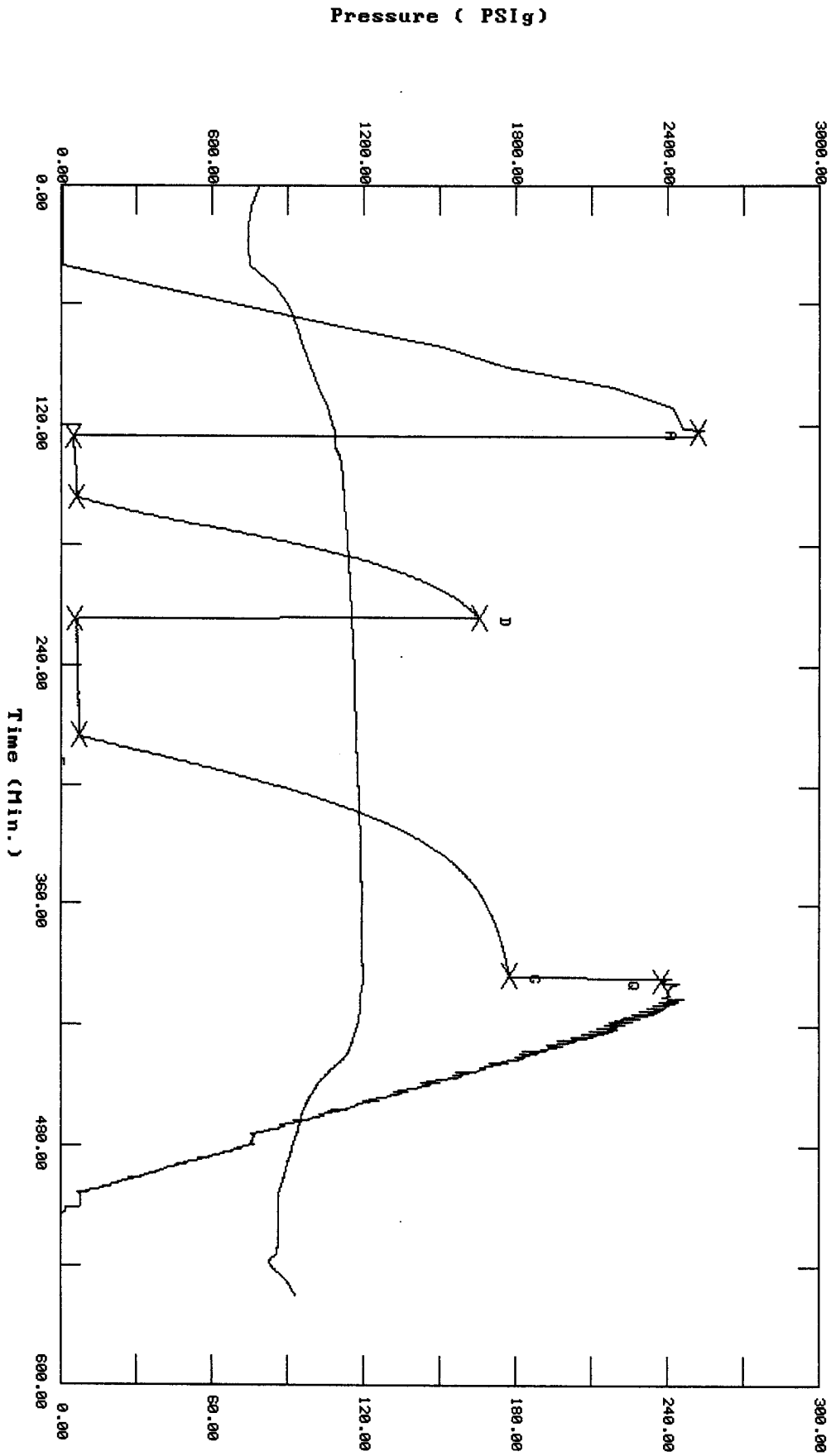
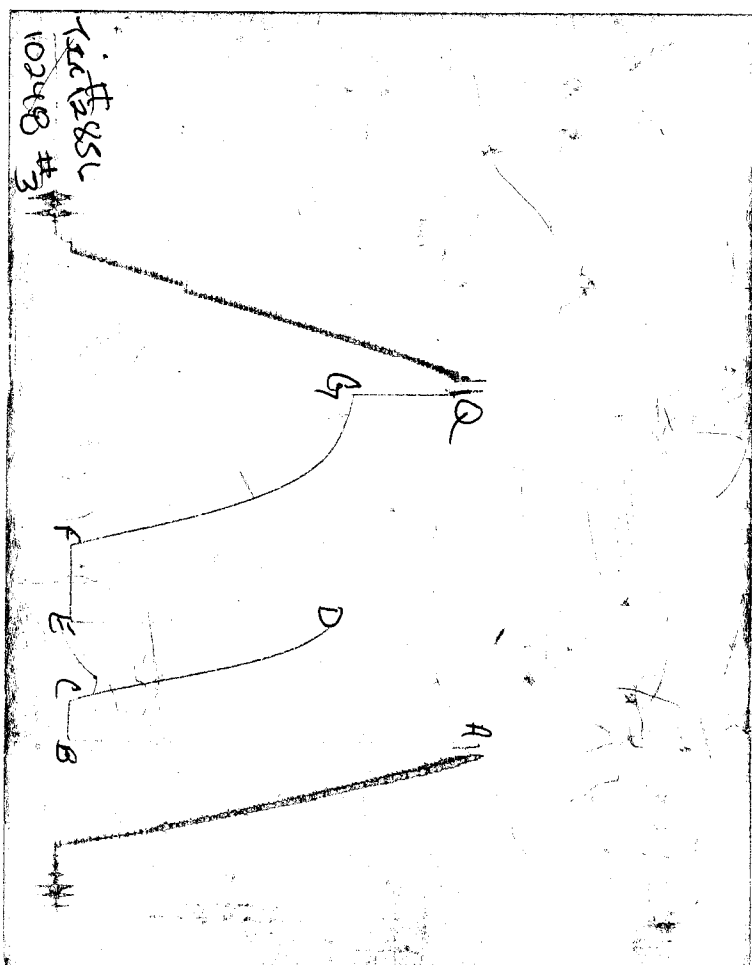


CHART PAGE



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 12856

Well Name & No.	<u>Herd # 2-10</u>	Test No.	<u>3</u>	Date	<u>6-1-2000</u>
Company	<u>R.T. Patrick Open Co.</u>	Zone Tested	<u>Pawnee</u>		
Address	<u>P.O. Box 1157, Lind 12, 67905</u>	Elevation	<u>2029</u> KB <u>2018</u> GL		
Co. Rep / Geo.	<u>Marvin Hargrey</u>	Cont.	<u>Duke Dwyer #5</u>	Est. Ft. of Pay	<u>8</u> Por. <u> </u> %
Location: Sec.	<u>10</u>	Twp.	<u>33 S</u>	Rge.	<u>19 W</u>
				Co.	<u>Comanche</u> State <u>KS</u>
No. of Copies	<u>5</u>	Distribution Sheet (Y, N)	<u>N</u>	Turnkey (Y, N)	<u>N</u>
				Evaluation (Y, N)	<u> </u>

Interval Tested	<u>5088 - 5152'</u>	Initial Str Wt/Lbs.	<u>74,000</u>	Unseated Str Wt/Lbs.	<u>78,000</u>
Anchor Length	<u>64'</u>	Wt. Set Lbs.	<u>20,000</u>	Wt. Pulled Loose/Lbs.	<u>96,000</u>
Top Packer Depth	<u>5083'</u>	Tool Weight	<u>2100 #</u>		
Bottom Packer Depth	<u>5088'</u>	Hole Size — 7 7/8"	<u>✓</u>	Rubber Size — 6 3/4"	<u>✓</u>
Total Depth	<u>5152'</u>	Wt. Pipe Run	<u>None</u>	Drill Collar Run	<u>120</u>
Mud Wt.	<u>9.1</u> LCM <u>4#</u> Vis. <u>57</u> WL <u>8.0</u>	Drill Pipe Size	<u>4 1/2" X.H.</u>	Ft. Run	<u>4951</u>
Blow Description	<u>IF: Strong blow. BOB in 12 mins.</u>				
	<u>ISI: No blow.</u>				
	<u>FF: Strong blow. BOB in 3-5 secs. FSI: No blow</u>				

Recovery — Total Feet	<u>130</u>	GIP	<u>310</u>	Ft. in DC	<u>120</u>	Ft. in DP	<u>10</u>
Rec.	<u>130</u>	Feet Of	<u>Heavy Mud.</u>	%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
Rec.		Feet Of		%gas	%oil	%water	%mud
BHT	<u>120</u>	°F Gravity	<u>N/A</u>	°API D@	<u> </u>	°F Corrected Gravity	<u>N/A</u>
RW	<u>N.C.</u>	°F Chlorides	<u>8,000</u>	ppm Recovery	<u>8,000</u>	ppm System	<u> </u>

(A) Initial Hydrostatic Mud	<u>2536</u>	AK-1	<u>2519</u>	Alpine	<u>2342</u>	PSI Recorder No.	<u>0330</u>	T-On Location	<u>0330</u>
(B) First Initial Flow Pressure	<u>57</u>		<u>48</u>		<u>5098'</u>	PSI (depth)		T-Started	<u>0350</u>
(C) First Final Flow Pressure	<u>73</u>		<u>60</u>		<u>10248</u>	PSI Recorder No.		T-Open	<u>0555</u>
(D) Initial Shut-In Pressure	<u>1655</u>		<u>1657</u>		<u>5149'</u>	PSI (depth)		T-Pulled	<u>1025</u>
(E) Second Initial Flow Pressure	<u>73</u>		<u>51</u>		<u> </u>	PSI Recorder No.		T-Out	<u>1258</u>
(F) Second Final Flow Pressure	<u>78</u>		<u>68</u>		<u> </u>	PSI (depth)		T-Off Location	<u>1330</u>
(G) Final Shut-in Pressure	<u>1794</u>		<u>1776</u>		<u>30</u>	PSI Initial Opening		Test	<u>✓ 800°</u>
(Q) Final Hydrostatic Mud	<u>2426</u>		<u>2374</u>		<u>40</u>	PSI Initial Shut-in		Jars	<u>✓ 200°</u>
					<u>40</u>	Final Flow		Safety Joint	<u>✓ 50°</u>
					<u>120</u>	Final Shut-in		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

Our Representative

Extra Packer
Elec. Rec. ✓ 150°
Mileage
Other
TOTAL PRICE \$ ✓ 1200

TRILOBITE TESTING L.L.C.

OPERATOR : R.J.Patrick Oper.Co.

DATE 06-01-000

WELL NAME: Herd #2-10

KB 2029.00 ft

TICKET NO: 12857

DST #4

LOCATION : 10-33s-19w Comanche co KS

GR 2018.00 ft

FORMATION: Ft.Scott

INTERVAL : 5150.00 To 5172.00 ft

TD 5172.00 ft

TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	10248	10248	2342			PF Fr. 0016 to 0046 hr
SI 60 Range(Psi)	4400.0	4400.0	4995.0	0.0	0.0	IS Fr. 0046 to 0146 hr
SF 60 Clock(hrs)	12 hr	12 hr	batt.			SF Fr. 0146 to 0246 hr
FS 120 Depth(ft)	5169.0	5169.0	5155.0	0.0	0.0	FS Fr. 0246 to 0446 hr

	Field	1	2	3	4	
A. Init Hydro	2492.0	2481.0	2509.0	0.0	0.0	T STARTED 2210 hr
B. First Flow	9.0	18.0	19.0	0.0	0.0	T ON BOTM 0010 hr
B1. Final Flow	9.0	10.0	21.0	0.0	0.0	T OPEN 0016 hr
C. In Shut-in	1850.0	1822.0	1848.0	0.0	0.0	T PULLED 0446 hr
D. Init Flow	14.0	10.0	18.0	0.0	0.0	T OUT 0650 hr
E. Final Flow	14.0	10.0	22.0	0.0	0.0	
F. Fl Shut-in	1854.0	1843.0	1864.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2428.0	2443.0	2452.0	0.0	0.0	Tool Wt. 2100.00 lbs
Inside/Outside	O	O	I	T		Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 100000.00 lbs
						Initial Str Wt 76000.00 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 120.00 ft
						D.P. Length 5010.00 ft

RECOVERY

Tot Fluid 30.00 ft of 30.00 ft in DC and 0.00 ft in DP
 0.00 ft of Gas in all fluid free pipe.
 30.00 ft of Drilling mud
 0.00 ft of 100% 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-----3
 SALINITY 8000.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:
 Strong blow. Bottom of bucket in
 3 1/2 minutes.
 Initial Shut-In:
 No blow.

Final Flow.

Strong blow. Bottom of bucket in 2
 seconds. Gas to surface in 5 1/2
 minutes. (See gas volume report).
 Final Shut-In:
 No blow.

SAMPLES: Gas sample

SENT TO:Caraway/Liberal

MUD DATA-----

Mud Type	Chemical
Weight	9.00 lb/cf
Vis.	50.00 S/L
W.L.	8.80 in3
F.C.	0.20 in
Mud Drop N	

Amt. of fill	0.00 ft
Btm. H. Temp.	116.00 F
Hole Condition	Fair
% 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.	Marvin Harvey
Contr.	Duke Drlg.
Rig #	5
Unit #	
Pump T.	LCM 6 #/bl

Test Successful: Y

GAS RECOVERY

COMPANY: R.J.Patrick Oper.Co.

DATE: 06-01-000

WELL NAME: Herd #2-10

KB Elev: 2029.00 ft TICKET #12857 DST #4

WELL LOCATION: 10-33s-19w Comanche co KS

GR Elev: 2018.00 ft FORMATION: Ft.Scott

INTERVAL Fr.: 5150.00 To 5172.00 T.D.: 5172.00 ft TEST TYPE: CONVENTIONAL

GAS RECOVERY MEASURED WITH Adjusting Choke

***** GAS RATES FOR FLOW #2

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
10	0.25	0	16	6720.0
20	0.25	0	20	7510.0
30	0.25	0	20	7510.0
40	0.25	0	20	7510.0
50	0.25	0	20	7510.0
60	0.25	0	20	7510.0

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Herd #2-10

LOCATION : 10-33s-19w Comanche co KS

TICKET No. 12857 D.S.T. No. 4 DATE 06-01-000

TOTAL TOOL TO BOTTOM OF TOP PACKERS 27

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 22

TOTAL TOOL 49

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY 49

D.C. ABOVE TOOLS.Stands2 Single Total 120

D.P. ABOVE TOOLS.Stands80 Single 1 Total 5010

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5179

TOTAL DEPTH 5172

TOTAL DRILL PIPE ABOVE K.B. 7

REMARKS:

Comments:

FLUID SAMPLER DATA (not run)

GAS----- cubic ft
OIL----- ML.
MUD----- ML.
WATER----- ML.
OTHER-----
PRESSURE----- PSI
Rw ----- ohms @ deg. F.
CHLORIDES----- ppm.
GRAVITY----- deg.API

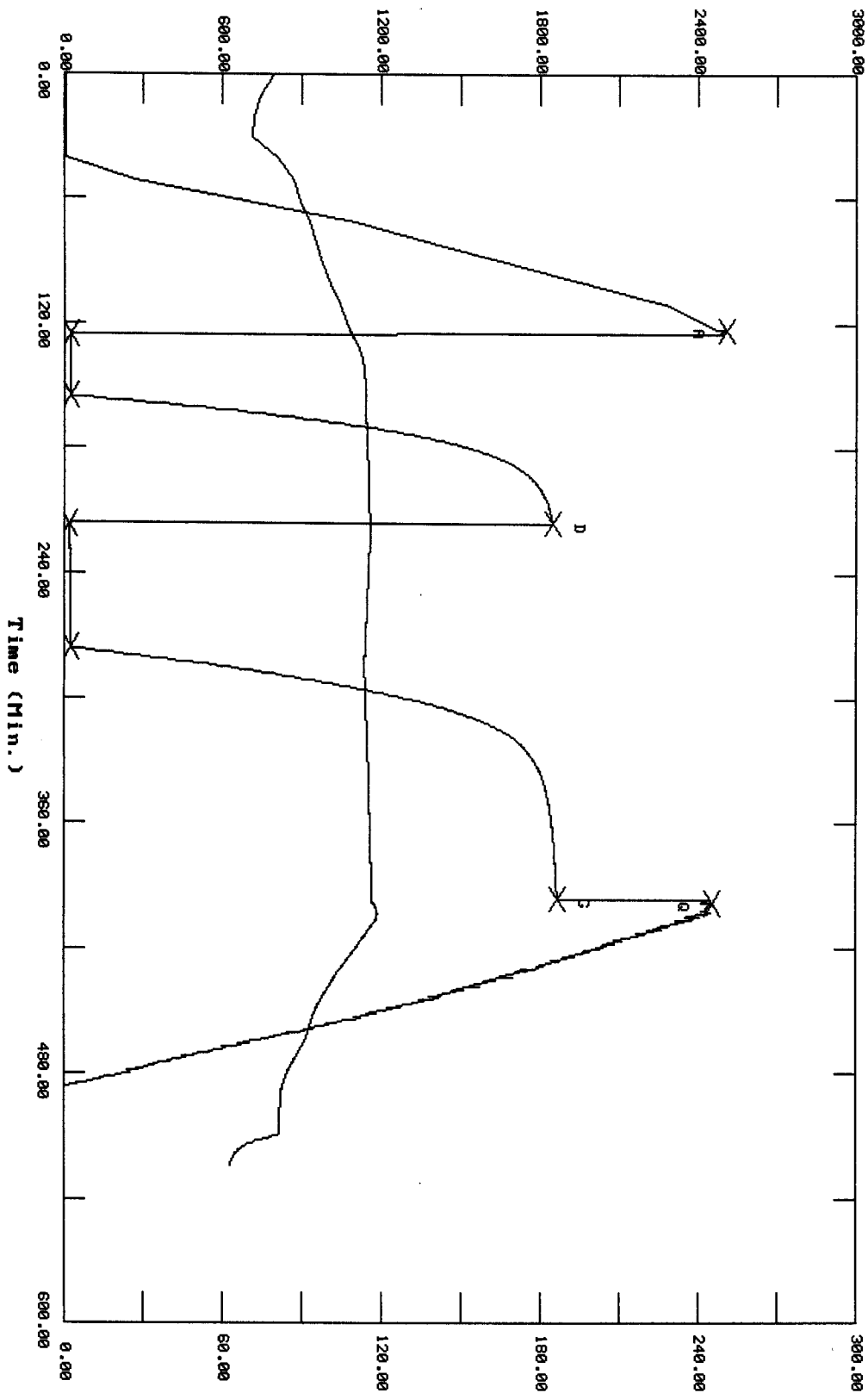
P.O. SUB		
C.O. SUB @ top of tool	5123	
S.I. TOOL Sterling	5129	
HMV Sterling	5134	
JARS bowen	5139	
SAFETY JOINT bowen	5141	
PACKER Top	5145	
PACKER Btm.	5150	
DEPTH 5150		
1 ft.	5151	
ANCHOR		
perfs		
Alpine rec. @ 5155		
16' perfs to	5167	
AK-1 rec. @ 5169		
BULLNOSE 5 ft. perforated	5172	
T.D.		

TEST HISTORY

12857 DST#4 HERD #2-10 R.J. PATRICK OPERATING CO.

Flag Points
t(Min.) P (PSig)

A:	0.00	2508.93
B:	0.00	19.21
C:	30.00	20.89
D:	60.50	1848.25
E:	0.00	18.12
F:	59.50	21.64
G:	120.00	1864.36
H:	0.00	2453.29

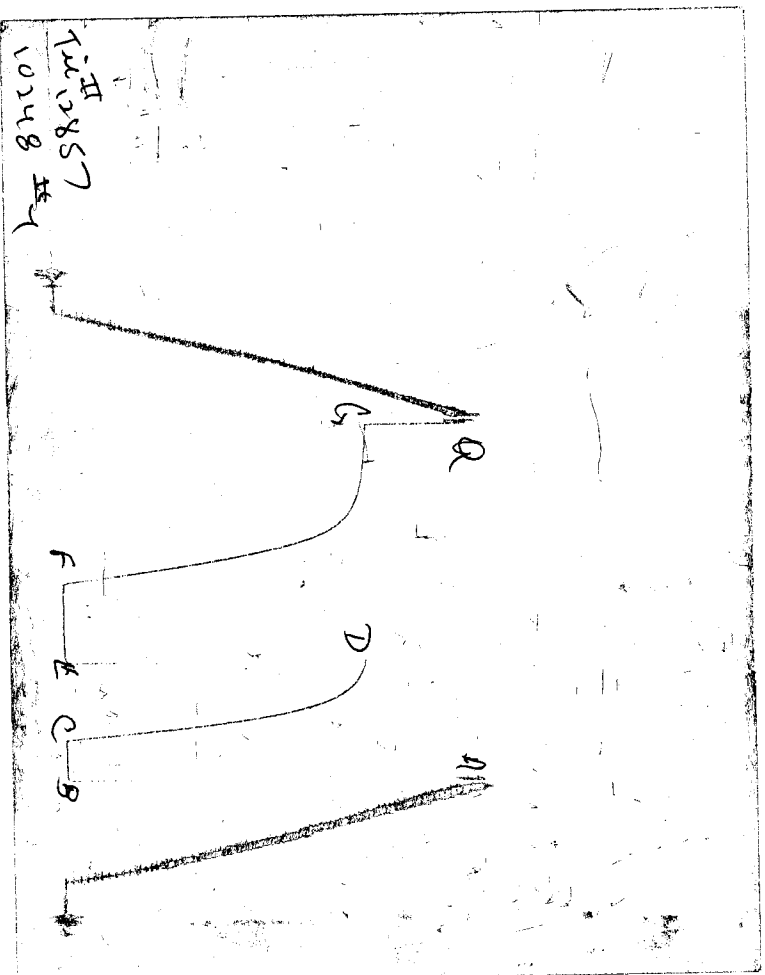


Pressure (PSig)

Temperature (DEG F)

Time (Min.)

CHART PAGE



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GAS VOLUME REPORT

R. J. Patnick Oper.
OPERATOR

Hand # 2-10

WELL NAME AND NO.

4
DST NO

[illegible]

Remarks:

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 12857

Well Name & No.	<u>Herald # 2-10</u>	Test No.	<u>4</u>	Date	<u>6-1-2000</u>
Company	<u>R.S. Patrick Oper. Co.</u>	Zone Tested	<u>Ft. Scott</u>		
Address	<u>Liberal Ks. 67905</u>	Elevation	<u>2029</u>	KB	<u>2018</u> GL
Co. Rep / Geo.	<u>Martin Hawley</u>	Cont.	<u>Duke Dely. #5</u>	Est. Ft. of Pay	<u>3</u> Pcr. <u> </u> %
Location: Sec.	<u>10</u>	Twp.	<u>32S</u>	Rge.	<u>19W</u>
				Co.	<u>Comanches</u> State <u>Ks.</u>
No. of Copies	<u>5</u>	Distribution Sheet (Y, N)	<u>N</u>	Turnkey (Y, N)	<u> </u>
				Evaluation (Y, N)	<u> </u>

Interval Tested	<u>5150 - 5172'</u>	Initial Str Wt./Lbs.	<u>76,000</u>	Unseated Str Wt./Lbs.	<u>76,000</u>
Anchor Length	<u>22'</u>	Wt. Set Lbs.	<u>20,000</u>	Wt. Pulled Loose/Lbs.	<u>100,000</u>
Top Packer Depth	<u>5145'</u>	Tool Weight	<u>3100 #</u>		
Bottom Packer Depth	<u>5150'</u>	Hole Size — 7 7/8"	<u>✓</u>	Rubber Size — 6 3/4"	<u>✓</u>
Total Depth	<u>5172'</u>	Wt. Pipe Run	<u>None</u>	Drill Collar Run	<u>120</u>
Mud Wt.	<u>9.0</u> LCM <u>G#</u> Vis. <u>50</u> WL <u>8.8 cc</u>	Drill Pipe Size	<u>4 1/2" X.H.</u>	Ft. Run	<u>5010'</u>
Blow Description	<u>IF: Strong blow, BOB in 3 1/2 mins, ISI: No blow</u>				

FF: Strong blow, BOB in 2 sec. GTS in 5 1/2 mins.
(See gas volume report) FSI: No blow.

Recovery — Total Feet	<u>30</u>	GIP	<u>yes</u>	Ft. in DC	<u>30</u>	Ft. in DP	<u>0</u>
Rec.	<u>30</u>	Feet Of	<u>Dry Mud</u>	%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
Rec.		Feet Of		%gas	%oil	%water	%mud
BHT	<u>116</u>	°F Gravity	<u>N/A</u>	°API D@	<u>2</u>	°F Corrected Gravity	<u>N/A</u>
RW	<u>N.C.</u>	°F Chlorides	<u>8,000</u>	ppm Recovery		Chlorides	<u>8,000</u> ppm System

	AK-1	Alpine					
(A) Initial Hydrostatic Mud	<u>2492</u>	<u>2507</u>	PSI	Recorder No.	<u>2342</u>	T-On Location	<u>2140</u>
(B) First Initial Flow Pressure	<u>9</u>	<u>19</u>	PSI	(depth)	<u>5155'</u>	T-Started	<u>2210</u>
(C) First Final Flow Pressure	<u>9</u>	<u>21</u>	PSI	Recorder No.	<u>10248</u>	T-Open	<u>0016</u>
(D) Initial Shut-In Pressure	<u>1850</u>	<u>1848</u>	PSI	(depth)	<u>5169'</u>	T-Pulled	<u>0446</u>
(E) Second Initial Flow Pressure	<u>14</u>	<u>18</u>	PSI	Recorder No.	<u> </u>	T-Out	<u>0650</u>
(F) Second Final Flow Pressure	<u>14</u>	<u>22</u>	PSI	(depth)	<u> </u>	T-Off Location	<u>0745</u>
(G) Final Shut-in Pressure	<u>1854</u>	<u>1864</u>	PSI	Initial Opening	<u>30</u>	Test	<u>✓ 800</u>
(Q) Final Hydrostatic Mud	<u>2428</u>	<u>2453</u>	PSI	Initial Shut-in	<u>60</u>	Jars	<u>✓ 200</u>
				Final Flow	<u>60</u>	Safety Joint	<u>✓ 50</u>
				Final Shut-in	<u>120</u>	Straddle	<u> </u>
					<u> </u>	Circ. Sub	<u> </u>
					<u> </u>	Sampler	<u> </u>
					<u> </u>	Extra Packer	<u> </u>
					<u> </u>	Elec. Rec.	<u>✓ 150</u>
					<u> </u>	Mileage	<u> </u>
					<u> </u>	Other	<u> </u>
					<u> </u>	TOTAL PRICE \$	<u>✓ 1200</u>

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Approved By

Martin Hawley

Our Representative

Gary Wallman

TRILOBITE TESTING L.L.C.

OPERATOR : R.J.Patrick Oper.Co.

DATE 06-03-000

WELL NAME: Herd #2-10

KB 2029.00 ft

TICKET NO: 12858

DST #5

LOCATION : 10-33s-19w Comanche co KS

GR 2018.00 ft

FORMATION: Mississippi

INTERVAL : 5263.00 To 5356.00 ft

TD 5360.00 ft

TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	10248	10248	2342			PF Fr. 0740 to 0810 hr
SI 60 Range(Psi)	4400.0	4400.0	4995.0	0.0	0.0	IS Fr. 0810 to 0910 hr
SF 60 Clock(hrs)	12 hr	12 hr	batt.			SF Fr. 0910 to 1010 hr
FS 120 Depth(ft)	5357.0	5357.0	5268.0	0.0	0.0	FS Fr. 1010 to 1210 hr

	Field	1	2	3	4	
A. Init Hydro	2647.0	2624.0	2616.0	0.0	0.0	T STARTED 0432 hr
B. First Flow	216.0	200.0	242.0	0.0	0.0	T ON BOTM 0730 hr
B1. Final Flow	141.0	158.0	137.0	0.0	0.0	T OPEN 0740 hr
C. In Shut-in	1903.0	1893.0	1886.0	0.0	0.0	T PULLED 1212 hr
D. Init Flow	177.0	183.0	193.0	0.0	0.0	T OUT 1430 hr
E. Final Flow	125.0	138.0	116.0	0.0	0.0	
F. Fl Shut-in	1881.0	1886.0	1882.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2536.0	2533.0	2470.0	0.0	0.0	Tool Wt. 2100.00 lbs
Inside/Outside	O	O	I	T		Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 90000.00 lbs
						Initial Str Wt 78000.00 lbs
						Unseated Str Wt 80000.00 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 120.00 ft
						D.P. Length 5139.00 ft

RECOVERY

Tot Fluid 80.00 ft of 80.00 ft in DC and 0.00 ft in DP
 0.00 ft of Gas in all fluid free pipe.
 80.00 ft of Drilling mud
 0.00 ft of 100% 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-----10
 SALINITY 9000.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:
 Strong blow. Gas to surface in 3 1/2 minutes. (see gas volume report)
 Initial Shut-In:
 No blow.

Final Flow:
 Strong blow. (see gas volume report)

Final Shut-In:
 No blow.

SAMPLES: Gas sample
 SENT TO:Caraway/Liberal

MUD DATA-----

Mud Type	Chemical
Weight	9.00 lb/cf
Vis.	51.00 S/L
W.L.	10.40 in3
F.C.	0.20 in
Mud Drop N	
Amt. of fill	0.00 ft
Btm. H. Temp.	114.00 F
Hole Condition	Fair
% 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.	Marvin Harvey
Contr.	Duke Drlg.
Rig #	5
Unit #	
Pump T.	LCM 8 #/bl

Test Successful: Y

GAS RECOVERY

COMPANY: R.J.Patrick Oper.Co.

DATE: 06-03-000

WELL NAME: Herd #2-10

KB Elev: 2029.00 ft TICKET #12858 DST #5

WELL LOCATION: 10-33s-19w Comanche Co KS

GR Elev: 2018.00 ft FORMATION: Mississippi

INTERVAL Fr.: 5263.00 To 5356.00 T.D.: 5360.00 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)
10	0.75	21	0	517600.0
20	0.75	18	0	474000.0
30	0.75	17	0	459500.0

***** GAS RATES FOR FLOW #2

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
10	0.75	34	0	706600.0
20	0.75	25	0	575800.0
30	0.75	21	0	517600.0
40	0.75	20	0	503100.0
50	0.75	20	0	503100.0
60	0.75	20	0	503100.0

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Herd #2-10

LOCATION : 10-33s-19w Comanche co KS

TICKET No. 12858 D.S.T. No. 5 DATE 06-03-000

TOTAL TOOL TO BOTTOM OF TOP PACKERS 27

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 36

TOTAL TOOL 63

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands 1 Single Total 61

TOTAL ASSEMBLY 124

D.C. ABOVE TOOLS.Stands2 Single Total 120

D.P. ABOVE TOOLS.Stands82 Single 1 Total 5139

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5383

TOTAL DEPTH 5360

TOTAL DRILL PIPE ABOVE K.B. 23

REMARKS:

Comments:

FLUID SAMPLER DATA (not run)

GAS----- cubic ft
OIL----- ML.
MUD----- ML.
WATER----- ML.
OTHER-----
PRESSURE----- PSI
Rw ----- ohms @ deg. F.
CHLORIDES----- ppm.
GRAVITY----- deg.API

P.O. SUB	
C.O. SUB @ top of tool	5123
S.I. TOOL Sterling	5129
HMV Sterling	5134
JARS bowen	5139
SAFETY JOINT bowen	5141
PACKER Top	5145
PACKER Btm.	5150
DEPTH 5263	
1 ft.	5264
ANCHOR	
perfs	
Alpine rec. @ 5268	
29'perfs & sub to	5293
1 std.pipe & sub to	5355
AK-1 rec. @ 5375	
BULLNOSE 5 ft. perforated T.D.	5360

TEST HISTORY

12858 DST#5 HERD #2-10 R.J. PATRICK OPERATING CO.

Flag Points

t (Min.)	P (PSig)
A: 0.00	2615.77
B: 0.00	241.62
C: 29.00	136.54
D: 60.50	1885.93
E: 0.00	192.52
F: 58.50	116.32
G: 121.00	1881.65
H: 0.00	2469.82

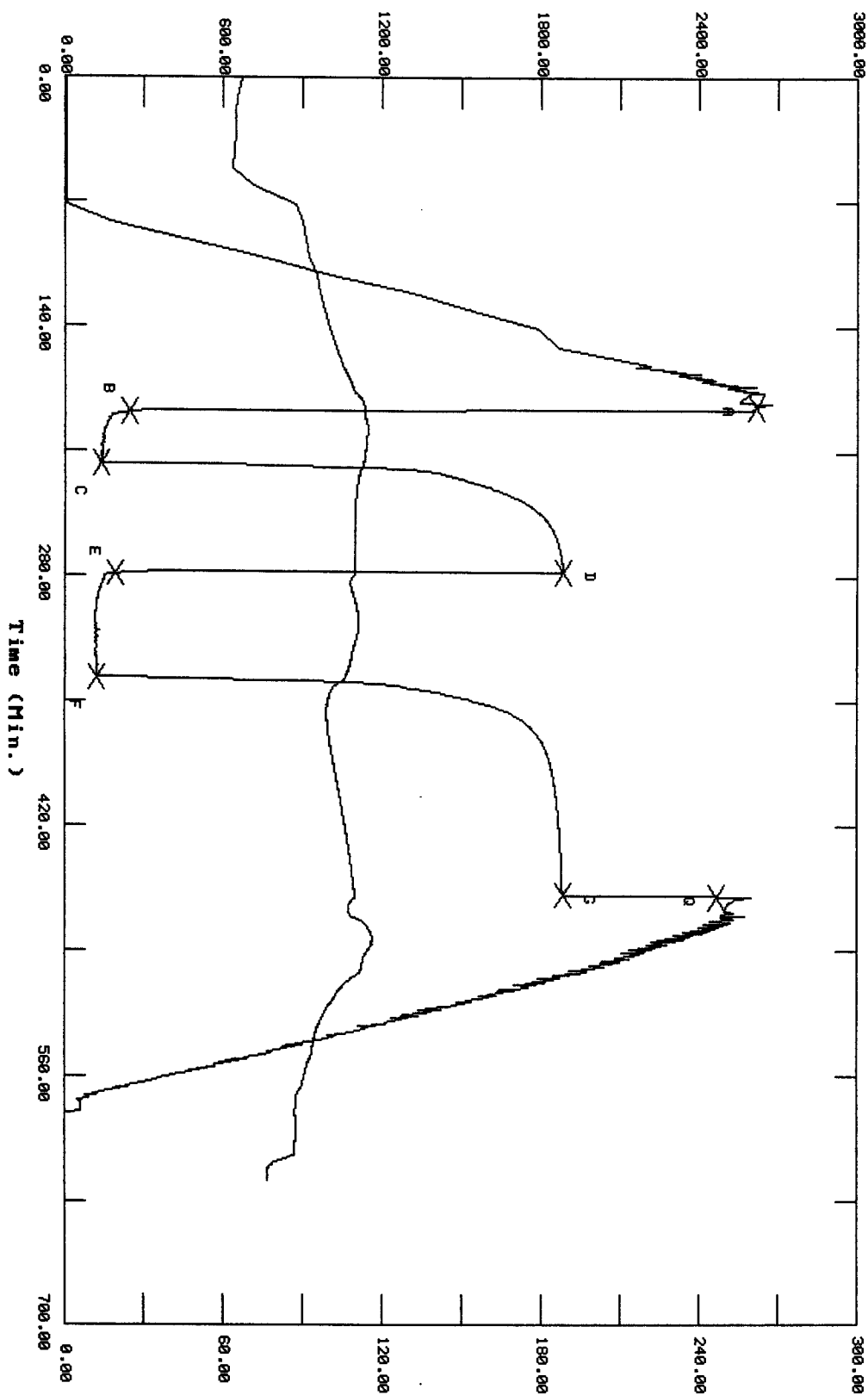
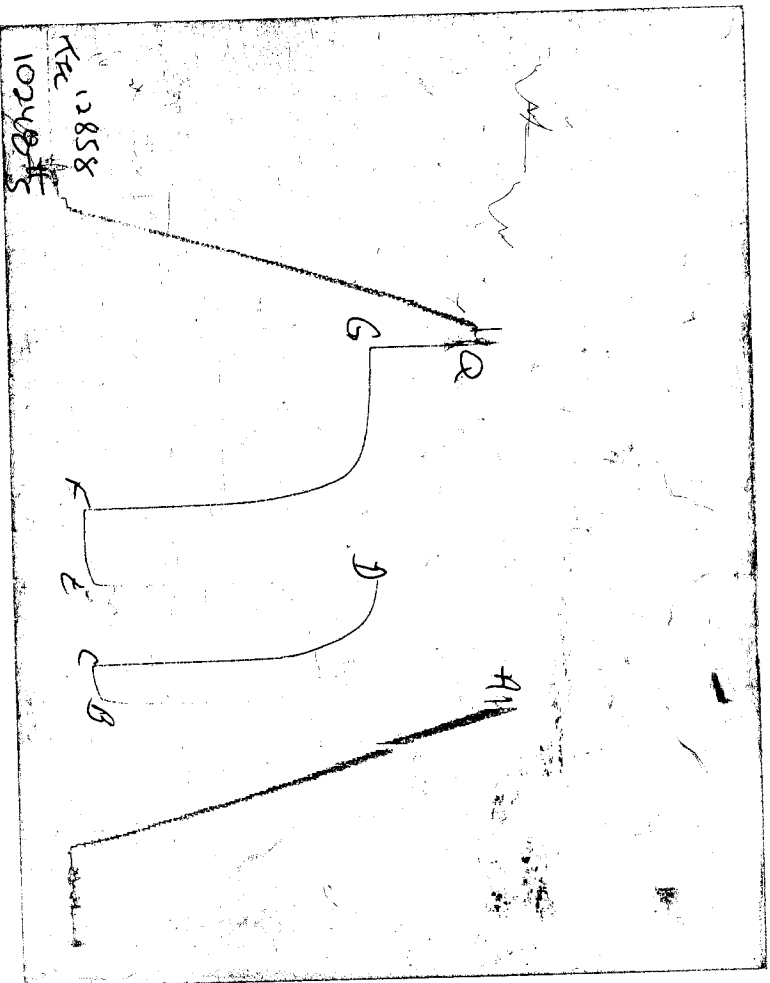


CHART PAGE



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



GAS VOLUME REPORT

R.S. Patrick Oper. Co. G
OPERATOR

Hand # 2-10

WELL NAME AND NO.

5
DST NO.

[illegible]

Remarks:

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

Nº 12858

Well Name & No.	<u>Herd #2-10</u>	Test No.	<u>5</u>	Date	<u>6-3-2000</u>
Company	<u>R.J. Patrick Oper. Co.</u>	Zone Tested	<u>Miss</u>		
Address	<u>Liberal 16 67905</u>	Elevation	<u>2029</u> KB <u>2018</u> GL		
Co. Rep / Geo.	<u>Martin Harvey</u>	Cont.	<u>Duke Dault #5</u>	Est. Ft. of Pay	<u>10</u> Por. <u> </u> %
Location: Sec.	<u>10</u>	Twp.	<u>33^S</u>	Rge.	<u>19^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>5263 - 5360</u>	Initial Str Wt./Lbs.	<u>78,000</u>	Unseated Str Wt./Lbs.	<u>80,000</u>
Anchor Length	<u>97'</u>	Wt. Set Lbs.	<u>29,000</u>	Wt. Pulled Loose/Lbs.	<u>90,000</u>
Top Packer Depth	<u>5258'</u>	Tool Weight	<u>2100 #</u>		
Bottom Packer Depth	<u>5263'</u>	Hole Size — 7 7/8"	<u>✓</u>	Rubber Size — 6 3/4"	<u>✓</u>
Total Depth	<u>5360'</u>	Wt. Pipe Run	<u>None</u>	Drill Collar Run	<u>120</u>
Mud Wt.	<u>9.0</u> LCM <u>8^{II}</u> Vis. <u>S1</u> WL <u>10.4 cc</u>	Drill Pipe Size	<u>4 1/2" x H</u>	Ft. Run	<u>5139</u>
Blow Description	<u>IF: Strong blow. GTS in 3 1/2 mins. (see gas volume report)</u> <u>ISI: No blow.</u> <u>FF: Strong blow. (see gas volume report) FSI: No blow.</u>				

Recovery — Total Feet	<u>80</u> Fluid GIP <u>yes</u>	Ft. in DC	<u>80</u>	Ft. in DP	<u>0</u>
Rec.	<u>80</u> Feet Of <u>Drig. Mud</u>	%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
Rec.	Feet Of	%gas	%oil	%water	%mud
BHT	<u>114</u> °F Gravity <u>N/A</u> °API D@ <u> </u> °F Corrected Gravity <u>N/A</u> °API				
RW	<u>N.C.</u> @ <u> </u> °F Chlorides <u>9,000</u> ppm Recovery Chlorides <u>9,000</u> ppm System				

(A) Initial Hydrostatic Mud	<u>2447</u> AK-1 <u>2616</u> Alpine <u>2342</u> PSI Recorder No. <u>2342</u> T-On Location <u>0350</u>
(B) First Initial Flow Pressure	<u>216</u> PSI (depth) <u>5268'</u> T-Started <u>0430</u>
(C) First Final Flow Pressure	<u>141</u> PSI Recorder No. <u>10248</u> T-Open <u>0740</u>
(D) Initial Shut-In Pressure	<u>1903</u> PSI (depth) <u>5357'</u> T-Pulled <u>1210</u>
(E) Second Initial Flow Pressure	<u>177</u> PSI Recorder No. <u> </u> T-Out <u>1430</u>
(F) Second Final Flow Pressure	<u>125</u> PSI (depth) <u> </u> T-Off Location <u>1520</u>
(G) Final Shut-in Pressure	<u>1881</u> PSI Initial Opening <u>30</u> Test <u>✓</u> <u>800</u>
(Q) Final Hydrostatic Mud	<u>2536</u> PSI Initial Shut-in <u>60</u> Jars <u>✓</u> <u>200</u>
	Final Flow <u>60</u> Safety Joint <u>✓</u> <u>50</u>
	Final Shut-in <u>120</u> Straddle <u> </u>
	<u>4</u> Circ. Sub <u> </u>
	<u>1</u> Sampler <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 Martin Harvey

Our Representative

Extra Packer
Elec. Rec. ✓ 150

Mileage
Other BY ✓ 30
TOTAL PRICE \$ ✓ 1230.00

TRILOBITE TESTING L.L.C.

OPERATOR : R.J.Patrick Oper.Co.

DATE 06-04-000

WELL NAME: Herd #2-10

KB 2029.00 ft

TICKET NO: 12859 DST #6

LOCATION : 10-33s-19w Comanche co KS

GR 2018.00 ft

FORMATION: Mississippi

INTERVAL : 5363.00 To 5442.00 ft

TD 5442.00 ft

TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	10248	10248	2342			PF Fr. 0615 to 0645 hr
SI 60 Range(Psi)	4400.0	4400.0	4995.0	0.0	0.0	IS Fr. 0645 to 0745 hr
SF 60 Clock(hrs)	12 hr	12 hr	batt.			SF Fr. 0745 to 0845 hr
FS 120 Depth(ft)	5439.0	5439.0	5370.0	0.0	0.0	FS Fr. 0845 to 1045 hr

	Field	1	2	3	4	
A. Init Hydro	2667.0	2667.0	2667.0	0.0	0.0	T STARTED 0354 hr
B. First Flow	46.0	57.0	55.0	0.0	0.0	T ON BOTM 0607 hr
B1. Final Flow	69.0	66.0	72.0	0.0	0.0	T OPEN 0615 hr
C. In Shut-in	1701.0	1694.0	1706.0	0.0	0.0	T PULLED 1047 hr
D. Init Flow	69.0	88.0	73.0	0.0	0.0	T OUT 1325 hr
E. Final Flow	110.0	117.0	114.0	0.0	0.0	
F. Fl Shut-in	1701.0	1697.0	1701.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2591.0	2549.0	2626.0	0.0	0.0	Tool Wt. 2100.00 lbs
Inside/Outside	O	O	I	T		Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 90000.00 lbs
						Initial Str Wt 76000.00 lbs
						Unseated Str Wt 78000.00 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 120.00 ft
						D.P. Length 5233.00 ft

RECOVERY

Tot Fluid 205.00 ft of 120.00 ft in DC and 85.00 ft in DP
 0.00 ft of Gas in all fluid free pipe.
 85.00 ft of Slightly oil cut mud
 0.00 ft of 1% oil 99% mud
 120.00 ft of Slightly oil cut muddy water
 0.00 ft of 1% oil 54% water 45% mud
 0.00 ft of
 0.00 ft of Rw .063 ohms @100 degrees F.
 0.00 ft of EST.FT. of PAY-----14
 SALINITY 87000.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Intial Flow:
 Strong blow. Bottom of bucket in 2-3 seconds.
 Initial Shut-In:
 No blow.

Final Flow:

Strong blow. Gas to surface in 11 minutes. (see gas volume report)

Final Shut-In:

Weak blow. 1/2 - 2".

SAMPLES: none

SENT TO:Caraway/Liberal

MUD DATA-----

Mud Type	Chemical
Weight	9.00 lb/cf
Vis.	51.00 S/L
W.L.	10.40 in3
F.C.	0.20 in
Mud Drop N	

Amt. of fill	0.00 ft
Btm. H. Temp.	126.00 F
Hole Condition	Fair
% Porosity	10.00
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.	Marvin Harvey
Contr.	Duke Drlg.
Rig #	5
Unit #	
Pump T.	LCM 6 #/bl

Test Successful: Y

GAS RECOVERY

COMPANY: R.J.Patrick Oper.Co.

DATE: 06-04-000

WELL NAME: Herd #2-10

KB Elev: 2029.00 ft TICKET #12859 DST #6

WELL LOCATION: 10-33s-19w Comanche co KS

GR Elev: 2018.00 ft FORMATION: Mississippi

INTERVAL Fr.: 5363.00 To 5442.00 T.D.: 5442.00 ft TEST TYPE: CONVENTIONAL

GAS RECOVERY MEASURED WITH Adjusting Choke

***** GAS RATES FOR FLOW #2

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
15	0.25	0	10	5320.0
20	0.25	0	10	5320.0
30	0.25	0	9	5050.0
40	0.25	0	8	4760.0
50	0.25	0	8	4760.0
60	0.25	0	8	4760.0

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Herd #2-10

LOCATION : 10-33s-19w Comanche co KS

TICKET No. 12859 D.S.T. No. 6 DATE 06-04-000

TOTAL TOOL TO BOTTOM OF TOP PACKERS 27

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 18

TOTAL TOOL 45

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands 1 Single Total 61

TOTAL ASSEMBLY 106

D.C. ABOVE TOOLS.Stands2 Single Total 120

D.P. ABOVE TOOLS.Stands84 Single Total 5233

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5459

TOTAL DEPTH 5442

TOTAL DRILL PIPE ABOVE K.B. 17

REMARKS:

Comments:

FLUID SAMPLER DATA (not run)

GAS----- cubic ft
 OIL----- ML.
 MUD----- ML.
 WATER----- ML.
 OTHER-----
 PRESSURE----- PSI
 Rw ----- ohms @ deg. F.
 CHLORIDES----- ppm.
 GRAVITY----- deg.API

P.O. SUB	
C.O. SUB @ top of tool	5336
S.I. TOOL Sterling	5342
HMV Sterling	5347
JARS bowen	5352
SAFETY JOINT bowen	5354
PACKER Top	5358
PACKER Btm.	5363
DEPTH 1 ft.	5364
ANCHOR	
perfs	
Alpine rec. @ 5370	
11'perfs & sub to	5375
1 std.pipe & sub to	5437
AK-1 rec. @ 5439	
BULLNOSE 5 ft. perforated T.D.	5442

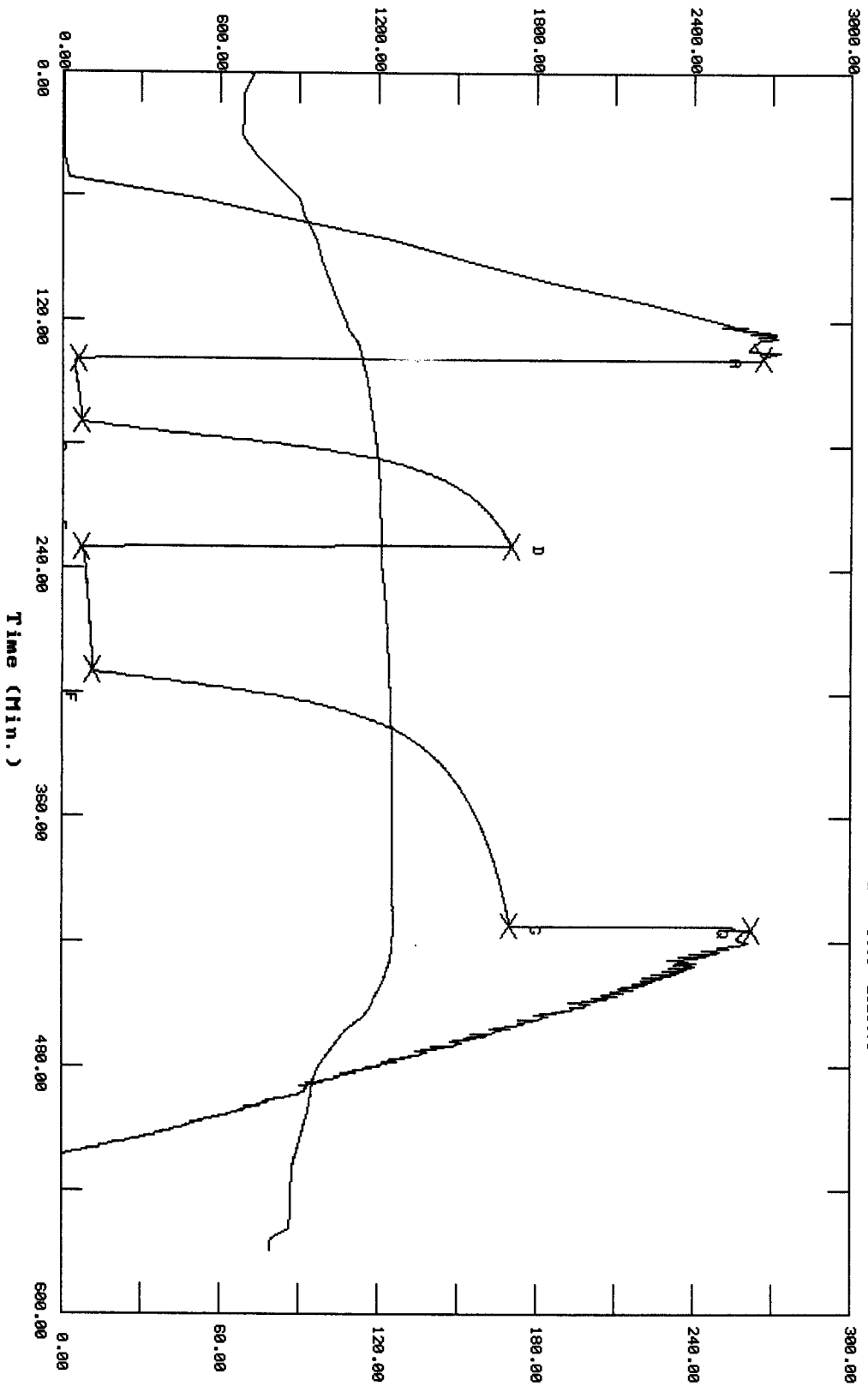
TEST HISTORY

12859 DST#6 HERD #2-10 R.J. PATRICK OPERATING CO.

Flag Points

t (Min.) P (PSig)

A:	0.00	2666.63
B:	0.00	54.96
C:	30.00	72.17
D:	60.00	1706.50
E:	0.00	72.59
F:	59.50	114.22
G:	122.00	1700.62
H:	0.00	2625.76

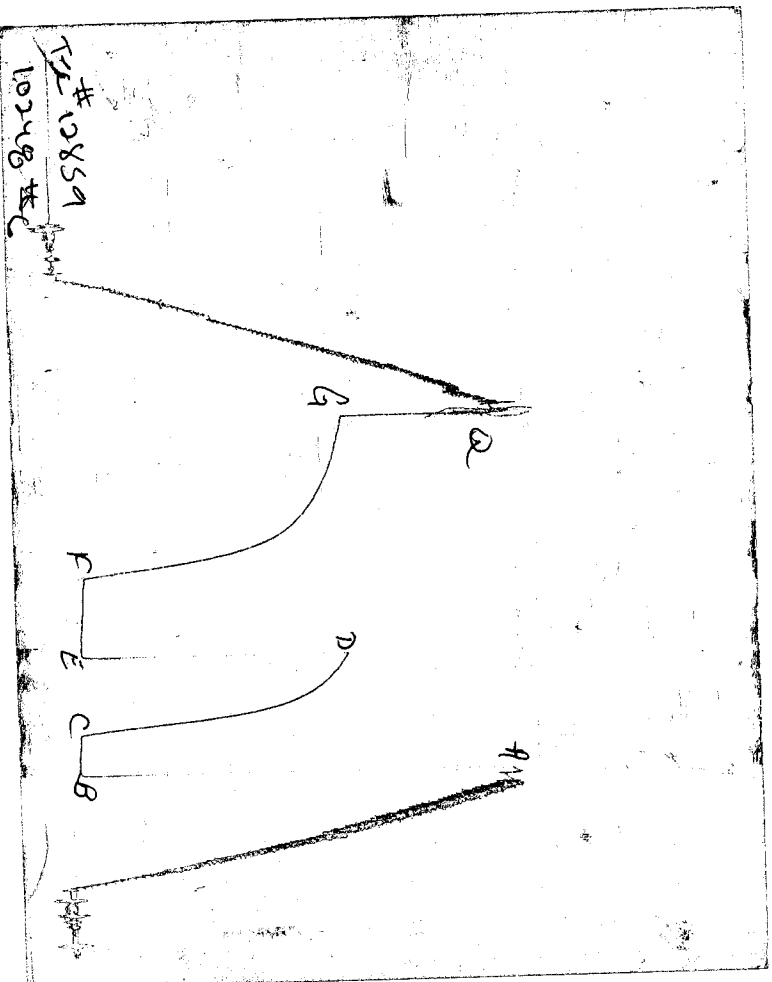


Pressure (PSig)

Temperature (DEG F)

Time (Min.)

CHART PAGE



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



GAS VOLUME REPORT

R. J. Patrick Oper. Co.

Hand # 2-10

WELL NAME AND NO.

DST NO

[illegible]

Remarks:

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

Nº 12859

Well Name & No.	<u>Herd # 2-10</u>	Test No.	<u>6</u>	Date	<u>6-4-2000</u>
Company	<u>R.J. Patrick Oper Co.</u>	Zone Tested	<u>Miss</u>		
Address	<u>Liberal KS 67905</u>	Elevation	<u>2029</u>	KB	<u>2018</u> GL
Co. Rep / Geo.	<u>Maurin Harvey</u>	Cont.	<u>Duke Dalg #5</u>	Est. Ft. of Pay	<u>14</u> Por. <u>%</u>
Location: Sec.	<u>10</u>	Twp.	<u>33 S</u>	Rge.	<u>19 W</u> Co. <u>Comanche</u> State <u>KS</u>
No. of Copies	<u>5</u>	Distribution Sheet (Y, N)	<u>N</u>	Turnkey (Y, N)	<u></u> Evaluation (Y, N) <u></u>

Interval Tested 5363-5442' Initial Str Wt./Lbs. 76,000 Unseated Str Wt./Lbs. 78,000
Anchor Length 79' Wt. Set Lbs. 20,000 Wt. Pulled Loose/Lbs. 90,000
Top Packer Depth 5358' Tool Weight 2100 II
Bottom Packer Depth 5363' Hole Size — 7 7/8" ✓ Rubber Size — 6 3/4" ✓
Total Depth 5442' Wt. Pipe Run None Drill Collar Run 120'
Mud Wt. 9.0 LCM 6# Vis. SL WL 10.4 cc. Drill Pipe Size 4 1/2" X.H. Ft. Run 5233
Blow Description IF: Strong blow. BOB in 2-3 secs. ISS: No blow

FF: Strong blow. GTS in 11 mins. (see gas volume report)
FSI: Weak blow. 1/2 - 2"

Recovery — Total Feet	<u>205</u>	GIP	<u>yes</u>	Ft. in DC	<u>120</u>	Ft. in DP	<u>85</u>
Rec.	<u>85</u>	Feet Of	<u>S.O.C.M.</u>	%gas	<u>1</u>	%oil	<u>%water 99 %mud</u>
Rec.	<u>120</u>	Feet Of	<u>S.O.C.M.W.</u>	%gas	<u>1</u>	%oil	<u>54 %water 45 %mud</u>
Rec.		Feet Of		%gas		%oil	<u>%water %mud</u>
Rec.		Feet Of		%gas		%oil	<u>%water %mud</u>
Rec.		Feet Of		%gas		%oil	<u>%water %mud</u>
BHT	<u>126</u>	°F Gravity	<u>N/A</u>	°API D@	<u>✓</u>	°F Corrected Gravity	<u>N/A</u> °API
RW	<u>.063</u>	@	<u>100</u>	°F Chlorides	<u>87,000</u>	ppm Recovery	<u>9,000</u> ppm System

(A) Initial Hydrostatic Mud	<u>AK-1 2667</u>	<u>Alpine 2667</u>	PSI	Recorder No.	<u>2342</u>	T-On Location	<u>0325</u>
(B) First Initial Flow Pressure	<u>46</u>	<u>55</u>	PSI	(depth)	<u>5375'</u>	T-Started	<u>0354</u>
(C) First Final Flow Pressure	<u>69</u>	<u>72</u>	PSI	Recorder No.	<u>10248</u>	T-Open	<u>0615</u>
(D) Initial Shut-In Pressure	<u>1701</u>	<u>1706</u>	PSI	(depth)	<u>5439'</u>	T-Pulled	<u>1047</u>
(E) Second Initial Flow Pressure	<u>69</u>	<u>73</u>	PSI	Recorder No.	<u>✓</u>	T-Out	<u>1325</u>
(F) Second Final Flow Pressure	<u>110</u>	<u>114</u>	PSI	(depth)	<u>✓</u>	T-Off Location	<u>1945</u>
(G) Final Shut-in Pressure	<u>1701</u>	<u>1701</u>	PSI	Initial Opening	<u>30</u>	Test	<u>✓ 800⁰⁰</u>
(Q) Final Hydrostatic Mud	<u>2591</u>	<u>2626</u>	PSI	Initial Shut-in	<u>60</u>	Jars	<u>✓ 200⁰⁰</u>
				Final Flow	<u>40</u>	Safety Joint	<u>✓ 50⁰⁰</u>
				Final Shut-in	<u>120</u>	Straddle	<u>✓</u>
					<u>4</u>	Circ. Sub	<u>✓</u>
						Sampler	<u>✓</u>
						Extra Packer	<u>✓</u>
						Elec. Rec.	<u>✓ 150⁰⁰</u>
						Mileage	<u>✓</u>
						Other	<u>✓</u>
						TOTAL PRICE \$	<u>✓ 1200⁰⁰</u>

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Approved By

Our Representative

Maurin Harvey
Gay Twining