

TRILOBITE TESTING L.L.C.

OPERATOR : Hummon Corp.

DATE 10-29-99

WELL NAME: Keller #1

KB 2073.00 ft

TICKET NO: 12386 DST #1

LOCATION : 22-32s-18w Comanche co KS

GR 2062.00 ft

FORMATION: Pawnee/Ft.Scott

INTERVAL : 5012.00 To 5076.00 ft

TD 5076.00 ft

TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	10248	10248	2342			PF Fr. 1027 to 1057 hr
SI 60 Range(Psi)	4400.0	4400.0	4995.0	0.0	0.0	IS Fr. 1057 to 1157 hr
SF 60 Clock(hrs)	12 hr	12 hr	batt.			SF Fr. 1157 to 1257 hr
FS 90 Depth(ft)	5073.0	5073.0	5024.0	0.0	0.0	FS Fr. 1257 to 1427 hr

	Field	1	2	3	4	
A. Init Hydro	2448.0	2467.0	2428.0	0.0	0.0	T STARTED 0739 hr
B. First Flow	57.0	74.0	65.0	0.0	0.0	T ON BOTM 1020 hr
B1. Final Flow	46.0	48.0	68.0	0.0	0.0	T OPEN 1027 hr
C. In Shut-in	1848.0	1835.0	1845.0	0.0	0.0	T PULLED 1429 hr
D. Init Flow	50.0	55.0	65.0	0.0	0.0	T OUT 1700 hr
E. Final Flow	78.0	77.0	75.0	0.0	0.0	
F. Fl Shut-in	1845.0	1838.0	1850.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2397.0	2405.0	2385.0	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 77000.00 lbs
						Unseated Str Wt 79000.00 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 5011.00 ft

RECOVERY

Tot Fluid 100.00 ft of 0.00 ft in DC and 100.00 ft in DP
 0.00 ft of Gas in all fluid free pipe.
 100.00 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 Rw n.c. ohms @ degrees F.
 0.00 ft of EST.FT. of PAY-----14
 SALINITY 6000.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:
 Strong blow bottom of bucket in
 1 min. gas to surface in 14 mins.
 Initial Shut-in:
 Weak blow. (1")
 Final Flow:
 Strong blow (see gas volume report)
 Final Shut-in:
 No blow

SAMPLES: Gas sample
 SENT TO: Caraway/Liberal

Test Successful: Y

MUD DATA-----
 Mud Type Chemical
 Weight 9.20 lb/cf
 Vis. 54.00 S/L
 W.L. 9.60 in3
 F.C. 0.20 in
 Mud Drop N
 Amt. of fill 0.00 ft
 Btm. H. Temp. 126.00 F
 Hole Condition good
 % 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. Arden Ratzlaff
 Contr. Duke Drlg.
 Rig # 5
 Unit #
 Pump T. LCM 2#/bl

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: 995867	Analyzed: 11/03/99
Sample From: Keller #1 DST 1	Pressure:
Producer: Hummon Corp.	Temperature:
Date:	Location: 22-32-18
Time:	County: Comanche
Sampler:	State: Kansas
Source:	Formation: Pawnee/ Ft. Scott

	Mole %	GPM
Helium	He: 0.145	0.000
Hydrogen	H2: 0.008	0.000
Oxygen	O2: 0.000	0.000
Nitrogen	N2: 3.689	0.000
Carbon Dioxide	CO2: 0.049	0.000
Methane	C1: 84.557	0.000
Ethane	C2: 4.272	1.143
Propane	C3: 3.077	0.848
Iso Butane	iC4: 0.507	0.166
Normal Butane	nC4: 1.443	0.455
Iso Pentane	iC5: 0.436	0.160
Normal Pentane	nC5: 0.526	0.191
Hexanes Plus	C6+: 1.291	0.563
TOTAL:		100.000 3.525
Z Fact:		0.9970
SP.GR.:		0.7033
BTU (SAT):		1161.1 @ 14.73 psia
BTU (DRY):		1181.6 @ 14.73 psia
OCTANE RATING:		120.0

COMMENTS:

0.000

GAS RECOVERY

COMPANY: Hummon Corp.

DATE: 10-29-99

WELL NAME: Keller #1

KB Elev: 2073.00 ft TICKET #12386 DST #1

WELL LOCATION: 22-32s-18w Comanche co KS

GR Elev: 2062.00 ft FORMATION: Pawnee/Ft.Scott

INTERVAL Fr.: 5012.00 To 5076.00 T.D.: 5076.00 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)
20	0.25	7	0	25000.0
30	0.25	8	0	28000.0

***** GAS RATES FOR FLOW #2

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
10	0.25	13	0	35900.0
20	0.25	15	0	39200.0
30	0.25	19	0	45500.0
40	0.25	20	0	47100.0
50	0.25	22	0	50200.0
60	0.25	24	0	53200.0

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Keller #1

LOCATION : 22-32s-18w Comanche co KS

TICKET No. 12386 D.S.T. No. 1 DATE 10-29-99

TOTAL TOOL TO BOTTOM OF TOP PACKERS 22

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 33

TOTAL TOOL 55

DRILL COLLAR ANCHOR IN INTERVAL

C. ANCHOR STND.Stands Single Total

P. ANCHOR STND.Stands Single 1 Total 31

TOTAL ASSEMBLY 86

C. ABOVE TOOLS.Stands Single Total

P. ABOVE TOOLS.Stands80 Single 1 Total 5011

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5097

TOTAL DEPTH 5076

TOTAL DRILL PIPE ABOVE K.B. 21

REMARKS:

Comments:Fax reports to Hummon Corp.

FLUID SAMPLER DATA (not run)

S-----		cubic ft
L-----		ML.
D-----		ML.
TER-----		ML.
HER-----		
ESSURE-----		PSI
-----	ohms @	deg. F.
LORIDES-----		ppm.
AVITY-----		deg.API

	P.O. SUB	
	C.O. SUB @ top of tool	4990
	S.I. TOOL Sterling	4996
	HMV Sterling	5001
	JARS none	
	SAFETY JOINT Bowen	5003
	PACKER Top	5007
	PACKER Btm.	5012
	DEPTH	5012
	STUBB 1 ft.	5013
	ANCHOR	
	6' perfs & sub to	5019
	Alpine rec. @ 5024	
	1 jt. pipe to	5050
	T.C.	
	DEPTH	
	21'perfs & sub to	5071
	AK-1 rec. @ 5073	
	BULLNOSE 5 ft. perforated	5076
	T.D.	

TEST HISTORY

12386 DST#1 KELLER #1 HUMMON CORP.

Flag Points

t(Min.) P(PSig)

A:	0.00	2427.77
B:	0.00	65.04
C:	31.00	68.14
D:	58.00	1845.14
E:	0.00	64.78
F:	60.50	74.52
G:	90.00	1849.59
Q:	0.00	2384.97

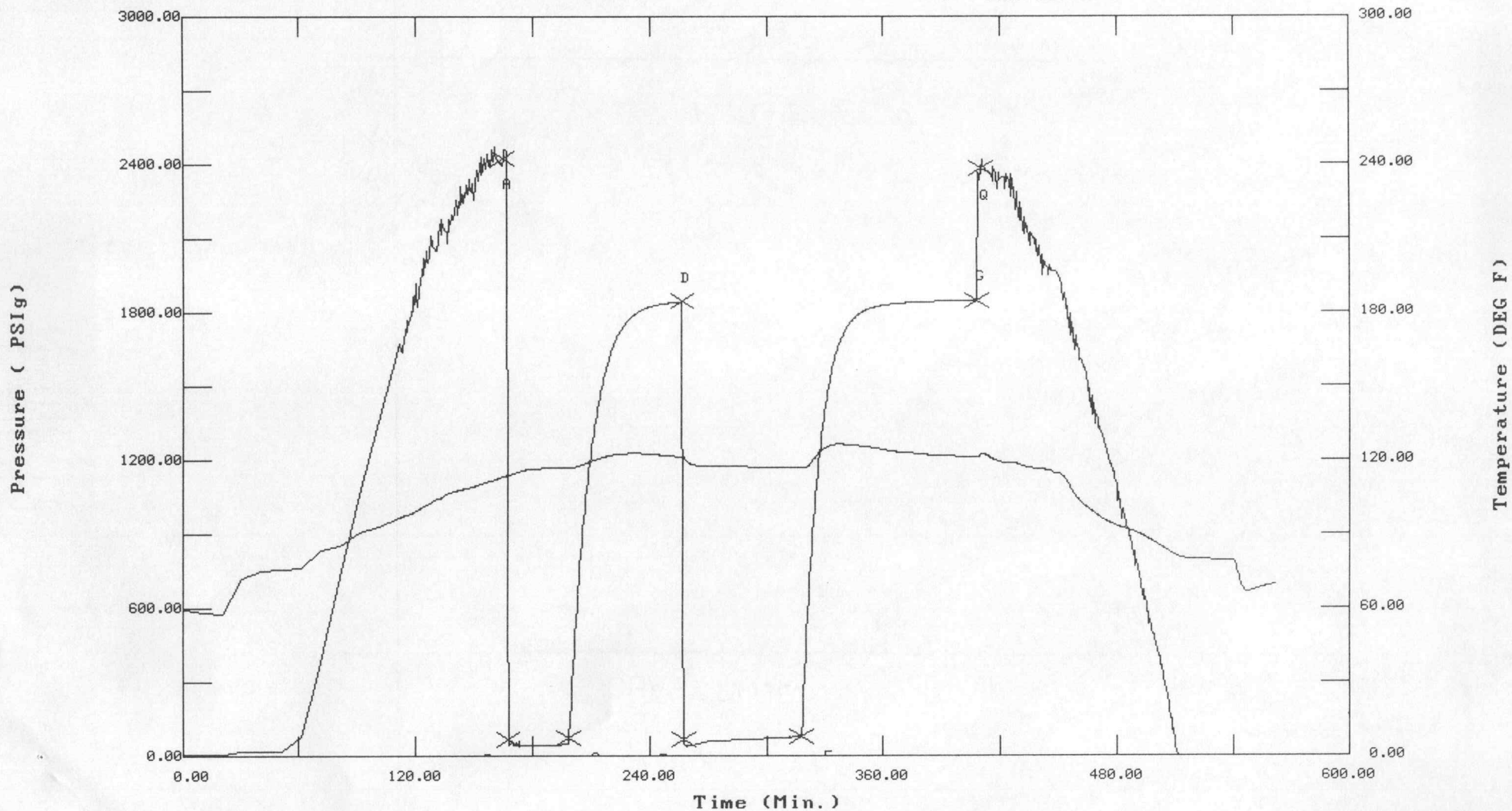
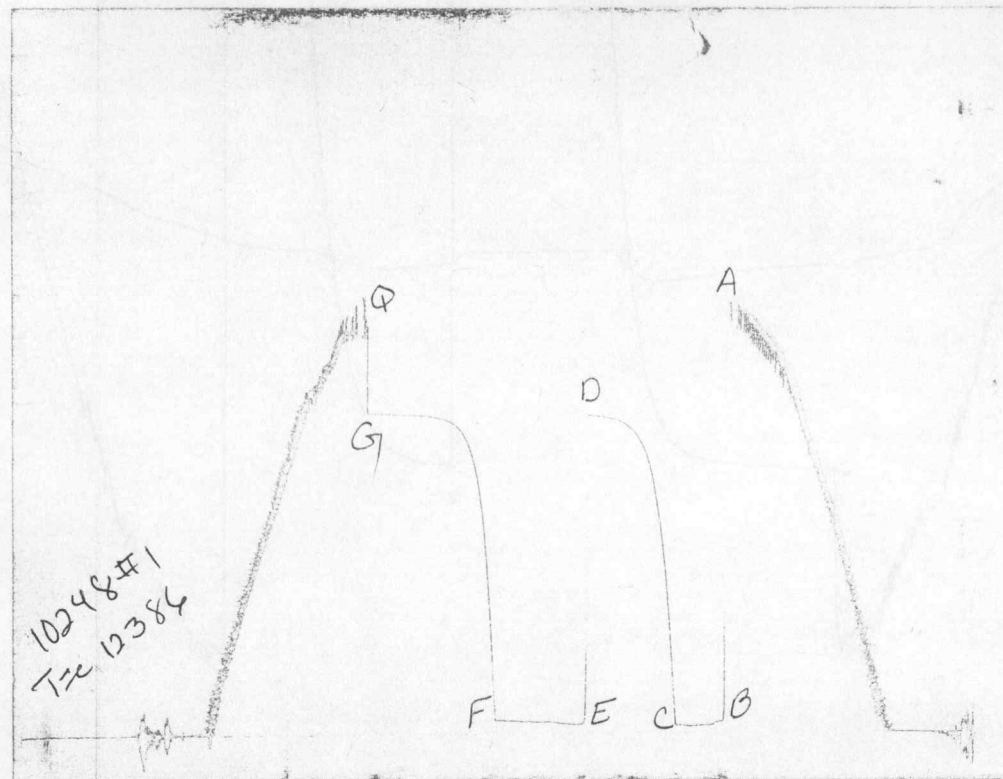


CHART PAGE



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

TRILOBITE TESTING L.L.C.

OPERATOR : Hummon Corp.

DATE 10-30-99

WELL NAME: Keller #1

KB 2073.00 ft

TICKET NO: 12387

DST #2

LOCATION : 22-32s-18w Comanche co KS

GR 2062.00 ft

FORMATION: Cherokee

INTERVAL : 5065.00 To 5102.00 ft

TD 5102.00 ft

TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	10248	10248	2342			PF Fr. 0820 to 0850 hr
SI 60 Range(Psi)	4400.0	4400.0	4995.0	0.0	0.0	IS Fr. 0850 to 0950 hr
SF 30 Clock(hrs)	12 hr	12 hr	batt.			SF Fr. 0950 to 1020 hr
FS 60 Depth(ft)	5099.0	5099.0	5071.0	0.0	0.0	FS Fr. 1020 to 1120 hr

	Field	1	2	3	4	
A. Init Hydro	2514.0	2505.0	2450.0	0.0	0.0	T STARTED 0540 hr
B. First Flow	34.0	52.0	27.0	0.0	0.0	T ON BOTM 0815 hr
B1. Final Flow	39.0	50.0	23.0	0.0	0.0	T OPEN 0820 hr
C. In Shut-in	446.0	435.0	428.0	0.0	0.0	T PULLED 1122 hr
D. Init Flow	41.0	49.0	18.0	0.0	0.0	T OUT 1340 hr
E. Final Flow	41.0	37.0	21.0	0.0	0.0	
F. Fl Shut-in	562.0	552.0	549.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2448.0	2487.0	2424.0	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 86000.00 lbs
						Initial Str Wt 76000.00 lbs
						Unseated Str Wt 77000.00 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 5073.00 ft

RECOVERY

Tot Fluid 15.00 ft of 0.00 ft in DC and 15.00 ft in DP
 120.00 ft of Gas in pipe.
 15.00 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 Rw n.c. ohms @ degrees F.
 0.00 ft of EST.FT. of PAY-----5

SALINITY 6000.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:
 Weak to fair blow (slow increase to 8")

Initial Shut-in:
 No blow.

Fina Flow:
 Strong blow bottom of bucket in 50 secs.

Final Shut-in:
 No blow

SAMPLES: none

SENT TO: Caraway/Liberal

Test Successful: Y

MUD DATA-----

Mud Type	Chemical
Weight	9.20 lb/cf
Vis.	51.00 S/L
W.L.	9.60 in3
F.C.	0.20 in
Mud Drop N	
Amt. of fill	0.00 ft
Btm. H. Temp.	116.00 F
Hole Condition	good
% Porosity	8.00
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.	Arden Ratzlaff
Contr.	Duke Drlg.
Rig #	5
Unit #	
Pump T.	LCM 3#/bl

P.O. SUB		
C.O. SUB	@ top of tool	5043
S.I. TOOL	Sterling	5049
HMV	Sterling	5054
JARS	none	
SAFETY JOINT	Bowen	5056
PACKER Top		5060
PACKER Btm.		5065
DEPTH	5065	
STUBB 1 ft.		5066
ANCHOR		
perfs		
Alpine rec.	@ 5071	
T.C.		
DEPTH		
31'perfs to		5097
AK-1 rec.	@ 5099	
BULLNOSE 5 ft. perforated		5102
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

12387 DST#2 KELLER #1 HUMMON CORP.

Flag Points

t(Min.) P(PSIg)

A:	0.00	2449.76
B:	0.00	26.76
C:	30.00	22.74
D:	59.00	427.60
E:	0.00	18.37
F:	30.50	20.55
G:	66.00	549.13
Q:	0.00	2424.08

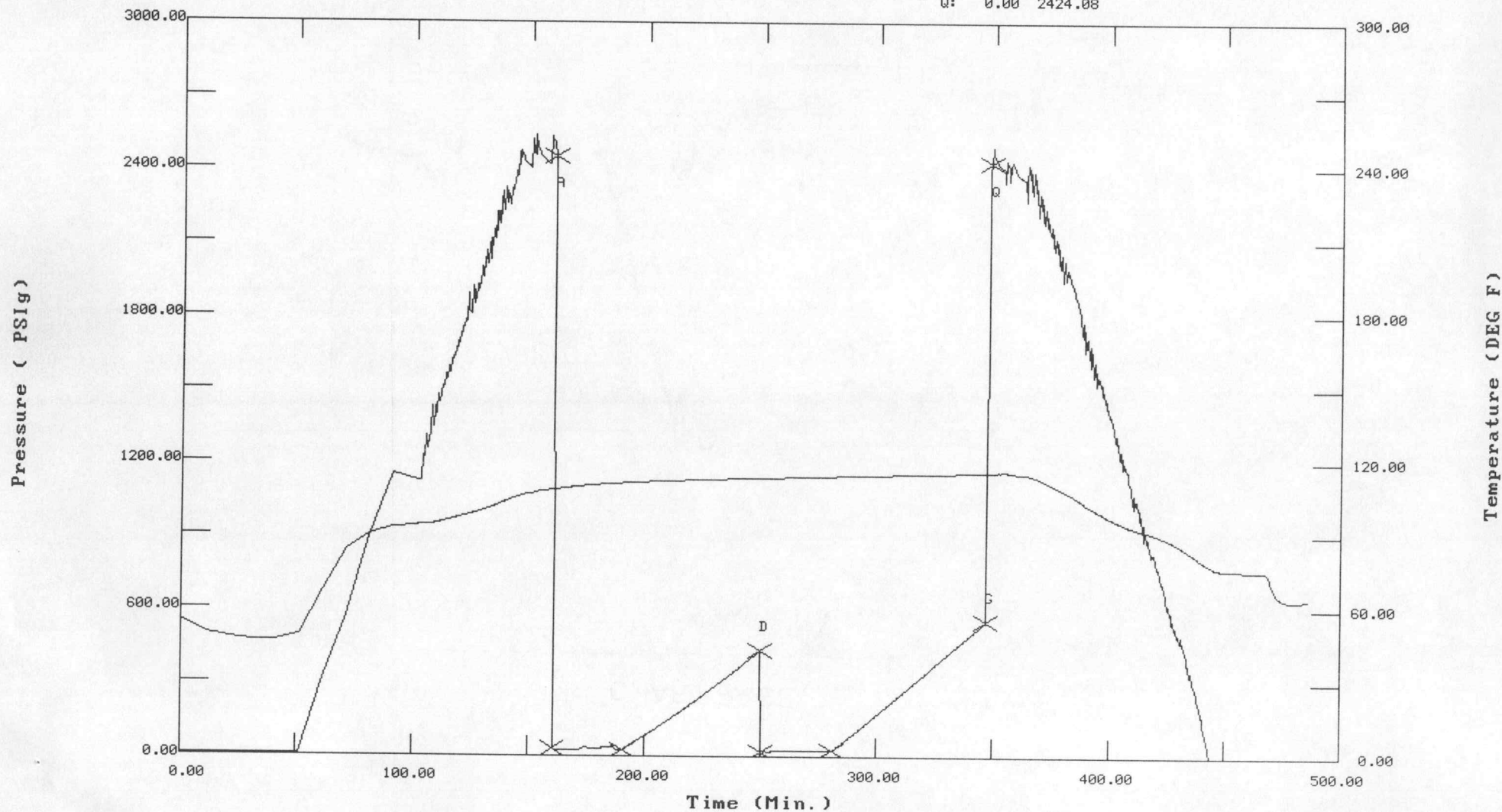
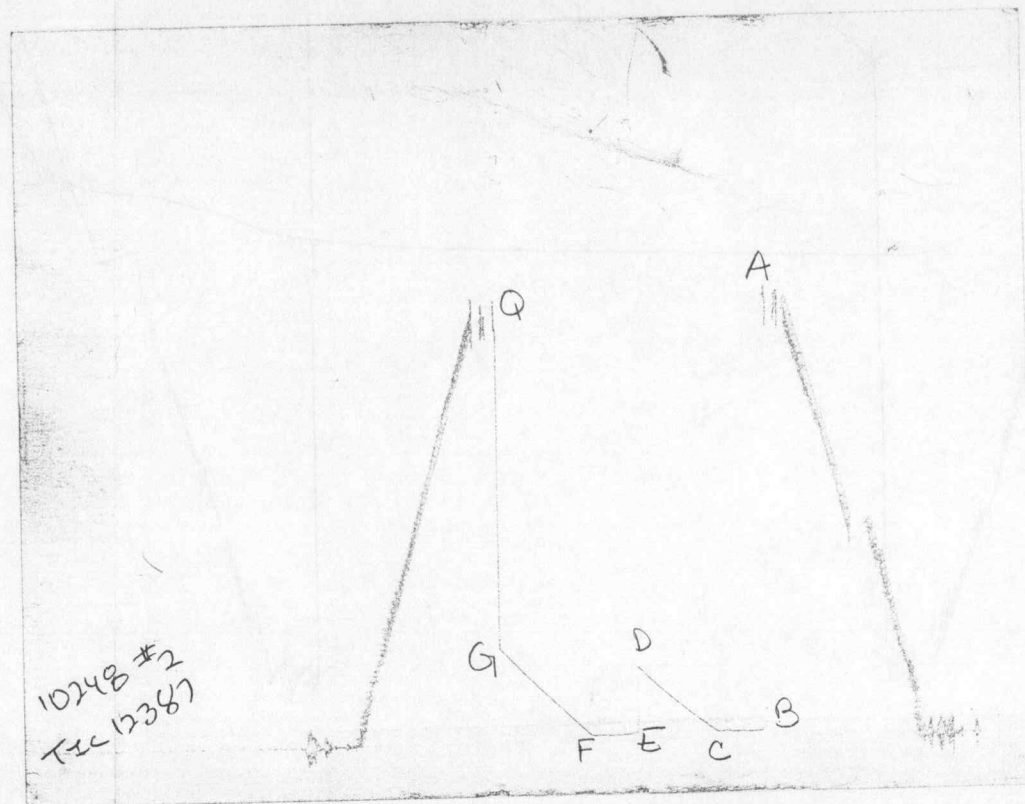


CHART PAGE



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TRILOBITE TESTING L.L.C.

OPERATOR : Hummon Corp.

DATE 10-31-99

WELL NAME: Keller #1

KB 2073.00 ft

TICKET NO: 12388

DST #3

LOCATION : 22-32s-18w Comanche co KS

GR 2062.00 ft

FORMATION: Miss.

INTERVAL : 5297.00 To 5333.00 ft

TD 5333.00 ft

TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	10248	10248	2342			PF Fr. 2043 to 2113 hr
SI 60 Range(Psi)	4400.0	4400.0	4995.0	0.0	0.0	IS Fr. 2113 to 2213 hr
SF 90 Clock(hrs)	12 hr	12 hr	batt.			SF Fr. 2213 to 2343 hr
FS 120 Depth(ft)	5330.0	5330.0	5303.0	0.0	0.0	FS Fr. 2343 to 0143 hr

	Field	1	2	3	4	
A. Init Hydro	2536.0	2516.0	2547.0	0.0	0.0	T STARTED 1757 hr
B. First Flow	12.0	8.0	19.0	0.0	0.0	T ON BOTM 2040 hr
B1. Final Flow	12.0	8.0	22.0	0.0	0.0	T OPEN 2043 hr
C. In Shut-in	395.0	350.0	379.0	0.0	0.0	T PULLED 0147 hr
D. Init Flow	16.0	12.0	22.0	0.0	0.0	T OUT 0350 hr
E. Final Flow	20.0	12.0	28.0	0.0	0.0	
F. Fl Shut-in	556.0	513.0	531.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2514.0	2516.0	2518.0	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 79000.00 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 0.00 ft
						D.P. Length 5293.00 ft

RECOVERY

Tot Fluid 30.00 ft of 0.00 ft in DC and 30.00 ft in DP
 300.00 ft of Gas in pipe.
 30.00 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 Rw n.c. ohms @ degrees F.
 0.00 ft of EST.FT. of PAY-----6
 SALINITY 8000.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:

Fair to strong blow bottom of bucket
 in 14 mins.

Initial Shut-in:

No blow.

Final Flow:

Fair to strong blow bottom of bucket
 in 7 mins.

Final Shut-in:

No blow

SAMPLES: none

SENT TO: Caraway/Liberal

MUD DATA-----

Mud Type	Chemical
Weight	9.30 lb/cf
Vis.	48.00 S/L
W.L.	12.80 in3
F.C.	0.20 in
Mud Drop N	
Amt. of fill	0.00 ft
Btm. H. Temp.	122.00 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.	Arden Ratzlaff
Contr.	Duke Drlg.
Rig #	5
Unit #	
Pump T.	LCM 2#/bl

Test Successful: Y

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Keller #1
 LOCATION : Sec.22 Twp.32s Rg.18w Ks
 TICKET No. 12388 D.S.T. No. 3 DATE 10-31-99

TOTAL TOOL TO BOTTOM OF TOP PACKERS 22

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 36

TOTAL TOOL 58

DRILL COLLAR ANCHOR IN INTERVAL

C. ANCHOR STND.Stands Single Total

P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY 58

C. ABOVE TOOLS.Stands Single Total

P. ABOVE TOOLS.Stands85 Single Total 5293

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5351

TOTAL DEPTH 5333

TOTAL DRILL PIPE ABOVE K.B. 18

MARKS:

Comments:Fax reports to Hummon Corp.

FLUID SAMPLER DATA (not run)

S----- cubic ft
 L----- ML.
 D----- ML.
 TER----- ML.
 HER-----
 PRESSURE----- PSI
 ----- ohms @ deg. F.
 LORIDES----- ppm.
 AVITY----- deg.API

	P.O. SUB	
	C.O. SUB @ top of tool	5275
	S.I. TOOL Sterling	5281
	HMV Sterling	5286
	JARS none	
	SAFETY JOINT Bowen	5288
	PACKER Top	5292
	PACKER Btm.	5297
	DEPTH 5297	
	STUBB 1 ft.	5298
	ANCHOR	
	perfs	
	Alpine rec. @ 5303	
	T.C.	
	DEPTH	
	30'perfs to	5328
	AK-1 rec. @ 5330	
	BULLNOSE 5 ft. perforated	5333
	T.D.	

TEST HISTORY

12388 DST#3 KELLER #1 HUMMON CORP.

Flag Points
t(Min.) P(PSIg)

A: 0.00 2546.95
B: 0.00 19.29
C: 30.00 22.32
D: 60.00 379.35
E: 0.00 22.48
F: 90.00 28.44
G: 122.00 530.50
Q: 0.00 2518.41

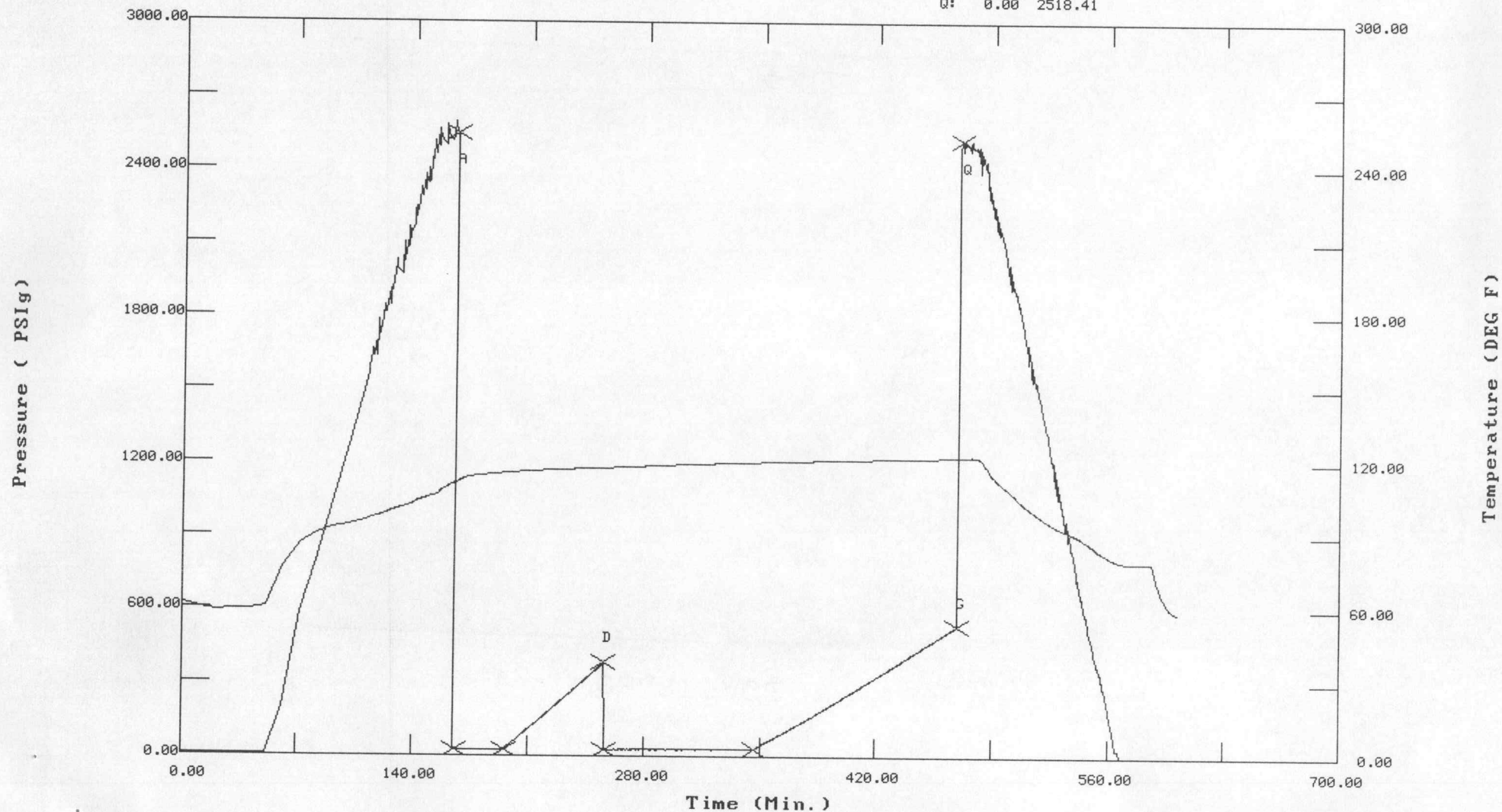
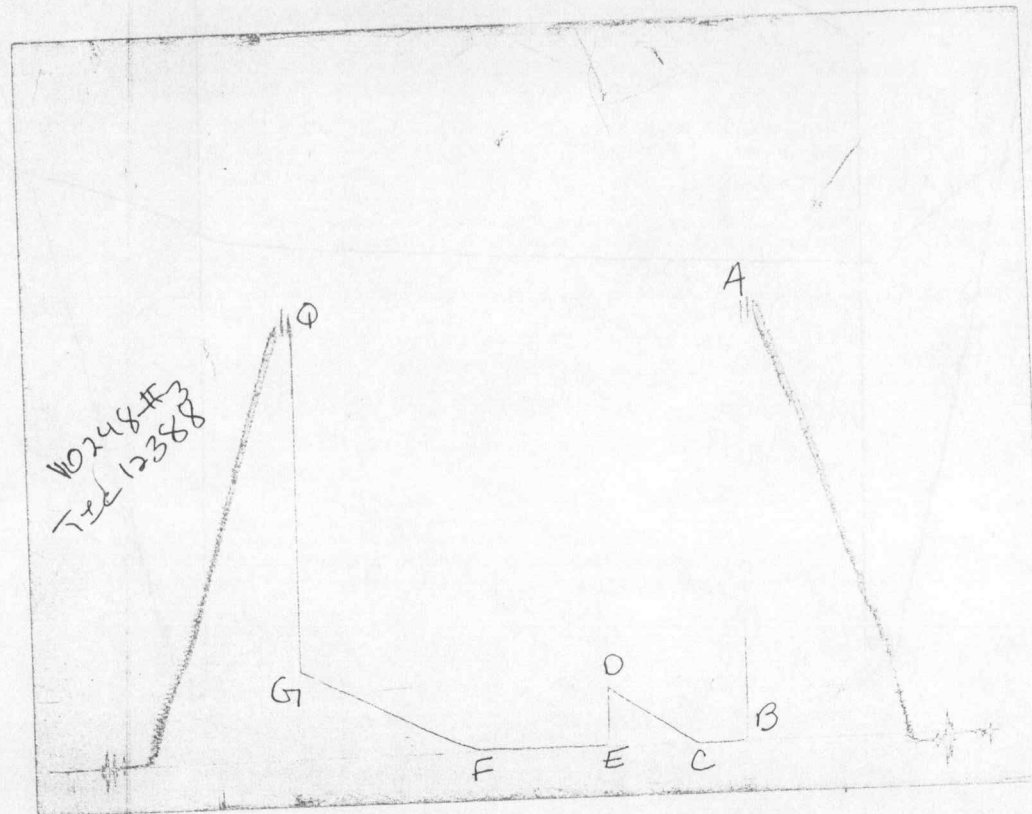


CHART PAGE



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TRILOBITE TESTING L.L.C.

OPERATOR : Hummon Corp.

DATE 11-2-99

WELL NAME: Keller #1

KB 2073.00 ft

TICKET NO: 12389

DST #4

LOCATION : 22-32s-18w Comanche co KS

GR 2062.00 ft

FORMATION: Viola

INTERVAL : 5672.00 To 5677.00 ft

TD 5677.00 ft

TEST TYPE: CONV

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	10248	10248				PF Fr. 1825 to 1855 hr
SI 60 Range(Psi)	4000.0	4000.0	0.0	0.0	0.0	IS Fr. 1855 to 1955 hr
SF 60 Clock(hrs)	12	12				SF Fr. 1955 to 2055 hr
FS 90 Depth(ft)	5674.0	5674.0	0.0	0.0	0.0	FS Fr. 2055 to 2225 hr

	Field	1	2	3	4	
A. Init Hydro	2768.0	2779.0	0.0	0.0	0.0	T STARTED 1545 hr
B. First Flow	9.0	16.0	0.0	0.0	0.0	T ON BOTM 1820 hr
B1. Final Flow	14.0	12.0	0.0	0.0	0.0	T OPEN 1825 hr
C. In Shut-in	1931.0	1951.0	0.0	0.0	0.0	T PULLED 2227 hr
D. Init Flow	14.0	28.0	0.0	0.0	0.0	T OUT 0051 hr
E. Final Flow	22.0	34.0	0.0	0.0	0.0	
F. Fl Shut-in	1933.0	1956.0	0.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2722.0	2745.0	0.0	0.0	0.0	Tool Wt. 2100.00 lbs
Inside/Outside	0	0				Wt Set On Packer 2000.00 lbs
						Wt Pulled Loose 100000.00 lbs
						Initial Str Wt 80000.00 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 0.00 ft
						D.P. Length 5666.00 ft

RECOVERY

Tot Fluid 32.00 ft of 0.00 ft in DC and 32.00 ft in DP
 32.00 ft of Watery mud with a scum of oil
 0.00 ft of 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

SALINITY 65000.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:
 Weak blow 1/2" - 1"
 Initial Shut-in:
 No blow
 Final Flow:
 Very weak blow
 Final Shut-in:
 No blow

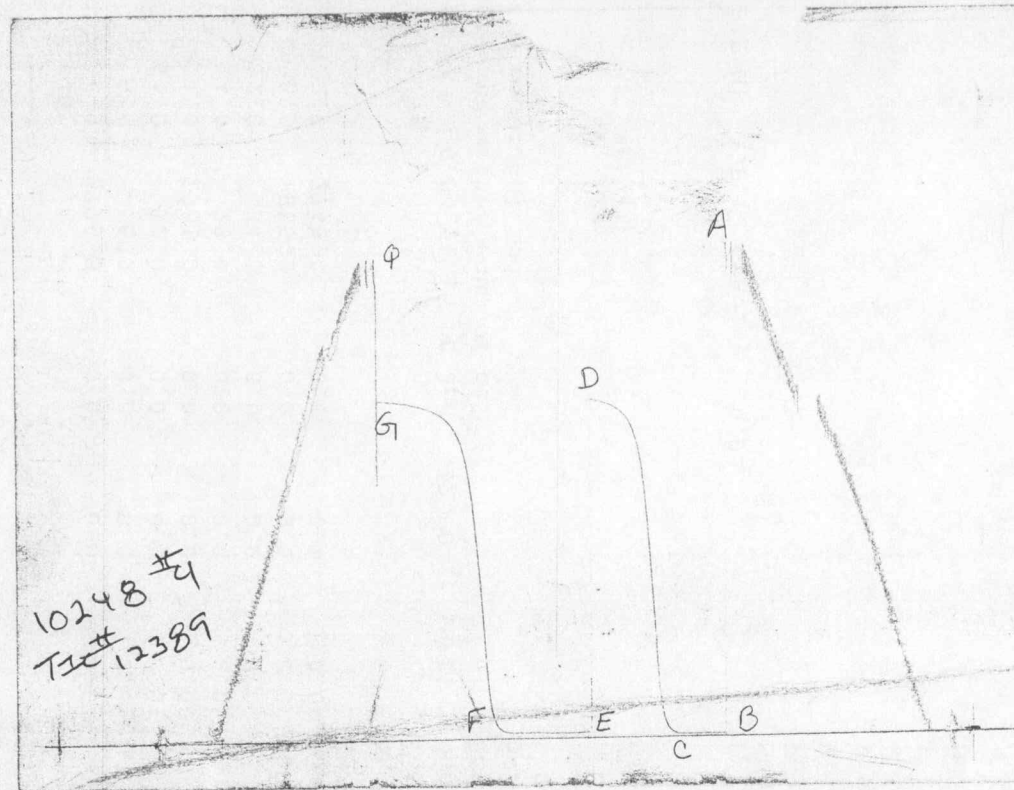
SAMPLES:

SENT TO:

MUD DATA-----
 Mud Type Chemical
 Weight 9.30 lb/cf
 Vis. 55.00 S/L
 W.L. 8.80 in3
 F.C. 0.00 in
 Mud Drop
 Amt. of fill 0.00 ft
 Btm. H. Temp. 129.00 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 Gary Pevoteaux
 Co. Rep. Arden Ratzlaff
 Contr. Duke Drilling
 Rig # 5
 Unit #
 Pump T.

Test Successful: Y

CHART PAGE



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