

Well Name: Home Royalty A-4
Company: Helmerich & Payne
Location: 17-31s-34w
Seward county Kansas
Date: 12-14-99

TRILOBITE TESTING L.L.C.

OPERATOR : Helmerich & Payne

DATE 12-6-99

WELL NAME: Home Royalty A-4

KB 2868.00 ft

TICKET NO: 12015 DST #1

LOCATION : 17-31s-34w Seward co KS

GR 2857.00 ft

FORMATION: KC "B"

INTERVAL : 4586.00 To 4630.00 ft

TD 4630.00 ft

TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 15 Rec.	11058	11058	2346			PF Fr. 2300 to 2315 hr
SI 60 Range(Psi)	4475.0	4475.0	4995.0	0.0	0.0	IS Fr. 2315 to 1215 hr
SF 60 Clock(hrs)	12	12	alpin			SF Fr. 1215 to 0115 hr
FS 180 Depth(ft)	4627.0	4627.0	4593.0	0.0	0.0	FS Fr. 0115 to 0415 hr

	Field	1	2	3	4	
A. Init Hydro	2255.0	2229.0	2216.0	0.0	0.0	T STARTED 2000 hr
B. First Flow	266.0	260.0	181.0	0.0	0.0	T ON BOTM 2257 hr
B1. Final Flow	277.0	260.0	244.0	0.0	0.0	T OPEN 2300 hr
C. In Shut-in	1297.0	1295.0	1278.0	0.0	0.0	T PULLED 0415 hr
D. Init Flow	388.0	384.0	308.0	0.0	0.0	T OUT 1055 hr
E. Final Flow	669.0	658.0	632.0	0.0	0.0	
F. Fl Shut-in	1286.0	1275.0	1262.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2244.0	2219.0	2181.0	0.0	0.0	Tool Wt. 5000.00 lbs
Inside/Outside	i	i	o			Wt Set On Packer 26000.00 lbs
						Wt Pulled Loose 90000.00 lbs
						Initial Str Wt 64000.00 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 3.50 in
						D.C. Length 291.00 ft
						D.P. Length 4329.00 ft

RECOVERY

Tot Fluid 2976.00 ft of 291.00 ft in DC and 2685.00 ft in DP
 2852.00 ft of Clean gassy oil (reversed out)
 0.00 ft of 60% gas 40% oil
 124.00 ft of Under circulation sub heavy oil cut gassy
 0.00 ft of drilling mud
 0.00 ft of 30% oil 35% gas 35% mud
 0.00 ft of
 0.00 ft of
 0.00 ft of

SALINITY 1300.00 P.P.M. A.P.I. Gravity 43.00

BLOW DESCRIPTION

Initial Flow:

Bottom of bucket in 1/2 minute.
 Gas to surface in 4 1/2 minutes.

Initial Shut-In:

Bleed off throughout.

Final Flow:

Bottom of bucket at open. Gauging gas
 Oil mist 56 minutes into open.

Final Shut-In:

Bleed off throughout. Reached fluid
 at 5:15A.M. Left hanging until
 daylight by order of geologist.

SAMPLES: gas

SENT TO: Caraway, Liberal, Ks

MUD DATA-----

Mud Type	Chemical
Weight	9.10 lb/cf
Vis.	46.00 S/L
W.L.	9.60 in3
F.C.	0.00 in
Mud Drop N	

Amt. of fill	0.00 ft
Btm. H. Temp.	124.00 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	Shane McBride
Co. Rep.	Brad Rine
Contr.	Cheyenne
Rig #	3
Unit #	
Pump T.	

Test Successful: Y

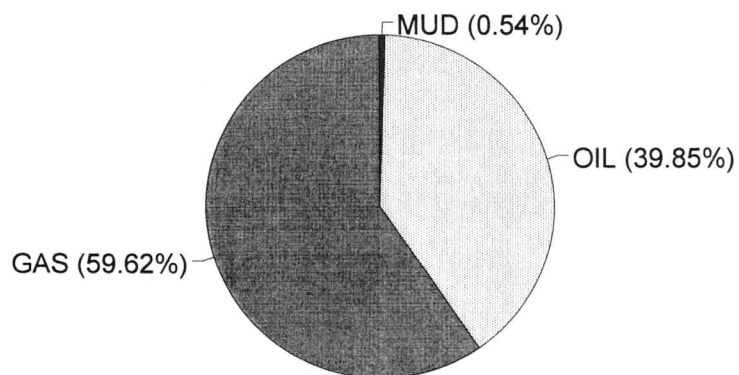
CALCULATED RECOVERY ANALYSIS

DST 1

TICKET 12015

SAMPLE		TOTAL	GAS		OIL		WATER		MUD	
#		FEET	%	FEET	%	FEET	%	FEET	%	FEET
DRILL	1	2685	60	1611	40	1074		0		0
PIPE	2	0	0	0	0	0	0	0		0
	3	0	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0	0	0
WEIGHT	1	0	0	0	0	0	0	0	0	0
PIPE	2	0	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0
DRILL	1	167	60	100.2	40	66.8	0	0	0	0
COLLARS	2	124	35	43.4	30	37.2	0	0	35	43.4
	3	0	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0
TOTAL		2976	0	1754.6	0	1178	0	0	0	43.4

			HRS OPEN		BBL/DAY
BBL OIL=	15.78084	*	1.25	=	302.9921
BBL WATER=	0	*		=	0
BBL MUD=	0.212226				
BBL GAS =	23.61062				



GAS RECOVERY

COMPANY: Helmerich & Payne

DATE: 12-6-99

WELL NAME: Home Royalty A-4

KB Elev: 2868.00 ft TICKET #12015 DST #1

WELL LOCATION: 17-31s-34w Seward co KS

GR Elev: 2857.00 ft FORMATION: KC "B"

INTERVAL Fr.: 4586.00 To 4630.00 T.D.: 4630.00 ft TEST TYPE: CONVENTIONAL

GAS RECOVERY MEASURED WITH merla

***** GAS RATES FOR FLOW #1

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
5	0.75	4	0	156.0
10	0.75	5	0	175.0
15	0.75	2	0	93.0

***** GAS RATES FOR FLOW #2

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
10	0.50	0	2	8.9
20	0.25	0	22	7.9
30	0.25	0	14	6.3
40	0.25	0	10	5.3
50	0.25	0	7	4.4
60	0.25	0	5	3.7

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Home Royalty A-4

LOCATION : 17-31s-34w Seward co KS

TICKET No. 12015 D.S.T. No. 1 DATE 12-6-99

TOTAL TOOL TO BOTTOM OF TOP PACKERS 30

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 44

TOTAL TOOL 74

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single 1 Total 31

TOTAL ASSEMBLY 105

D.C. ABOVE TOOLS.Stands5 Single Total 291

D.P. ABOVE TOOLS.Stands69 Single 1 Total 4267

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4663

TOTAL DEPTH 4630

TOTAL DRILL PIPE ABOVE K.B. 33

REMARKS:

Gas: .6 cubic ft.

Oil: 2600 ml

Water:

Mud:

Total: 2600 ml oil - .6 cubic ft gas

Pressure 560 psi.

P.O. SUB	
C.O. SUB 1'	4555
S.I. TOOL 5'	4561
sampler 3'	4564
HMV 5'	4569
JARS 5'	4574
SAFETY JOINT 2'	4576
PACKER top	4581
PACKER bottom	4586
DEPTH 4586	
1'	4587
ANCHOR 5' perf	4592
1' c.o.	4593
alpine recorder	4593
31' drillpipe	4624
1' c.o.	4625
ak-1 recorder	4627
BULLNOSE 5' bullplug	4630
T.D.	4630



P.O. Box 362 • Hays, Kansas 67601 • (913) 625-4778

GAS VOLUME REPORT

Helmerich & Payne
OPERATOR

Home Royalty A-51

DST NO

1st open

2nd open

[illegible]

Remarks: ~~Gas~~ to Surface in $4\frac{1}{2}$ min

Brown Bright Orange, Cih ~~gray~~^{mist} 50 min into 2nd flow.

TRILOBITE TESTING L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 12015 Date 12-6-99
Company Name Helmreich & Payne
Lease Home Royalty A-4 Test No. 1
County Seward, KS Sec. 17 Twp. 31s Rng. 34w

SAMPLER RECOVERY

Gas .6 cft
Oil 2600 ML
Mud _____ ML
Water _____ ML
Other _____ ML
Pressure 560 PSI
Total mh 2600-oil .6 cft gas

PIT MUD ANALYSIS

Chlorides 1300 ppm.
Resistivity _____ ohms @ _____ F
Viscosity 46
Mud Weight 9.1
Filtrate 9.6
Other LCM #5

SAMPLER ANALYSIS

Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.
Gravity 43 corrected @ 60 F

PIPE RECOVERY

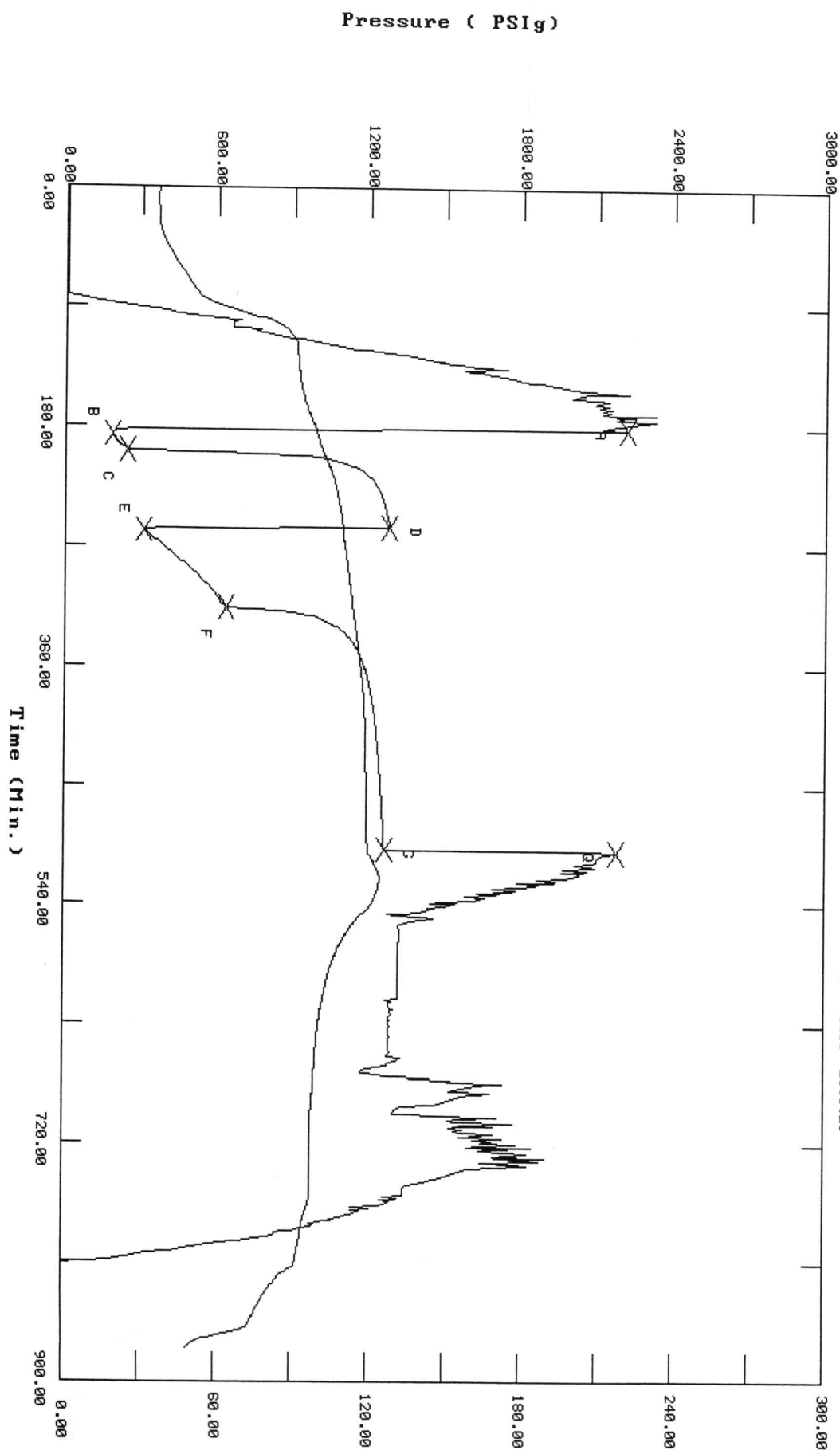
TOP
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.
MIDDLE
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.
BOTTOM
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.

TEST HISTORY

12015 DST#1 Home Royalty A-4 Helmerich & Payne

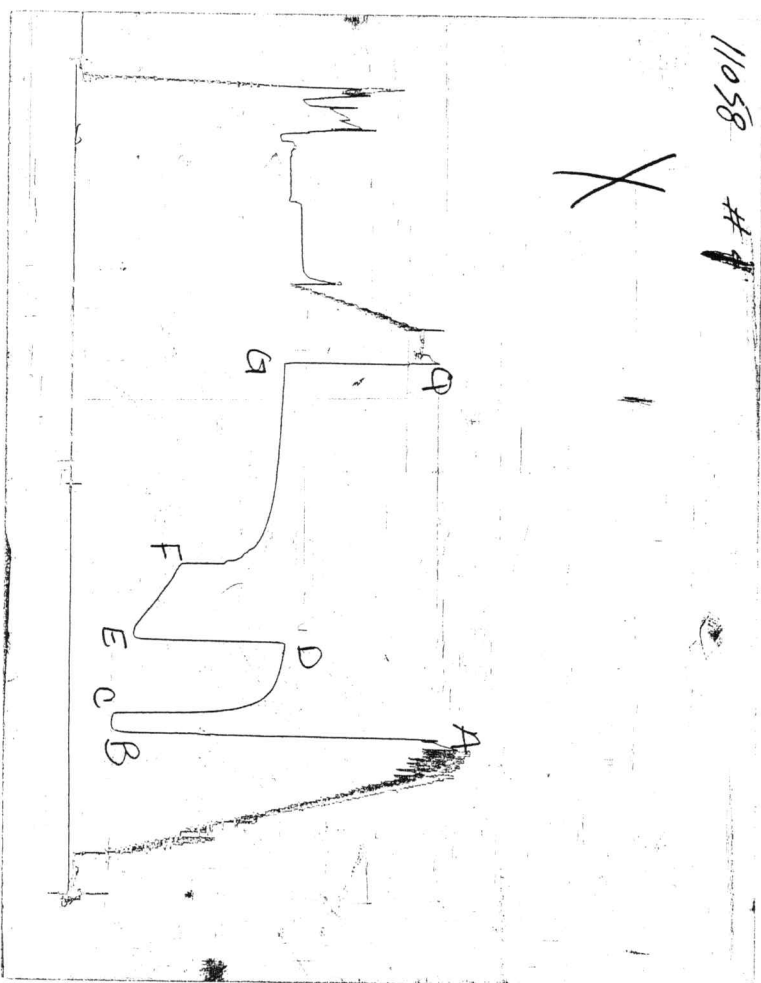
Flag Points

t(Min.)	Pk PSig)
R: 0.00	2216.70
B: 0.00	181.09
C: 12.00	244.32
D: 57.00	1278.02
E: 0.00	308.60
F: 58.00	632.08
G: 182.00	1262.38
H: 0.00	2181.23



Temperature (DEG F)

CHART PAGE



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

NATURAL GAS ANALYSIS REPORT

Sampled by:
 Trilobite Testing, L. L. C.
 Hays, Kansas
 Scott City, Kansas
 Phone: 800-728-5369
 Fax: 913-625-5620

Analyzed by:
 Caraway Analytical, Inc
 P. O. Box 2137
 Liberal, Kansas 67905
 Phone: 316-624-5389
 Fax: 316-626-7108

Lab Number: 996357
 Sample From: Home Royalty A-4
 Producer: Helmerich & Payne
 Date:
 Time:
 Sampler:
 Source:

Analyzed: 12/14/99
 Pressure:
 Temperature:
 Location: 17-31-34
 County: Seward
 State: Kansas
 Formation: KC 'B'

	Mole %	GPM
Helium	He: 0.031	0.000
Hydrogen	H2: 0.002	0.000
Oxygen	O2: 0.000	0.000
Nitrogen	N2: 5.701	0.000
Carbon Dioxide	CO2: 0.069	0.000
Methane	C1: 56.651	0.000
Ethane	C2: 11.914	3.186
Propane	C3: 11.552	3.183
Iso Butane	iC4: 1.854	0.607
Normal Butane	nC4: 4.786	1.509
Iso Pentane	iC5: 1.355	0.496
Normal Pentane	nC5: 1.839	0.666
Hexanes Plus	C6+: 4.246	1.852

TOTAL: 100.000 11.499
 Z Fact: 0.9930
 SP.GR.: 1.0266
 BTU (SAT): 1622.4 @ 14.73 psia
 BTU (DRY): 1651.1 @ 14.73 psia
 OCTANE RATING: 106.2

COMMENTS:

0.000

Well Name Home Royalty
DST Number 1
Recorder Number 11058

A:	<u>1.986</u>	<u>2229</u>
B:	<u>.234</u>	<u>260</u>
C:	<u>.234</u>	<u>260</u>
D:	<u>1.158</u>	<u>1295</u>
E:	<u>.346</u>	<u>384</u>
F:	<u>.590</u>	<u>1058</u>
G:	<u>1.140</u>	<u>1275</u>
Q:	<u>1.978</u>	<u>2219</u>