

Step Rate

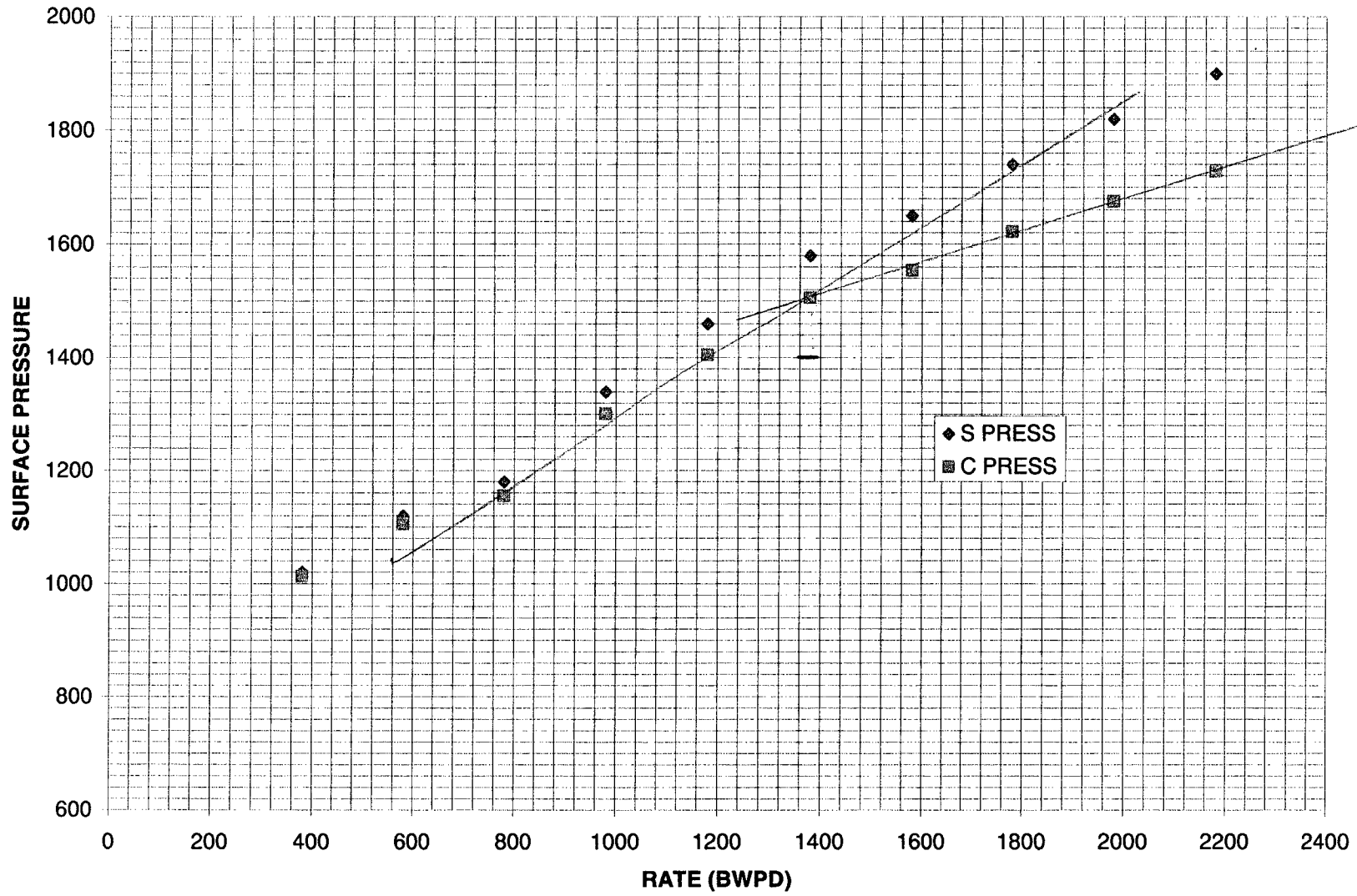
VGSAU

#233 WIW

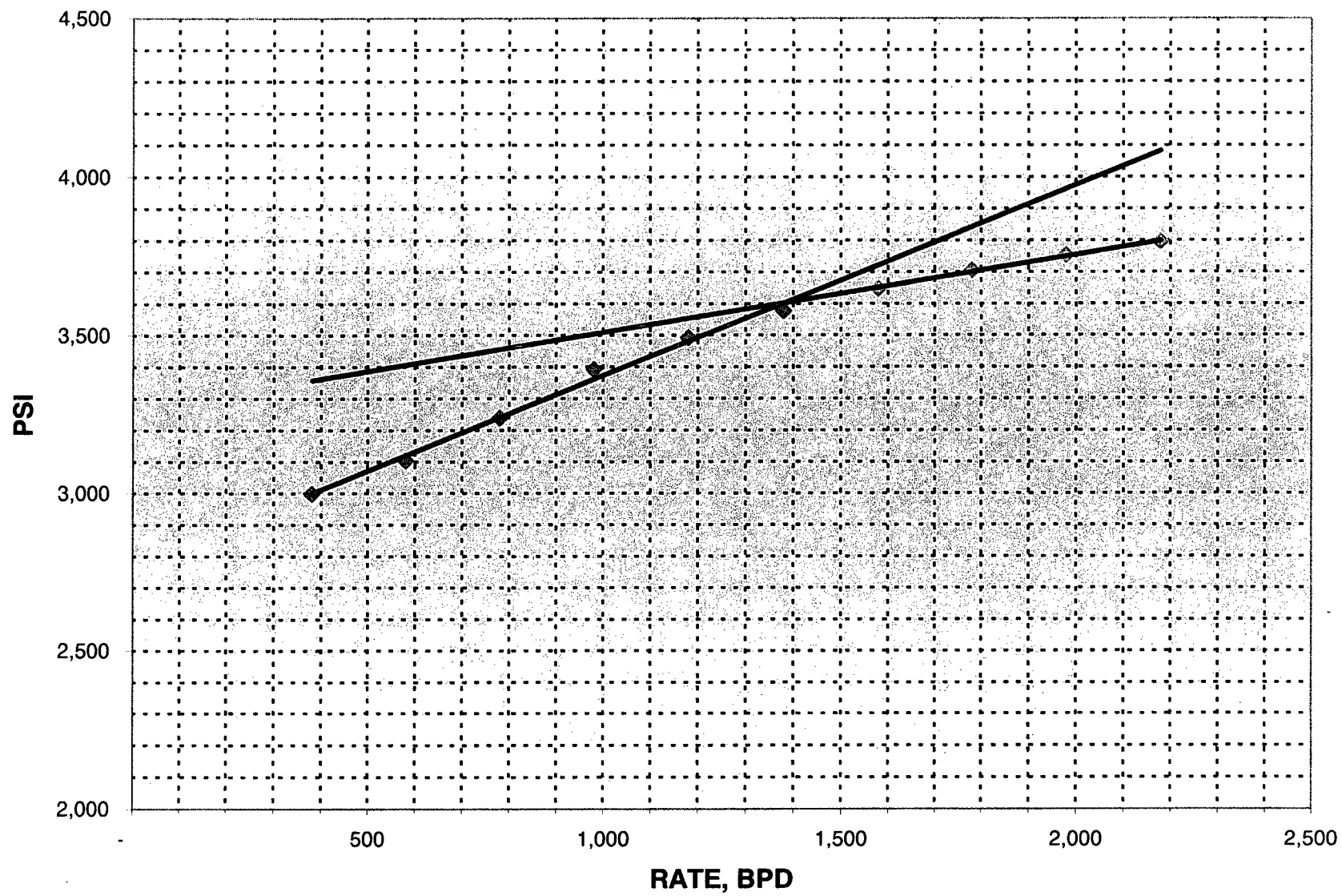
11/14/03

VGSAU #233

1590 psi



BOTTON HOLE PRESSURE



GRAY WIRELINE SERVICES, INC

COMPANY: CHEVRON TEXACO

WELL: VACUUM GRAYBURG SAN ANDRES UNIT #233

TEST: 15 MINUTE STEP RATE TEST

DATE RUN: NOVEMBER 14, 2003

TUBING: 2 3/8" RICE DUOLINE

BHP TOOL: SET @ 4400'

RATE AND PRESSURE 0 @ 890 PSI. PRIOR TO PUMPING.

□

POINT #	TIME	RATE, BPD	Surface Pressure	FRICTION	Corrected Pressure	Measured BHP
1	11:15	380	1,020	7	1,013	2,998
2	11:30	580	1,120	15	1,105	3,104
3	11:45	780	1,180	25	1,155	3,239
4	12:00	980	1,340	39	1,301	3,392
5	12:15	1,180	1,460	55	1,405	3,492
6	12:30	1,380	1,580	74	1,506	3,577
7	12:45	1,580	1,650	96	1,554	3,647
8	1:00	1,780	1,740	118	1,622	3,706
9	1:15	1,980	1,820	145	1,675	3,753
10	1:30	2,180	1,900	172	1,728	3,795
11						
12						
13						
14						

Breaking Pressure (@ BH cond.): 3,600 psi

BOTTON HOLE PRESSURE

