

COMPANY Quannah Petroleum, Inc.

WELL

Reeves St. #1

TEST NO. 5

COUNTY

Lea

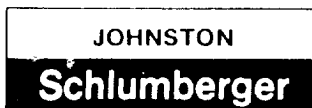
STATE N

JOHNSTON

Schlumberger

computerized
data
analysis

Field Report No. 38360E



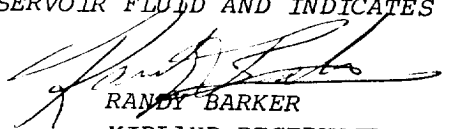
COMPUTERIZED DATA ANALYSIS

September 10, 1981

GENTLEMEN:

THE ENCLOSED TEST APPEARS TO BE A GOOD MECHANICAL DRILL STEM TEST DURING WHICH THE TOOLS DID FUNCTION PROPERLY. THE FORMATION DID PRODUCE ENOUGH RESERVOIR FLUID FOR PROPER IDENTIFICATION. RESERVOIR PRESSURE DRAWDOWN WAS SUFFICIENT AND ADEQUATE SHUT-IN BUILD-UPS DID OCCUR FOR RELIABLE QUANTITATIVE ANALYSIS. RESERVOIR PARAMETERS WERE CALCULATED BY THE HORNER METHOD.

1. FLOW RATE: A FLOW RATE OF 59 BBL/DAY OF OIL WAS NOTED DURING THIS TEST.
2. RESERVOIR PRESSURE: EXTRAPOLATION OF THE INITIAL SHUT-IN PRESSURE BUILD-UP INDICATES A MAXIMUM RESERVOIR PRESSURE OF 810 P.S.I.A. AT RECORDER DEPTH. EXTRAPOLATION OF THE SECOND SHUT-IN PRESSURE BUILD-UP INDICATES A MAXIMUM RESERVOIR PRESSURE OF 802 P.S.I.A. AT RECORDER DEPTH. EXTRAPOLATION OF THE FINAL SHUT-IN PRESSURE BUILD-UP INDICATES A MAXIMUM RESERVOIR PRESSURE OF 809 P.S.I.A. AT RECORDER DEPTH. THE DIFFERENCE BETWEEN THE THREE SHUT-INS IS INSIGNIFICANT.
3. PERMEABILITY: THE CALCULATED TRANSMISSIBILITY FACTOR OF 1504 MD.-FT./CP. INDICATES AN AVERAGE EFFECTIVE PERMEABILITY TO OIL OF 85.52 MD. FOR THE REPORTED 12 FOOT NET INTERVAL. THE CALCULATIONS WERE BASED ON A SLOPE OF 7.5 P.S.I./LOG CYCLE OBTAINED FROM THE FINAL SHUT-IN BUILD-UP PLOT. IT WAS ASSUMED FOR THESE CALCULATIONS: (A) THE 42.2 °API AT 60°F. OIL CONTAINED 270 CU.FT./BBL. OF ORIGINAL DISSOLVED GAS, (B) VISCOSITY .6824 CP., (C) FORMATION VOLUME FACTOR 1.17 BBL/BBL. THESE FIGURES WERE OBTAINED FROM THE AVAILABLE TECHNICAL LITERATURE.
4. WELLBORE DAMAGE: THE CALCULATED DAMAGE RATIO OF 5.89 INDICATES THAT WELLBORE DAMAGE WAS PRESENT AT THE TIME AND CONDITIONS OF THIS TEST. THE PRESSURE DROP DUE TO DAMAGE IS ESTIMATED TO BE 158 P.S.I.
5. RADIUS OF INVESTIGATION: THE CALCULATED RADIUS OF INVESTIGATION OF THIS TEST IS 62 FEET BASED ON AN ASSUMED POROSITY OF 10%, COMPRESSIBILITY OF 1.18×10^{-3} ; AND OTHER ASSUMPTIONS MADE IN NUMBER 3 ABOVE.
6. GENERAL COMMENTS: THE FORMATION EXHIBITS THE CHARACTERISTICS OF RELATIVELY HIGH PERMEABILITY EFFECTIVE TO THE RESERVOIR FLUID AND INDICATES THE PRESENCE OF WELLBORE DAMAGE.


 RANDY BARKER
 MIDLAND RESERVOIR
 EVALUATION DEPARTMENT

QUANNAH PETROLEUM, INC.
 REEVES ST. #1; LEA COUNTY, NEW MEXICO
 TEST #5; 10900' TO 11025'
 LOCATION: SEC. 14 T-18-S R-35-E

FIELD REPORT NO. 38360E

In making any interpretation, our employees will give Customer the benefit of their best judgment as to the correct interpretation. Nevertheless, since all interpretations are opinions based on inferences from electrical, mechanical or other measurements, we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not be liable or responsible, except in the case of gross or wilful negligence on our part, for any loss, costs, damages or expenses incurred or sustained by Customer resulting from any interpretation

Reservoir Engineering Data

Recorder No. T-908

Field Report No. 38360E

Damage Ratio	DR	5.89	Effective Transmissibility	$\frac{Kh}{\mu}$	Oil	1504	$\frac{Md-ft.}{Cp.}$
Maximum Reservoir Pressure Initial shut-in	P_o	810 P.S.I.A.	Effective Transmissability	$\frac{Kh}{\mu}$		-----	$\frac{Md-ft.}{Cp.}$
Slope of Shut-in Curve Final shut-in	M	7.5 PSI/log cycle	Flow Rate	Q	Oil	59.28	Bbl./day
Potentiometric Surface (Datum Plane, Sea Level)	PS	--- ft.	Pressure Gradient			.0736	PSI. ft.
Productivity Index	PI	--- Bbl./day/PSI	Gas Oil Ratio	GOR		270	CF/Bbl.
Radius of Investigation		62 ft.	K (Effective to Oil)			85.52	Md.

$$SLOPE (M) = 810 - 802.5 = 7.5 \text{ psi/Log Cycle}$$

Assumptions made for Calculations for Liquid Recoveries

- Q is averaged at a constant rate.
- P_r is formation flowing pressure at a constant rate.
- Formation flow is taken as single phase flow.
If gas is produced at surface, phase separation is assumed to have occurred in drill pipe.
- Radial flow is assumed.
- For the purpose of calculating EDR where specific reservoir parameters are not available it is assumed that:

Effective permeability, K, will fall between	1 to 200 md
Formation porosity, ϕ , will fall between	0.1 to 0.3
Fluid compressibility, c, will fall between	10^{-4} to 10^{-3}
Fluid viscosity, μ , will fall between	0.05 to 50 cp.
Well bore radius, r_w , will fall between	3" to 4 1/2"

Which gives an average value for the function $\log \frac{K}{\phi \mu c r_w^2}$ of 5.5

- Other standard radial flow, equilibrium assumptions.

Empirical Equations:

$$1. \text{ EDR} = \frac{P_o - P_r}{M(\log T + 2.65)} \text{ where } M = \frac{P_i - P_{10}}{\text{Log Cycle}}$$

$$2. \text{ Transmissibility } \frac{Kh}{\mu\beta} = \frac{162.6 Q}{M}$$

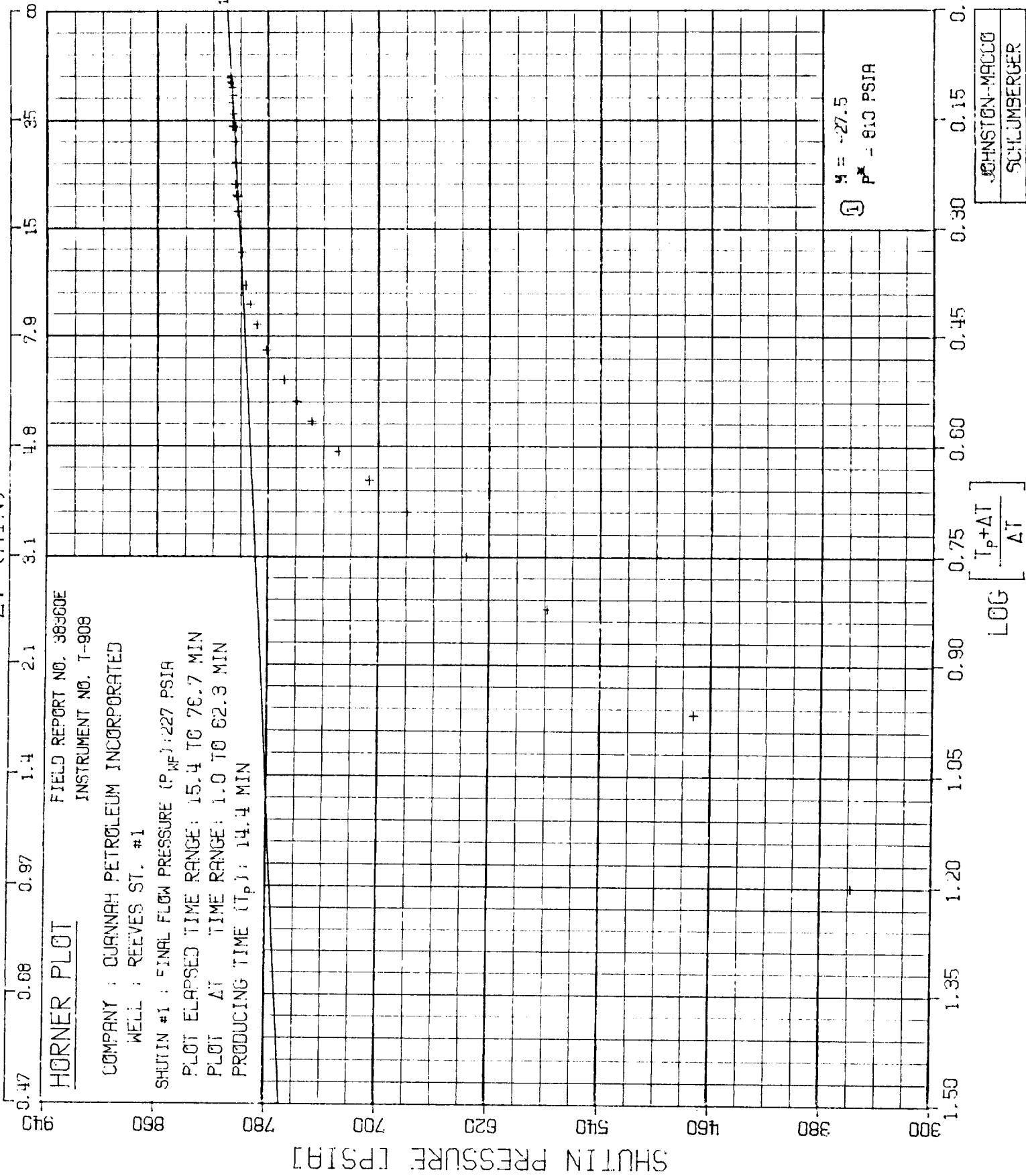
$$3. \text{ DST } J = \frac{Q}{P_o - P_r} \quad \text{Theoretical } J = \frac{7.08 \times 10^{-3} Kh}{\mu\beta \ln(r_o/r_w)} \quad \text{Assumed } \ln(r_o/r_w) = 7.60$$

$$4. \text{ P.S.} = [P_o \times 2.309 \text{ ft./PSI}] - [\text{Recorder depth to sea level.}]$$

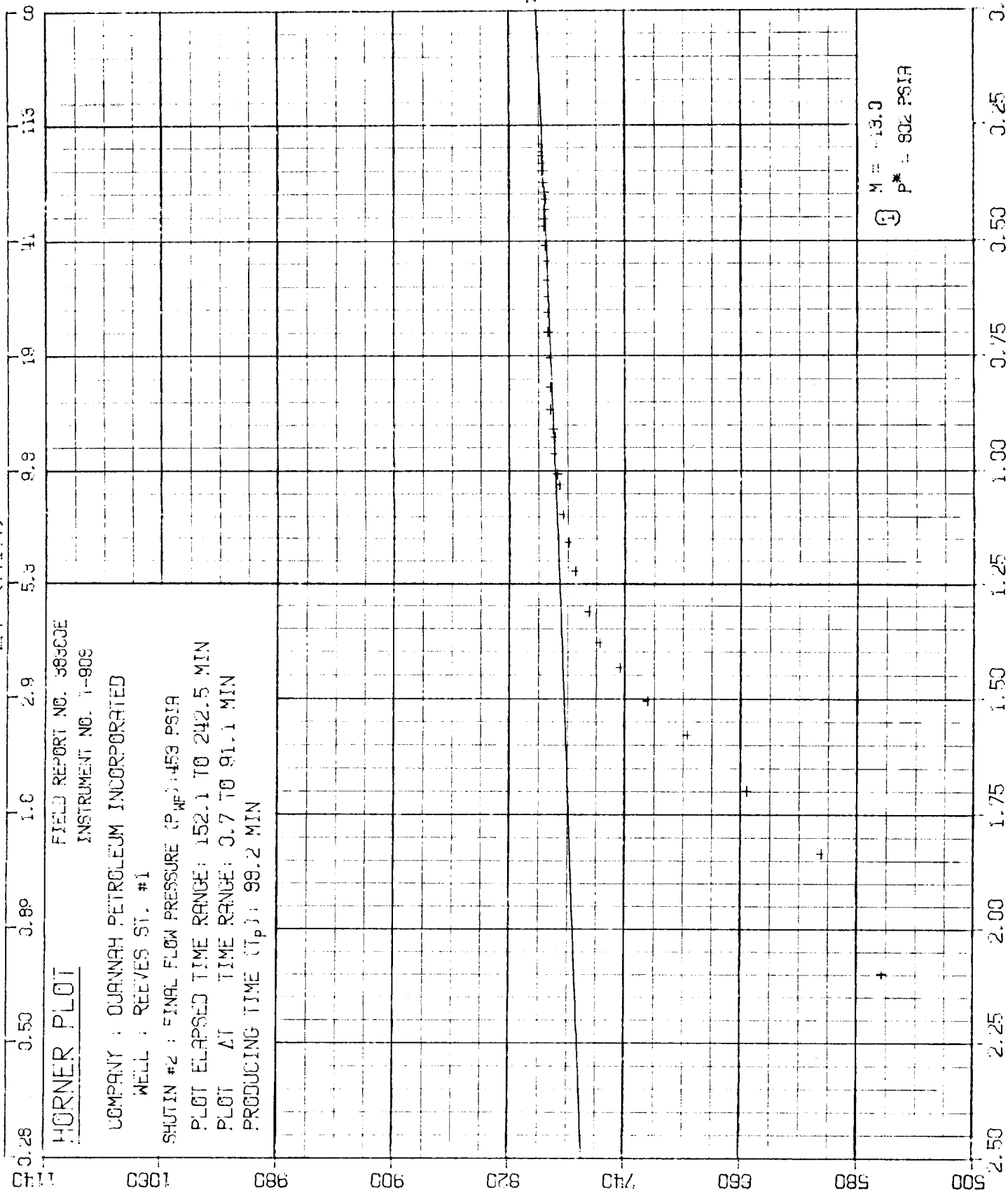
$$5. \text{ Radius of investigation, } r_i = \sqrt{\frac{Kt}{40\phi\mu c}} \quad \text{where } t = \text{time in days}$$

In making any interpretation, our employees will give Customer the benefit of their best judgment as to the correct interpretation. Nevertheless, since all interpretations are opinions based on inferences from electrical, mechanical or other measurements, we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not be liable or responsible, except in the case of gross or wilful negligence on our part, for any loss, costs, damages or expenses incurred or sustained by Customer resulting from any interpretation made by any of our agents or employees.

ΔT (MIN)

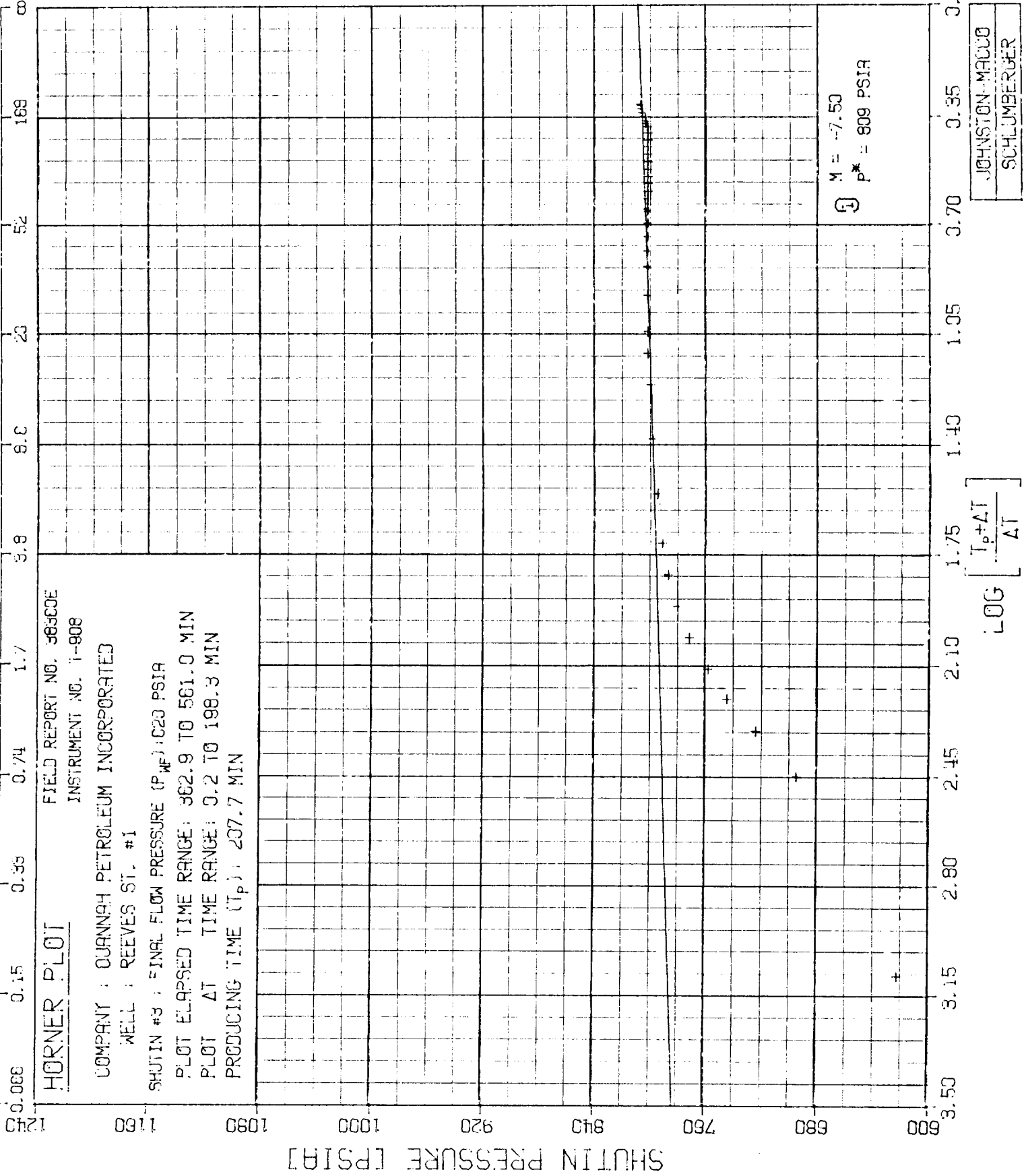


ΔT (MIN)



JOHNSTON-MALCOLM
SCHUMBERGER

ΔT (MIN)



LOG LOG PLOT

COMPANY : OJANNAH PETROLEUM INCORPORATED

WELL : REEVES ST. #1

FIELD REPORT NO. 38360E

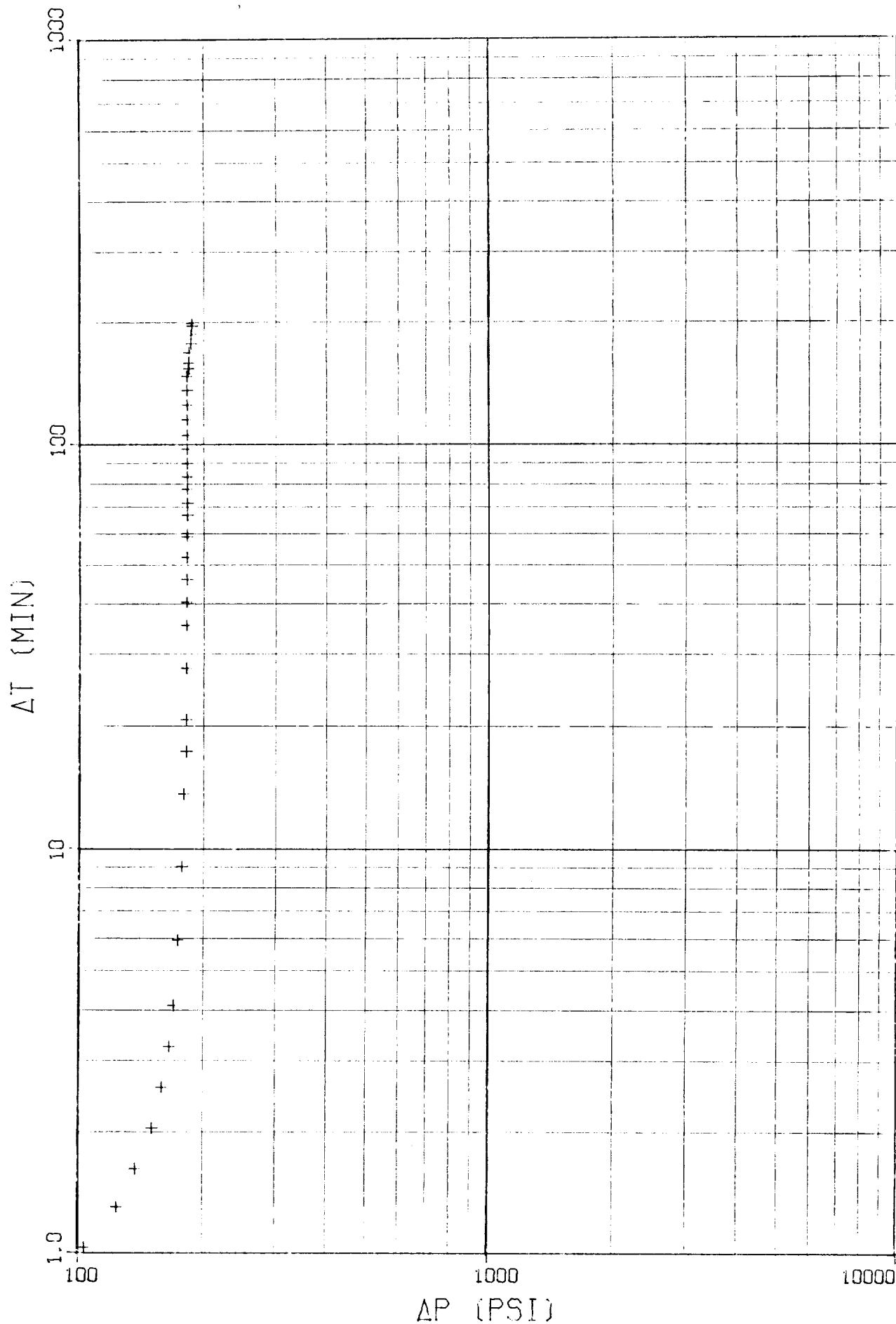
INSTRUMENT NO. 1-908

SHUTIN #3 :

FINAL FLOW PRESSURE (P_{wf}) : 623 PSIA

PLOT ELAPSED TIME RANGE: 363.8 TO 561.0 MIN

PLOT ΔT TIME RANGE: 1.0 TO 198.3 MIN



 * TEST TICKET DATA PRINTOUT *

WELL IDENTIFICATION

1. WELL	: REEVES ST. #1
2. COMPANY	: GUANNAH PETROLEUM INCORPORATED
3.	: 4335 LBJ FREEWAY SUITE 525
4.	: DALLAS, TEXAS
5. CUSTOMER	: SAHJ
6.	:
7.	:
8. FIELD	: WILDCAT
9. COUNTY	: LEA
10. STATE/PROV.	: NEW MEXICO
11. LOCATION	: SEC. 14 T-18-S R-35-E
12. TECHNICIAN	: BOULWARE (HOERS)
13. TEST APPROVED BY	: MR. EDDY CURRY
14. TEST DATE	: 8-26-81
15. DEPTH REFERENCE	: KELLY BUSHING
16. DEPTH REFERENCE ELEVATION	: S.L. 3900. FT

HOLE INFORMATION

1. THE HOLE IS STRAIGHT.	
2. TOTAL DEPTH	: 11025. FT
3. OPEN HOLE DIAMETER	: 7.88 IN

MUD INFORMATION

1. MUD TYPE	: LOW-SOLIDS DRISPAK
2. MUD WEIGHT	: 8.8 LB/GAL
3. MUD VISCOSITY	: 35. MARSH FUNNEL SEC
4. CORRECTED WATER LOSS	: 16.6 CC/30 MIN
5. MUD RESISTIVITY	: 0.35 OHM-M
6. MUD RES. MEAS. TEMP.	: 65.0 DEG F
7. MUD FILTRATE RESISTIVITY	: OHM-M
8. MUD FILT. RES. MEAS. TEMP.	: DEG F
9. MUD CHLORIDES CONTENT	: 2300.0 PPM BY WEIGHT

 * TEST TICKET DATA PRINTOUT *

TEST INFORMATION

1. FIELD REPORT NUMBER : 38360E
 2. TEST TYPE : M.F.E. OPEN HOLE
 3. TEST NUMBER : 05
 4. TELEFLOW IN USE ? : YES
 5. SSDR DR J-300 IN USE ? : NO
 6. SPRD IN USE ? : NO
 7. PTSDL IN USE ? : NO

TEST STRING INFORMATION

#	COMPONENT NAME	EFFECTIVE I.D. (IN)	EFFECTIVE O.D. (IN)	FLOW PATH LENGTH (FT)	J/R CODE
1	DRILL PIPE	3.24	4.00	10270.	
2	DRILL COLLARS	2.25	6.00	593.	
3	TOOL STRING	0.94	5.00	162.	

TEST STRING PLACEMENT

1. TEST TYPE CODE 1 - DN BOTTOM
 2. PACKER DEPTHS : 10894. FT & 10900. FT

TEST ZONE DESCRIPTION

	FORMATION NAME	TOP (FT)	BOTTOM (FT)	PRODUCTION ZONE THICKNESS (FT)	POROSITY (%)
1	STRAWN			25.	10.

TEST CONDITIONS

1. BOTTOMHOLE CHOKER(S) EFF. INTERNAL DIA. : 0.94 IN

 * TEST TICKET DATA PRINTOUT *

TEST TOOL SAMPLE CHAMBER RECOVERY DATA

SAMPLE PRESSURE : 85. PSIG
 OIL GRAVITY : 42.2 DEG. API @ 60.0 DEG F
 GAS/OIL RATIO : 270. FT3/BBL
 GAS/LIQUID RATIO : 270. FT3/BBL

SAMPLE CHAMBER CONTENTS

FLUID	VOLUME	RESISTIVITY	CHLORIDES
GAS	1.70 FT3		
OIL	1000.0 CC		
WATER	CC	OHM-M @	DEG F PPM
MUD	CC	OHM-M @	DEG F
TOTAL LIQUID	1000.0 CC		

RECOVERY INFORMATION

DESCRIPTION	FEET	% DIL	% H2O	API DEG.	DEG.F	RESISTIVITY OHM-M	DEG.F	CHL PPM
1 OIL (TOP)	1470	100		42	60			
2 DRILLING FLUID (MIDDLE)						0.52	76	3500.
3 DRILLING FLUID (BOTTOM)	297					0.52	76	3200.
4 TOTAL RECOVERY	1767							

SURFACE INFORMATION

DESCRIPTION	TIME	PRESSURE	CHOKE SIZE
1 SET PACKER (8-25-81)	0847		CLOSED
2 OPENED TOOL	0849	0	CHAMBE
3	0854	-	"
4	0859	.66	"
5 CLOSED FOR INITIAL SHUT-IN	0904	1.53	"
6 FINISHED SHUT-IN	1006	3.48	"
7 REOPENED TOOL	1007	3.55	"
8 CLOSED FOR 2ND SHUT-IN	1122	48.53	"
9 FINISHED 2ND SHUT-IN	1253	-	
10 RE-OPENED TOOL	1254	56.24	"
11 OPENED ON 1/8 " CHOKE	1343	85.29	18 "
12	1348	85.76	"
13 OPENED ON 1/4 " CHOKE	1353	85.67	1/4 "

* TEST TICKET DATA PRINTOUT *

DESCRIPTION	TIME	PRESSURE	CHORE SIZE
14	1403	75.66	"
15	1413	67.21	"
16	1423	60.25	"
17	1433	47.12	"
18	1443	38.06	"
19 CLOSED FOR FINAL SHUT-IN	1454	34.14	"
20 FINISHED SHUT-IN	1810	0	-
21 PULLED PACKER LODGE	1815	-	-
22 STARTED REVERSING	2200		
23 FINISHED REVERSING	2300	400	

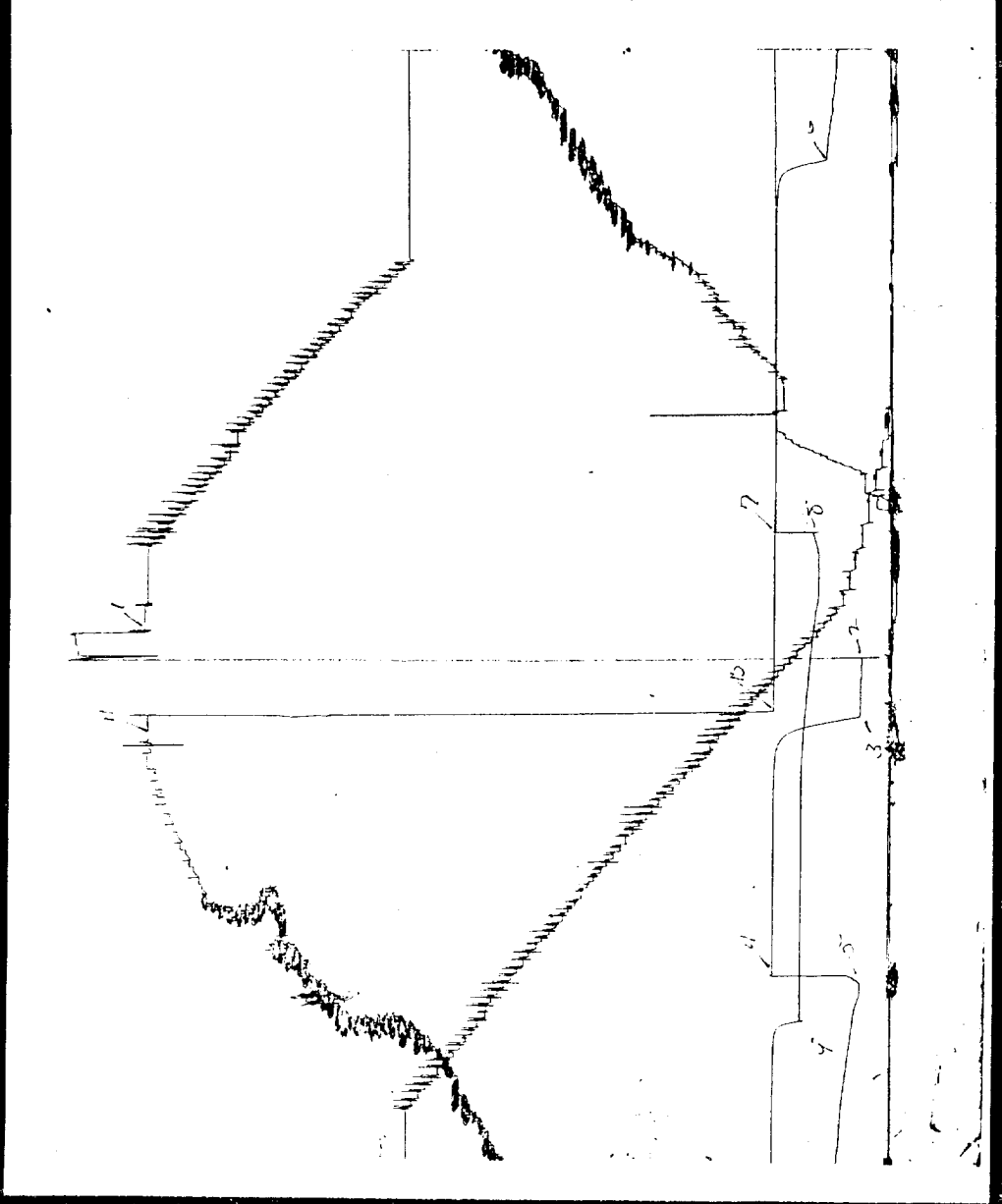
FIELD REPORT NO.: 38360E

CAPACITY: 7000#

INSTRUMENT NO.: T-908

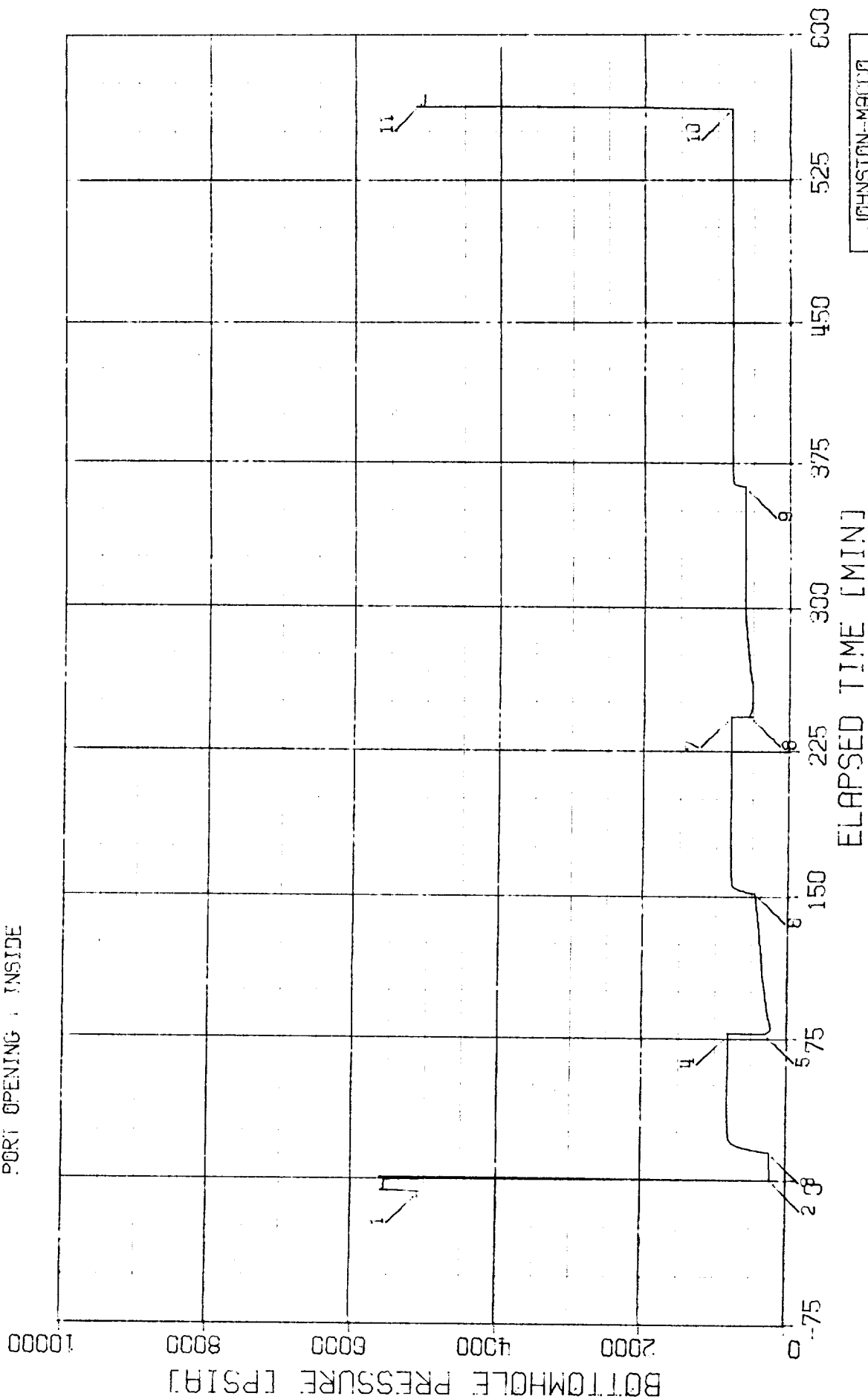
NUMBER OF REPORTS: 5

JOHNSTON
Schlumberger



BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO. 38360E COMPANY : QUANNAH PETROLEUM INCORPORATED
INSTRUMENT NO. T-908 WELL : REEVES ST. #1
DEPTH : 11013 FT
CAPACITY : 7000 PSI
PORT OPENING : INSIDE



JOHNSTON-MACCO
SCHLUMBERGER

 * WELL TEST DATA PRINTOUT *

FIELD REPORT # : 38360E

COMPANY : QUANNAH PETROLEUM INCORPORATED
 WELL : REEVES ST. #1

INSTRUMENT # : T-908
 CAPACITY (PSID) : 7000.
 DEPTH (FT) : 11013.0
 PORT OPENING : INSIDE
 TEMPERATURE (DEG F) : 164.0

LABEL POINT INFORMATION

#	TIME OF DAY	DATE	EXPLANATION	ELAPSED TIME, MIN	BOT HOLE PRESSURE PSIA
HH:MM:SS	DD-MM				
1	8:41:18	25-AU	HYDROSTATIC MUD	-7.70	5081
2	8:49:00	25-AU	START FLOW	0.00	214
3	9:3:26	25-AU	END FLOW & START SHUT-IN	14.44	227
4	10:5:43	25-AU	END SHUT-IN	76.72	808
5	10:6:38	25-AU	START FLOW	77.64	310
6	11:20:24	25-AU	END FLOW & START SHUT-IN	151.40	453
7	12:51:31	25-AU	END SHUT-IN	242.51	798
8	12:52:13	25-AU	START FLOW	243.21	544
9	14:51:43	25-AU	END FLOW & START SHUT-IN	362.72	620
10	18:10:00	25-AU	END SHUT-IN	561.00	807
11	18:14:56	25-AU	HYDROSTATIC MUD	565.94	5057

SUMMARY OF FLOW PERIODS

PERIOD	START ELAPSED TIME, MIN	END ELAPSED TIME, MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA
1	0.00	14.44	14.44	214	227
2	77.64	151.40	73.76	310	453
3	243.21	362.72	119.51	544	620

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	14.44	76.72	62.28	227	808	227	14.44
2	151.40	242.51	91.11	453	798	453	63.20
3	362.72	561.00	198.28	620	807	620	207.71

TEST PHASE : FLOW PERIOD # 1

TIME OF DAY	DATE	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE PRESSURE PSIA
HH:MM:SS	DD-MM	*****	*****	*****
8:49: 0	25-AU	0.00	0.00	214
8:54: 0	25-AU	5.00	5.00	215
8:59: 0	25-AU	10.00	10.00	224
9: 3:26	25-AU	14.44	14.44	227

TEST PHASE : SHUTIN PERIOD # 1

FINAL FLOW PRESSURE (PSIA) = 227

PRODUCING TIME (MIN) = 14.44

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	*****	*****	*****	*****	*****
9: 3:26	25-AU	14.44	0.00	227	0	
9: 4:26	25-AU	15.44	1.00	362	135	1.189
9: 5:26	25-AU	16.44	2.00	506	279	0.915
9: 6:26	25-AU	17.44	3.00	624	397	0.764
9: 7:26	25-AU	18.44	4.00	696	468	0.664
9: 8:26	25-AU	19.44	5.00	737	510	0.590
9: 9:26	25-AU	20.44	6.00	762	535	0.532
9:10:26	25-AU	21.44	7.00	776	549	0.486
9:11:26	25-AU	22.44	8.00	786	559	0.448
9:12:26	25-AU	23.44	9.00	792	565	0.416
9:13:26	25-AU	24.44	10.00	796	569	0.388
9:15:26	25-AU	26.44	12.00	799	572	0.343
9:17:26	25-AU	28.44	14.00	801	574	0.308
9:19:26	25-AU	30.44	16.00	803	576	0.279
9:21:26	25-AU	32.44	18.00	804	577	0.256
9:23:26	25-AU	34.44	20.00	804	577	0.236
9:25:26	25-AU	36.44	22.00	804	577	0.219
9:27:26	25-AU	38.44	24.00	804	577	0.205
9:29:26	25-AU	40.44	26.00	804	577	0.192
9:31:26	25-AU	42.44	28.00	804	577	0.181
9:33:26	25-AU	44.44	30.00	804	577	0.171
9:38:26	25-AU	49.44	35.00	807	580	0.150
9:43:26	25-AU	54.44	40.00	807	580	0.134
9:48:26	25-AU	59.44	45.00	807	580	0.121
9:53:26	25-AU	64.44	50.00	807	580	0.110
9:58:26	25-AU	69.44	55.00	807	580	0.101
10: 3:26	25-AU	74.44	60.00	808	581	0.094
10: 5:43	25-AU	76.72	62.28	808	581	0.091

TEST PHASE : FLOW PERIOD # 2

TIME OF DAY	DATE	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE PRESSURE PSIA
HH:MM:SS	DD-MM	*****	*****	*****
10: 6:38	25-AU	77.64	0.00	310
10:11:38	25-AU	82.64	5.00	224
10:16:38	25-AU	87.64	10.00	261
10:21:38	25-AU	92.64	15.00	260
10:26:38	25-AU	97.64	20.00	299
10:31:38	25-AU	102.64	25.00	316
10:36:38	25-AU	107.64	30.00	354
10:41:38	25-AU	112.64	35.00	345
10:46:38	25-AU	117.64	40.00	355
10:51:38	25-AU	122.64	45.00	367
10:56:38	25-AU	127.64	50.00	384
11: 1:38	25-AU	132.64	55.00	396
11: 6:38	25-AU	137.64	60.00	412
11:11:38	25-AU	142.64	65.00	429
11:16:38	25-AU	147.64	70.00	444
11:20:24	25-AU	151.40	73.76	453

TEST PHASE : SHUTIN PERIOD # 2

FINAL FLOW PRESSURE (PSIA) = 453

PRODUCING TIME (MIN) = 88.20

TIME OF DAY	DATE	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HOBNER TIME
HH:MM:SS	DD-MM	*****	*****	*****	*****	*****
11:20:24	25-AU	151.40	0.00	453	0	
11:21:24	25-AU	152.40	1.00	583	130	1.950
11:22:24	25-AU	153.40	2.00	669	217	1.654
11:23:24	25-AU	154.40	3.00	750	277	1.483
11:24:24	25-AU	155.40	4.00	759	306	1.363
11:25:24	25-AU	156.40	5.00	769	316	1.270
11:26:24	25-AU	157.40	6.00	776	323	1.196
11:27:24	25-AU	158.40	7.00	780	327	1.134
11:28:24	25-AU	159.40	8.00	783	330	1.080
11:29:24	25-AU	160.40	9.00	785	332	1.033
11:30:24	25-AU	161.40	10.00	787	334	0.992
11:32:24	25-AU	163.40	12.00	789	336	0.932
11:34:24	25-AU	165.40	14.00	792	339	0.863
11:36:24	25-AU	167.40	16.00	792	339	0.814
11:38:24	25-AU	169.40	18.00	792	339	0.771
11:40:24	25-AU	171.40	20.00	792	339	0.733
11:42:24	25-AU	173.40	22.00	793	340	0.700
11:44:24	25-AU	175.40	24.00	793	340	0.670
11:46:24	25-AU	177.40	26.00	793	340	0.643
11:48:24	25-AU	179.40	28.00	793	340	0.618
11:50:24	25-AU	181.40	30.00	794	341	0.595
11:55:24	25-AU	186.40	35.00	794	341	0.547

TEST PHASE : SHUTIN PERIOD # 2

FINAL FLOW PRESSURE (PSIAB) = 453

PRODUCING TIME (MIN) = 88.20

TIME OF DAY	DATE	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORN TIME
12: 0:24	25-AU	191.40	90.00	795	342	0.506
12: 5:24	25-AU	196.40	95.00	796	343	0.471
12:10:24	25-AU	201.40	50.00	796	343	0.442
12:15:24	25-AU	206.40	55.00	795	342	0.416
12:20:24	25-AU	211.40	60.00	796	343	0.393
12:25:24	25-AU	216.40	65.00	797	344	0.372
12:30:24	25-AU	221.40	70.00	797	345	0.354
12:35:24	25-AU	226.40	75.00	798	345	0.338
12:40:24	25-AU	231.40	80.00	798	345	0.323
12:45:24	25-AU	236.40	85.00	798	345	0.309
12:50:24	25-AU	241.40	90.00	798	345	0.297
12:51:31	25-AU	242.51	91.11	798	345	0.294

TEST PHASE : FLOW PERIOD # 3

TIME OF DAY	DATE	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE PRESSURE PSIA
12:52:13	25-AU	243.21	0.00	594
12:57:13	25-AU	248.21	5.00	506
13: 2:13	25-AU	253.21	10.00	505
13: 7:13	25-AU	258.21	15.00	506
13:12:13	25-AU	263.21	20.00	527
13:17:13	25-AU	268.21	25.00	544
13:22:13	25-AU	273.21	30.00	558
13:27:13	25-AU	278.21	35.00	570
13:32:13	25-AU	283.21	40.00	584
13:37:13	25-AU	288.21	45.00	595
13:42:13	25-AU	293.21	50.00	606
13:47:13	25-AU	298.21	55.00	614
13:52:13	25-AU	303.21	60.00	619
13:57:13	25-AU	308.21	65.00	619
14: 2:13	25-AU	313.21	70.00	619
14: 7:13	25-AU	318.21	75.00	619
14:12:13	25-AU	323.21	80.00	619
14:17:13	25-AU	328.21	85.00	620
14:22:13	25-AU	333.21	90.00	620
14:27:13	25-AU	338.21	95.00	620
14:32:13	25-AU	343.21	100.00	621
14:37:13	25-AU	348.21	105.00	621
14:42:13	25-AU	353.21	110.00	621
14:47:13	25-AU	358.21	115.00	620
14:51:43	25-AU	362.72	119.51	620

TEST PHASE : SHUTIN PERIOD # 3

FINAL FLOW PRESSURE (PSIA) = 620

PRODUCING TIME (MIN) = 207.71

TIME OF DAY	DATE	ELAPSED TIME, MIN	DELTA TIME, MIN	BDT HOLE PRESSURE PSIA	DELTA P PSI	LOG HOBNER TIME
*****	*****	*****	*****	*****	*****	*****
14:51:43	25-AU	362.72	0.00	620	0	
14:52:43	25-AU	363.72	1.00	721	101	2.320
14:53:43	25-AU	364.72	2.00	770	150	2.021
14:54:43	25-AU	365.72	3.00	784	164	1.847
14:55:43	25-AU	366.72	4.00	790	170	1.724
14:56:43	25-AU	367.72	5.00	793	172	1.629
14:57:43	25-AU	368.72	6.00	794	174	1.552
14:58:43	25-AU	369.72	7.00	796	176	1.487
14:59:43	25-AU	370.72	8.00	797	177	1.431
15: 0:43	25-AU	371.72	9.00	798	178	1.382
15: 1:43	25-AU	372.72	10.00	798	178	1.338
15: 3:43	25-AU	374.72	12.00	799	179	1.263
15: 5:43	25-AU	376.72	14.00	800	180	1.200
15: 7:43	25-AU	378.72	16.00	801	181	1.146
15: 9:43	25-AU	380.72	18.00	802	182	1.098
15:11:43	25-AU	382.72	20.00	802	182	1.056
15:13:43	25-AU	384.72	22.00	802	182	1.019
15:15:43	25-AU	386.72	24.00	802	182	0.985
15:17:43	25-AU	388.72	26.00	802	182	0.954
15:19:43	25-AU	390.72	28.00	802	182	0.925
15:21:43	25-AU	392.72	30.00	802	182	0.899
15:26:43	25-AU	397.72	35.00	802	182	0.841
15:31:43	25-AU	402.72	40.00	802	182	0.792
15:36:43	25-AU	407.72	45.00	802	182	0.749
15:41:43	25-AU	412.72	50.00	802	182	0.712
15:46:43	25-AU	417.72	55.00	802	182	0.679
15:51:43	25-AU	422.72	60.00	802	182	0.650
15:56:43	25-AU	427.72	65.00	802	182	0.623
16: 1:43	25-AU	432.72	70.00	802	182	0.598
16: 6:43	25-AU	437.72	75.00	802	182	0.576
16:11:43	25-AU	442.72	80.00	802	182	0.556
16:16:43	25-AU	447.72	85.00	802	182	0.537
16:21:43	25-AU	452.72	90.00	802	182	0.520
16:26:43	25-AU	457.72	95.00	802	182	0.503
16:31:43	25-AU	462.72	100.00	802	182	0.488
16:36:43	25-AU	467.72	105.00	802	182	0.474
16:41:43	25-AU	472.72	110.00	802	182	0.461
16:46:43	25-AU	477.72	115.00	802	182	0.448
16:51:43	25-AU	482.72	120.00	802	182	0.436
16:56:43	25-AU	487.72	125.00	802	182	0.425
17: 1:43	25-AU	492.72	130.00	802	182	0.415
17: 6:43	25-AU	497.72	135.00	802	182	0.405
17:11:43	25-AU	502.72	140.00	802	182	0.395
17:16:43	25-AU	507.72	145.00	802	182	0.386
17:21:43	25-AU	512.72	150.00	803	183	0.377
17:26:43	25-AU	517.72	155.00	803	183	0.369
17:31:43	25-AU	522.72	160.00	804	184	0.361
17:36:43	25-AU	527.72	165.00	804	184	0.354

TEST PHASE : SHUTIN PERIOD # 3

FINAL FLOW PRESSURE (PSTAD) = 820

PRODUCING TIME (MIN) = 207.71

TIME OF DAY	DATE	ELAPSED TIME, MIN	DELTA TIME, MIN	EDT HOLT PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
*****	*****	*****	*****	*****	*****	*****
17:41:43	25-AU	532.72	170.00	805	184	0.347
17:46:43	25-AU	537.72	175.00	806	186	0.340
17:51:43	25-AU	542.72	180.00	806	186	0.333
17:56:43	25-AU	547.72	185.00	806	186	0.327
18: 1:43	25-AU	552.72	190.00	806	186	0.321
18: 6:43	25-AU	557.72	195.00	807	187	0.315
18:10: 0	25-AU	561.00	198.28	807	187	0.311



DISCUSSION

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FORMATION	DATUM	FORMATION	DATUM
TD 11,025 (STRN)		PBD	10,986

CONTR	Cactus #15	OPRSTLEV	3883 GL	sub-s 15
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12-4-22 NM
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