NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELLS

Form C-122
Revised 9-1-65

RECEIVED
JAN 13 1983
O. C. D.
ARTESIA, OFFICE

OIL & GAS
MINERALS MGMT. SERVICE
ROSWELL, NEW MEXICO

File

Type Test: [X] Initial [ ] Annual | Test Date: 12/21/82

Company: PERRY R. BASS	Connection: AIR	Unit:
Pool: Wildcat	Formation: MORROW	County: Big Eddy
Completion Date: 12/18/82	Total Depth: 12840	Plug Back T.D.: 12805
Elevation:	Farm or Lease Name: BIG EDDY UNIT	
Csg. Size: 5½ / Wt.: 17 / d: / Set At: 12840	Perforations: From 12477 To 12541	Well No.: 94
Tbg. Size: 2 3/8 / Wt.: 4.7 / d: / Set At: 12436	Perforations: From To	Unit: E / Sec.: 20 / Twp.: 21s / Rge.: 29e
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE GAS	Packer Set At: 12436	County: EDDY
Producing Thru: TBG.	Reservoir Temp. °F: 199 @ 12509	Mean Annual Temp. °F: 60
Baro. Press. – P_a: 13.2	State: NEW MEXICO	
L: 12509 / H: 12509	Gg: .6464	% CO_2: 6.564 / % N_2: .410 / % H_2S:
Prover:	Meter Run: 4"	Taps: FLG.

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					3400				24 hrs.
1.	4 X .750	500	10.0	90	3230				1 hr.
2.	4 X .750	500	19.0	100	2990				1 hr.
3.	4 X .750	500	33.0	96	2640				1 hr.
4.	4 X .750	500	35.0	88	2330				1 hr.
5.	4 X .750	500	32.0	90	1350				4 hrs.

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	2.661	71.64	513.2	.9723	1.244	1.036	239
2	2.661	98.75	513.2	.9636	1.244	1.035	326
3	2.661	130.14	513.2	.9671	1.244	1.036	432
4	2.661	134.02	513.2	.9741	1.244	1.038	449
5	2.661	128.15	513.2	.9723	1.244	1.036	427

NO.	P_t	Temp. °R	T_t	Z
1	.73	550	1.53	.932
2	.73	560	1.54	.933
3	.73	556	1.53	.932
4	.73	548	1.51	.929
5	.73	550	1.53	.932

Gas Liquid Hydrocarbon Ratio: DRY Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: Deg.
Specific Gravity Separator Gas: .6464 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: 700 P.S.I.A. P.S.I.A.
Critical Temperature: 363 R R

P_c 3413.2 P_c^2 11,649.9

NO	BHP	P_w	P_w^2	$P_c^2 - P_w^2$
1	4362.2	3253.8	10587.1	1062.8
2	4053.2	3004.5	9027.3	2622.6
3	3643.2	2682.2	7194.2	4455.7
4	3260.2	2390.3	5713.8	5936.1
5	2364.2	1738.6	3022.9	8627.0

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 10.962$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3.311$

$AOF = Q\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = .791$

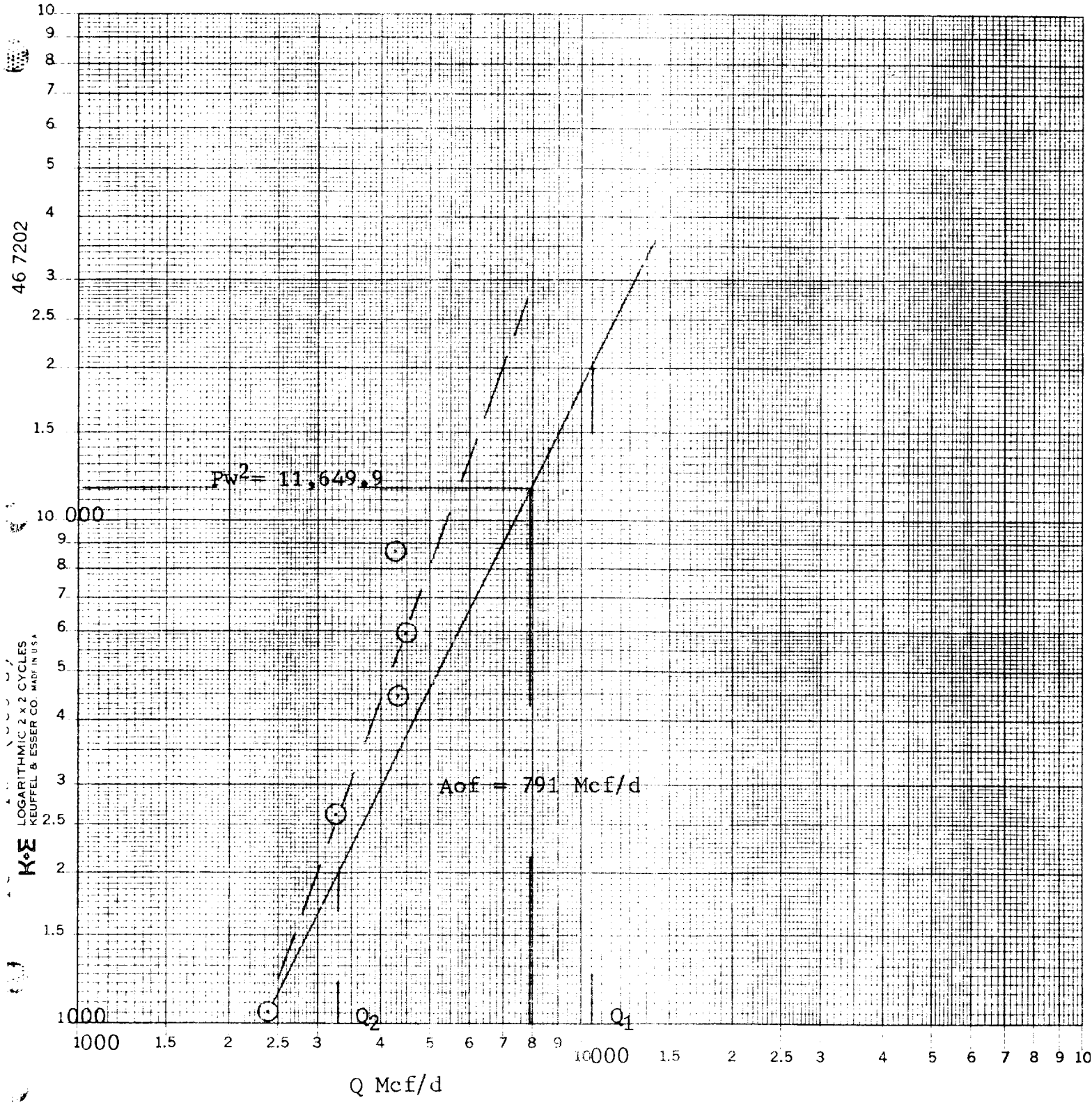
Post FD-2
1-14-83
Comp + BK

Absolute Open Flow: 4640.2 SIP. / 791 Mcfd @ 15.025 | Angle of Slope θ: 63.5° | Slope, n: .500

Remarks:

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	DAVIS SERVICES, INC.	RICK PAGAN	

COMPANY: PERRY R. BASS
LEASE: BIG EDDY UNIT
WELL NO.: 94
LOC.: SEC. 20 TWP. 21s RGE. 29e
COUNTY: EDDY
STATE: NEW MEXICO
DATE: 12-21-82



Q1 LOG 1044 = 3.018514
Q2 LOG 330 = 2.518514
N = .500
θ = 63.5

WORK SHEET FOR CALCULATION OF WELLHEAD PRESSURES (P_t or P_w)

FROM KNOWN BOTTOM HOLE PRESSURE (P_t or P_s)

Form C-122F
Adopted 9-1-65

COMPANY PERRY R. BASS LEASE BIG EDDY UNIT WELL NO. 94 DATE 12/21/82

LOCATION: Unit E Section 20 Township 21s Range 29e

L 12509 H 12509 L/H 1.000 G .6464 % CO_2 6.564 % N_2 .410 % H_2S

GH 8086 P_{cr} 700 (TABLE IX & X) T_{cr} 363 (TABLE IX & X)

		1st Rate		2nd Rate		3rd Rate		4th Rate	
LINE		1	2	3	4	5	6	7	8
1	T_w(W.H. °R)	534	534	534	534	534	534	534	534
2	T_s(B.H. °R)	659	659	659	659	659	659	659	659
3	$T=(\frac{T_w + T_s}{2})$	596.5	596.5	596.5	596.5	596.5	596.5	596.6	596.5
4	Z (Est.)	.913	.867	.881	.849	.853	.830	.833	.819
5	TZ	544.6	517.2	525.5	506.4	508.8	495.1	496.9	488.5
6	GH/TZ	14.847	15.635	15.387	15.967	15.892	16.332	16.273	16.552
7	e^S(Table XIV)	1.745	1.797	1.781	1.820	1.815	1.845	1.841	1.860
8	P_f or P_s	4362.2	4362.2	4053.2	4053.2	3643.2	3643.2	3260.2	3260.2
9	P_f^2 or P_s^2	19028.8	19028.8	16428.4	16428.4	13272.9	13272.9	10628.9	10628.9
10	$P_c^2 = P_f^2/e^s$ or $P_w^2 = P_s^2/e^s$	10904.7	10587.1	9225.8	9027.3	7313.9	7194.2	5773.9	5713.8
11	P_c or P_w	3302.2	3253.8	3037.4	3004.5	2704.4	2682.2	2402.9	2390.3
12	$P=(\frac{P_w + P_s}{2})$ or $(\frac{P_c + P_f}{2})$	3832.2	3808.0	3545.3	3528.9	3173.8	3162.7	2831.5	2825.3
13	$P_r = (P/P_{cr})$	5.48	5.44	5.07	5.04	4.53	4.52	4.05	4.04
14	$T_r = (T/T_{cr})$	1.64	1.64	1.64	1.64	1.64	1.64	1.64	1.64
15	Z (Table XI)	.867	.864	.849	.848	.830	.829	.819	.819

WORK SHEET FOR CALCULATION OF WELLHEAD PRESSURES (P_{XX} or P_w)

FROM KNOWN BOTTOM HOLE PRESSURE (P_{XX} or P_s)

Form C-122F
Adopted 9-1-65

COMPANY PERRY R. BASS LEASE BIG EDDY UNIT WELL NO. 94 DATE 12/21/82

LOCATION: Unit E Section 20 Township 21s Range 29e

L 12509 H 12509 L/H 1.000 G .6464 % CO_2 6.564 % N_2 .410 % H_2S

GH 8086 P_{cr} 700 (TABLE IX & X) T_{cr} 363 (TABLE IX & X)

5th Rate

LINE		1	2	3	4	5	6	7	8
1	T_w(W.H. °R)	534	534						
2	T_s(B.H. °R)	659	659						
3	$T=(\frac{T_w + T_s}{2})$	596.5	596.5						
4	Z (Est.)	.818	.827						
5	TZ	487.9	493.3						
6	GH/TZ	16.572	16.391						
7	e^s(Table XIV)	1.862	1.849						
8	P_f or P_s	2364.2	2364.2						
9	P_f^2 or P_s^2	5589.4	5589.4						
10	$P_c^2 = P_f^2/e^s$ or $P_w^2 = P_s^2/e^s$	3002.5	3022.9						
11	P_C or P_w	1732.8	1738.6						
12	$P=(\frac{P_w + P_s}{2})$ or $(\frac{P_c + P_f}{2})$	2048.5	2051.4						
13	$P_r = (P/P_{cr})$	2.93	2.93						
14	$T_r = (T/T_{cr})$	1.64	1.64						
15	Z (Table XI)	.827	.827						

NEW-TEX LAB

PHONE 505/393-3561 • P. O. BOX 1161 • 611 W. SNYDER • HOBBS, NEW MEXICO 88240

ANALYSIS CERTIFICATE

CLIENT:	DAVIS SERVICES INC	ANALYSIS NUMBER:	8889
ADDRESS:	P O BOX 2033	DATE OF RUN:	12/22/82
CITY, STATE:	HOBBS NM 88240	DATE SECURED:	12/21/82

SAMPLE IDENT: Perry R. BASS - BIG EDDY UNIT 94
SAMPLING PRESS: SAMPLING TEMP:

********** GAS ANALYSIS **********

	MOLE PERCENT	GAL/MCF
NITROGEN	0.410	
CARBON DIOXIDE	6.564	
METHANE	88.638	
ETHANE	3.322	0.904
PROPANE	0.429	0.173
ISO-BUTANE	0.071	0.227
NORMAL BUTANE	0.079	0.025
ISO-PENTANE	0.022	0.008
NORMAL PENTANE	0.011	0.004
HEXANES	0.004	0.002
HEPTANES PLUS	0.050	0.023
TOTAL	100.000	1.197

PROPANE GPM:	0.17	BUTANES GPM:	0.05
ETHANE GPM:	0.94	PENTANES PLUS GPM:	0.04

SPECIFIC GRAV (CALC): 0.6464
MOLE WEIGHT: 18.72

HHV-BTU/CU FT	PRESSURE (PSIA)	WET	DRY
	14.696	965	983
	14.650	962	979
	14.730	968	985
	14.735	968	985

ANALYZED BY: R. H. HAMILTON APPROVED BY R H Hamilton