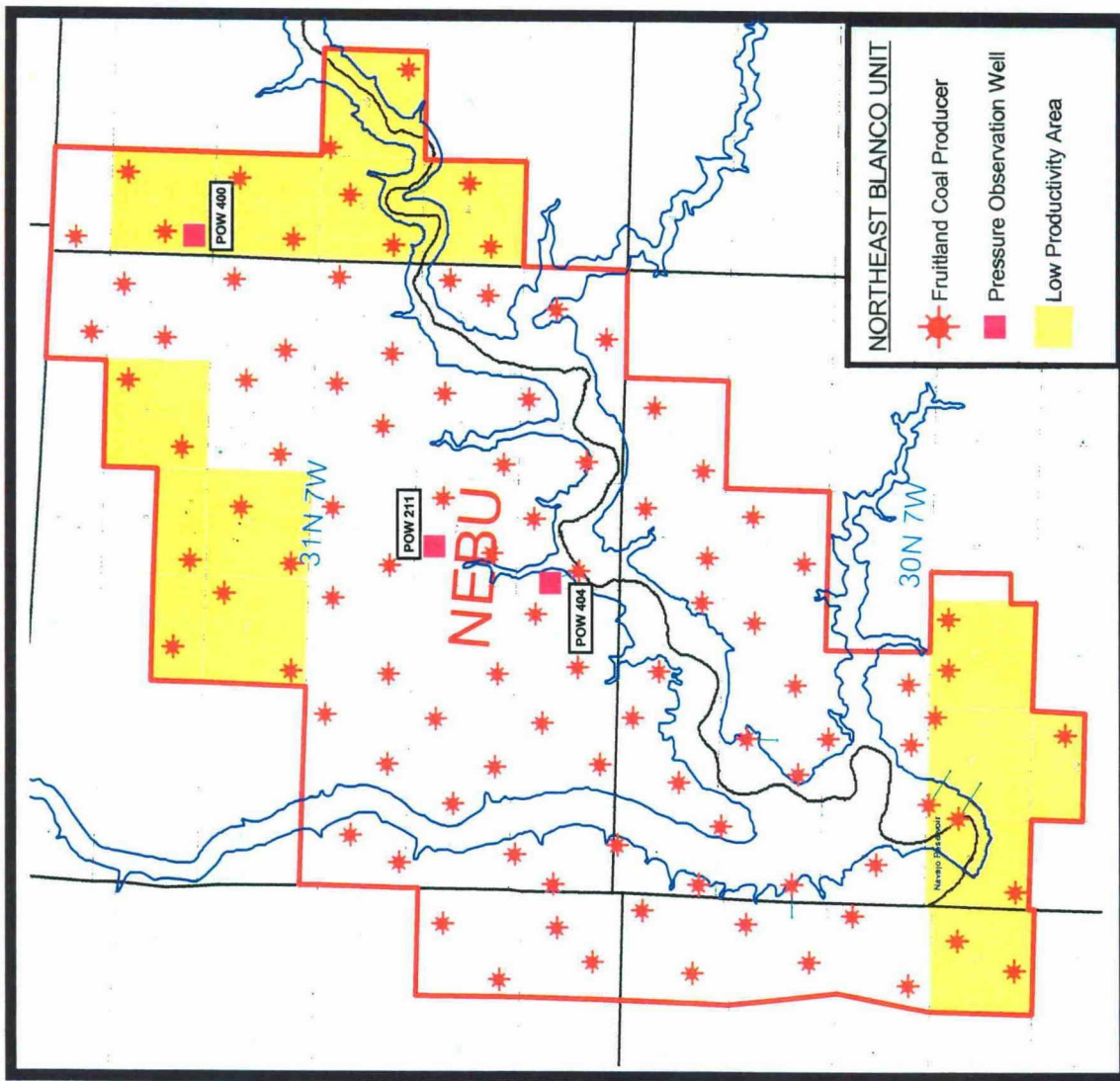


Fruitland Coal Infill
De Novo Hearing
HPA Geology and Engineering

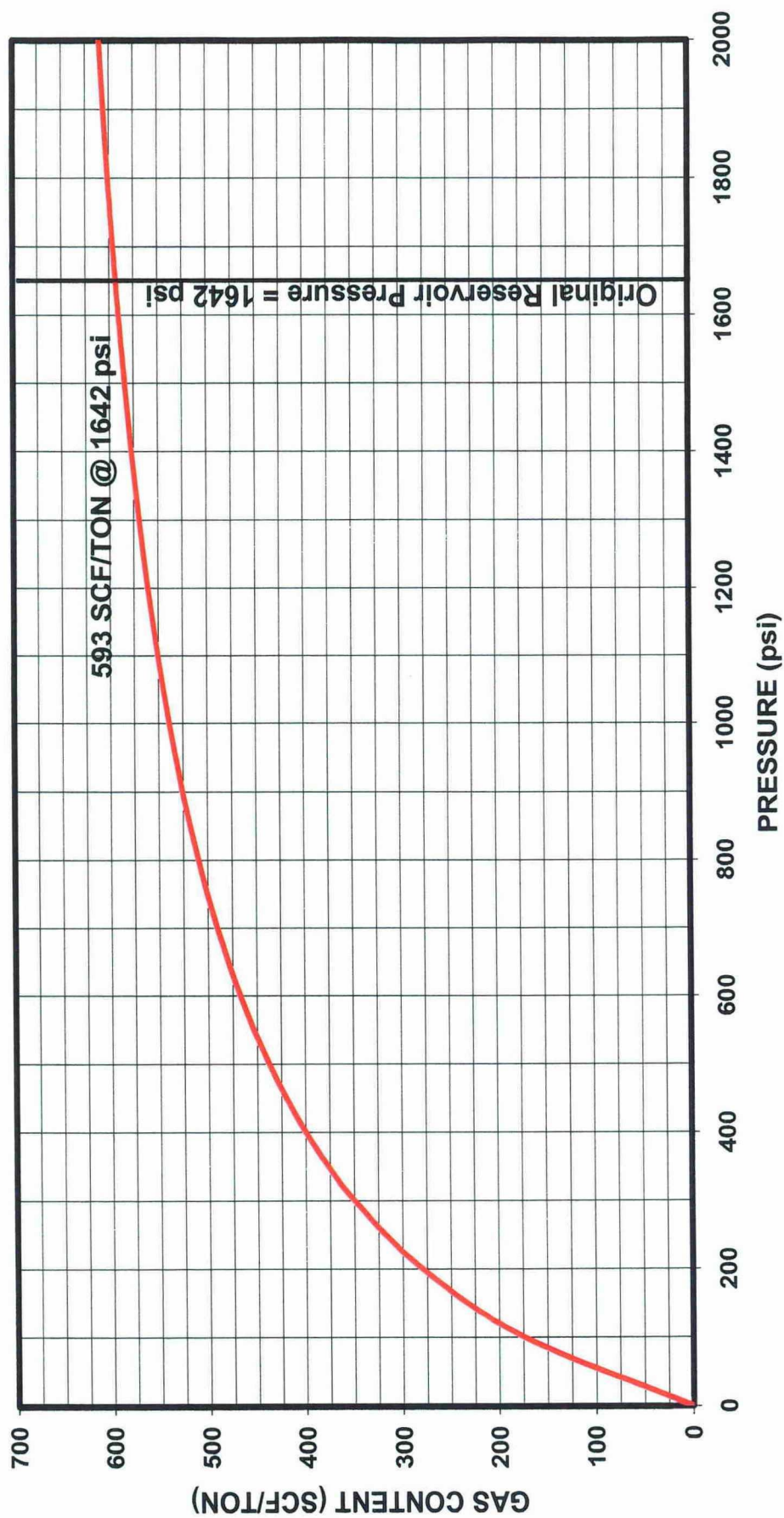
Gary Kump

Engineer

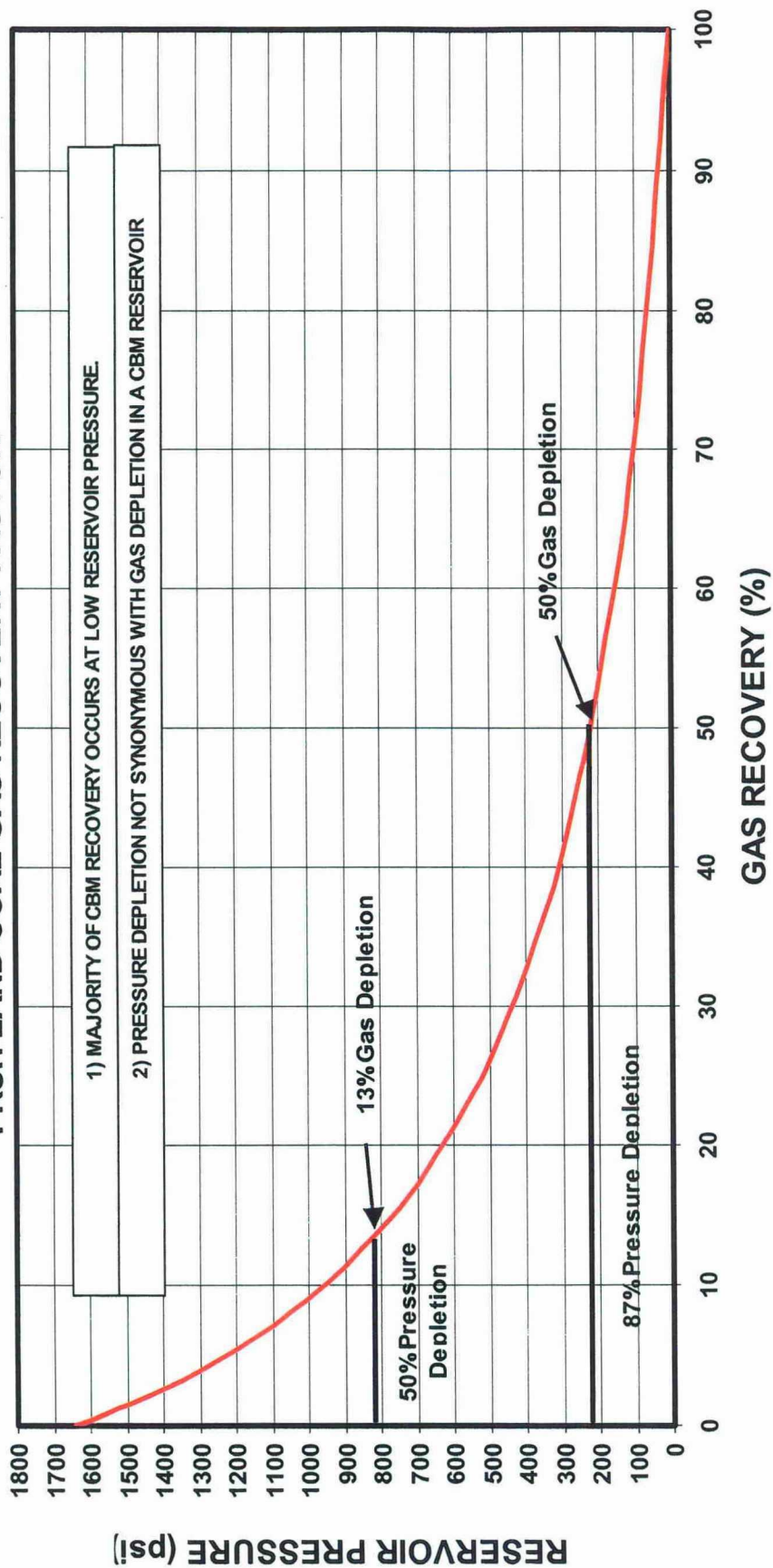
DEVON ENERGY



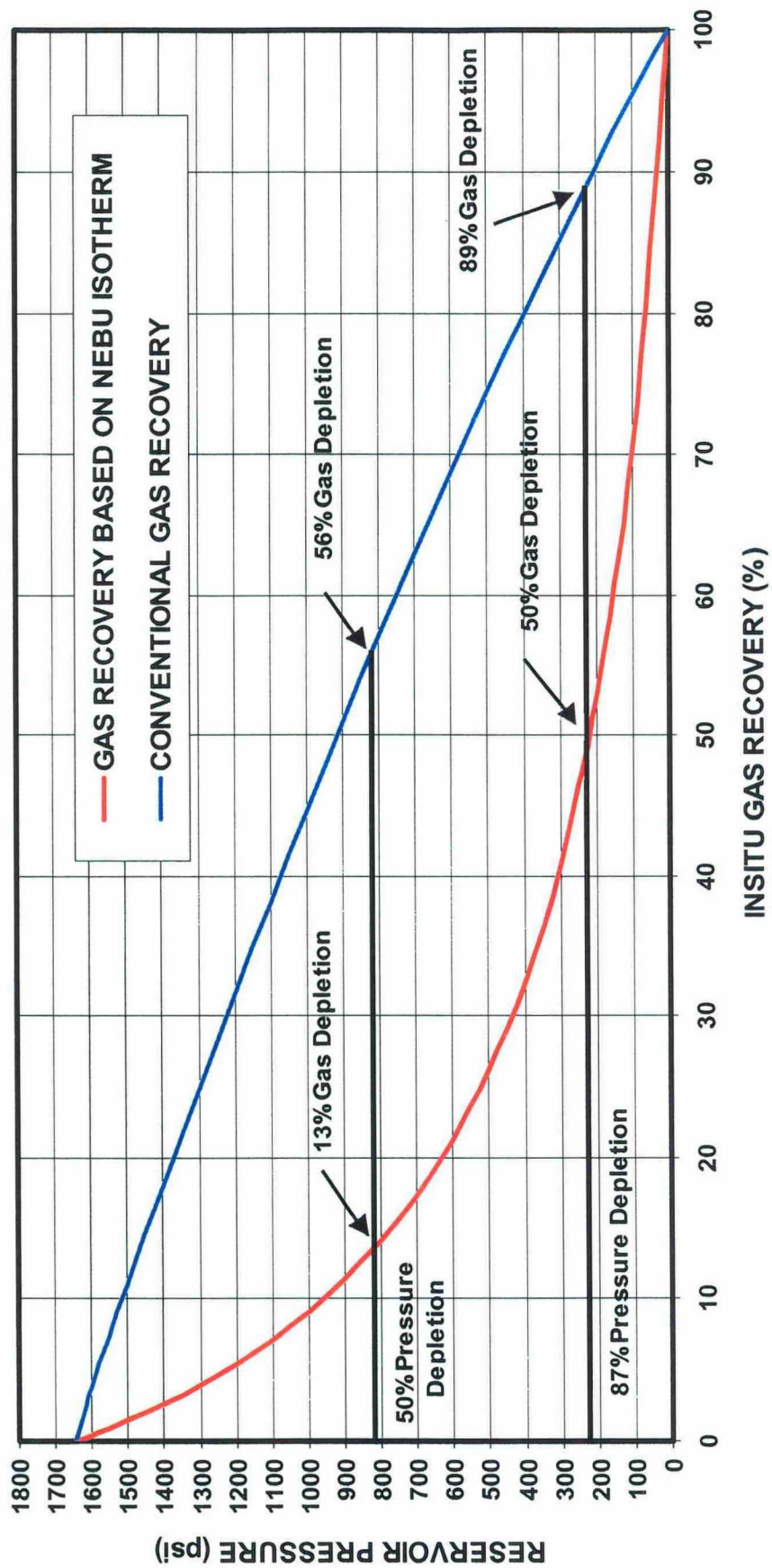
**NORTHEAST BLANCO UNIT
FRUITLAND COAL ISOTHERM**



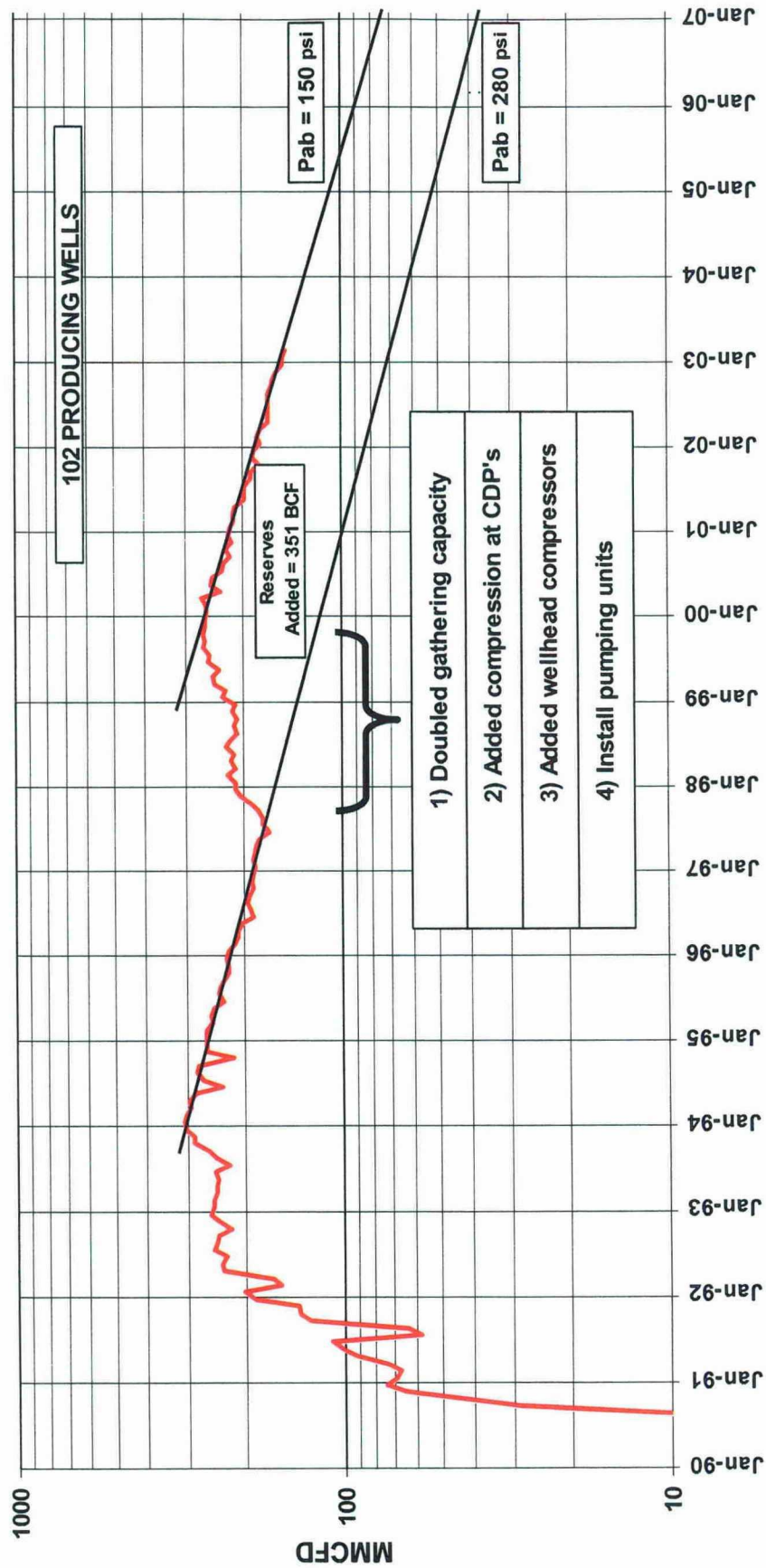
NORTHEAST BLANCO UNIT FRUITLAND COAL GAS RECOVERY FACTOR



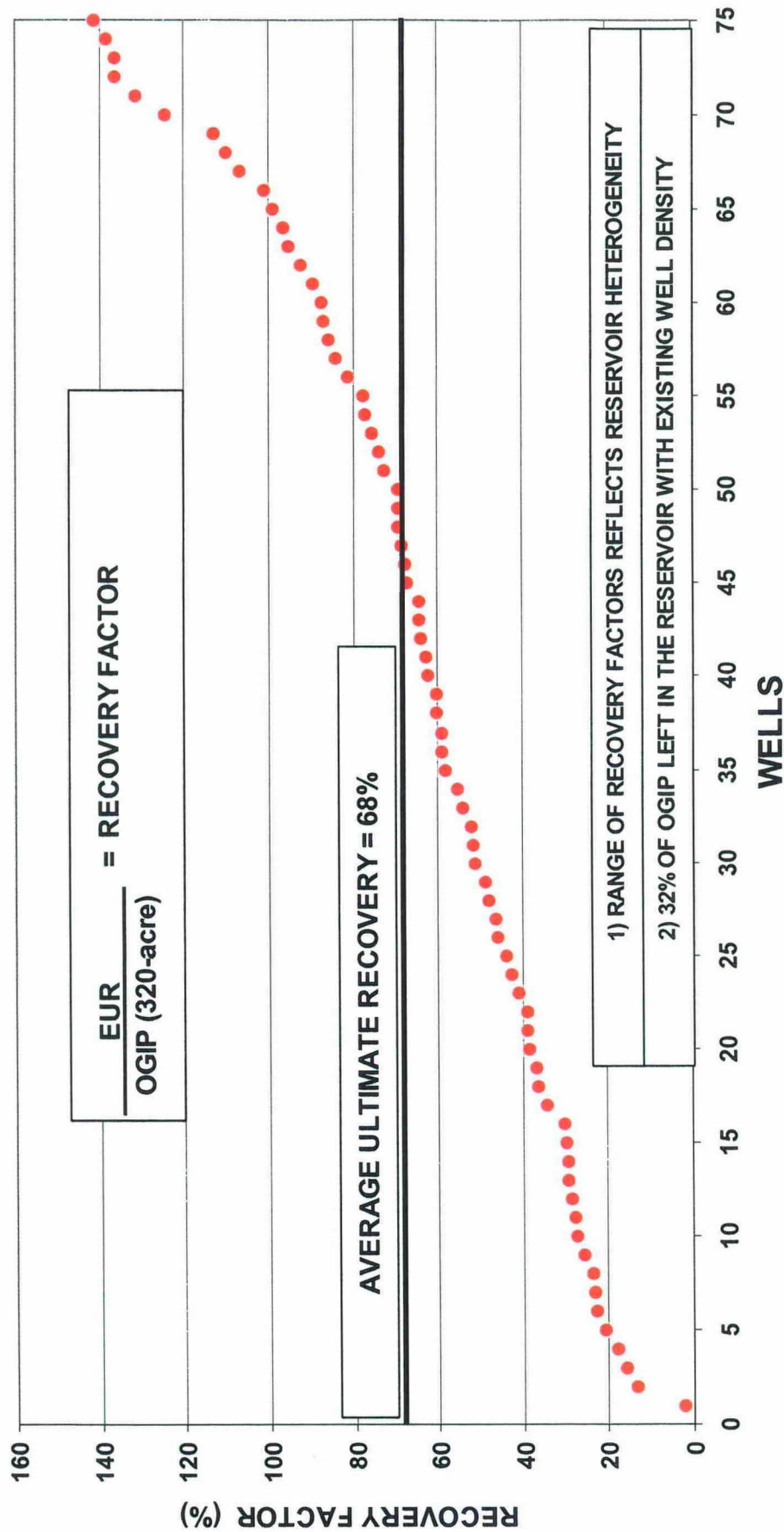
COAL GAS RECOVERY VS CONVENTIONAL GAS RECOVERY



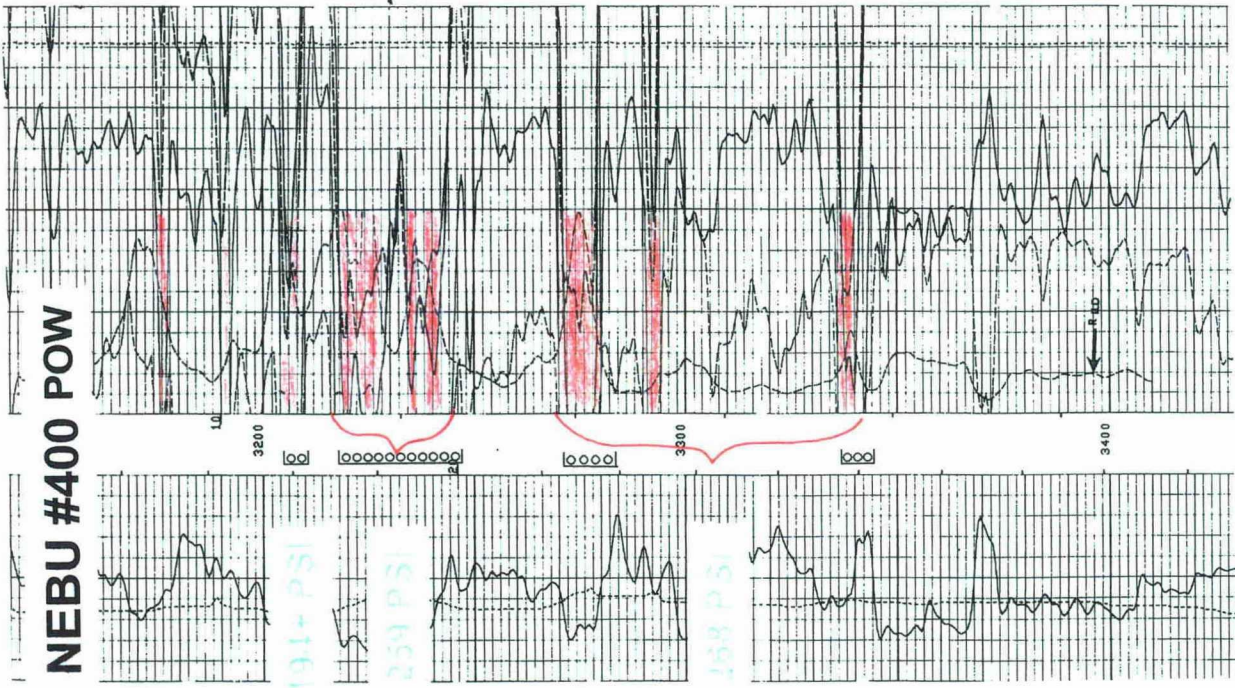
NORTHEAST BLANCO UNIT FRUITLAND COAL - GROSS PRODUCTION



NORTHEAST BLANCO UNIT ULTIMATE RECOVERY - HPA WELLS



GAS DEPLETION



54%

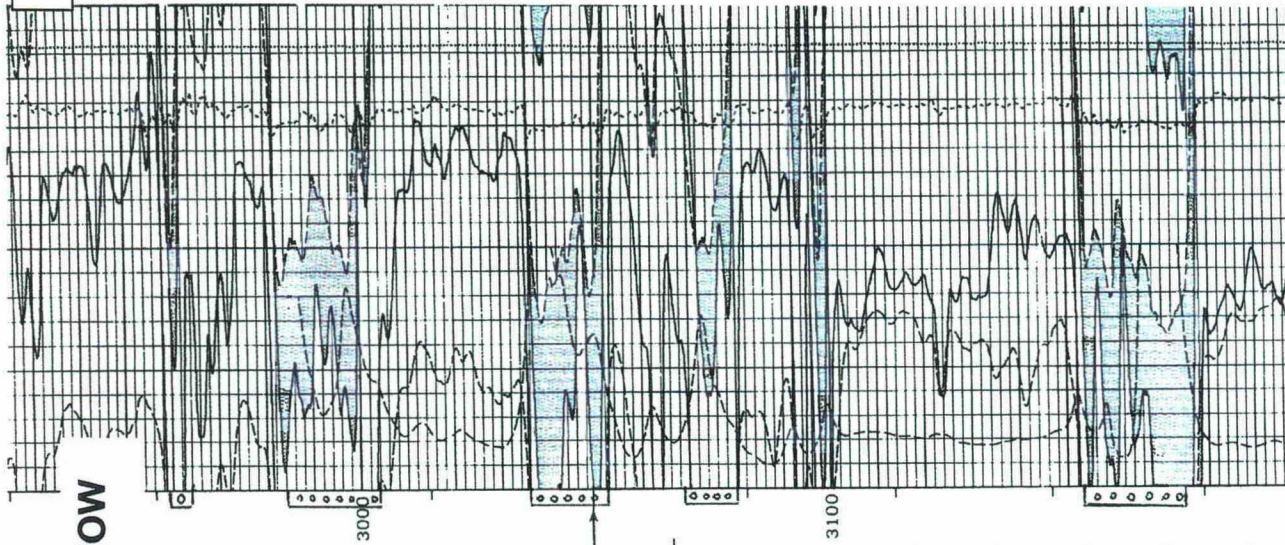
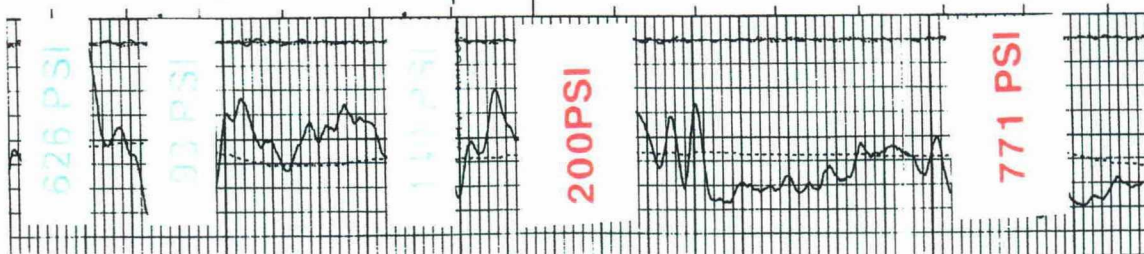
46%

16%

Offset Well - Cum Gas	
NEBU 400R	13.5 BCF
NEBU 438	1.0 BCF
NEBU 458	2.5 BCF
NEBU 489	0.8 BCF



NEBU 404 POW



GAS DEPLETION

20%
72%
52%
54%
15%

Average Seam Pressure
366 psi

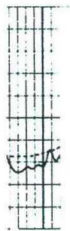
Thickness Wtd Seam Pressure
371 psi

Composite Pressure
219 psi

<u>Offset Well - Cum Gas</u>	
NEBU 404R	10.8 BCF
NEBU 454	3.0 BCF
NEBU 466	11.6 BCF
NEBU 494	2.7 BCF



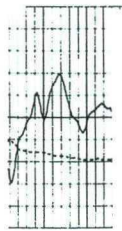
NEBU #211 POW



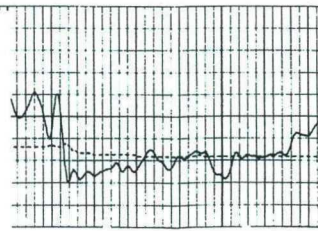
246 PSI



152 PSI



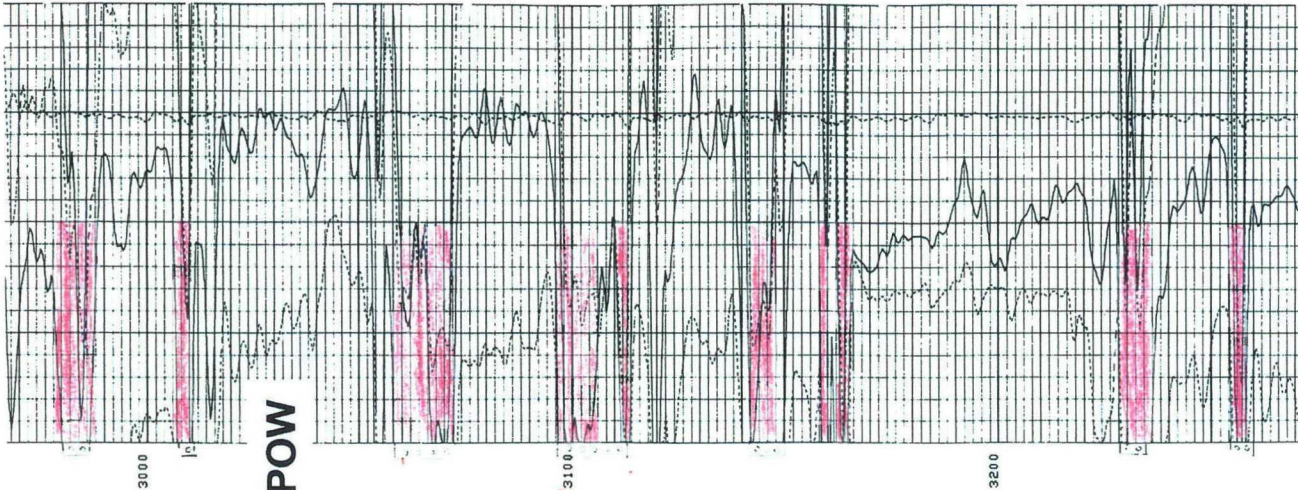
418 PSI



1186 PSI



1451 PSI



GAS DEPLETION

30%

25%

47%

62%

33%

2%

2%

Average Seam Pressure
673 psi

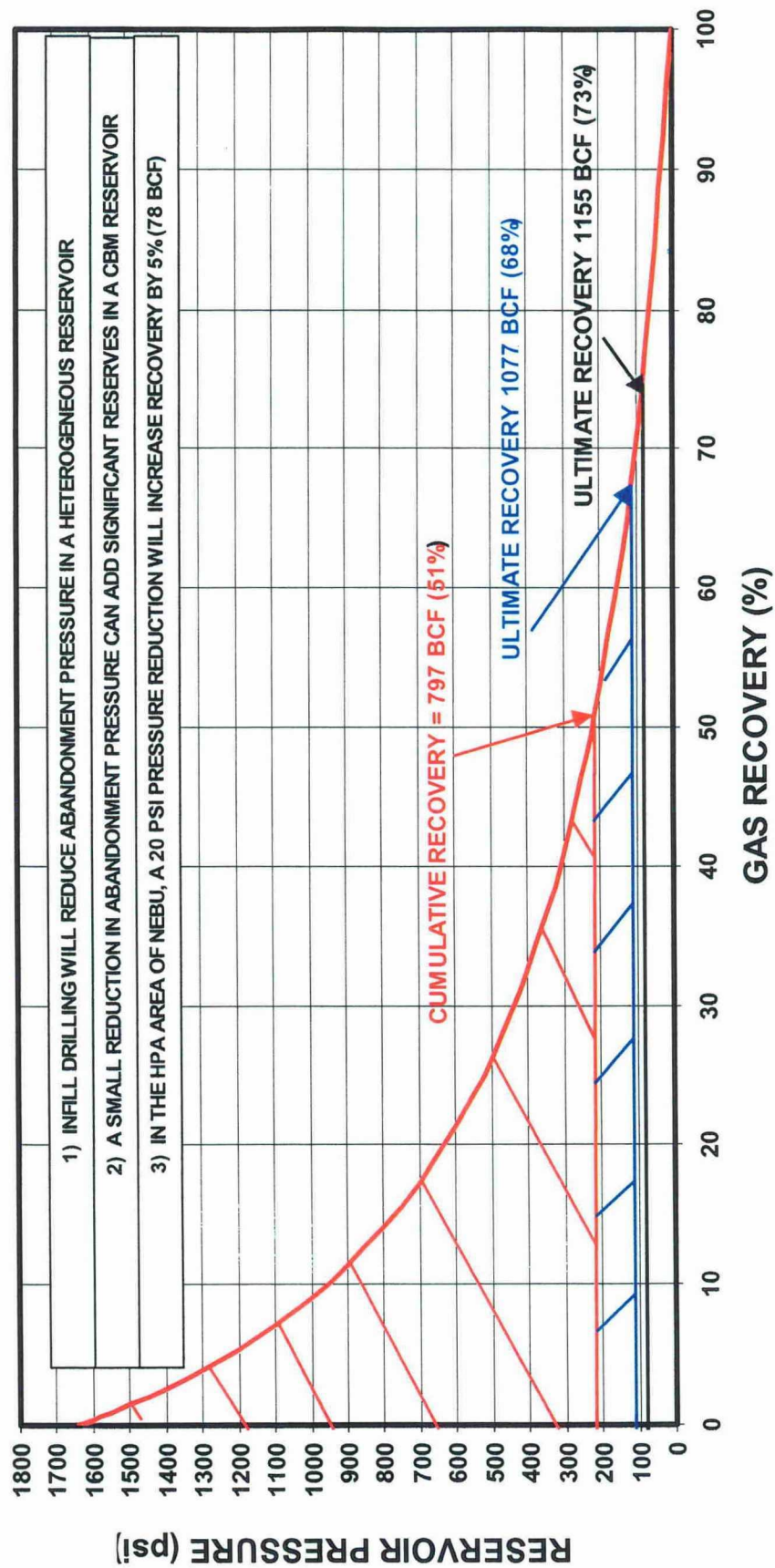
Thickness Wtd Seam Pressure
508 psi

Composite Pressure
494 psi

Offset Well - Cum Gas

NEBU 420	0.4 BCF
NEBU 470	1.7 BCF
NEBU 476	16.3 BCF
NEBU 494	2.7 BCF

NORTHEAST BLANCO UNIT - HPA RECOVERY ESTIMATES



TESTIMONY SUMMARY

Gary Kump

Devon Energy Production Company, L.P.

1. A major portion of CBM gas recovery occurs at low reservoir pressures.
2. Devon has reduced wellhead pressures in NEBU to a minimum of 5-10 psi in order to maximize CBM gas recovery from existing wells.
3. The current 320-acre well density in the HPA area of NEBU will leave 32% of the OGIP in the ground at abandonment.
4. Geologic and production characteristics suggest that additional gas can be recovered in NEBU by infill drilling:
 - a) Geologic testimony stated that only $\pm 30\%$ of individual coal seams in NEBU POW's are connected to the nearest offset wells.
 - b) The erratic recoveries of individual NEBU CBM wells demonstrate the heterogeneous nature (poor connectivity) of Fruitland coal seams.
 - c) Pressure data in individual coal seams demonstrate that the Fruitland CBM gas is being differentially depleted and inefficiently drained.
5. Infill wells in the heterogeneous Fruitland Coal seams will enhance drainage efficiency, recover additional reserves, and prevent waste.
6. A 20 psi reduction in abandonment pressure in the HPA area of NEBU by infill wells would result in the recovery of an additional 78 BCF of CBM gas.