BURLINGTON RESOURCES
Engineering Summary
Basin-Fruitland Coal Infill Pilot Project
Case # 12651

Current studies underway at Burlington Resources indicate that the relatively low production, underpressured area (UPE) of the Basin-Fruitland Coal Gas Pool may not be adequately draining the current 320-acre proration spacing units. Compared to the more prolific area of the basin (Fairway), estimated recovery factors of original gas in place are extremely low. Initial reservoir pressure testing in T28N-R06W indicated that the majority of existing wells on the current 320-acre spacing units are in pressure communication. Some discrepancies in the data in conjunction with the low predicted recovery factors (when using the entire coal thickness) indicates a distinct possibility that several of the layers are either not contributing to production or may not be laterally continuous.

Therefore, Burlington proposes to drill one additional pilot well per 320-acre spacing unit at five locations throughout the UPE area. These five locations were selected with the intention of capturing a representative sampling of the geological and productive variation observed to date within the UPE. The objective of this proposal will be to drill, complete and produce the pilot wells in a manner similar to the surrounding Fruitland Coal wells in order to adequately evaluate the current level of depletion by layer. Significant testing of the pilot wells will be undertaken to determine potential production differences between the different coal seams encountered in the pilot wells. This will include obtaining adsorption isotherms from cuttings, determining average density values, calculating gas in place by layer, obtaining reservoir pressures and spinner surveys. The pilot project will include basic reservoir simulation of the pilot wells and their immediate offsets.

A summary outlining the basic reservoir engineering and data acquisition steps Burlington intends to take with each pilot well is listed below.

I. Drill the wells, collect cuttings for measuring adsorption isotherms. Run suite of wireline logs to include RHOB (density) measurements. Develop a correlation between langmuir volumes and bulk density.

II. Perforate all coal intervals encountered and break down all perforations to ensure communication with formation. Set bridge plugs and pressure gauges isolating individual coal layers as determined by geology. Record reservoir pressure for each layer.

III. Fracture stimulate wells in a manner consistent with existing offset producers.

IV. Produce wells for 180 days. Run spinner surveys at both 90 and 180 days to determine relative contribution from each layer identified.

V. Use a reservoir simulator in conjunction with data acquired from steps I through IV to history match the observed early time performance of the pilot increased density well.

VI. After a history match of the pilot well performance is achieved, expand the reservoir simulation to include the nearest 4 offset producing coal wells. History match the performance of the offset producing wells and the increased density pilot well.

VII. After a history match of the pilot well and offsets is achieved, use the derived reservoir parameters in an expanded area to simulate reservoir development at various well densities. Use simulation to establish base rates of decline, expected ultimate gas recoveries and incremental reserve adds for both the existing coal wells on 320-acre spacing and for various theoretical increased density well locations.

Fruitland Coal Infill Pilot

Recovery Factor Summary

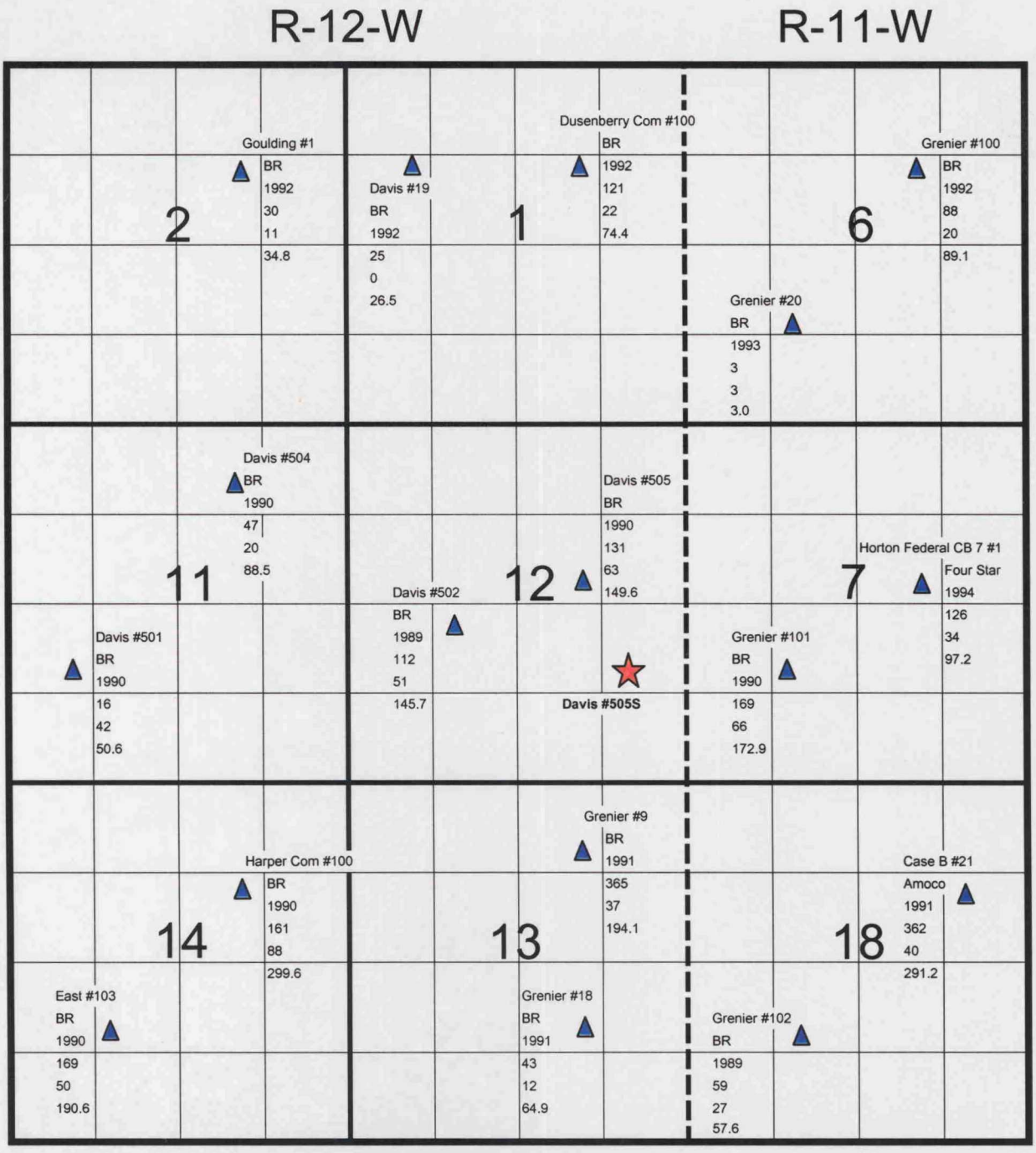
Well Name	EUR (MMcf)	GIP (MMcf)	R_f (%)
Davis #505	180.7	5,661.1	3.2
Lodewick #15	2,118.5	3,093.8	68.5
San Juan 28-5 #201	105.0	6,701.9	1.6
San Juan 28-6 #460	1,138.8	5,930.0	19.1
Turner Federal #210	334.2	5,207.8	6.4

Fruitland Coal Infill Pilot

Production Summary

Well Name	Avg. Initial Rate (Mcfd)	Avg. Current Rate (Mcfd)	Avg. Cum. Production (MMcf)
Davis #505S	194	54	166
Huerfano #258S	202	264	893
San Juan 28-5 #201S	144	73	296
San Juan 28-6 #418S	674	123	623
Turner Federal #210S	113	40	176

Fruitland Coal Infill Pilot Study



Davis #505S
NE/SE Sec 12, T31N, R12W

LEGEND:
Well Name
Operator
Completion Year
Initial Rate (Mcfd)
Current Rate (Mcfd)
Cum. Prod. (MMcf)

Davis #505
for the Davis #505S
Volumetric Recovery Factor Calculation

Gas Content Calculations

Gc = [(Langmuir Vol.) * (Initial Pres.)] / [(Initial Pres.) + (Langmuir Pres.)]

Volumetric Gas-in-Place Calculations

Gas-in-Place (GIP) = (h) * (Drainage area) * (Bulk density) * (Gas content) * 1.3597

Upper and Lower Coals

Langmuir Volume, V_L =	323	(scf/ton)
Initial Reservoir Pressure, P_i =	819	(psia)
Langmuir Pressure, P_L =	661	(psia)
Gas content, Gc =	179	(scf / ton)
Net coal thickness, h =	44	(ft)
Drainage area, A =	320	(acres)
Bulk density =	1.52	(gm/cm^3)
Conversion Factor =	1.3597	[(Mscf) (ton) (cm^3)] / [(ac-ft) (scf) (gm)]
GIP =	5,201,326	Mscf

Middle Coal

Langmuir Volume, V_L =	308	(scf/ton)
Initial Reservoir Pressure, P_i =	819	(psia)
Langmuir Pressure, P_L =	661	(psia)
Gas content, Gc =	170	(scf / ton)
Net coal thickness, h =	4	(ft)
Drainage area, A =	320	(acres)
Bulk density =	1.55	(gm/cm^3)
Conversion Factor =	1.3597	[(Mscf) (ton) (cm^3)] / [(ac-ft) (scf) (gm)]
GIP =	459,788	Mscf

Total GIP = Upper and Basal Coals, Mscf

Total GIP = 5,661,114 Mscf

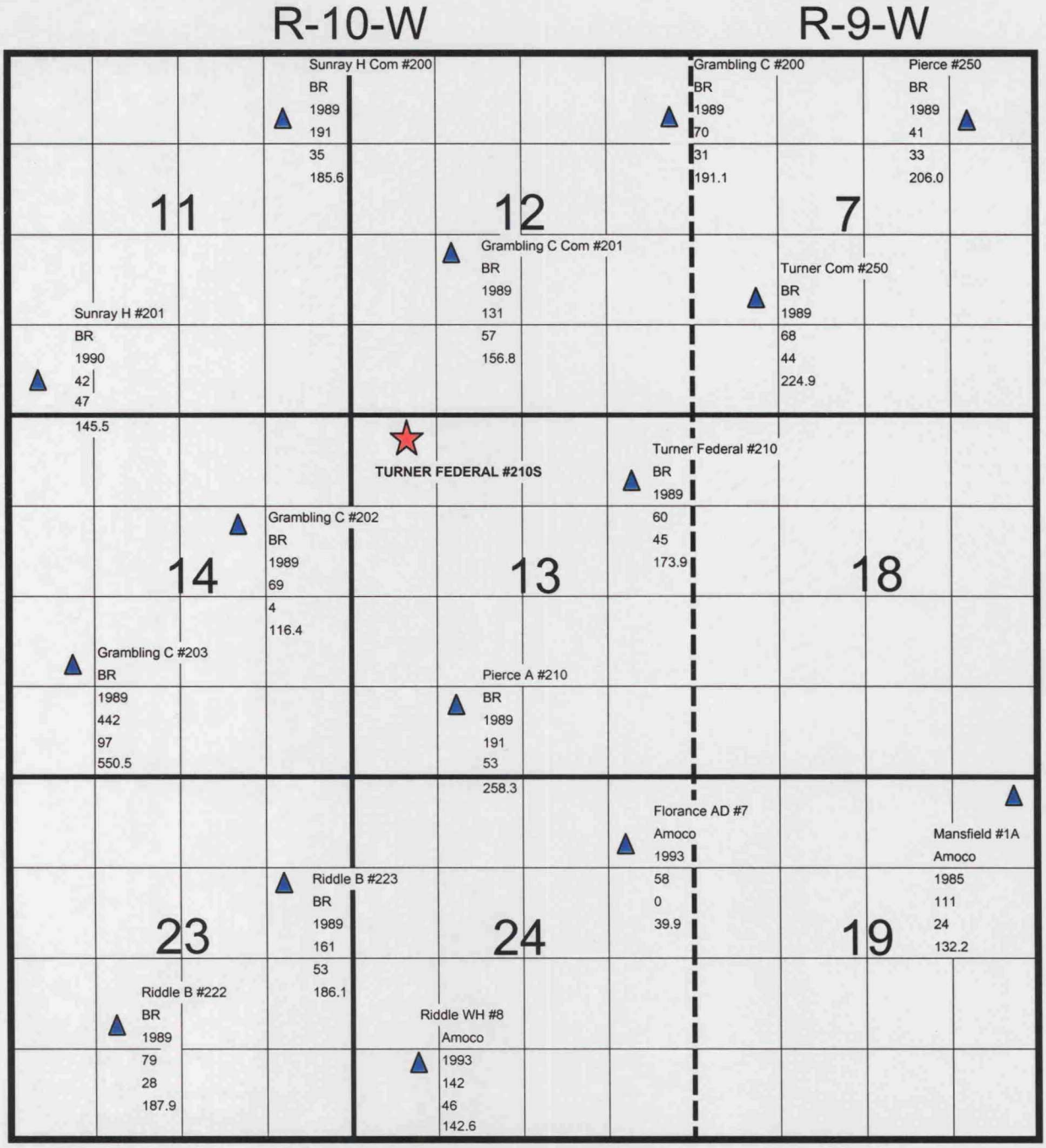
Estimated Ultimate Recovery, EUR = Based on Decline Curve Analysis for the same well

EUR = 180,700 Mscf

Recovery Factor (R_f) = EUR / Total GIP

R_f = 3.2%

Fruitland Coal Infill Pilot Study



Turner Federal #210S
NW/NW, Sec. 13, T30N, R10W

Legend:
Well Name
Operator
Year of Completion
Initial Rate (Mcfd)
Current Rate (Mcfd)
Cum. Prod. (MMcf)

Turner Federal #210
for the Turner Federal #210S
Volumetric Recovery Factor Calculation

Gas Content Calculations

Gc = [(Langmuir Vol.) * (Initial Pres.)] / [(Initial Pres.) + (Langmuir Pres.)]

Volumetric Gas-in-Place Calculations

Gas-in-Place (GIP) = (h) * (Drainage area) * (Bulk density) * (Gas content) * 1.3597

Upper Coal

Langmuir Volume, V_L =	210	(scf/ton)
Initial Reservoir Pressure, P_i =	850	(psia)
Langmuir Pressure, P_L =	661	(psia)
Gas content, Gc =	118	(scf / ton)
Net coal thickness, h =	33	(ft)
Drainage area, A =	320	(acres)
Bulk density =	1.75	(gm/cm^3)
Conversion Factor =	1.3597	[(Mscf) (ton) (cm^3)] / [(ac-ft) (scf) (gm)]
GIP =	2,968,375	Mscf

Basal Coal

Langmuir Volume, V_L =	234	(scf/ton)
Initial Reservoir Pressure, P_i =	850	(psia)
Langmuir Pressure, P_L =	661	(psia)
Gas content, Gc =	132	(scf / ton)
Net coal thickness, h =	23	(ft)
Drainage area, A =	320	(acres)
Bulk density =	1.7	(gm/cm^3)
Conversion Factor =	1.3597	[(Mscf) (ton) (cm^3)] / [(ac-ft) (scf) (gm)]
GIP =	2,239,444	Mscf

Total GIP = Upper and Basal Coals, Mscf

Total GIP = 5,207,819 Mscf

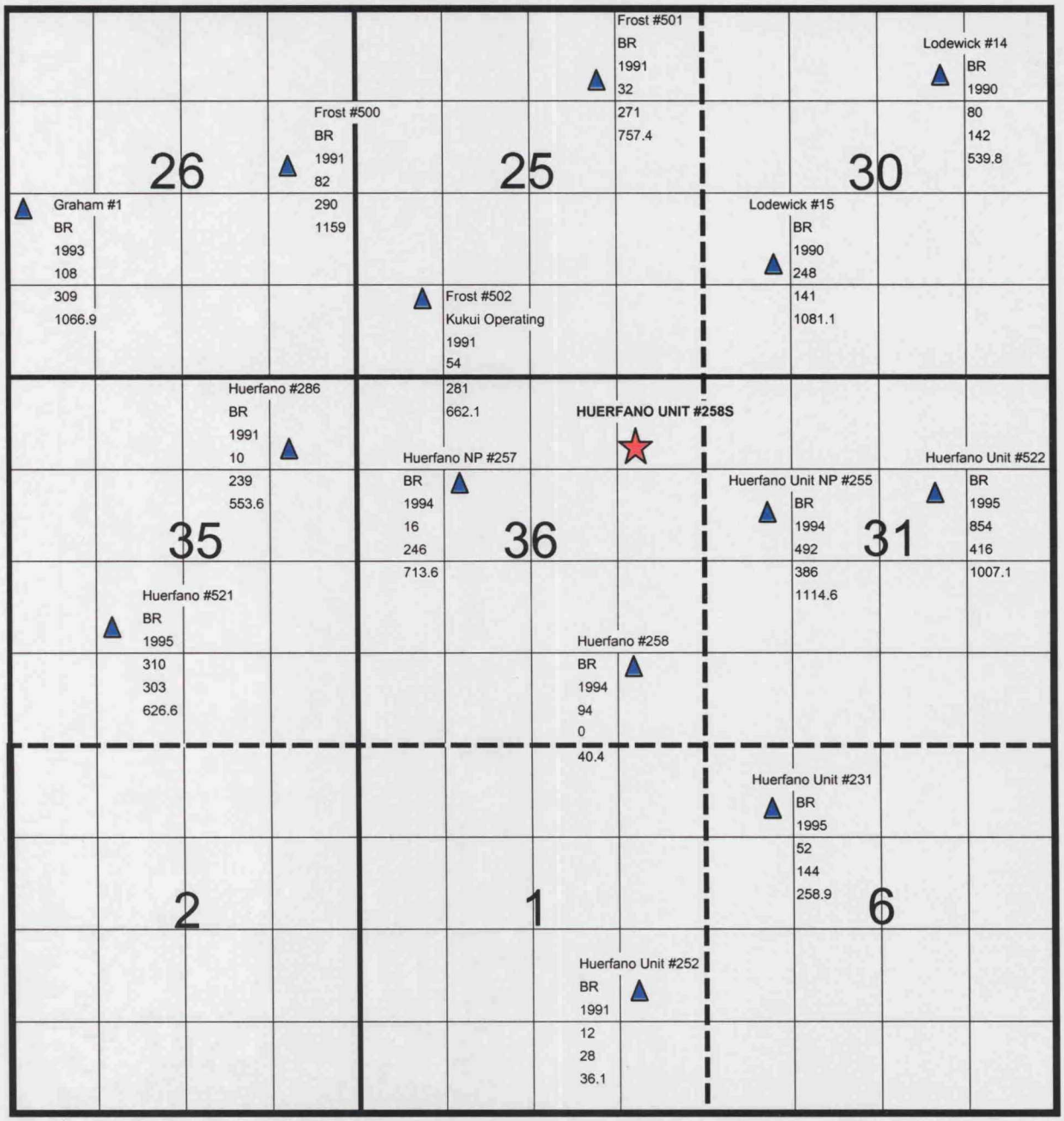
Estimated Ultimate Recovery, EUR = Based on Decline Curve Analysis for the same well

EUR = 334,247 Mscf

Recovery Factor (R_f) = EUR / Total GIP

R_f = 6.4%

Fruitland Coal Infill Pilot Study



Huerfano Unit #258S
NE/NE, Sec. 36, T27N, R10W

Legend:
Well Name
Operator
Date of Completion
Initial Rate (Mcfd)
Current Rate (Mcfd)
Cum. Prod (MMcf)

Lodewick #15
for the Huerfano Unit #258S
Volumetric Recovery Factor Calculation

Gas Content Calculations

Gc = [(Langmuir Vol.) * (Initial Pres.)] / [(Initial Pres.) + (Langmuir Pres.)]

Volumetric Gas-in-Place Calculations

Gas-in-Place (GIP) = (h) * (Drainage area) * (Bulk density) * (Gas content) * 1.3597

Upper Coal

Langmuir Volume, V_L =	224	(scf/ton)
Initial Reservoir Pressure, P_i =	486	(psia)
Langmuir Pressure, P_L =	661	(psia)
Gas content, Gc =	95	(scf / ton)
Net coal thickness, h =	20	(ft)
Drainage area, A =	320	(acres)
Bulk density =	1.67	(gm/cm^3)
Conversion Factor =	1.3597	[(Mscf) (ton) (cm^3)] / [(ac-ft) (scf) (gm)]
GIP =	1,379,305	Mscf

Basal Coal

Langmuir Volume, V_L =	307	(scf/ton)
Initial Reservoir Pressure, P_i =	483	(psia)
Langmuir Pressure, P_L =	661	(psia)
Gas content, Gc =	130	(scf / ton)
Net coal thickness, h =	20	(ft)
Drainage area, A =	320	(acres)
Bulk density =	1.52	(gm/cm^3)
Conversion Factor =	1.3597	[(Mscf) (ton) (cm^3)] / [(ac-ft) (scf) (gm)]
GIP =	1,714,455	Mscf

Total GIP = Upper and Basal Coals, Mscf

Total GIP = 3,093,761 Mscf

Estimated Ultimate Recovery, EUR = Based on Decline Curve Analysis for the same well

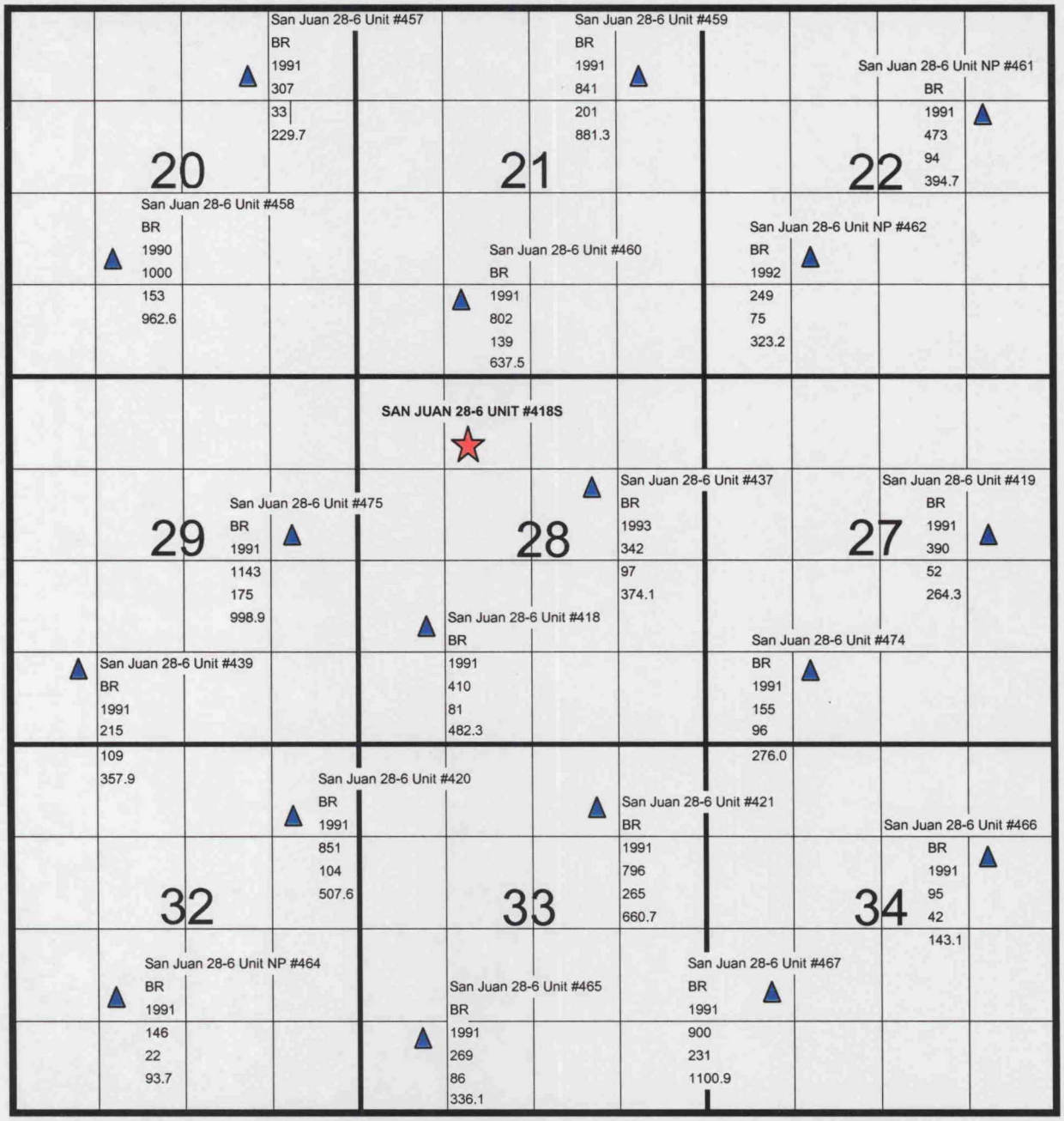
EUR = 2,118,500 Mscf

Recovery Factor (R_f) = EUR / Total GIP

R_f = 68.5%

Fruitland Coal Infill Pilot Study

R-6-W



T-28-N

San Juan 28-6 Unit #418S
NE/NW, Sec. 28, T28N, R6W

Legend:
Well Name
Operator
Year of Completion
Initial Rate (Mcfd)
Current Rate (Mcfd)
Cum. Prod. (MMcf)

San Juan 28-6 #460
for the San Juan 28-6 #418S
Volumetric Recovery Factor Calculation

Gas Content Calculations

Gc = [(Langmuir Vol.) * (Initial Pres.)] / [(Initial Pres.) + (Langmuir Pres.)]

Volumetric Gas-in-Place Calculations

Gas-in-Place (GIP) = (h) * (Drainage area) * (Bulk density) * (Gas content) * 1.3597

Upper Coal

Langmuir Volume, V_L =	242	(scf/ton)
Initial Reservoir Pressure, P_i =	1030	(psia)
Langmuir Pressure, P_L =	661	(psia)
Gas content, Gc =	147	(scf / ton)
Net coal thickness, h =	18	(ft)
Drainage area, A =	320	(acres)
Bulk density =	1.69	(gm/cm^3)
Conversion Factor =	1.3597	[(Mscf) (ton) (cm^3)] / [(ac-ft) (scf) (gm)]
GIP =	1,951,018	Mscf

Basal Coal

Langmuir Volume, V_L =	304	(scf/ton)
Initial Reservoir Pressure, P_i =	1030	(psia)
Langmuir Pressure, P_L =	661	(psia)
Gas content, Gc =	185	(scf / ton)
Net coal thickness, h =	32	(ft)
Drainage area, A =	320	(acres)
Bulk density =	1.56	(gm/cm^3)
Conversion Factor =	1.3597	[(Mscf) (ton) (cm^3)] / [(ac-ft) (scf) (gm)]
GIP =	4,021,933	Mscf

Total GIP = Upper and Basal Coals, Mscf

Total GIP = 5,972,951 Mscf

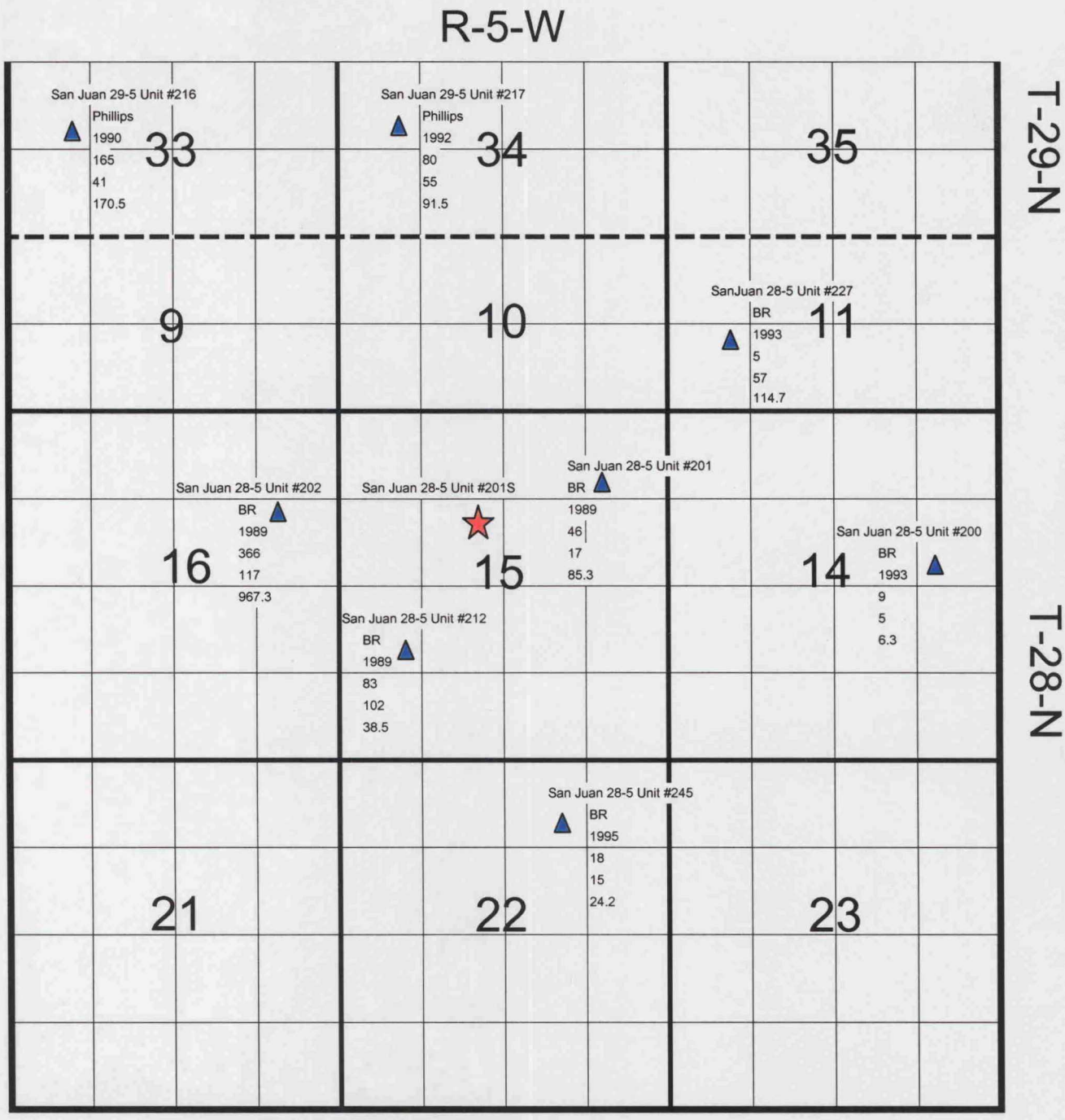
Estimated Ultimate Recovery, EUR = Based on Decline Curve Analysis for the same well

EUR = 1,138,770 Mscf

Recovery Factor (R_f) = EUR / Total GIP

R_f = 19.1%

Fruitland Coal Infill Pilot Study



San Juan 28-5 Unit #201S
SE/NW Sec 15, T28N, R5W

LEGEND:
Well Name
Operator
Completion Date
Initial Rate (Mcfd)
Current Rate (Mcfd)
Cum. Prod. (MMcf)

San Juan 28-5 #201
for the San Juan 28-5 #201S
Volumetric Recovery Factor Calculation

Gas Content Calculations

Gc = [(Langmuir Vol.) * (Initial Pres.)] / [(Initial Pres.) + (Langmuir Pres.)]

Volumetric Gas-in-Place Calculations

Gas-in-Place (GIP) = (h) * (Drainage area) * (Bulk density) * (Gas content) * 1.3597

All Coal

Langmuir Volume, V_L =	260	(scf/ton)
Initial Reservoir Pressure, P_i =	1181	(psia)
Langmuir Pressure, P_L =	661	(psia)
Gas content, Gc =	167	(scf / ton)
Net coal thickness, h =	56	(ft)
Drainage area, A =	320	(acres)
Bulk density =	1.65	(gm/cm^3)
Conversion Factor =	1.3597	[(Mscf) (ton) (cm^3)] / [(ac-ft) (scf) (gm)]
GIP =	6,701,911	Mscf

Total GIP = All Coals

Total GIP = 6,701,911 Mscf

Estimated Ultimate Recovery, EUR = Based on Decline Curve Analysis for the same well

EUR = 105,000 Mscf

Recovery Factor (R_f) = EUR / Total GIP

R_f = 1.6%