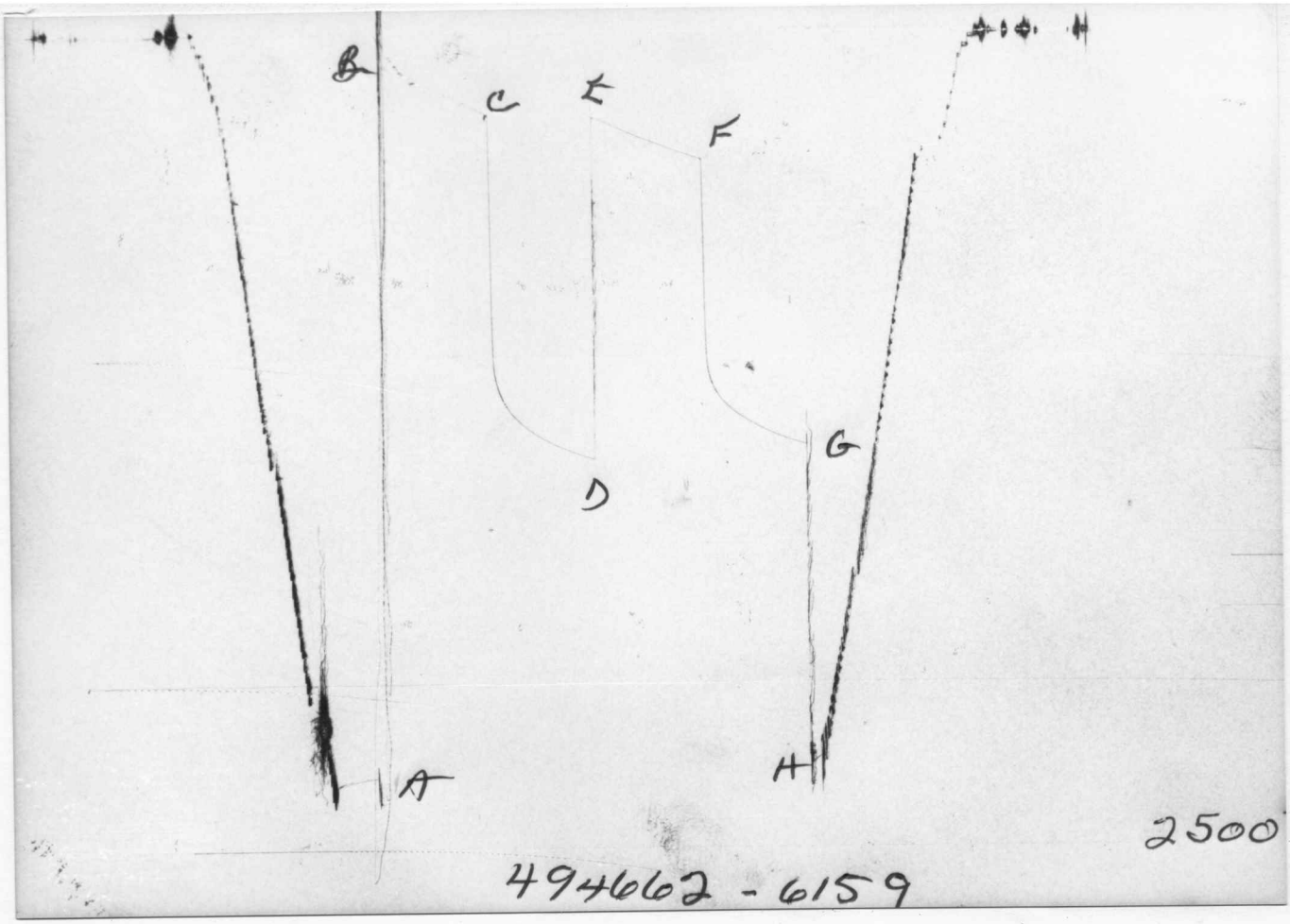
LEASE NAME	WELL NO.	TEST NO.	TESTED INTERVAL	LEASE OWNER/COMPANY NAME
PRATT	1	1	4288.' - 4359.'	SPINES EXPLORATION INCORPORATED

LEGAL LOCATION SEC. - TWP. - RNG.	FIELD AREA	COUNTY	STATE
C-NE-NW-15-24-18W		EDWARDS	KANSAS OR

HALLIBURTON
SERVICES

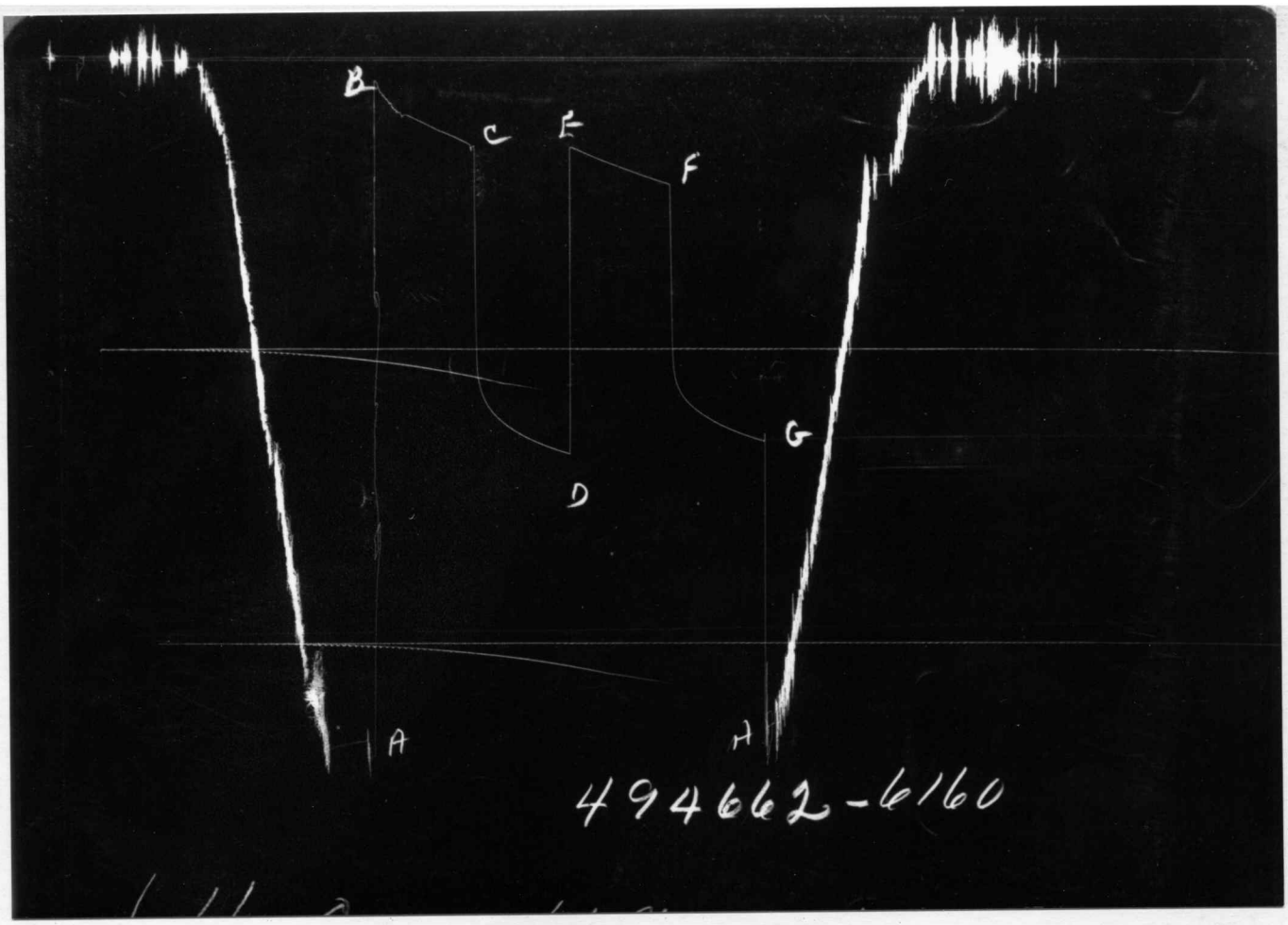
TICKET NO. 49466200
23-NOV-83
GREAT BEND

FORMATION TESTING SERVICE REPORT



GAUGE NO: 6159 DEPTH: 4267.2 BLANKED OFF: NO HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		2281.7			
B	INITIAL FIRST FLOW		16.4	60.0	60.7	F
C	FINAL FIRST FLOW		249.9			
C	INITIAL FIRST CLOSED-IN		249.9	60.0	57.6	C
D	FINAL FIRST CLOSED-IN		1314.6			
E	INITIAL SECOND FLOW		264.3	60.0	61.6	F
F	FINAL SECOND FLOW		393.0			
F	INITIAL SECOND CLOSED-IN		393.0	60.0	57.5	C
G	FINAL SECOND CLOSED-IN		1271.7			
H	FINAL HYDROSTATIC		2226.9			



GAUGE NO: 6160 DEPTH: 4356.0 BLANKED OFF: YES HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	2366	2329.2			
B	INITIAL FIRST FLOW	68	78.9	60.0	60.7	F
C	FINAL FIRST FLOW	297	302.9			
C	INITIAL FIRST CLOSED-IN	297	302.9	60.0	57.6	C
D	FINAL FIRST CLOSED-IN	1349	1356.7			
E	INITIAL SECOND FLOW	297	309.4	60.0	61.6	F
F	FINAL SECOND FLOW	433	436.8			
F	INITIAL SECOND CLOSED-IN	433	436.8	60.0	57.5	C
G	FINAL SECOND CLOSED-IN	1307	1313.2			
H	FINAL HYDROSTATIC	2267	2271.7			

EQUIPMENT & HOLE DATA

FORMATION TESTED: MARMATON
NET PAY (ft):
GROSS TESTED FOOTAGE: 71.0
ALL DEPTHS MEASURED FROM: KELLY BUSHING
CASING PERFS. (ft):
HOLE OR CASING SIZE (in): 7.875
ELEVATION (ft): 2149
TOTAL DEPTH (ft): 4359.0
PACKER DEPTH(S) (ft): 4282, 4288
FINAL SURFACE CHOKE (in):
BOTTOM HOLE CHOKE (in):
MUD WEIGHT (lb/gal): 9.80
MUD VISCOSITY (sec): 42
ESTIMATED HOLE TEMP. (°F):
ACTUAL HOLE TEMP. (°F): 110 @ 4354.0 ft

TICKET NUMBER: 49466200

DATE: 11-20-83 TEST NO: 1

TYPE DST: OPEN HOLE

HALLIBURTON CAMP: GREAT BEND

TESTER: T.R. GAUNT

WITNESS: DOUG DAVIS

DRILLING CONTRACTOR: BIG SPRINGS #3

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
PIT SAMPLE	@ °F	40000 ppm
RECOVERY	@ °F	93500 ppm
	@ °F	ppm
	@ °F	ppm
	@ °F	ppm
	@ °F	ppm

SAMPLER DATA

Psig AT SURFACE:
cu.ft. OF GAS:
cc OF OIL:
cc OF WATER:
cc OF MUD:
TOTAL LIQUID cc:

HYDROCARBON PROPERTIES

OIL GRAVITY (°API): @ °F
GAS/OIL RATIO (cu.ft. per bbl):
GAS GRAVITY:

CUSHION DATA

TYPE	AMOUNT	WEIGHT

RECOVERED:

700 FEET OF WATER

MEASURED FROM TESTER VALVE

REMARKS:

TYPE & SIZE MEASURING DEVICE: _____					TICKET NO: 49466200
TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
					TEST FORMATION FROM 4288-4359'
11-20-83					
0100					CALLED OUT-READY AT 0600
0330					ON LOCATION-CIRCULATING
0600					STARTED MAKING UP TOOLS
0700					TOOLS STARTED
0850					OPENED TOOL WITH 1/4" BLOW
0910					BLOW OFF BOTTOM OF BUCKET
0950					CLOSED TOOL-NO GAS
1050					OPENED TOOL, BLOW IS 2" OFF
					OF BOTTOM
1054					BLOW OFF BOTTOM OF BUCKET
1150					CLOSED TOOL-NO GAS
1250					PULLED TOOLS OFF BOTTOM
1445					TOOLS AT THE TABLE
1530					TOOLS LAID DOWN

TICKET NO: 49466200

CLOCK NO: 3722 HOUR: 12

HALLIBURTON SERVICES

GAUGE NO: 6159

DEPTH: 4267.2

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			FIRST FLOW			
B	1	0.0	16.4			
	2	10.0	99.4	83.0		
	3	20.0	151.1	51.6		
	4	30.0	170.3	19.3		
	5	40.0	195.3	25.0		
	6	50.0	220.3	24.9		
C	7	60.7	249.9	29.7		
			FIRST CLOSED-IN			
C	1	0.0	249.9			
	2	4.0	1066.9	817.0	3.7	1.212
	3	8.0	1134.7	884.8	7.1	0.933
	4	12.0	1169.6	919.7	10.0	0.782
	5	16.0	1194.9	945.0	12.6	0.682
	6	20.0	1213.1	963.2	15.0	0.607
	7	24.0	1229.4	979.5	17.2	0.547
	8	28.0	1244.7	994.7	19.2	0.501
	9	32.0	1257.5	1007.6	21.0	0.462
	10	36.0	1268.4	1018.5	22.6	0.429
	11	40.0	1277.5	1027.6	24.1	0.401
	12	44.0	1287.5	1037.5	25.5	0.377
	13	48.0	1296.1	1046.2	26.8	0.355
	14	52.0	1304.6	1054.7	28.0	0.336
	15	56.0	1311.5	1061.6	29.1	0.319
D	16	57.6	1314.6	1064.7	29.6	0.313
			SECOND FLOW			
E	1	0.0	264.3			
	2	10.0	281.8	17.5		
	3	20.0	306.8	25.0		
	4	30.0	327.6	20.8		
	5	40.0	348.6	21.0		
	6	50.0	368.5	19.9		
F	7	61.6	393.0	24.4		
			SECOND CLOSED-IN			
F	1	0.0	393.0			
	2	4.0	1074.9	681.9	3.9	1.499
	3	8.0	1117.6	724.7	7.5	1.211
	4	12.0	1144.1	751.1	10.9	1.049
	5	16.0	1164.2	771.3	14.1	0.938
	6	20.0	1181.1	788.2	17.2	0.852
	7	24.0	1194.3	801.3	20.1	0.785
	8	28.0	1206.4	813.4	22.8	0.730
	9	32.0	1218.0	825.1	25.4	0.684
	10	36.0	1228.7	835.7	27.8	0.644

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			SECOND CLOSED-IN - CONTINUED			
	11	40.0	1238.2	845.2	30.1	0.609
	12	44.0	1246.8	853.8	32.3	0.578
	13	48.0	1254.5	861.6	34.5	0.550
	14	52.0	1261.8	868.8	36.5	0.525
	15	56.0	1269.4	876.4	38.4	0.503
G	16	57.5	1271.7	878.7	39.1	0.495

REMARKS:

TICKET NO: 49466200	GAUGE NO: 6160
CLOCK NO: 13851 HOUR: 12	DEPTH: 4356.0

HALLIBURTON SERVICES

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			FIRST FLOW			
B	1	0.0	78.9			
	2	10.0	157.0	78.1		
	3	20.0	197.4	40.4		
	4	30.0	224.0	26.7		
	5	40.0	252.1	28.1		
	6	50.0	275.8	23.7		
C	7	60.7	302.9	27.1		
			FIRST CLOSED-IN			
C	1	0.0	302.9			
	2	4.0	1149.6	846.7	3.8	1.207
	3	8.0	1197.7	894.8	7.1	0.933
	4	12.0	1225.5	922.6	10.1	0.781
	5	16.0	1246.6	943.7	12.7	0.681
	6	20.0	1263.9	961.0	15.0	0.606
	7	24.0	1278.0	975.1	17.2	0.548
	8	28.0	1291.1	988.2	19.2	0.501
	9	32.0	1302.6	999.7	21.0	0.462
	10	36.0	1313.2	1010.3	22.6	0.429
	11	40.0	1322.7	1019.8	24.1	0.401
	12	44.0	1331.8	1028.9	25.5	0.376
	13	48.0	1339.7	1036.8	26.8	0.355
	14	52.0	1347.0	1044.1	28.0	0.336
	15	56.0	1354.2	1051.3	29.1	0.319
D	16	57.6	1356.7	1053.8	29.6	0.313
			SECOND FLOW			
E	1	0.0	309.4			
	2	10.0	329.1	19.7		
	3	20.0	353.2	24.1		
	4	30.0	373.9	20.7		
	5	40.0	395.0	21.1		
	6	50.0	414.9	19.9		
F	7	61.6	436.8	21.9		
			SECOND CLOSED-IN			
F	1	0.0	436.8			
	2	4.0	1123.5	686.6	3.8	1.504
	3	8.0	1165.7	728.8	7.5	1.213
	4	12.0	1190.9	754.0	10.9	1.050
	5	16.0	1209.8	773.0	14.1	0.937
	6	20.0	1225.5	788.7	17.2	0.853
	7	24.0	1238.8	801.9	20.1	0.785
	8	28.0	1251.3	814.4	22.8	0.730
	9	32.0	1262.6	825.8	25.4	0.684
	10	36.0	1272.3	835.4	27.8	0.643

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			SECOND CLOSED-IN - CONTINUED			
	11	40.0	1281.3	844.5	30.2	0.608
	12	44.0	1290.1	853.3	32.4	0.578
	13	48.0	1297.2	860.4	34.5	0.550
	14	52.0	1304.4	867.5	36.5	0.526
	15	56.0	1311.0	874.1	38.4	0.503
G	16	57.5	1313.2	876.4	39.1	0.495

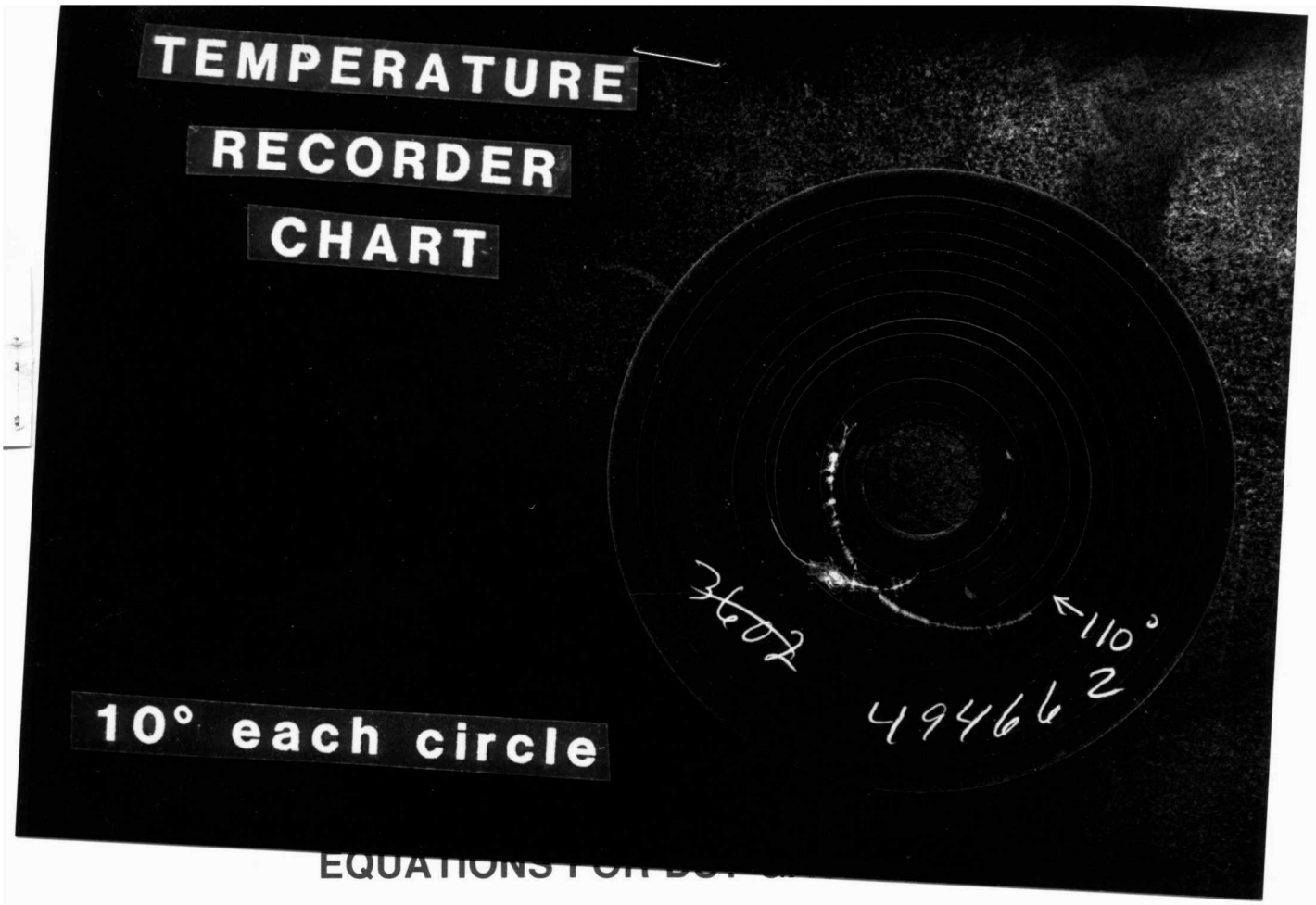
REMARKS:

TICKET NO. 49466200

		O.D.	I.D.	LENGTH	DEPTH
1	DRILL PIPE.....	4.500	3.826	3974.0	
50	IMPACT REVERSING SUB.....	5.750	2.750	1.0	3958.6
1	DRILL PIPE.....	4.500	3.826	31.0	
3	DRILL COLLARS.....	6.250	2.250	265.0	
5	CROSSOVER.....	5.750	2.750	0.8	
12	DUAL CIP VALVE.....	5.750	0.870	6.0	
60	HYDROSPRING TESTER.....	5.000	0.750	5.0	4266.4
80	AP RUNNING CASE.....	5.000	2.250	4.1	4267.2
15	JAR.....	5.030	1.750	5.0	
16	VR SAFETY JOINT.....	5.000	1.000	2.8	
70	OPEN HOLE PACKER.....	6.750	1.530	5.8	4282.4
70	OPEN HOLE PACKER.....	6.750	1.530	5.8	4288.2
5	CROSSOVER.....	5.750	2.750	1.5	
3	DRILL COLLARS.....	6.250	2.250	29.5	
5	CROSSOVER.....	5.750	2.750	1.5	
20	FLUSH JOINT ANCHOR.....	5.000	2.370	31.0	
82	TEMPERATURE RUNNING CASE.....	5.000		1.5	4354.0
81	BLANKED-OFF RUNNING CASE.....	5.000		4.1	4356.0

TOTAL DEPTH 4359.0

EQUIPMENT DATA



EQUATIONS FOR DE[illegible]

Indicated Flow Capacity	$kh = \frac{1637\ Q_g\ T}{m}$	md-ft
Average Effective Permeability	$k = \frac{kh}{h}$	md
Skin Factor	$S = 1.151 \left[\frac{m(P^*) - m(P_f)}{m} - \text{LOG} \frac{kt}{\phi\ \mu\ c_t r_w^2} + 3.23 \right]$	—
Damage Ratio	$DR = \frac{m(P^*) - m(P_f)}{m(P^*) - m(P_f) - 0.87\ mS}$	—
Indicated Flow Rate (Maximum)	$AOF_1 = \frac{Q_g\ m(P^*)}{m(P^*) - m(P_f)}$	MCFD
Indicated Flow Rate (Minimum)	$AOF_2 = Q_g \sqrt{\frac{m(P^*)}{m(P^*) - m(P_f)}}$	MCFD
Approx. Radius of Investigation	$r_i = 0.032 \sqrt{\frac{kt}{\phi \mu c_t}}$	ft