

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION COMMISSION

IN THE MATTER OF THE HEARING CALLED BY	)	
THE OIL CONSERVATION COMMISSION FOR THE	)	
PURPOSE OF CONSIDERING:	)	CASE NO. 13,069
	)	
APPLICATION OF THE NEW MEXICO OIL	)	
CONSERVATION DIVISION THROUGH THE	)	
ENGINEERING BUREAU CHIEF FOR ADOPTION	)	
OF A NEW RULE RELATING TO COMPULSORY	)	
POOLING AND PRESCRIBING RISK CHARGES	)	
	)	

OFFICIAL EXHIBIT FILE
(2 OF 2: Burlington Exhibits)
COMMISSION HEARING

BEFORE: LORI WROTENBERY, CHAIRMAN
JAMI BAILEY, COMMISSIONER
ROBERT LEE, COMMISSIONER

May 15th, 2003

Santa Fe, New Mexico

This matter came on for hearing before the Oil Conservation Commission, LORI WROTENBERY, Chairman, on Thursday, May 15th, 2003, at the New Mexico Energy, Minerals and Natural Resources Department, 1220 South Saint Francis Drive, Room 102, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

* * *

STEVEN T. BRENNER, CCR
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Risk Penalty Analysis

Risk Penalty

Geological Risk

- Coal Stratigraphy and Thickness (highly variable unpredictable)
- Cleating/Fractures
- Coal Characteristics

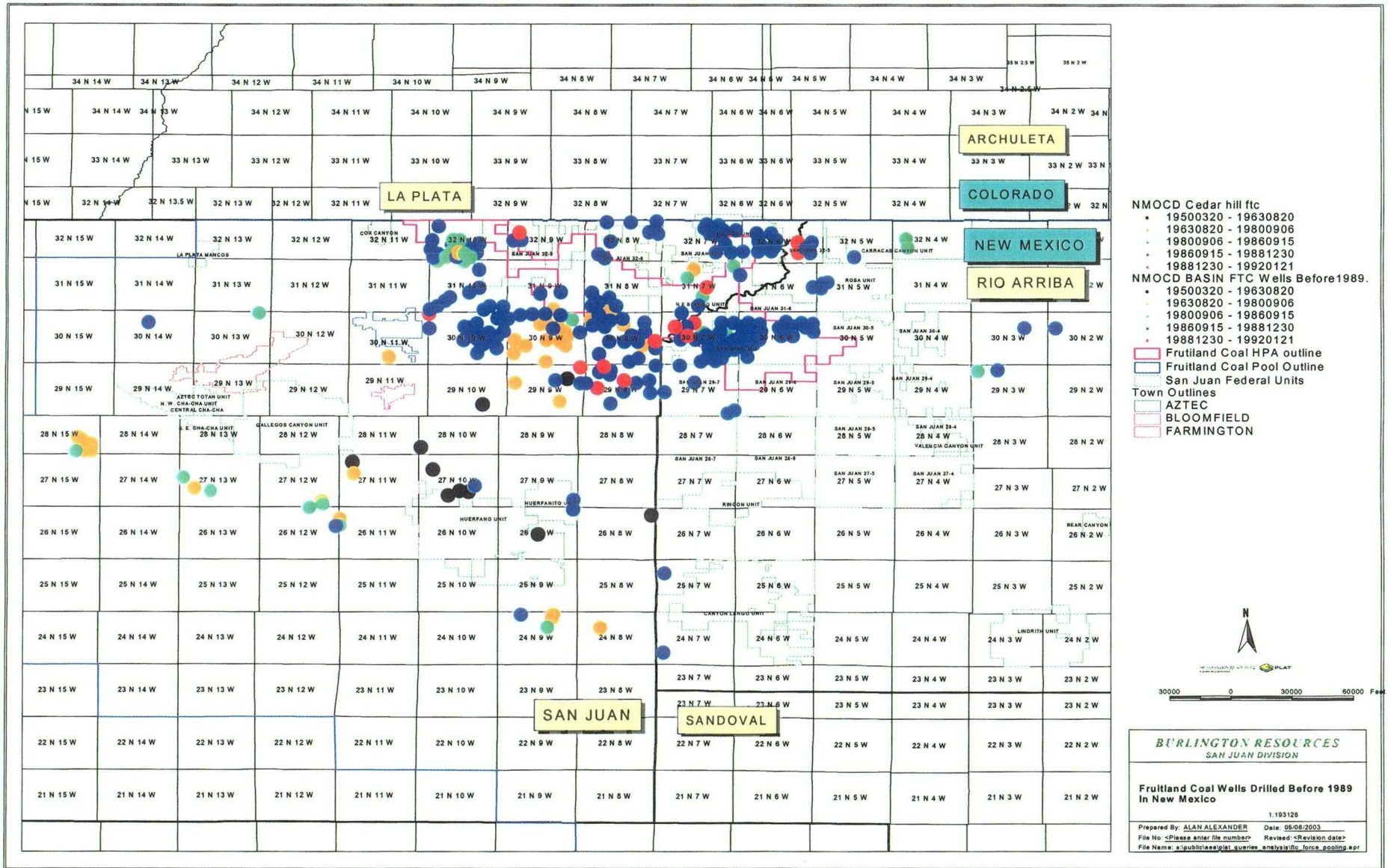
Reservoir Risk

- Sustained Deliverability
- Dewatering
- Reserve Recovery
- Undefined Coal Producing Characteristics

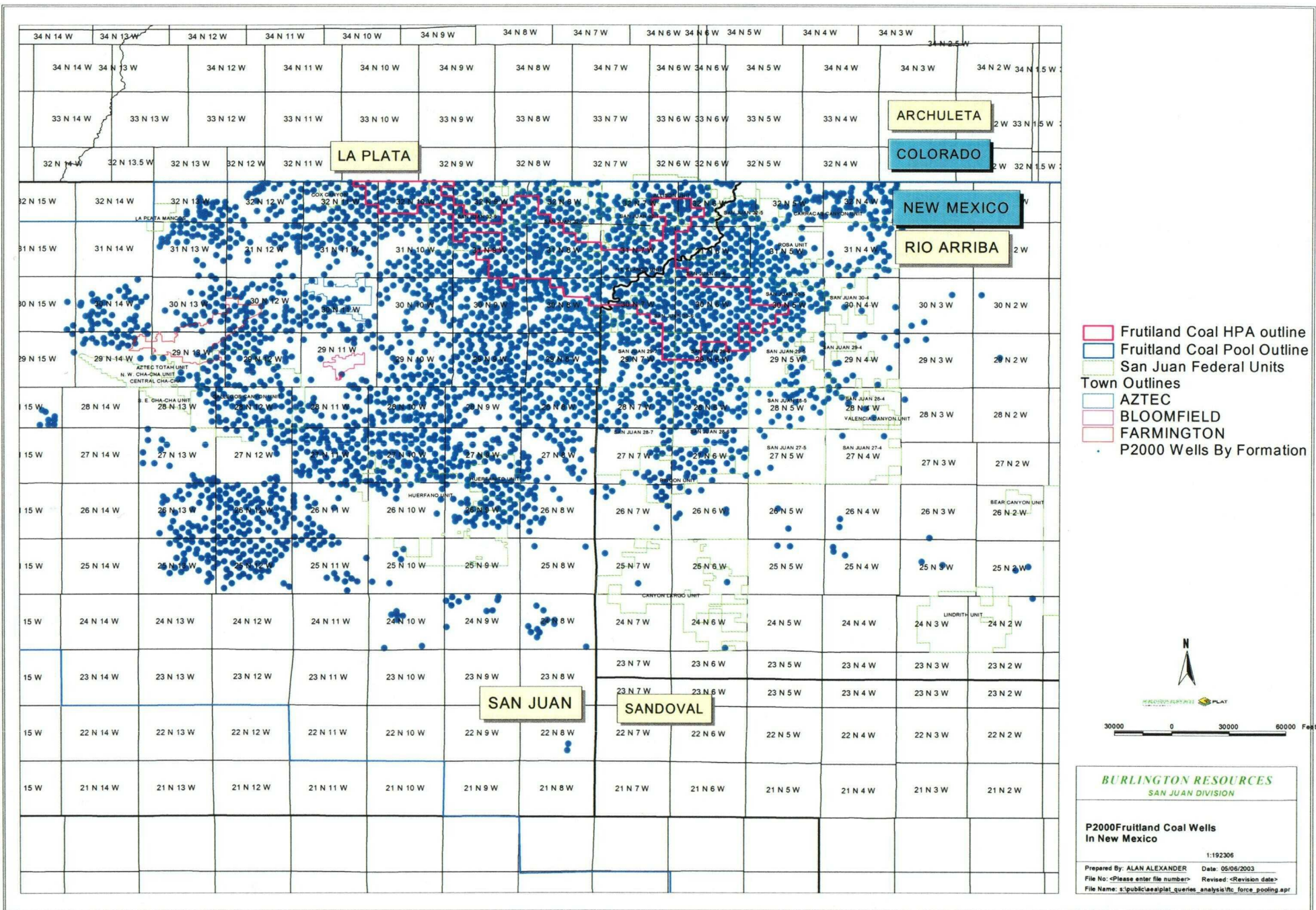
Operations Risk

- Completion Operations
- Equipment Failures While Drilling
- Formation Problems While Drilling

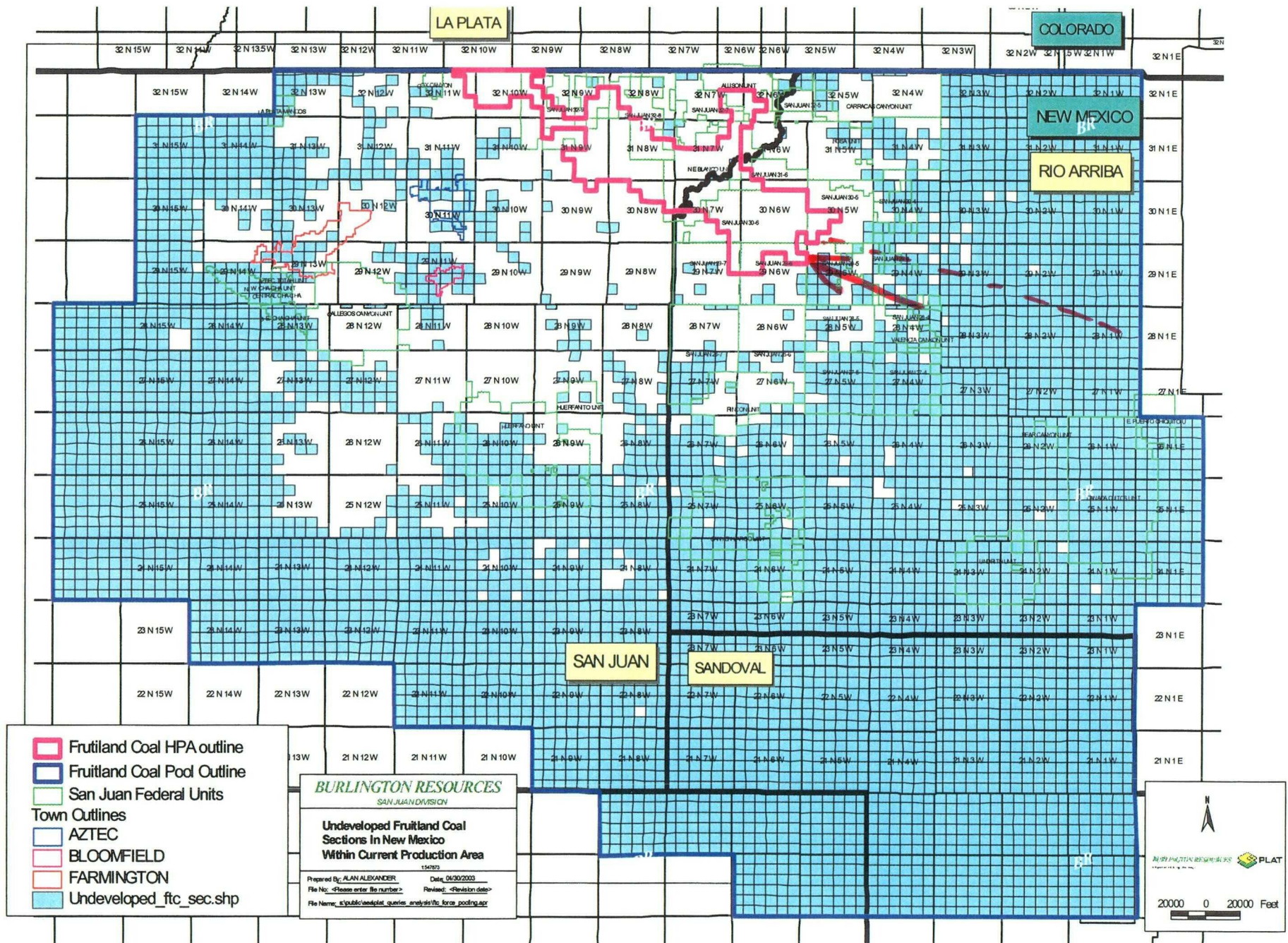
FTC Wells Completed Before 1989



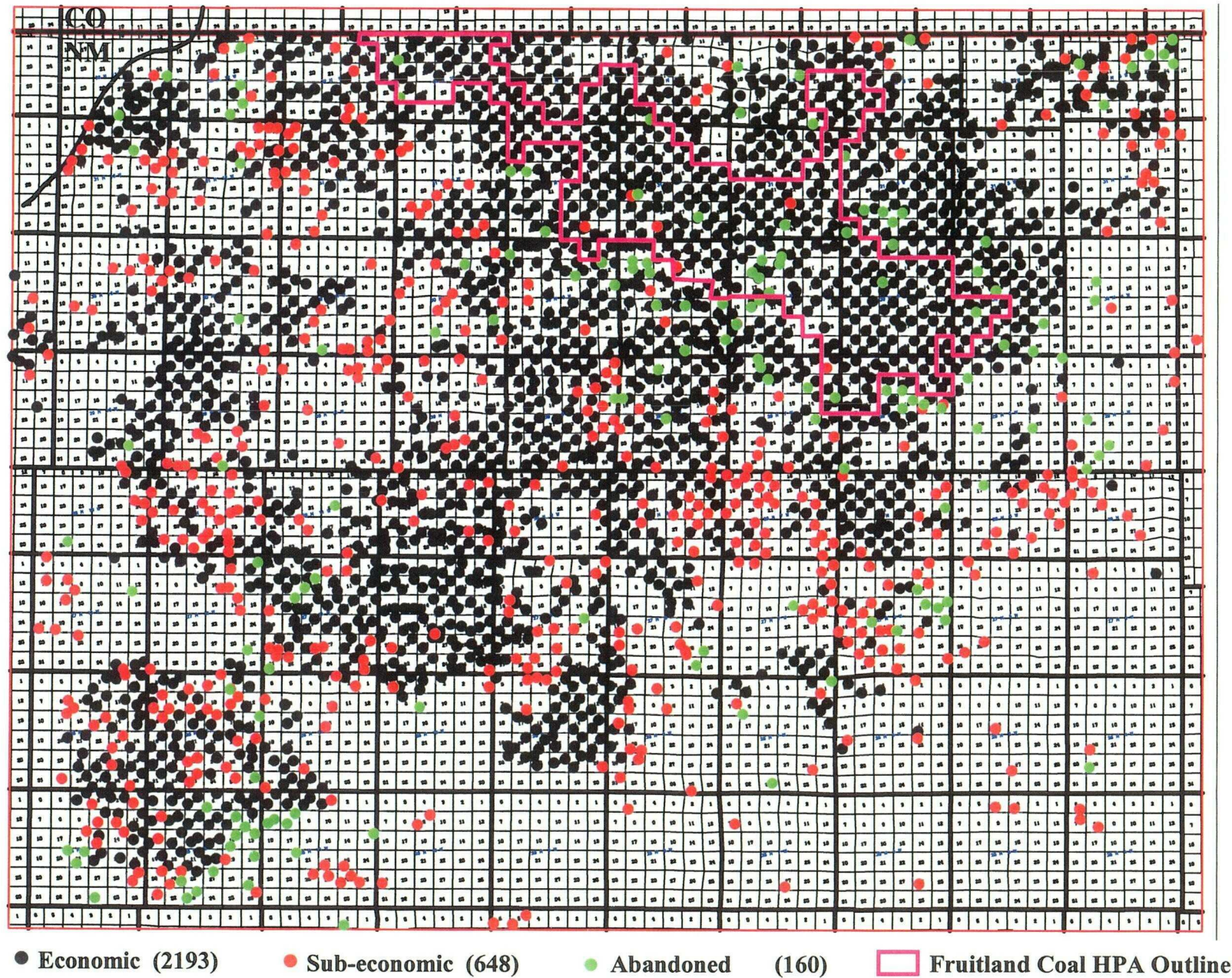
P2000 FIC Wells



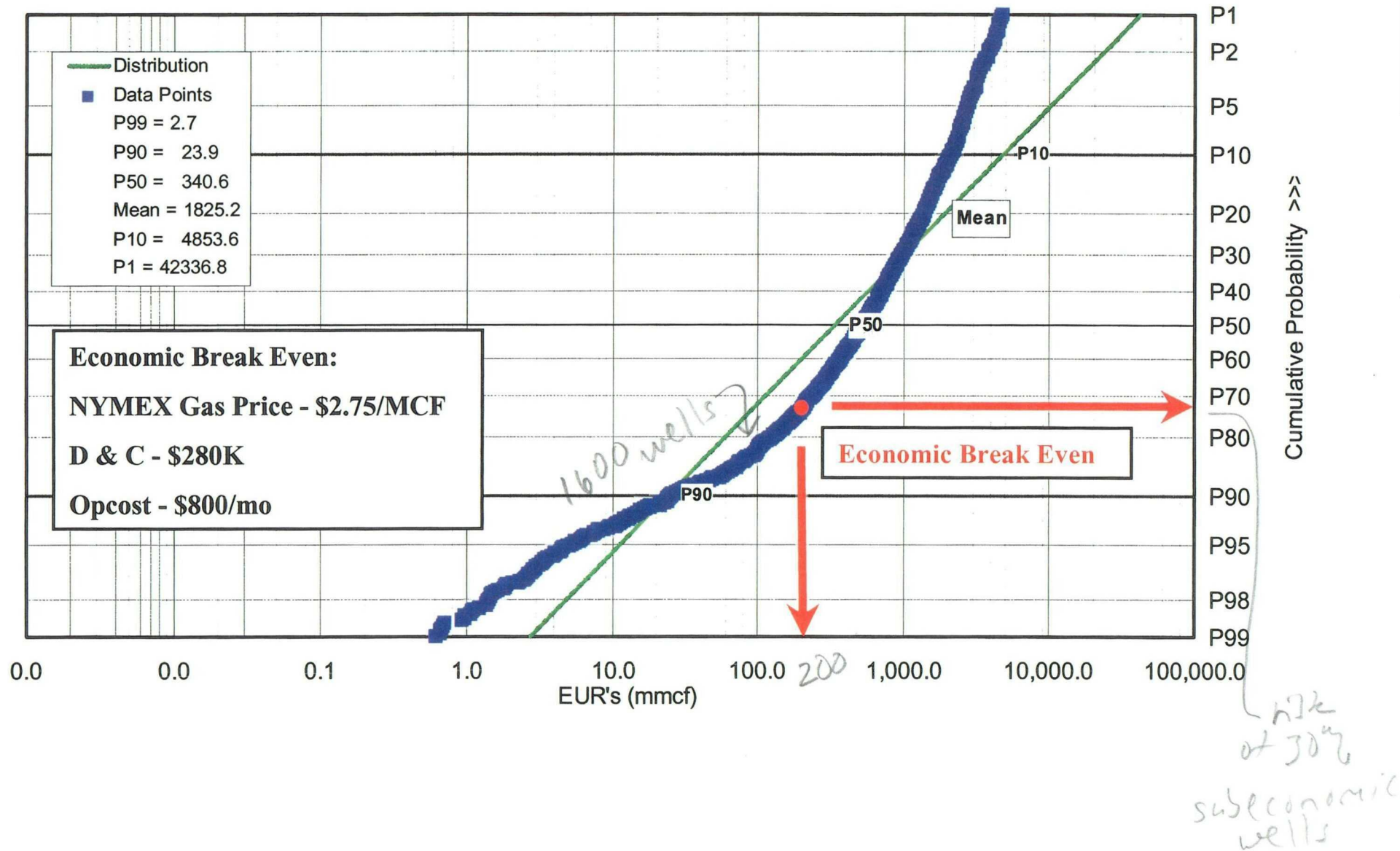
Undeveloped Fruitland Coal Sections



Fruitland Coal Wells

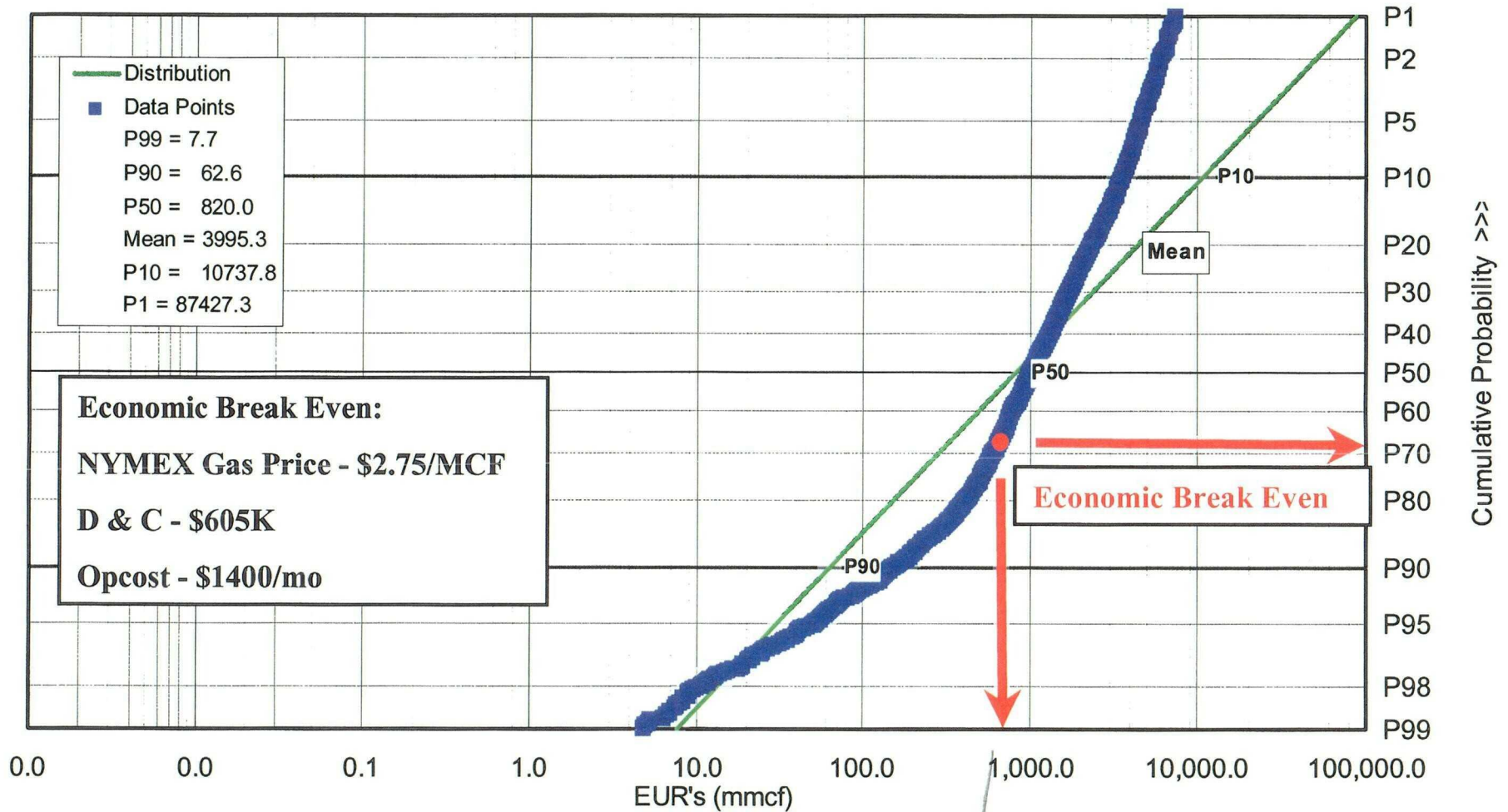


UPE Fruitland Coal Performance Statistics



Dakota Performance Statistics

5600 wells



Abandonment Rate by Objective Formation
San Juan Basin Wells Drilled Since 1988
(From NMOCD & Public Databases)

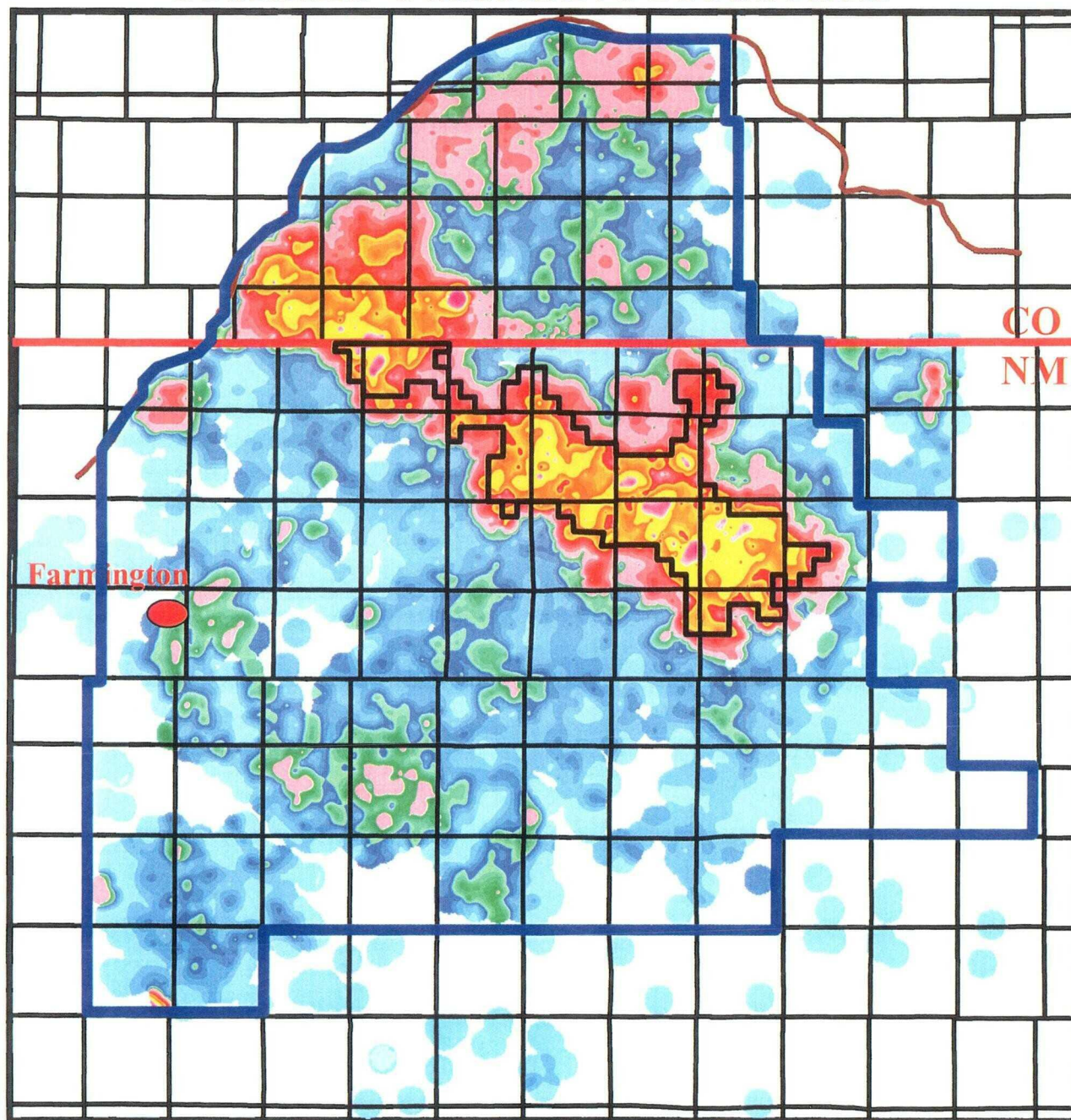
	Completed	Abandoned	Percent
	<u>Wells</u>	<u>Wells</u>	<u>Abandoned</u>
Dakota	1024	23	2.2%
Fruitland Coal	2369	160	6.3%
Mesaverde	880	6	0.7%
Picture Cliff	708	42	5.6%

Note: Fruitland Coal includes those identified in public database as either Fruitland or Fruitland Coal

Geologic Overview Summary

- Production heterogeneity exists across basin
- Nine genetic coal packages identified and mapped
- Individual coal bed discontinuities are prevalent
- Major coal packages are correlatable throughout basin
- All coals display vertical and lateral heterogeneity

Fruitland Cumulative Production



- Fruitland Outcrop
- Mapped Area
- HPA Line

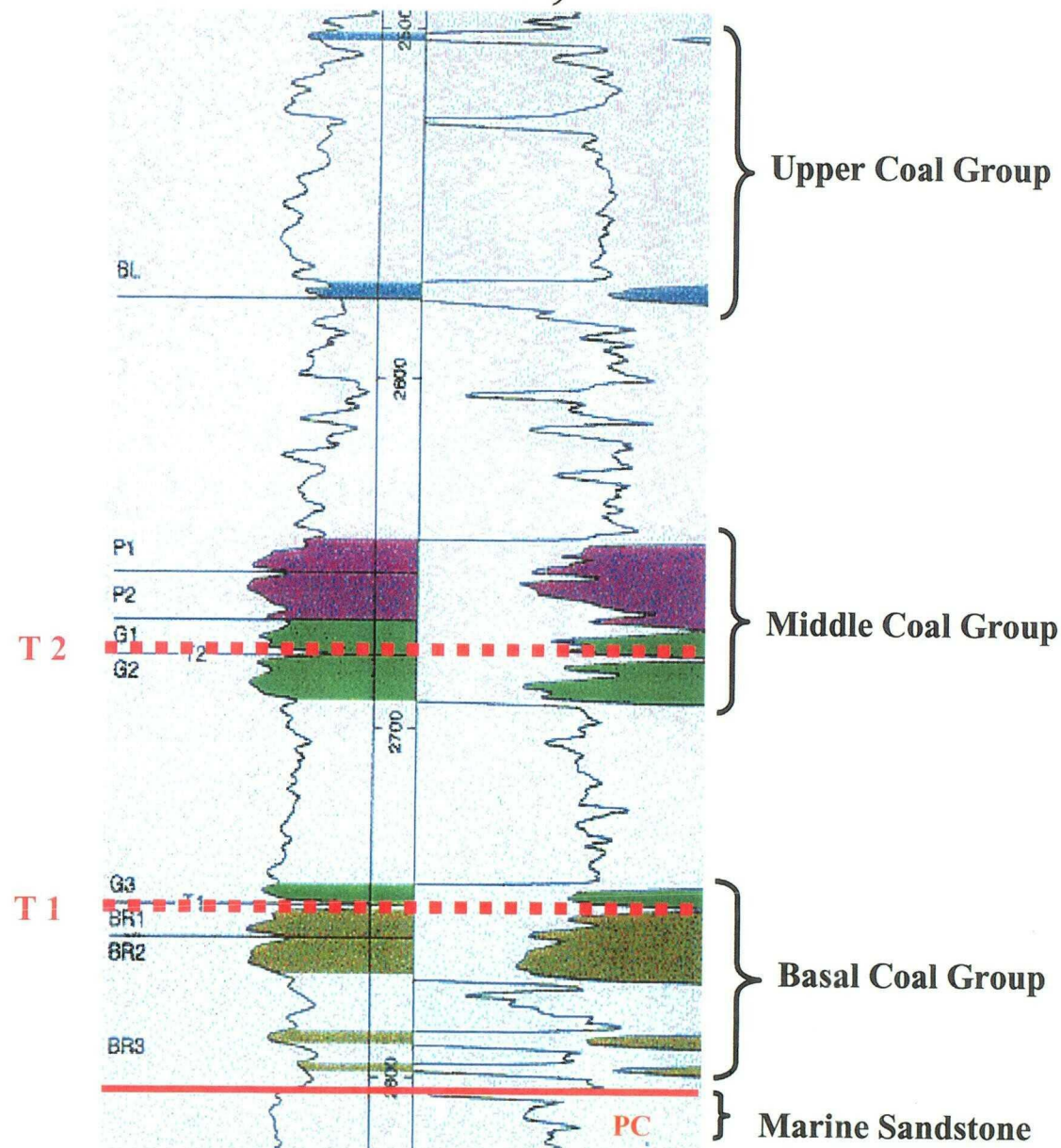
Fruitland Cumulative Production

Blue	0 - .5	BCF
Green	.5 - 1	BCF
Red	1 - 5	BCF
Orange	5 - 10	BCF
Yellow	10 - 15	BCF
Purple	> 15	BCF

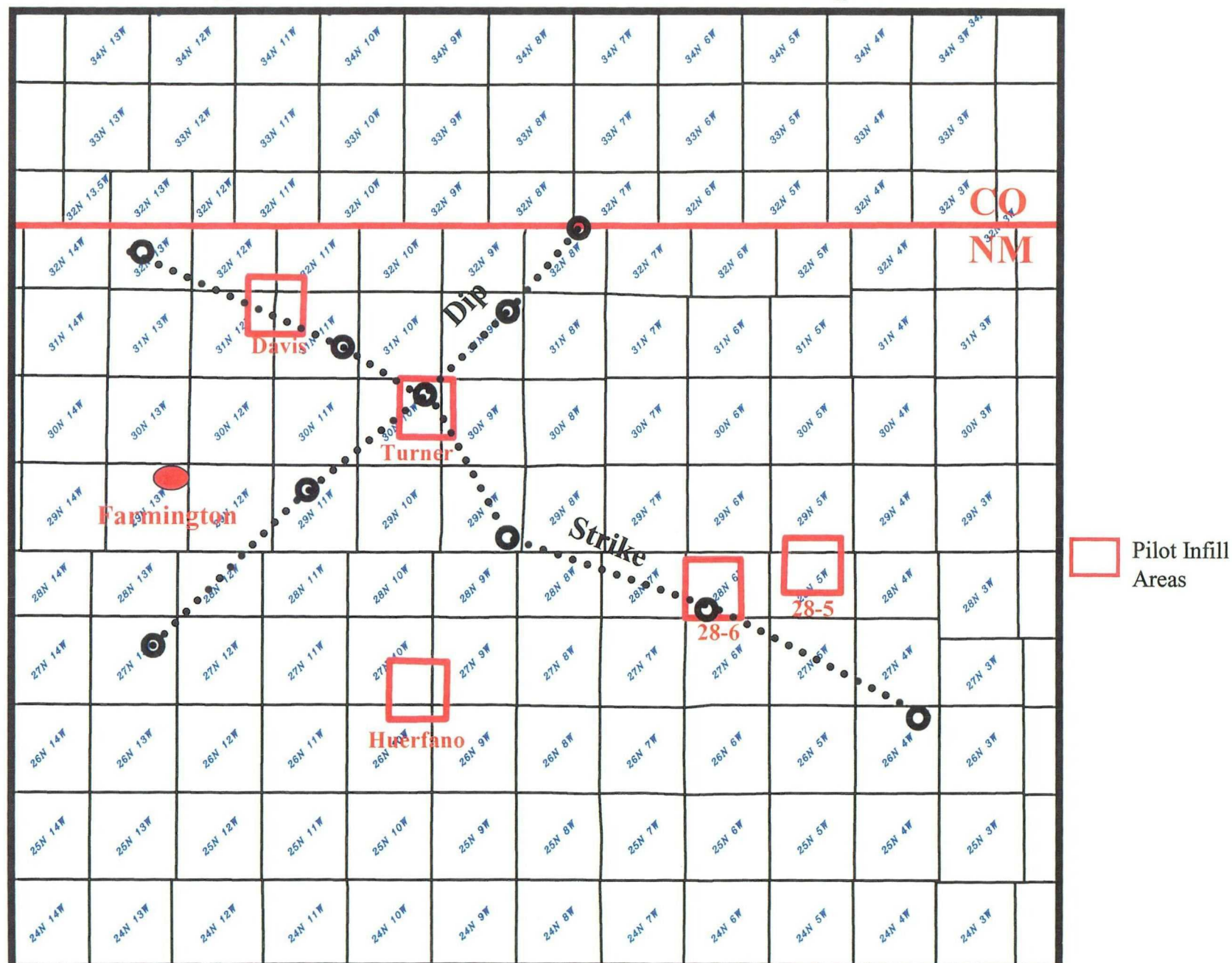
CI: .1 BCF (for cum's < 1 BCF)
 1 BCF (for cum's > 1 BCF)

Type Log for Coal Package Layers

T32N – R11W, CO



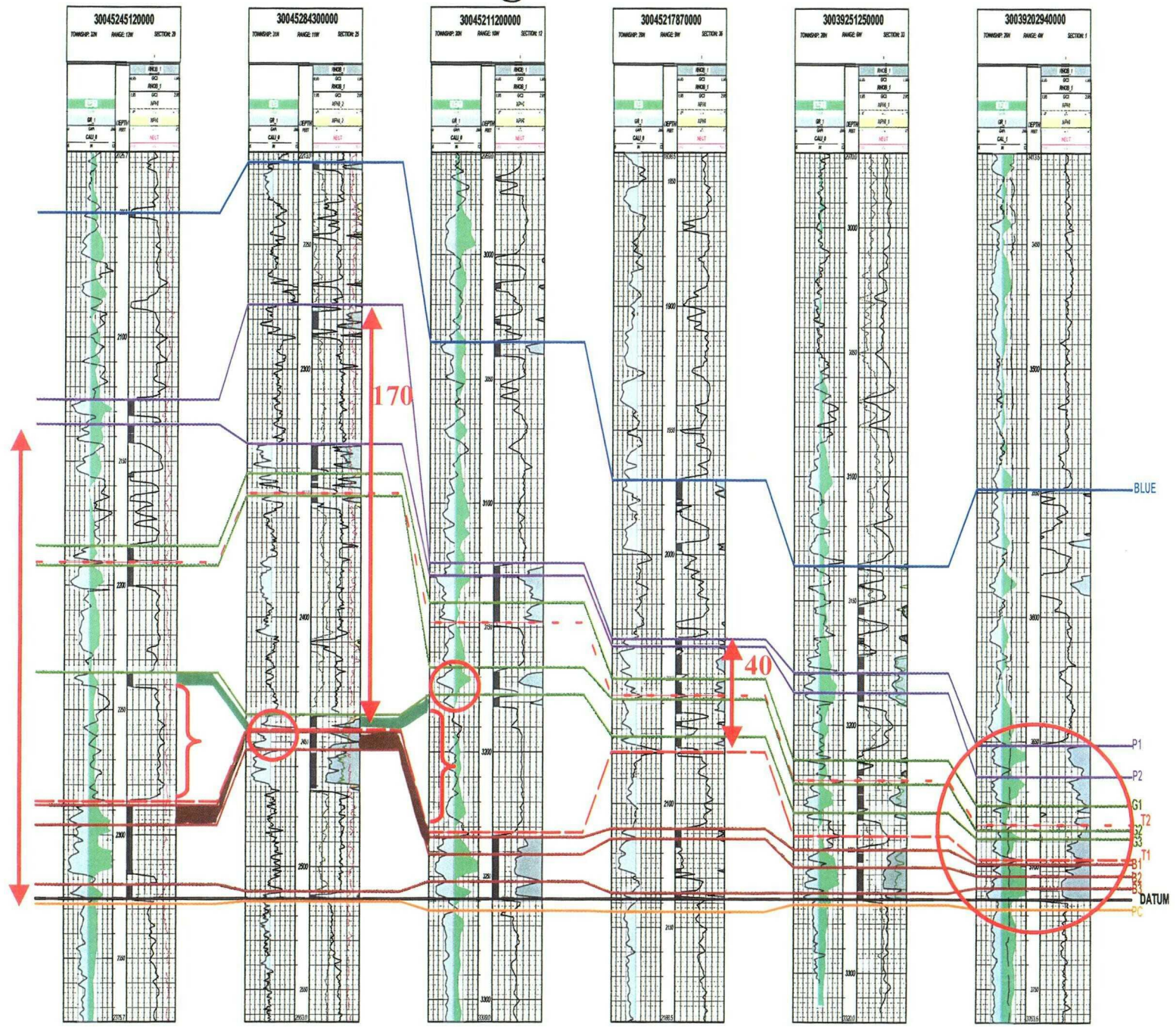
Regional Cross Section Locator Map



NW

Fruitland Regional Strike Section

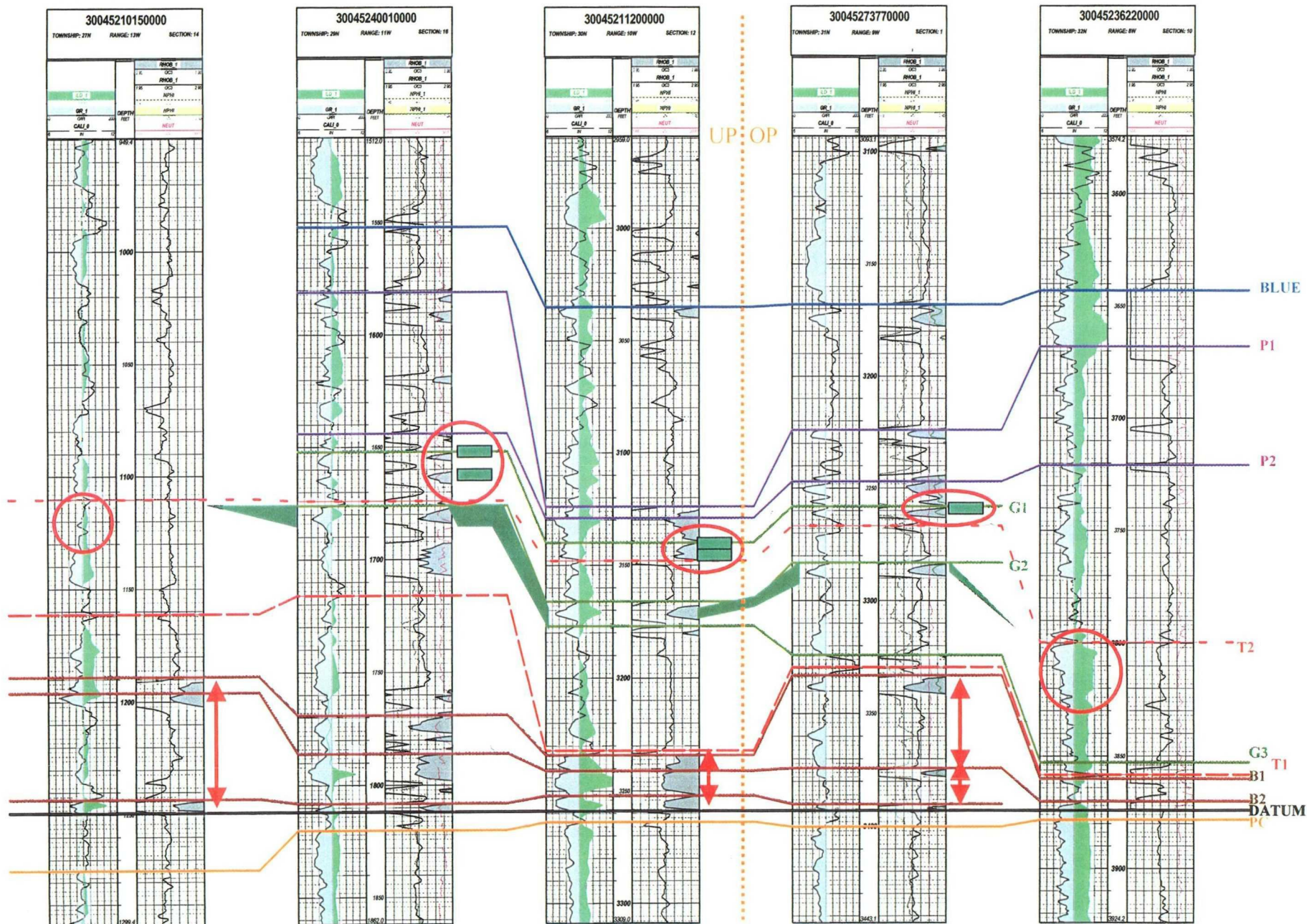
SE



SW

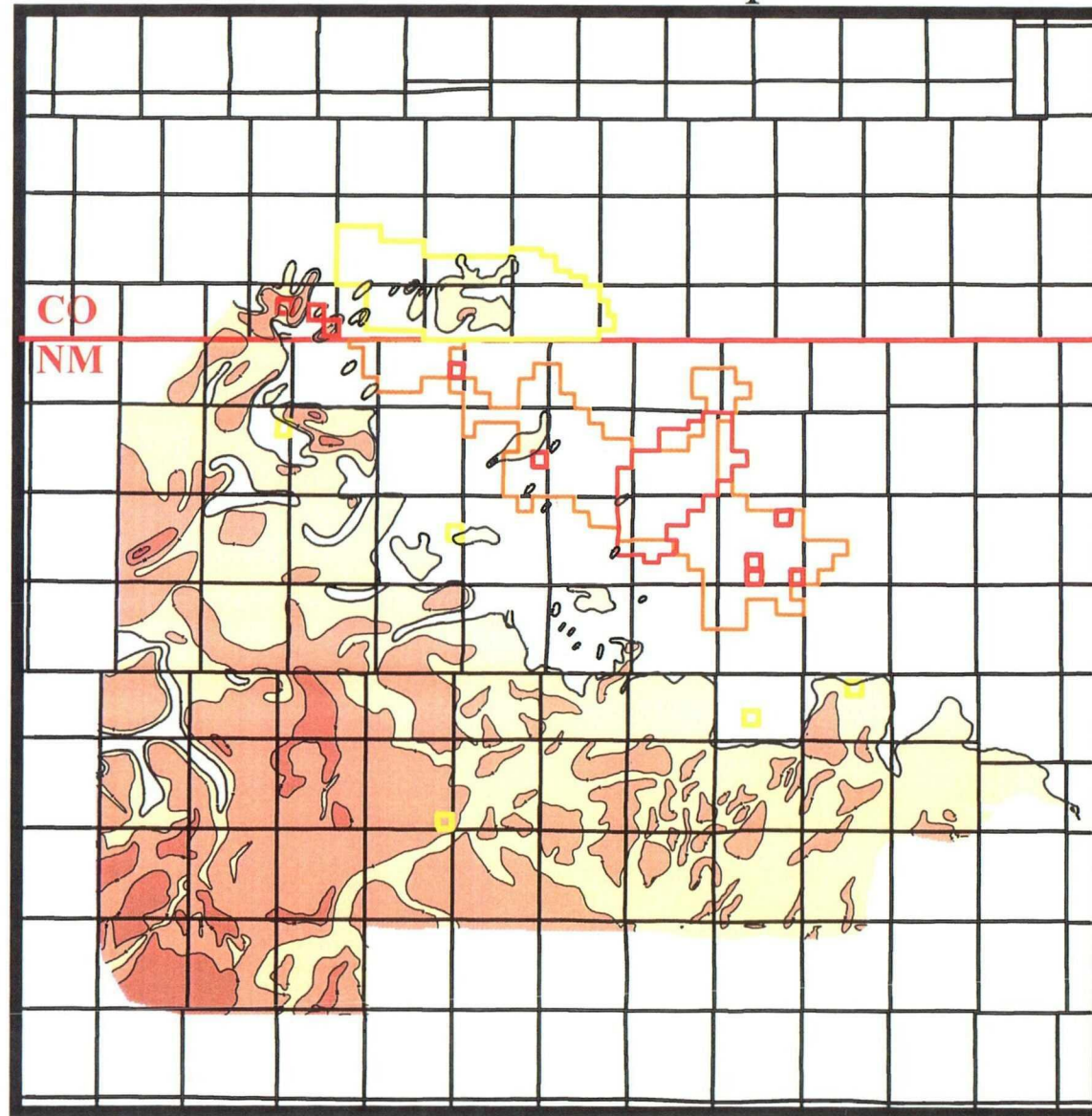
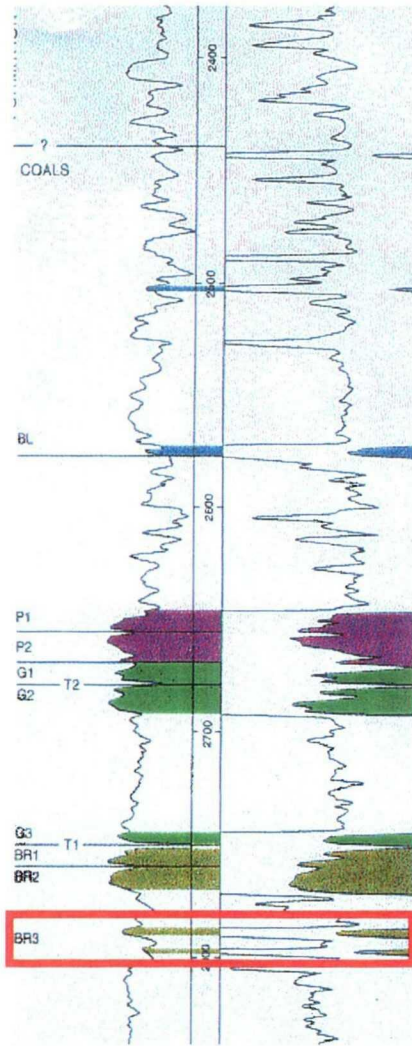
Fruitland Regional Dip Section

NE



BR3 Thickness Isopach

T32N - R11W, CO

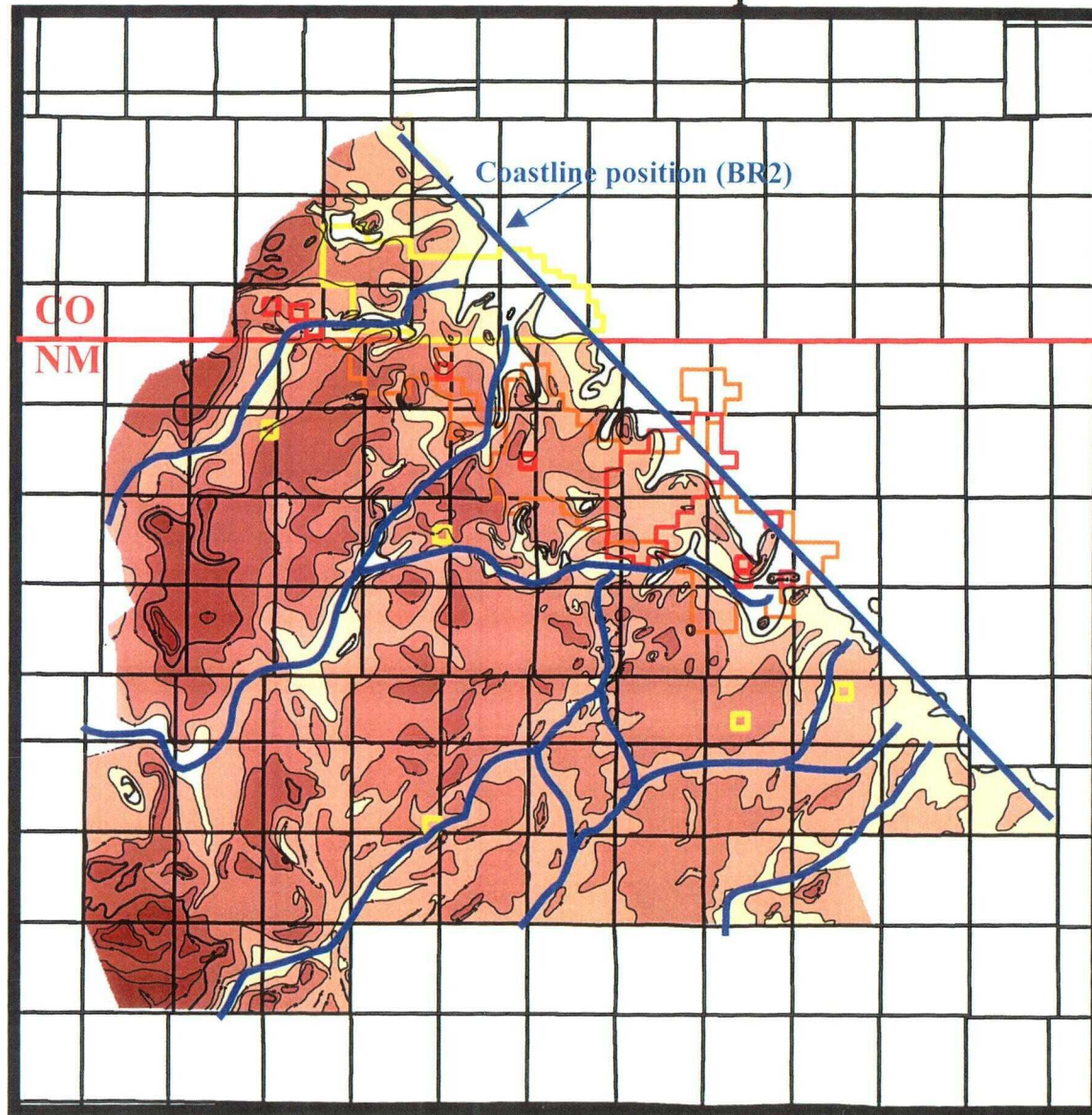
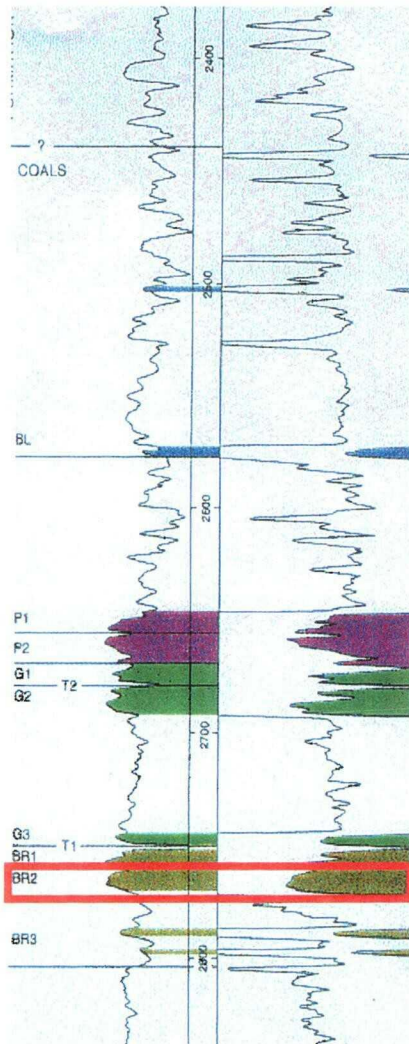


HPA 2 MMcfd Line

CI: 5'

BR2 Thickness Isopach

T32N - R11W, CO

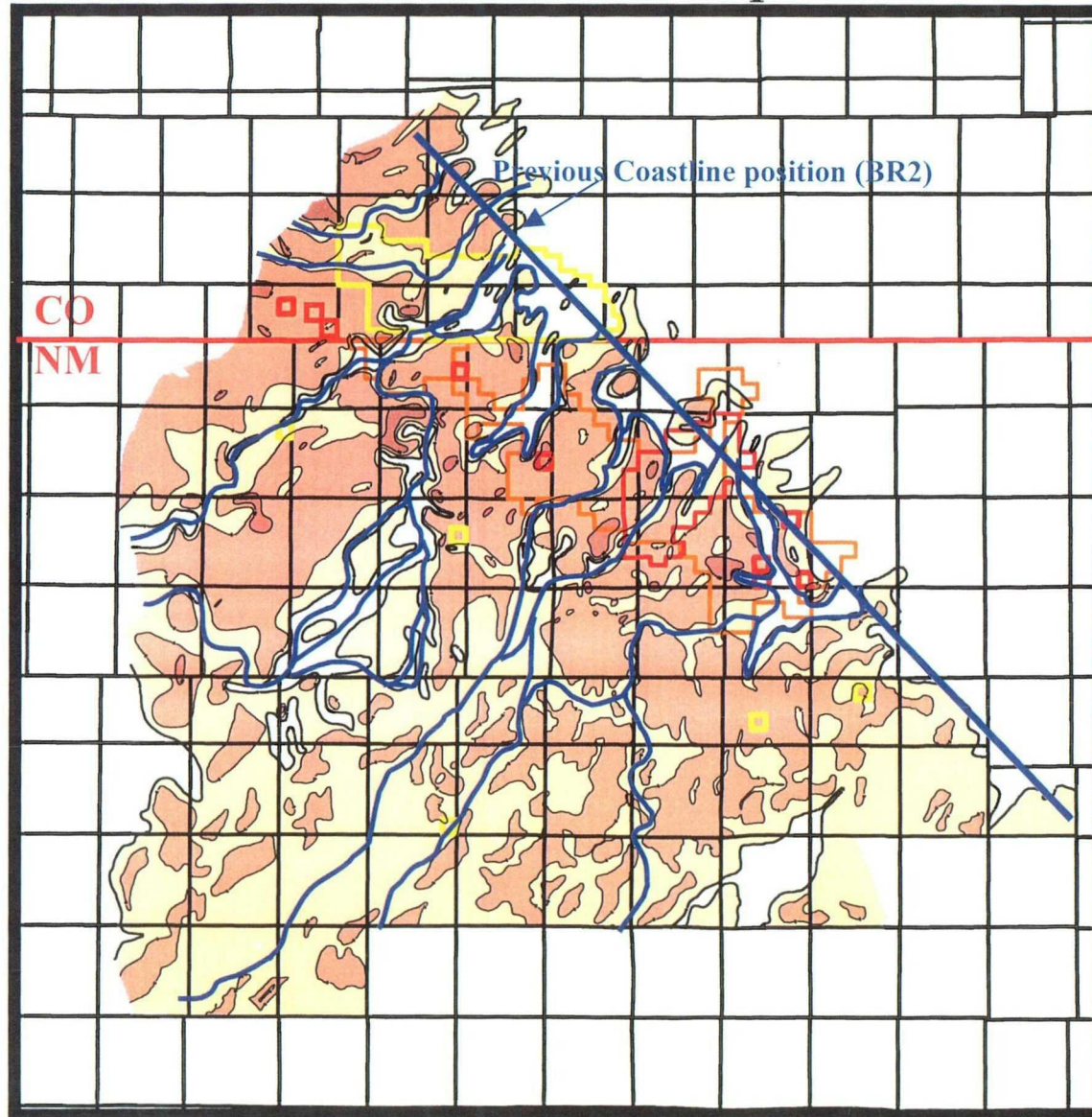
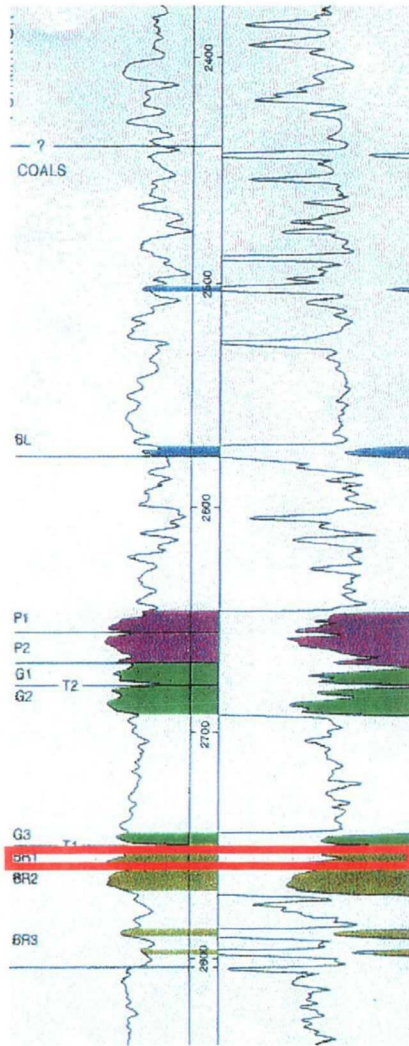


HPA 2 MMcfd Line

CI: 5'

BR1 Thickness Isopach

T32N - R11W, CO



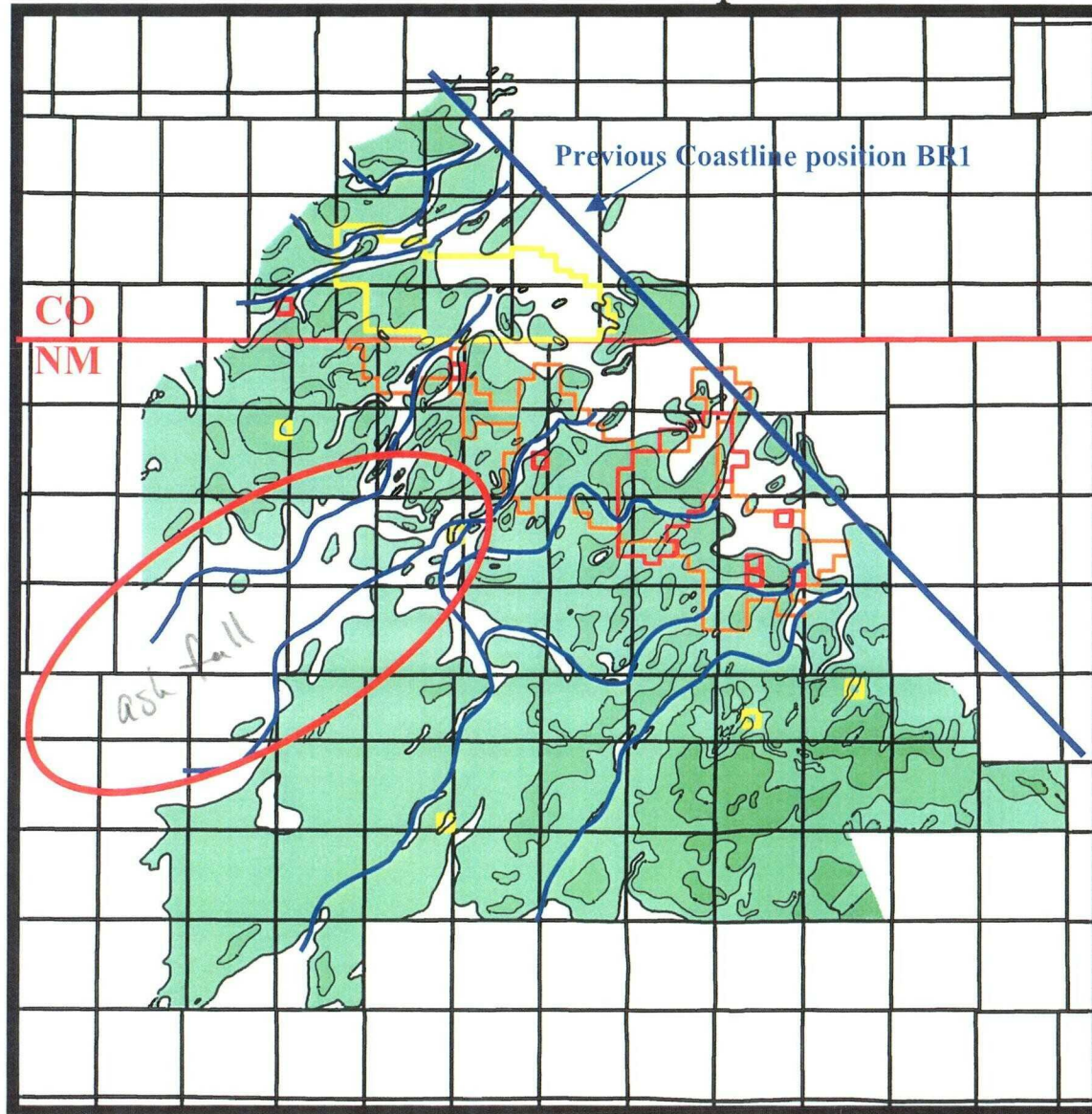
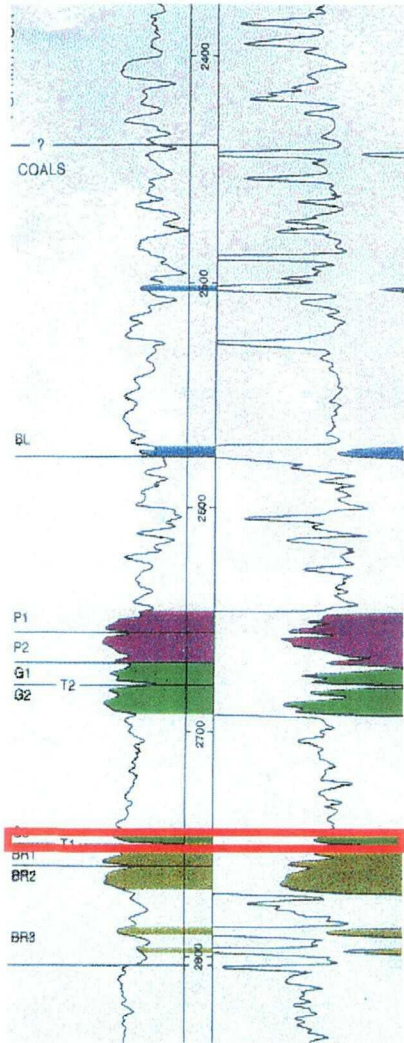
HPA 2 MMcf/d Line

Blue = rivers

CI: 5'

G3 Thickness Isopach

T32N - R11W, CO



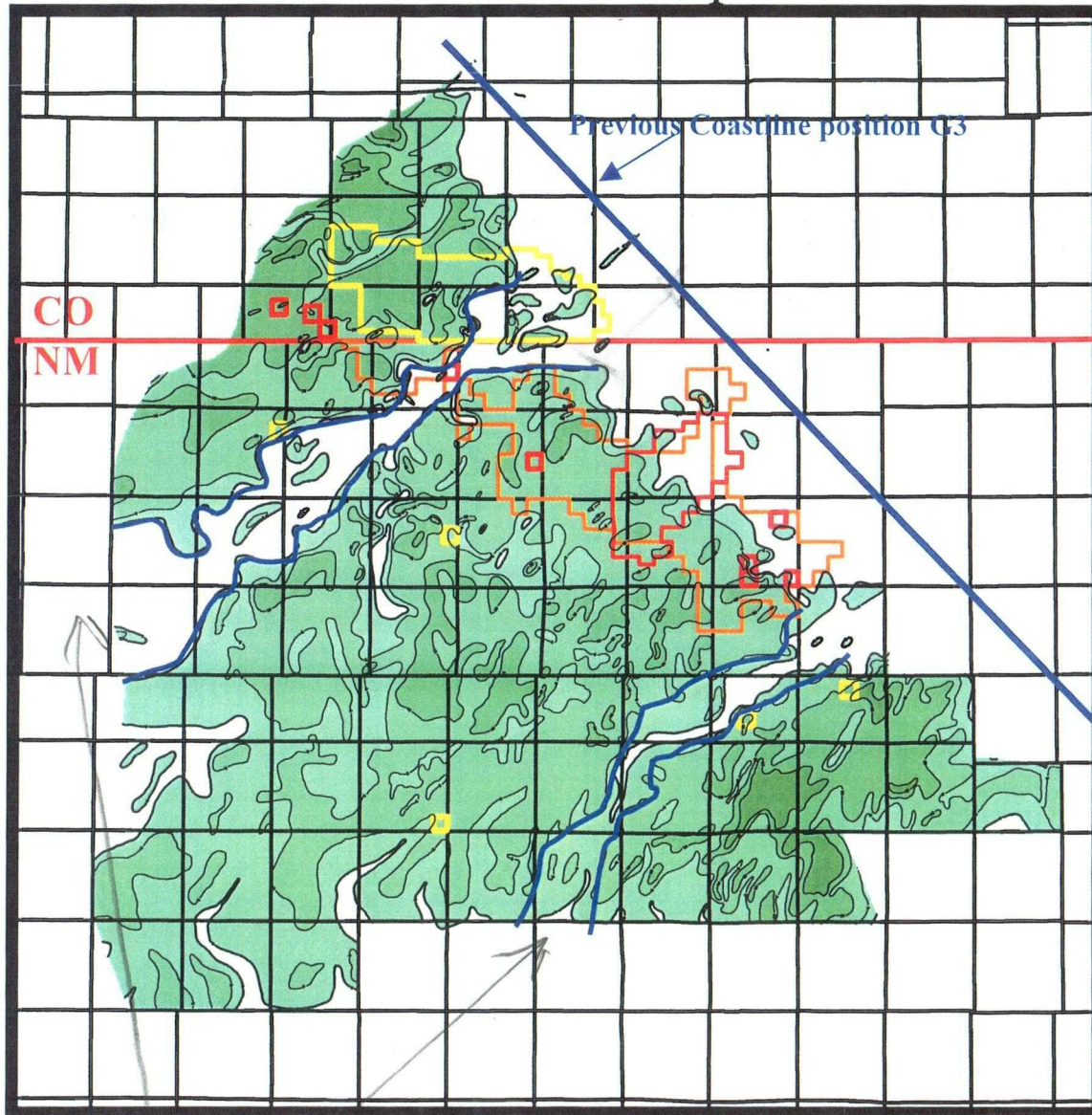
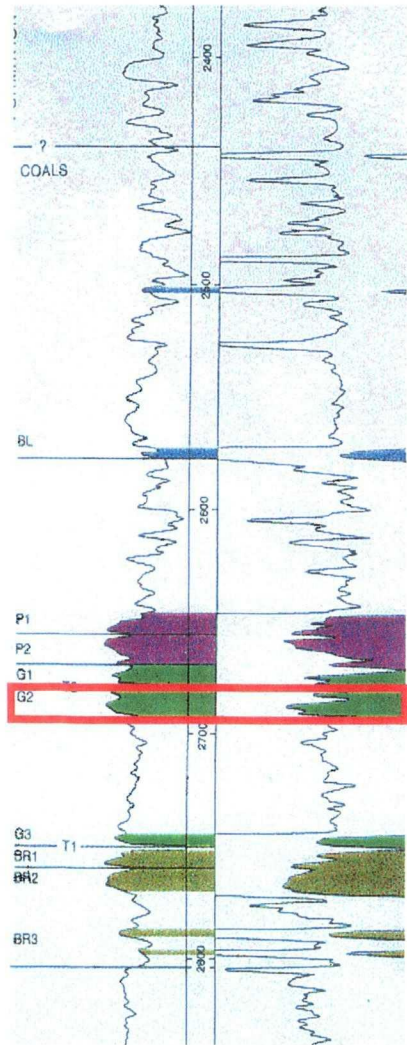
HPA 2 MMcf/d Line

Blue = rivers

CI: 5'

G2 Thickness Isopach

T32N - R11W, CO



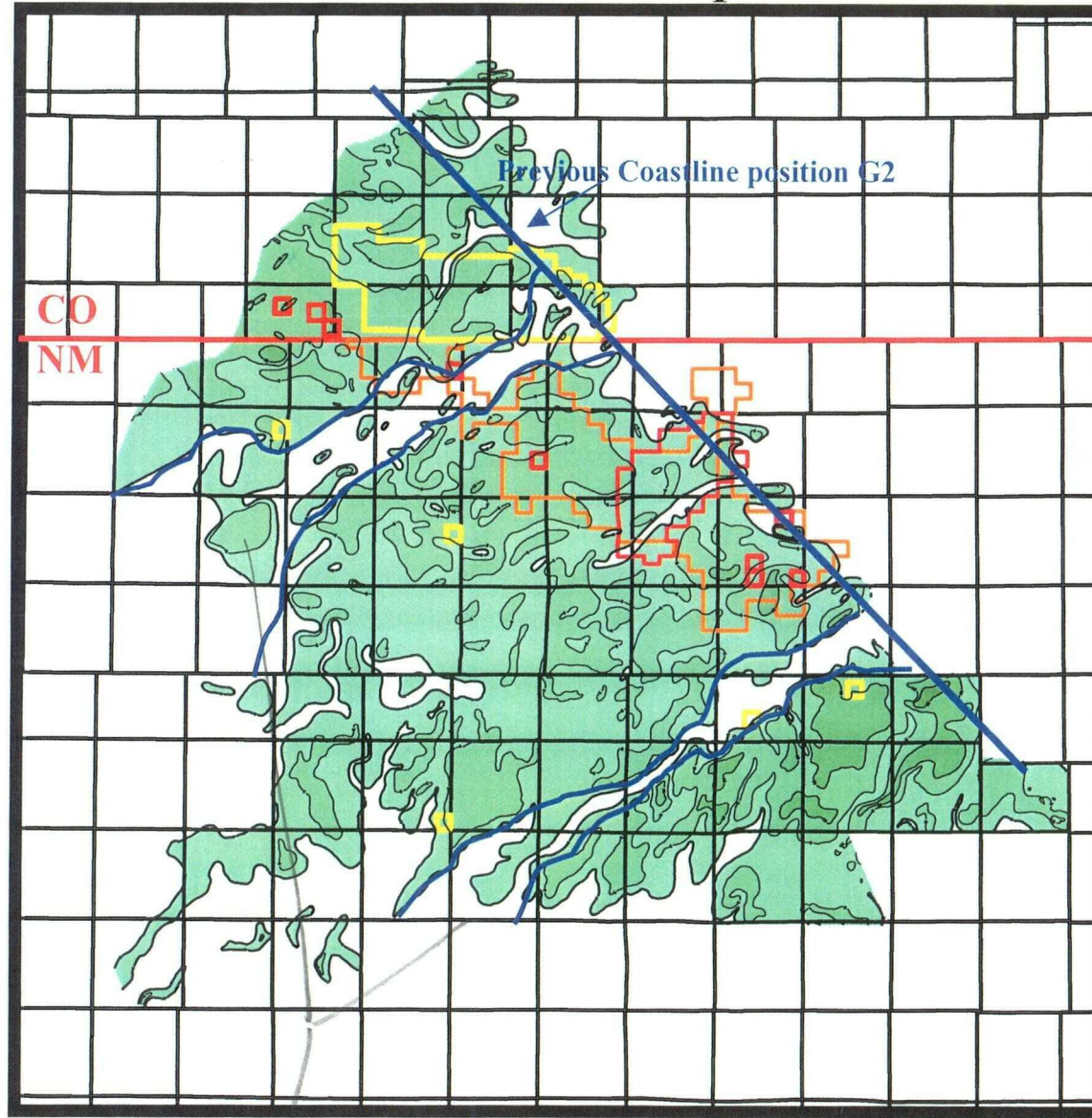
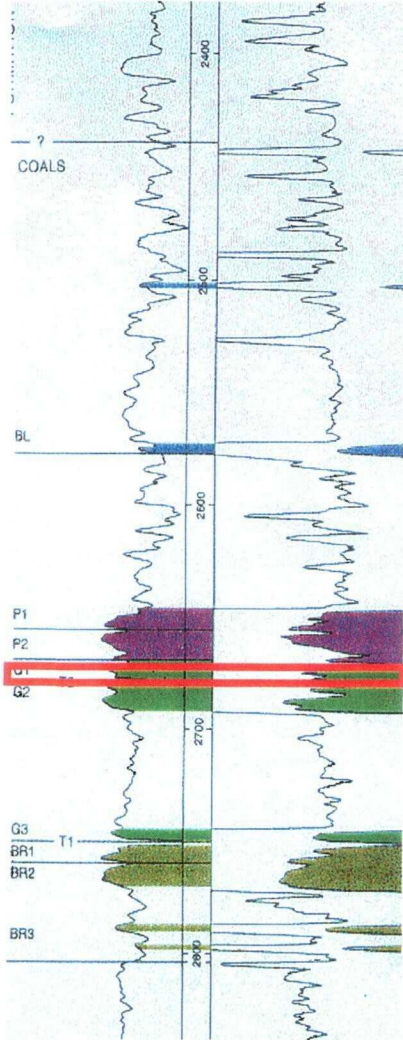
HPA 2 MMcfd Line

CI: 5'

Stream systems correlate w/ San Juan & Animas River

G1 Thickness Isopach

T32N - R11W, CO

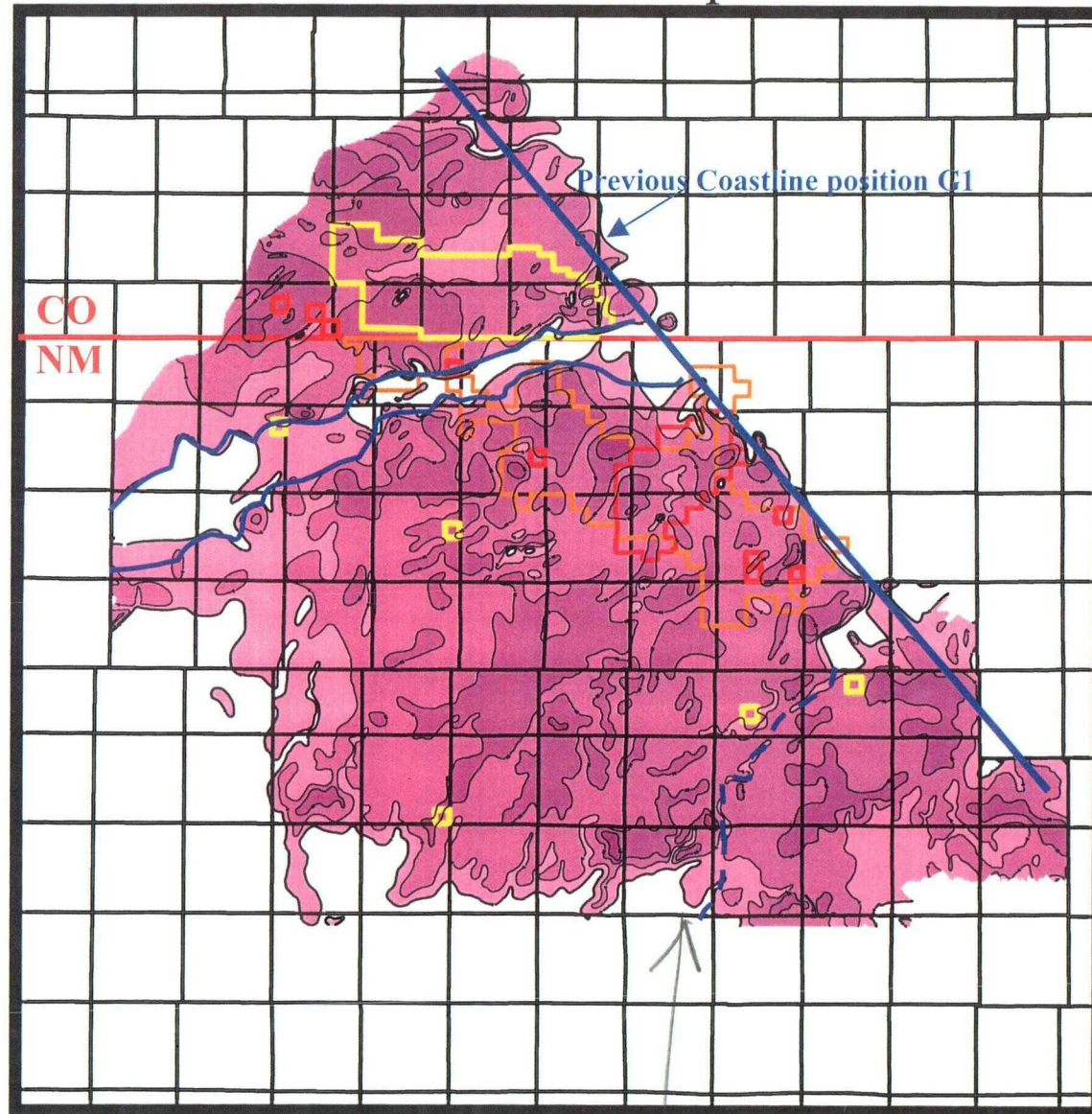
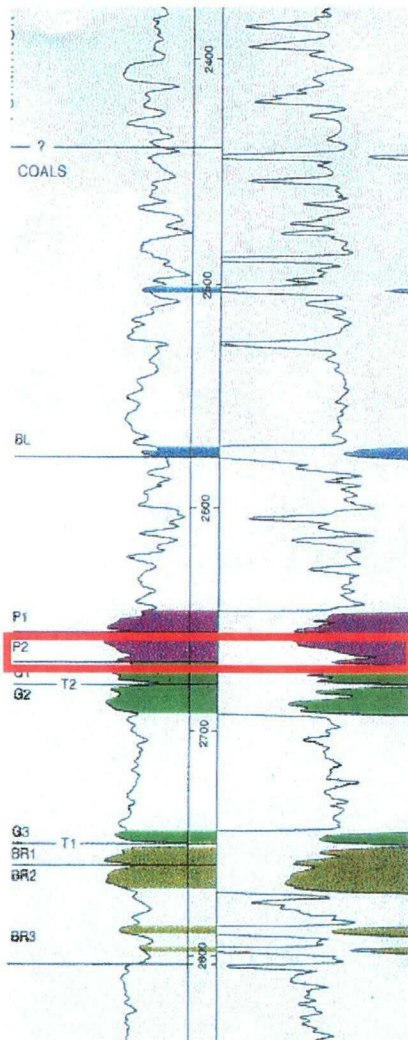


HPA 2 MMcfd Line

CI: 5'

P2 Thickness Isopach

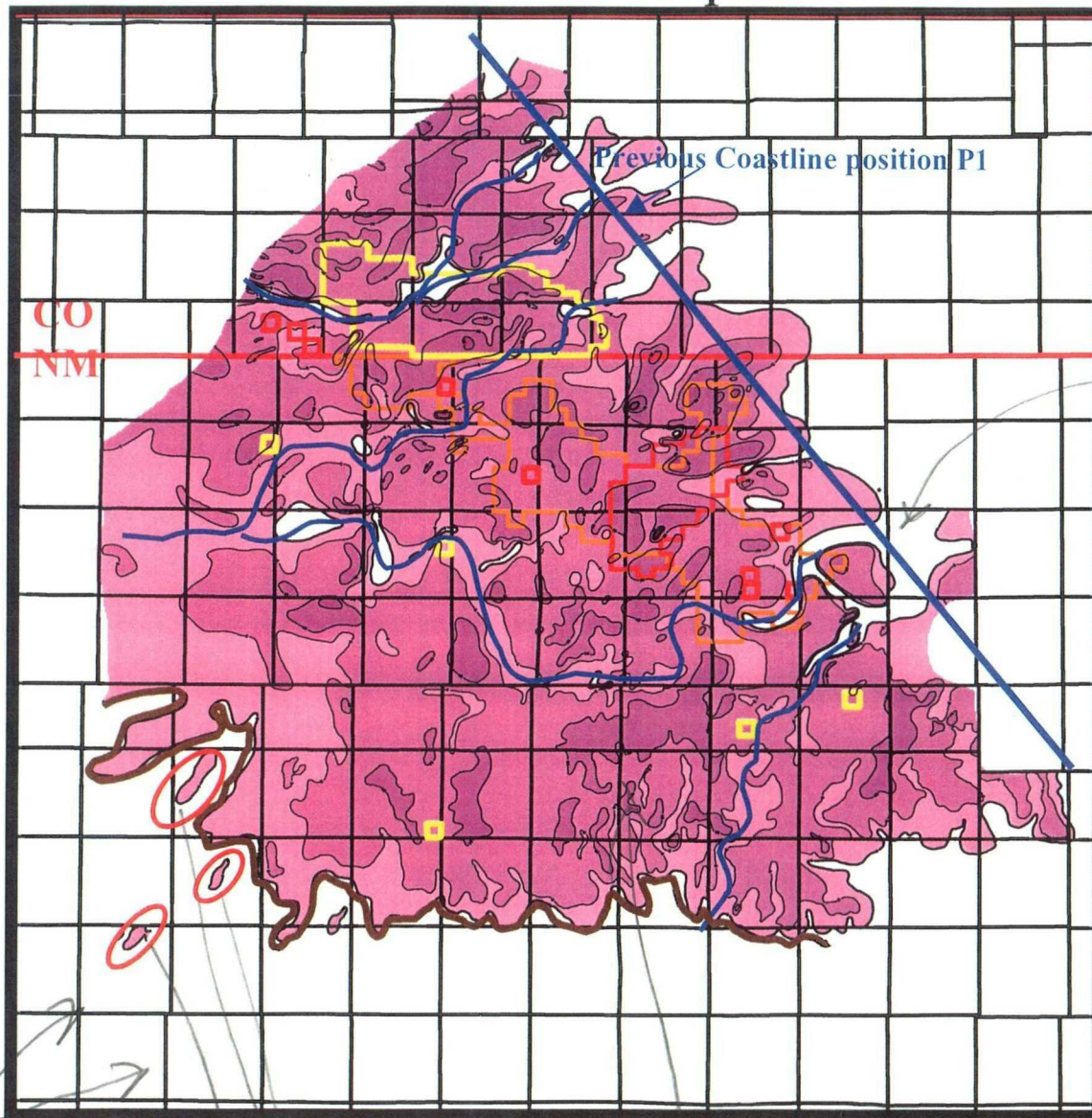
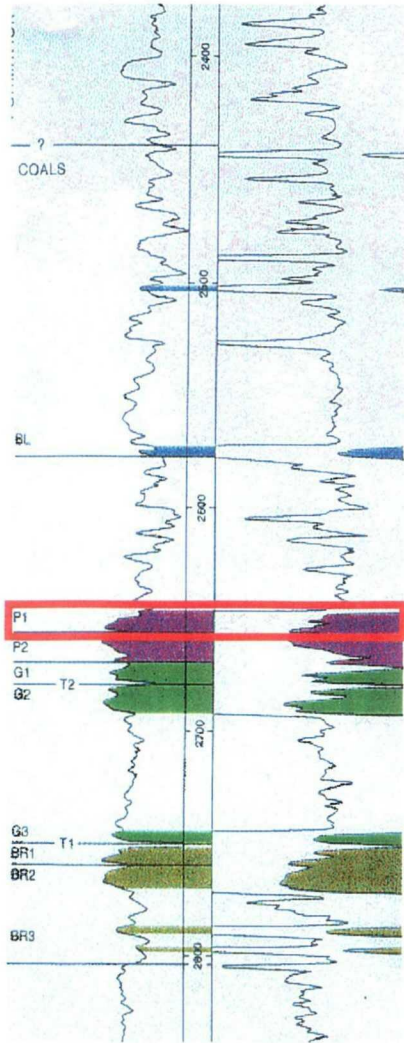
T32N - R11W, CO



HPA 2 MMcfd Line

P1 Thickness Isopach

T32N - R11W, CO



prograde



HPA 2 MMcf/d Line

CI: 5'

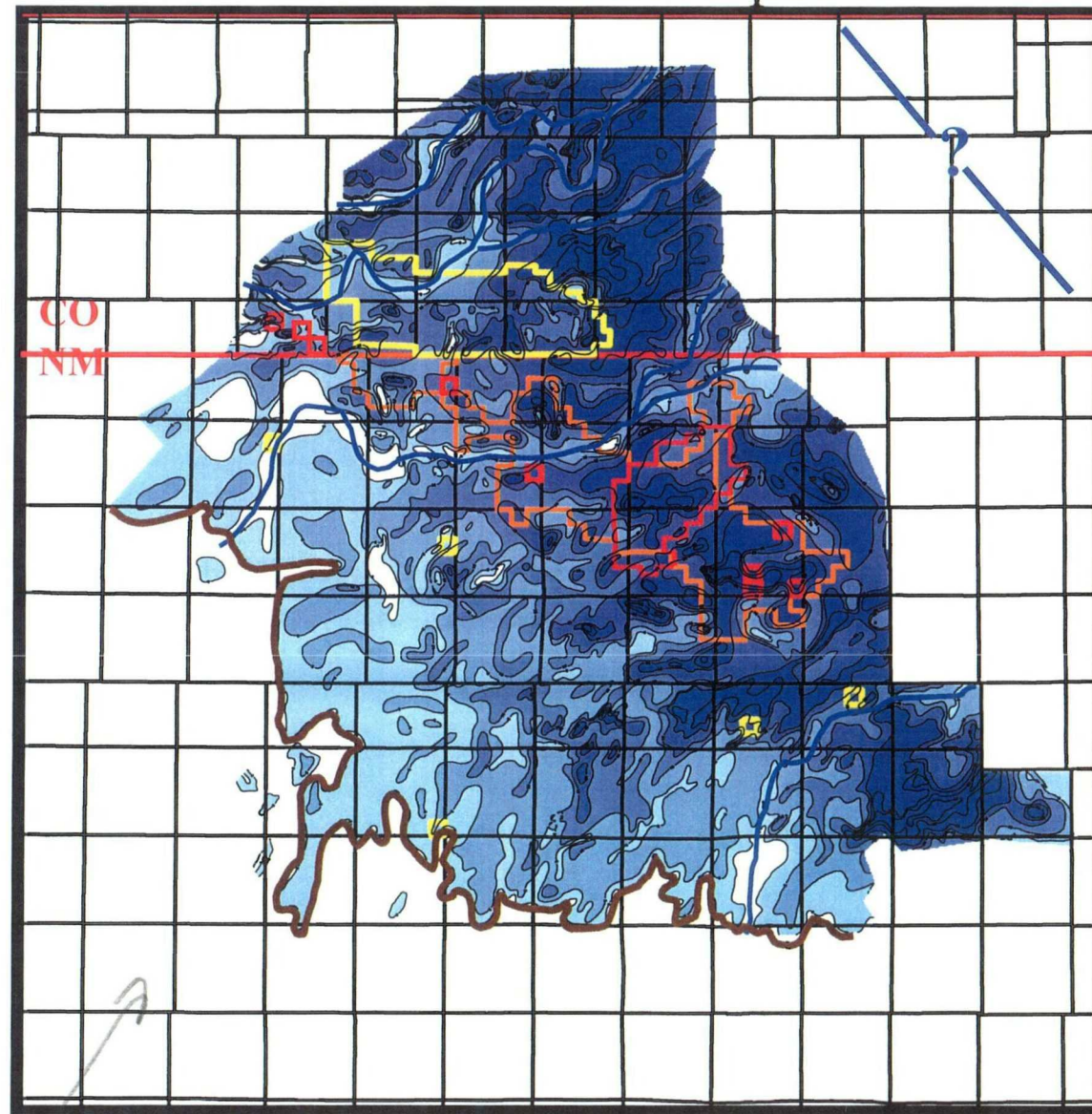
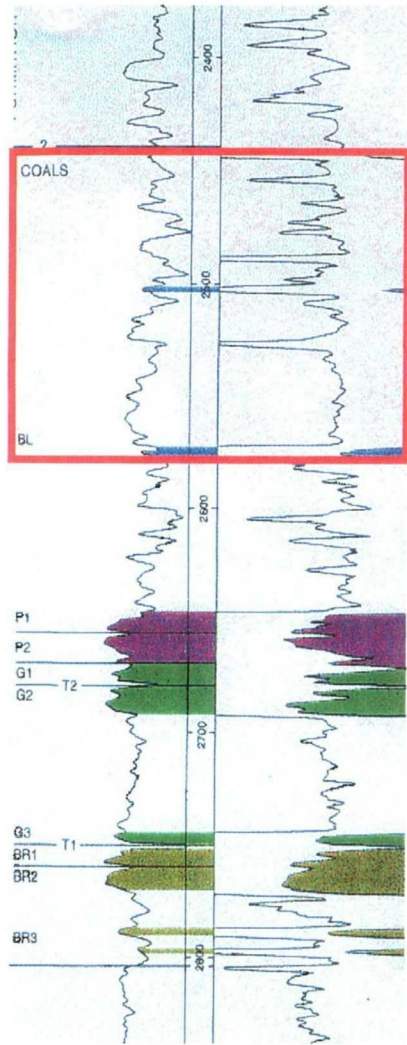
dry land

oxhous

mushy

Blue Thickness Isopach

T32N - R11W, CO



HPA 2 MMcfd Line

CI: 5'

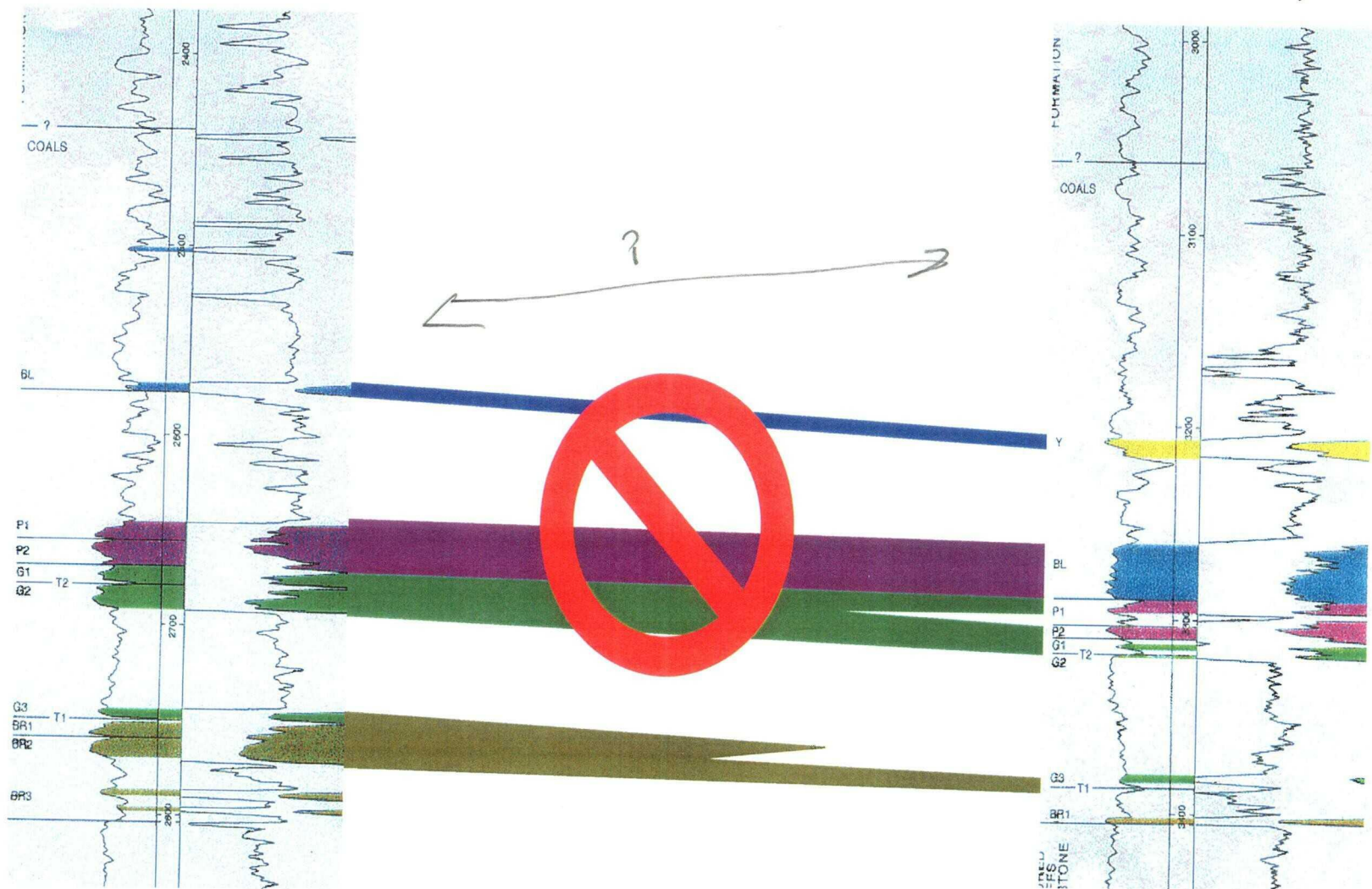
dry land
(poorer coal quality)
(flooding + erosion)

20 mact/d.

T 32N - R11W, CO

poor well

T30N - R06W, NM



Conclusions

- Major coal packages correlatable throughout basin
- Production differences primarily due to coal heterogeneity
- Coal heterogeneity due to diverse depositional environments
- Heterogeneity and discontinuities create multiple barriers
- Large uncertainty in predicting performance based on offsets
- Therefore, non-consent penalty should be higher