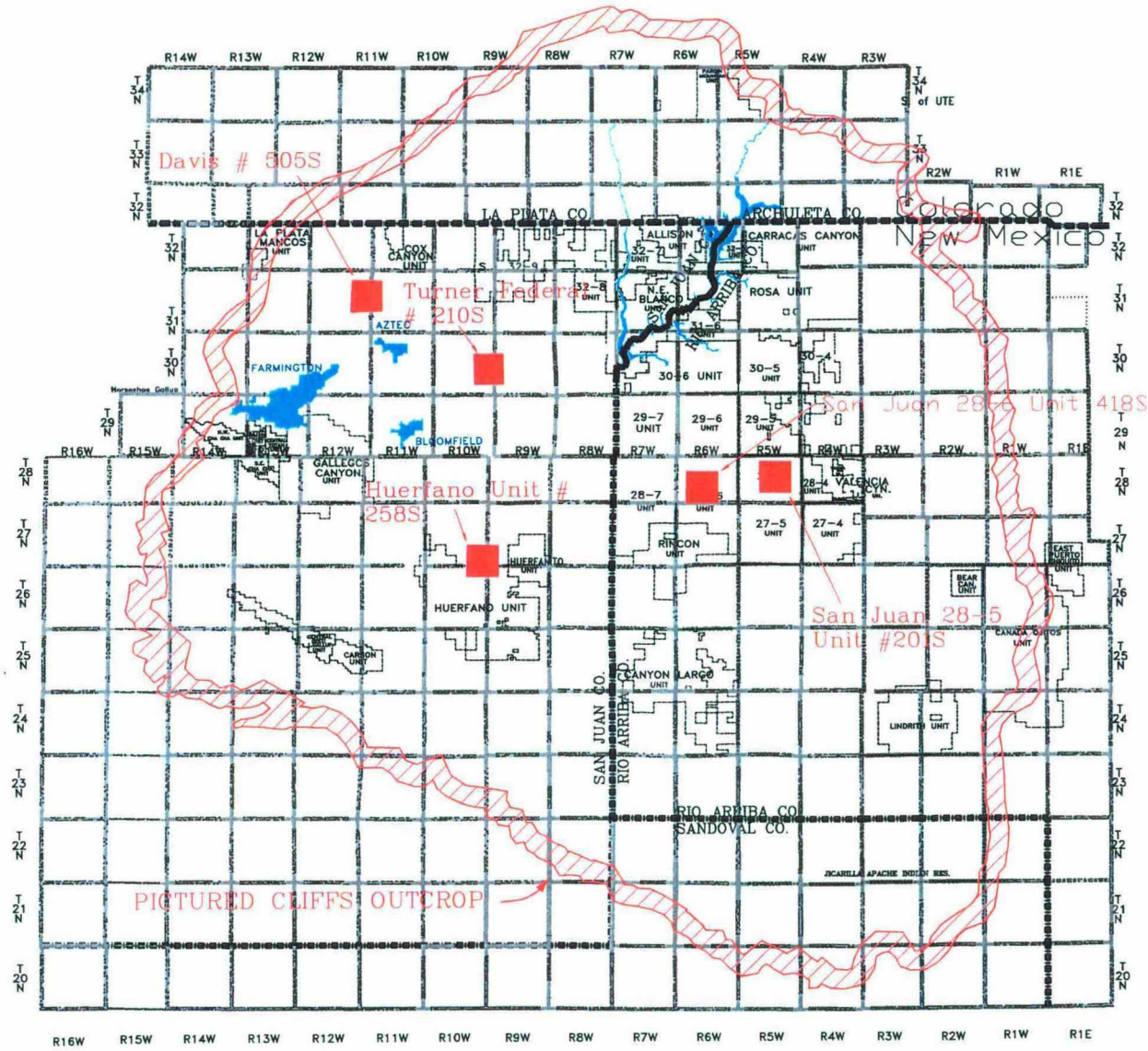
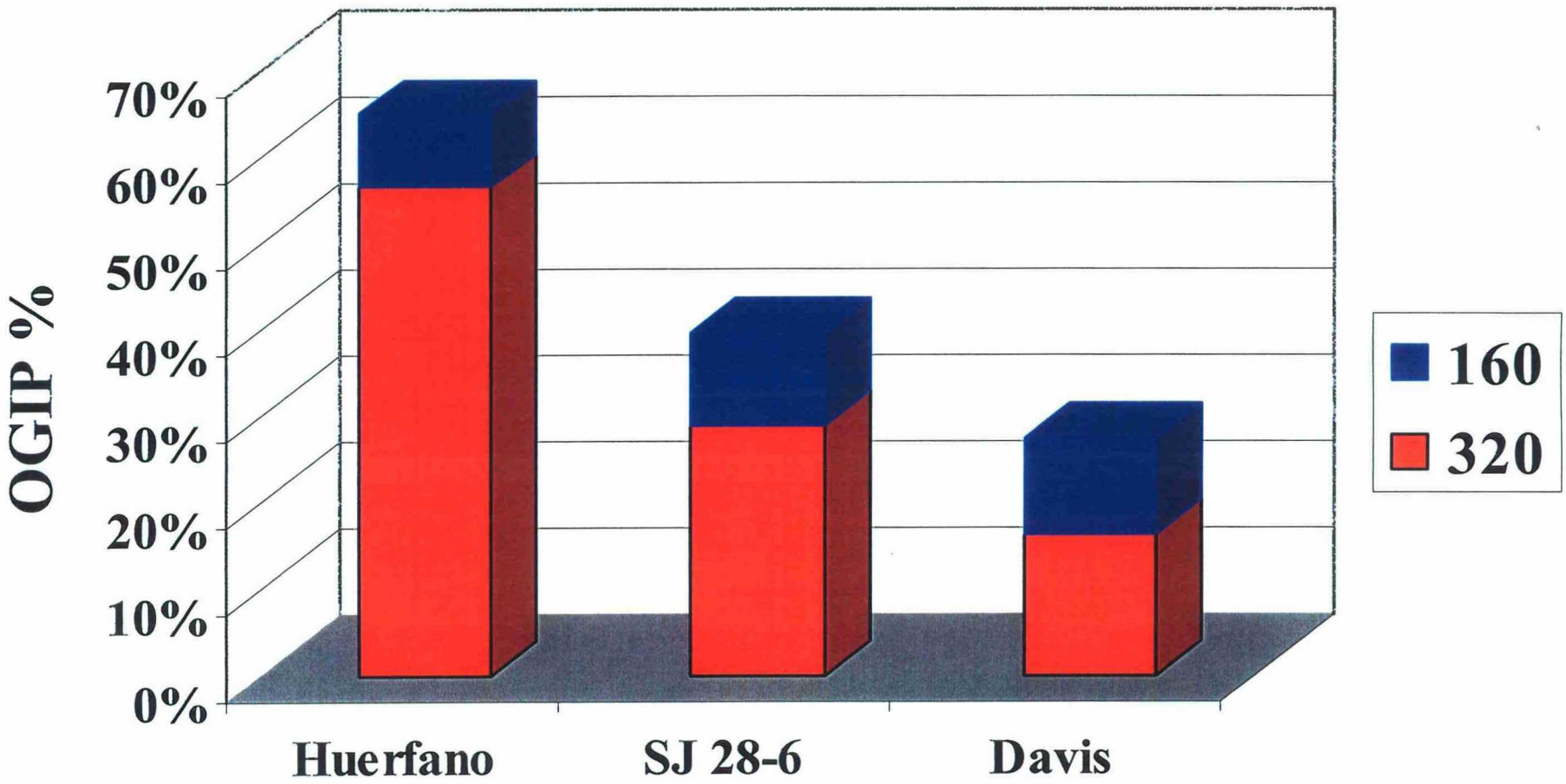
Fruitland Coal Infill
De Novo Hearing
LPA Geology and Engineering

Supplemental Exhibits

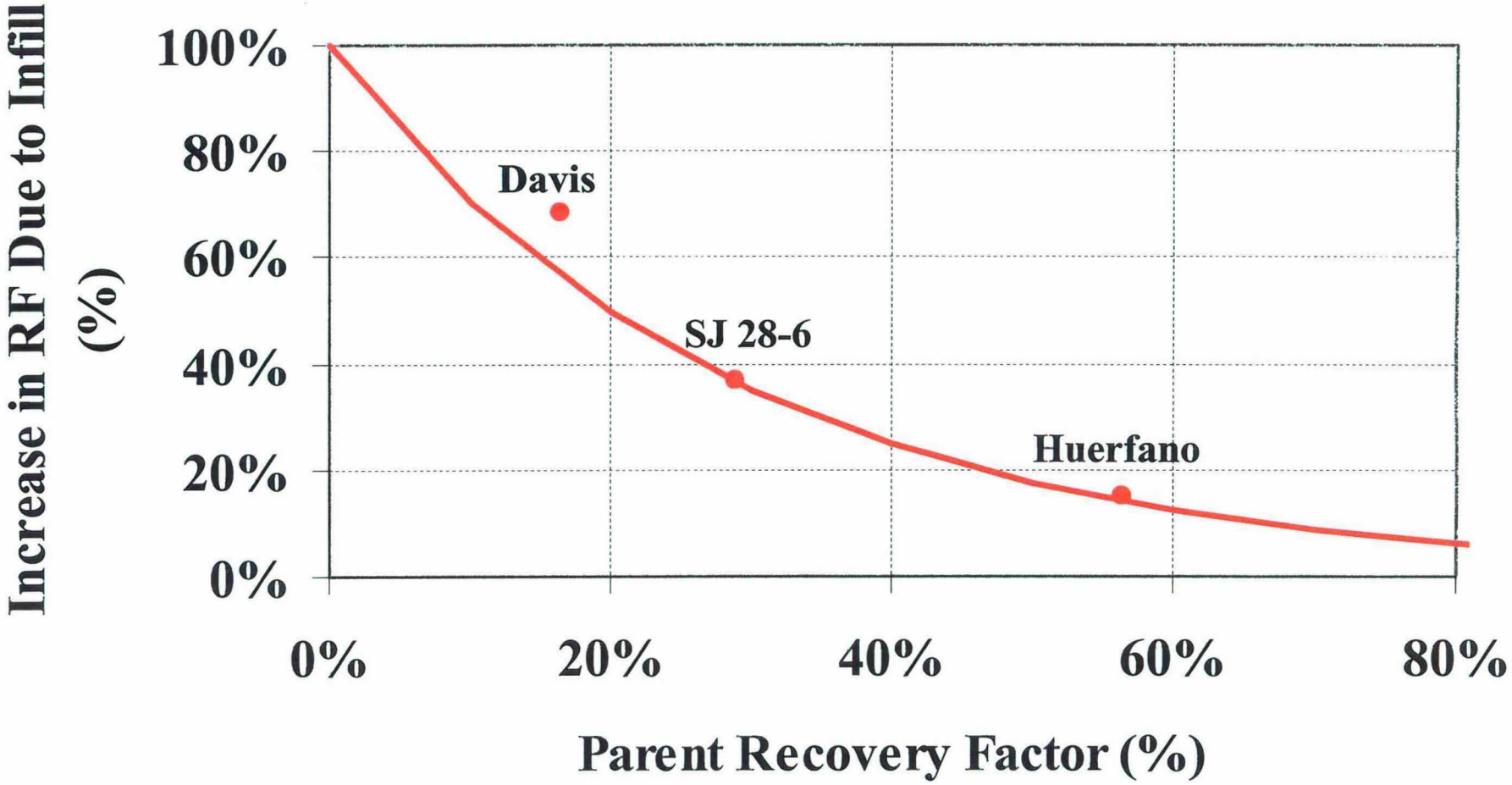
Locator Map


Davis # 505S
Turner Federal # 210S
San Juan 28-6 Unit 418S
Huerfano Unit # 258S
San Juan 28-5 Unit #201S
PICTURED CLIFFS OUTCROP
LA PLATA CO.
ARCHULETA CO.
Colorado
New Mexico
SAN JUAN CO.
RIO ARRIBA CO.
SANDOVAL CO.
FARMINGTON
AZTEC
BLOOMFIELD
HUERFANO UNIT
CANYON LARGO UNIT
ROSA UNIT
JICARILLA APACHE INDIAN RES.

Additional Completions Result in Additional Recovery



Pilot Well Results are Transferable to UPE



Overview of Pilot Well Testing Program

- Drilled 5 pilot wells in geologically diverse areas of UPE
- Collected coal cuttings from multiple (up to 5) coal layers
  - For coal quality (organic/inorganic content)
  - For adsorption isotherms (Gas Content)
- Ran open hole logs over coal intervals
- Collected multi-layer pressures (up to 4)
  - To determine degree of coal layer depletion
- Fracture stimulated and produced wells for up to 180 day test period
  - To compare well performance to offset wells

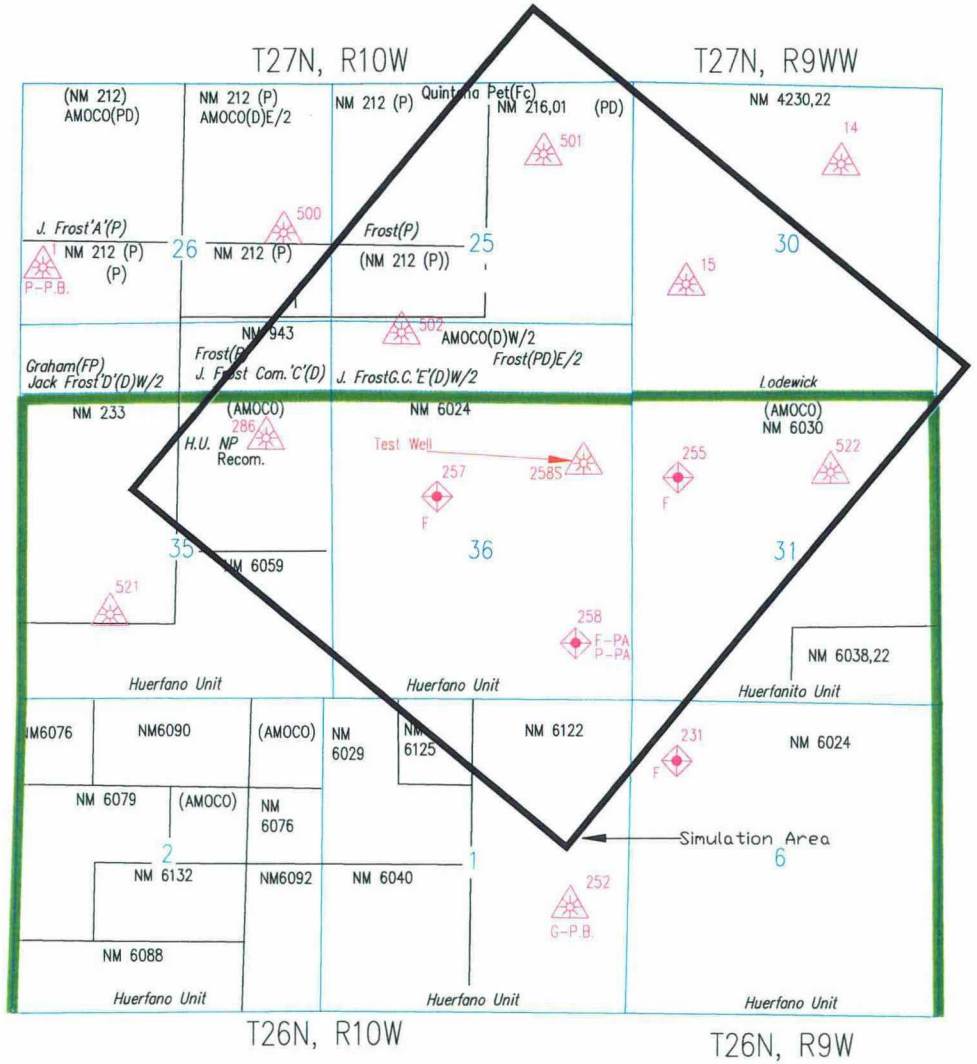
Pilot Testing/Simulation/Economic Results

- Five pilot wells drilled, tested, stimulated and produced
- All five pilot wells contained some coal layers with little depletion (as inferred from pressure data)
- Only 3 pilot areas modeled (Huerfano, Davis, SJ 28-6)
    - SJ 28-5 and Turner Federal areas believed to be analogous to Davis – lack of depletion, poor production of offset wells

Pilot Testing/Simulation/Economic Results: Huerfano Unit #258S Summary

- Sufficient data collected to evaluate pilot area for infill
- Original Gas-In-Place (320-acre) = 3.3 Bcf
- 3 layer pressures collected:
  - Top coal layer shows little depletion, middle layer shows substantial depletion, bottom coal layer pressure (bad data)
- Successful history-match of infill well layer pressures and flowing pressures for 8 offset wells
- Scale-up modeling indicates 160-acre infill yields increase in reserves
- Infill recompletes are economic

Huerfano Unit #258S Pilot Area



FRUITLAND COAL

Approximate Extent of Simulation Grid Boundary

Pilot Testing/Simulation/Economic Results: Huerfano Unit #258S Detail

I. Incorporation of pilot well/offset well test data:

- Pilot well openhole logs used to complete pilot area geologic model – coal-layer thickness and bulk density (16-section)
- Adsorption isotherm data and coal densities used to develop correlation between isotherm parameters and coal density – OGIP calculations
- Pilot well multi-layer pressures used as parameter to history-match
- Pilot well production data used as parameter to history-match
- Pilot offset well type-curve analysis used to constrain composite permeability in simulation model

Pilot Testing/Simulation/Economic Results: Huerfano Unit #258S Detail

II. History-match pilot offset wells (single-well) using (EXCEL®) tank model and type-curve results

- Type-curve estimated composite permeability and skin factor yield reasonable performance predictions
- Constrain reservoir simulation to have composite permeability within range of type-curve estimates

Pilot Testing/Simulation/Economic Results: Huerfano Unit #258S Detail

III. History-match pilot offset wells (multi-well) using ECLIPSE® numerical reservoir simulator

Model Parameters:

- Model grid: 47 x 57 x 3 (3 vertical layers, dual porosity), average gridblock size = 206 ft x 202 ft
- Model area: 2561 acres, incorporating 8 offset producing wells + infill well
- Each vertical layer (3) in model corresponds to coal layer for which pressure measured at infill well

Pilot Testing/Simulation/Economic Results: Huerfano Unit #258S Detail

III. History-match pilot offset wells (multi-well) using ECLIPSE® numerical reservoir simulator (cont'd)

Reservoir Parameters:

- Coal layer OGIP calculated from Isotherm vs. Coal Density Relationship, using average density for layer
- Coal layer permeability calculated from assumed Permeability vs. Coal Density relationship, using average density for Layer
- Other reservoir properties obtained from core data and literature values

Pilot Testing/Simulation/Economic Results: Huerfano Unit #258S Detail

III. History-match pilot offset wells (multi-well) using ECLIPSE® numerical reservoir simulator (cont'd)

History-Matching:

- Simulation driven by historical monthly gas rate (offset wells)
- Assumed single-phase flow
- Permeability vs. Coal Density relationship adjusted to match pressures at infill well location, and flowing pressures of offset wells
- Some skin factor adjustment also required

Pilot Testing/Simulation/Economic Results: Huerfano Unit #258S Detail

IV. History-match infill well production using ECLIPSE®

- Simulation driven by scheduled flowing pressure (estimated from measured casing pressure)
- Skin factor adjusted within range of offset wells

Pilot Testing/Simulation/Economic Results: Huerfano Unit #258S Detail

V. Use scale-up models (16-section) to forecast infill well incremental and accelerated reserves

Model Parameters:

- Model grid: 40 x 40 x 3 (3 vertical layers, dual porosity)
- Model area: 16 Sections (10240 acres)
- Parent (32 wells) and Infill (32 wells) follow regular pattern

Pilot Testing/Simulation/Economic Results: Huerfano Unit #258S Detail

V. Use scale-up models (16-section) to forecast infill well incremental and accelerated reserves (cont'd)

Reservoir Parameters:

- Average coal layer thickness = history-match model
- Coal layer permeability = history-match model
- All other reservoir properties = history-match model

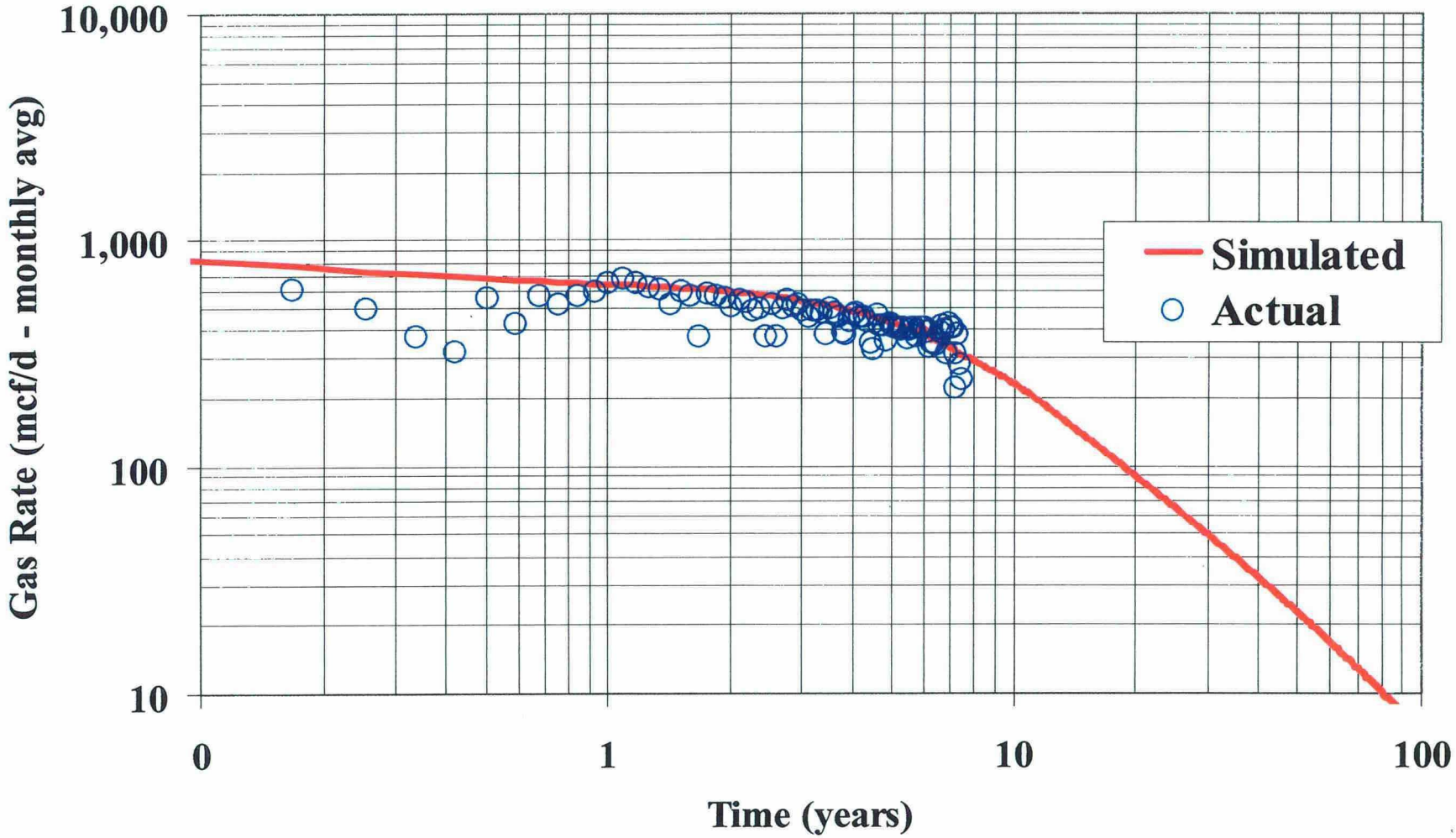
Pilot Testing/Simulation/Economic Results: Huerfano Unit #258S Detail

V. Use scale-up models (16-section) to forecast infill well incremental and accelerated reserves (cont'd)

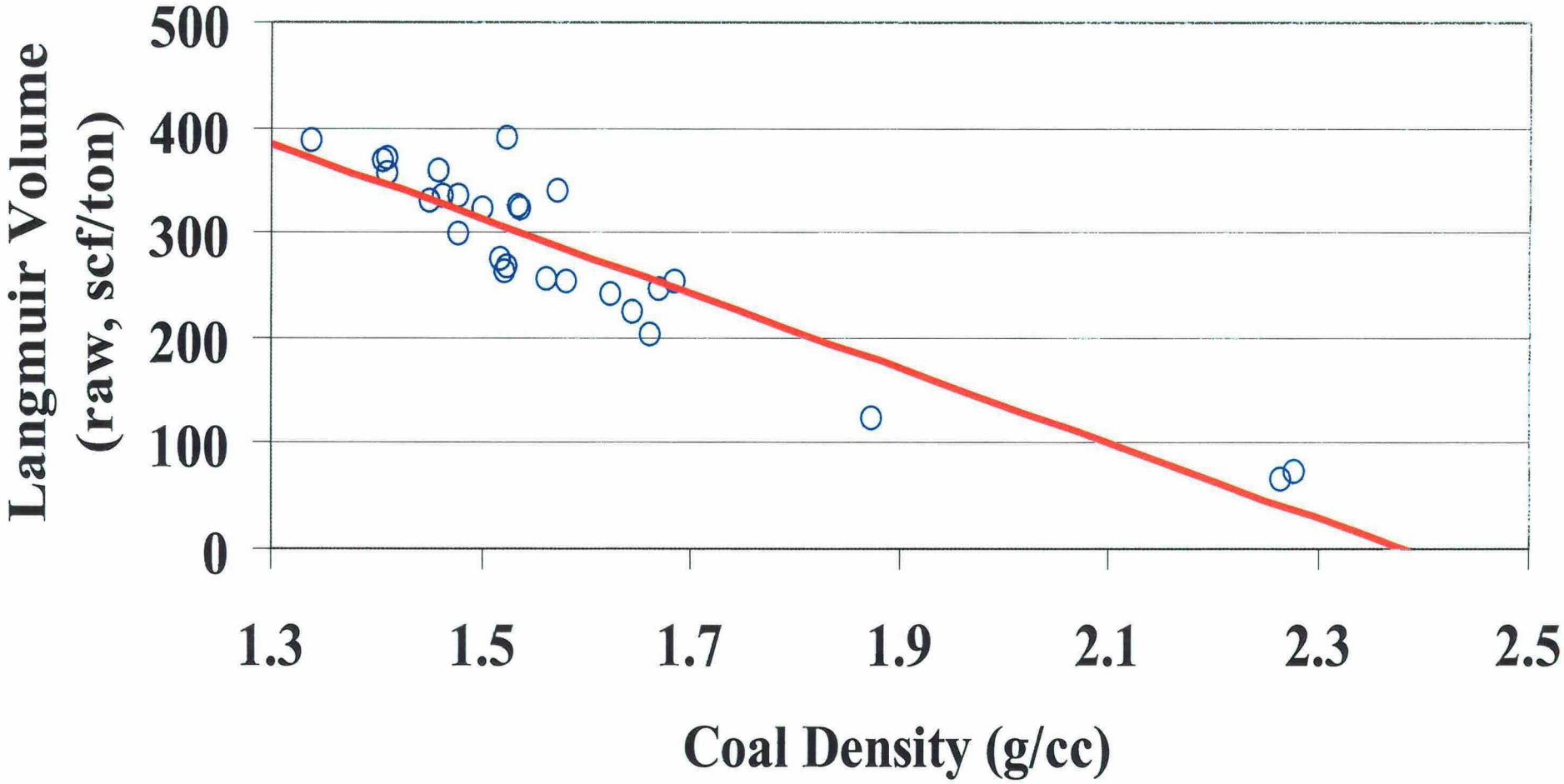
Parent (320-acre) and Infill (160-acre) Forecasting:

- Initial layer pressures = Huerfano Unit #258S (infill well) pressures at end of history-match
- Parent wells (no infill) forecast out to year 2033
- Infill + parent wells forecast out to year 2033, with infill wells starting in year 2003
- Simulation driven by flowing bottomhole pressure

Huerfano Unit NP #255 Tank Model Match

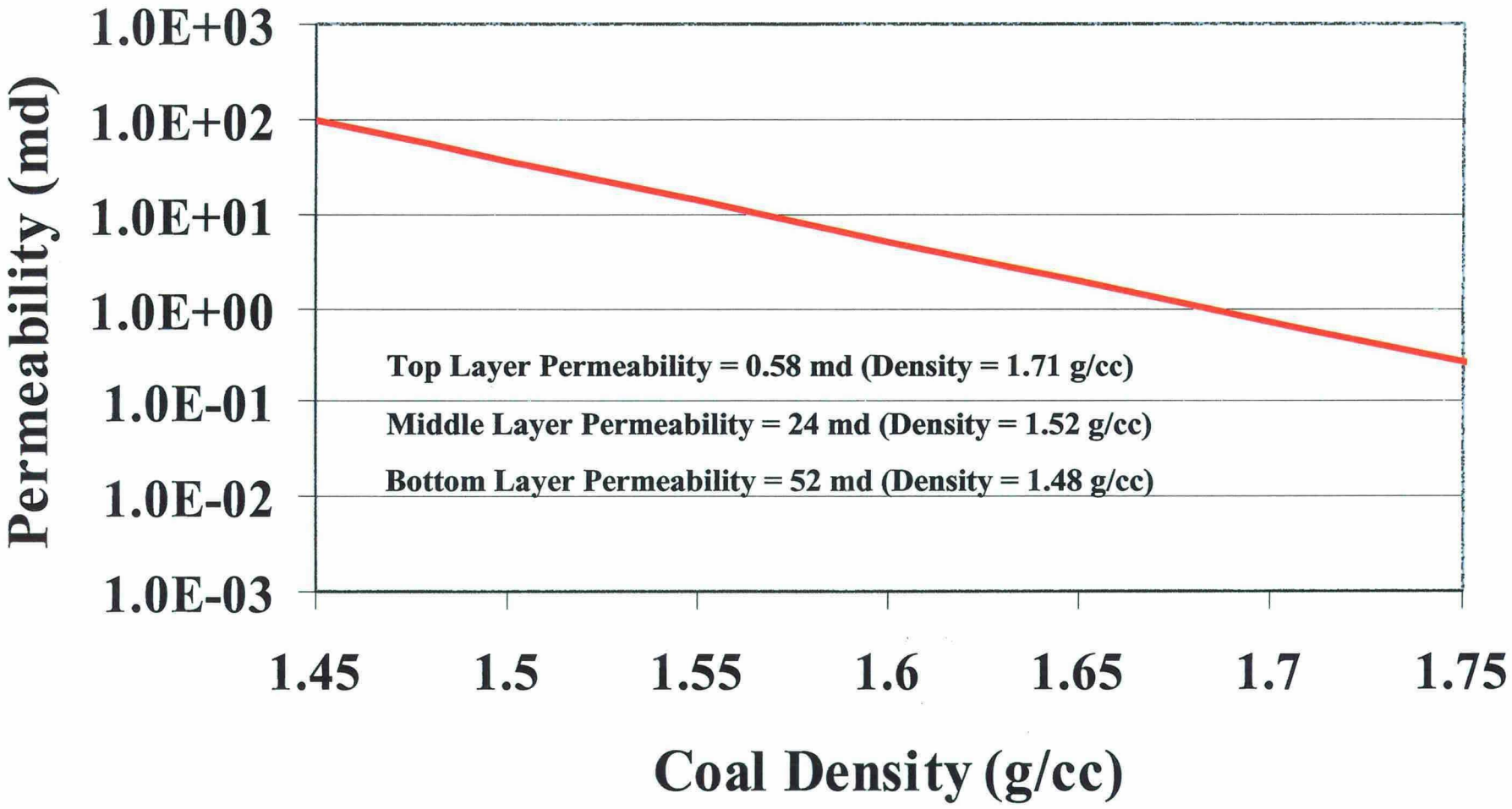


Isotherm vs. Coal Density Relationship



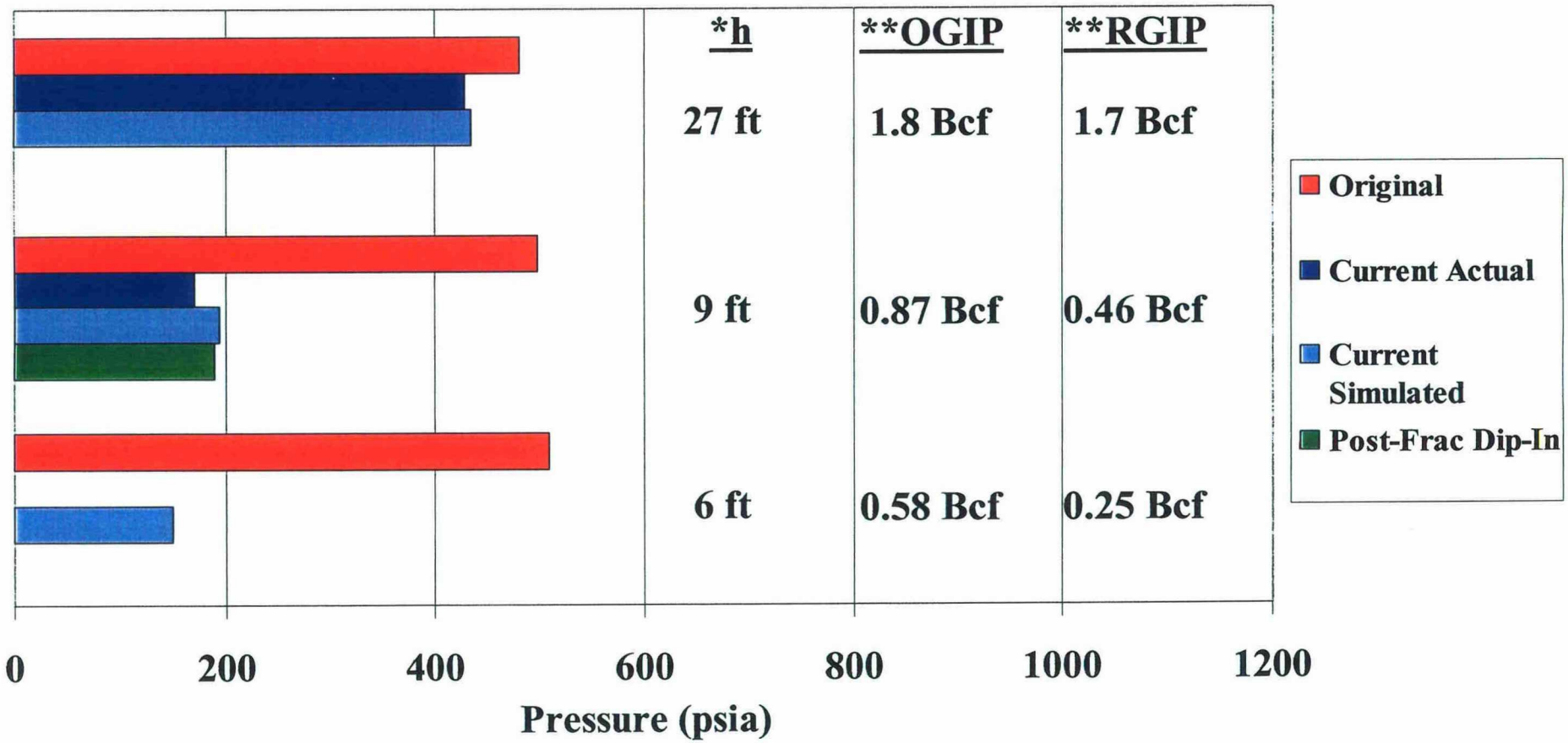
* Average Original Gas-In-Place per 320-acre ~ 3.3 Bcf

Coal Permeability vs. Coal Density Relationship



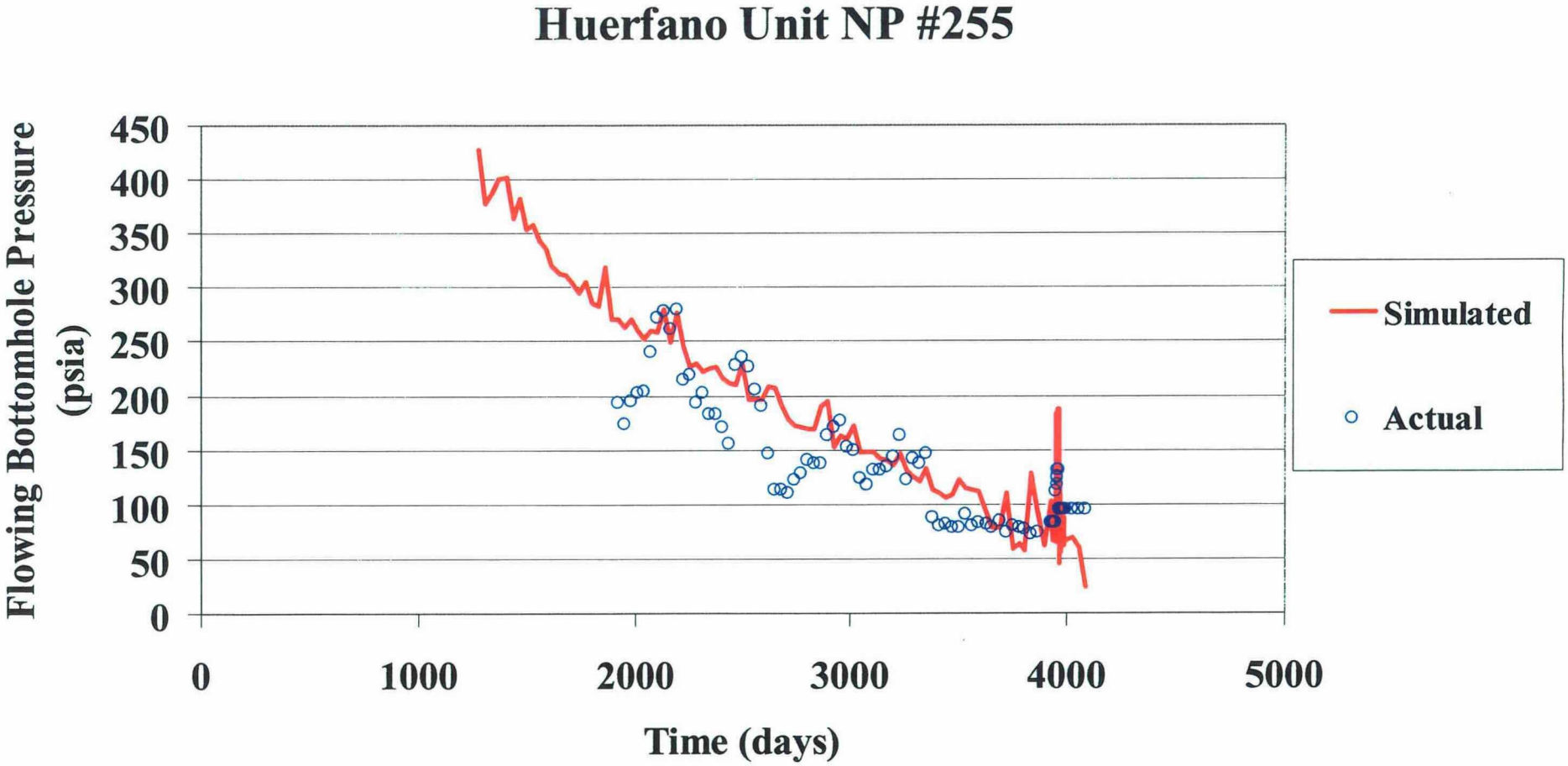
Infill Well Layer Pressure Match

Huerfano Unit #258S Layer Pressures

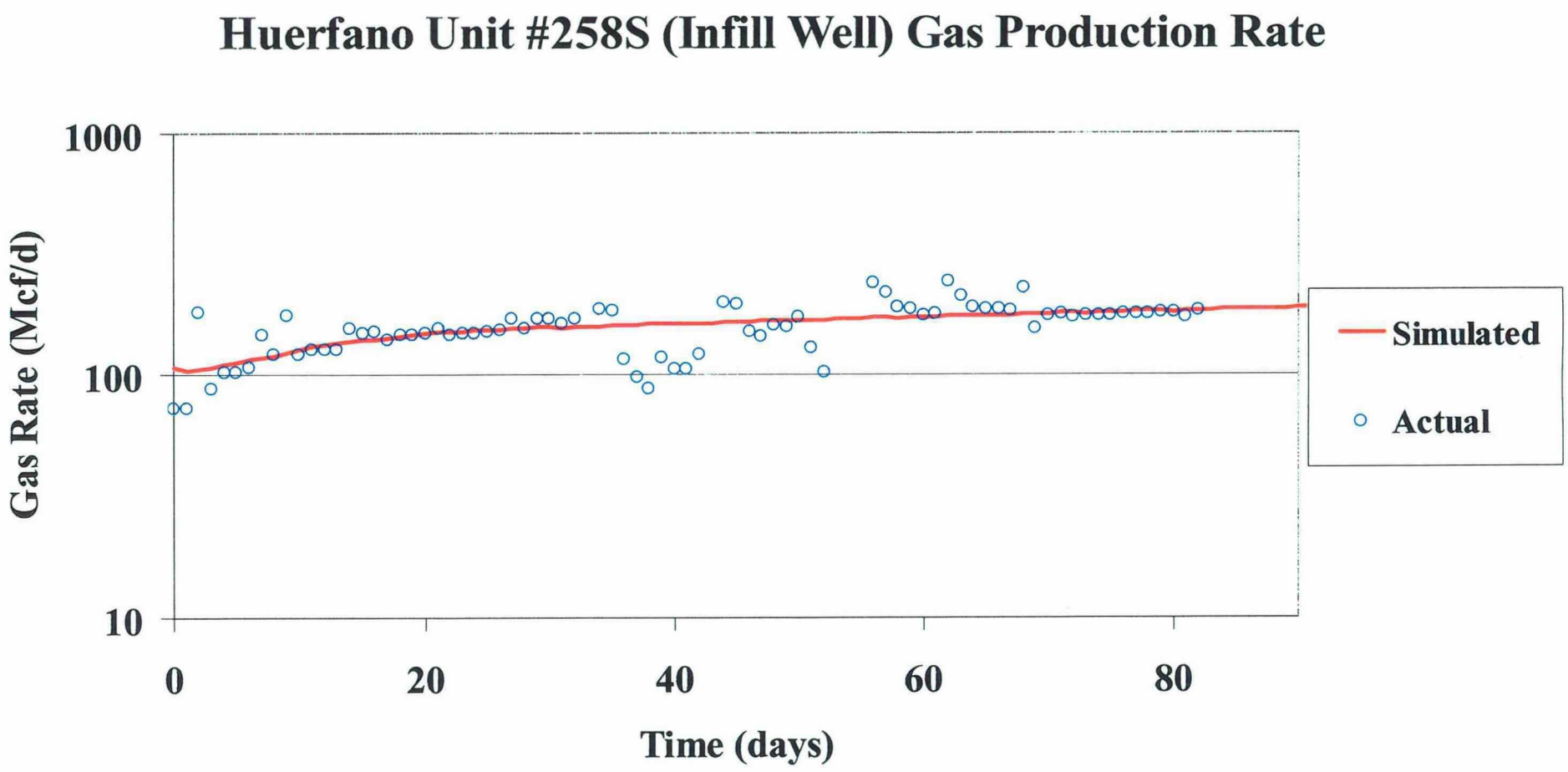


* Thickness At Infill Well **Model Average per 320

Offset Well Flowing Pressure Match



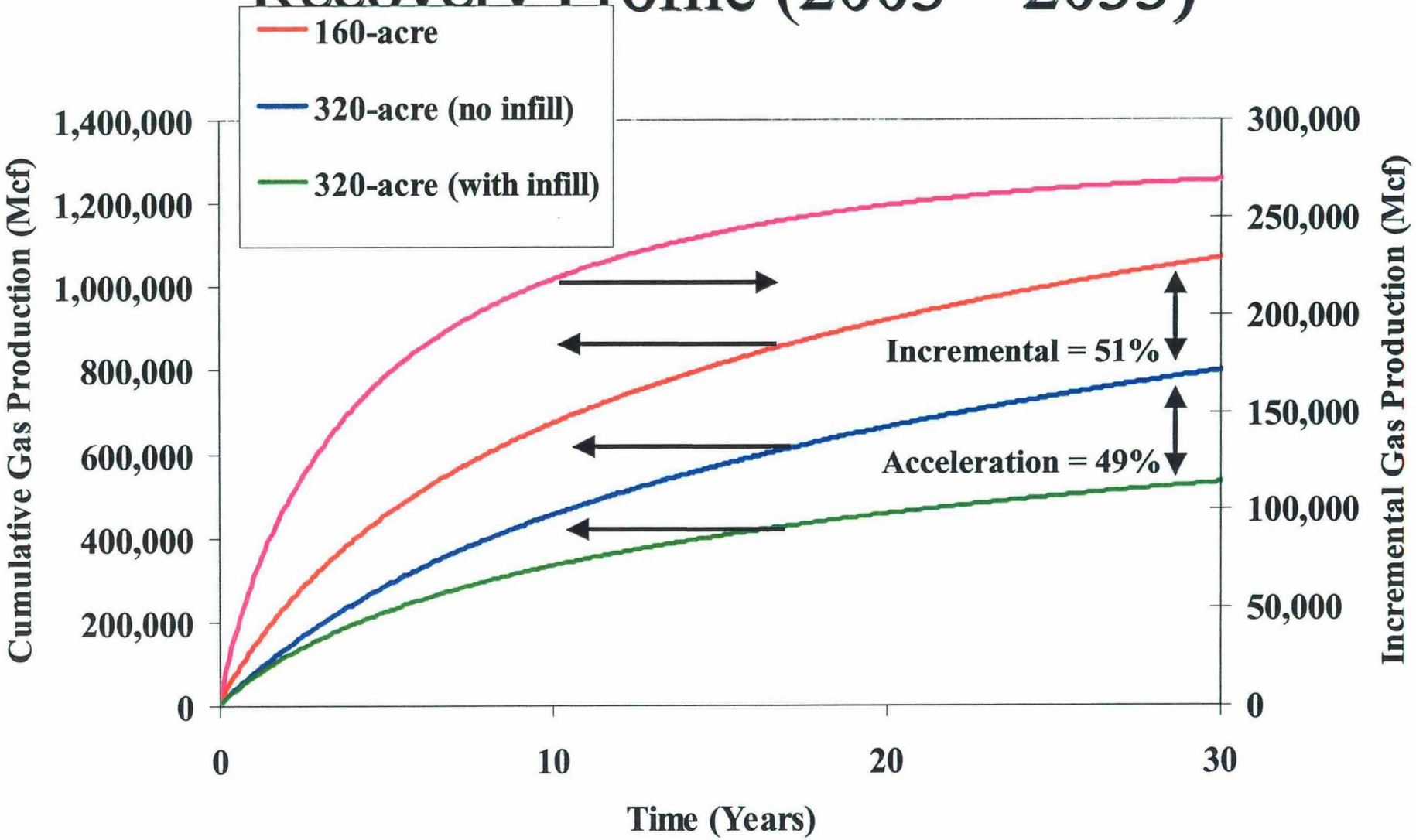
Infill Well Production Match



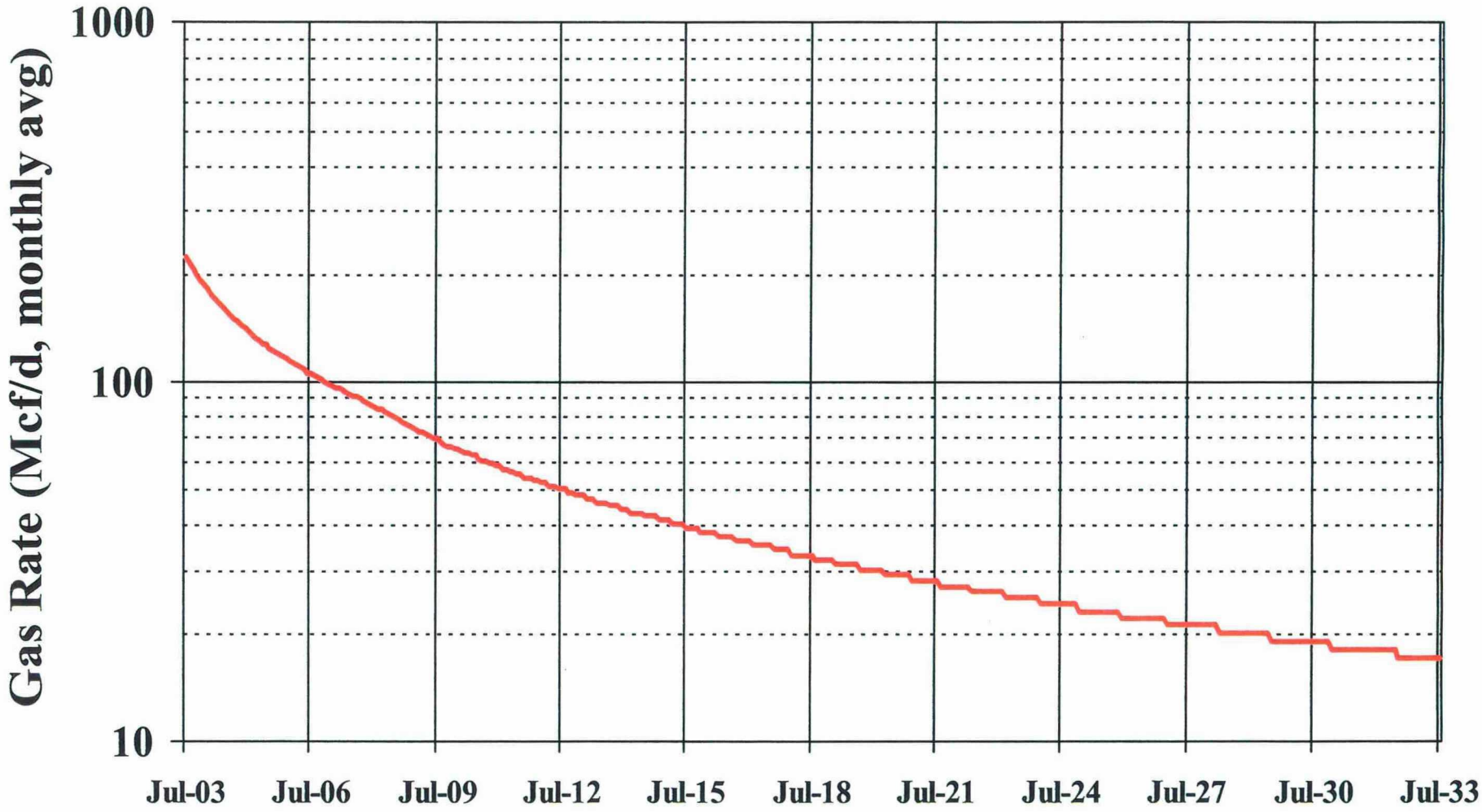
*Corrected to 24 hour flow rate

Huerfano Area Increased Density

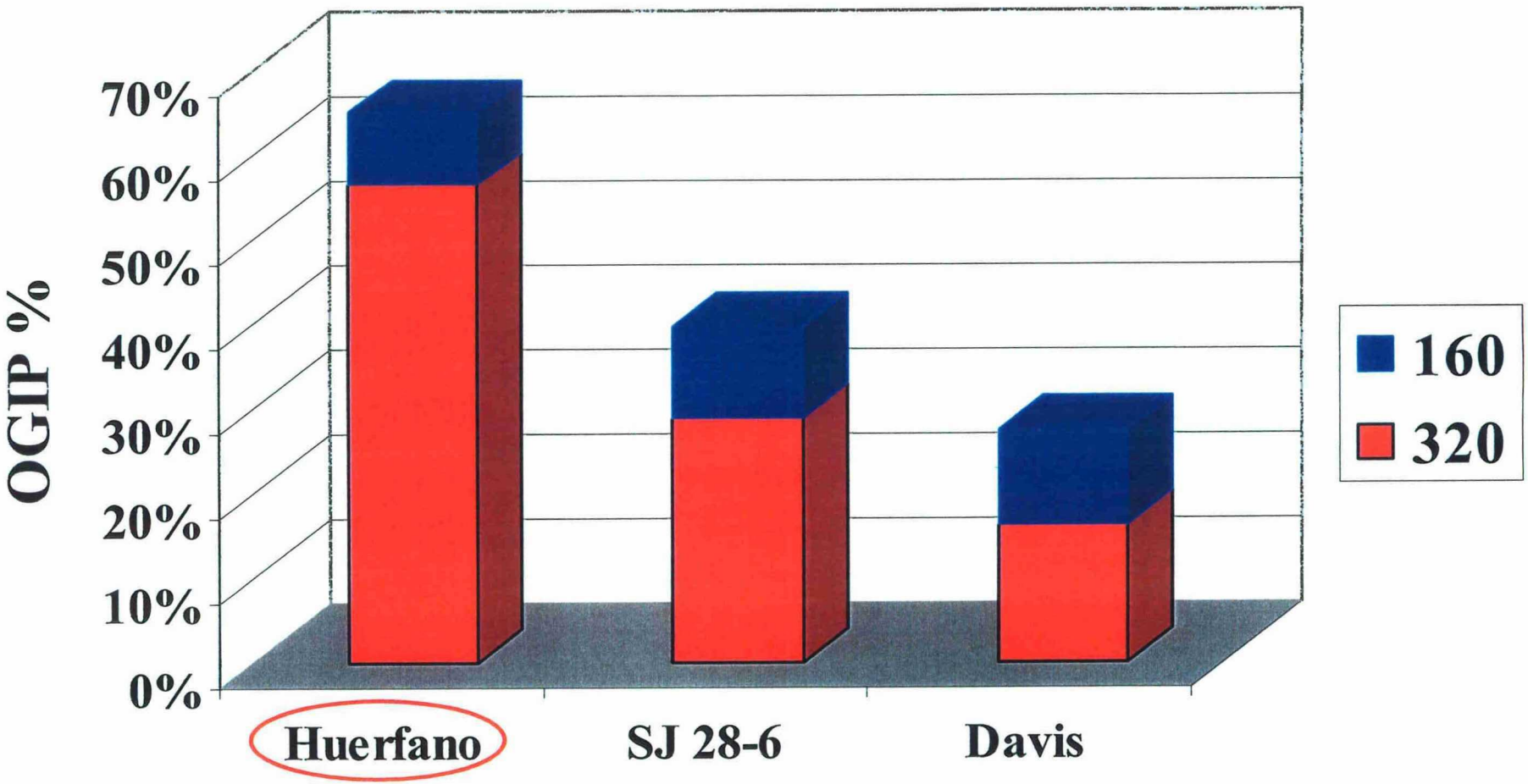
Recovery Profile (2003 – 2033)



Huerfano Area Infill Well Projection



Additional Completions Result in Additional Recovery



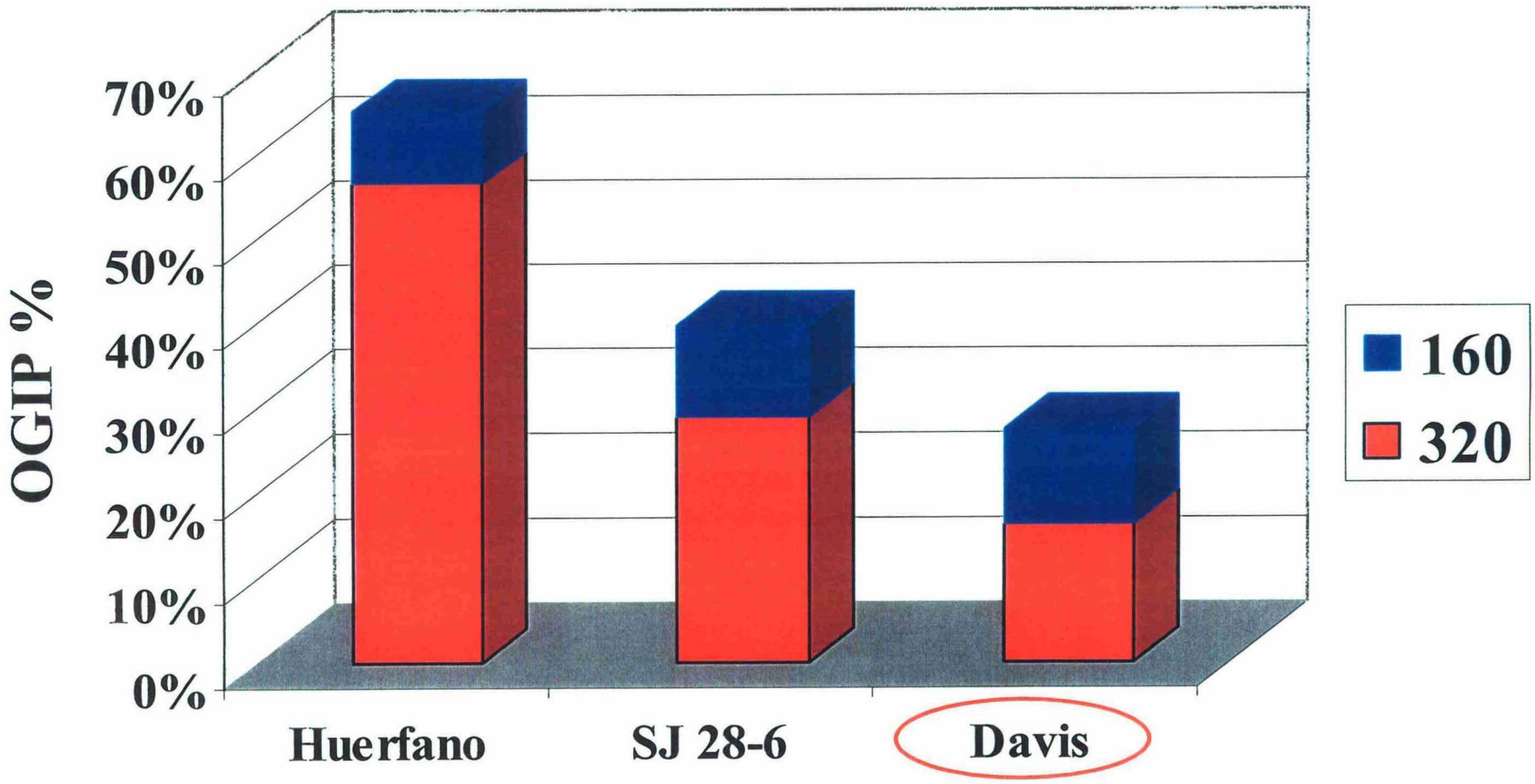
Infill Recompletes Are Economic

- After-tax Present Value = $13.0 M (Disc. @ 10%)
- Primary economic inputs/assumptions:
  - Incremental economics (160-acre case – 320-acre case)
  - Gas price = $3.25/mmbtu (NYMEX)
  - Operating costs = $1060/well/month
  - Capital costs = $200 M
  - GWI/NRI = 100/84

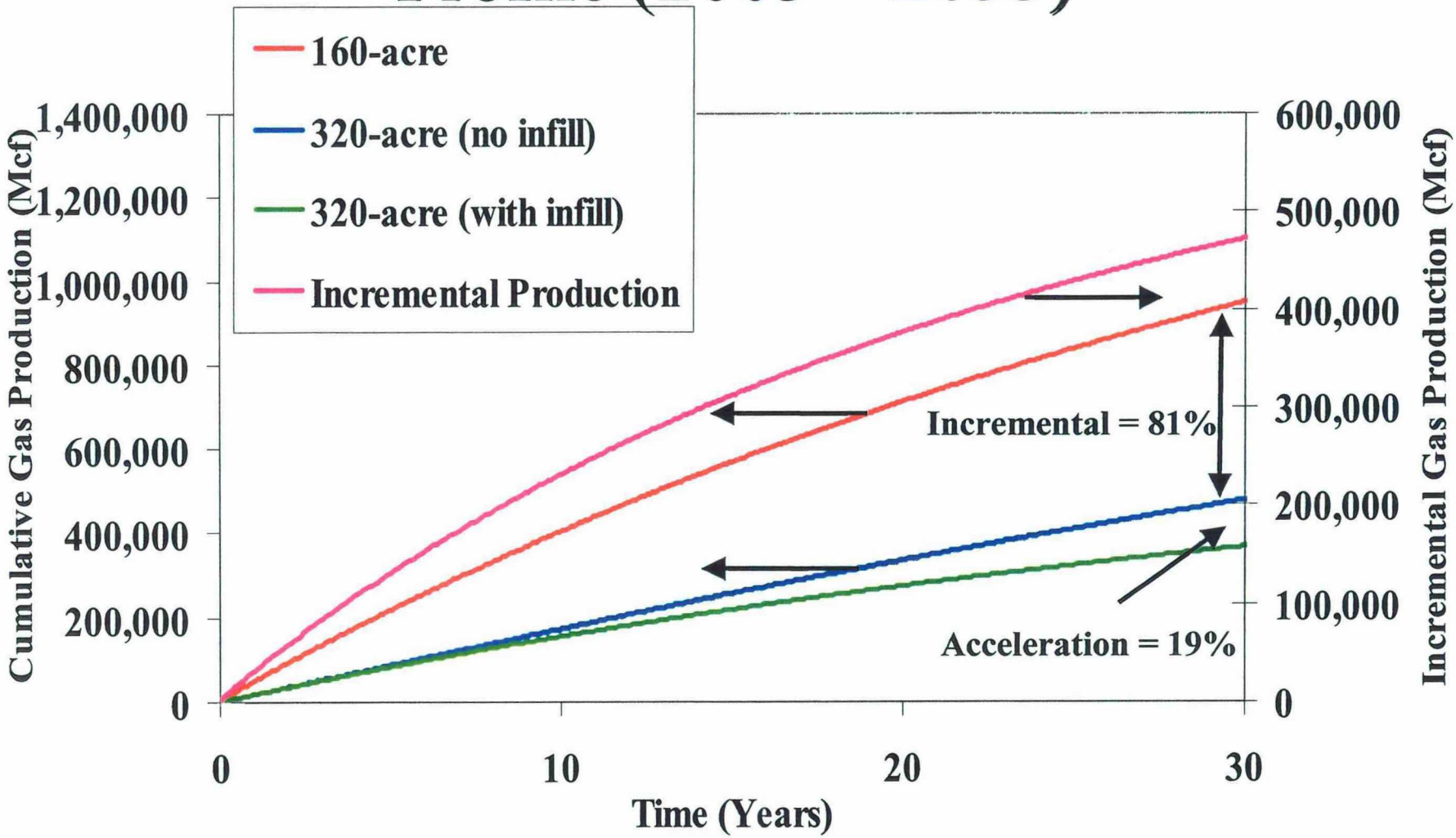
Pilot Testing/Simulation/Economic Results: Davis #505S Summary

- Sufficient data collected to evaluate pilot area for infill
- Original Gas-In-Place (320-acre) = 4.3 Bcf
- 4 layer pressures collected:
  - All coal layers show little depletion
- 5-layer, dual porosity simulation model used
- Successful history-match of infill well layer pressures and flowing pressures for 4 offset wells
- Scale-up modeling indicates 160-acre infill yields increase in reserves
- Infill recompletes are economic

Additional Completions Result in Additional Recovery



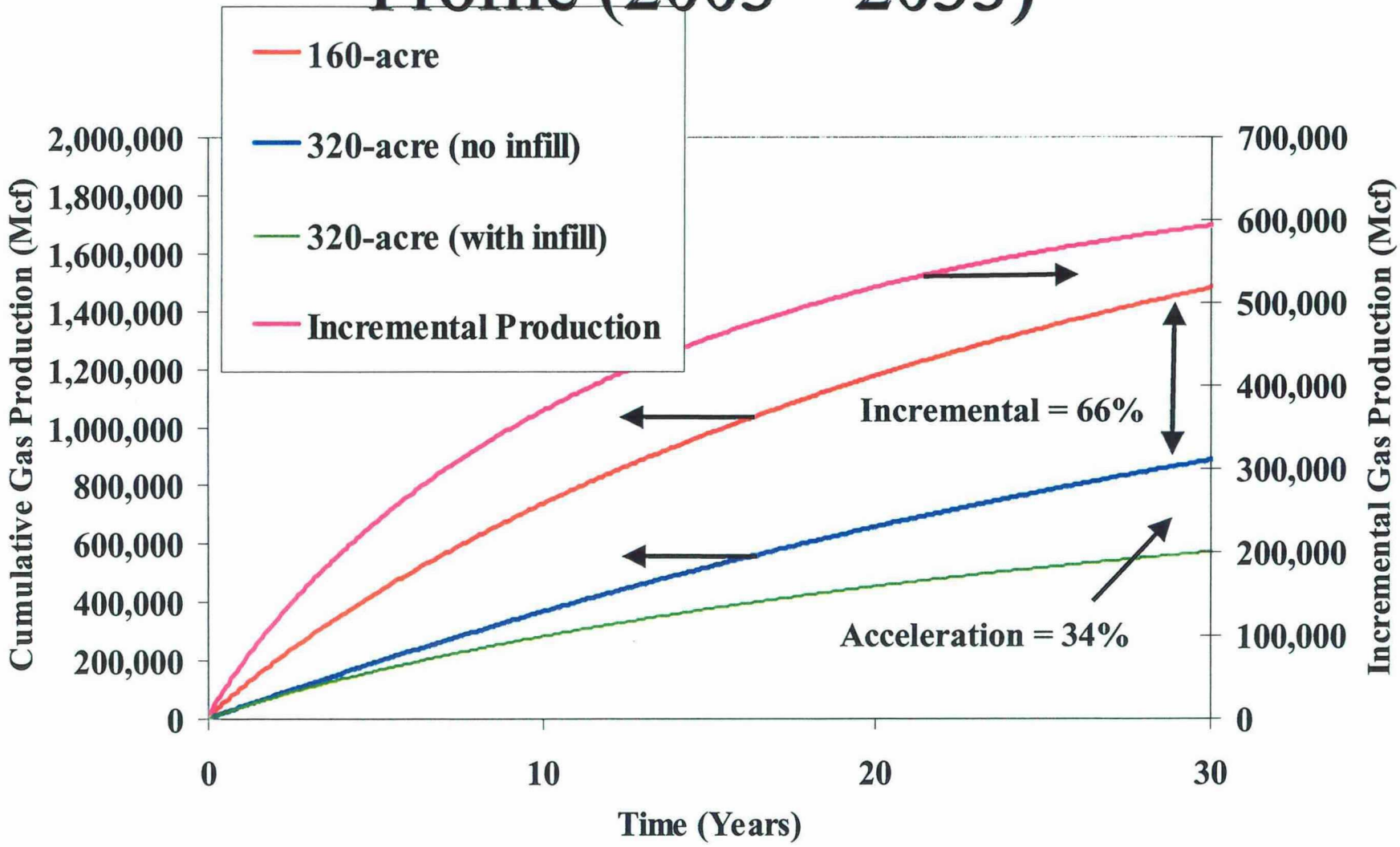
Davis Area Increased Density Recovery Profile (2003 – 2033)



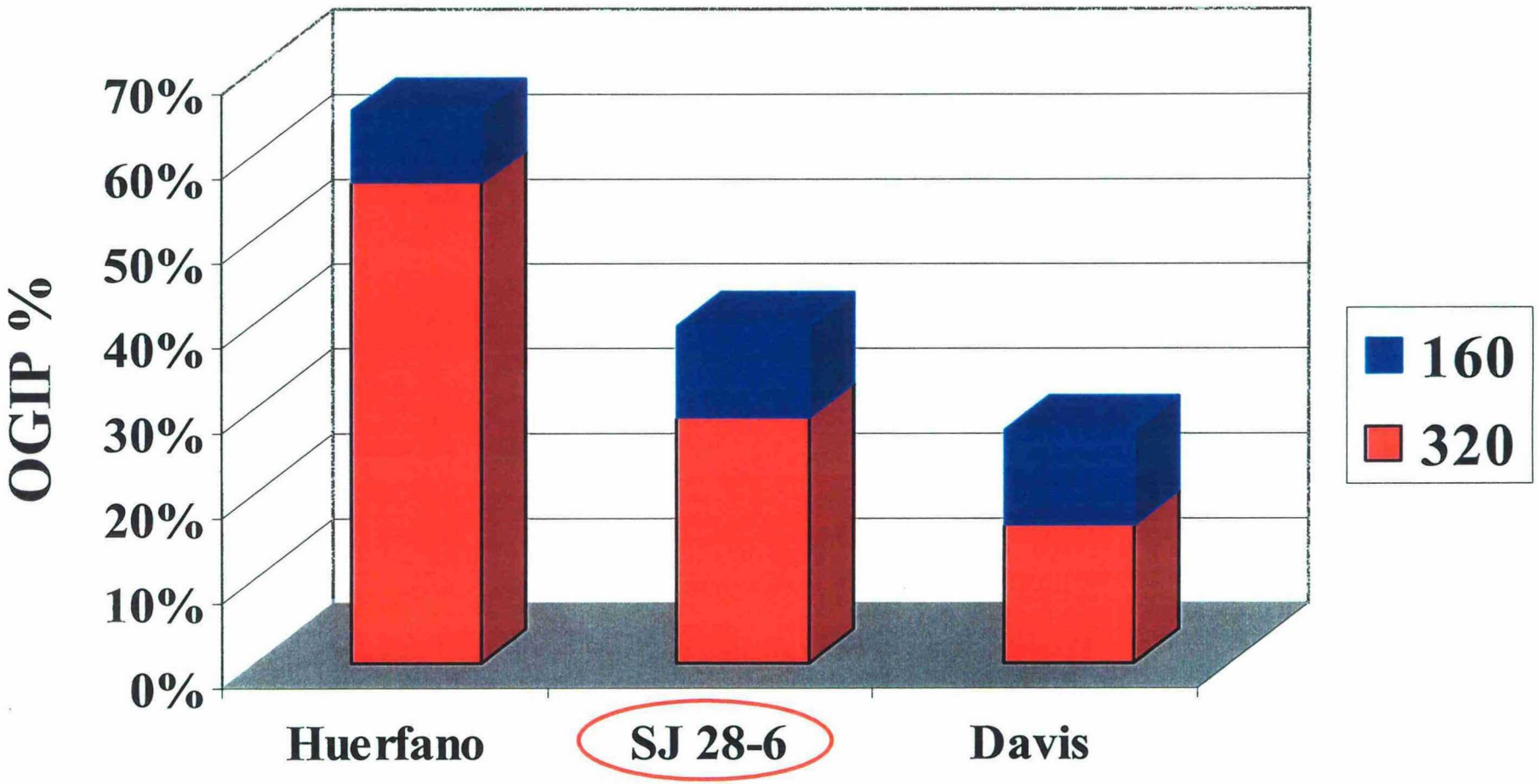
Pilot Testing/Simulation/Economic Results: SJ 28-6 Unit #418S Summary

- Sufficient data collected to evaluate pilot area for infill
- Original Gas-In-Place (320-acre) = 5.6 Bcf
- 4 layer pressures collected:
  - Top coal layer shows little depletion, other 3 layers show substantial depletion
- 13-layer, dual porosity simulation model used
- Successful history-match of infill well layer pressures and flowing pressures for 4 offset wells
- Scale-up modeling indicates 160-acre infill yields increase in reserves
- Infill recompletes are economic

SJ 28-6 Area Increased Density Recovery Profile (2003 – 2033)



Additional Completions Result in Additional Recovery



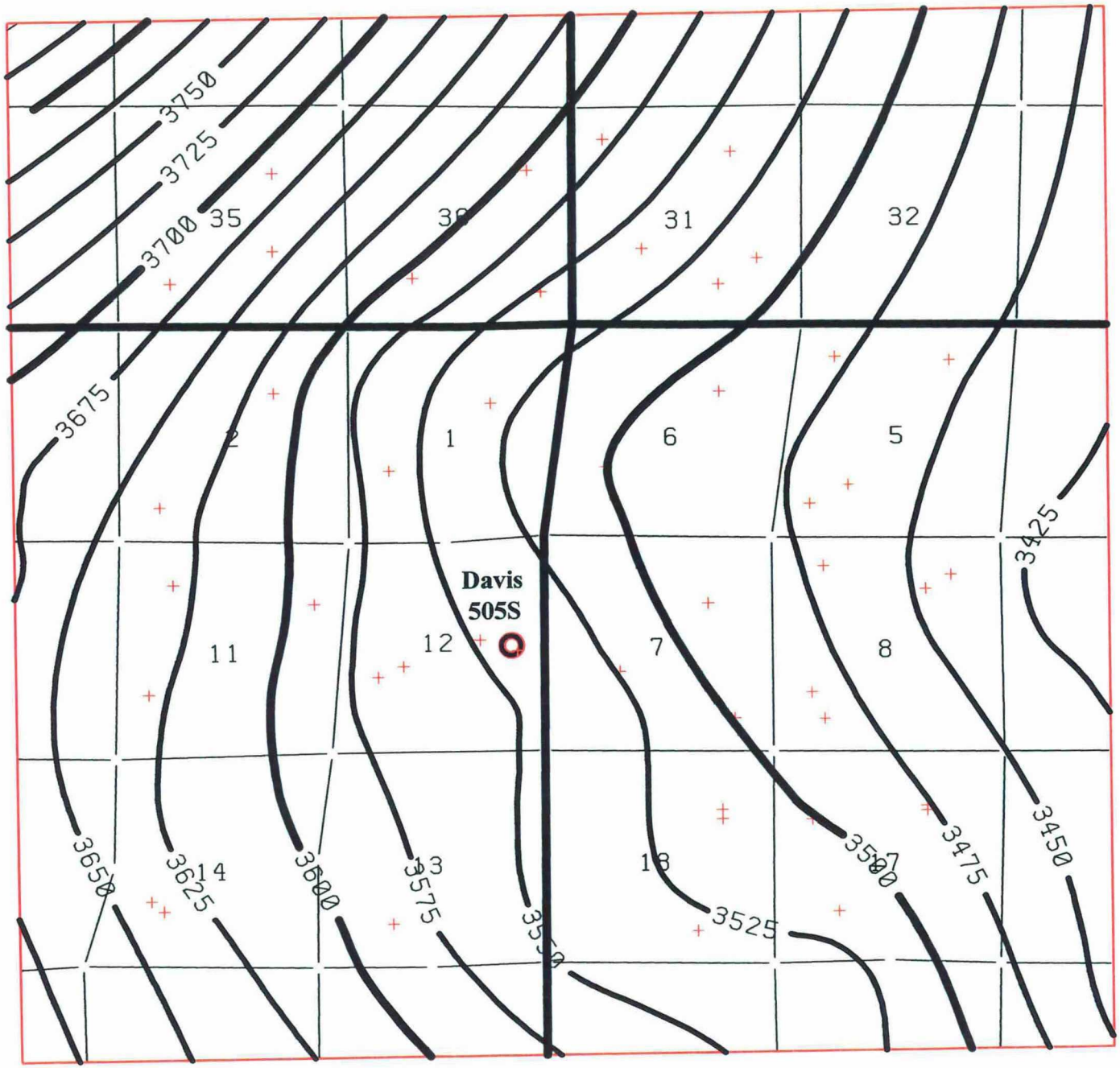
Infill Recompletes Are Economic

- After-tax Present Value = $173.7 M (Disc. @ 10%)
- Primary economic inputs/assumptions:
  - Incremental economics (160-acre case – 320-acre case)
  - Gas price = $3.25/mmbtu (NYMEX)
  - Operating costs = $1060/well/month
  - Capital costs = $200 M
  - GWI/NRI = 100/84

Transfer of Pilot Well Results to UPE

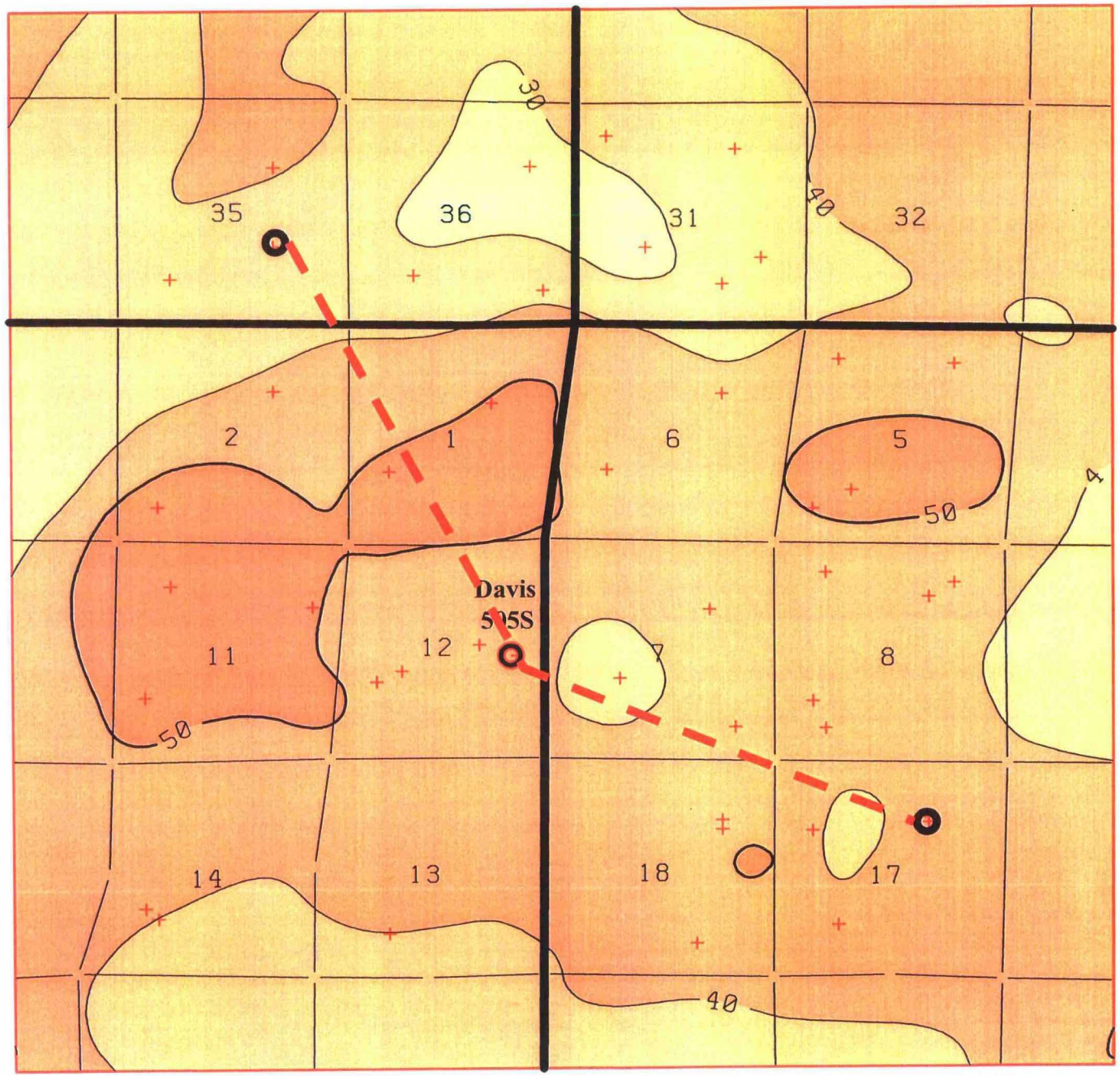
- Sufficient data collected to extrapolate results of pilot areas to the UPE
- Utilize relationship between simulation-derived recovery factor increase (160 vs. 320) and parent recovery factor
- Significant pool-wide (UPE portion) incremental recoveries expected with additional completions

T1 Structure Map: Davis Infill Area



CI: 25’

Total Coal Isopach: Davis Infill Area

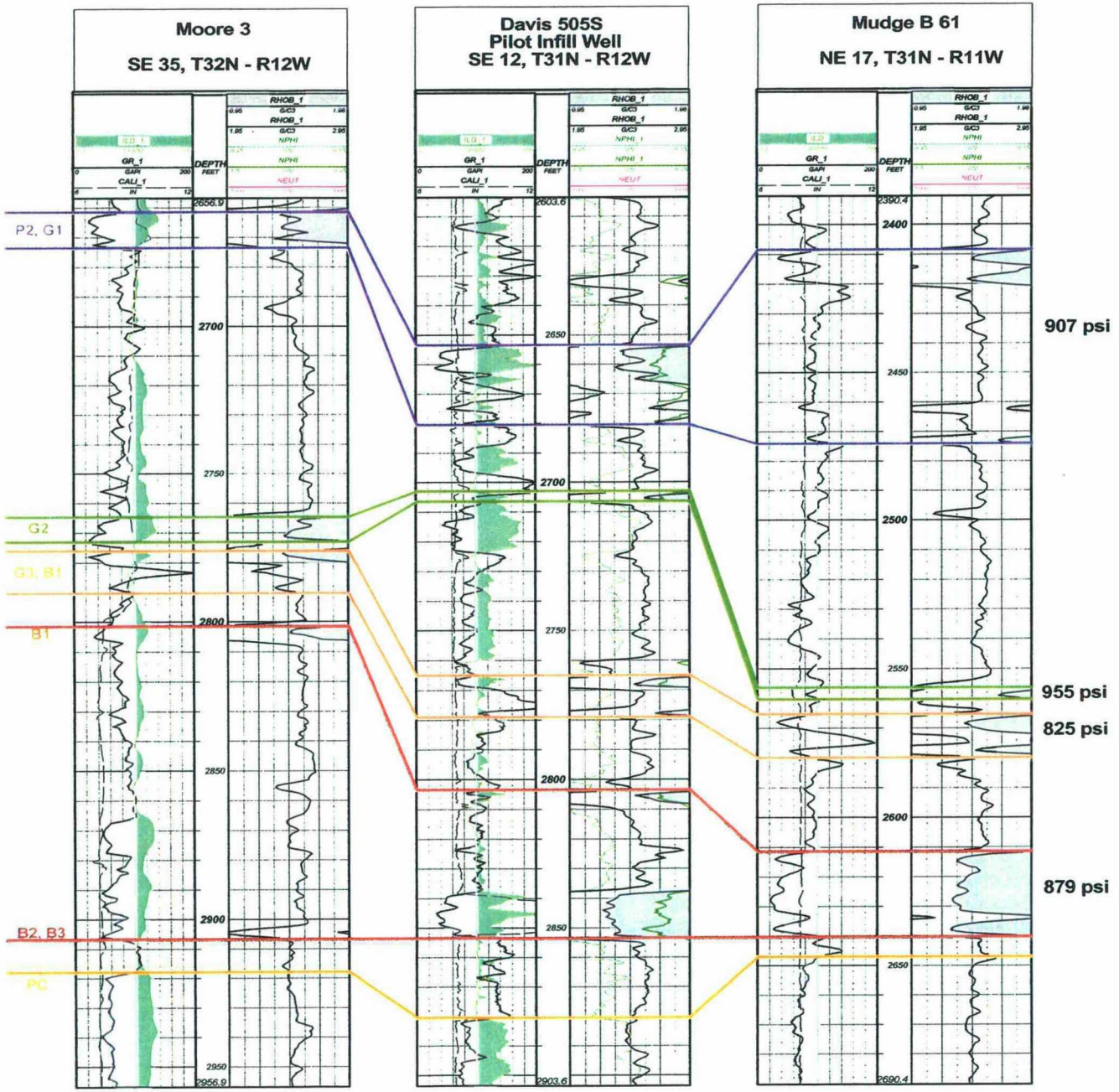


CI: 10’

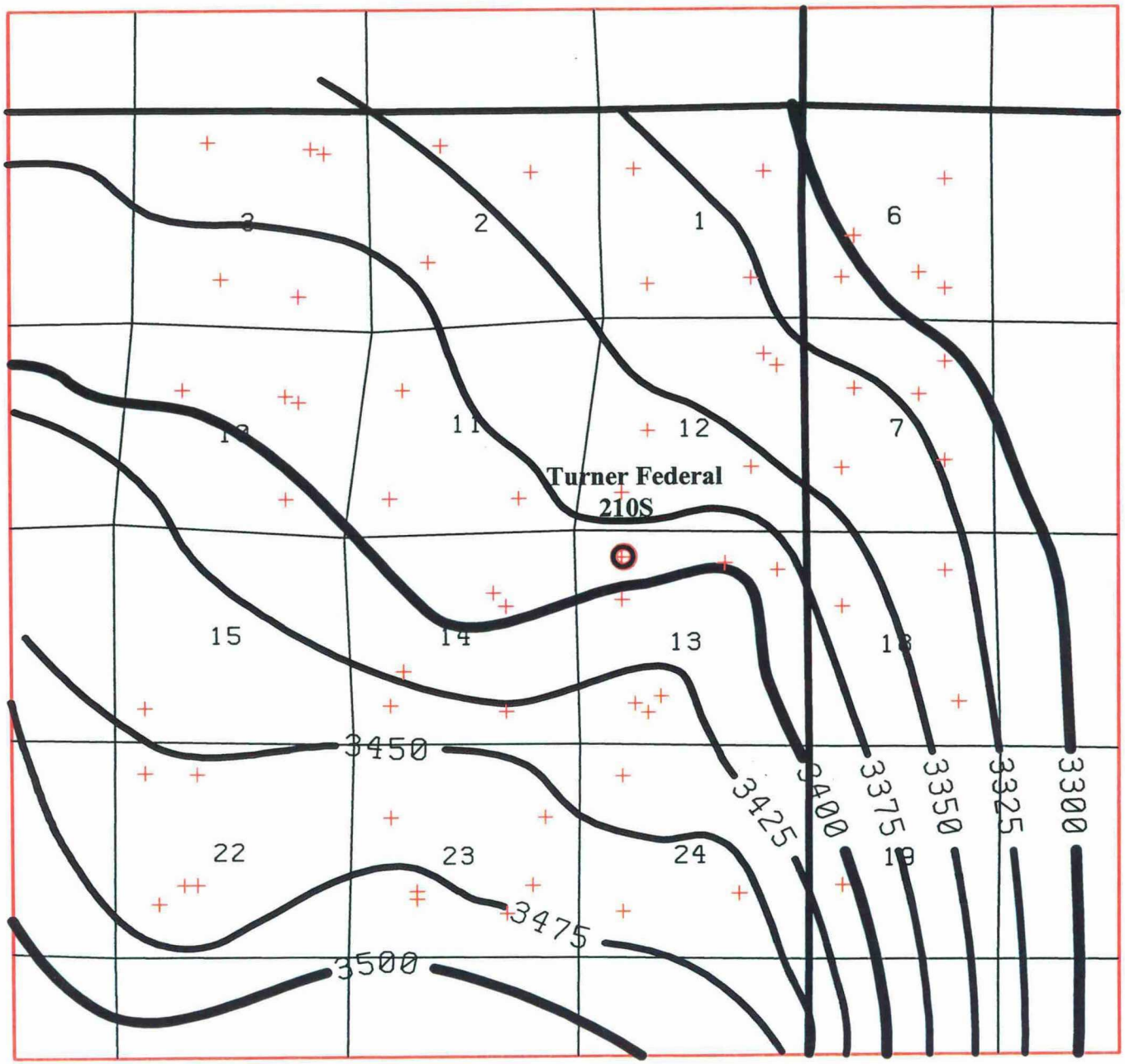
NW

Strike Section: Davis Infill Area

SE

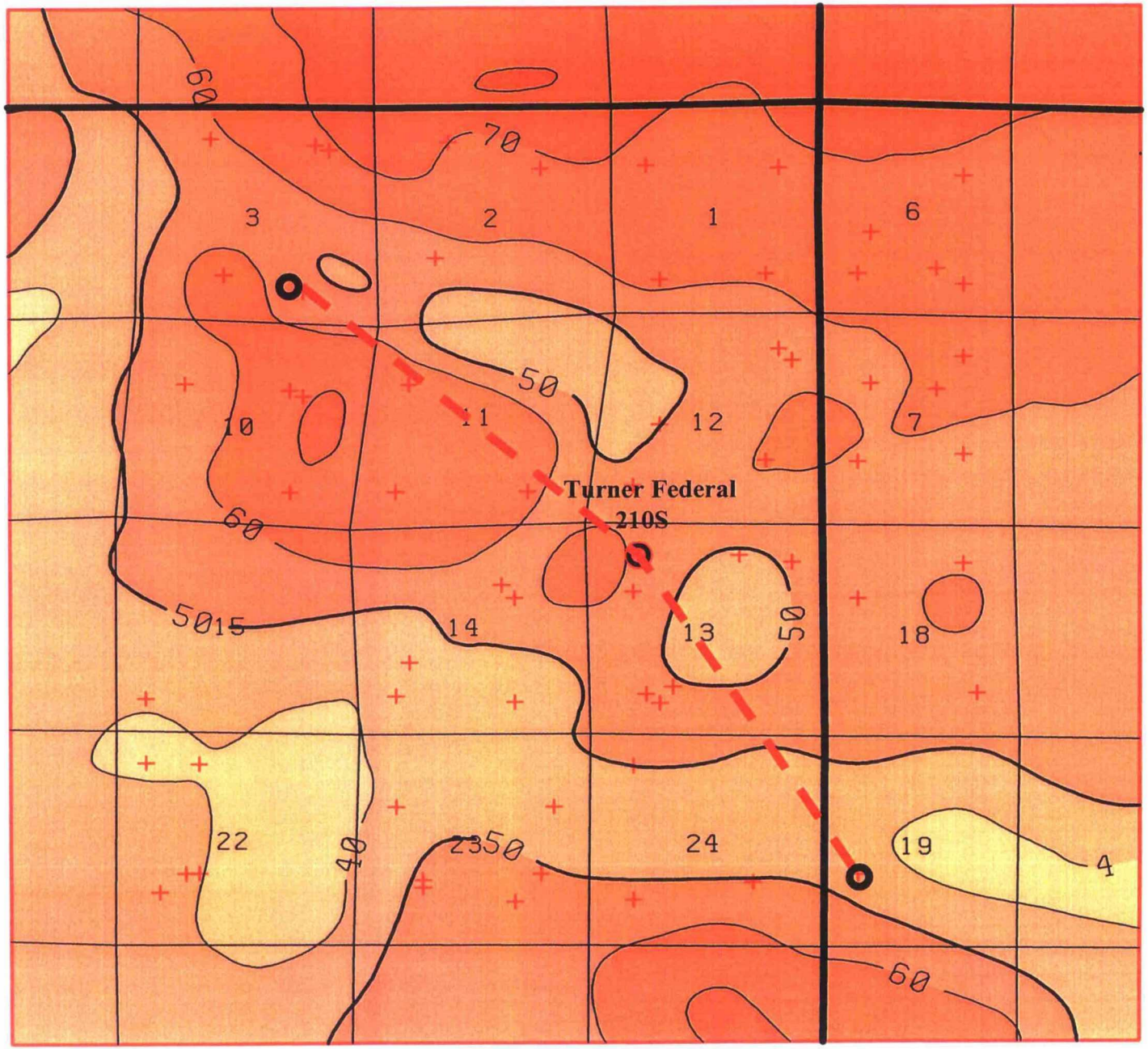


T1 Structure Map: Turner Infill Area



CI: 25'

Total Coal Isopach: Turner Infill Area

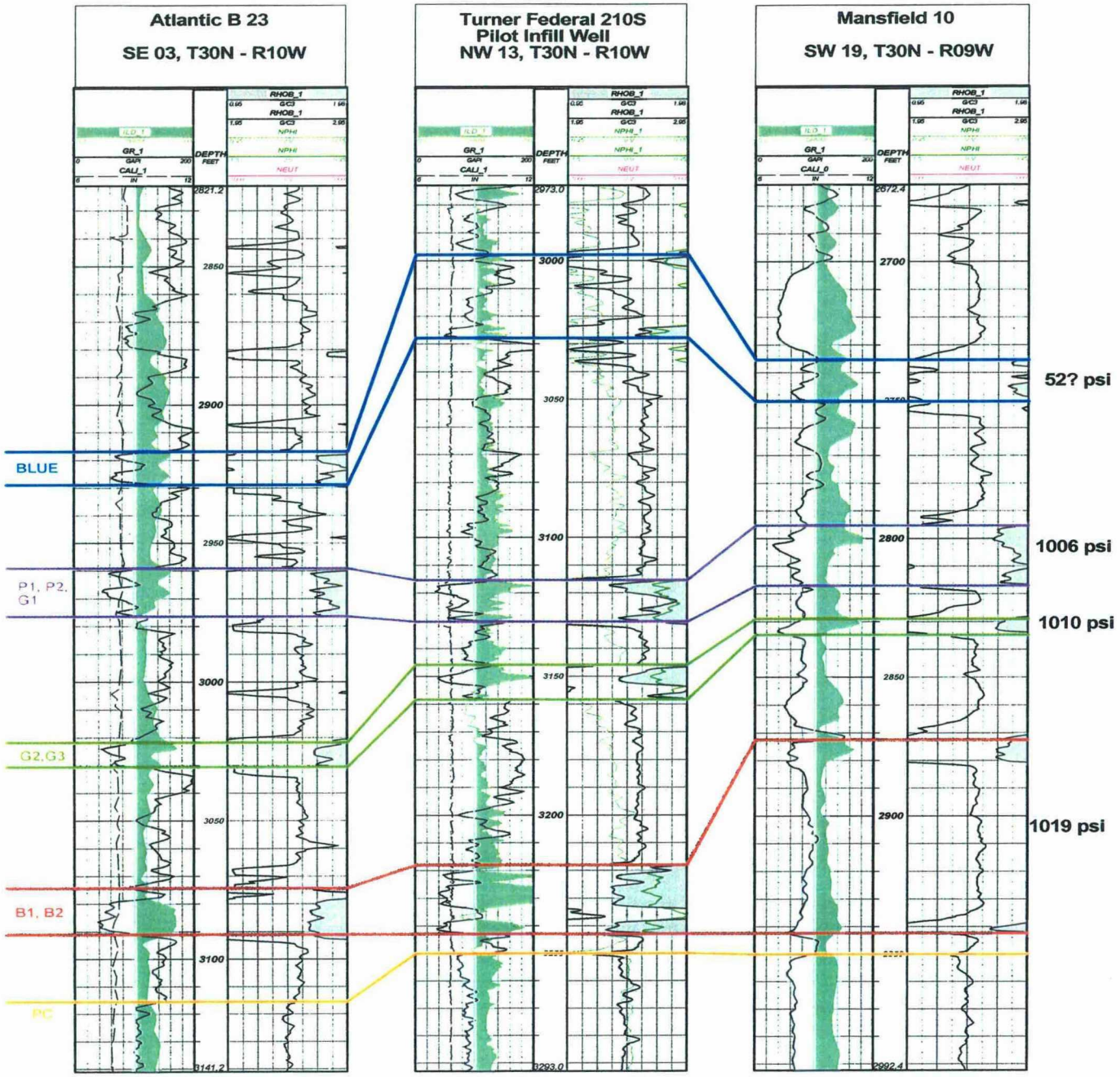


CI: 10'

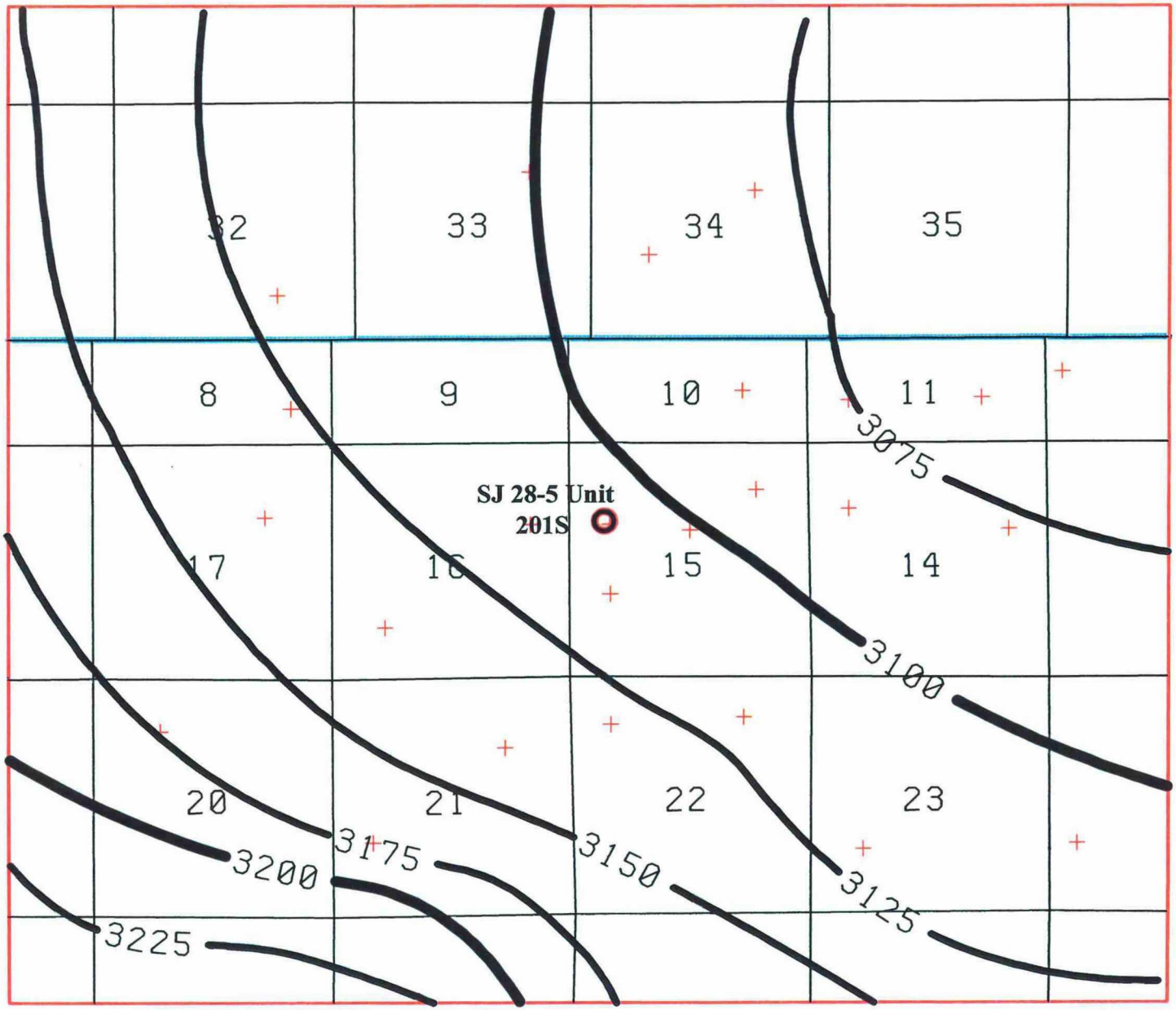
NW

Strike Section: Turner Infill Area

SE

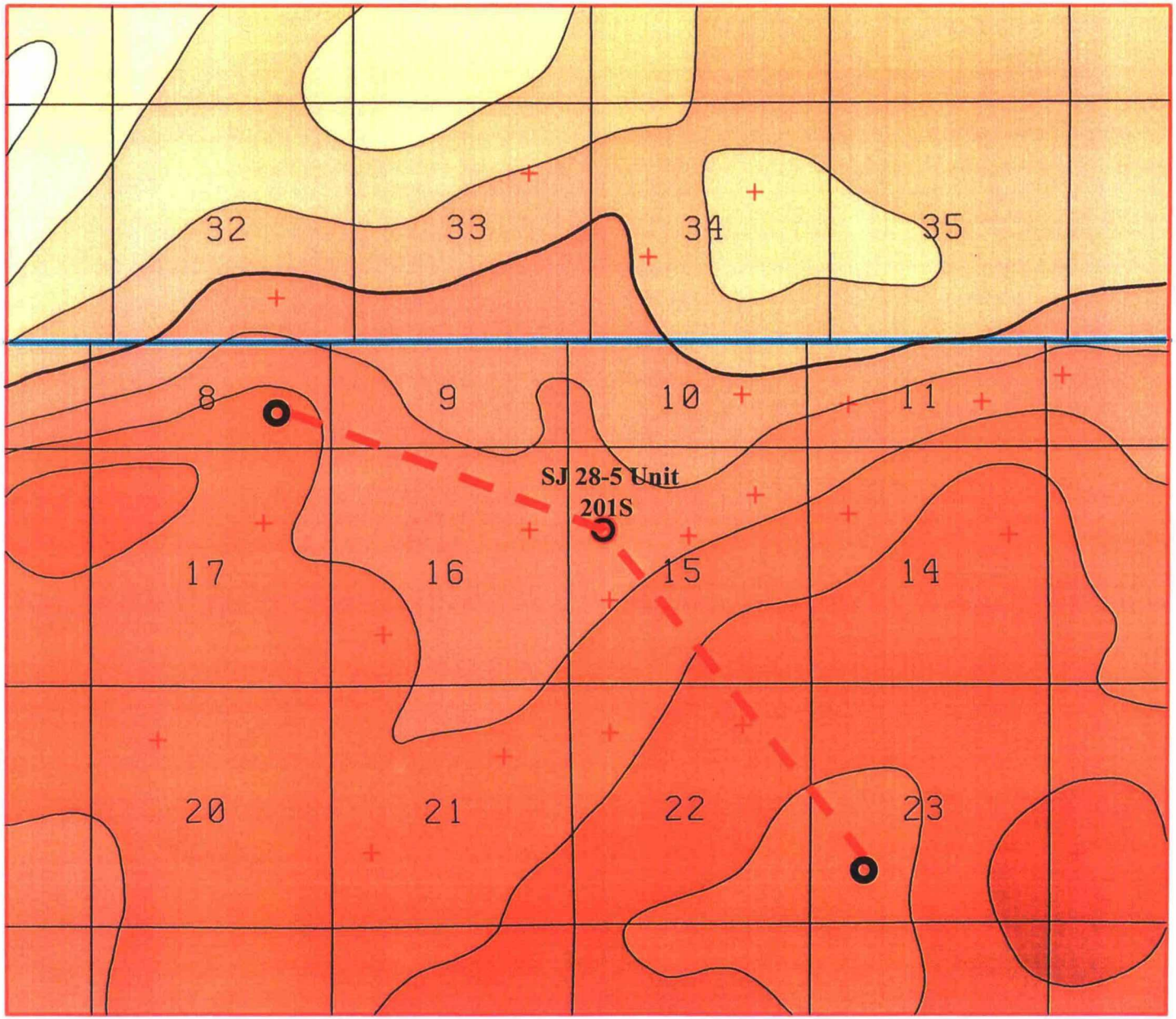


T1 Structure Map: 28-5 Infill Area



CI: 25'

Total Coal Isopach: 28-5 Infill Area

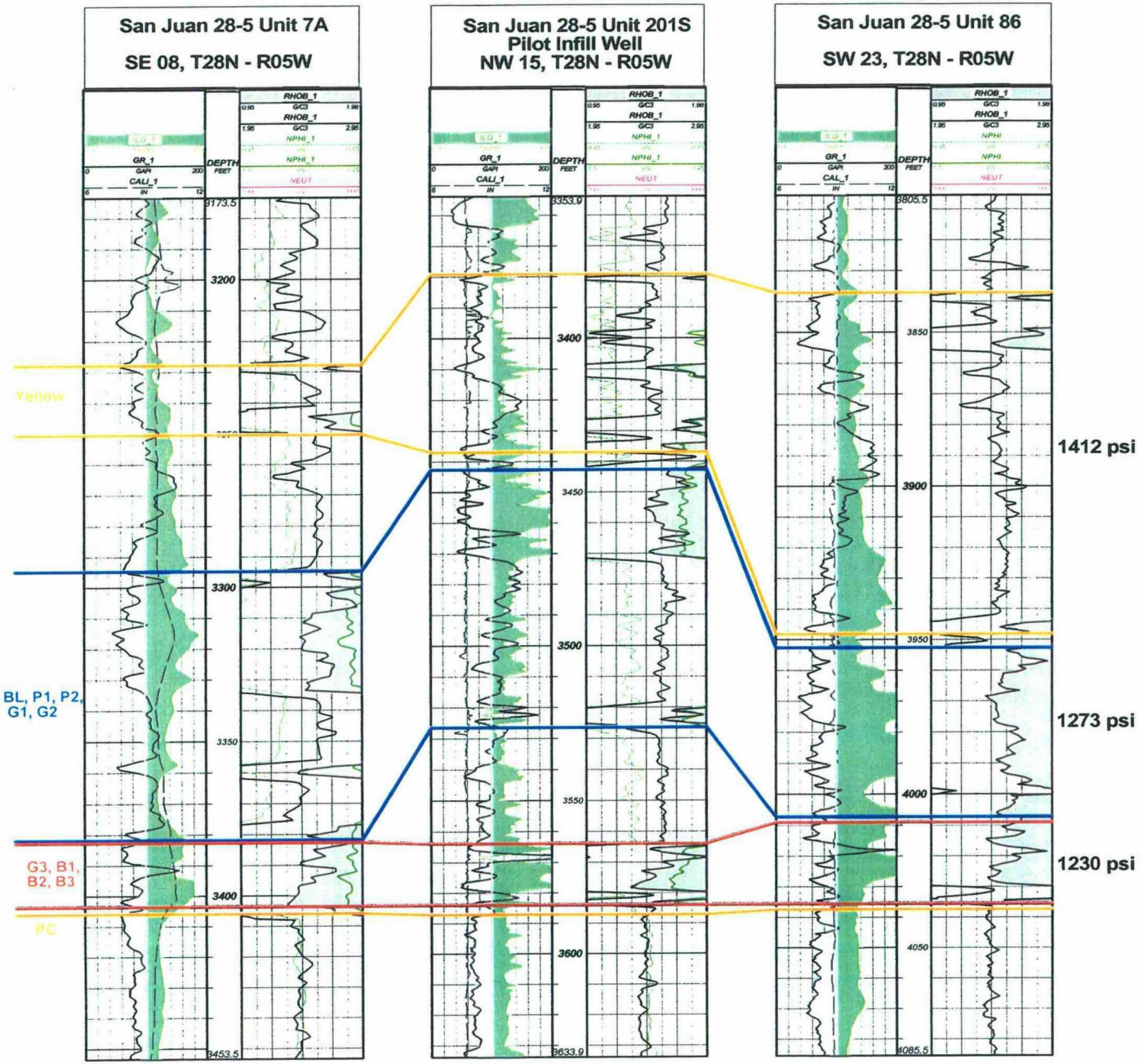


CI: 10'

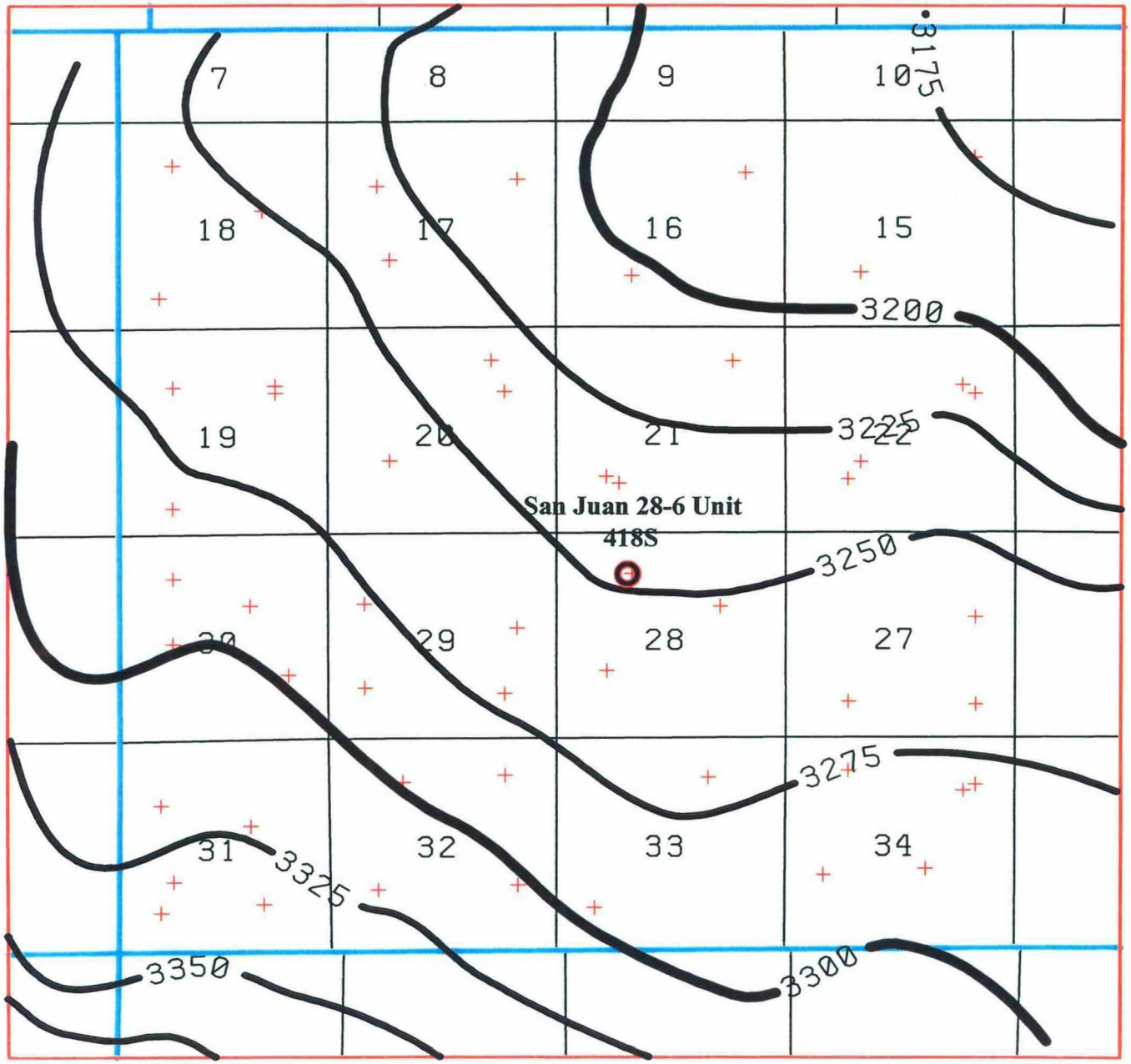
NW

Strike Section: 28-5 Infill Area

SE

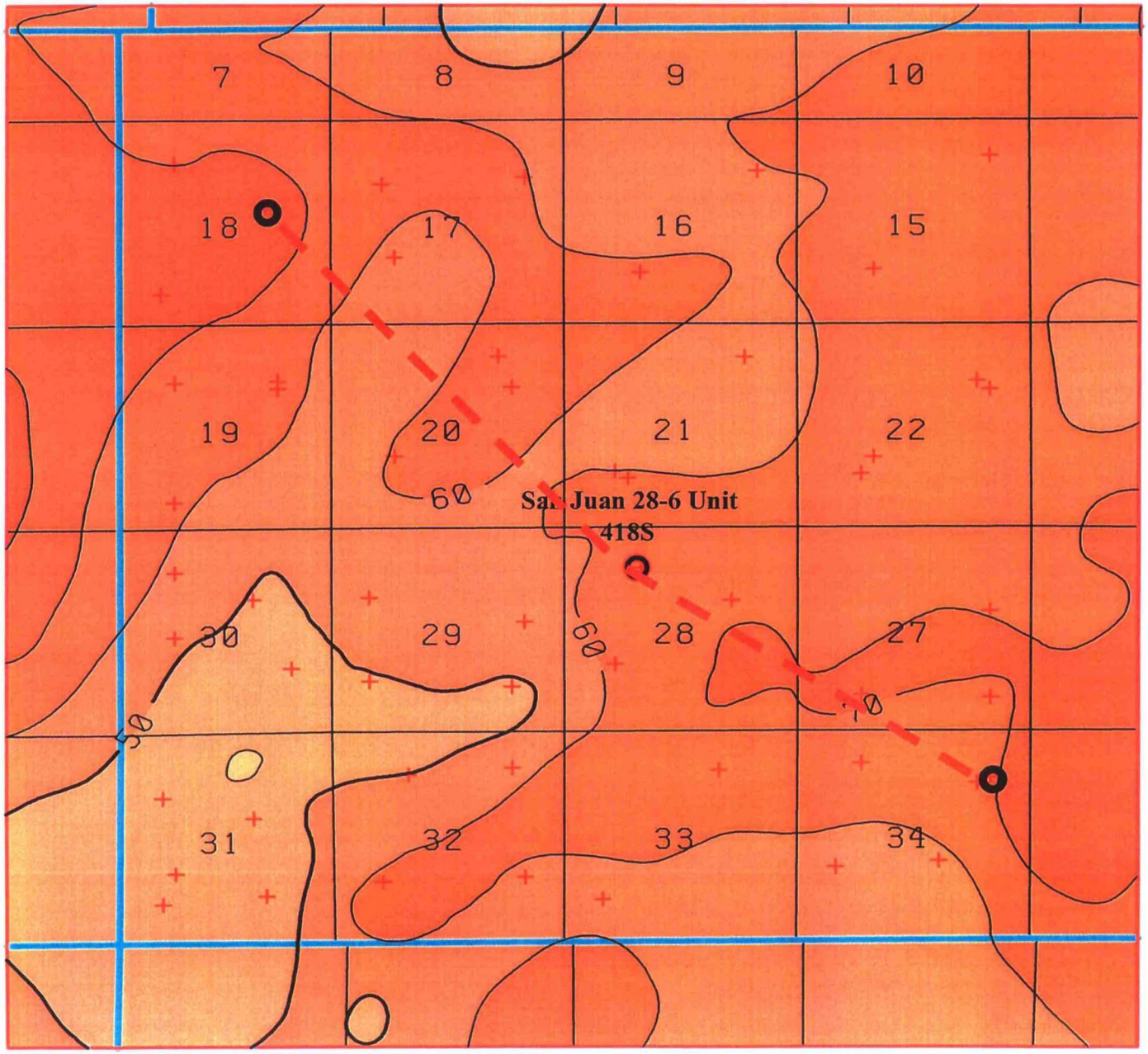


T1 Structure Map: 28-6 Infill Area



CI: 25'

Total Coal Isopach: 28-6 Infill Area

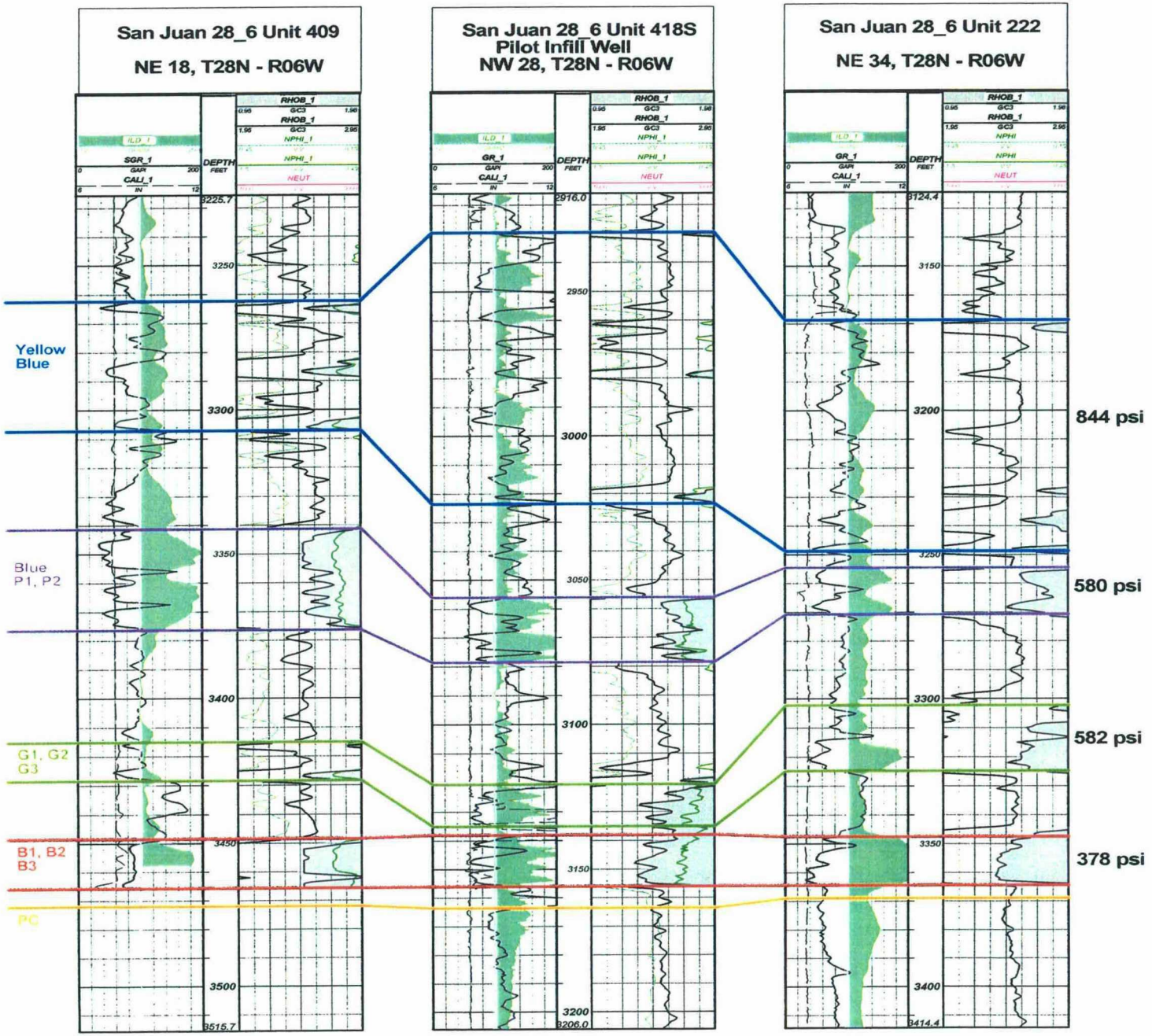


CI: 10'

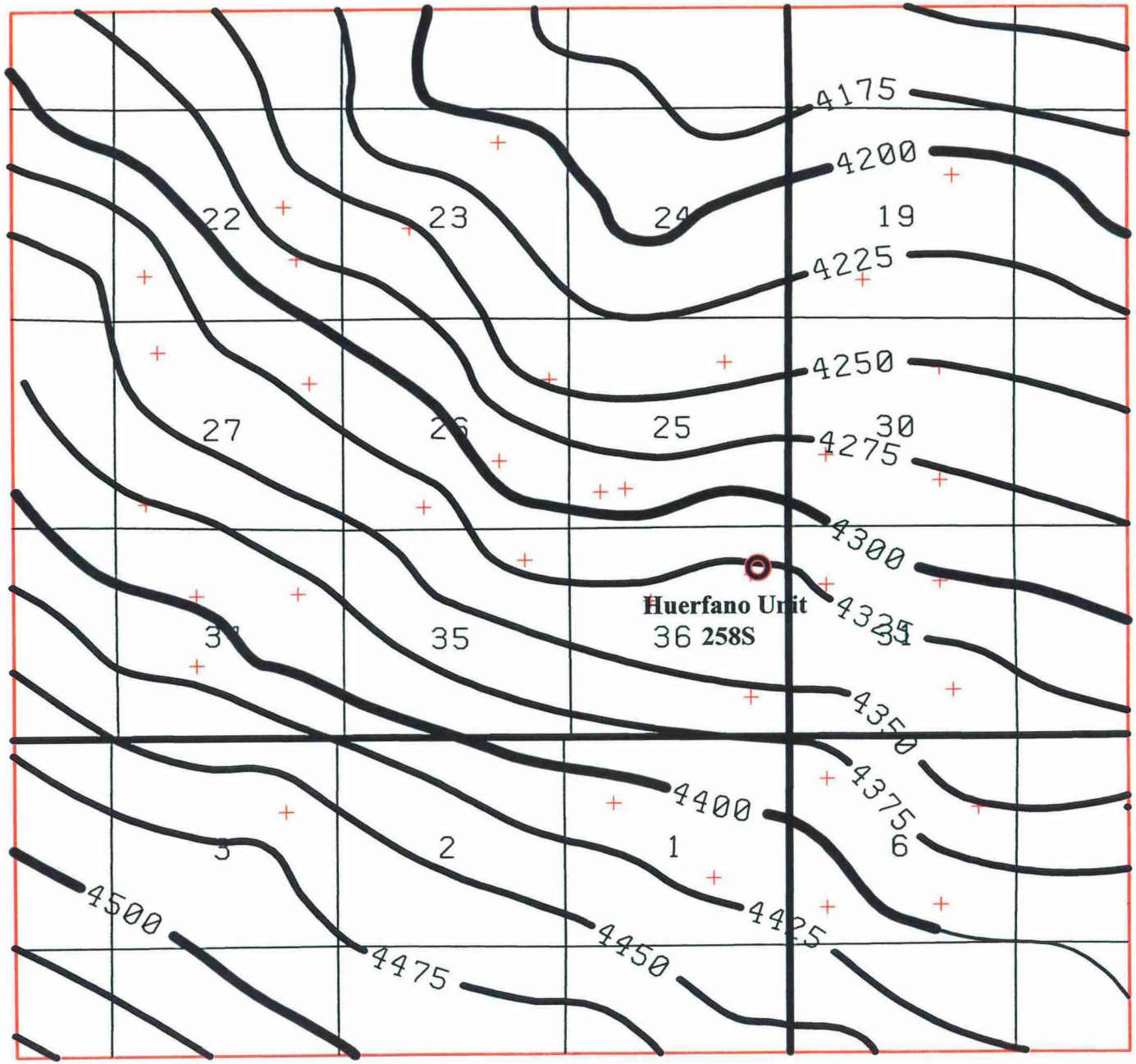
NW

Strike Section: 28-6 Infill Area

SE

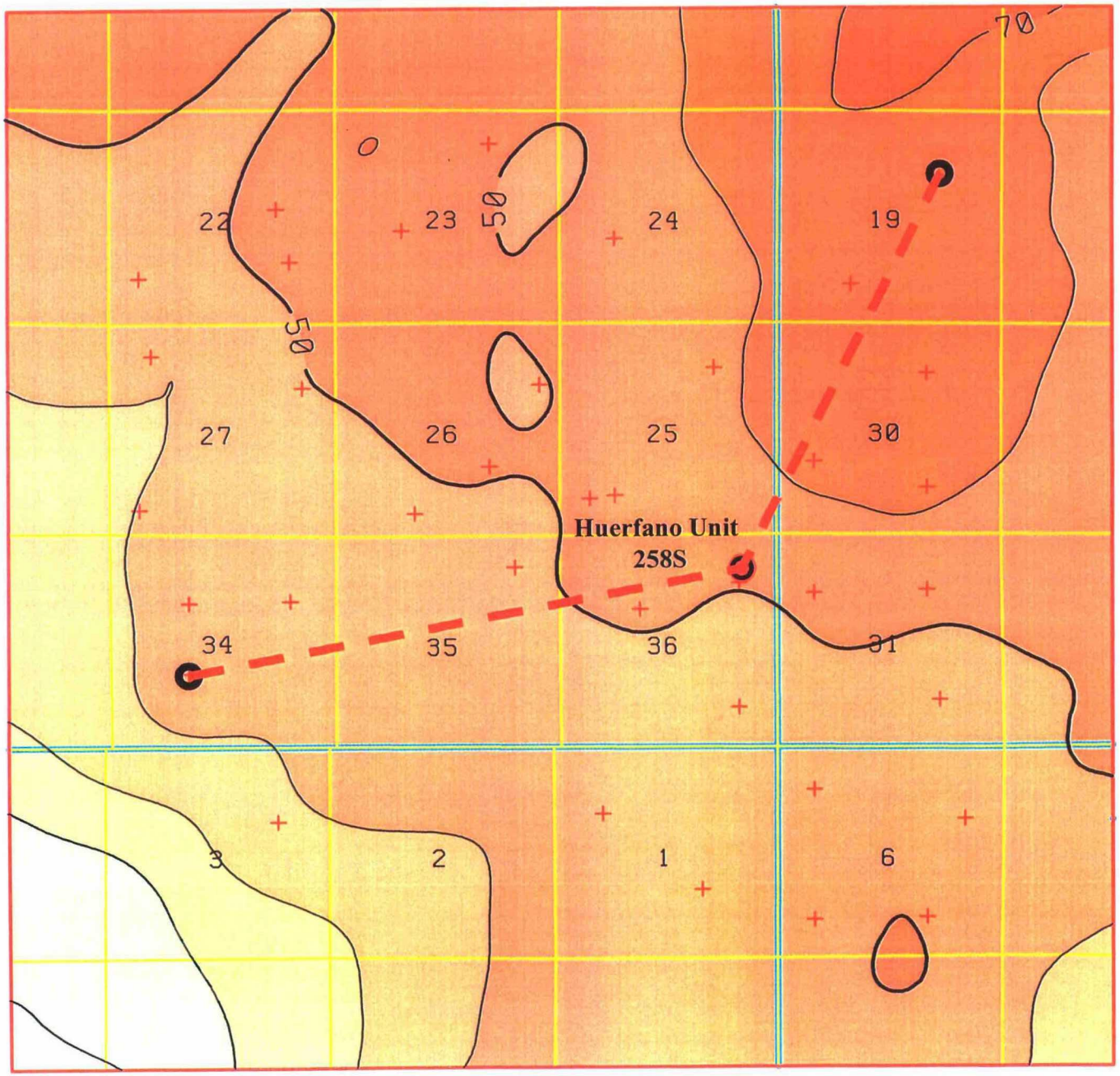


T1 Structure Map: Huerfano Infill Area



CI: 25'

Total Coal Isopach: Huerfano Infill Area

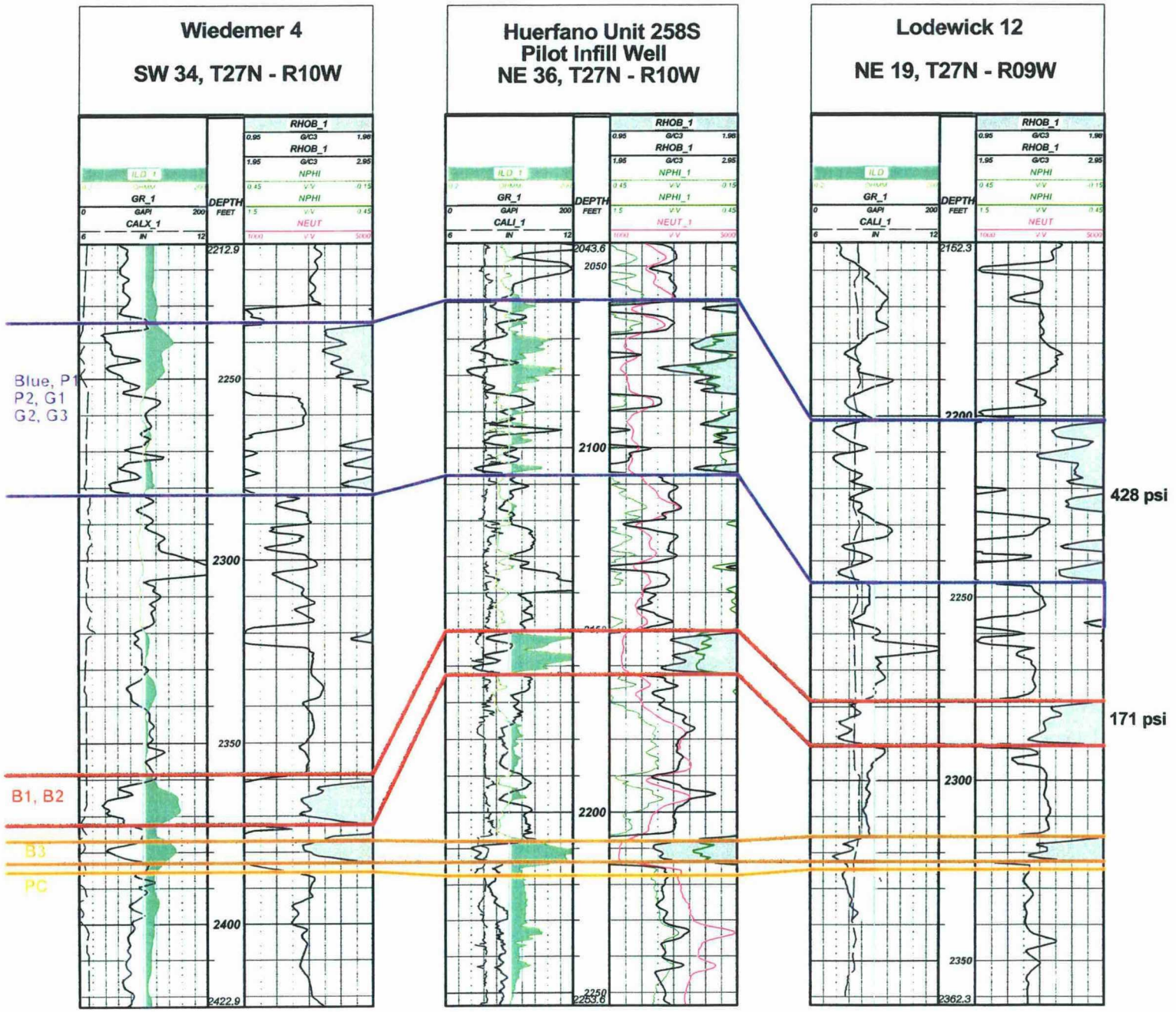


CI: 10’

SW

NE

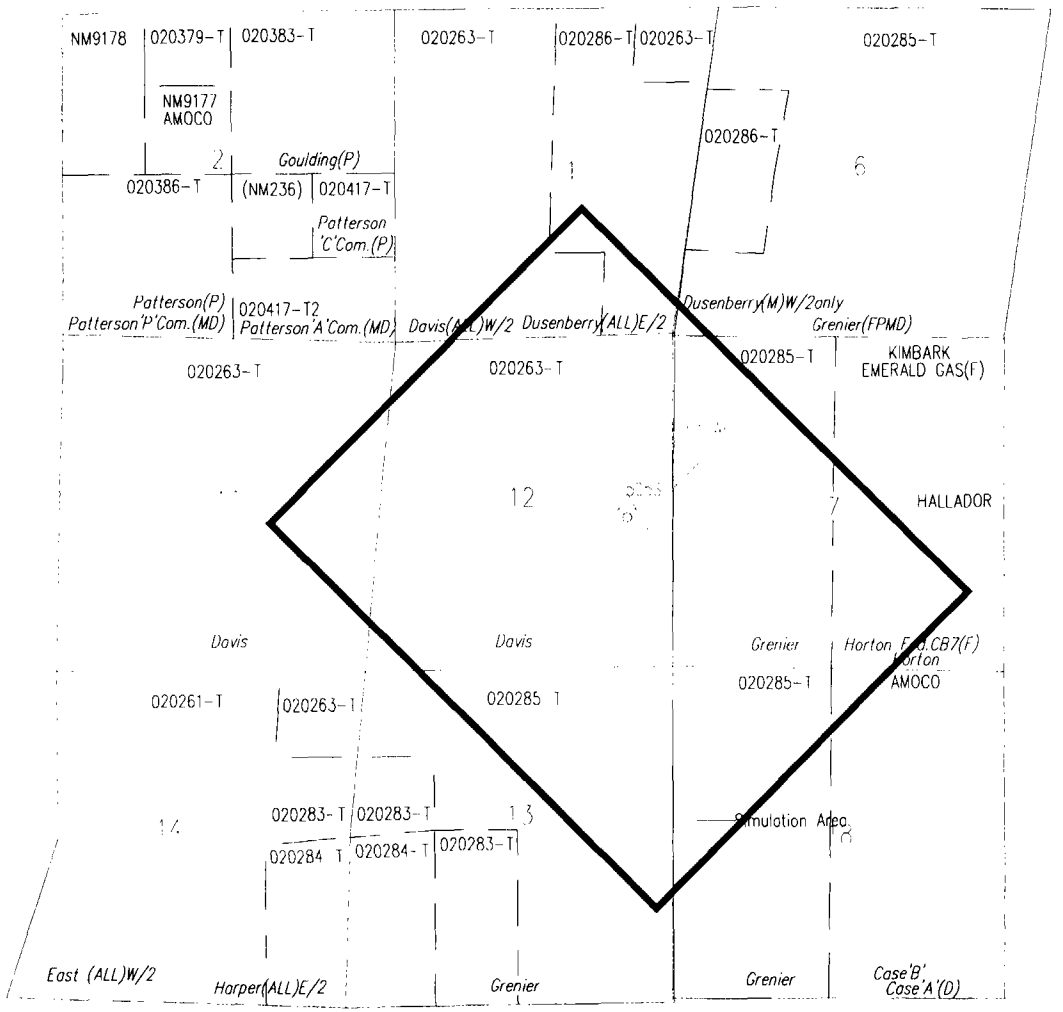
Dip Section: Huerfano Infill Area



Underpressured Fruitland Coal Pilot Infill Production, Simulation and Economic Data

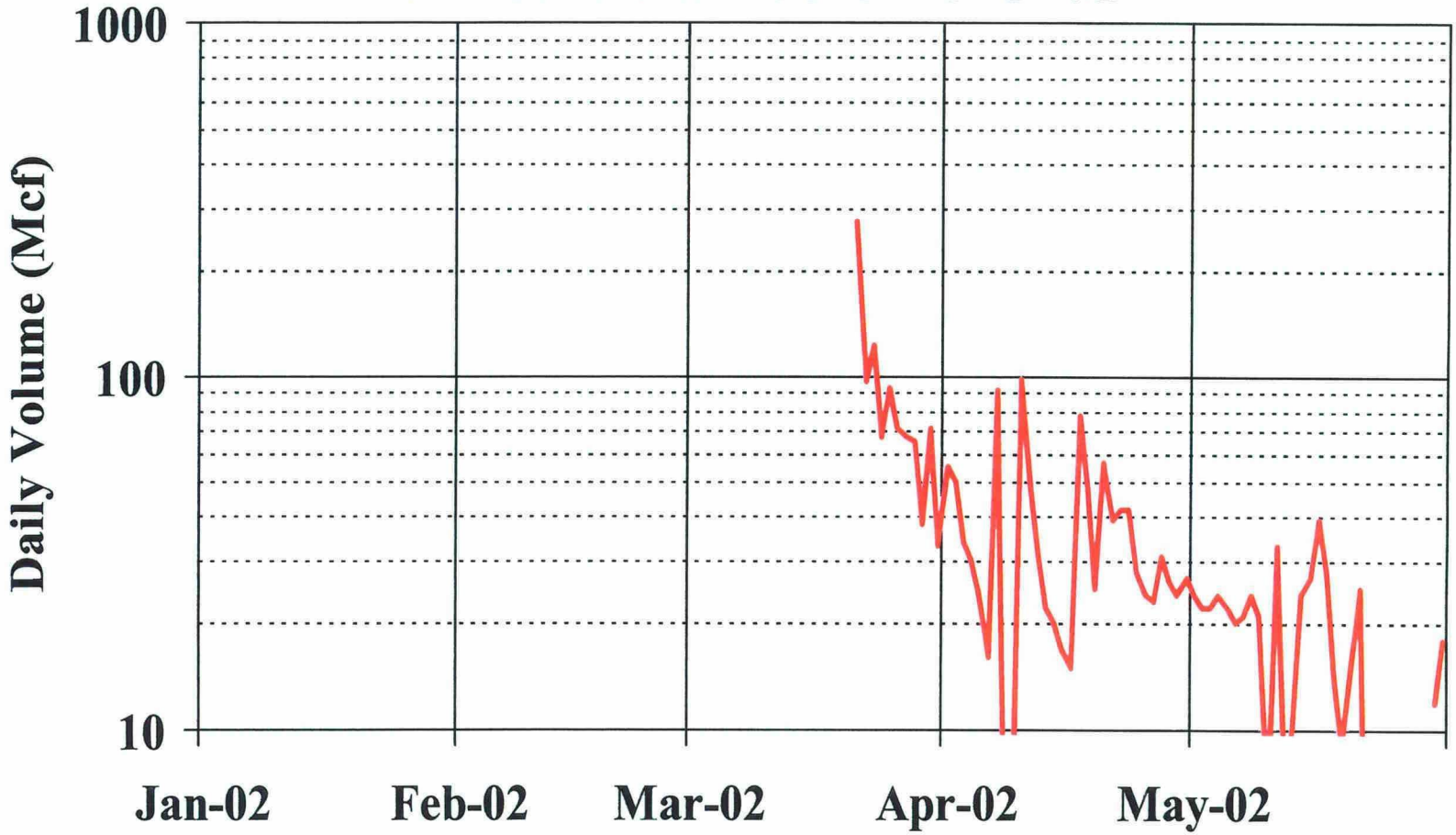
Burlington Resources

Davis #505S Pilot Area

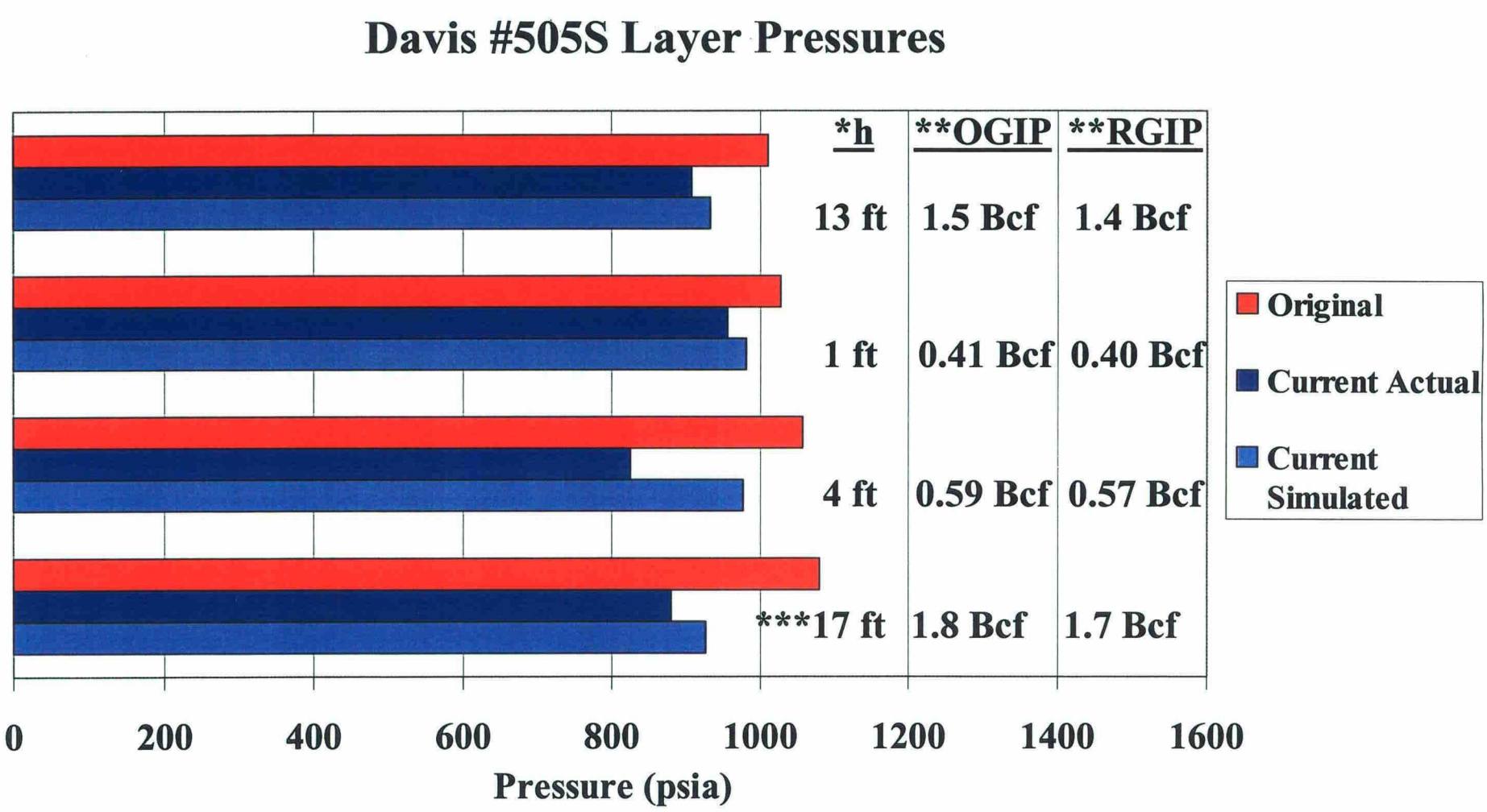


Approximate Extent of Simulation Grid Boundary

Davis #505S

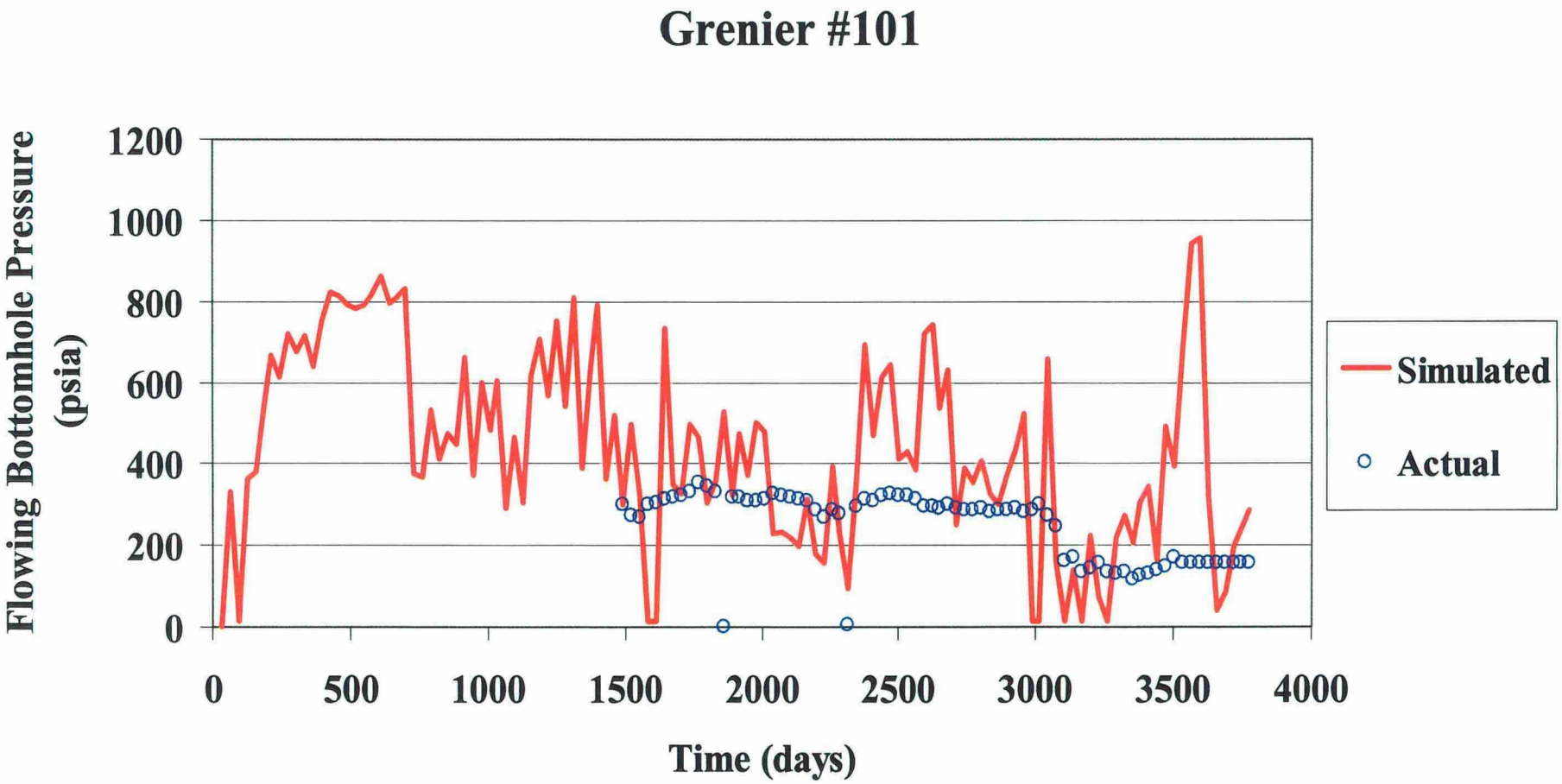


Infill Well Layer Pressure Match

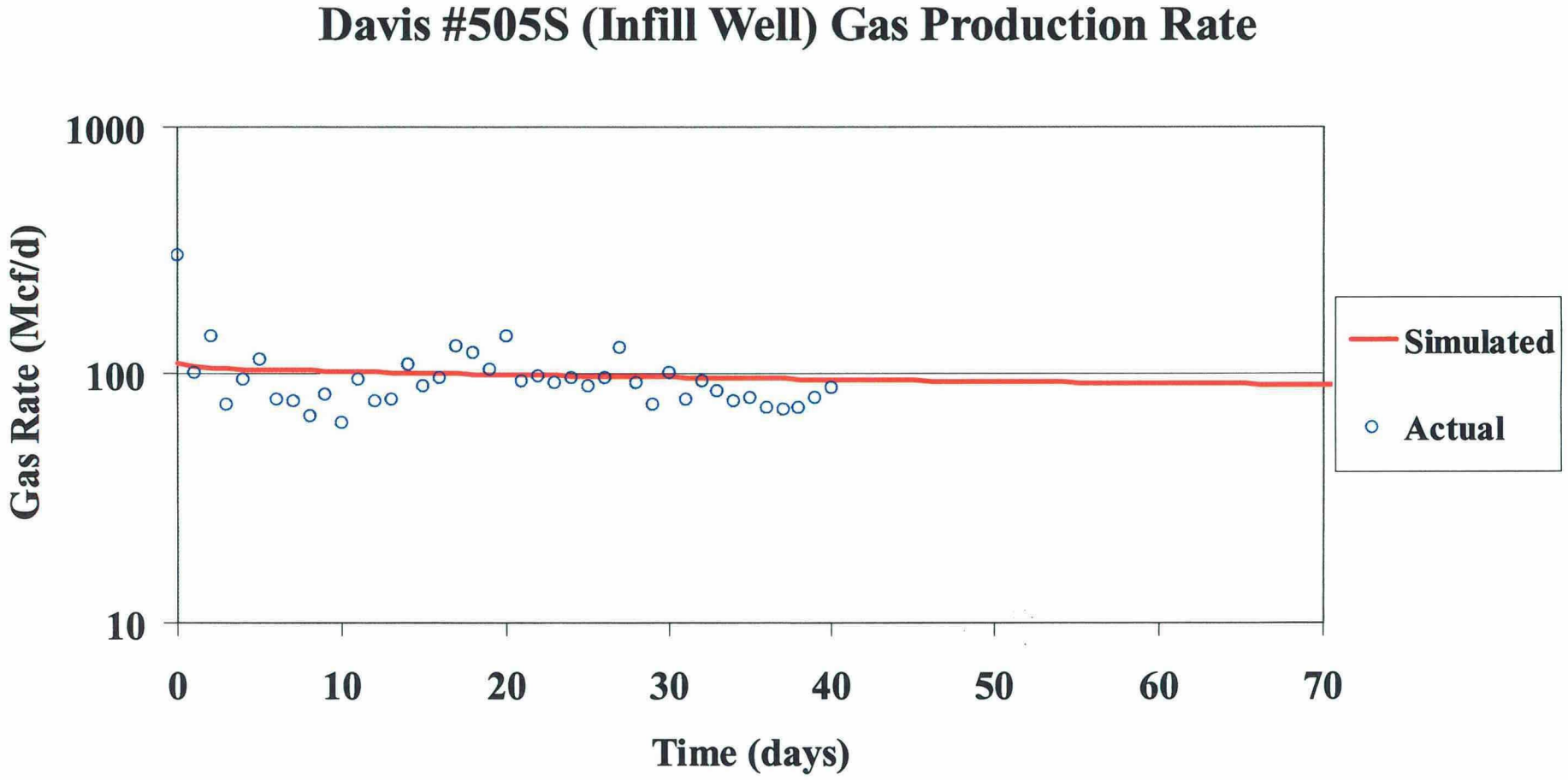


* Thickness At Infill Well **Model Average per 320 *** Combined Bottom Two Layers

Offset Well Flowing Pressure Match

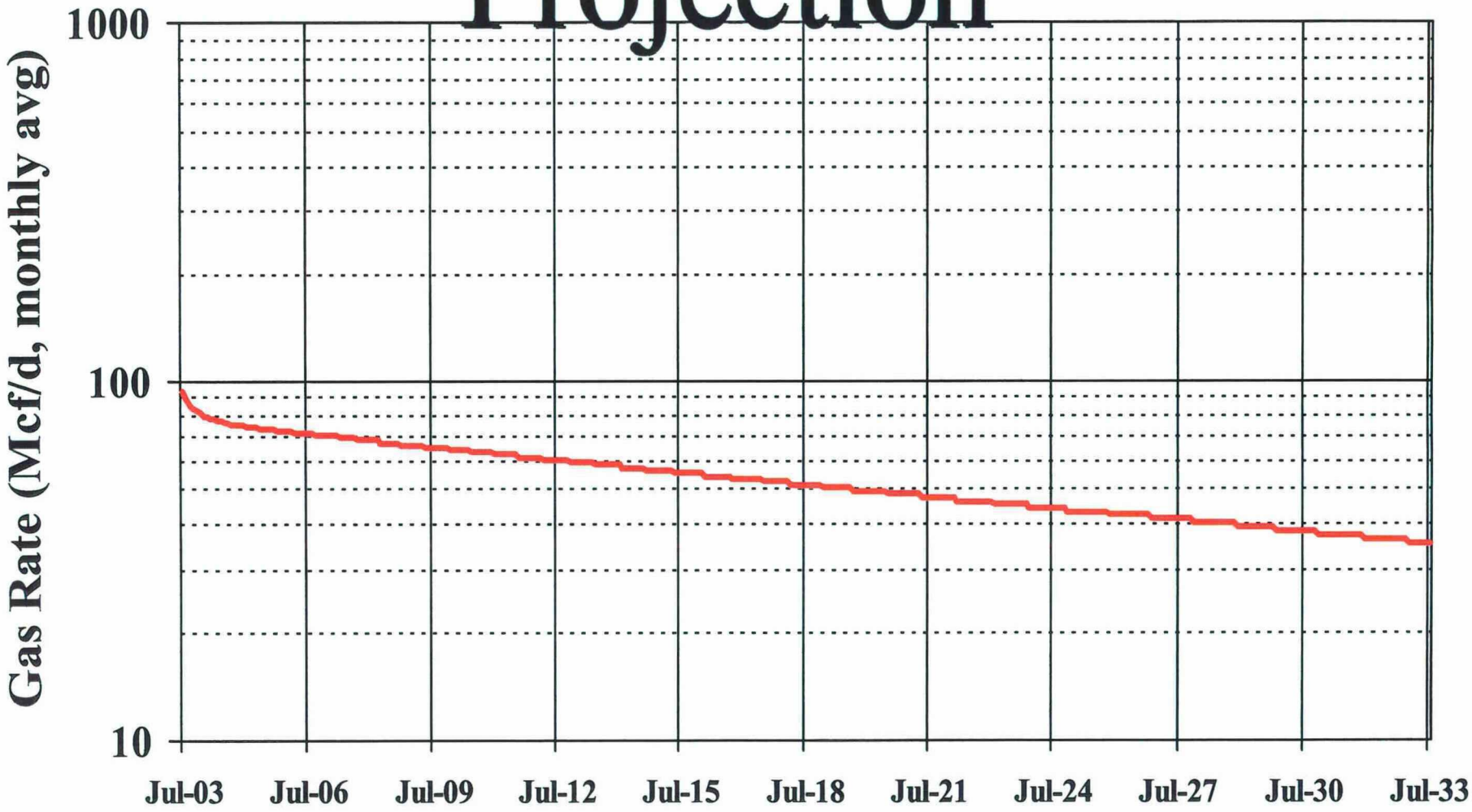


Infill Well Production Match



*Corrected to 24 hour flow rate

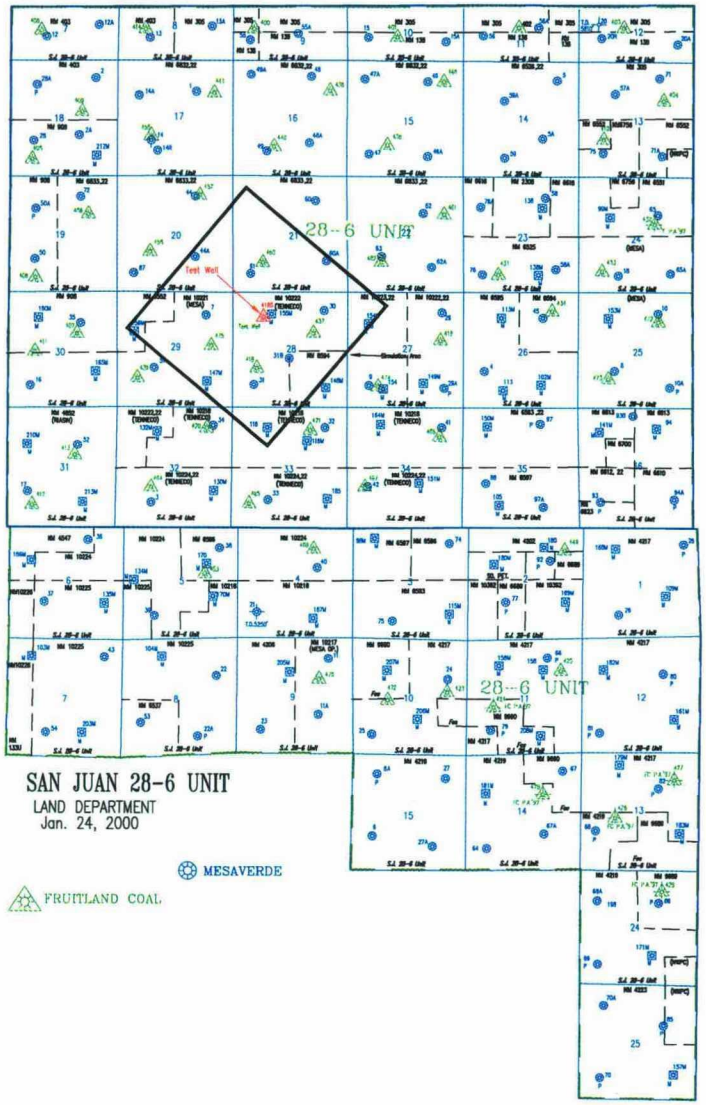
Davis Area Infill Well Projection



Infill Recompletes Are Economic

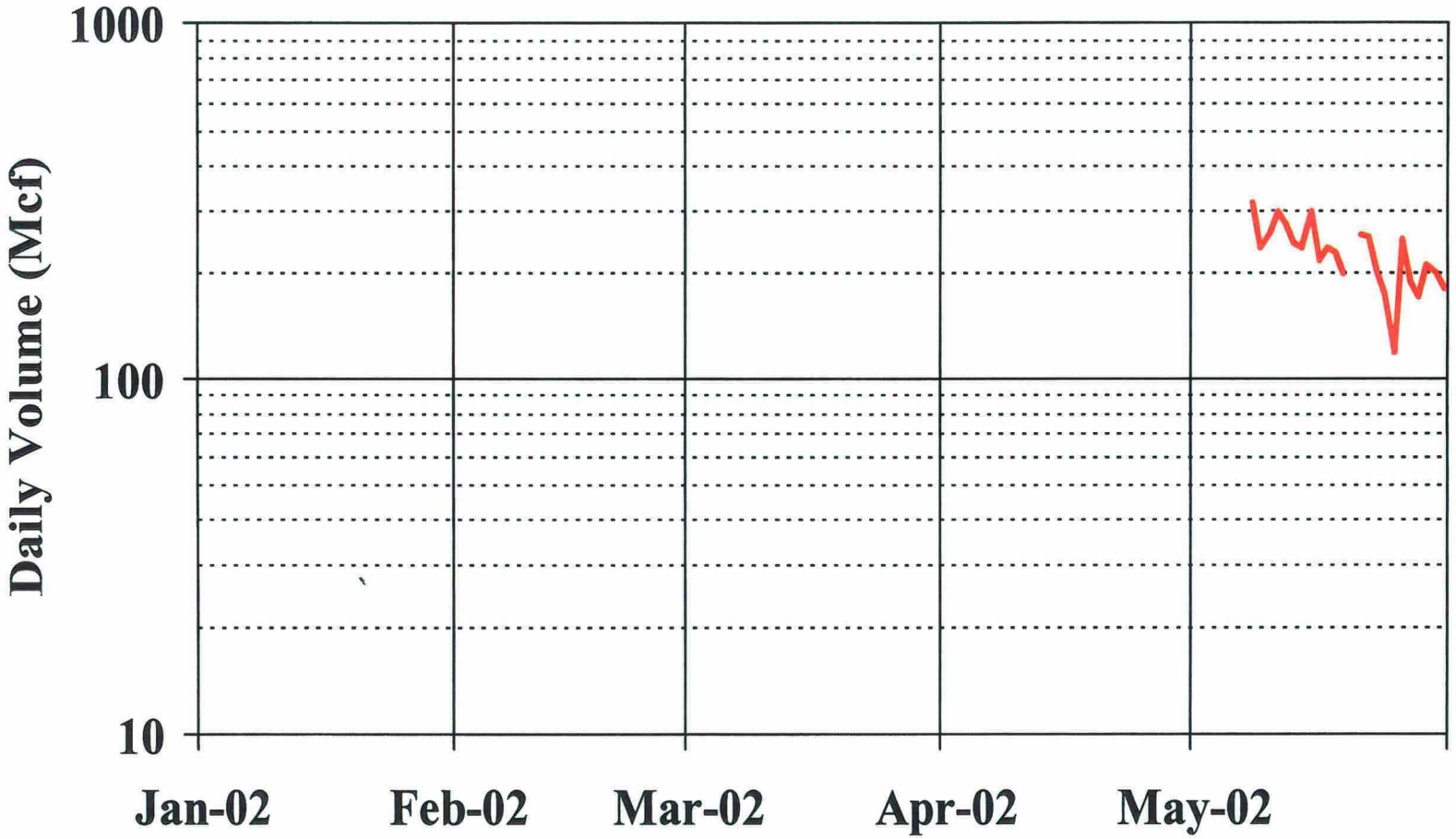
- After-tax Present Value = $43.0 M (Disc. @ 10%)
- Primary economic inputs/assumptions:
  - Incremental economics (160-acre case – 320-acre case)
  - Gas price = $3.25/mmbtu (NYMEX)
  - Operating costs = $1060/well/month
  - Capital costs = $200 M
  - GWI/NRI = 100/84

SJ 28-6 Unit #418S Pilot Area

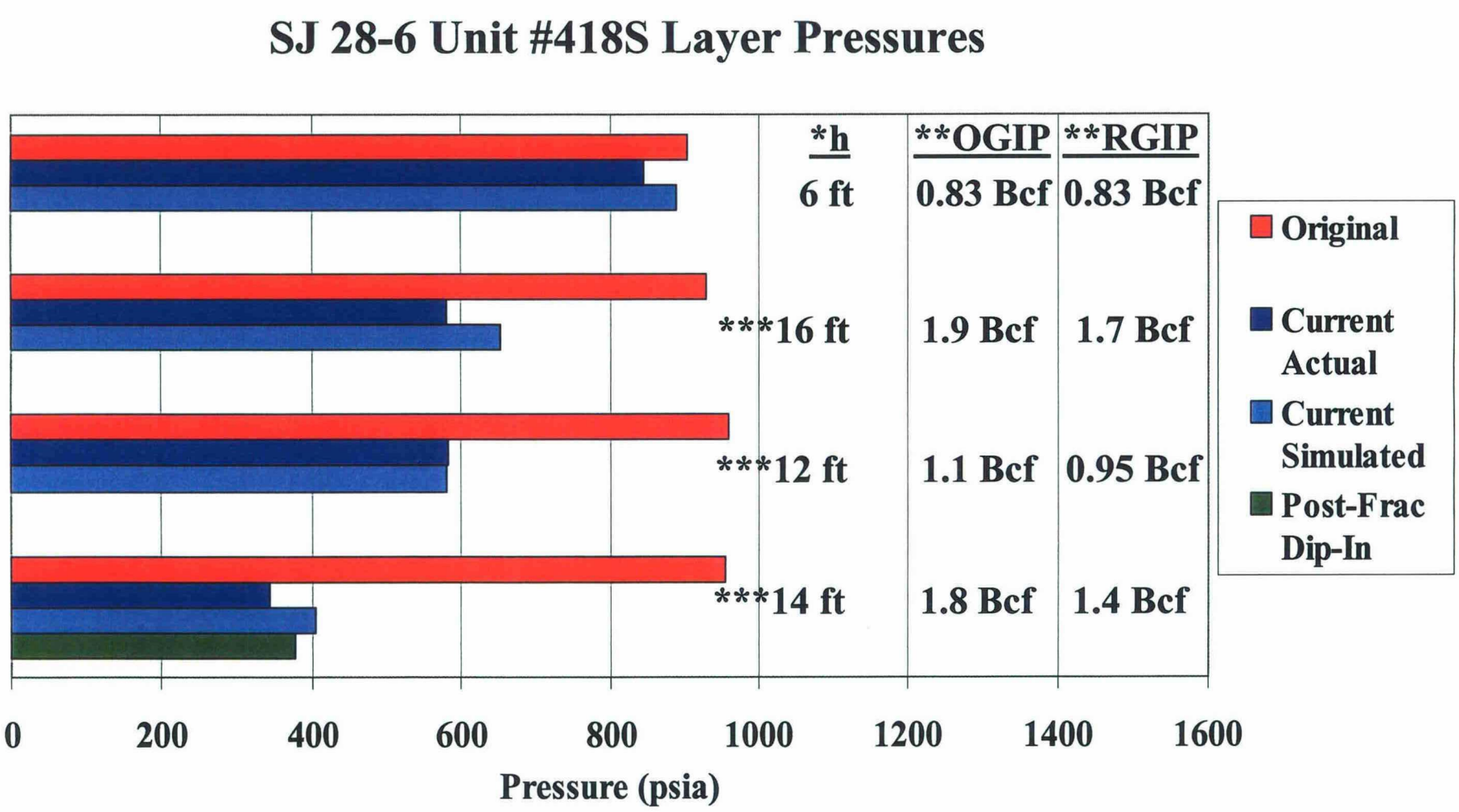


Approximate Extent of Simulation Grid Boundary

SJ 28-6 Unit #418S

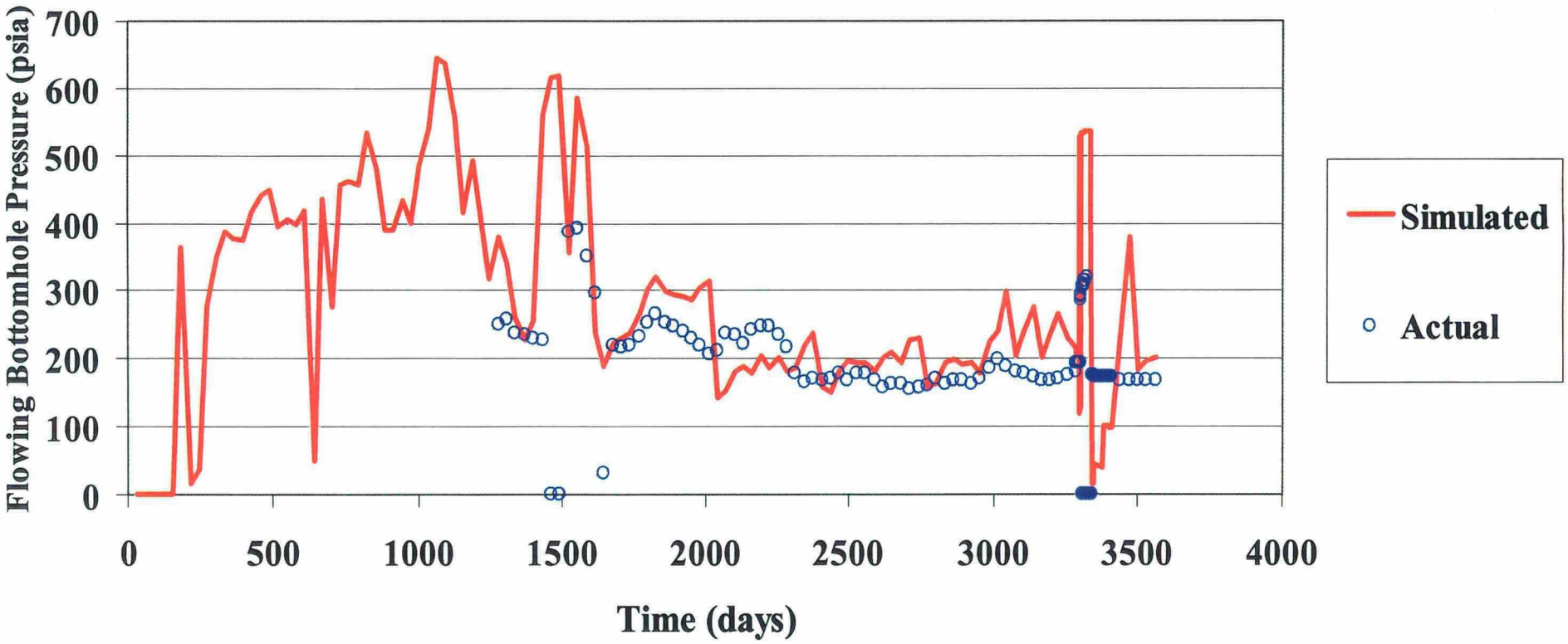


Infill Well Layer Pressure Match



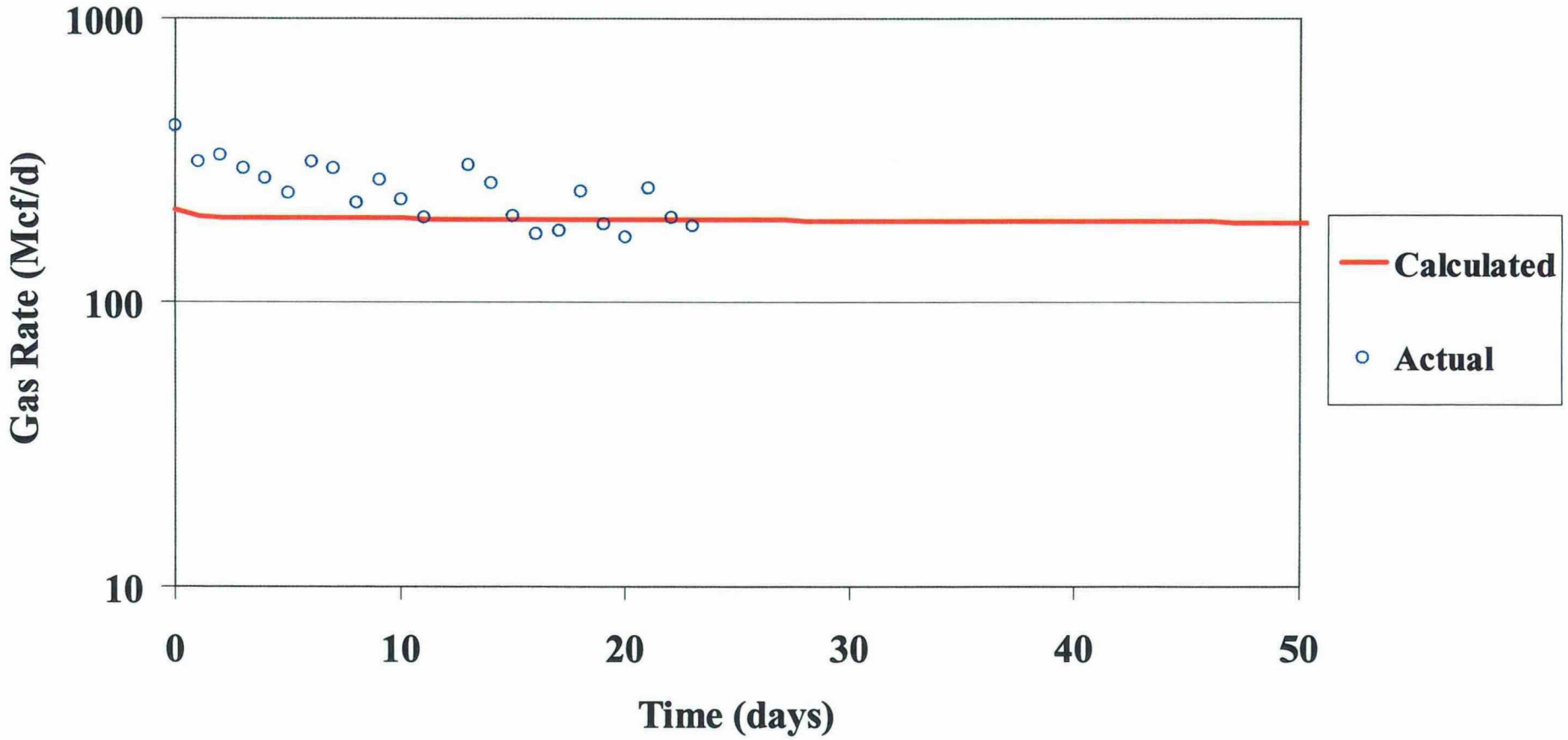
* Thickness At Infill Well **Model Average per 320 *** Combined Four Layers

Offset Well Flowing Pressure Match



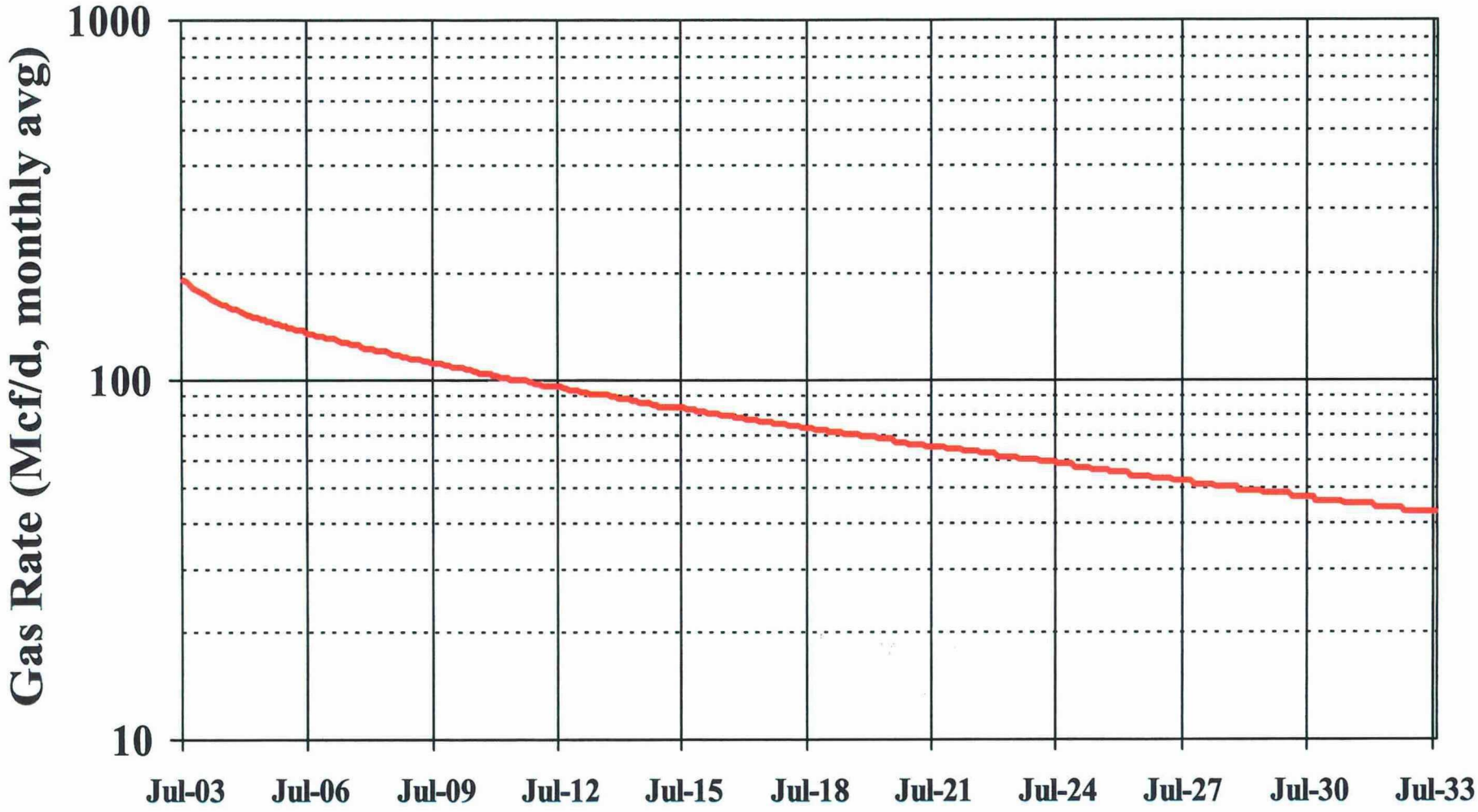
Infill Well Production Match

SJ 28-6 Unit #418S (Infill Well) Gas Production Rate



*Corrected to 24 hour flow rate

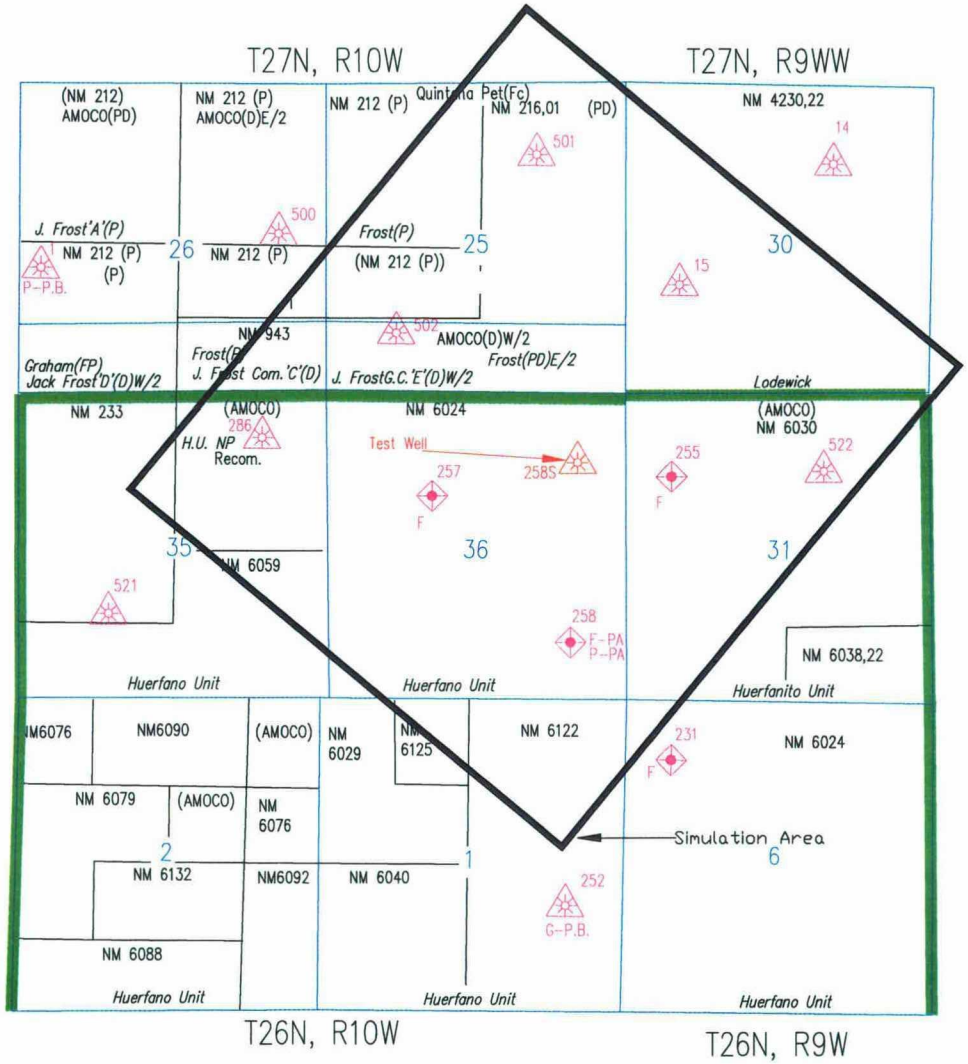
SJ 28-6 Area Infill Well Projection



Infill Recompletes Are Economic

- After-tax Present Value = $173.7 M (Disc. @ 10%)
- Primary economic inputs/assumptions:
  - Incremental economics (160-acre case – 320-acre case)
  - Gas price = $3.25/mmbtu (NYMEX)
  - Operating costs = $1060/well/month
  - Capital costs = $200 M
  - GWI/NRI = 100/84

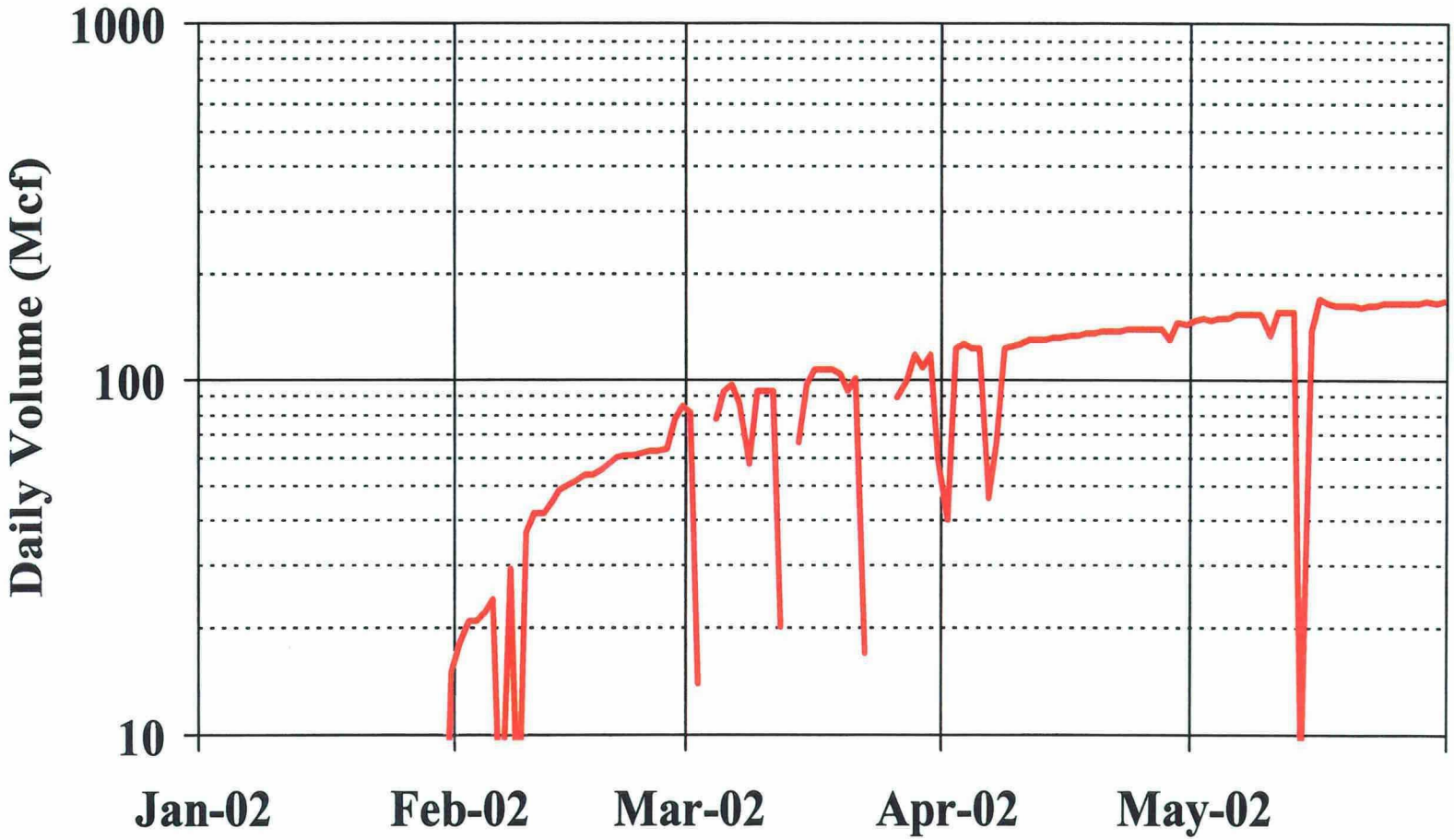
Huerfano Unit #258S Pilot Area



FRUITLAND COAL

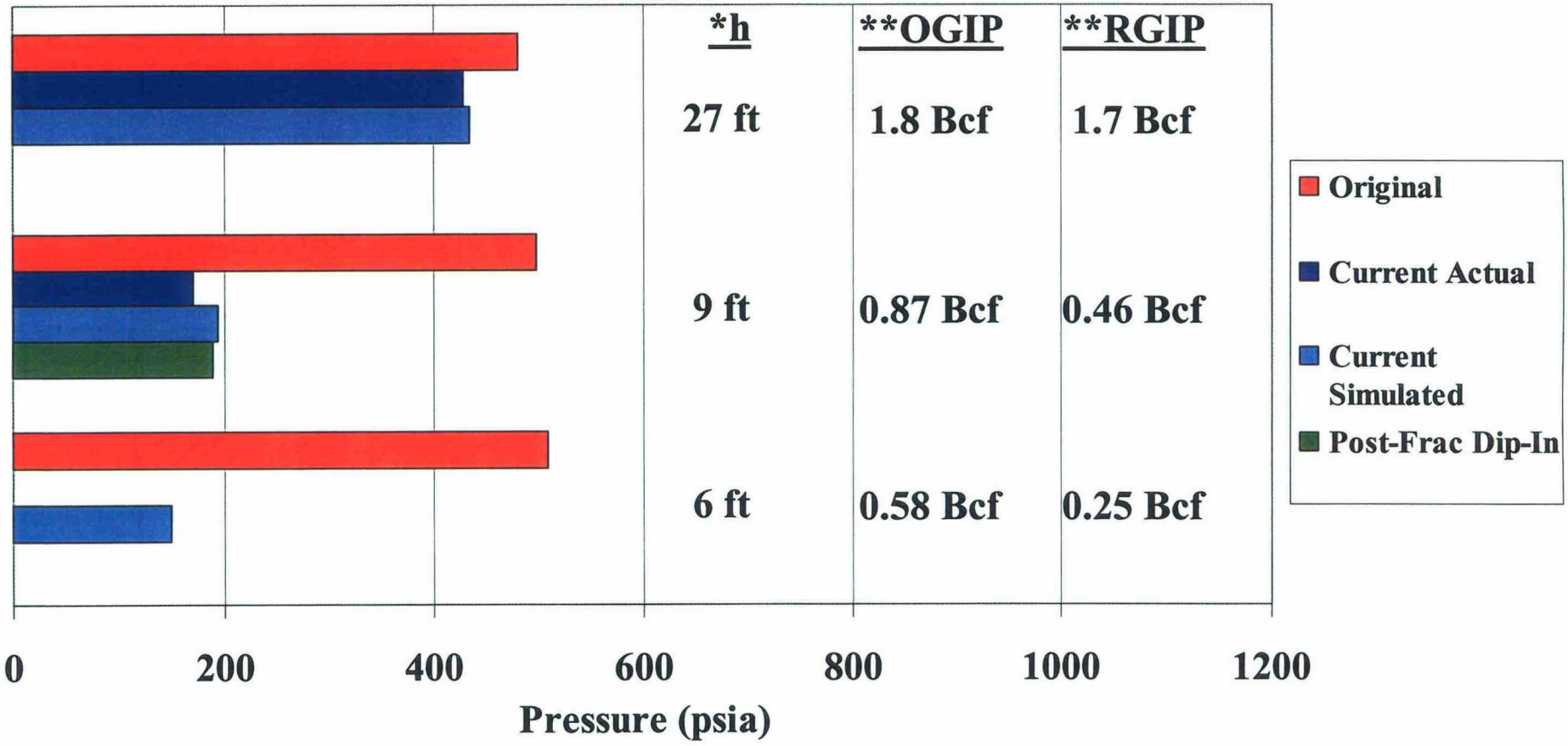
Approximate Extent of Simulation Grid Boundary

Huerfano Unit #258S



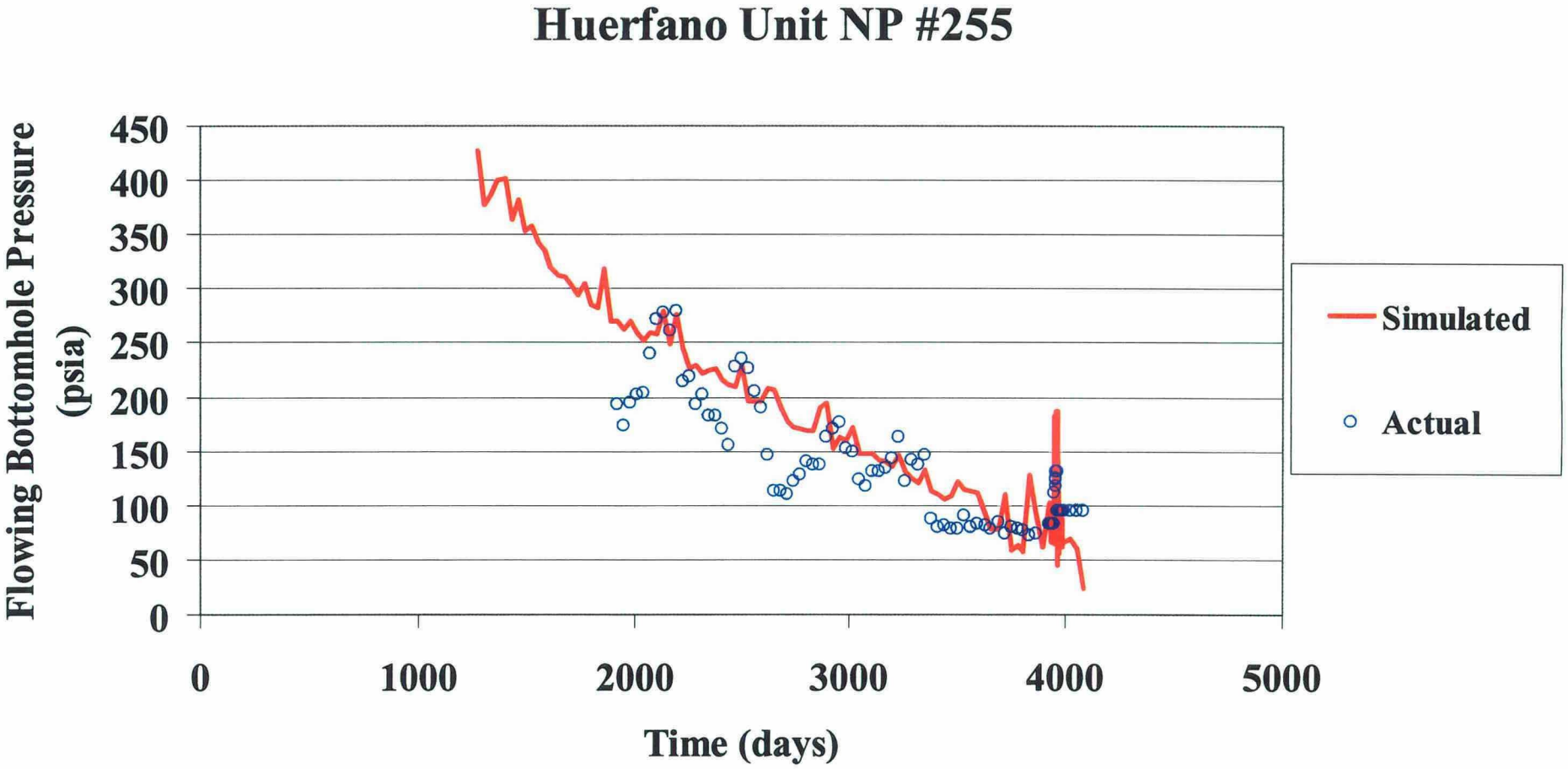
Infill Well Layer Pressure Match

Huerfano Unit #258S Layer Pressures

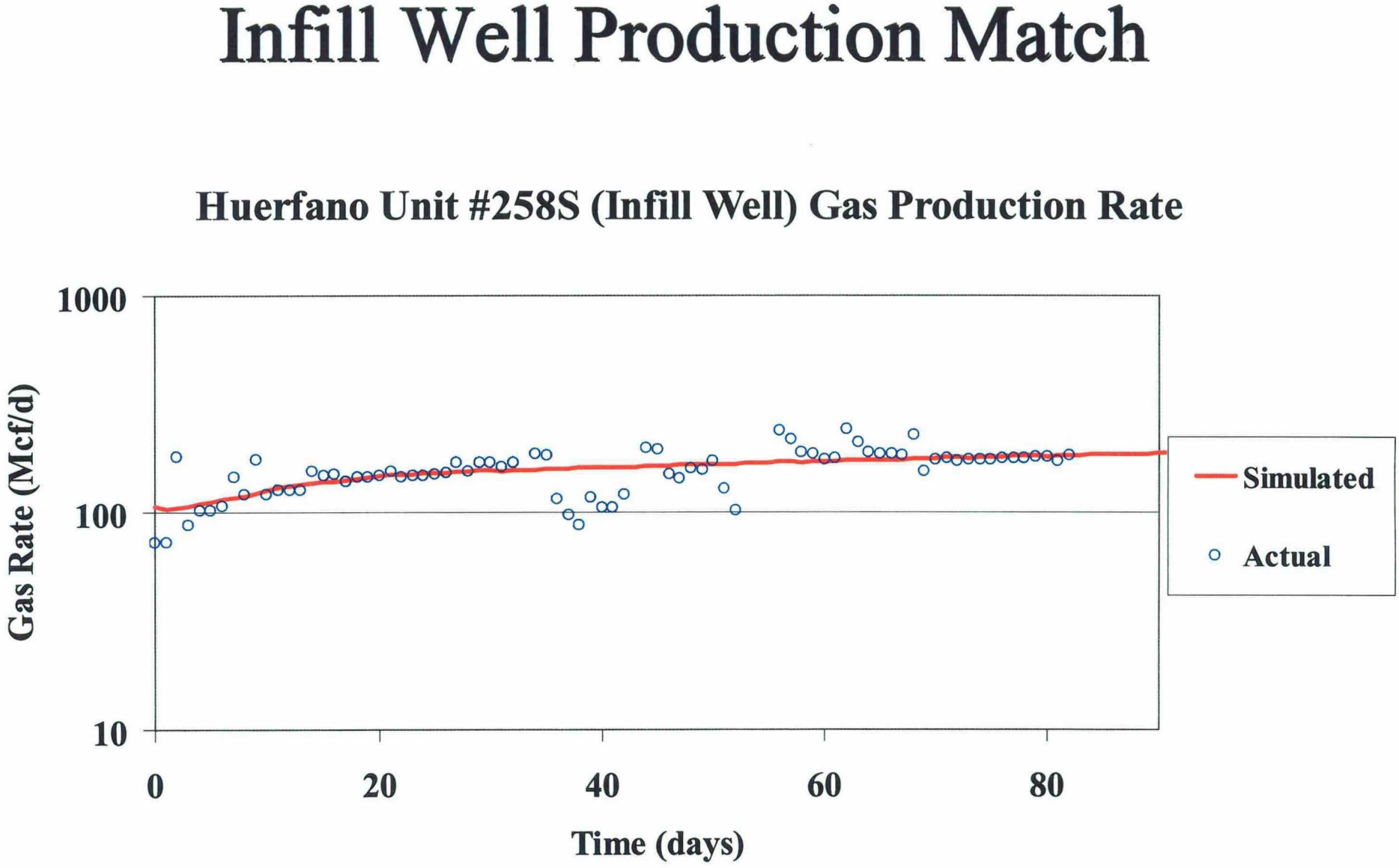


* Thickness At Infill Well **Model Average per 320

Offset Well Flowing Pressure Match

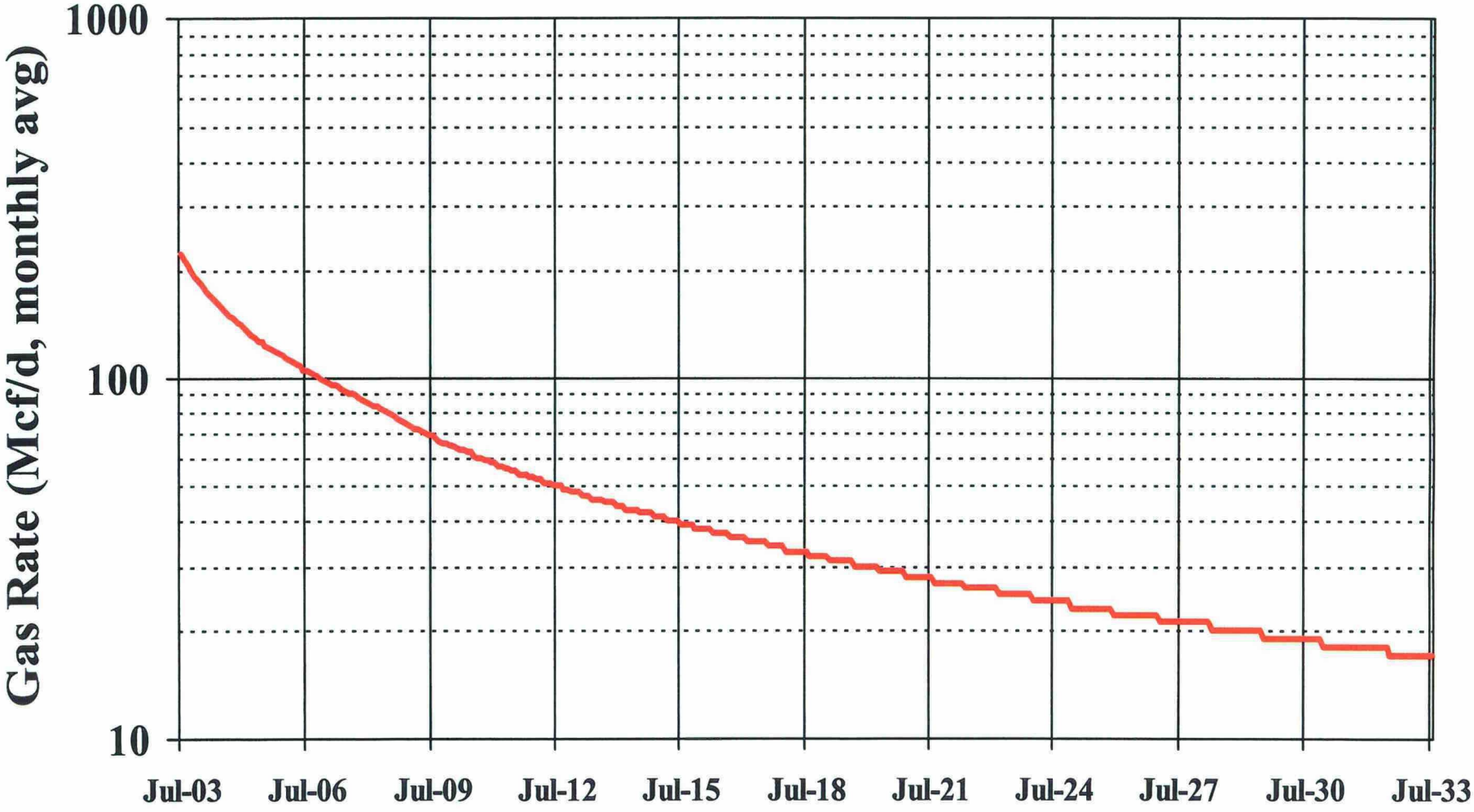


Infill Well Production Match



*Corrected to 24 hour flow rate

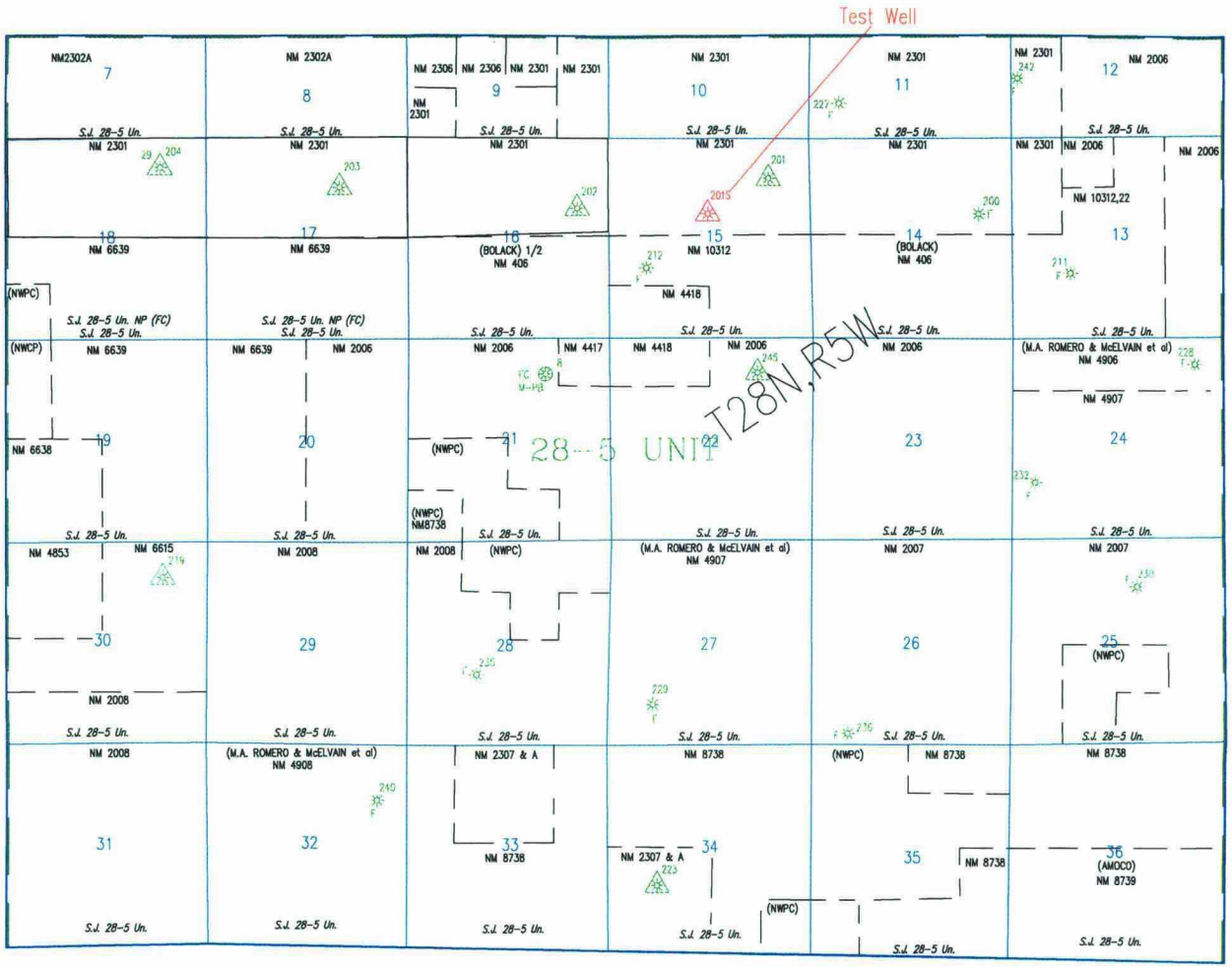
Huerfano Area Infill Well Projection



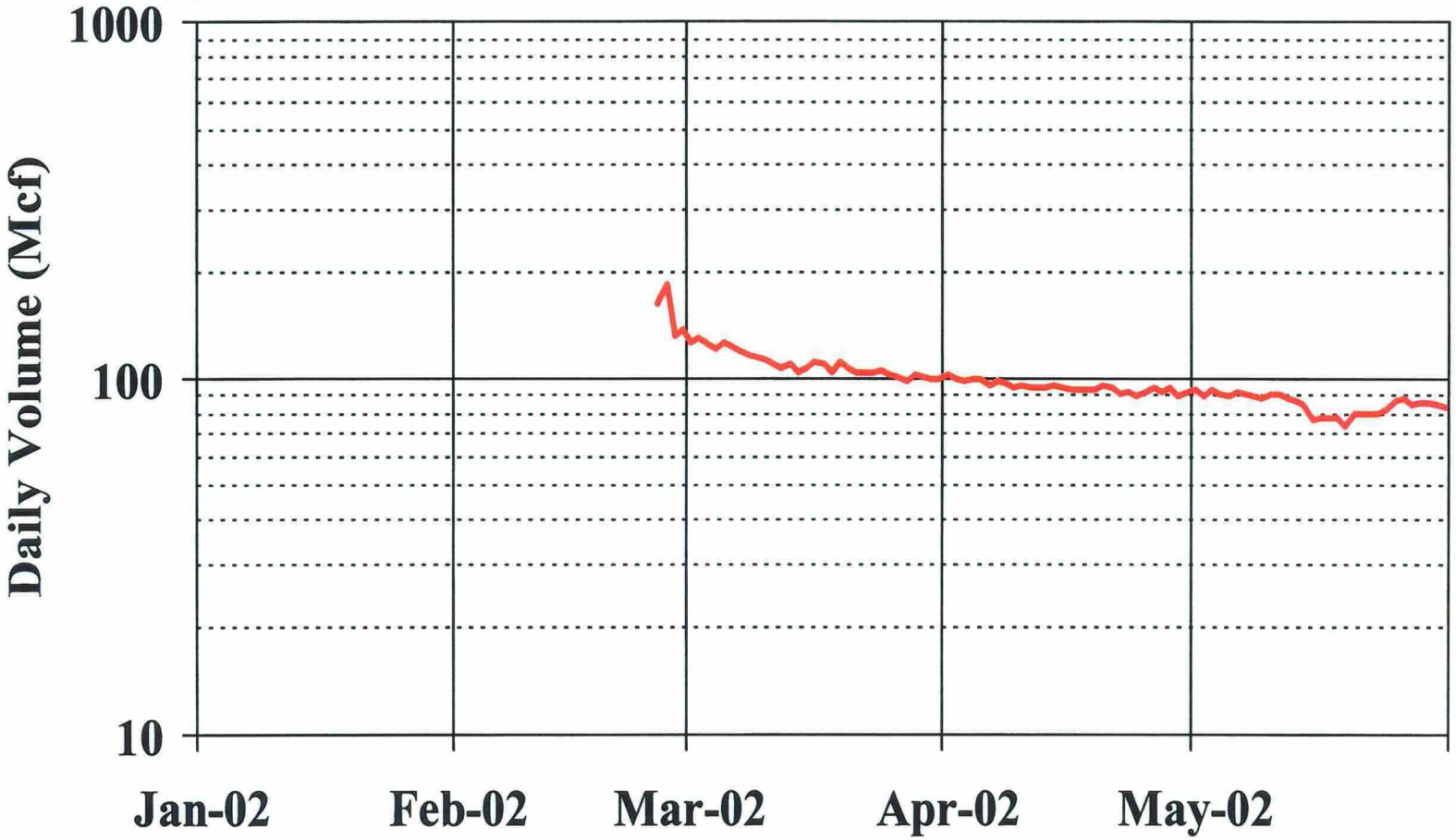
Infill Recompletes Are Economic

- After-tax Present Value = $13.0 M (Disc. @ 10%)
- Primary economic inputs/assumptions:
  - Incremental economics (160-acre case – 320-acre case)
  - Gas price = $3.25/mmbtu (NYMEX)
  - Operating costs = $1060/well/month
  - Capital costs = $200 M
  - GWI/NRI = 100/84

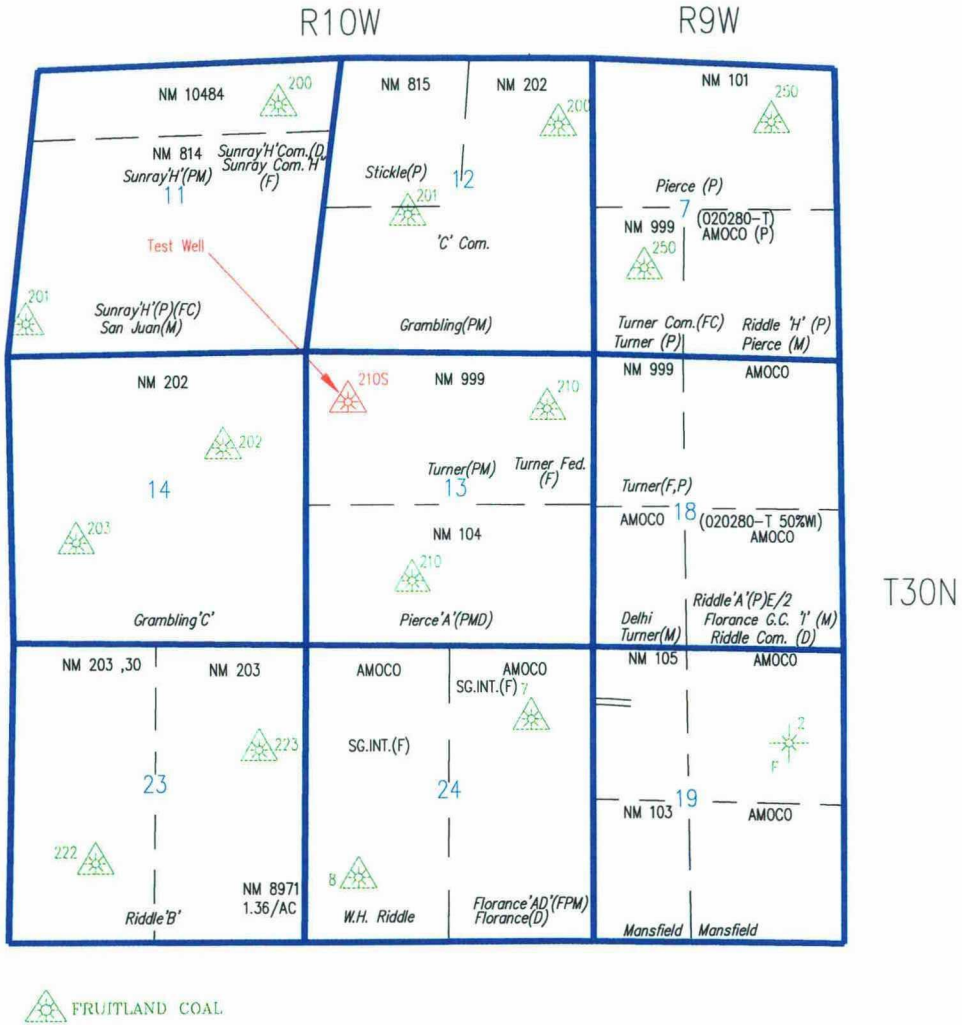
SJ 28-5 Unit #201S Pilot Area



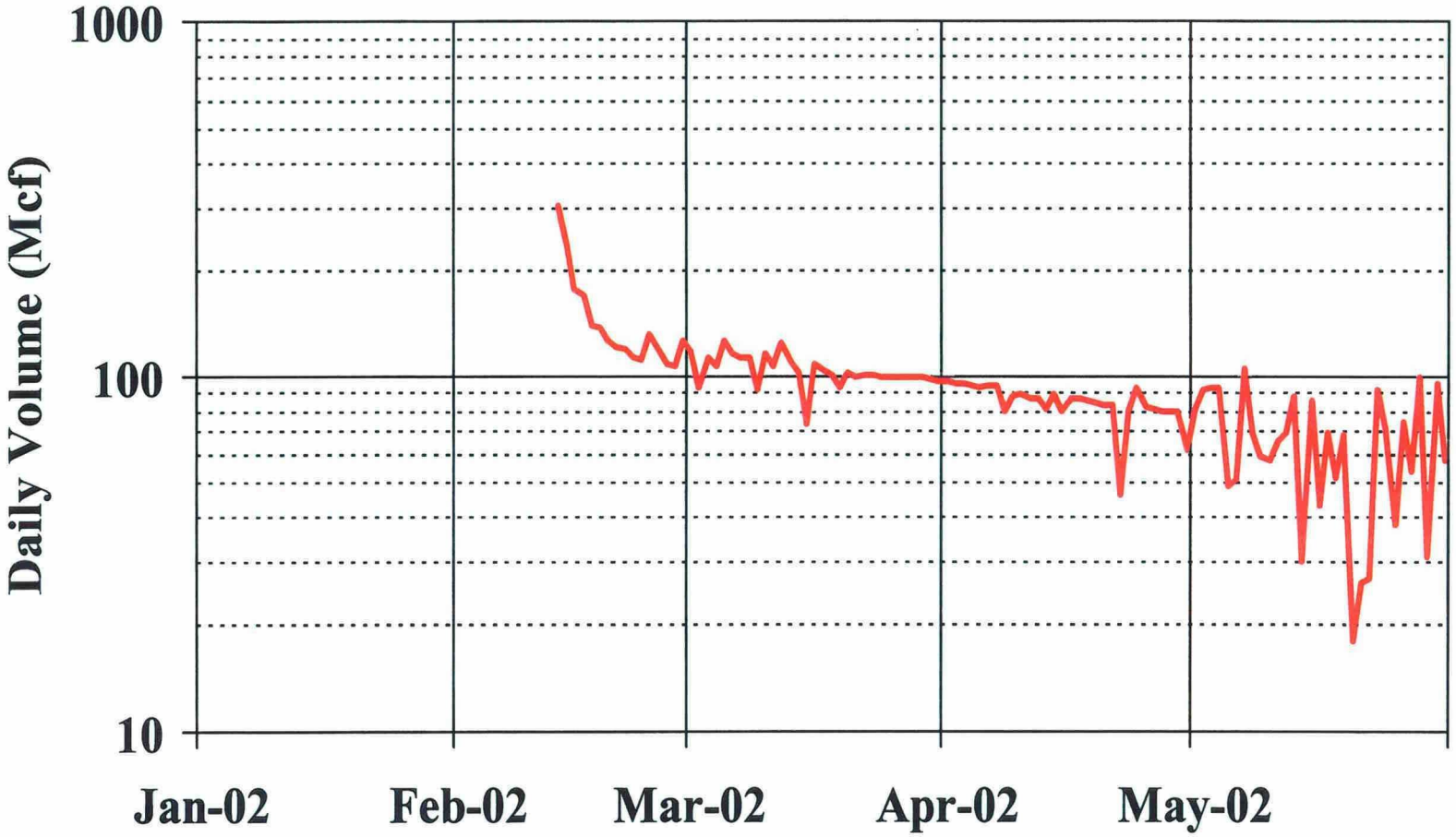
SJ 28-5 Unit #201S



Turner Federal #210S Pilot Area



Turner Federal #210S



Overview of Pilot Reservoir Simulation Procedures

I. Incorporation of pilot well/offset well test data:

1) Pilot well openhole logs used to complete pilot area geologic model – coal-layer thickness and bulk density (16-section)

2) Adsorption isotherm data and coal densities used to develop correlation between isotherm parameters and coal density – OGIP calculations

3) Pilot well multi-layer pressures used as parameter to history-match

4) Pilot well production data used as parameter to history-match

5) Pilot offset well type-curve analysis used to constrain composite permeability in simulation model

Overview of Pilot Reservoir Simulation Procedures Cont'd

II. History-match pilot offset wells (single-well) using (EXCEL®) tank model and type-curve results

III. History-match pilot offset wells (multi-well) using ECLIPSE® numerical reservoir simulator

- Constrained by permeability and gas content vs. coal density relationships
- Constrained by composite permeability from offset wells
- Match multi-layer pressures at infill well
- Match flowing pressures of offset wells

Overview of Pilot Reservoir Simulation Procedures Cont'd

IV. History-match infill well production using ECLIPSE®

V. Use scale-up models (16-section) to forecast infill well incremental and accelerated reserves

- Using history-match reservoir parameters
- 320- and 160-acre wells drilled on regular pattern

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J.T. (Tom) Schmid, Jr. P.E.
Manager - Oil Shale Development

4 June 2003

ChevronTexaco

New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Attn: Ms Lori Wrotenbery, Director - Oil Conservation Division

RE: Case No. 12,888, *de novo*, Application of the Fruitland Coalbed Methane Study Committee to amend Rules 4 and 7 of the Special Rules and Regulations of the Basin-Fruitland Coal (Gas) Pool and for the termination of the Cedar Hill-Fruitland Basal Coal Pool and the concomitant expansion of the Basin-Fruitland Coal (Gas) Pool, Rio Arriba, San Juan, McKinley, and Sandoval Counties, New Mexico, before the Oil Conservation Commission.

Dear Ms Wrotenbery:

Chevron U.S.A. Inc. ("Chevron") and its affiliate, Four Star Oil & Gas Company ("Four Star") agree with the Study Committee's recommendations. We support the above referenced Fruitland Coalbed Methane Infill drilling application. More precisely we support the authorization, under certain restrictions, of a Fruitland Coal operator to drill a second Basin-Fruitland Coalbed Methane well in and produce from an already established 320 acre gas spacing unit for wells located in the pool, based upon an operators' prudent assessment of all relevant data.

Chevron and Four Star further believe this is a prudent approach to developing their fields and leases. The Study Committee has applied technical and logical reasoning to all relevant issues. We believe that the recent technical work done by the Fruitland Coalbed Methane Study Committee and other major San Juan Basin producers, particularly Burlington Resources Oil & Gas Company, BP America Production Company, and Devon Energy Corporation L.P. adequately justifies our position. In our opinion, the approval of this application 1) will promote conservation by assuring a greater ultimate recovery of gas and associated hydrocarbons, 2) will prevent waste by allowing more efficient drainage, and 3) will adequately protect correlative rights through the notice procedures as described in the application and testimony of the Study Committee.

Chevron Ex 1

Chevron, as operator, will actively strive to reduce surface impacts by using new technology to reduce surface disturbance, use existing drillpads and roads where it is economically feasible and will respect landowner concerns regarding their aesthetic values of the lands.

Respectfully submitted this 4th day June 2003 before the New Mexico Oil Conservation Commission.

Sincerely,

J.T. Schmid, Jr.