



REPORT NO  
113874

PAGE NO 1

TEST DATE:

17-OCT-1989

# STAR™

## A Schlumberger Transient Analysis Report Of A Schlumberger Drillstem Test

### Schlumberger

Company: SHARON RESOURCES

Well: SHARON FEDERAL #28-1

#### TEST IDENTIFICATION

Test Type ..... MFE OH DST

Test No. .... 1

Formation ..... CASTLE GATE

Test Interval (ft) .. 3266 - 3364

Reference Depth ..... KELLY BUSHING

#### WELL LOCATION

Field .....

County ..... RIO BLANCO

State ..... COLORADO

Sec/Twn/Rng ..... S28T1NR103W

Elevation (ft) ..... 5466

#### HOLE CONDITIONS

Total Depth (MD/TUD)(ft) . 3364

Hole Size (in) . . . . . 7 7/8

Casing/Liner I.D. (in) ...

Perf'd Interv./Nt Pay(ft). -- / 38

Shot Density Diameter(in).

#### MUD PROPERTIES

Mud Type ..... KCL MUD

Mud Weight (lb/gal) ..... 8.7

Mud Resistivity (ohm.m) .. 0.62 @ 60 DEG. F.

Filtrate Resistiv.(ohm.m). 0.58 @ 60 DEG. F.

Filtrate Chlorides (ppm) . 10700

#### INITIAL TEST CONDITIONS

Initial Hydrostatic (psi). 1547

Gas Cushion Type . . . . . NONE

Surface Pressure (psi) ... --

Liquid Cushion Type ..... NONE

Cushion Length (ft) ..... --

#### TEST STRING CONFIGURATION

Pipe Length (ft)/I.D.(in). 2909 / 3.47

Collar Length ft/I.D.(in). 313 / 2.25

Packer Depths (ft) ..... 3266

Bottomhole Choke Size(in). 15/16

Gauge Depth (ft)/Type .... 3271 / MECHANICAL

#### NET PIPE RECOVERY

Volume	Fluid Type	Properties
2000 FT.	G&MC WATER	TOP: RW=0.68@60DEG.F.
		MID: RW=0.8@60DEG.F.
		BTM: RW=10@60DEG.F.
		PPM CL.=10K, 800, 600

#### NET SAMPLE CHAMBER RECOVERY

Volume	Fluid Type	Properties
0.8 SCF	GAS	
2080 CC	WATER	RW=10 @ 60 DEG. F.
		600 PPM CL.
Press. 700	GOR:	GLR: 61

#### VALIDATION RESULTS

Model of Behavior .....

Fluid Type Used ..... Liquid

Reservoir Pressure (psi) .

Transmissivity (md.ft/cp)

Permeability (md) .....

Skin Factor/Damage Ratio .

Storativity Ratio .....

Interporosity Flow Coeff..

Distance to Anomaly (ft).

Investigation Radius (ft).

Potentiometric Surf. (ft).

#### ROCK/FLUID/WELLBORE PROPERTIES

Oil Density (deg. API) ...

Basic Solids (%) ..... 0

Gas Gravity .....

Water Cut (%) ..... 100

Viscosity (cp) .....

Tot. Compress. (1/psi) ...

Porosity (%) ..... 24

Reservoir Temperature (F). 108

Form.Vol.Factor (bbl/STB).

PRODUCTION RATE DURING TEST: -

COMMENTS:



## SEQUENCE OF EVENTS

Schlumberger

EVENT NO.	DATE	TIME (HR:MIN)	DESCRIPTION	ELAPSED TIME (MINS)	BHP (PSIA)	WHP (PSIG)
1	17-OCT	0646	SET PACKERS	-1.46	1547	
2		0648	OPENED TOOL-1/4" CHOKE	0.00	85	1.25 PSIG
		0653				1.5 PSIG
		0658				1.5 PSIG
3		0703	CLOSED FOR INITIAL SHUT-IN	15.04	422	
4		0733	FINISHED SHUT-IN	45.06	1274	
5		0735	RE-OPENED TOOL	46.81	422	4" BLOW
		0740				20" BLOW
		0745				22" BLOW
		0750				18" BLOW
		0755				19" BLOW
		0800				18" BLOW
		0805				15" BLOW
		0810				12" BLOW
		0815				10" BLOW
		0820				9" BLOW
		0825				10" BLOW
		0830				9" BLOW
6		0835	CLOSED FOR FINAL SHUT-IN	106.24	921	7" BLOW
7		0935	FINISHED SHUT-IN	167.00	1277	
8		0940	PULLED PACKERS LOOSE	168.48	1527	
			NOTE: NO GAS TO SURFACE.			

# BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO 113874

COMPANY MARTIN SOURCES INC

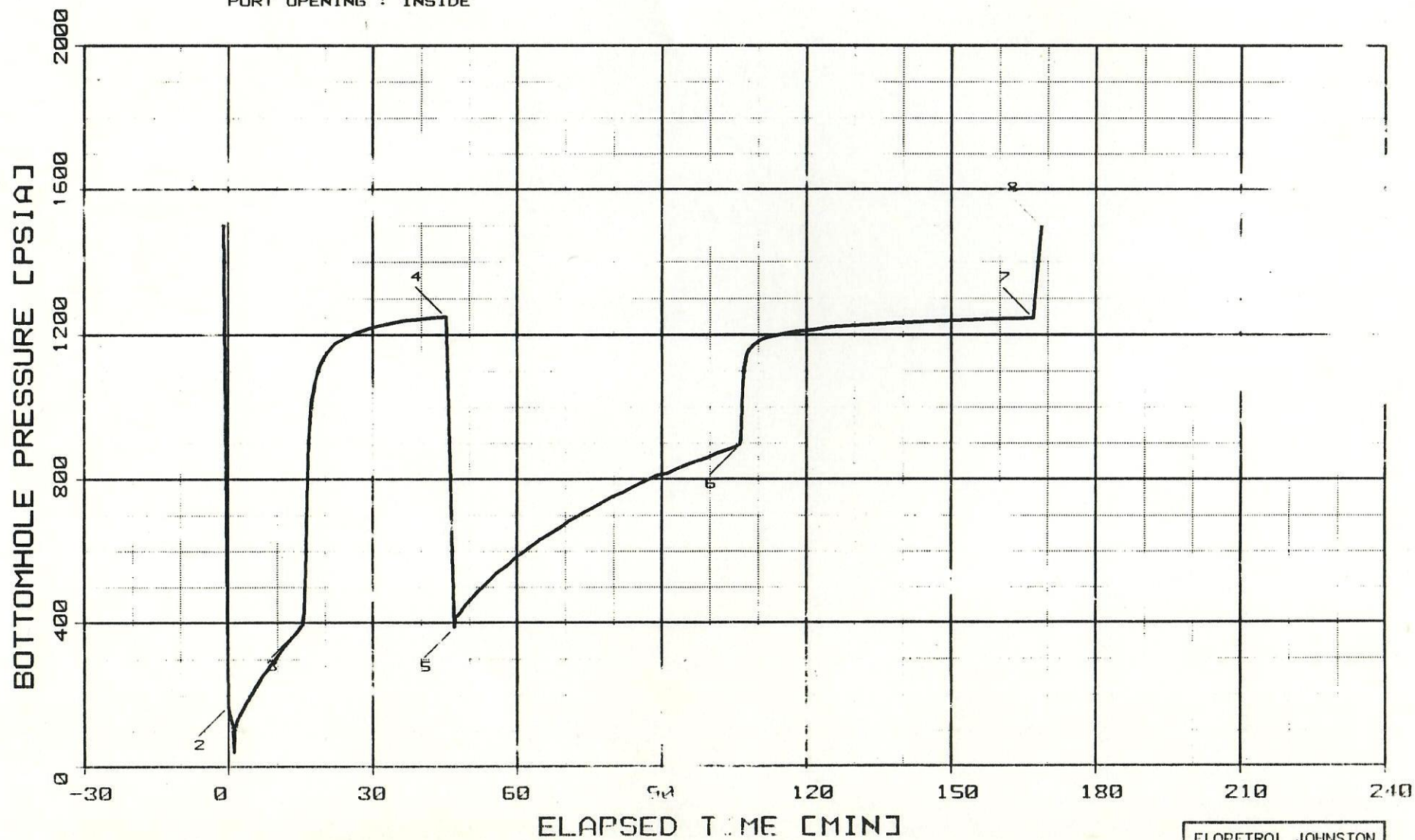
INSTRUMENT NO. 1117

WELL SHARON D 28 1

DEPTH : 3236 FT

CAPACITY : 4700 PSI

PORT OPENING : INSIDE





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 \* WELL TEST DATA PRINTOUT \*  
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FIELD REPORT # : 113874

COMPANY : SHARON RESOURCES INC.  
 WELL : SHARON FED-28-1

INSTRUMENT # : 1117  
 CAPACITY [PSI] : 4700.  
 DEPTH [FT] : 3236.0  
 PORT OPENING : INSIDE  
 TEMPERATURE [DEG F] : 108.0

LABEL POINT INFORMATION  
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#	TIME OF DAY HH:MM:SS	DATE DD-MM	EXPLANATION	ELAPSED TIME, MIN	BOT HOLE PRESSURE PSIA
1	6:46:59	17-OC	HYDROSTATIC MUD	-1.01	1504
2	6:48: 0	17-OC	START FLOW	0.00	169
3	7: 3: 2	17-OC	END FLOW & START SHUT-IN	15.04	388
4	7:33: 1	17-OC	END SHUT-IN	45.02	1249
5	7:34:53	17-OC	START FLOW	46.89	386
6	8:34:13	17-OC	END FLOW & START SHUT-IN	106.22	894
7	9:35: 0	17-OC	END SHUT-IN	167.00	1244
8	9:36:44	17-OC	HYDROSTATIC MUD	168.74	1495

SUMMARY OF FLOW PERIODS  
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PERIOD	START ELAPSED TIME, MIN	END ELAPSED TIME, MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA
1	0.00	15.04	15.04	169	388
2	46.89	106.22	59.33	386	894

SUMMARY OF SHUTIN PERIODS  
 \*\*\*\*\*

PERIOD	START ELAPSED TIME, MIN	END ELAPSED TIME, MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	FINAL FLOW PRESSURE PSIA	PRODUCING TIME, MIN
1	15.04	45.02	29.98	388	1249	388	15.04
2	106.22	167.00	60.78	894	1244	894	74.37

## TEST PHASE : FLOW PERIOD # 1

TIME OF DAY	DATE	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE PRESSURE PSIA
6:48: 0	17-OC	0.00	0.00	169
6:53: 0	17-OC	5.00	5.00	207
6:58: 0	17-OC	10.00	10.00	307
7: 3: 0	17-OC	15.00	15.00	388
7: 3: 2	17-OC	15.04	15.04	388

## TEST PHASE : SHUTIN PERIOD # 1

FINAL FLOW PRESSURE [PSIA] = 388  
 PRODUCING TIME [MIN] = 15.04

TIME OF DAY	DATE	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
7: 3: 2	17-OC	15.04	0.00	388	0	
7: 4: 2	17-OC	16.04	1.00	571	183	1.205
7: 5: 2	17-OC	17.04	2.00	981	593	0.930
7: 6: 2	17-OC	18.04	3.00	1074	686	0.779
7: 7: 2	17-OC	19.04	4.00	1115	727	0.678
7: 8: 2	17-OC	20.04	5.00	1141	753	0.603
7: 9: 2	17-OC	21.04	6.00	1160	772	0.545
7:10: 2	17-OC	22.04	7.00	1174	786	0.498
7:11: 2	17-OC	23.04	8.00	1181	793	0.459
7:12: 2	17-OC	24.04	9.00	1188	800	0.427
7:13: 2	17-OC	25.04	10.00	1195	807	0.399
7:15: 2	17-OC	27.04	12.00	1207	818	0.353
7:17: 2	17-OC	29.04	14.00	1215	827	0.317
7:19: 2	17-OC	31.04	16.00	1222	834	0.288
7:21: 2	17-OC	33.04	18.00	1228	840	0.264
7:23: 2	17-OC	35.04	20.00	1234	846	0.244
7:25: 2	17-OC	37.04	22.00	1238	850	0.226
7:27: 2	17-OC	39.04	24.00	1241	853	0.211
7:29: 2	17-OC	41.04	26.00	1244	856	0.198
7:31: 2	17-OC	43.04	28.00	1246	858	0.187
7:33: 2	17-OC	45.04	30.00	1248	860	0.176
7:33: 1	17-OC	45.02	29.98	1249	860	0.177



TEST PHASE : FLOW PERIOD # 2

TIME OF DAY	DATE	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE PRESSURE PSIA
HH:MM:SS	DD-MM	*****	*****	*****
7:34:53	17-OC	46.89	0.00	386
7:39:53	17-OC	51.89	5.00	488
7:44:53	17-OC	56.89	10.00	548
7:49:53	17-OC	61.89	15.00	601
7:54:53	17-OC	66.89	20.00	648
7:59:53	17-OC	71.89	25.00	691
8: 4:53	17-OC	76.89	30.00	729
8: 9:53	17-OC	81.89	35.00	762
8:14:53	17-OC	86.89	40.00	795
8:19:53	17-OC	91.89	45.00	819
8:24:53	17-OC	96.89	50.00	846
8:29:53	17-OC	101.89	55.00	872
8:34:13	17-OC	106.22	59.33	894

TEST PHASE : SHUTIN PERIOD # 2

FINAL FLOW PRESSURE [PSIA] = 894

PRODUCING TIME [MIN] = 74.37

TIME OF DAY	DATE	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
HH:MM:SS	DD-MM	*****	*****	*****	*****	*****
8:34:13	17-OC	106.22	0.00	894	0	
8:35:13	17-OC	107.22	1.00	1110	216	1.877
8:36:13	17-OC	108.22	2.00	1159	265	1.582
8:37:13	17-OC	109.22	3.00	1172	279	1.411
8:38:13	17-OC	110.22	4.00	1181	288	1.292
8:39:13	17-OC	111.22	5.00	1188	294	1.201
8:40:13	17-OC	112.22	6.00	1193	299	1.127
8:41:13	17-OC	113.22	7.00	1197	303	1.065
8:42:13	17-OC	114.22	8.00	1199	305	1.013
8:43:13	17-OC	115.22	9.00	1201	307	0.967
8:44:13	17-OC	116.22	10.00	1204	310	0.926
8:46:13	17-OC	118.22	12.00	1209	315	0.857
8:48:13	17-OC	120.22	14.00	1211	318	0.800
8:50:13	17-OC	122.22	16.00	1215	321	0.752
8:52:13	17-OC	124.22	18.00	1219	325	0.710
8:54:13	17-OC	126.22	20.00	1222	328	0.674
8:56:13	17-OC	128.22	22.00	1224	330	0.642
8:58:13	17-OC	130.22	24.00	1225	331	0.613
9: 0:13	17-OC	132.22	26.00	1226	332	0.587
9: 2:13	17-OC	134.22	28.00	1227	334	0.563
9: 4:13	17-OC	136.22	30.00	1229	335	0.541
9: 9:13	17-OC	141.22	35.00	1232	339	0.495
9:14:13	17-OC	146.22	40.00	1235	342	0.456
9:19:13	17-OC	151.22	45.00	1238	345	0.424
9:24:13	17-OC	156.22	50.00	1241	347	0.396

TEST PHASE · SHUTIN PERIOD # 2  
FINAL FLOW PRESSURE [PSIA] = 894  
PRODUCING TIME [MIN] = 74.37

TIME OF DAY	DATE	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
*****	*****	*****	*****	*****	*****	*****
9:29:13	17-OC	161.22	55.00	1242	349	0.371
9:34:13	17-OC	166.22	60.00	1244	350	0.350
9:35: 0	17-OC	167.00	60.78	1244	351	0.347



# BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO. 113874

COMPANY : SHARON RES.

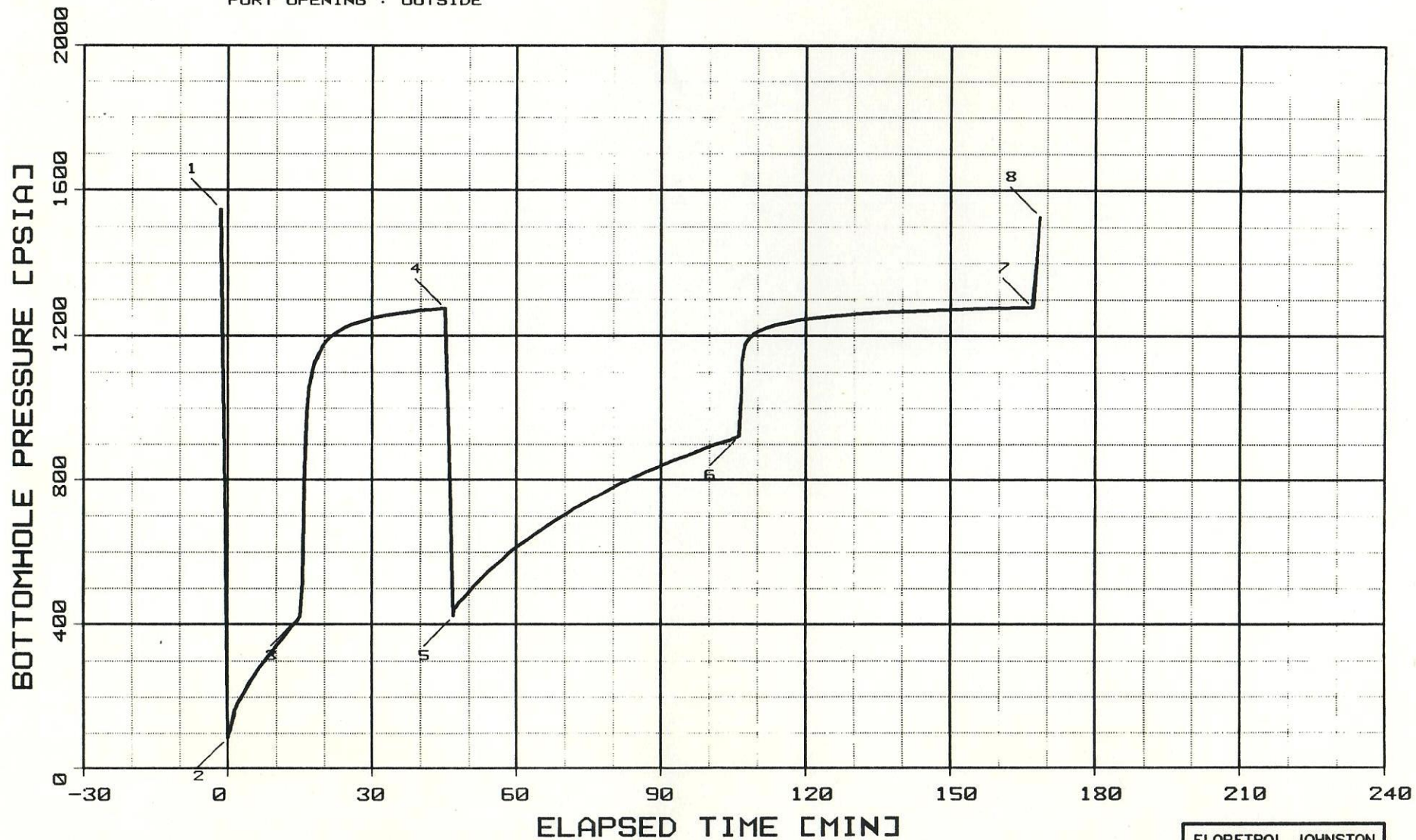
INSTRUMENT NO. 1238

WELL : SHARON FED-28-1

DEPTH : 3271 FT

CAPACITY : 4700 PSI

PORT OPENING : OUTSIDE



FLOPETROL JOHNSTON

Schlumberger



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 \* WELL TEST DATA PRINTOUT \*  
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FIELD REPORT # : 113874  
 COMPANY : SHARON RES.  
 WELL : SHARON FED-28-1

INSTRUMENT # : 1238  
 CAPACITY [PSI] : 4700.  
 DEPTH [FT] : 3271.0  
 PORT OPENING : OUTSIDE  
 TEMPERATURE [DEG F] : 108.0

LABEL POINT INFORMATION  
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#	TIME OF DAY HH:MM:SS	DATE DD-MM	EXPLANATION	ELAPSED TIME, MIN	BOT HOLE PRESSURE PSIA
***	*****	*****	*****	*****	*****
1	6:46:32	6-0C	HYDROSTATIC MUD	-1.46	1547
2	6:47:59	6-0C	START FLOW	-0.01	85
3	7: 3: 2	6-0C	END FLOW & START SHUT-IN	15.04	422
4	7:33: 4	6-0C	END SHUT-IN	45.06	1274
5	7:34:49	6-0C	START FLOW	46.81	422
6	8:34:14	6-0C	END FLOW & START SHUT-IN	106.24	921
7	9:35: 0	6-0C	END SHUT-IN	167.00	1277
8	9:36:29	6-0C	HYDROSTATIC MUD	168.48	1527

SUMMARY OF FLOW PERIODS  
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PERIOD	START ELAPSED TIME, MIN	END ELAPSED TIME, MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA
*****	*****	*****	*****	*****	*****
1	-0.01	15.04	15.05	85	422
2	46.81	106.24	59.43	422	921

SUMMARY OF SHUTIN PERIODS  
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PERIOD	START ELAPSED TIME, MIN	END ELAPSED TIME, MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	FINAL FLOW PRESSURE PSIA	PRODUCING TIME, MIN
*****	*****	*****	*****	*****	*****	*****	*****
1	15.04	45.06	30.02	422	1274	422	15.05
2	106.24	167.00	60.76	921	1277	921	74.48

## TEST PHASE : FLOW PERIOD # 1

TIME OF DAY	DATE	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE PRESSURE PSIA
HH:MM:SS	DD-MM			
*****	*****	*****	*****	*****
6:47:59	6-0C	-0.01	0.00	85
6:52:59	6-0C	4.99	5.00	247
6:57:59	6-0C	9.99	10.00	340
7: 2:59	6-0C	14.99	15.00	421
7: 3: 2	6-0C	15.04	15.05	422

## TEST PHASE : SHUTIN PERIOD # 1

FINAL FLOW PRESSURE [PSIA] = 422

PRODUCING TIME [MIN] = 15.05

TIME OF DAY	DATE	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
HH:MM:SS	DD-MM					
*****	*****	*****	*****	*****	*****	*****
7: 3: 2	6-0C	15.04	0.00	422	0	
7: 4: 2	6-0C	16.04	1.00	899	477	1.205
7: 5: 2	6-0C	17.04	2.00	1073	651	0.931
7: 6: 2	6-0C	18.04	3.00	1127	705	0.779
7: 7: 2	6-0C	19.04	4.00	1156	734	0.678
7: 8: 2	6-0C	20.04	5.00	1178	756	0.603
7: 9: 2	6-0C	21.04	6.00	1193	771	0.545
7:10: 2	6-0C	22.04	7.00	1203	780	0.498
7:11: 2	6-0C	23.04	8.00	1211	789	0.460
7:12: 2	6-0C	24.04	9.00	1219	797	0.427
7:13: 2	6-0C	25.04	10.00	1225	803	0.399
7:15: 2	6-0C	27.04	12.00	1235	813	0.353
7:17: 2	6-0C	29.04	14.00	1243	821	0.317
7:19: 2	6-0C	31.04	16.00	1250	828	0.288
7:21: 2	6-0C	33.04	18.00	1255	833	0.264
7:23: 2	6-0C	35.04	20.00	1259	837	0.244
7:25: 2	6-0C	37.04	22.00	1263	840	0.226
7:27: 2	6-0C	39.04	24.00	1267	845	0.211
7:29: 2	6-0C	41.04	26.00	1269	847	0.198
7:31: 2	6-0C	43.04	28.00	1272	849	0.187
7:33: 2	6-0C	45.04	30.00	1274	852	0.177
7:33: 4	6-0C	45.06	30.02	1274	852	0.176



## TEST PHASE : FLOW PERIOD # 2

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA
7:34:49	6-OC	46.81	0.00	422
7:39:49	6-OC	51.81	5.00	515
7:44:49	6-OC	56.81	10.00	576
7:49:49	6-OC	61.81	15.00	628
7:54:49	6-OC	66.81	20.00	675
7:59:49	6-OC	71.81	25.00	718
8: 4:49	6-OC	76.81	30.00	754
8: 9:49	6-OC	81.81	35.00	791
8:14:49	6-OC	86.81	40.00	821
8:19:49	6-OC	91.81	45.00	849
8:24:49	6-OC	96.81	50.00	875
8:29:49	6-OC	101.81	55.00	900
8:34:14	6-OC	106.24	59.43	921

## TEST PHASE : SHUTIN PERIOD # 2

FINAL FLOW PRESSURE [PSIA] = 921

PRODUCING TIME [MIN] = 74.48

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
8:34:14	6-OC	106.24	0.00	921	0	
8:35:14	6-OC	107.24	1.00	1158	238	1.878
8:36:14	6-OC	108.24	2.00	1190	269	1.583
8:37:14	6-OC	109.24	3.00	1203	282	1.412
8:38:14	6-OC	110.24	4.00	1211	290	1.293
8:39:14	6-OC	111.24	5.00	1217	296	1.201
8:40:14	6-OC	112.24	6.00	1222	302	1.128
8:41:14	6-OC	113.24	7.00	1227	306	1.066
8:42:14	6-OC	114.24	8.00	1230	310	1.013
8:43:14	6-OC	115.24	9.00	1233	312	0.967
8:44:14	6-OC	116.24	10.00	1235	315	0.927
8:46:14	6-OC	118.24	12.00	1241	320	0.858
8:48:14	6-OC	120.24	14.00	1245	324	0.801
8:50:14	6-OC	122.24	16.00	1248	327	0.752
8:52:14	6-OC	124.24	18.00	1251	330	0.711
8:54:14	6-OC	126.24	20.00	1253	333	0.674
8:56:14	6-OC	128.24	22.00	1256	335	0.642
8:58:14	6-OC	130.24	24.00	1258	337	0.613
9: 0:14	6-OC	132.24	26.00	1259	339	0.587
9: 2:14	6-OC	134.24	28.00	1261	340	0.563
9: 4:14	6-OC	136.24	30.00	1263	342	0.542
9: 9:14	6-OC	141.24	35.00	1266	345	0.495
9:14:14	6-OC	146.24	40.00	1269	348	0.457
9:19:14	6-OC	151.24	45.00	1271	350	0.424
9:24:14	6-OC	156.24	50.00	1274	353	0.396

TEST PHASE : SHUTIN PERIOD # 2  
FINAL FLOW PRESSURE [PSIA] = 921  
PRODUCING TIME [MIN] = 74.48

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
*****	*****	*****	*****	*****	*****	*****
9:29:14	6-0C	161.24	55.00	1276	355	0.372
9:34:14	6-0C	166.24	60.00	1277	356	0.351
9:35: 0	6-0C	167.00	60.76	1277	356	0.347