STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-122
Revised 10-1-78

JUL 26 1991
O. C. D.
ARTESIA, OFFICE

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELLS

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 7-01-91	
Company: GREAT WESTERN DRILLING COMPANY			Connection: VENTED		
Pool: PECOS SLOPE			Formation: ABO		Unit
Completion Date: 4-18-91	Total Depth: 3950		Plug Back TD: 3868'	Elevation: 3870 GROUND	Farm or Lease Name: QUAIL STATE
Csg. Size: 4 1/2 / Wt.: 11.6 / d: / Set At: 3950			Perforations: From 3462 To 3566		Well No.: 1
Tbg. Size: 2 3/8 / Wt.: 4.7 / d: / Set At: 3580			Perforations: From To		Unit: A / Sec.: 36 / Twp.: 6 / Rge.: 24
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE			Packer Set At: NONE		County: CHAVES
Producing Thru: TBG	Reservoir Temp. °F: 109 @ 3514	Mean Annual Temp. °F: 60	Baro. Press. – P_a: 13.2		State: NEW MEXICO

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
*3514	*3514	.714	.15	7.34		2"		

	FLOW DATA				TUBING DATA		CASING DATA		
NO.	Prover Line Size X Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	Duration of Flow
SI					960		962		2 1/2 MOS.
1.	2 X 3/16	887		70	887		910		1 HR
2.	2 X 7/32	827		70	827		850		1 HR
3.	2 X 1/4	777		71	777		808		1 HR
4.	2 X 3/8	590		68	590		680		1 HR
5.									

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1.	.6082		900.2	.9905	1.183	1.096	703
2.	.8393		840.2	.9905	1.183	1.090	901
3.	1.087		790.2	.9896	1.183	1.085	1.091
4.	2.378		603.2	.9924	1.183	1.062	1.788
5.							

NO.	P_r	Temp. °R	T_r	Z
1.	1.37	530	1.41	.832
2.	1.28	530	1.41	.841
3.	1.20	531	1.41	.850
4.	.91	528	1.40	.886
5.				

Gas Liquid Hydrocarbon Ratio: DRY GAS Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: DRY Deg.
Specific Gravity Separator Gas: .714 xxxxxxxxx
Specific Gravity Flowing Fluid: xxxxx
Critical Pressure: **656 P.S.I.A. P.S.I.A.
Critical Temperature: **375 R R

P_c 975.2 P_c^2 951.0

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		889.3	790.9	160.1
2		836.0	698.9	252.1
3		787.0	619.4	331.6
4		674.4	454.8	496.2
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.917$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.917$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3.427$

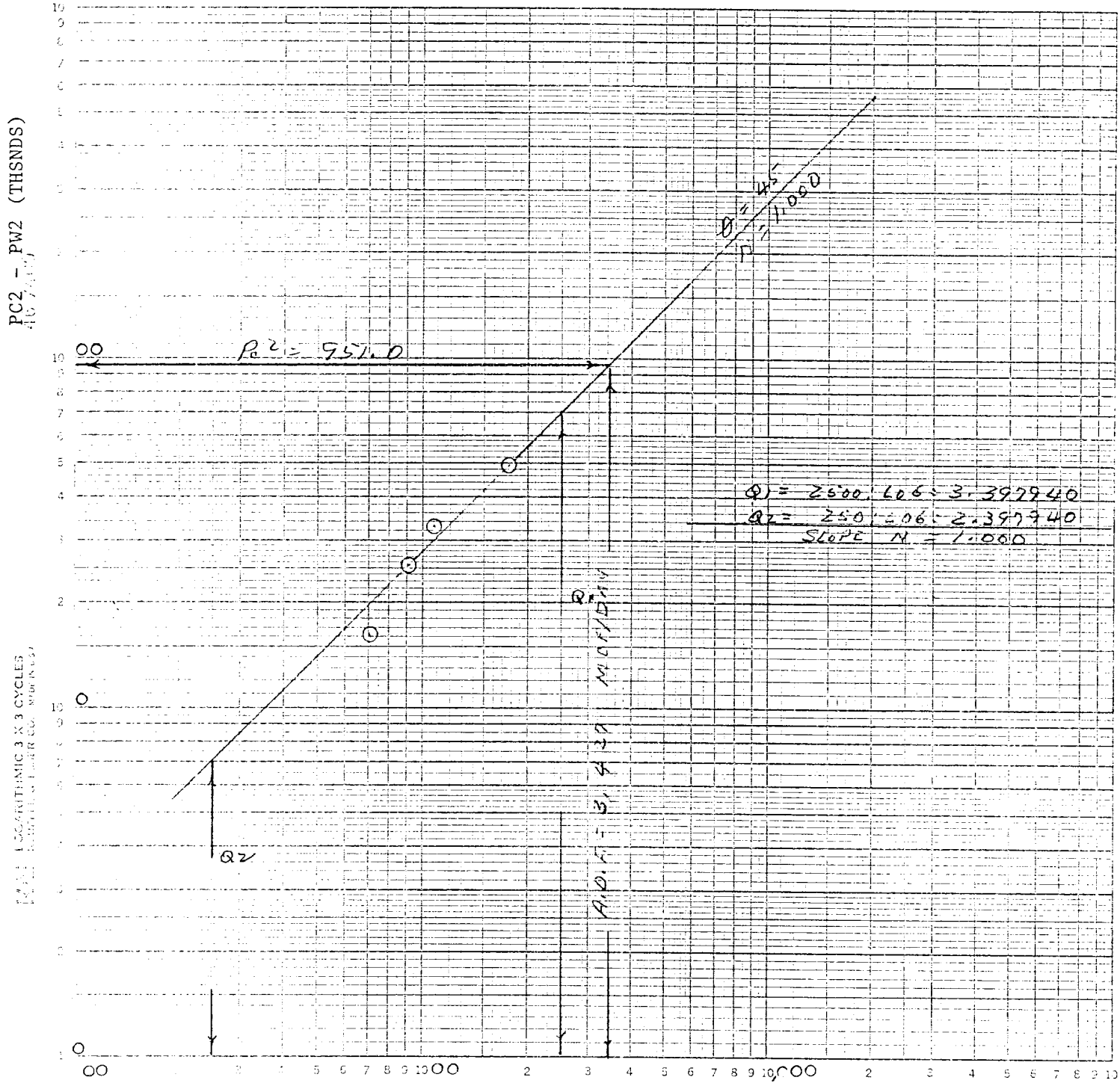
Part ID-2
8-9-91
comp w BH

Absolute Open Flow: 3,427 Mcfd @ 15.025 Angle of Slope θ: 45 Slope, n: 1.000

Remarks: *EHP INSTRUMENT SET @ THIS DEPTH
**CORRECTED TO 7.34 % N2
NO FLUID PRODUCED DURING TEST

Approved By Division	Conducted By:	Calculated By:	Checked By:
	JOHN WEST ENGINEERING	BM	BM

GREAT WESTERN DRILLING COMPANY
QUAIL STATE WELL NC. 1
A - 36 - 6 - 24
CHAVES COUNTY, NEW MEXICO
7-01-91



WORK SHEET FOR CALCULATION OF WELLHEAD PRESSURE (Pc or Pw) FORM C-122F
FROM KNOWN BOTTOM HOLE PRESSURE (Pf or Ps)

COMPANY	GREAT WESTERN DRILLING	LEASE	QUAIL ST	WELL NO.	1	DATE	7 1 91
UNIT	A	SECTION	36	TWNSHP	6	RANGE	24
L	3514	H	3514	L/H	1	G/GMIX	0.7140
		CO2	0.15	N2	7.34	H2S	
		GH	2509.0	PCR	656	TCR	375

LINE		1	2	3	4	5	6	7	8
1	TW(W.H. R)	534	534	534	534	534	534	534	534
2	Ts(B.H. R)	569.1	569.1	569.1	569.1	569.1	569.1	569.1	569.1
3	T=(Tw+Ts/2)	551.6	551.6	551.6	551.6	551.6	551.6	551.6	551.6
4	Z (EST.)	0.877	0.823	ERR	ERR	ERR	ERR	ERR	ERR
5	TZ	483	454	ERR	ERR	ERR	ERR	ERR	ERR
6	GH/TZ	5.190	5.526	ERR	ERR	ERR	ERR	ERR	ERR
7	eS(TABLE XIV)	1.215	1.230	ERR	ERR	ERR	ERR	ERR	ERR
8	Pf or Ps	1059.2	1059.2	0	0	0	0	0	0
9	Pf2 or Ps2	1121.9	1121.9	0.0	0.0	0.0	0.0	0.0	0.0
10	Pc2=Pf/eS or Pw2=Ps2/eS	923.5	911.9	ERR	ERR	ERR	ERR	ERR	ERR
11	Pc or Pw	961	955	ERR	ERR	ERR	ERR	ERR	ERR
12	P=(Pw+Ps/2)or(Pc+Pf/2)	1010	1007	ERR	ERR	ERR	ERR	ERR	ERR
13	Pr=(P/Pcr)	1.54	1.54	ERR	ERR	ERR	ERR	ERR	ERR
14	Tr(T/Tcr)	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47
15	Z (TABLE XI)	0.823	0.824	ERR	ERR	ERR	ERR	ERR	ERR

Pc ~~PW~~ 1 : 954.9 PW 2 : ERR PW 3 : ERR PW 4 : ERR

WORK SHEET FOR CALCULATION OF WELLHEAD PRESSURE (Pc or Pw) FORM C-122F
FROM KNOWN BOTTOM HOLE PRESSURE (Pf or Ps)

COMPANY	GREAT WESTERN DRILLING	LEASE :	QUAIL ST	WELL NO. :	1	DATE	7 1 91	
UNIT	A	SECTION :	36	TWNSHP :	6	RANGE :	24	
L	3514	H :	3514	L/H :	1	G/GMIX :	0.7140	
		CO2 :	0.15	N2 :	7.34	H2S :		
		GH :	2509.0	PCR :	656	TCR :	375	

LINE		1	2	3	4	5	6	7	8
1	TW(W.H. R)	534	534	534	534	534	534	534	534
2	Ts(B.H. R)	569.1	569.1	569.1	569.1	569.1	569.1	569.1	569.1
3	T=(Tw+Ts/2)	551.6	551.6	551.6	551.6	551.6	551.6	551.6	551.6
4	Z (EST.)	0.887	0.833	0.835	0.841	0.842	0.848	0.860	0.866
5	TZ	489	459	460	464	465	468	475	477
6	GH/TZ	5.128	5.464	5.450	5.410	5.400	5.363	5.287	5.255
7	eS(TABLE XIV)	1.212	1.227	1.227	1.225	1.224	1.223	1.219	1.218
8	Pf or Ps	985.2	985.2	925.2	925.2	870.2	870.2	744.2	744.2
9	Pf2 or Ps2	970.6	970.6	856.0	856.0	757.2	757.2	553.8	553.8
10	Pc2=Pf/eS or Pw2=Ps2/eS	800.8	790.8	697.8	698.8	618.4	619.3	454.2	454.8
11	Pc or Pw	895	889	835	836	786	787	674	674
12	P=(Pw+Ps/2)or(Pc+Pf/2)	940	937	880	881	828	829	709	709
13	Pr=(P/Pcr)	1.43	1.43	1.34	1.34	1.26	1.26	1.08	1.08
14	Tr(T/Tcr)	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47
15	Z (TABLE XI)	0.833	0.833	0.841	0.841	0.848	0.848	0.866	0.866

PW 1 : 889.3 PW 2 : 836.0 PW 3 : 787.0 PW 4 : 674.4

TEST DATE: 7/1-5/91
TEST DEPTH: 3,514 FEET

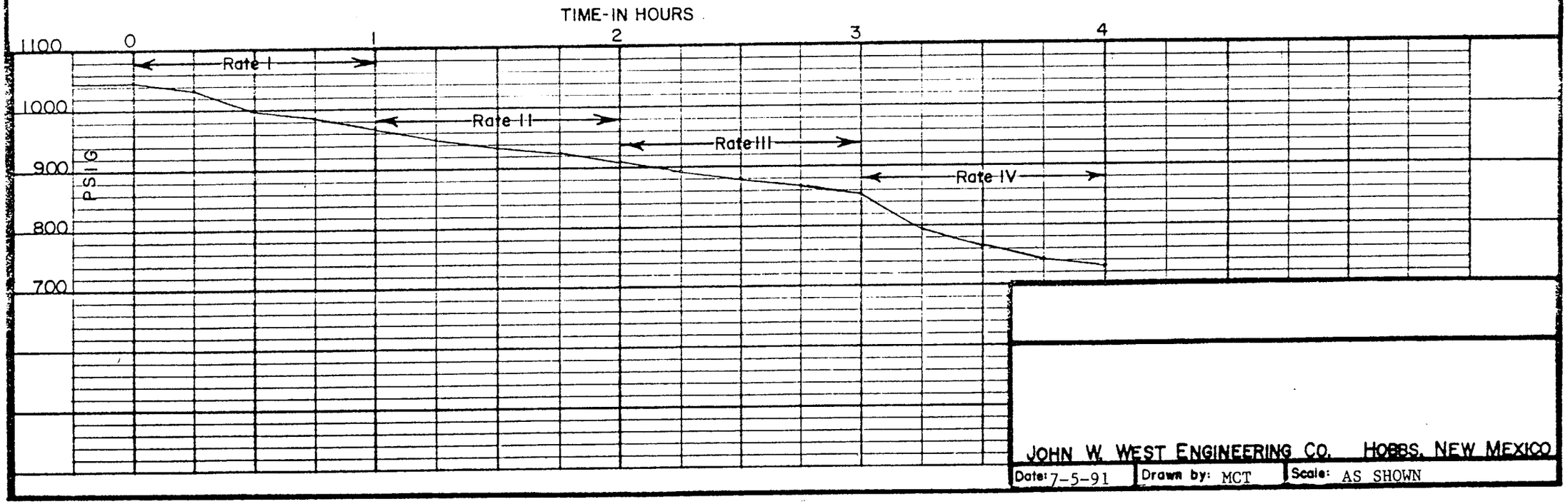
ELEMENT NO.: 56493
RANGE: 0-1500 PSI
CLOCK NO.: B2400S
RANGE: 0-12 HR

NOTE: SEE TABULATION OF PRESSURE AND TIME ON ATTACHED SHEET

GREAT WESTERN DRILLING COMPANY

QUAIL STATE WELL NO. 1

B H P TO USE FOR CALCULATING A O F TEST



JOHN W. WEST ENGINEERING CO. HOBBS, NEW MEXICO

Date: 7-5-91 | Drawn by: MCT | Scale: AS SHOWN

GREAT WESTERN DRILLING COMPANY
QUAIL STATE WELL NO. 1
B H P TO USE FOR CALCULATING A O F TEST
TABULATIONS OF TIMES AND PRESSURES

TEST CONDUCTED BY
JOHN WEST ENGINEERING CO., INC.

TEST DATE: JULY 1-5, 1991
TEST DEPTH: 3,514 FEET
ELEMENT NO.: 56493 (0-1500 PSI)
OPERATOR: B.J.T.

DATE	TIME	CUM. HRS./ MINS.		PSIG @ 3,514 FEET
7-1-91	11:45 AM			1046, GAUGE REACHED 3,514 FEET
7-1-91	12:00 PM	00	00	1046, OPEN CHOKE BEGIN TEST
	12:15 PM	00	15	1018
	12:30 PM	00	30	999
	12:45 PM	00	45	984
	1:00 PM	01	00	972, END RATE I
	1:15 PM	01	15	951
	1:30 PM	01	30	936
	1:45 PM	01	45	924
	2:00 PM	02	00	912, END RATE II
	2:15 PM	02	15	895
	2:30 PM	02	30	880
	2:45 PM	02	45	868
	3:00 PM	03	00	857, END RATE III
	3:15 PM	03	15	895
	3:30 PM	03	30	763
	3:45 PM	03	45	742
7-1-91	4:00 PM	04	00	731, END RATE IV

TEST DATE: 7/1-5/91
TEST DEPTH: 3,514 FEET

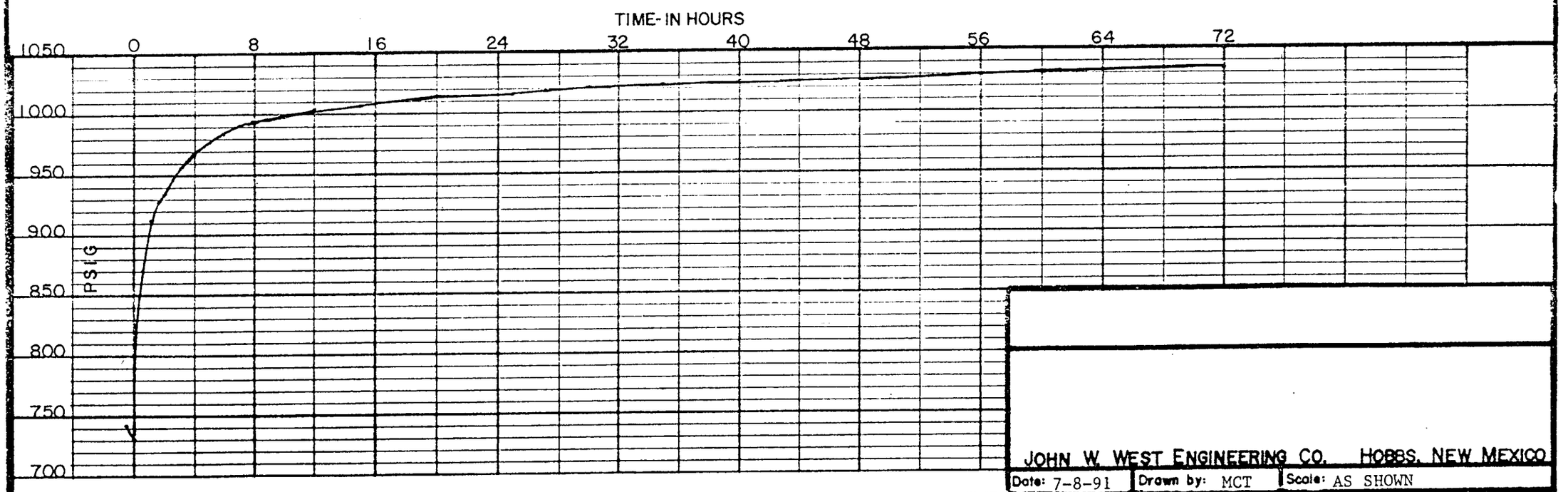
ELEMENT NO.: 56493
RANGE: 0-1500 PSI
CLOCK NO.: 20439
RANGE: 0-72 HR

NOTE: SEE TABULATION OF PRESSURE AND TIME ON ATTACHED SHEET.

GREAT WESTERN DRILLING COMPANY

QUAIL STATE WELL NO. 1

BOTTOM HOLE PRESSURE BUILD-UP CURVE



JOHN W. WEST ENGINEERING CO. HOBBS, NEW MEXICO

Date: 7-8-91 | Drawn by: MCT | Scale: AS SHOWN

GREAT WESTERN DRILLING COMPANY
QUAIL STATE WELL NO. 1
BOTTOM HOLE PRESSURE BUILD-UP TEST
TABULATION OF PRESSURE AND TIME

TEST CONDUCTED BY
JOHN WEST ENGINEERING CO., INC.

TEST DATE: 7/1-5/91
TEST DEPTH: 3,514 FEET
ELEMENT NO.: 56493 (0-1500 PSI)
CLOCK NO.: 20439 (0-72 HR)

DATE	TIME	CUM. HRS.	MINS.	PSIG @ 3,514 FEET
7-1-91	4:00 PM	00	00	731, BEGIN BUILD-UP
	4:15 PM	00	15	836
	4:30 PM	00	30	871
	4:45 PM	00	45	894
	5:00 PM	01	00	912, GAUGE OUT CHANGE CHART
	5:15 PM	01	15	922
	5:45 PM	01	30	929
	6:00 PM	02	00	936
	6:30 PM	02	30	948
	7:00 PM	03	00	958
	7:30 PM	03	30	964
	8:00 PM	04	00	970
	9:00 PM	05	00	979
	10:00 PM	06	00	984
7-1-91	11:00 PM	07	00	991
7-2-91	12:00 AM	08	00	994
	1:00 AM	09	00	997
	2:00 AM	10	00	999
	4:00 AM	12	00	1004
	7:00 AM	15	00	1008
	12:00 PM	20	00	1014
	5:00 PM	25	00	1018
7-2-91	10:00 PM	30	00	1021
7-3-91	3:00 AM	35	00	1022
	8:00 AM	40	00	1025
7-3-91	6:00 PM	50	00	1028
7-4-91	4:00 AM	60	00	1031
	4:00 PM	72	00	1035, CHART RAN DOWN, END TEST