

Well Name: Dale #2
Company: Midco Exploration Inc.
Location: 34-32s-18w
Comanche County Kansas
Date: 11-10-98

TRILOBITE TESTING L.L.C.

OPERATOR : Midco Expl.Inc.
 WELL NAME: Dale #2
 LOCATION : 34-32s-18w Comanche co KS
 INTERVAL : 5060.00 To 5110.00 ft

DATE 11-04-98
 KB 2034.00 ft
 GR 2021.00 ft
 TD 5110.00 ft
 TICKET NO: 11565 DST #1
 FORMATION: Cherokee
 TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30	Rec.	10248	10248	2342		PF Fr. 0244 to 0314 hr
SI 60	Range(Psi)	4400.0	4400.0	4995.0	0.0	0.0 IS Fr. 0314 to 0414 hr
SF 60	Clock(hrs)	12 hr	12 hr	batt.		SF Fr. 0414 to 0514 hr
FS 60	Depth(ft)	5107.0	5107.0	5075.0	0.0	0.0 FS Fr. 0514 to 0614 hr

	Field	1	2	3	4	
A. Init Hydro	2468.0	2487.0	2486.0	0.0	0.0	T STARTED 0023 hr
B. First Flow	200.0	224.0	194.0	0.0	0.0	T ON BOTM 0230 hr
B1. Final Flow	193.0	211.0	184.0	0.0	0.0	T OPEN 0244 hr
C. In Shut-in	1563.0	1558.0	1580.0	0.0	0.0	T PULLED 0615 hr
D. Init Flow	157.0	172.0	145.0	0.0	0.0	T OUT 0845 hr
E. Final Flow	200.0	204.0	193.0	0.0	0.0	
F. Fl Shut-in	1194.0	1191.0	1208.0	0.0	0.0	
G. Final Hydro	2404.0	2426.0	2396.0	0.0	0.0	
Inside/Outside	0	0	I	T		

TOOL DATA-----

Tool Wt.	2100.00 lbs
Wt Set On Packer	20000.00 lbs
Wt Pulled Loose	98000.00 lbs
Initial Str Wt	88000.00 lbs
Unseated Str Wt	89000.00 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	294.00 ft
D.P. Length	4763.00 ft

RECOVERY

Tot Fluid 386.00 ft of 294.00 ft in DC and 92.00 ft in DP
 4671.00 ft of Gas in pope.
 386.00 ft of Drilling mud
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of Rw n.c. ohms @ degrees F.
 0.00 ft of EST.FT. of PAY-----6
 SALINITY 7000.00 P.P.M. A.P.I. Gravity 0.00

MUD DATA-----

Mud Type	Chemical
Weight	9.20 lb/c
Vis.	47.00 S/L
W.L.	13.20 in3
F.C.	0.20 in
Mud Drop N	

BLOW DESCRIPTION

Initial Flow:
 Strong blow bottom of bucket in
 1 min.
 Initial Shut-in:
 Weak blow. (1 - 2")
 Final Flow:
 Strong blow bottom of bucket in
 1-2 secs.
 Final Shut-in:
 Gas to surface in 30 secs. in to
 1-2" blow back

Amt. of fill	0.00 ft
Btm. H. Temp.	116.00 F
Hole Condition	Good
% 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.	Rice /Williams
Contr.	Duke Drlg.
Rig #	7
Unit #	
Pump T.	LCM 0#/bl

SAMPLES: None
 SENT TO: Caraway/Liberal

Test Successful: Y

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Dale #2

LOCATION : 34-32s-18w Comanche co KS

TICKET No. 11565 D.S.T. No. 1 DATE 11-04-98

TOTAL TOOL TO BOTTOM OF TOP PACKERS 27

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 19

TOTAL TOOL 46

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single Total

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

TOTAL ASSEMBLY 77

D.C. ABOVE TOOLS.Stands 5 Single Total 294

D.P. ABOVE TOOLS.Stands 76 Single 1 Total 4763

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5134

TOTAL DEPTH 5110

TOTAL DRILL PIPE ABOVE K.B. 24

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

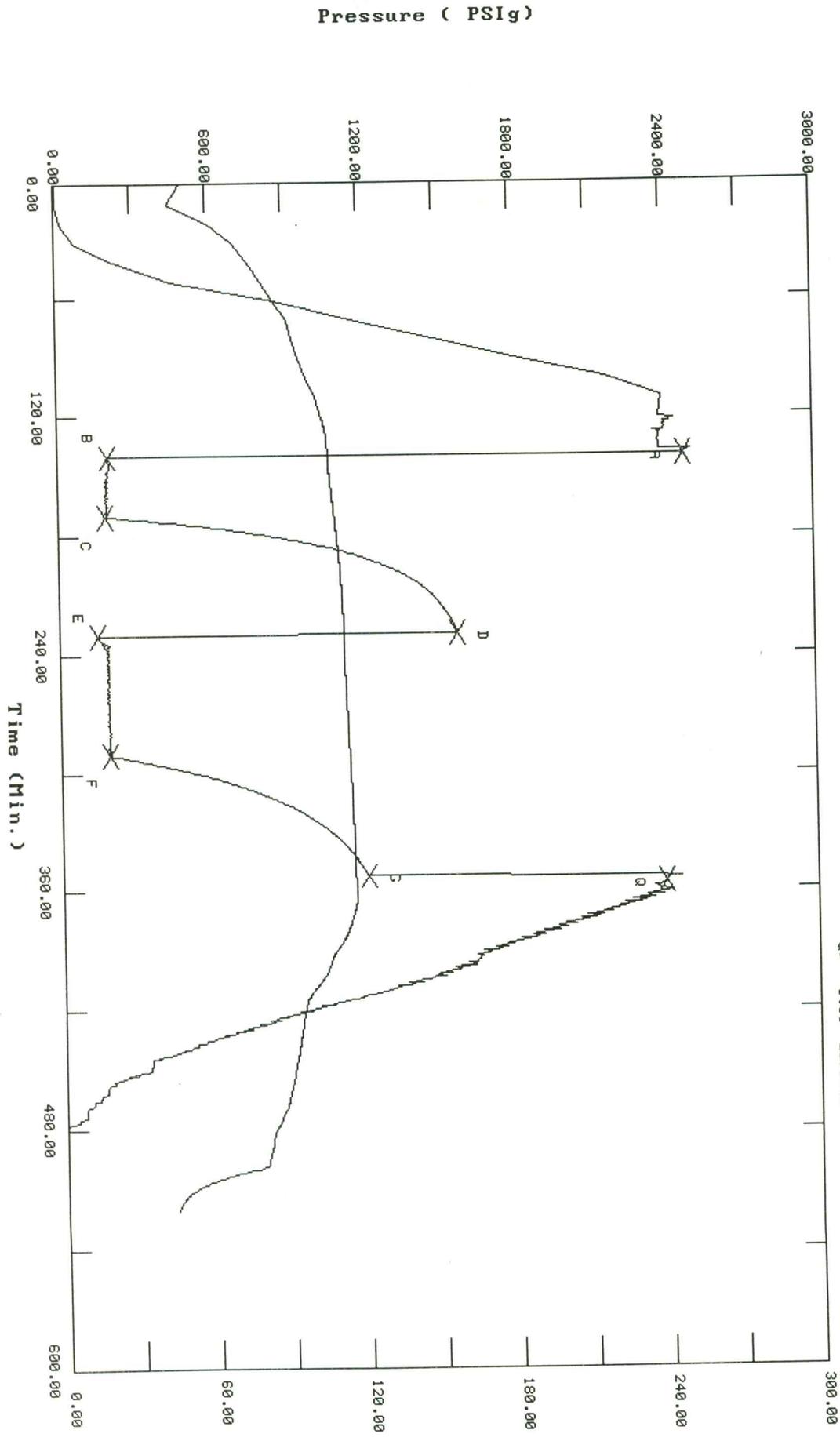
┌	P.O. SUB	
├	C.O. SUB @ top of tool	5033
┌	S.I. TOOL Sterling	5039
├		
┌	HMV Sterling	5044
├		
┌	JARS Bowen	5049
├		
┌	SAFETY JOINT Bowen	5051
├	PACKER Top	5055
├	PACKER Btm.	5060
├	DEPTH 5060	
├	STUBB 1 ft.	5061
├	ANCHOR	
├	11'perfs to	5072
├		
├	Alpine rec. @	5075
├		
├	T.C.	
├	DEPTH	
├		
├	1 jt. pipe & subs	
├	to	5105
├		
├	AK-1 rec. @	5107
├		
├	BULLNOSE 5 ft. perforated	5110
├	T.D.	

TEST HISTORY

11565 DST#1 DALE #2 MIDCO EXPL. INC.

Flag Points
 t (Min.) P (PSig)

R:	0.00	2485.93
B:	0.00	194.45
C:	30.00	183.63
D:	59.50	1579.76
E:	0.00	145.10
F:	60.00	192.52
G:	62.00	1208.38
Q:	0.00	2395.63



Pressure (PSig)

Temperature (DEG F)

Time (Min.)

TRILOBITE TESTING L.L.C.

OPERATOR : Midco Expl.Inc. DATE 11-04-98
 WELL NAME: Dale #2 KB 2034.00 ft TICKET NO: 11566 DST #2
 LOCATION : 34-32s-18w Comanche co KS GR 2021.00 ft FORMATION: Miss.
 INTERVAL : 5105.00 To 5149.00 ft TD 5149.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30	Rec.	10248	10248	2342		PF Fr. 2108 to 2138 hr
SI 60	Range(Psi)	4400.0	4400.0	4995.0	0.0	0.0 IS Fr. 2138 to 2238 hr
SF 60	Clock(hrs)	12 hr	12 hr	batt.		SF Fr. 2238 to 2338 hr
FS 90	Depth(ft)	5146.0	5146.0	5111.0	0.0	0.0 FS Fr. 2338 to 0108 hr

	Field	1	2	3	4	
A. Init Hydro	1514.0	2546.0	2488.0	0.0	0.0	T STARTED 1904 hr
B. First Flow	144.0	126.0	153.0	0.0	0.0	T ON BOTM 2103 hr
Bl. Final Flow	82.0	92.0	73.0	0.0	0.0	T OPEN 2108 hr
C. In Shut-in	1465.0	1477.0	1486.0	0.0	0.0	T PULLED 0109 hr
D. Init Flow	132.0	75.0	163.0	0.0	0.0	T OUT 0340 hr
E. Final Flow	78.0	75.0	62.0	0.0	0.0	
F. Fl Shut-in	1404.0	1395.0	1405.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2477.0	2484.0	2415.0	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 94000.00 lbs
						Initial Str Wt 86000.00 lbs
						Unseated Str Wt 86000.00 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 294.00 ft
						D.P. Length 4795.00 ft

RECOVERY

Tot Fluid 60.00 ft of 60.00 ft in DC and 0.00 ft in DP
 0.00 ft of Gas in all fluid free pipe.
 60.00 ft of Drilling mud
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of Rw n.c. ohms @ degrees F.
 0.00 ft of EST.FT. of PAY-----7
 SALINITY 7000.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:
 Strong blow gas to surface in 2 mins.
 Initial Shut-in:
 No blow
 Final Flow:
 Strong blow (see gas volume report)
 Final Shut-in:
 Weak blow 1"

SAMPLES: Gas sample
 SENT TO:Caraway/Liberal

Test Successful: Y

MUD DATA-----
 Mud Type Chemical
 Weight 9.20 lb/c
 Vis. 52.00 S/L
 W.L. 7.60 in3
 F.C. 0.20 in
 Mud Drop N
 Amt. of fill 0.00 ft
 Btm. H. Temp. 109.00 F
 Hole Condition Good
 % 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. Rice /Williams
 Contr. Duke Drlg.
 Rig # 7
 Unit #
 Pump T. LCM 0#/bl

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Dale #2

LOCATION : Sec.34 Twp.32s Rg.18w Ks

TICKET No. 11566 D.S.T. No. 2 DATE 11-04-98

TOTAL TOOL TO BOTTOM OF TOP PACKERS 27

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 44

TOTAL TOOL 71

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY 71

D.C. ABOVE TOOLS.Stands 5 Single Total 294

D.P. ABOVE TOOLS.Stands 77 Single Total 4795

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5160

TOTAL DEPTH 5149

TOTAL DRILL PIPE ABOVE K.B. 11

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

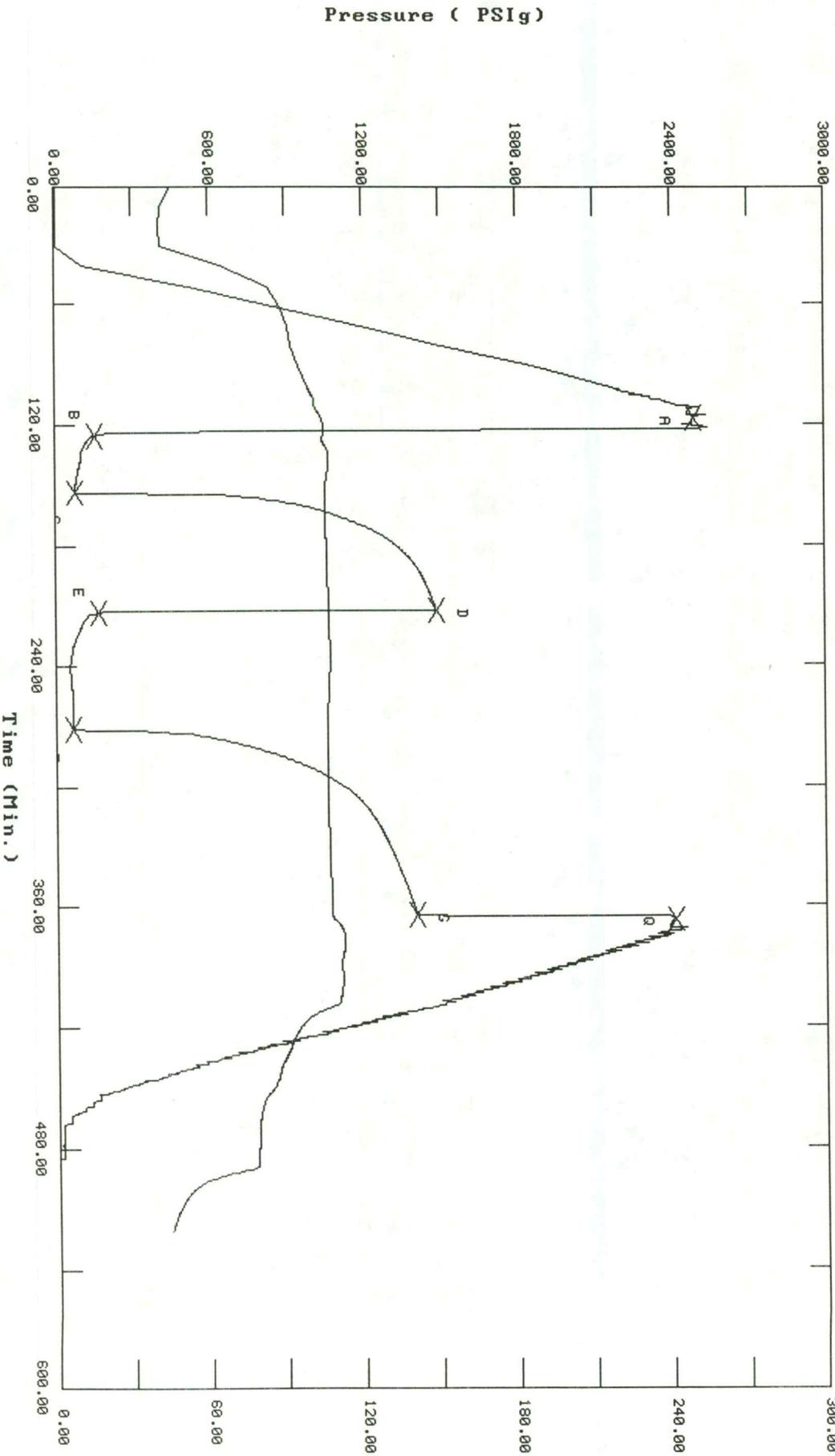
H	P.O. SUB		
H	C.O. SUB @ top of tool		5078
H	S.I. TOOL Sterling		5084
H			
H	HMV Sterling		5089
H	JARS Bowen		5094
H			
H	SAFETY JOINT Bowen		5096
H	PACKER Top		5100
H	PACKER Btm.		5105
H	DEPTH 5105		
H	STUBB 1 ft.		5106
H	ANCHOR		
H	perfs		
H			
H	Alpine rec. @		5111
H			
H			
H	T.C.		
H	DEPTH		
H			
H	38 ft. perfs to		5144
H			
H	AK-1 rec. @		5146
H			
H	BULLNOSE 5 ft. perforated		5149
H	T.D.		

TEST HISTORY

11566 DST#2 DALE #2 MIDCO EXPL. INC.

Flag Points

Time (Min.)	Pressure (PSIg)
A: 0.00	2488.03
B: 0.00	152.66
C: 28.00	73.34
D: 59.50	1485.51
E: 0.00	163.15
F: 58.00	62.35
G: 93.00	1405.19
Q: 0.00	2415.35



TRILOBITE TESTING L.L.C.

OPERATOR : Midco Expl.Inc. DATE 11-07-98
 WELL NAME: Dale #2 KB 2034.00 ft TICKET NO: 11567 DST #3
 LOCATION : 34-32s-18w Comanche co KS GR 2021.00 ft FORMATION: Viola
 INTERVAL : 5598.00 To 5648.00 ft TD 5648.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins		Field	1	2	3	4	TIME DATA-----
PF 30	Rec.	10248	10248	2342			PF Fr. 0451 to 0521 hr
SI 60	Range(Psi)	4400.0	4400.0	4995.0	0.0	0.0	IS Fr. 0521 to 0621 hr
SF 30	Clock(hrs)	12 hr	12 hr	batt.			SF Fr. 0621 to 0651 hr
FS 60	Depth(ft)	5645.0	5645.0	5603.0	0.0	0.0	FS Fr. 0651 to 0751 hr

	Field	1	2	3	4	
A. Init Hydro	2713.0	2705.0	2668.0	0.0	0.0	T STARTED 0216 hr
B. First Flow	373.0	400.0	381.0	0.0	0.0	T ON BOTM 0445 hr
B1. Final Flow	528.0	522.0	509.0	0.0	0.0	T OPEN 0451 hr
C. In Shut-in	1854.0	1839.0	1834.0	0.0	0.0	T PULLED 0752 hr
D. Init Flow	528.0	580.0	479.0	0.0	0.0	T OUT 1058 hr
E. Final Flow	760.0	753.0	747.0	0.0	0.0	
F. Fl Shut-in	1756.0	1749.0	1744.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2673.0	2676.0	2634.0	0.0	0.0	Tool Wt. 2100.00 lbs
Inside/Outside	0	0	I	T		Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 102000.00 lbs
						Initial Str Wt 92000.00 lbs
						Unseated Str Wt 99000.00 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 294.00 ft
						D.P. Length 5293.00 ft

RECOVERY

Tot Fluid 1690.00 ft of 294.00 ft in DC and 1396.00 ft in DP
 0.00 ft of Gas in all fluid free pipe.
 120.00 ft of Muddy water 20% mud 80% water
 1570.00 ft of Gassy salty water.
 0.00 ft of approx. 15% gas 85% water
 0.00 ft of
 0.00 ft of
 0.00 ft of Rw .15 ohms @ 54 degrees F.
 0.00 ft of EST.FT. of PAY-----8
 SALINITY 63000.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:
 Strong blow gas to surface in
 4.5 mins. (see gas volume report)
 Initial Shut-in:
 Fair to strong blow.
 Final Flow:
 Strong blow (see gas volume report)
 Final Shut-in:
 Strong blow water mud to surface
 3 mins. into final shut-in. Flowed
 for 8-10 mins.

SAMPLES: None
 SENT TO: Caraway/Liberal

Test Successful: Y

MUD DATA-----
 Mud Type Chemical
 Weight 9.20 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. 138.00 F
 Hole Condition Good
 % 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. Rice /Williams
 Contr. Duke Drlg.
 Rig # 7
 Unit #
 Pump T. LCM 6#/bl

GAS RECOVERY

COMPANY: Midco Expl.Inc.

DATE: 11-07-98

WELL NAME: Dale #2

KB Elev: 2034.00 ft TICKET #11567 DST #3

WELL LOCATION: Sec.34 Twp.32s Rg.18w Ks

GR Elev: 2021.00 ft FORMATION: Viola

INTERVAL Fr.: 5598.00 To 5648.00 T.D.: 5648.00 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	0.50	37	0	270000.0
20	0.50	44	0	301000.0
30	0.50	40	0	285000.0

***** GAS RATES FOR FLOW #2

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
10	0.25	28	0	59000.0
20	0.25	41	0	77300.0
30	0.25	57	0	99500.0

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Dale #2

LOCATION : Sec.34 Twp.32s Rg.18w Ks

TICKET No. 11567 D.S.T. No. 3 DATE 11-07-98

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 Single 1 Total 32

TOTAL ASSEMBLY 77

D.C. ABOVE TOOLS.Stands 5 Single Total 294

D.P. ABOVE TOOLS.Stands85 Single Total 5293

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5664

TOTAL DEPTH 5648

TOTAL DRILL PIPE ABOVE K.B. 16

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

H	P.O. SUB		
H	C.O. SUB @ top of tool		5571
H	S.I. TOOL Sterling		5577
H			
H	HMV Sterling		5582
H	JARS Bowen		5587
H			
H	SAFETY JOINT Bowen		5589
■	PACKER Top		5593
■	PACKER Btm.		5598
H	DEPTH	5598	
H	STUBB 1 ft.		5599
H	ANCHOR		
H	perfs		
H			
H	Alpine rec. @		5603
H			
H	11' perfs & sub to		5610
H			
H	T.C.		
H	DEPTH		
H			
H	33 ft.pipe & sub		
H	to		5643
H			
H	AK-1 rec. @		5645
H			
H	BULLNOSE 5 ft. perforated		5648
H	T.D.		

11567 DST#3 DALE #2 MIDCO EXPL. INC.
TEST HISTORY

Flag Points

t (Min.)	P (PSig)
A: 0.00	2668.39
B: 0.00	380.52
C: 27.50	508.59
D: 59.50	1834.15
E: 0.00	478.97
F: 29.50	747.20
G: 61.50	1744.35
Q: 0.00	2634.07

