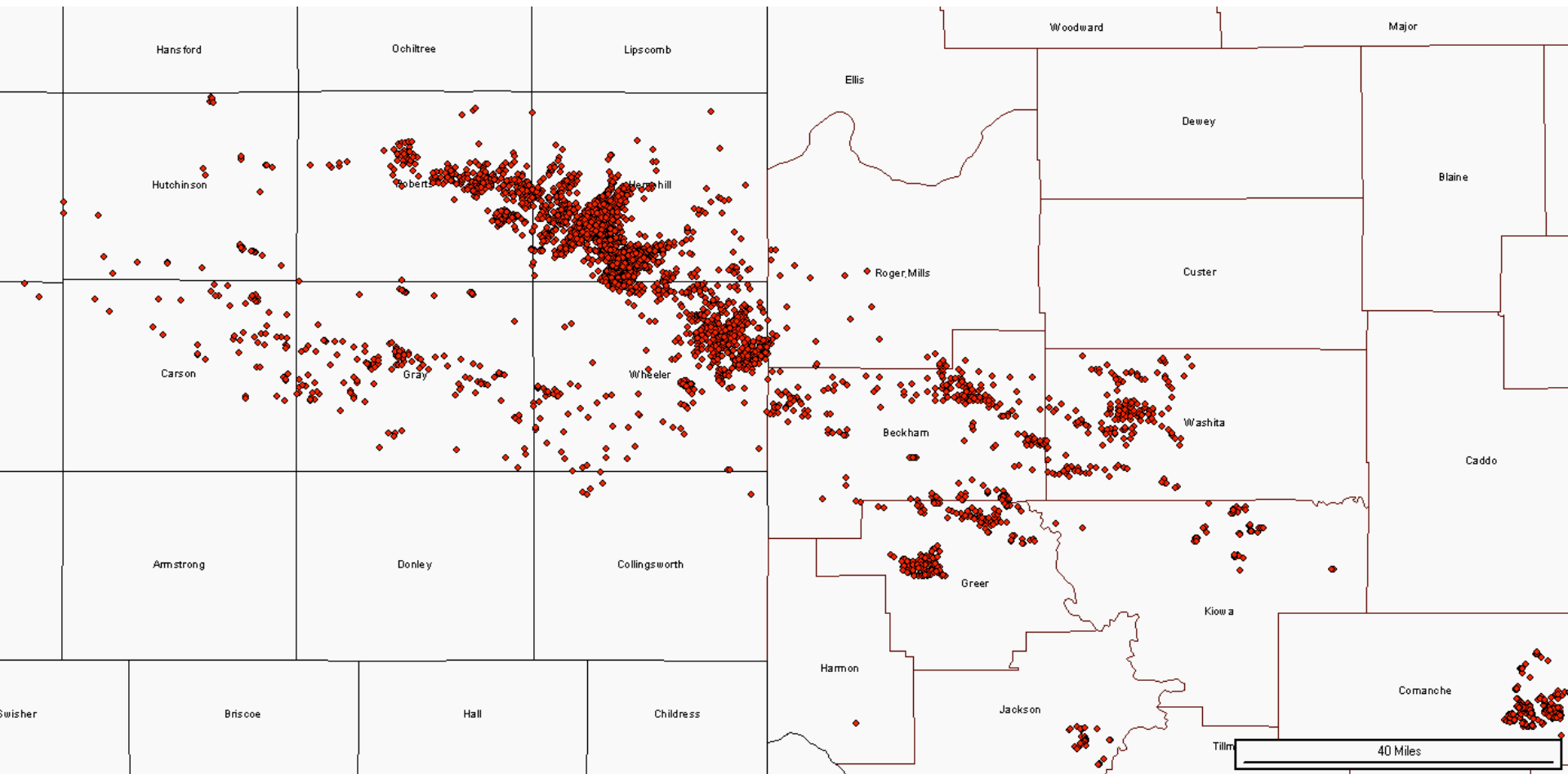


MID CONTINENT WASH PLAYS



+ 3600 Wash wells
NW-SE 30 Miles Wide 160 Miles Long



Historical Data

- Oklahoma Geological Survey Circular 1-6, 2001
- Average Production for “Wash” wells – Anadarko Basin
 - 1,150 MMCF with 24 MBO
- Cherokee Wash Middle – 3,241 MMCF
- Cherokee Wash Lower – 2,061 MMCF
- Red Fork Wash – 1,161 MMCF
- Cleveland Wash – 1,012 MMCF
- **Granite Wash – 726 MMCF**
- **Atoka Wash – 385 MMCF**
- **1,985 Total Wells included in this study**
 - Paul W. Smith, Walter J. Hendrickson and Ronald J. Woods

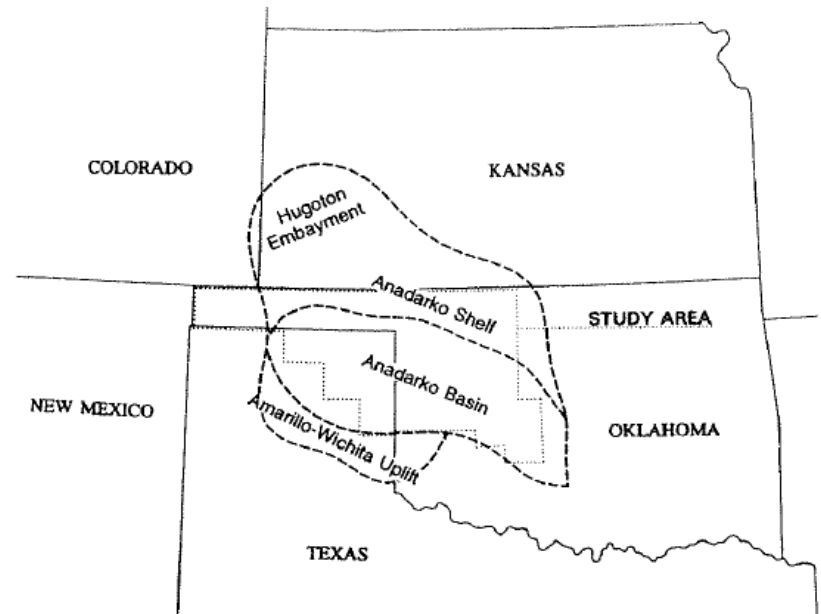
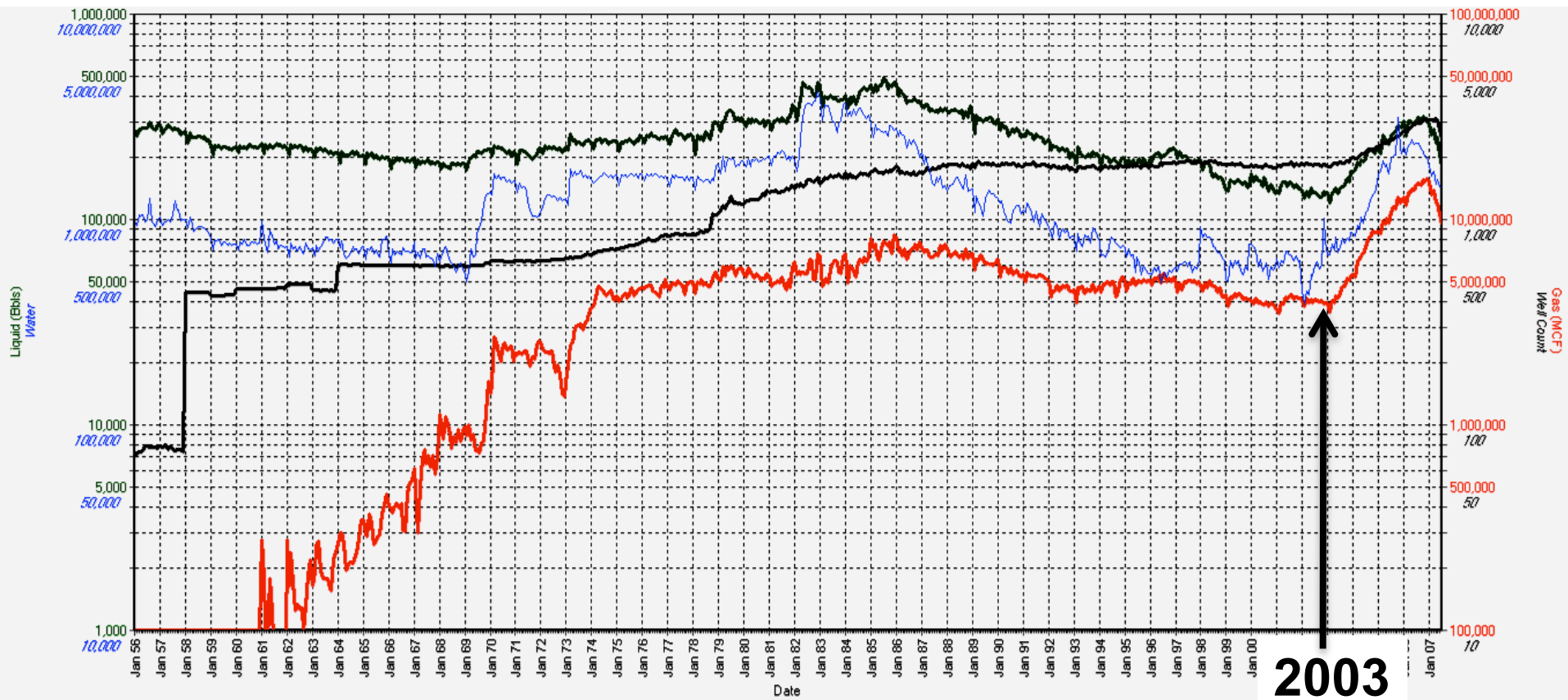
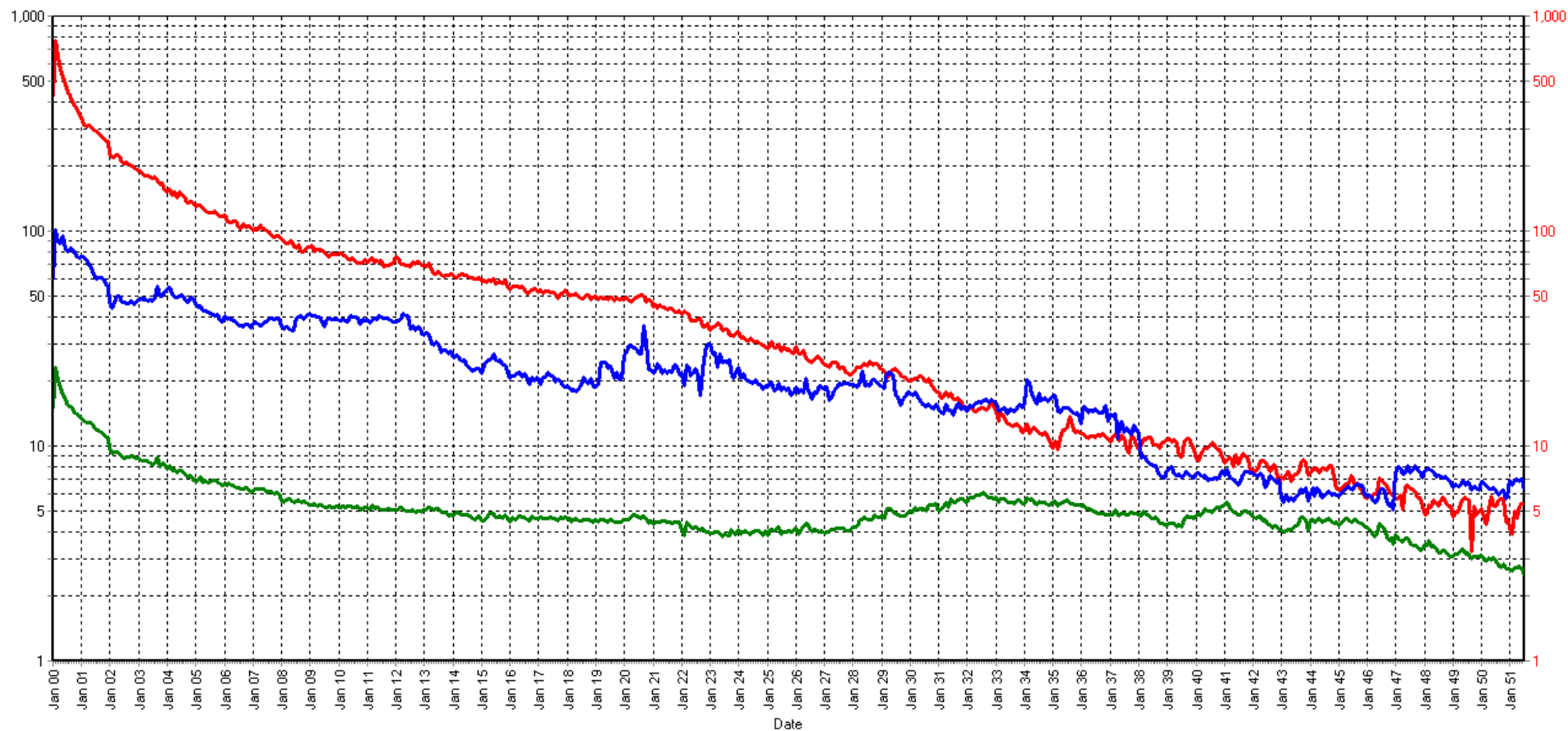


Figure 1. Map of Anadarko basin and shelf area of Oklahoma and Texas, showing study area (delineated by dotted line).



Historical Granite Wash Production

Cumulative Gas = 1.88 TCF
Cumulative Oil = 61,400,000 BBL



Gas Well

1.0 BCF

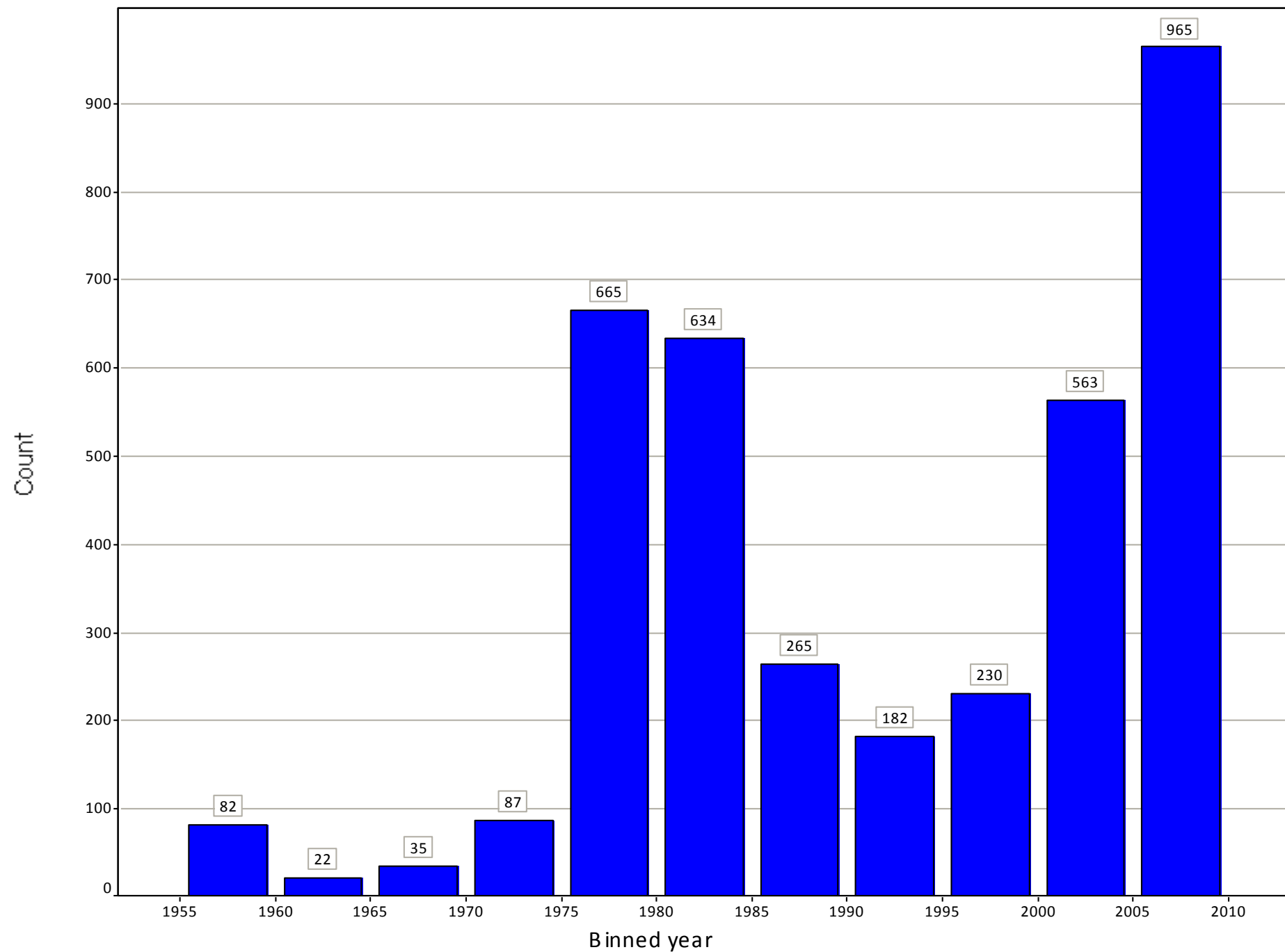
Oil Well

99,400 BBL

Water

440,000 BBL

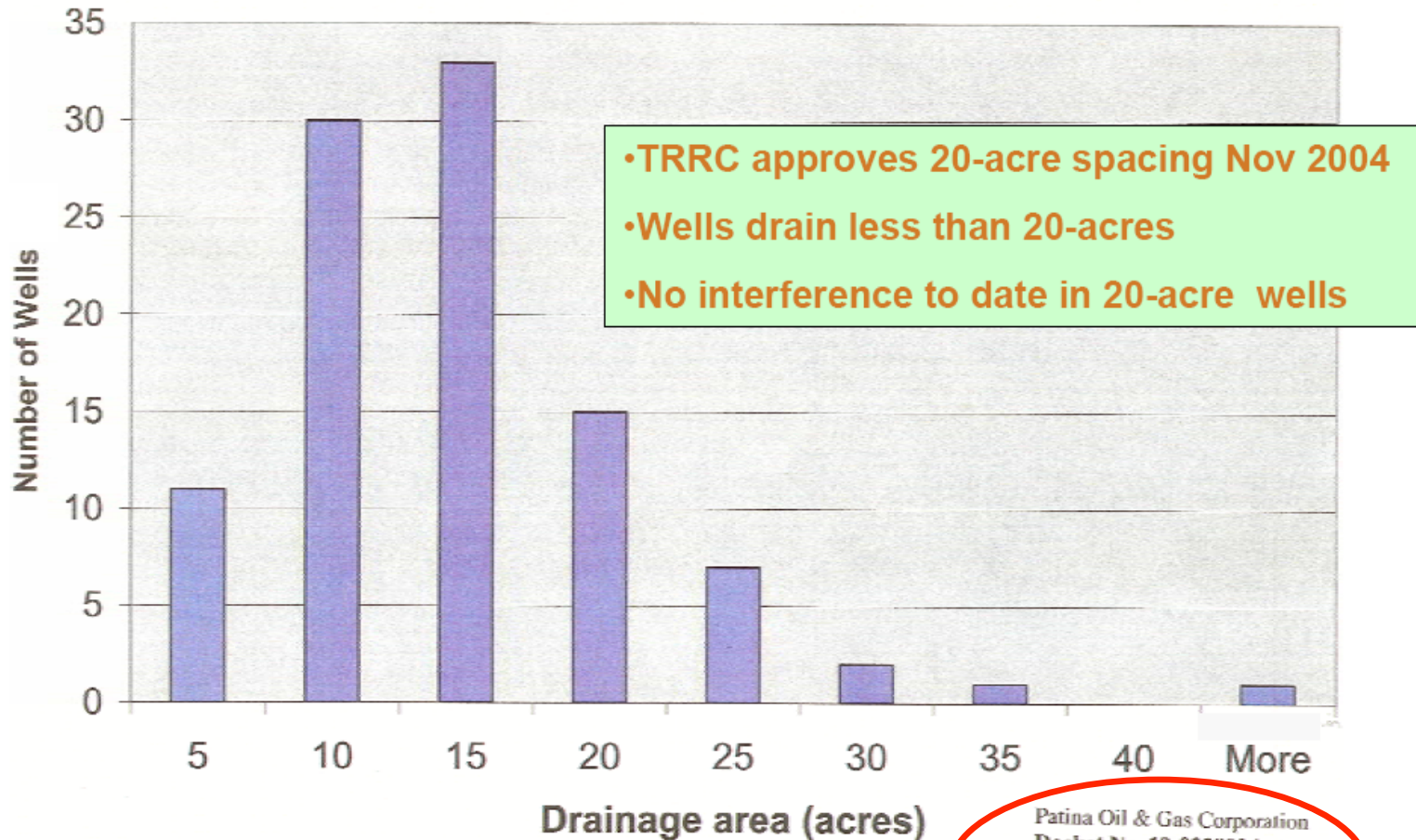
Granite Wash Completions



Buffalo Wallow Drainage Area's

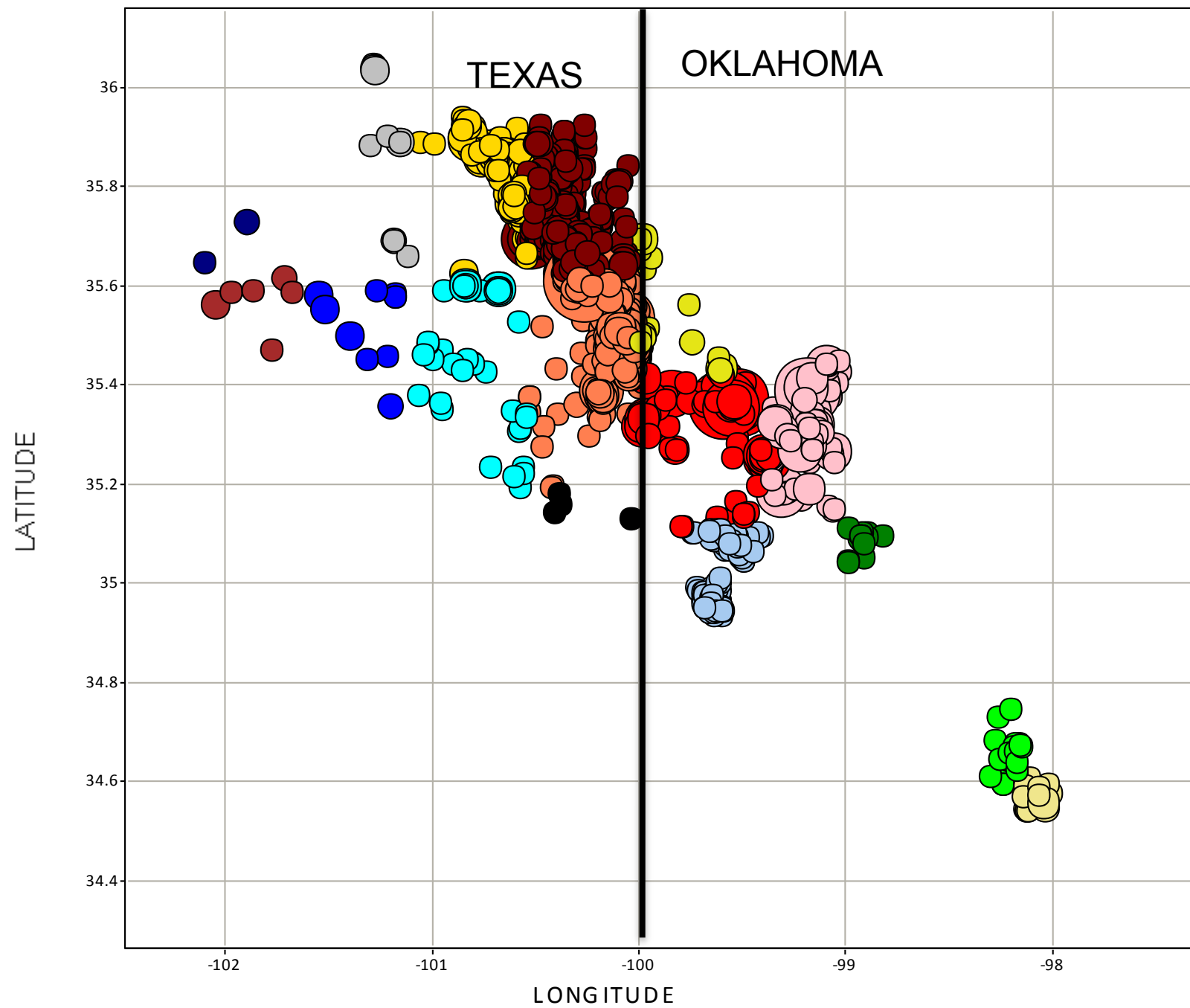
Buffalo Wallow Drainage Area Histogram

89 of 100 wells drain ≤ 20 acres

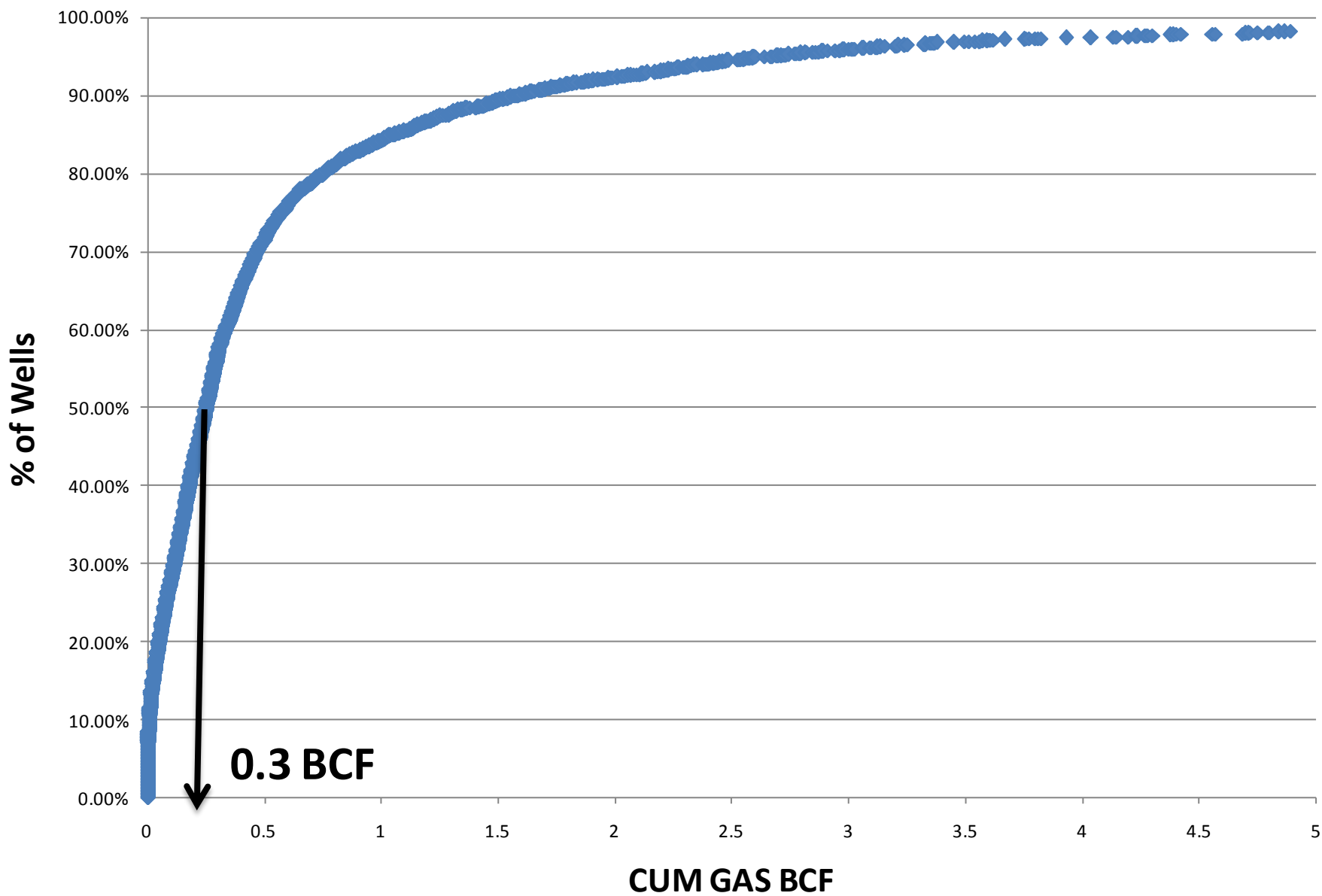


Patina Oil & Gas Corporation
Docket No. 10-0238004
Date: October 8, 2004
EXHIBIT

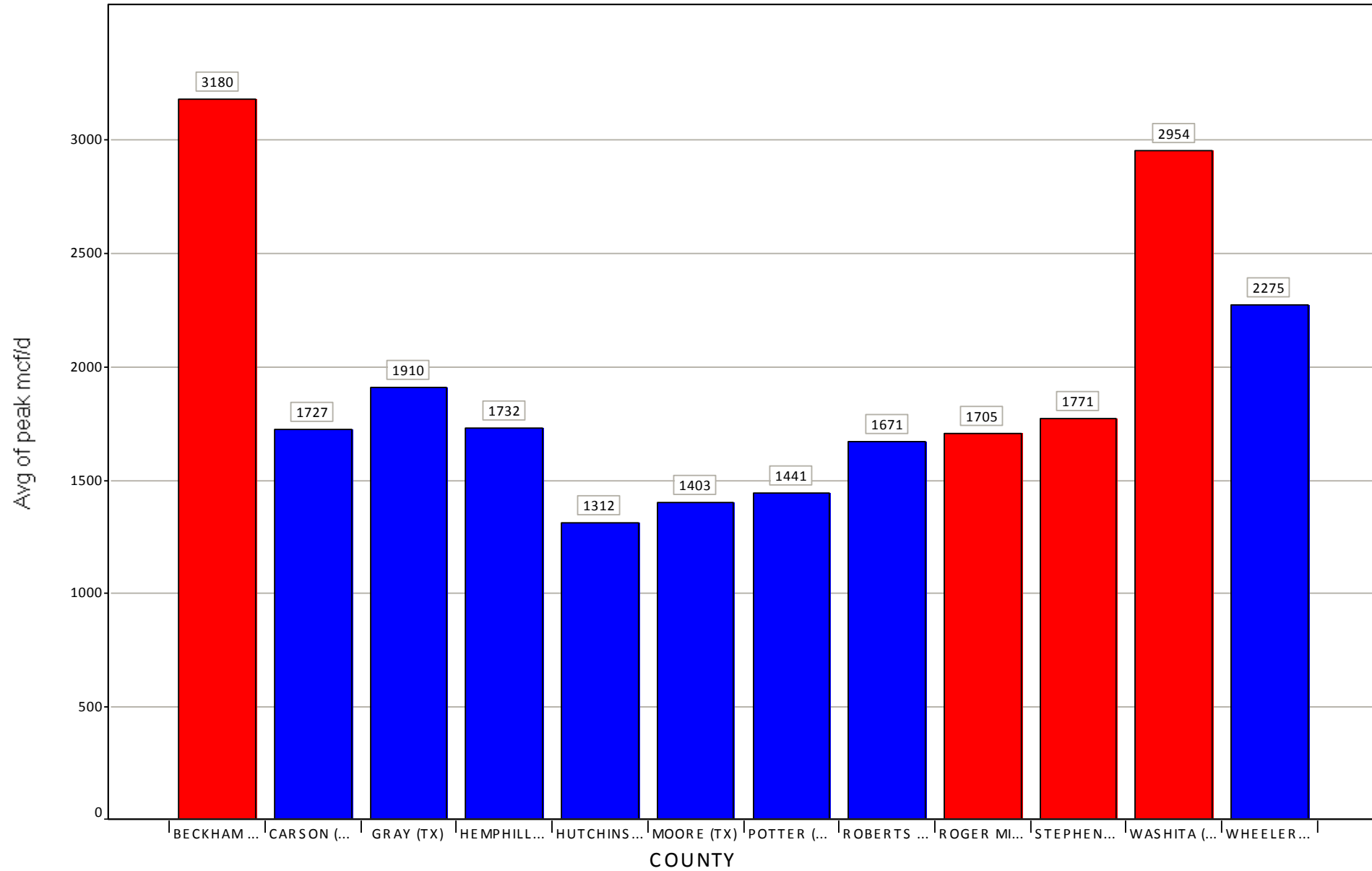
2686 Granite Wash Gas Producers



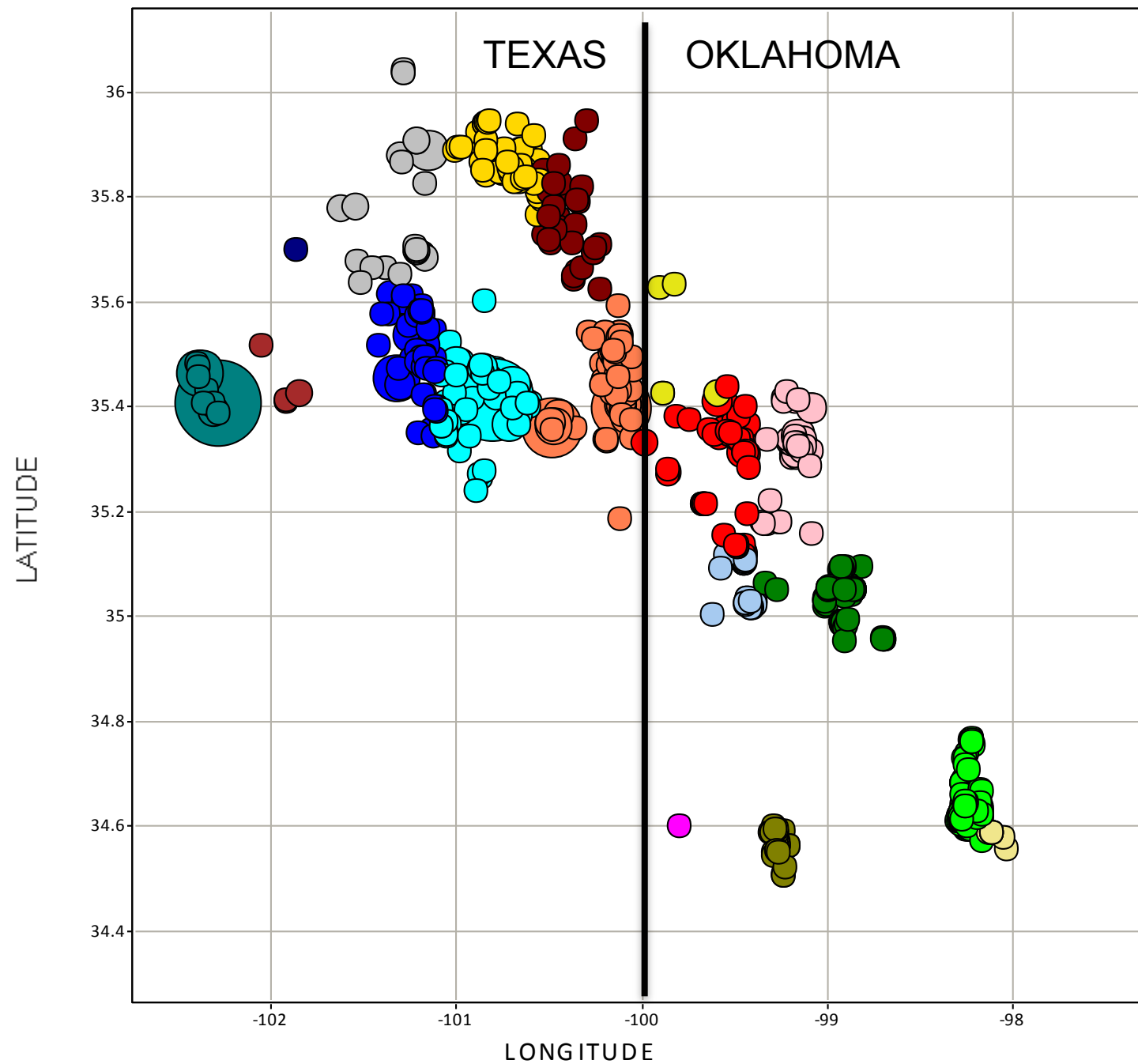
Cumulative Frequency Plot Granite Wash GAS Production BCF



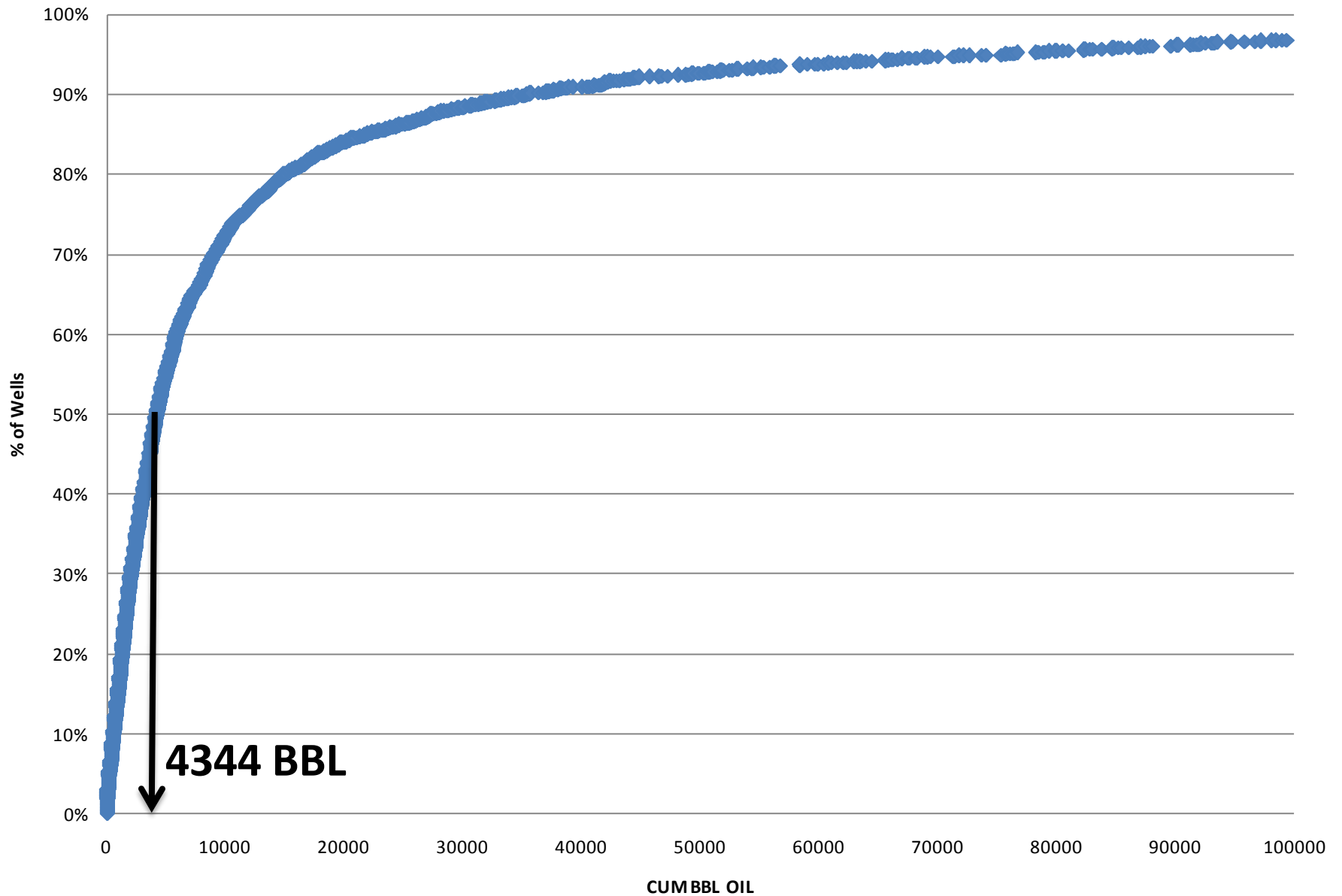
1296 Granite Wash Average Peak Gas MCF/D By County



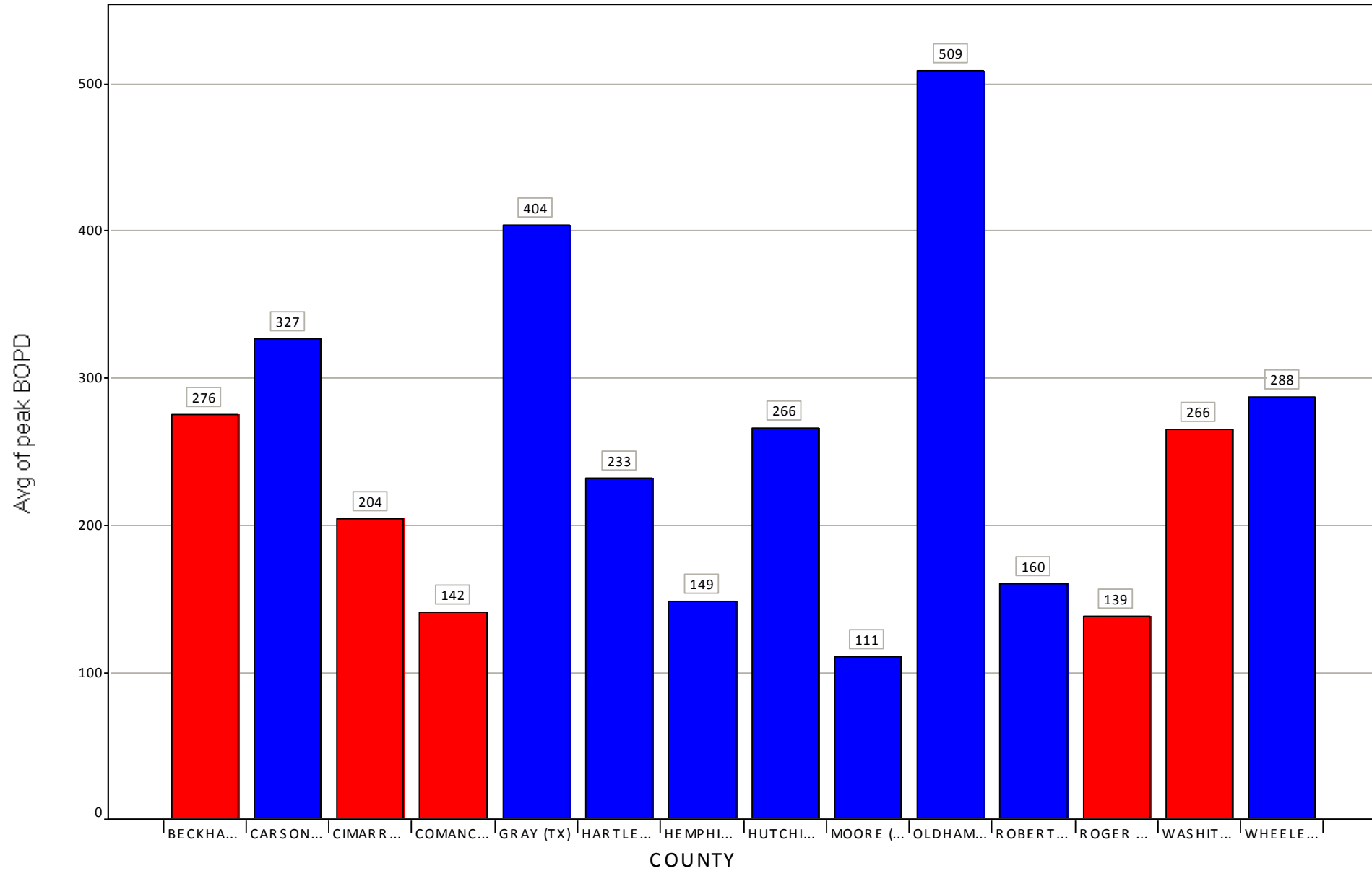
922 Granite Wash Oil Producers



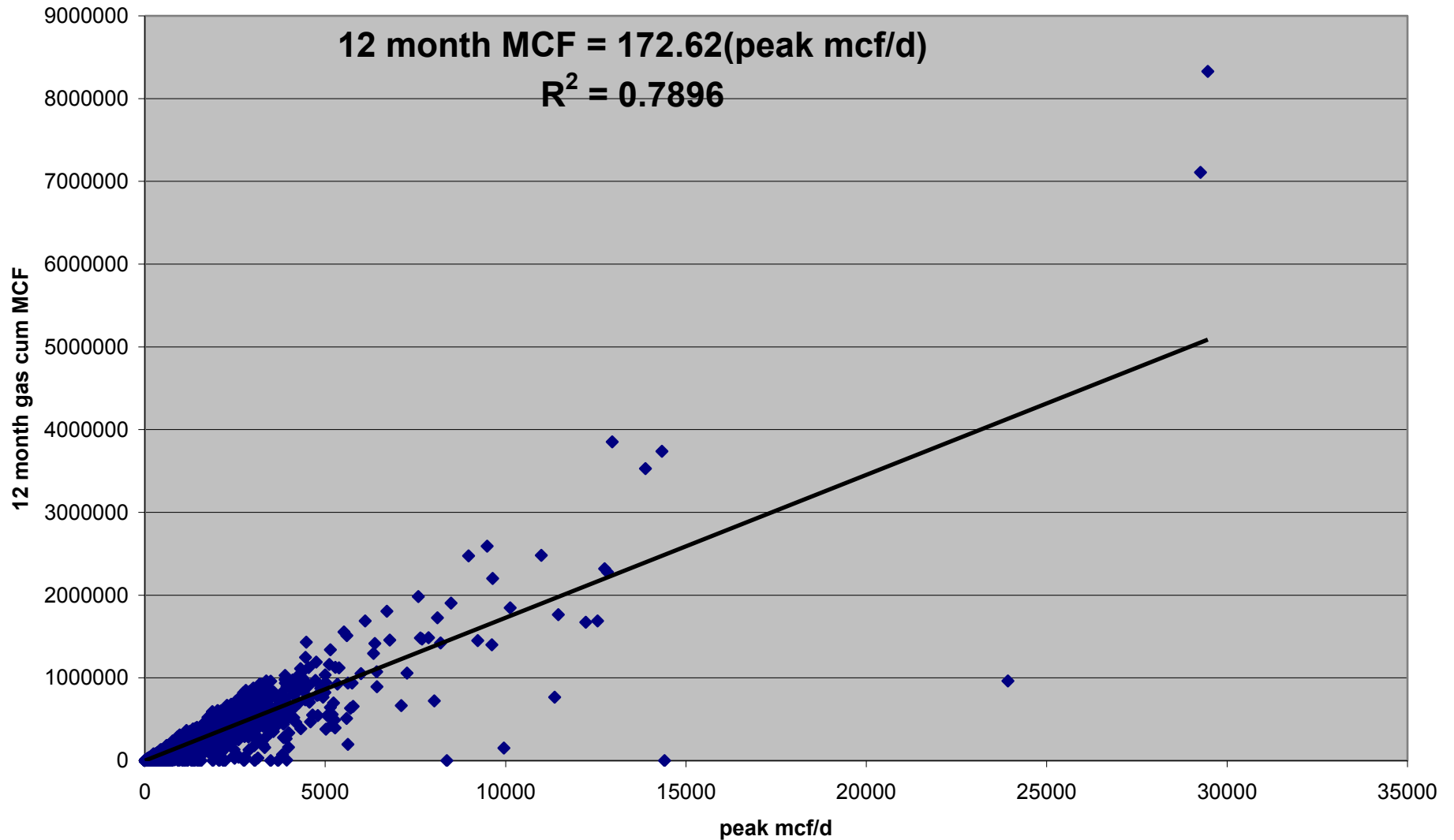
Cumulative Frequency Plot Granite Wash Oil Production



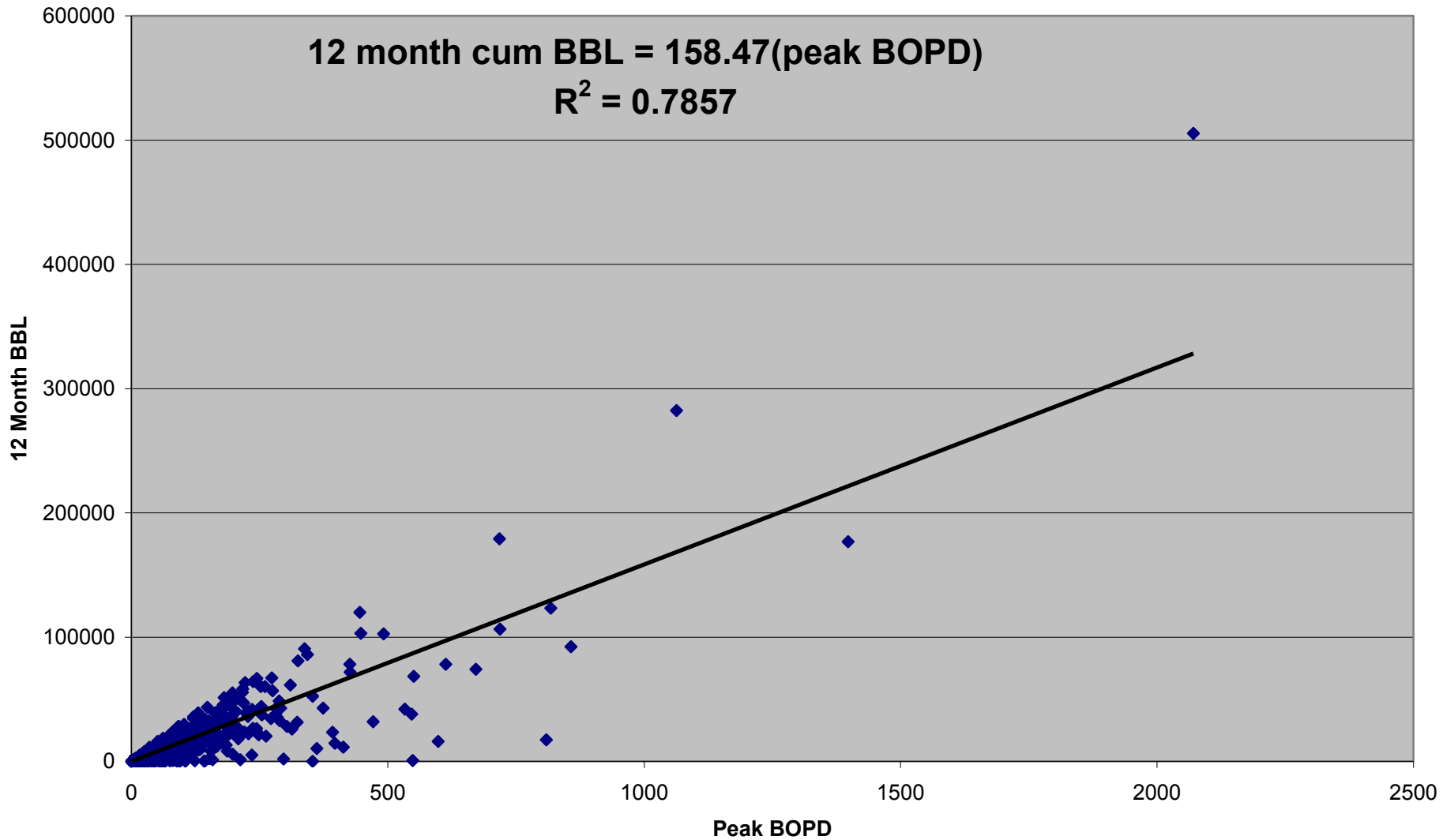
130 Granite Wash Average Peak Oil BOPD By County



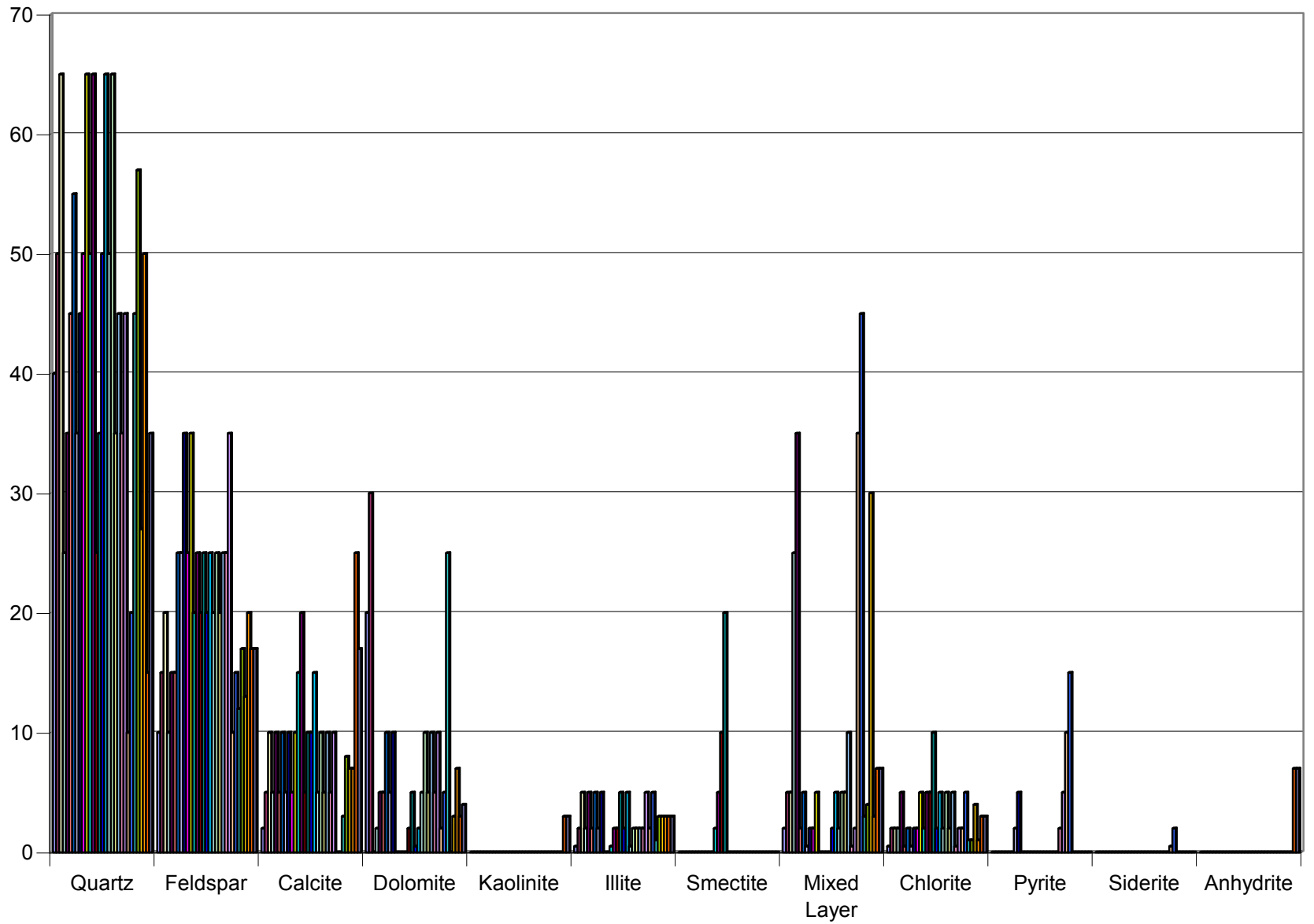
FIRST12_GAS VS PEAK MCF/D
GRANITE WASH



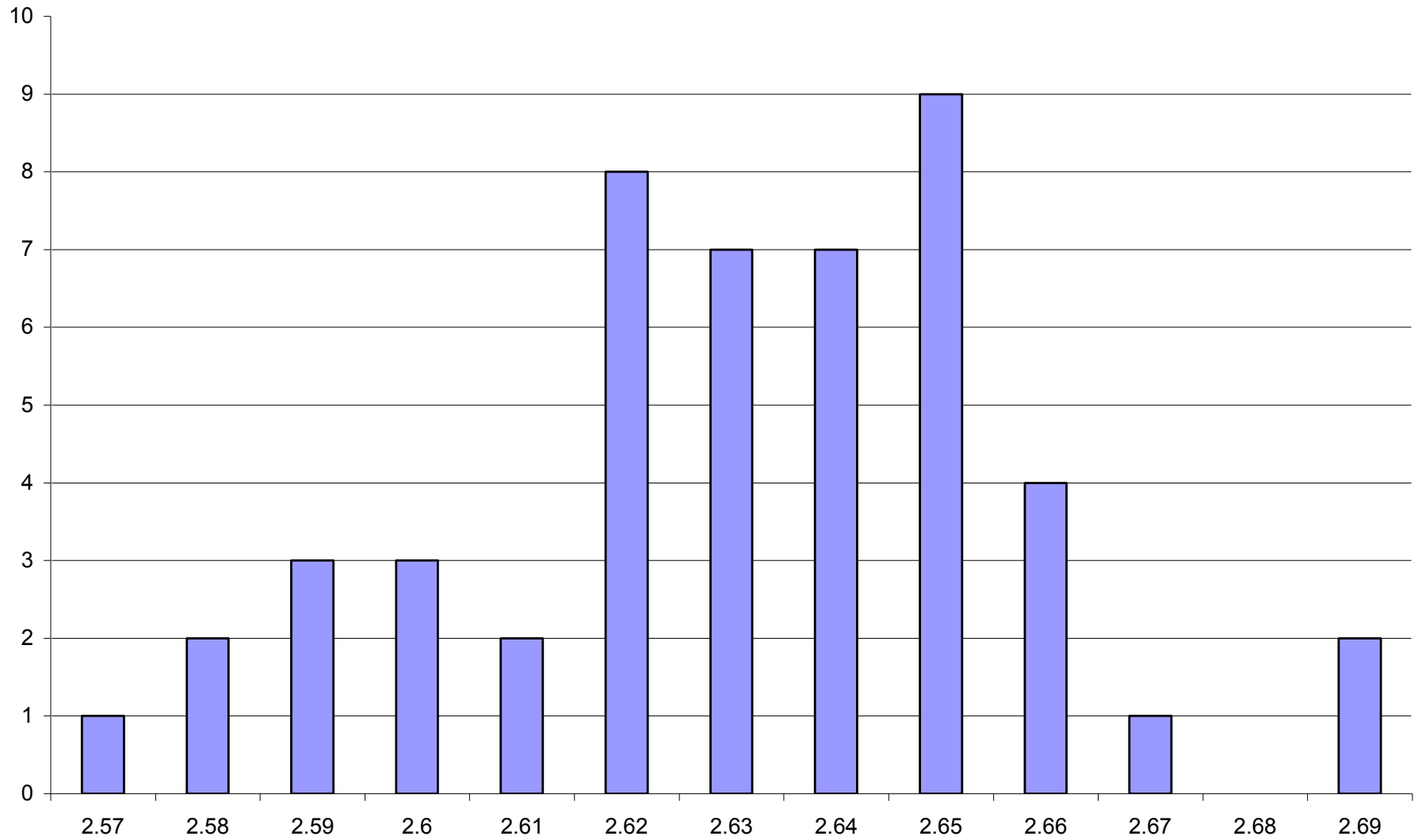
FIRST12 BBL VS Peak BOPD
GRANITE WASH



GRANITE WASH MINERALOGY

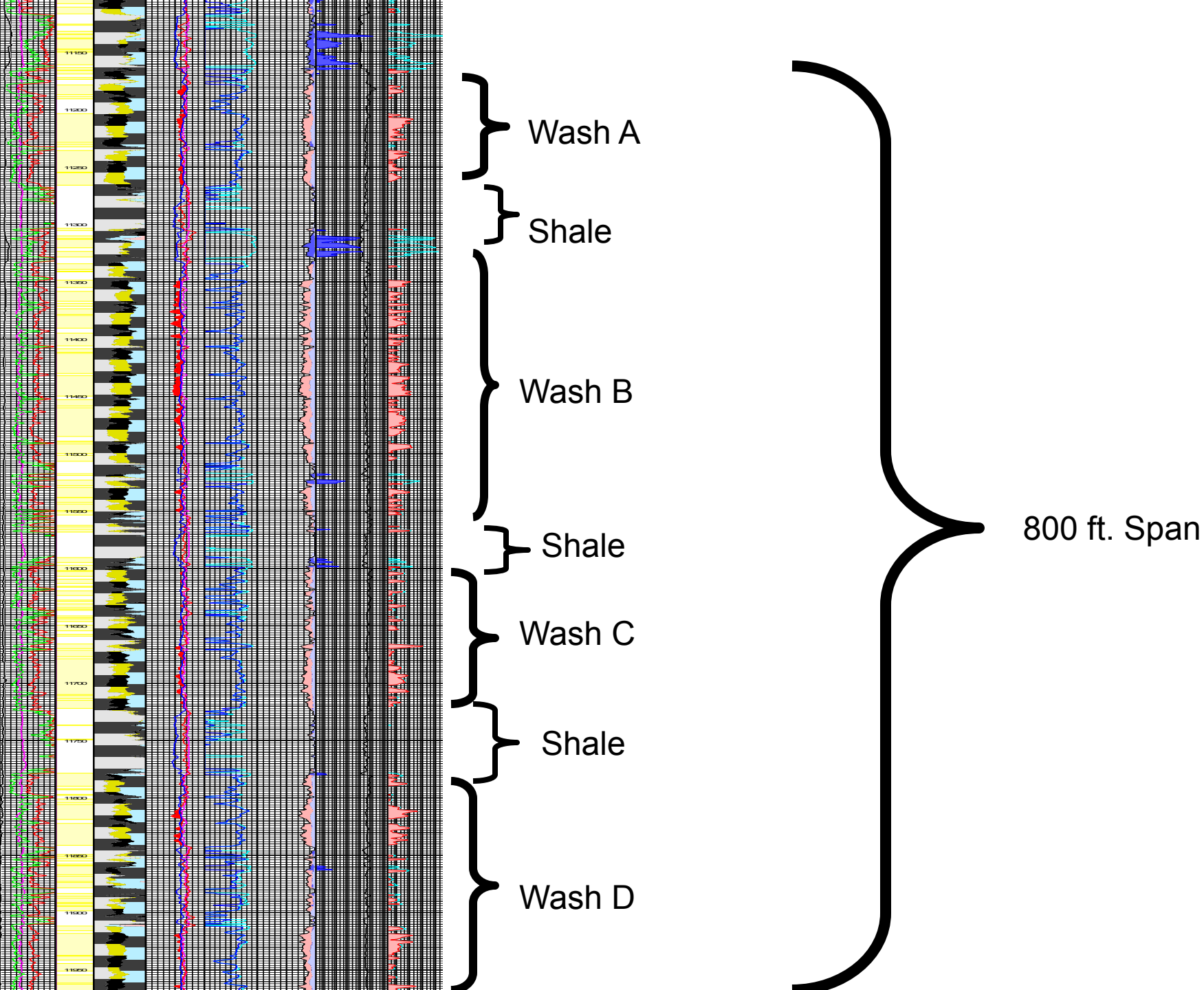


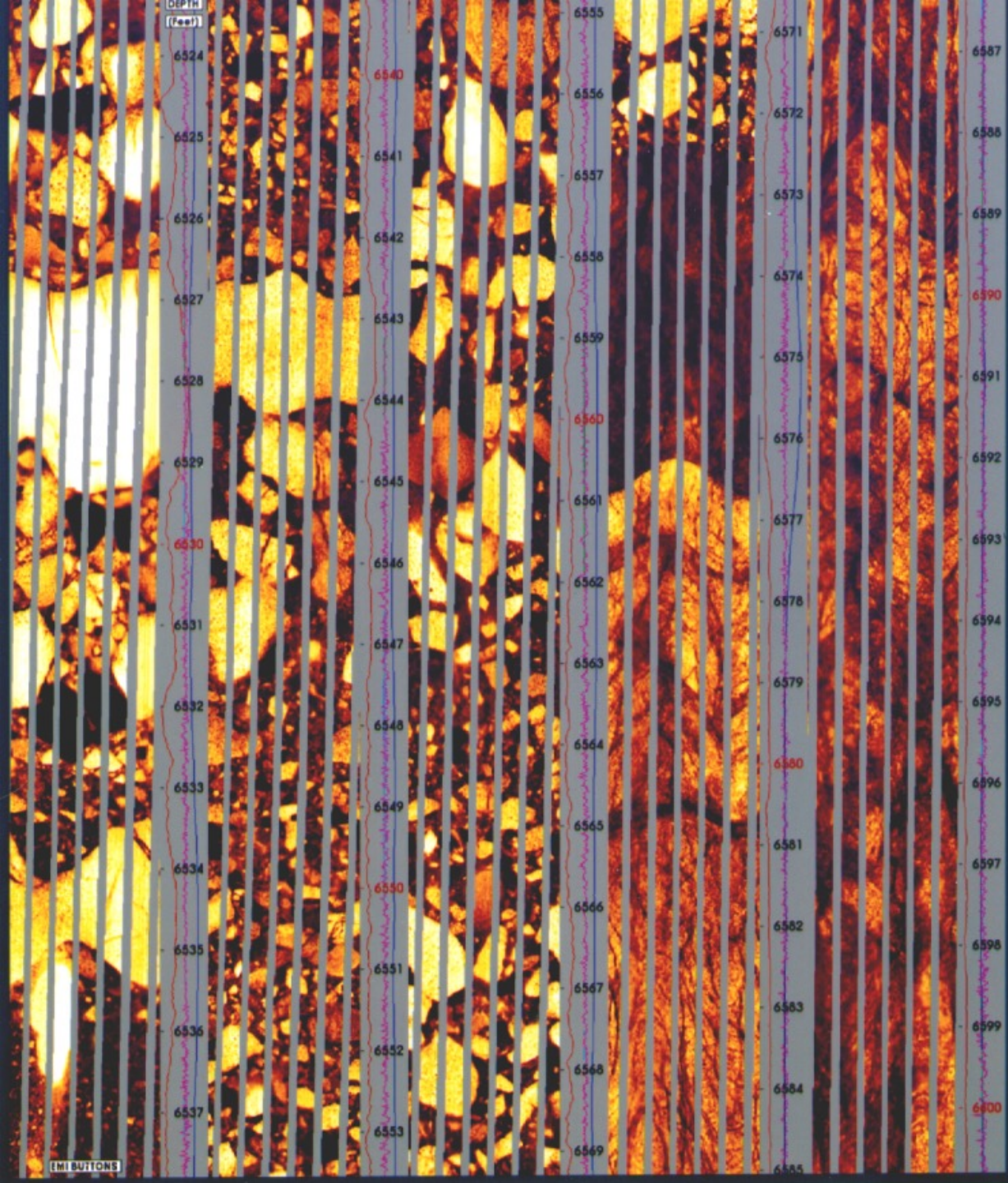
Granite Wash Grain Density



GRANITE WASH WASHITA CO OK

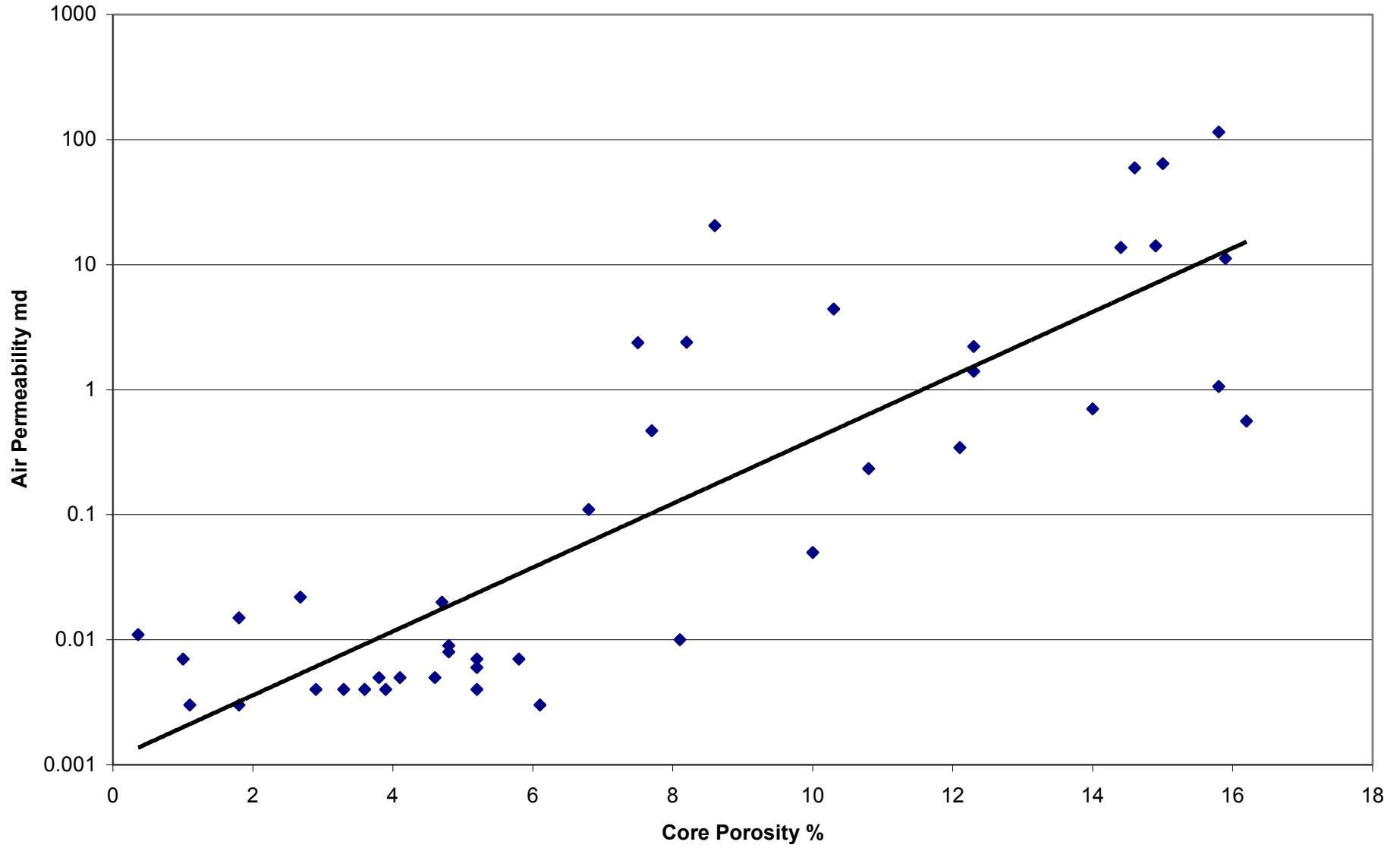
Mineral	Weight %	RhoB g/cc	Neutron Por.
Quartz	25-84	2.65	-1
Plagioclase	3-35	2.69	-1.1
K-Feldspar	5-25	2.56	-1.4
Calcite	0-23	2.71	0
Dolomite	0-8	2.87	0.9
Na-Feldspar	0-30	2.62	-1.1
Illite	0-10	2.66	9.5
Chlorite	0-10	2.80	38

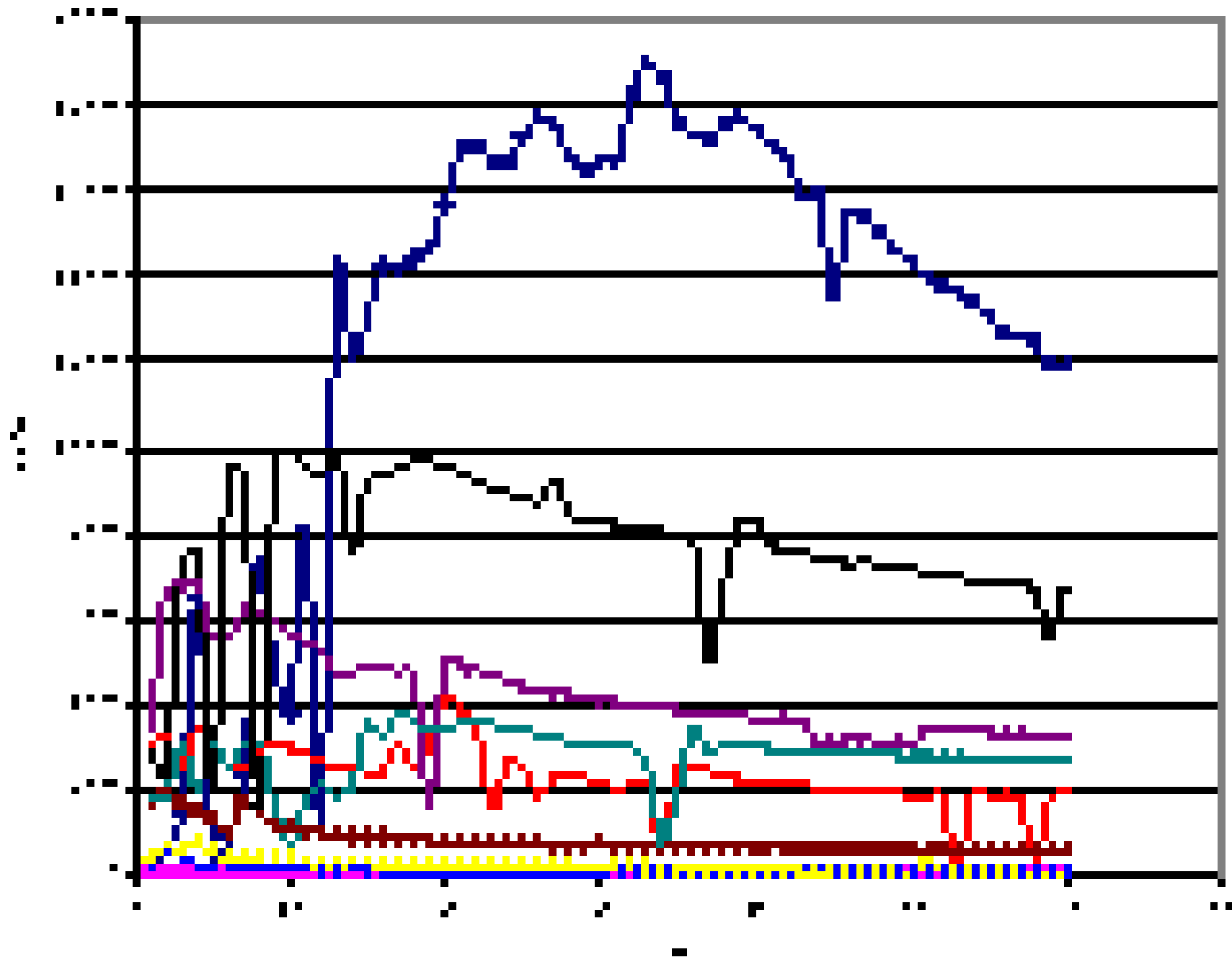




75 ft. Granite Wash

Core Permeability and Porosity Comparison







QUESTIONS?