EXHIBIT(s)

FOR
ORDER NO(s).

COGCC

1 - 127

369 - 5

386 - 4

399 - 5

429 - 10

DELTA
PETROLEUM
CORPORATION

Buzzard Creek, Sheep Creek, Vega, Brush Creek, and Middleton Creek Fields

Mesaverde Group
Mesa County, Colorado

Request for an order to allow the equivalent of one well per 10 acres, with the permitted well to be located no closer than 100 feet from the lease line, for certain lands in Townships 8 and 9 South, Ranges 92 and 93 West, 6th P.M.

Cause Nos. 1, 369, 386, 399 and 429
Docket Number 0809-AW-25

Administrative Hearing: September 9, 2008

Delta Petroleum Corporation
370 Seventeenth Street, Suite 4300
Denver, Colorado 80202

Table of Contents

BEFORE THE OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF COLORADO

IN THE MATTER OF THE PROMULGATION AND ESTABLISHMENT OF FIELD RULES TO GOVERN OPERATIONS IN THE BUZZARD CREEK, SHEEP CREEK, VEGA, BRUSH CREEK, AND MIDDLETON CREEK FIELDS, MESA COUNTY, COLORADO	)))))	CAUSE NOS. 1, 369, 386, 399 and 429 DOCKET NO. 0809-AW-25

NOTICE OF HEARING

TO ALL INTERESTED PARTIES AND TO WHOM IT MAY CONCERN:

Rule 318.a. of the Rules and Regulations of the Commission requires that wells drilled in excess of 2,500 feet in depth be located not less than 600 feet from any lease line, and located not less than 1,200 feet from any other producible or drilling oil or gas well when drilling to the same common source of supply. Certain lands in Townships 8 and 9 South, Ranges 92 and 93 West, 6th P.M. are subject to this Rule.

On June 21, 1982, the Commission issued Order No. 386-1 which, among other things, established 640-acre drilling and spacing units for certain lands, including the Section 17, Township 9 South, Range 92 West, 6th P.M., for the production of gas and associated hydrocarbons from the Mesaverde Formation, with the permitted well to be located no closer than 600 feet from the boundaries of the section upon which it is located. On November 27, 2006, the Commission issued Order No. 386-2 which, among other things, allowed the equivalent of one (1) well per 10 acres for Sections 20 and 21, Township 9 South, Range 92 West, 6th P.M., for the production of gas from the Mesaverde Formation.

On June 5, 2006, the Commission issued Order No. 429-5 which, among other things, allowed the equivalent of one (1) well per 10 acres for certain lands, including portions of Sections 31, 32 and 33 of Township 9 South, Range 93 West, 6th P.M., for the production of gas and associated hydrocarbons from the Mesaverde Formation, with the permitted well to be located no closer than 100 feet from the boundaries of the lease line. On December 12, 2007, the Commission issued Order No. 429-6 which, among other things, allowed the equivalent of one (1) well per 10 acres for certain lands, including portions of Sections 18, 19, and 30 of Township 9 South, Range 93 West, 6th P.M., for the production of gas and associated hydrocarbons from the Mesaverde Formation, with the permitted well to be located no closer than 100 feet from the boundaries of the lease line.

On February 25, 2008, the Commission issued Order Nos. 1-124, 369-4 and 399-4 which, among other things, allowed the equivalent of one (1) well per 10 acres for certain lands, including portions of Sections 6, 7, 18 and 19 of Township 9 South, Range 92 West, 6th P.M., and portions of Sections 1, 13-14, 20-22, 23-28, 29 and 33-36 of Township 9 South, Range 93 West, 6th P.M., for the production of gas and associated hydrocarbons from the Williams Fork and Iles Formations, with the permitted well to be located no closer than 100 feet from the boundaries of the lease line.

On July 23, 2008, Delta Petroleum Corporation, by its attorney, filed with the Commission a verified application for an order affecting the below-listed application lands as further described herein, for the production of gas and associated hydrocarbons from the Williams Fork and Iles Formations:

Township 8 South, Range 92 West, 6th P.M.
Section 30: That part of Tract 59 in Section 30 (80.00 acres) and that part of Tract 60 in Section 30 (39.18 acres) Containing 119.18 acres, more or less

Section 31: That part of Tract 59 in Section 31 (80.00 acres), that part of Tract 60 in Section 31 (4.95 acres) and that part of Tract 62 in Section 31 (50.34 acres) Containing 135.29 acres, more or less

Township 8 South, Range 93 West, 6th P.M.
Section 25: That part of Tract 60 in Section 25 (54.72 acres) Containing 54.72 acres, more or less

Section 36: That part of Tract 58 in Section 36 (160.00 acres), that part of Tract 60 in Section 36 (61.15 acres) and that part of Tract 62 in Section 36 (109.66 acres) Containing 330.81 acres, more or less

Township 9 South, Range 92 West, 6th P.M.
Section 17: All
Containing 640.00 acres, more or less

Township 9 South, Range 93 West, 6th P.M.

Section 1:	SW¼, SW¼ SE¼, and SE¼ SE¼ nka Lot 8 (21.35 acres) Containing 221.35 acres, more or less
Section 2:	All: Lot 1 (40.22 acres), Lot 2 (40.27 acres), Lot 3 (40.33 acres), Lot 4 (40.38 acres), S½ N½, SW¼ and SE¼ Containing 641.20 acres, more or less
Section 3:	Lot 1 (40.40 acres), Lot 2 (40.40 acres), Lot 3 (40.40 acres), Lot 4 (40.40 acres), S½ N½, and S½ Containing 641.60 acres, more or less
Section 4:	All: Lot 1 (40.39 acres), Lot 2 (40.36 acres), Lot 3 (40.34 acres), Lot 4 (40.31 acres), S½ N½, and S½ Containing 641.40 acres, more or less
Section 5:	All: Lot 1 (40.42 acres), Lot 2 (40.65 acres), Lot 3 (40.89 acres), Lot 4 (41.12 acres), S½ N½, and S½ Containing 643.08 acres, more or less
Section 6:	All: Lot 1 (41.08 acres), Lot 2 (40.81 acres), S½ NE¼ and SE¼ Containing 321.89 acres, more or less
Section 7:	E½ Containing 320.00 acres, more or less
Section 8:	All Containing 640.00 acres, more or less
Section 9:	All Containing 640.00 acres, more or less
Section 10:	All: N½ N½, SW¼ NE¼, S½ NW¼, W½ SW¼, NE¼ SW¼, SE¼ SW¼, SE¼ NE¼, NW¼ SE¼, NE¼ SE¼, and S½ SE¼ Containing 640.00 acres, more or less
Section 11:	All: N½ NW¼, NE¼, S½ NW¼, and S½ Containing 640.00 acres, more or less
Section 12:	All Containing 640.00 acres, more or less
Section 13:	N½ and N½ S½ Containing 480.00 acres, more or less
Section 14:	N½, SW¼, N½ SE¼, and SW¼ SE¼ Containing 600.00 acres, more or less
Section 15:	All Containing 640.00 acres, more or less
Section 16:	All: W½ NW¼, NE¼ NW¼, NW¼ NE¼, NE¼ NE¼, S½ NE¼, SE¼ NW¼, and S½ Containing 640.00 acres, more or less
Section 17:	All: W½, NE¼, and SE¼ Containing 640.00 acres, more or less
Section 18:	E½ Containing 320.00 acres, more or less
Section 19:	All: Lot 1 (41.32 acres), Lot 2 (41.24 acres), Lot 3 (41.16 acres), NE¼ NW¼, and NE¼ Containing 323.72 acres, more or less
Section 20:	W½ and NE¼

Containing 480.00 acres, more or less

Section 21: N½
Containing 320.00 acres, more or less

Section 22: N½ N½
Containing 160.00 acres, more or less

Section 29: W½ W½ and SE¼ SW¼
Containing 200.00 acres, more or less

Section 33: SE¼ NW¼, SW¼ NE¼ and NW¼ SE¼
Containing a total of 120.00 acres, more or less

Applicant is requesting an order to allow the equivalent of one (1) well per 10 acres for the below-listed lands, for the production of gas and associated hydrocarbons from the Williams Fork and Iles Formations:

10-ACRE DENSITY LANDS

Township 9 South, Range 92 West, 6th P.M.

Section 17: All
Containing 640.00 acres, more or less

Township 9 South, Range 93 West, 6th P.M.

Section 2: Lot 1 (40.22 acres), Lot 2 (40.27 acres), Lot 3 (40.33 acres), Lot 4 (40.38 acres), S½ N½, SW¼
Containing 481.20 acres, more or less

Section 3: All: Lot 1 (40.40 acres), Lot 2 (40.40 acres), Lot 3 (40.40 acres), Lot 4 (40.40 acres), S½ NE¼, S½ NW, SW¼, SE¼
Containing 641.60 acres, more or less

Section 4: All: Lot 1 (40.39 acres), Lot 2 (40.36 acres), Lot 3 (40.34 acres), Lot 4 (40.31 acres), S½ N½, S½
Containing 641.40 acres, more or less

Section 5: All: Lot 1 (40.42 acres), Lot 2 (40.65 acres), Lot 3 (40.89 acres), Lot 4 (41.12 acres), S½ N½, S½
Containing 643.08 acres, more or less

Section 6: Lot 1 (41.08 acres), Lot 2 (40.81 acres), S½ NE¼, SE¼
Containing 321.89 acres, more or less

Section 7: E½
Containing 320.00 acres, more or less

Section 8: All
Containing 640.00 acres, more or less

Section 9: All
Containing 640.00 acres, more or less

Section 10: N½ N½, SW¼ NE¼, S½ NW¼, W½ SW¼, NE¼ SW¼, NW¼ SE¼
Containing 440.00 acres, more or less

Section 11: N½ NW¼
Containing 80.00 acres, more or less

Section 16: W½ NW¼, NE¼ NW¼, NW¼ NE¼
Containing 160.00 acres, more or less

Section 17: W½, NE¼
Containing 480.00 acres, more or less

Section 18: E½
Containing 320.00 acres, more or less

Section 19:	Lot 1 (41.32 acres), Lot 2 (41.24 acres), Lot 3 (41.16 acres), NE¼ NW¼, NE¼ Containing 323.72 acres, more or less
Section 20:	W½ Containing 320.00 acres, more or less
Section 29:	W½ W½, SE¼ SW¼ Containing 200.00 acres, more or less
Section 33:	SE¼ NW¼, SW¼ NE¼, NW¼ SE¼ Containing 120.00 acres, more or less

All future Williams Fork Formation and Iles Formation wells to be drilled upon the above-described lands should be located downhole anywhere within said lands but no closer than 100 feet from a lease line or the boundaries of said lands without exception being granted by the Director of the Oil and Gas Conservation Commission. In cases where the above-described lands abut or corner lands in respect of which the Commission has not at the time of drilling permit application granted the right to drill 10-acre density Williams Fork Formation and Iles Formation wells, the well should be located downhole no closer than 200 feet from the boundary or boundaries of said lands so abutting or cornering such lands without exception being granted by the Director of the Oil and Gas Conservation Commission.

Except as previously authorized by order of the Commission, wells to be drilled on the above-described lands will be drilled from the surface either vertically or directionally from no more than one pad located on a given quarter quarter section (or lots or parcels approximately equivalent thereto) unless exception is granted by the Director of the Oil and Gas Conservation Commission pursuant to application made for such exception. In addition, all wells drilled to the Iles Formation will be drilled only in connection with the drilling of Williams Fork Formation wells.

In addition, the Applicant is requesting an order that all future permitted wells located in the Middleton Creek Federal Unit and the Buzzard Creek Federal Unit as described below, be located no closer than 100 feet from the exterior boundary of the federal units (or lease line if applicable), without exception granted by the Commission. In cases where the Middleton Creek Federal Unit lands or Buzzard Creek Federal Unit lands abut or corner lands where the Commission has not, at the time of the drilling permit application, granted the right to drill 10-acre density Williams Fork Formation or Iles Formation of the Mesaverde Group wells, the wells should be located downhole no closer than 200 feet from the boundary or boundaries of the federal units or drilling unit abutting or cornering such lands (or lease line if applicable), without exception granted by the Commission.

MIDDLETON CREEK FEDERAL UNIT LANDS

Township 8 South, Range 92 West, 6th P.M.

Section 30:	That part of Tract 59 in Section 30 (80.00 acres) and that part of Tract 60 in Section 30 (39.18 acres) Containing 119.18 acres, more or less
Section 31:	That part of Tract 59 in Section 31 (80.00 acres), that part of Tract 60 in Section 31 (4.95 acres), and that part of Tract 62 in Section 31 (50.34 acres) Containing 135.29 acres, more or less

Township 8 South, Range 93 West, 6th P.M.

Section 25:	That part of Tract 60 in Section 25 (54.72 acres) Containing 54.72 acres, more or less
Section 36:	That part of Tract 58 in Section 36 (160.00 acres), that part of Tract 60 in Section 36 (61.15 acres), and that part of Tract 62 in Section 36 (109.66 acres) Containing 330.81 acres, more or less

BUZZARD CREEK FEDERAL UNIT LANDS

Township 9 South, Range 93 West, 6th P.M.

Section 1:	SW¼, SW¼ SE¼, SE¼ SE¼ nka Lot 8 (21.35 acres) Containing 221.35 acres, more or less
Section 2:	SE¼ Containing 160.00 acres, more or less

Section 10:	SE¼ NE¼, SE¼ SW¼, NE¼ SE¼, S½ SE¼ Containing 200.00 acres, more or less
Section 11:	NE¼, S½ NW¼, S½ Containing 560.00 acres, more or less
Section 12:	All Containing 640.00 acres, more or less
Section 13:	N½, N½ S½ Containing 480.00 acres, more or less
Section 14:	N½, SW¼, N½ SE¼, SW¼ SE¼ Containing 600.00 acres, more or less
Section 15:	All Containing 640.00 acres, more or less
Section 16:	NE¼ NE¼, S½ NE¼, SE¼ NW¼, S½ Containing 480.00 acres, more or less
Section 17:	SE¼ Containing 160.00 acres, more or less
Section 20:	NE¼ Containing 160.00 acres, more or less
Section 21:	N½ Containing 320.00 acres, more or less
Section 22:	N½ N½ Containing 160.00 acres, more or less

NOTICE IS HEREBY GIVEN, that the Oil and Gas Conservation Commission of the State of Colorado, pursuant to the above, has scheduled the above-entitled matter for hearing on:

Date:	Monday, September 22, 2008 Tuesday, September 23, 2008
Time:	9:00 a.m.
Place:	Suite 801, The Chancery Building 1120 Lincoln Street Denver, Colorado 80203

In accordance with the Americans with Disabilities Act, if any party requires special accommodations as a result of a disability for this hearing, please contact Margaret Humecki at (303) 894-2100 ext. 139, prior to the hearing and arrangements will be made.

Pursuant to said hearing in the above-entitled matter at the time and place aforesaid, or at any adjourned meeting, the Commission will enter such orders as it deems appropriate to protect the health, safety and welfare of the public and to prevent the waste of oil and gas, either or both, in the operations of said field, and to carry out the purposes of the statute.

In accordance with Rule 509., any interested party desiring to protest the granting of the application or to intervene on the application should file with the Commission a written protest or intervention no later than September 8, 2008, briefly stating the basis of the protest or intervention. Such interested party shall, at the same time, serve a copy of the protest or intervention to the person filing the application. An original and 13 copies shall be filed with the Commission. **Anyone who files a protest or intervention must be able to participate in a prehearing conference during the week of September 8, 2008.** Pursuant to Rule 503.f., if a party who has received notice under Rule 503.b. wishes to receive further pleadings in the above-referenced matter, that party must file a protest or intervention in accordance with these rules. In accordance with the practices of the Commission, should no protests or interventions be filed in this matter by **September 8, 2008, the Applicant may request that an administrative hearing be scheduled during the week of September 8, 2008.** In the alternative, pursuant to Rule 511.b., if the matter is uncontested, the applicant may request, and the Director may recommend approval on the basis of the merits of the verified application and the supporting exhibits.

IN THE NAME OF THE STATE OF COLORADO

OIL AND GAS CONSERVATION COMMISSION
OF THE STATE OF COLORADO

By _____
Patricia C. Beaver, Secretary

Dated at Suite 801
1120 Lincoln Street
Denver, Colorado 80203
August 21, 2008

Attorneys for Applicant:
Michael J. Wozniak/Susan L. Aldridge
Beatty & Wozniak, P.C.
216 16th Street, Suite 1100
Denver, CO 80202
(303) 407-4499

Sheryl A. Olson, CPL
Land Testimony
Cause Nos. 1, 369, 386, 399 and 429, Docket No. 0809-AW-25
Delta Petroleum Corporation

IN THE MATTER OF THE APPLICATION OF DELTA PETROLEUM CORPORATION FOR AN ORDER ESTABLISHING DENSITY AND WELL LOCATION RULES FOR THE WILLIAMS FORK AND ILES FORMATIONS (INCLUDING BUT NOT LIMITED TO THE ROLLINS, COZZETTE AND CORCORAN) OF THE MESAVERDE GROUP FOR CERTAIN DESCRIBED LANDS IN THE BUZZARD CREEK UNIT AND FIELD AND SHEEP CREEK FIELD, and the MIDDLETON CREEK UNIT, MESA COUNTY, COLORADO

My name is Sheryl A. Olson. I am a Land Advisor for Delta Petroleum Corporation. I am familiar with the Application Lands. A copy of my curriculum vitae is enclosed in the exhibit booklet submitted by the Applicant. The below mentioned Exhibits are true and correct to the best of my knowledge and belief and were prepared under my supervision and control.

The Application Lands covered in this Application are described as follows:

Township 8 South, Range 92 West
Section 30: That part of Tract 59 in Sec 30 (80.00 acres), That part of Tract 60 in Sec 30 (39.18 acres)
Containing 119.18 acres, more or less.

Section 31: That part of Tract 59 in Sec 31 (80.00 acres), That part of Tract 60 in Sec 31 (4.95 acres), that part of Tract 62 in Sec 31 (50.34 acres)
Containing 135.29 acres, more or less.

Township 8 South, Range 93 West
Section 25: That part of Tract 60 in Sec 25 (54.72 acres)
Containing 54.72 acres, more or less.

Section 36: That part of Tract 58 in Sec 36 (160.00 acres), That part of Tract 60 in Sec 36 (61.15 acres); that part of Tract 62 in Sec 36 (109.66 acres)
Containing 330.81 acres, more or less.

Township 9 South, Range 92 West
Section 17: ALL
Containing 640.00 acres, more or less

Township 9 South, Range 93 West
Section 1: SW¼, SW¼SE¼, SE¼SE¼ NKA Lot 8 (21.35 acres)
Containing 221.35 acres, more or less.

Section 2: Lots 1 (40.22 acres), 2 (40.27 acres), 3 (40.33 acres), 4 (40.38 acres), S½N½, SW¼, SE¼ (ALL)
Containing 641.20 acres, more or less.

Section 3: Lots 1 (40.40 acres), 2 (40.40 acres), 3 (40.40 acres), 4 (40.40 acres), S½N½, S½ (ALL)
Containing 641.60 acres, more or less.

Section 4: Lots 1 (40.39 acres), 2 (40.36 acres), 3 (40.34 acres), 4 (40.31 acres), S½N½, S½ (ALL)
Containing 641.40 acres, more or less.

Section 5: Lots 1 (40.42 acres), 2 (40.65 acres), 3 (40.89 acres), 4 (41.12 acres), S½N½, S½ (ALL)
Containing 643.08 acres, more or less.

Section 6: Lots 1 (41.08 acres), 2 (40.81 acres), S½NE¼, SE¼
Containing 321.89 acres, more or less.

Section 7: E½
Containing 320.00 acres, more or less.

Section 8: ALL
Containing 640.00 acres, more or less.

Section 9: ALL
Containing 640.00 acres, more or less.

Section 10: N½N½, SW¼NE¼, S½NW¼, W½SW¼, NE¼SW¼, SE¼SW¼, SE¼NE¼, NW¼SE¼, NE¼SE¼, S½SE¼ (ALL)
Containing 640.00 acres, more or less.

Section 11: N½NW¼, NE¼, S½NW¼, S½ (ALL)
Containing 640.00 acres, more or less.

Section 12: ALL
Containing 640.00 acres, more or less.

Section 13: N½, N½S½
Containing 480.00 acres, more or less.

Section 14: N½, SW¼, N½SE¼, SW¼SE¼
Containing 600.00 acres, more or less.

Section 15: ALL
Containing 640.00 acres, more or less.

Section 16: W½NW¼, NE¼NW¼, NW¼NE¼
NE¼NE¼, S½NE¼, SE¼NW¼, S½ (ALL)
Containing 640.00 acres, more or less.

Section 17: W½, NE¼, SE¼ (ALL)
Containing 640.00 acres, more or less.

Section 18: E½
Containing 320.00 acres, more or less.

Section 19: Lots 1 (41.32 acres), 2 (41.24 acres), 3 (41.16 acres), NE¼NW¼, NE¼
Containing 323.72 acres, more or less.

Section 20: W½, NE¼
Containing 480.00 acres more or less.

Section 21: N½
Containing 320.00 acres, more or less.

Section 22: N½N½
Containing 160.00 acres, more or less.

Section 29: W½W½, SE¼SW¼
Containing 200.00 acres, more or less.

Section 33: SE¼NW¼, SW¼NE¼, NW¼SE¼
Containing 120.00 acres, more or less.

Exhibit B-1 Proposed Increased Density and Setbacks

10-Acre Density:

Exhibit B-1 is a plat which depicts the Application Lands. The Applicant requests that for the portion of the Application Lands outlined in red the Oil and Gas Conservation Commission of the State of Colorado ("Commission") allow the equivalent of one (1) well per 10 acres for the production of gas and associated hydrocarbons from the Mesaverde Group (including the Williams Fork and Iles Formations). Additionally, Applicant requests that all future Williams Fork Formation and Iles Formation of the Mesaverde Group wells to be drilled on the Application Lands should be located downhole anywhere within said lands but no closer than 100 feet from a lease line or the boundaries of said lands without exception being granted by the Director of the Commission. In cases where the Application Lands abut or corner lands in respect of which the Commission has not at the time of the drilling permit application granted the right to drill 10-acre density Williams Fork Formation and Iles Formation of the Mesaverde Group wells, the wells should be located downhole no closer than 200 feet from the

boundaries or boundaries of said lands so abutting or cornering such lands without exception being granted by the Director of the Commission.

100 foot Setbacks:

With respect to all future permitted wells located in the Middleton Creek Federal Unit and Buzzard Creek Federal Unit as reflected on the plat in purple, Applicant requests that the wells be located no closer than 100 feet from the exterior boundary of the federal units (or lease line if applicable), without exception granted by the Director of the Commission. In cases where the Middleton Creek Federal Unit and/or Buzzard Creek Federal Unit lands abut or corner lands where the Commission has not, at the time of the drilling permit application, granted the right to drill 10-acre density Williams Fork or Iles Formation of the Mesaverde Group wells, the wells should be located downhole no closer than 200 feet from the boundary or boundaries of the federal units or drilling unit abutting or cornering such lands (of lease line if applicable), without exception granted by the Director of the Commission.

With respect to the 10-Acre Density Lands, except as previously authorized by the Commission, wells drilled on the Application Lands will be drilled from the surface either vertically or directionally from no more than one pad located on a given quarter quarter section (or lots or parcels approximately equivalent thereto) unless exception is granted by the Director of the Commission. In addition, all wells drilled to the Iles Formation will be drilled only in connection with the drilling of Williams Fork Formation wells.

Exhibit B-2 Surface Ownership

Exhibit B-2 is a plat which depicts the Application Lands and reflects the surface ownership within the Application Lands.

Exhibit B-3 Mineral Ownership

Exhibit B-3 reflects the federal and private mineral ownership underlying the Application Lands.

Exhibit B-4 Leasehold Ownership

Exhibit B-4 depicts the leasehold ownership. Delta is the current operator and owns or has a contractual working interest in the Delta and EnCana leases within the Application Lands. Antero holds a partial leasehold within the Application Lands.

Exhibit B-4 Orders 1-124, 369-4, 399-4

Exhibit B-4 also depicts the area in green wherein Commission Orders were entered that allowed the equivalent of one (1) well per 10 acres on such lands in green.

Sheryl A. Olson, CPL
Land Advisor
Delta Petroleum Corporation

ACKNOWLEDGMENT

STATE OF COLORADO)
) ss.
CITY AND COUNTY OF DENVER)

The foregoing instrument was acknowledged before me this 9th day of September, 2008, by Sheryl A. Olson, CPL, Land Advisor for Delta Petroleum Corporation.

Witness my hand and official seal.

My commission expires: 2/5/2012

JENNIFER A LUELLIG
Notary Public
State of Colorado
My Commission Expires February 05, 2012

Notary Public

Address: 370 17th Street
Suite 4300
Denver, CO 80202

Jacinda Nettik
Geologic Testimony
10 acre Density Lands – 100 ft Setbacks
Mesa County, Colorado
Cause 1, 369, 386, 399, and 429 Docket No. 0809-AW-25
Delta Petroleum Corporation

IN THE MATTER OF THE APPLICATION OF DELTA PETROLEUM CORPORATION FOR AN ORDER ESTABLISHING DENSITY AND WELL LOCATION RULES FOR THE WILLIAMS FORK AND ILES FORMATIONS (INCLUDING BUT NOT LIMITED TO THE ROLLINS, COZZETTE AND CORCORAN) OR THE MESAVERDE GROUP FOR CERTAIN DESCRIBED LANDS IN THE BUZZARD CREEK FIELD AND SHEEP CREEK FIELD, AND THE MIDDLETON CREEK UNIT, MESA COUNTRY COLORADO

My name is Jacinda Nettik. I am a geologist with Delta Petroleum Corporation. I have been a geologist since 2001. I earned my Bachelor of Science degree from University of North Carolina at Wilmington. I am a geologist working the Piceance Basin with knowledge of the Wasatch, Mesaverde Group including Williams Fork & Iles (Rollins Sandstone, Cozzette Sandstone, Corcoran & Sego Sandstone) of the Application Lands. I have previously testified before the Colorado Oil and Gas Conservation Commission ("COGCC") as an expert in the field of Petroleum Geology in regards to setback and increased density for the adjacent Vega Federal Unit and other lands. A copy of my resume is included in the Delta exhibit booklet.

Geologic Overview of the Mesaverde Group in the Piceance Basin
The Mesaverde Group in the Piceance Basin is a basin-center gas accumulation. The basin has regionally extensive gas accumulation in discontinuous fluvial sandstones with low porosity (< 13%) and low permeability (<0.1 md) interbedded with marine and nonmarine shales and coals. The sands are lenticular in profile. Individual sandstones range 0.5-29 feet thick and 40 to 2,791 feet wide with the average 9 feet thick and 526 feet wide. (Cole, R.D., Cumella S.P. 2005, Sandbody Architecture in the Lower Williams Fork Formation (Upper Cretaceous), Coal Canyon, Colorado with Comparison to the Piceance Basin Subsurface: The Mountain Geologist v.42, n.3, p.85).

Exhibit A Location Map
Exhibit A is a location map with the Application Lands outlined in red and the Middleton Creek Federal Unit & Buzzard Creek Federal Unit outlined in dashed purple. The Application Lands are located in Township/Range 8S/93W, 9S/93W & 9S/92W. This is a regional map with contours for Gas In Place (GIP) per Section, producing fields and producing formations. This map shows that the Application Lands have some of the highest GIP/section in the South Piceance Basin.

Exhibit C Topographic Map
Exhibit C is a topographic map of the Application Lands outlined in red with Buzzard Creek Federal Unit & Middleton Creek Federal Unit outlined in purple. This displays the mountainous terrain of the Application Lands with elevations of 7,000-9,000 feet.

Exhibit E Rollins Structure Map
Exhibit E is a Rollins Structure map of the Application Lands. This map demonstrates the structure of the basin. The basin gets deeper north on the map. Displayed are Application Lands outlined in red, proposed locations and wells in black with

pads/purposed pads in yellow, red pluses show control points for Rollins Structure contours.

Exhibit F Gross Pay Isopach Map
Exhibit F is a gross pay isopach map. This map shows the gross pay interval, which is believed to be from Top of Gas (TOG) to Rollins. In addition, it is likely one well per pad will be taken to Cozzette/Corcoran for additional production from the Corcoran offshore sandbar. The gross pay thickens to the northeast as the basin gets deeper. The Application Lands are outlined in red.

Exhibit G1 Cross-section with Net Pay
Exhibit G is a cross-section across the Application Lands. Displayed e-logs include Gamma Ray, Resistivity, & gas logs with perforation intervals marked in the depth column for those that have been completed. Gross Pay is from TOG to Rollins. Net pay is colored yellow on the GR curve. The cross-section demonstrates the Williams Fork Fm net sands do not individually correlate, however the gross interval can be correlated. This cross-section suggests the area must be drilled with increased well density to intersect a greater number of sand bars to adequately drain the area. The low permeability of these sands has resulted in low interference of drainage areas with increased well density.

Exhibit G2 Cross-section Projection Map
Exhibit G2 is a map with the projection of the previous cross-section in blue.

Exhibit G3 Depositional and Stratigraphic Framework of the Piceance Basin
Exhibit G3 is a stratigraphic and depositional column for the Piceance Basin. The area of the Application Lands closely resembles the South Piceance Basin model. Depositional facies include: marine shoreface sandstones, coastal-plain meandering-stream channel sandstones, distal braided-stream channel sandstones, and proximal braided-stream amalgamated channel sandstones with interbedded marine to non-marine shales and minor coals.

Don Yerwicz Exxon Mobil Exploration Company. "Depositional and stratigraphic framework of the Piceance Basin." [Online image] 24 April 2007. <http://www.searchanddiscovery.net/documents/abstracts/2005hedberg_vail/abstracts/extended/yurewicz/images/fig01.htm

Exhibit J1 Microseismic Summary
Exhibit J1 is a summary of the microseismic project Delta Petroleum ran near the Application Lands, which suggests the drainage ellipse for a wellbore is less than 20 acres so increased well density is necessary to drain the Application Lands.

Exhibit J2 "An Overview of the Williams Fork Geological Model and Supporting Reservoir Engineering data for 10-acre Density Development," by Williams Production RMT Company April 24, 2006
Exhibit J2 is Williams Production RMT Company's data supplied to the Colorado Oil and Gas Conservation Commission in reference to the request for an order to allow the equivalent of one well per 10 acres, with the permitted well to be located no closer than 100 feet from the unit boundary for certain lands in Townships 6 and 7 South, Ranges 94 and 95 West, 6th P.M. Docket Number 0607-AW-11, Cause Number 139 & 440, dated April 24, 2006. This data approval supports Delta's request for 10 acre density.

Exhibit J3 Geologic Summary

Exhibit J3 is a geologic summary that suggests microseismic, dense well control, core analysis, image logs, outcrops and other Operators in the area support 10 acre well density for the Application Lands and that the current well density of 20 acres leaves reserves in the ground.

In addition, I ask the Commission to take administrative notice of the numerous other exhibits Delta provided in Docket 0802-AW-07 (February 12, 2008) that demonstrated the depositional fluvial nature of the Williams Fork Formation and sand stacking patterns that resulted in approval for increased well density to 10 acres and 100 foot setbacks as well as Docket 0604-EX-04 (April 12, 2006) that resulted in approval for increased well density to 20 acres and 200 foot setbacks. The request for the Application Lands is similar and approval would allow Delta to economically and efficiently drain the area more adequately than the current density allows.

Jacinda Nettik
Delta Petroleum Corporation
Geologist

ACKNOWLEDGMENT

STATE OF COLORADO)
) ss.
CITY AND COUNTY OF DENVER)

The foregoing instrument was acknowledged before me this 9th day of September, 2008, by Jacinda Nettik.

Witness my hand and official seal.

My commission expires: 12.18.2010

CHERYL LAJEUNESSE
NOTARY PUBLIC
STATE OF COLORADO
My Commission Expires 12/18/2010

Cheryl LaJeunesse
Notary Public

Address: 370 17th St. Suite 4300, Denver Co 80202

Charles H. Williams
Engineering Testimony
Mesa County, Colorado
Cause 1, 369, 386, 399, and 429 Docket No. 0809-AW-25
Delta Petroleum Corporation

IN THE MATTER OF THE APPLICATION OF DELTA PETROLEUM CORPORATION FOR AN ORDER ESTABLISHING DENSITY AND WELL LOCATION RULES FOR THE WILLIAMS FORK AND ILES FORMATIONS (INCLUDING BUT NOT LIMITED TO THE ROLLINS, COZZETTE AND CORCORAN) OF THE MESAVERDE GROUP FOR CERTAIN DESCRIBED LANDS IN THE BUZZARD CREEK UNIT AND FIELD AND SHEEP CREEK FIELD, AND THE MIDDLETON CREEK UNIT, MESA COUNTY COLORADO

My name is Charles H. Williams. I am a Reservoir Engineering Manager with Delta Petroleum Corporation. I have been a petroleum engineer since 1980. I earned two Bachelor of Science Engineering degrees from New Mexico State University. I am the reservoir engineer working the Piceance Basin with engineering, economic, and geologic knowledge concerning the Application Lands. I have previously testified before the Colorado Oil and Gas Conservation Commission ("COGCC") as an expert in the field of Petroleum Engineering in regards to setback and increased density for the adjacent Delta operated Vega Federal Unit. A brief copy of my resume is included in the Delta exhibit booklet.

Operators throughout the Piceance Basin have applied for and received well density reductions to 10-acre density. Drilling and completing wells on 10-acre density conforms with industry precedence and standards currently in place for well density in the Piceance Basin, reference **Exhibit J2 "An Overview of the Williams Fork Geological Model and Supporting Reservoir Engineering data for 10-acre Density Development," by Williams Production RMT Company April 24, 2006.**

Drilling wells on 10-acre density is necessary to adequately and economically produce the gas reserves in the Piceance Basin. Minimal well interference and pressure depletion has been anticipated and Delta has therefore optimized its BHLs based on measured well microseismic data, see **Exhibit J1 Microseismic Summary.**

Exhibit H is a summary of a 10-acre Vega type well and the resulting economics. Delta has conservatively estimated that a 10-acre density well within this area will recover 65% of an offset 20-acre well.

Exhibit I is a 10-acre Type well plot.

By developing the Application Lands on 10-acre density, Delta is further protecting the correlative rights of all mineral interest owners concerned. This development will result in no waste or lost recovery of gas and will economically and efficiently drain the respective acreage.

Your permission to develop wells on the Application Lands on 10-acre density is requested.

Charles H. Williams
Delta Petroleum Corporation
Reservoir Engineering Manager
– Piceance Basin

ACKNOWLEDGMENT

STATE OF COLORADO)
) ss.
CITY AND COUNTY OF DENVER)

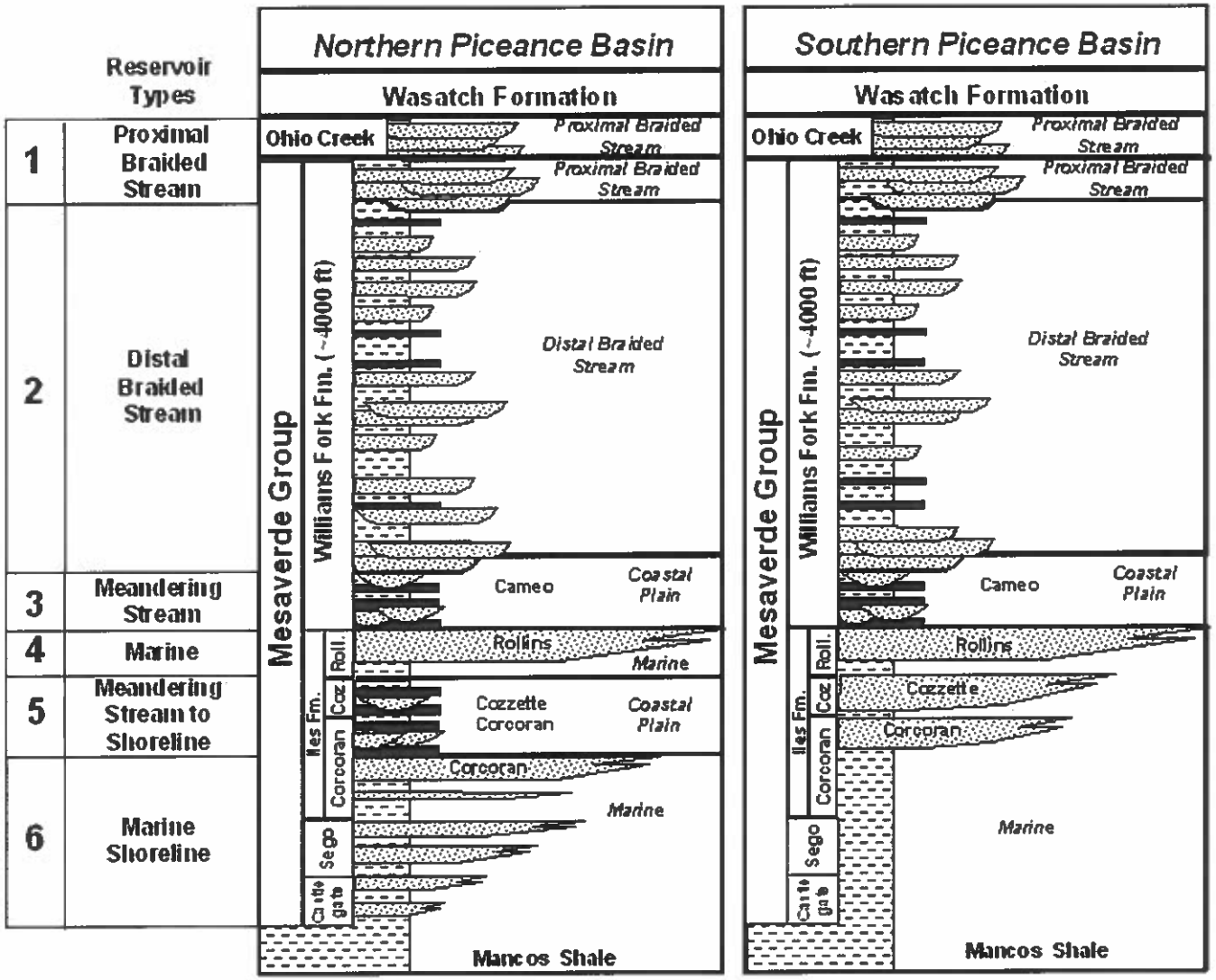
The foregoing instrument was acknowledged before me this 9th day of September, 2008, by Charles H. Williams.

Witness my hand and official seal.

My commission expires: 12-18-2010

CHERYL LAJEUNESSE
NOTARY PUBLIC
STATE OF COLORADO
My Commission Expires 12/18/2010

Cheryl Lajeunesse
Notary Public
Address: 370 17th St., Suite 4300, Denver CO 80202



Depositional and Stratigraphic Framework of the Piceance Basin

Don Yerwicz Exxon Mobil Exploration Company. "Depositional and stratigraphic framework of the Piceance Basin." [Online image] 24 April 2007. *<http://www.searchanddiscovery.net/documents/abstracts/2005hedberg_vail/abstracts/extended/yurewicz/images/fig01.htm>*.

Exhibit Number: G3 Applicant: Delta Petroleum Corporation Exhibit Author: J. Nettik	Cause No. 1, 369, 386, 399 and 429 Docket No. 0809-AW-25 Type of Exhibit: Stratigraphic Column County Name: Mesa

DELTA PETROLEUM CORPORATION
VEGA FEDERAL UNIT

TYPE WELL
ECONOMIC SUMMARY

INPUT PARAMETERS

Well Cost -- $1.9mm

Working Interest -- 100%

Net Revenue Interest -- 82.45%

IP -- 888 mcfd

Gross EUR -- .800 Bcf

Wellhead Gas Price -- $7.89/mcf

Operating Costs -- $2,200/month/well

TYPE CURVE PARAMETERS

IP -- 888 mcfd

Hyperbolic B factor -- 1.5

Initial Decline -- 69%

Final Decline -- 6 %

Gross EUR -- .800 Bcf

RESULTS

ROR -- 22.46%

PV9 -- $744,479

Payout(undiscounted) -- 4.9 years

Exhibit Number: H Applicant: Delta Petroleum Corporation Exhibit Author: C. Williams	Cause No. 1, 369, 386, 399 and 429 Docket No. 0809-AW-25 Type of Exhibit: Reserve Economic Calculation County Name: Mesa

Delta's Geologic Summary

Delta exhibits suggest microseismic, dense well control, core analysis, image logs, outcrops and other Operators in the area support 10 acre well density for the application lands. The current well density of 20 acres leaves reserves in the ground.

The Mesaverde sands were deposited by meandering channels which are lenticular in nature as observed in outcrops. The gross interval can be correlated; however individual sands cannot be correlated because rarely do two wellbores intersect the same sand body. The average the sand body size 9 feet by 526 feet. In order to penetrate the greatest number of sand bodies the field must be developed on the correct density which is believed to be 10 acres.

Delta has collected microseismic data to help determine the correct bottom hole density. Microseismic provides information on frac half lengths, which is valuable information for calculating drainage ellipses and determining bottom hole locations. Delta's microseismic data provides an average half length of 1,050' with a range from 950' to 1,175'. Based on a 1:6 drainage ellipse ratio as is typical in the Piceance Basin the drainage ellipse average is 13.2 acres with a range from 10.9 acres to 16.6 acres. This suggests 20 acre density in not fully draining the acreage.

In addition, the frac azimuth was confirmed with both microseismic and image logs. These suggest the frac azimuth is east-west and therefore the locations should be placed closer together north-south than east-west to minimize drainage interference. Delta has currently set up 10 acre locations so they are no closer than ~1,300' east-west and ~500' north-south. This suggests that even maximum fracs (1,175') will not intersect other wellbores on 10 acres density.

Williams Production RMT Company provided the COGCC "An Overview of the Williams Fork Geological Model and Supporting Reservoir Engineering Data for 10 acre Density Development," this document which is included in Delta's exhibits further supports 10 acre well density. Delta's application lands are similar to Williams and therefore suggest that if Williams was granted 10 acre well density Delta should also be developing 10 acres density to better drain the application lands.

In summary to adequately drain the application lands 10 acre well density is necessary as supported by microseismic, dense well control, core analysis, image logs, outcrop, other Operators in the area and previous support of 10 acre density by the COGCC in the Piceance Basin.

SHERYL A. OLSON

Certified Professional Landman

SOLSON@IDCOMM.COM (303) 253-4676 2081 IVY STREET, DENVER, CO 80207

Land Management Professional Summary

Over twenty-five years Gulf Coast and Rockies experience with proficiency in a full spectrum of land management responsibilities including seismic acquisition, drilling programs, acquisition, divestiture, marketing, prospect sales, and department operational policies and procedures.

- Expertise in property evaluation including development potential, due diligence, revenue sources, agreement preparation, land and accounting systems.
- Proven results in client relationship, new business development, sales and marketing.
- Expert negotiation with sellers, buyers, owners.
- Solid leadership skills with demonstrated ability to recruit, train, and motivate teams.
- Experienced in South Texas, Gulf Coast Texas and Louisiana, Williston, Powder River, Big Horn, Green River, Denver, Julesburg, San Juan, Paradox Basins, Midcontinent, and Southern California.

Professional Experience

Land Advisor, Delta Petroleum Corporation, June 2008

Senior Landman, McElvain Oil & Gas Properties, Inc., 2007-May, 2008

Managed San Juan Basin operated properties: new wells, infill, rework, recompletion and P&A proposals with prudent new or updated title review and surface agreements. Responsible for Colorado and New Mexico Commission issues such as infill applications, force poolings, commingling applications, and unorthodox locations. Participated in/managed special projects in La Plata County, CO, Rio Arriba and San Juan Counties, NM.

District Land Manager, Aspect Resources/Aspect Energy, LLC, 1996-2006

Managed special projects, including feasibility, evaluation, and acquisition of new 3-D seismic programs. Project manager for 4 proprietary 3-D seismic shoots, totaling 250+ squares. Directed Texas-operated Hackberry Trend covering 700 squares of data. Supervised brokers in lease acquisition and surface site negotiations. Executed unitization and cleared title for drilling. Made budget forecasts for project, prospect, and well expenditures. Coordinated all data gives and prospect assemblage on a continuous 8-well directional drilling program for company's largest proprietary shoot, 146 squares within 5 municipalities in a highly litigious area. Developed unique counter offensive strategies to protect against blockbuster activity. Negotiated release of confidential well log which condemned offset well location saving $1.5 million. Facilitated several discoveries through critical mineral owner negotiations, overcame significant title challenges, and reduced company liability. Oversaw non-operated Louisiana Hackberry Trend projects including unitization approval, review of operating agreements and other contracts.

Regional Landman, Trinity Petroleum Management, Inc., Sheffield Exploration Company, Inc., 1993-1996

Conducted county title review for Powder River Basin infill drilling program; negotiated, verified title, and closed acquisition of non-operated working interests; negotiated producing property acquisitions; qualified buyers; executed high level confidential projects; managed brokerage activity, lease records staff, and database conversion.

SHERYL A. OLSON
2081 IVY STREET, DENVER, CO 80207
SOLSON@IDCOMM.COM · (303) 253-4676

Independent Petroleum Landman, 1984-1992, 1996

Basin Exploration, Inc. and HS Resources, Inc. Provided due diligence as to title defects for $130 million DJ Basin property divestiture for seller. Conducted title curative for high value properties in same acquisition for purchaser.
Trinity Petroleum Management, Inc., Conducted due diligence, curative and merger of properties for a $9 million Rocky Mountain acquisition; supervised in-house and contract personnel, created a Land Department from scratch, establishing requisite procedures.
NICOR Exploration, Purchased and sold working interests in Midcontinent region, inclusive of due diligences tasks; monitored Oklahoma Corporation Commission docket, worked on OCC spacing, pooling, location exceptions, protest actions and increased-density proceedings.
Mobil Oil Corporation, Key participant on divestiture team for Oklahoma and California properties of significant size and complexity: properties included multiple producing zones in over 2100 wells, overlapping unitized and non-unitized horizons, surface restrictions, and reservations in urban areas; acquired mineral and royalty interests under community leases.
Texaco USA, Verified interests and title curative for Getty Oil Company acquisition.
Consolidated Oil & Gas, Inc., Provided due diligence and integration of properties for a 180 well acquisition; worked with independent counsel, Texas Railroad Commission and the State to correct improperly pooled units and mitigate penalties.

Northern Division Landman, Consolidated Oil & Gas, Inc., 1979-1984

Negotiated leases, farm-ins, offset drillsite support and prepared all agreements; sold prospects on a promoted basis; AFE'd partners, verified and cured titles for 60 well drilling programs in San Juan Basin and South Texas; calculated working and net revenue interests; prepared division orders.

Landman, Apache Corporation, 1978-1979

Supervised brokers on title checks and lease plays; negotiated drillsite support and prepared all agreements; cleared titles; calculated revenue interests; approved parties for disbursement; supervised contract personnel on major database records conversion; coordinated reorganization of land department.

Land Specialist, Frontier Resources, Inc., 1975-1978

Maintained all mineral, oil and gas lease records; paid rentals; renewed expiring leases in a one person land department; initiated conversion to Marathon Oil Company's property management system.

Education and Professional Development

Extensive Continuing Professional Development in Oil, Gas, and Mining: Title Examination, University of Denver College of Law; Oil and Gas Law and Taxation, Southwest Legal Foundation; Introduction to Mining Geology, Introduction to Mining, Colorado School of Mines; Business Law, University of Colorado, Denver; Rocky Mountain Mineral Law Foundation Annual Institutes and Seminars, AAPL and DAPL Annual Institutes.

Certified Professional Landman #3952– American Association of Professional Landmen

Professional Affiliations: AAPL, DAPL

Bachelor of Arts – Illinois Wesleyan University

Jacinda Nettik, Geologist

2244 Franklin St, Denver, CO 80205, 303-868-2160, jacinda@nettik.com

Education:
8/2001, **Bachelor of Science in Geology,** University of North Carolina at Wilmington, Wilmington, NC

Continuing Education:
3/31-4/4/07 **AAPG Annual Convention**, Long Beach, CA
1/31-2/1/07 **NAPE**, Houston, TX
12/4-8 /06 **Frac School,** Texas A&M, Steamboat Springs, CO
9/26/06 **USGS Core Workshop-Barnett Sh, Ft.Worth Basin & Niobrara Fm**, Lakewood, CO
9/25/06 **Shale Gas: From Grass-Roots Exploration. to Prod.-A Symposium**, Denver, CO
8/7-9/06 **Rocky Mountain Gas, Geology & Resources Conference**, Denver, CO
6/11-13/06 **RMAG/AAPG Regional Meeting**, Billings, MT
5/1/06 **Seismic Attribute Mapping of Struct.& Strat**, SEG/EAGE, Golden, CO
3/3/06 **Old Electric Logs: Interpretation & Analysis**, PTTC/KGS, Lawrence, KS
3/2/06 **The Crash Course in Log Analysis**, PTTC/KGS, Lawrence, KS
9/24/05 **Bakken Play Essentials**, AAPG, Jackson, WY
8/29/05 **Low Permeability Reservoirs in the Rockies**, RMAG/PTTC, Denver, CO
3/31/05 **Intro to Mining the Internet --Oil & Gas Professional,** PTTC Golden, CO
11/15/04 **Hydrothermal Dolomite Conference**, RMAG/CSM SEG, Golden, CO
3/03 **The Remediation Course**, Princeton Groundwater, Denver CO
Fall 2002 **Hydrology**, Colorado School of Mines, Golden, CO

Work Experience:
2/04-Present
Geologist, Delta Petroleum Corporation, Denver, CO
Geologist for the Piceance Basin, DJ Basin and Austin Chalk trend. Responsibilities include supervising geological operations during drilling of wells. Assessing potential on existing leaseholds and creating a comprehensive development plan. Proposing prospect and developing an inventory of prospects and locations. Assisting reservoir, production and completion staff with development strategies and schedules. Providing drilling locations with supporting documentation to drilling, regulatory and land personnel. Providing geological support in property evaluations. Geosteering horizontal wells through GR interpretation and seismic interpretations.

10/01-2/04
Petroleum Business Development Manager & Geologist, RockWare, Inc., Golden, CO
Geological consulting that included solid modeling, statistical analysis, and digitizing for petroleum, mining and geotechnical industries. RockWare's petroleum sales & technical support, technical writing manager.

Research Experience:
Summer 2000
Student Geologist, National Science Foundation funded Research Experience for Undergraduates, Western Carolina University & University of South Florida at Tampa
Selected as one of 12 participants to conduct geologic field mapping of the Carroll Knob complex in western North Carolina, involved basic field mapping, digital mapping using ArcView, collection of geophysical data using seismography, resistivity, Electromagnetics-34, Ground Penetrating Radar, magnetometery. Geochemical analysis (major and trace elements) using Direct Current Emission Spectrometer.

Publications and Professional Presentations:

- Grosser, B., Nettik, J., Sha, G., Tweedy, K., O'Shaughnessy, B., Huntsman, J. (2001), An Inventory of Joints in the Roanoke Rapids Tailrace, Northeastern, North Carolina. Geological Society of America Abstracts with Program, v. 33, n. 2, p. A-66.
- Meyer, J., Nettik, J., Pollock, M., Sullivan, W., Bierly, L., Tibbits, M., Gerseny, M., DeArmond, B., Dean, R., Natoli, J., Csontos, R., Lesmerises, M., Ryan, J. Yorkovich, S., Savov, I., Peterson, V., Burr, J., Kruse S. (March 2001), Geochemistry and Petrogenesis of the Carroll Knob Mafic/Ultramafic Complex, Macon County, North Carolina. Geological Society of America Abstracts with Program, v. 33, n. 2, p. A-69.
- Bierly L., Sullivan, W., Tibbits, M., Natoli, J., Csontos R., Meyer, J., Nettik, J., Dean, R., DeArmond, B., Gerseny, M., Lesmerises, M., Pollock, M., Yurkovich, S., Savov, I., Peterson, V., Burr, J., Kruse, S., Schneider, J., Ryan J. (2001), Petrographic and Field Relations of a Portion of the Carroll Knob Mafic/Ultramafic Complex, Eastern, Blue Ridge, Macon Co., NC. Geological Society of America Abstracts with Program, v. 33, n. 2, p. A-69.
- Dean, R., DeArmond, B., Gerseny, M., Pollock, M., Csontos, R., Lesmerises, M., Natoli, J., Meyer, J., Bierly, L., Nettik, J., Sullivan, W., Tibbits, M., Schneider, J., Kruse, S., Peterson, V., Yurkovich, S., Burr, J., Ryan, J. (2001), Geophysical Transects Across the Margins of the Carroll Knob Mafic/Ultramafic Complex, Macon County, North Carolina. Geological Society of America Abstracts with Program, v. 33, n. 2, p. A-67.

Awards, Achievements and Professional Memberships:

- **RMAG Member**
- **SE-GSA Best Poster Presentation**, Southeastern Geological Society of America, 2001, Raleigh, NC. Petrographic and Field Relations of a Portion of the Carroll Knob Mafic/Ultramafic Complex, Eastern, Blue Ridge, Macon Co., NC.
- **UNCW Honors Student Research and Travel Grant**, UNCW for 4 Poster Presentations at the Southeastern Geological Society Association, September 2000
- **AAUW**, American Association of University Women Academic Scholarship, awarded to exceptional women in science and math related majors, April 2001.
- **National Science Foundation Grant**, Selected as a participant for an internship at Furman University, Summer 2000.
- **National Science Foundation funded Research Experience for Undergraduates**. Western Carolina University & University of South Florida at Tampa, Summer 2000.
- **Dean's List**, The University of North Carolina at Wilmington.
- **President of UNCW Geology Club**, Implemented the adoption of a beach access from Surfrider Foundation and the Parks and Rec. Association, T-shirt sales, and designed web site, 2000-2001.

Charles H. Williams

Reservoir Engineering Manager
Piceance Basin
Delta Petroleum Corporation
370 17th Street Suite 4300
Denver, CO 80202
303.575.0385
cwilliams@deltapetro.com

Current:

Reservoir Engineering Manager responsible for Delta's Piceance Basin assets, both operated and non-operated. Duties also include engineering for all of Delta's Non-Operated Working Interest properties.

Twenty-seven(plus) years of varied work experience as a Petroleum Engineer.
Began work in the Oil and Gas Industry in 1980 as a field engineer with Texaco Inc., working in Hobbs, New Mexico in the Permian Basin. Held various engineering positions of increasing responsibility for fourteen years with Texaco.
Since leaving Texaco have consulted and worked for numerous Independent Oil and Gas companies in the Denver area. Worked fields in the Gulf Coast, Mid-Continent, and Rockies. Worked the San Juan Basin area for six years.

Graduated from New Mexico State University in 1980 with:

Bachelor of Science, Civil Engineering &
Bachelor of Science, Geological Engineering

Exhibit Number: J-2
Applicant: Delta Petroleum Corporation
Exhibit Author: Williams Production RMT Co.

Cause No. 1, 369, 386, 399 and 429
Docket No. 0809-AW-25
Type of Exhibit: Report April 24, 2006
County Name: Mesa

An Overview of the Williams Fork Geological Model and Supporting Reservoir Engineering Data for 10-acre Density Development

Presented to:

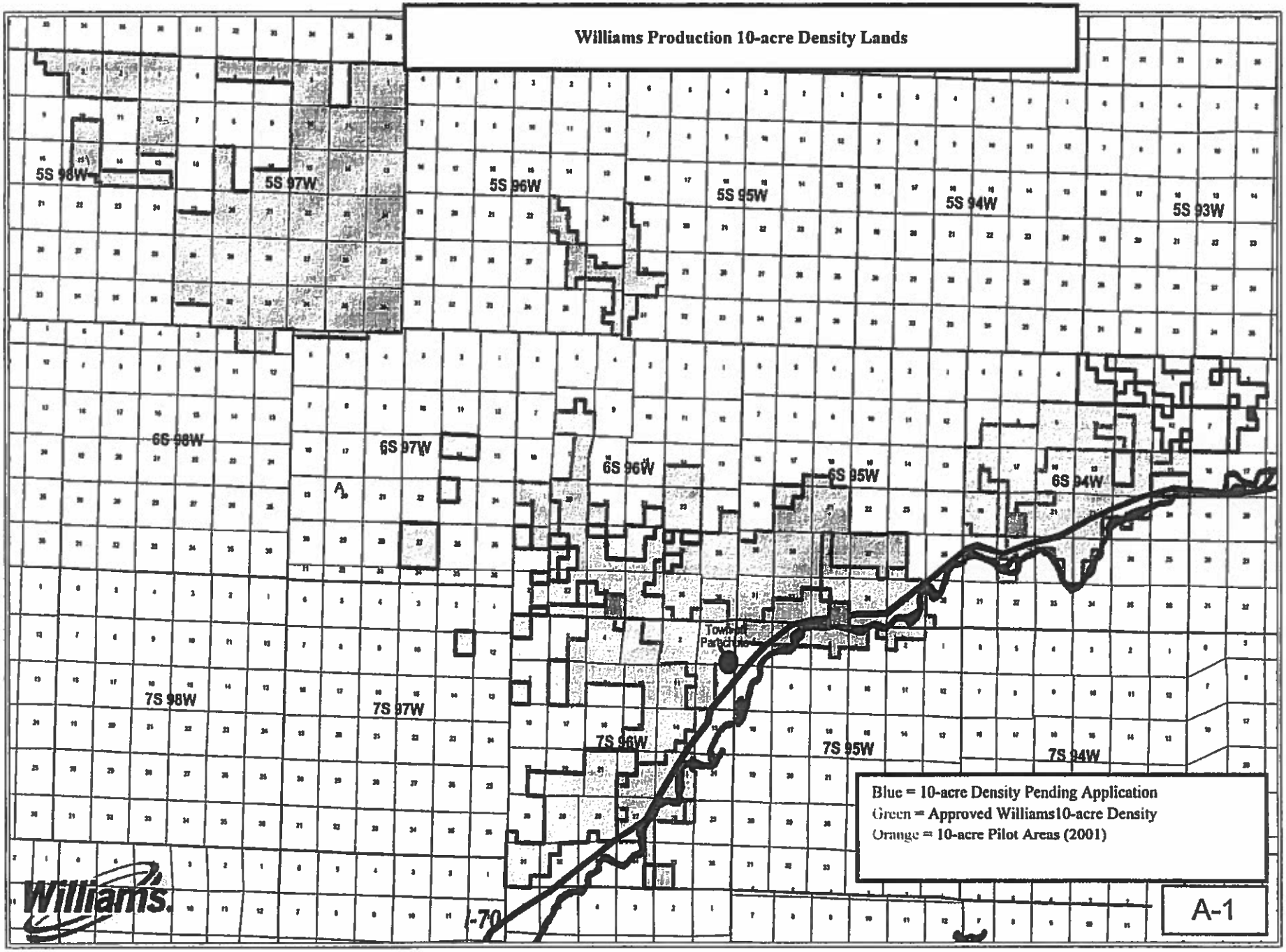
Colorado Oil and Gas Commission

Presented by:

Williams Production RMT Company

April 24, 2006

Williams.


Williams Production 10-acre Density Lands
5S 98W
5S 97W
5S 96W
5S 95W
5S 94W
5S 93W
6S 98W
6S 97W
6S 96W
6S 95W
6S 94W
7S 98W
7S 97W
7S 96W
7S 95W
7S 94W
Town of Parachute
I-70
Blue = 10-acre Density Pending Application
Green = Approved Williams10-acre Density
Orange = 10-acre Pilot Areas (2001)
Williams
A-1

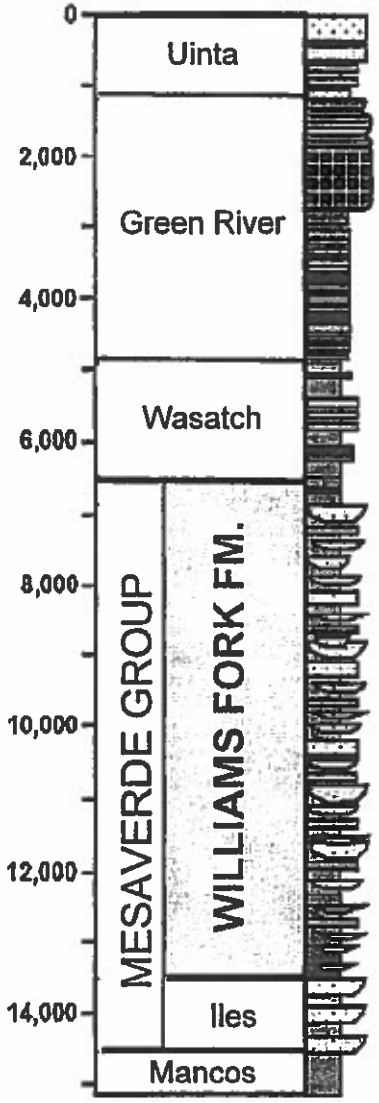
GEOLOGIC MODEL OF THE WILLIAMS FORK FORMATION

1. THE GEOLOGIC MODEL SUPPORTS 10-ACRE DENSITY DRILLING.

2. YEARS OF VARIOUS STUDIES BY MANY DIFFERENT ORGANIZATIONS HAVE DEVELOPED AN IN-DEPTH GEOLOGIC MODEL.

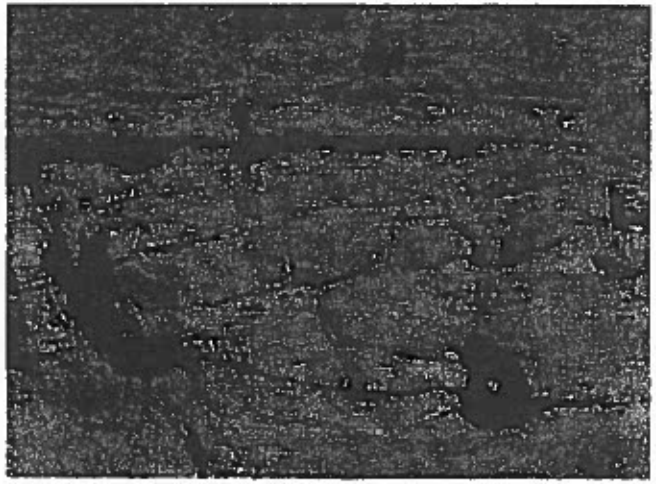
Williams.

BUILDING THE GEOLOGIC MODEL



STRATIGRAPHY

PALEOGEOGRAPHY

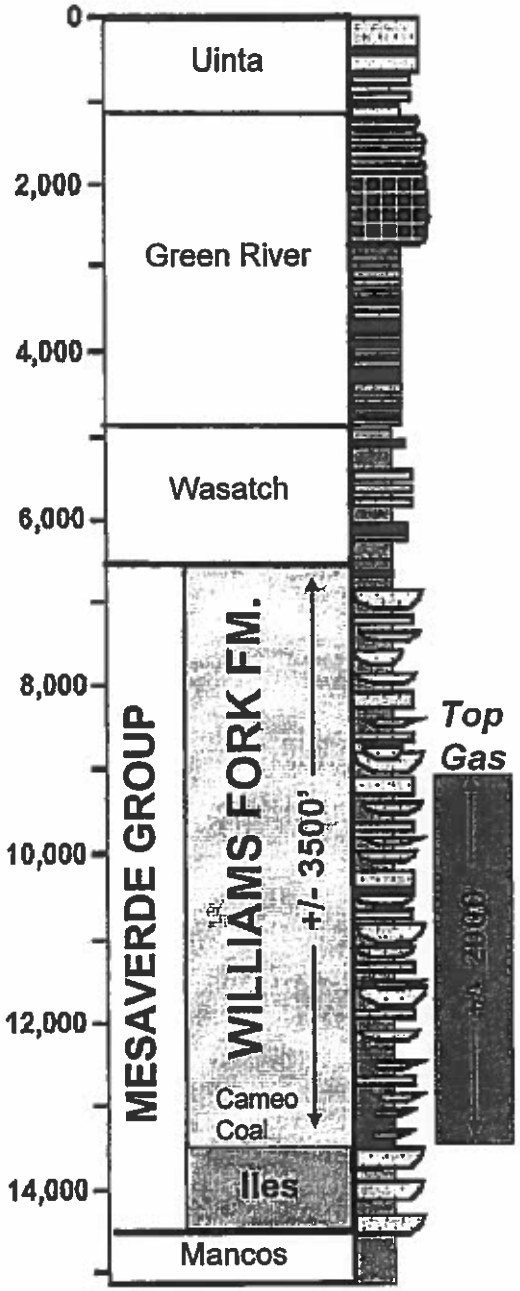


OUTCROP STUDIES

CORE ANALYSIS

MODERN-DAY ANALOGS

Williams.



THE GEOLOGIC MODEL SUPPORTS 10-ACRE DENSITY

Sand Body Characteristics:

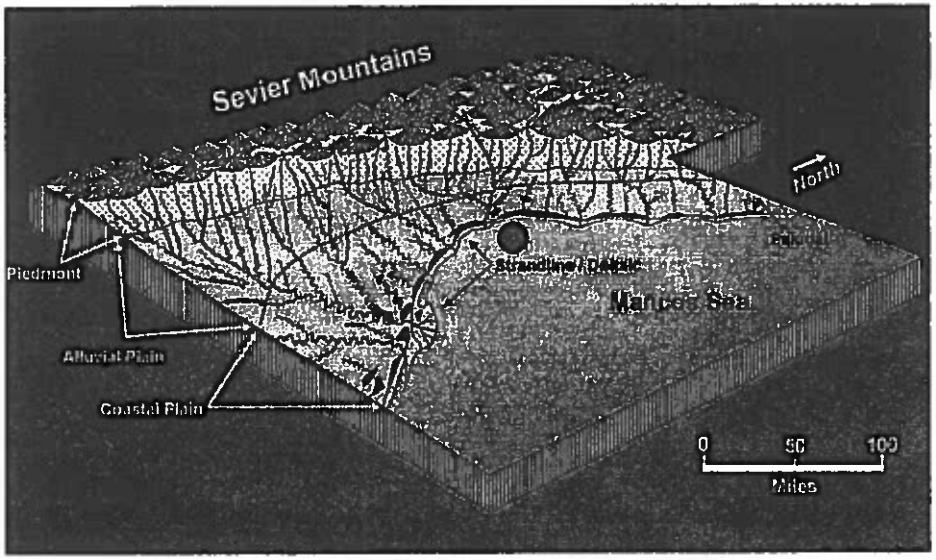
- Small and Discontinuous
  - Average apparent width = 526'
  - 10 acre = 660' between wells

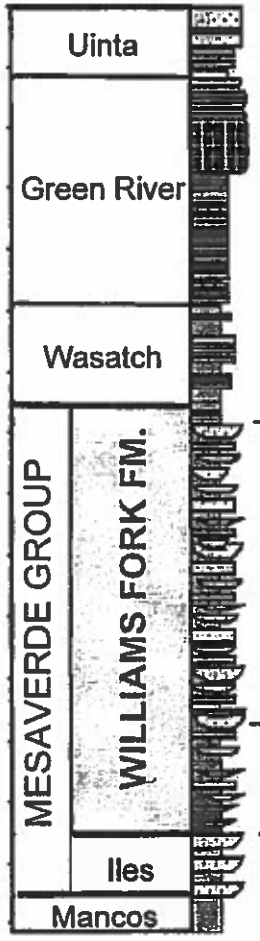
-Complex Internal Structure

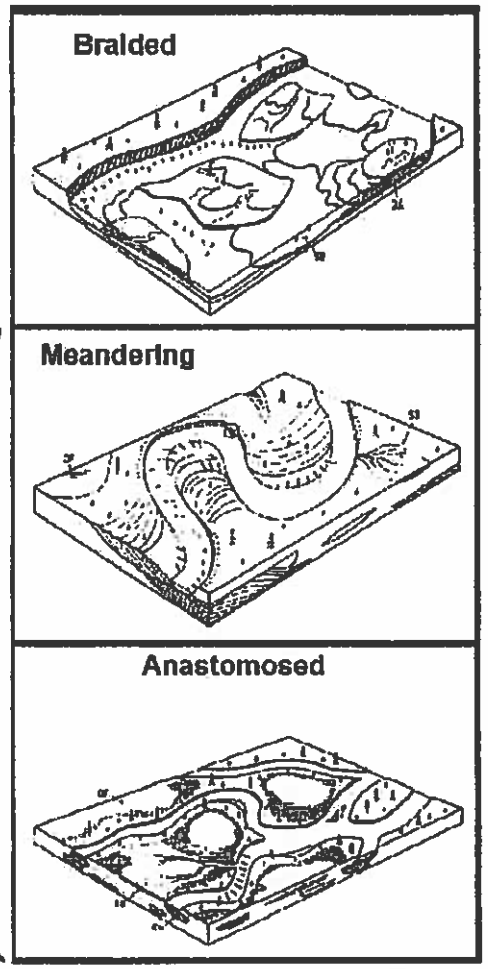
- Many barriers to flow

Williams

PALEOGEOGRAPHY OF THE WILLIAMS FORK FORMATION

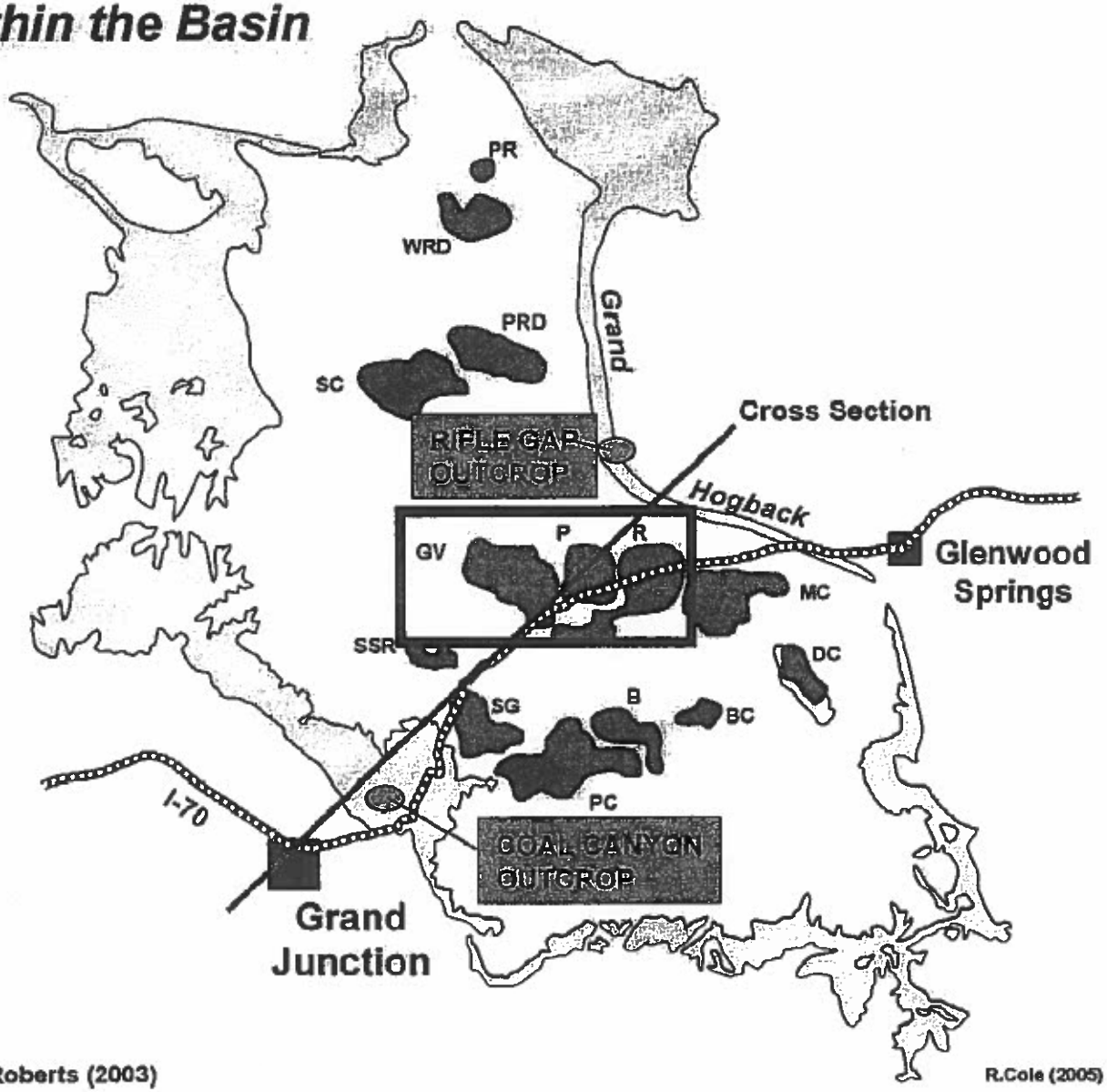






Williams.

Gas Fields Within the Basin

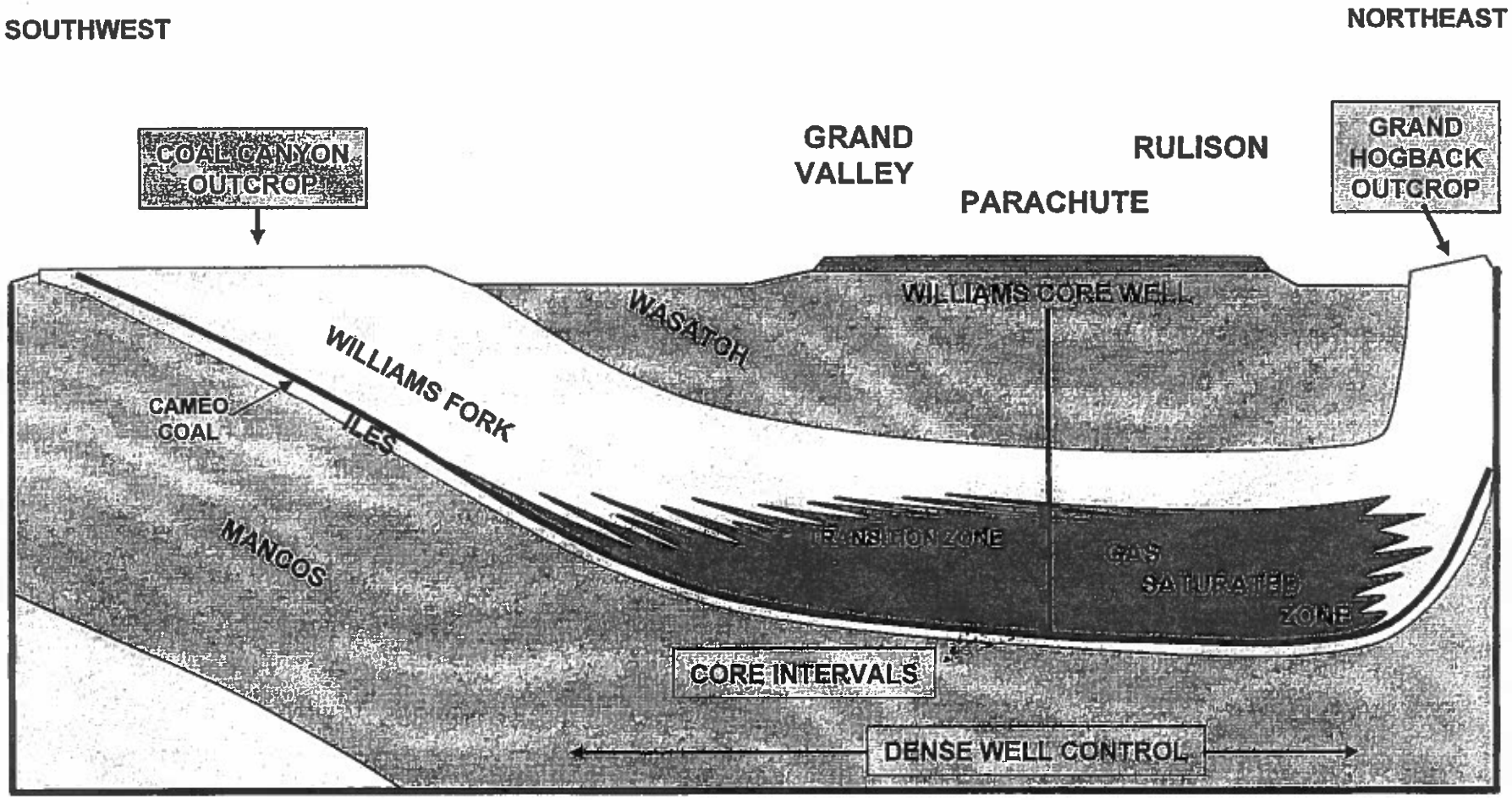


Modified from Johnson and Roberts (2003)

R.Cole (2005)

Williams.

SCHEMATIC CROSS SECTION - PICEANCE BASIN

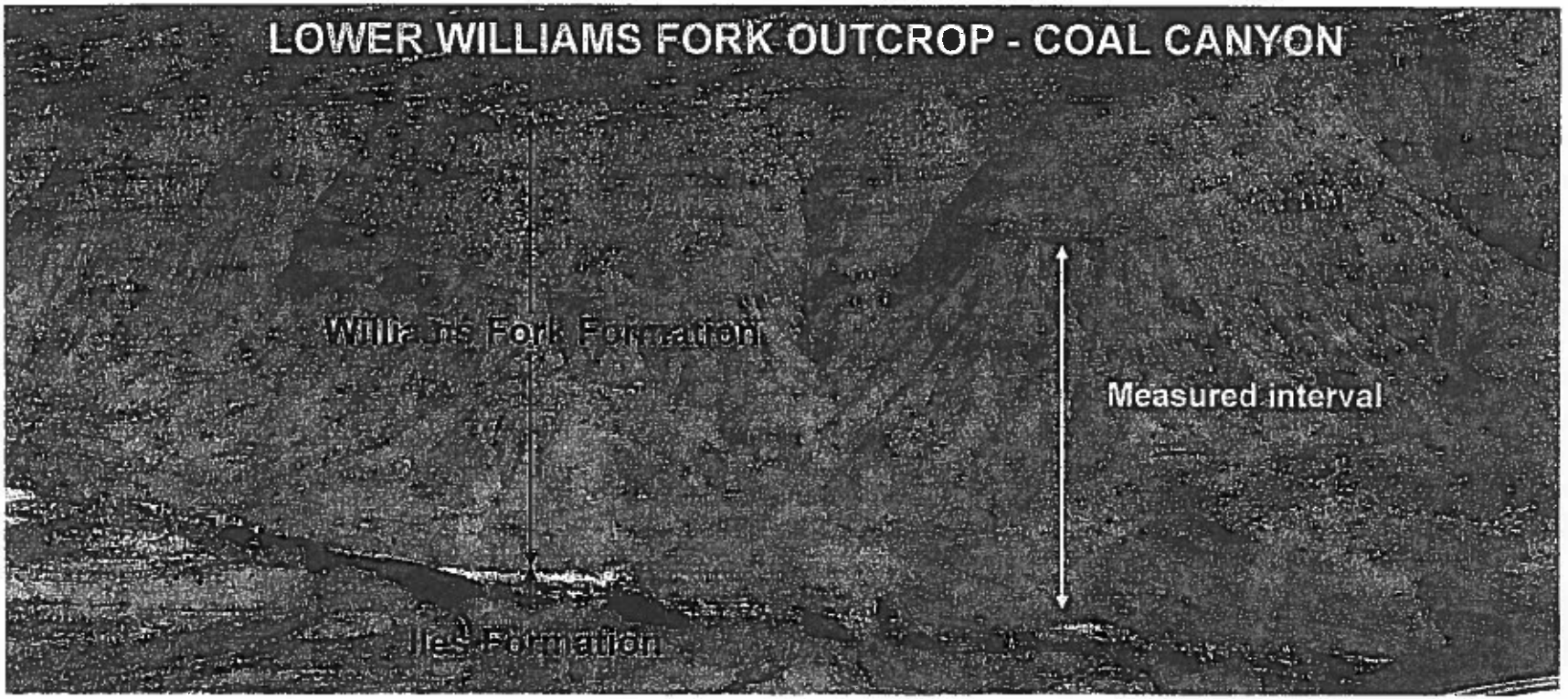


Extensive outcrop around the basin, dense well control, and cored wells provide an exceptional opportunity to understand the reservoir in the subsurface and to support the geologic model.

Williams.

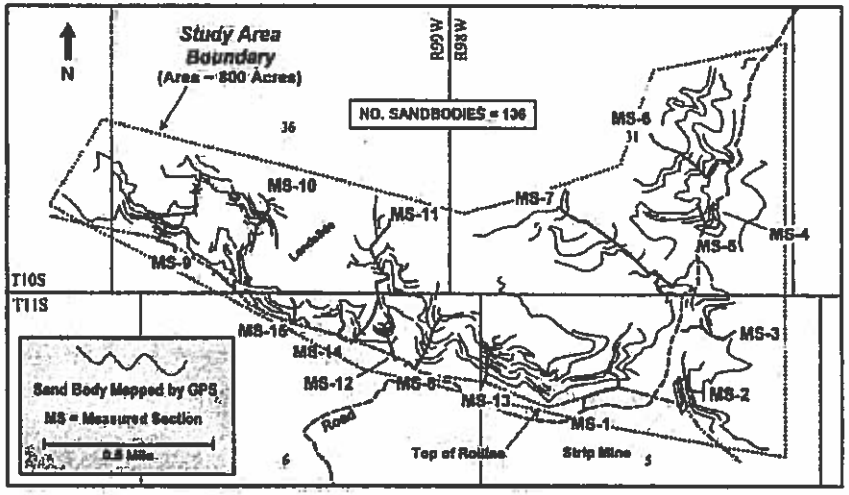
WILLIAMS FORK FORMATION IN THE GRAND HOGBACK
NEAR RIFLE GAP (EASTERN PICEANCE BASIN)
TOP OF THE MESAVERDE
WILLIAMS FORK FORMATION
CAMEO COAL ZONE
ILES FORMATION
MANCOS SHALE

B-7

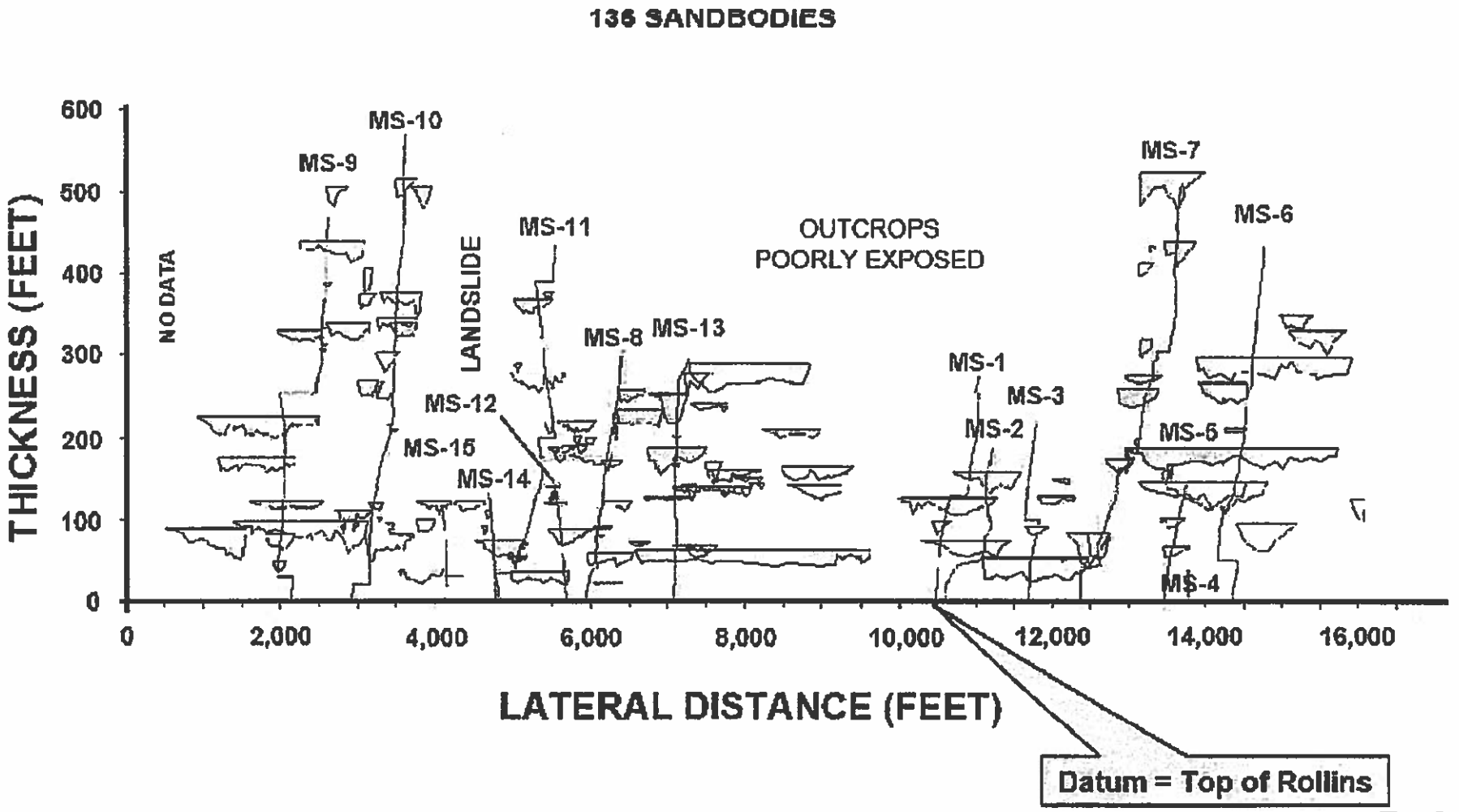


Approximately 24 miles southwest of Grand Valley Field

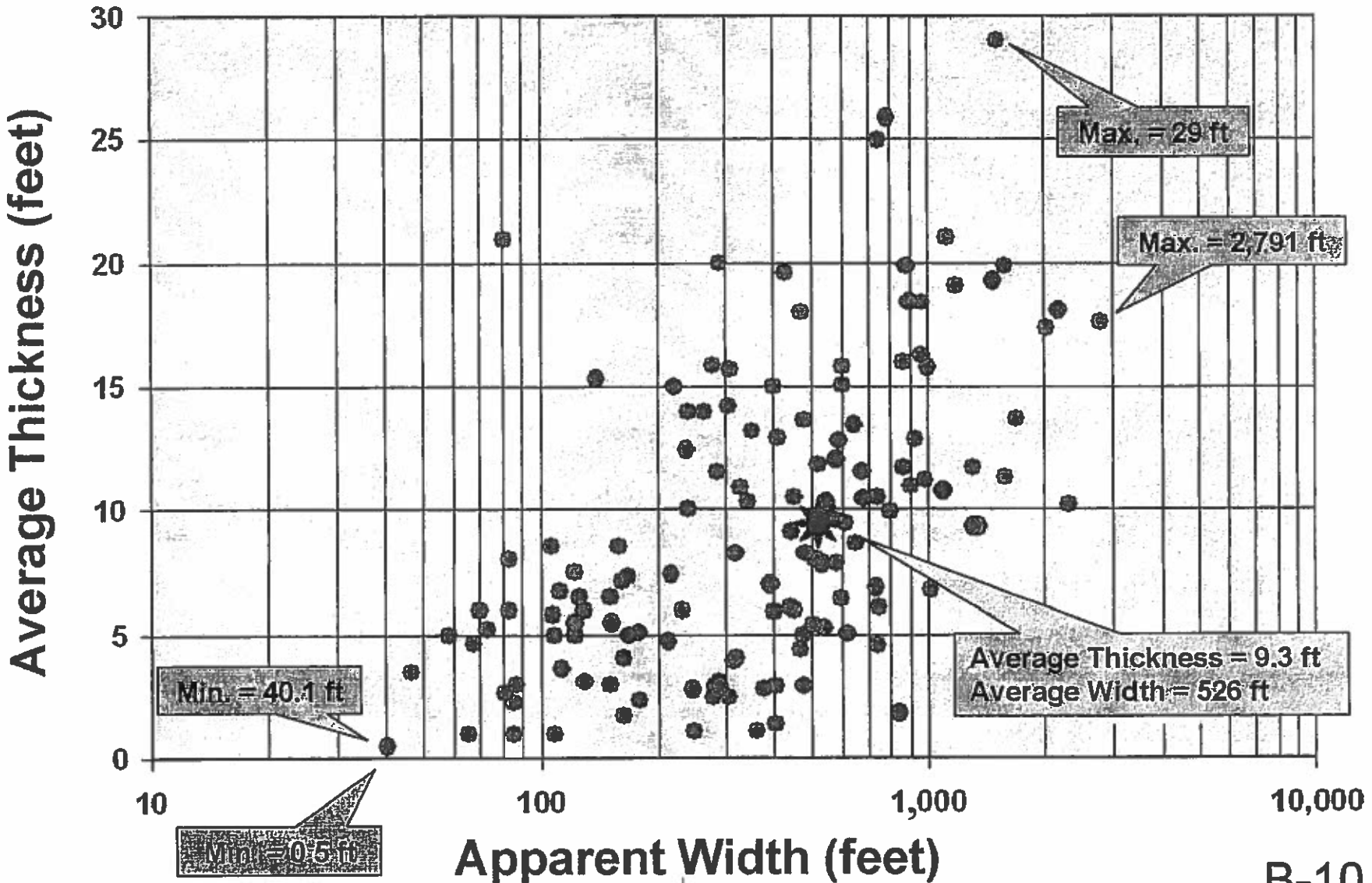
Study of excellent outcrop exposures was undertaken to determine sand body widths



Large-Scale Stratal Architecture

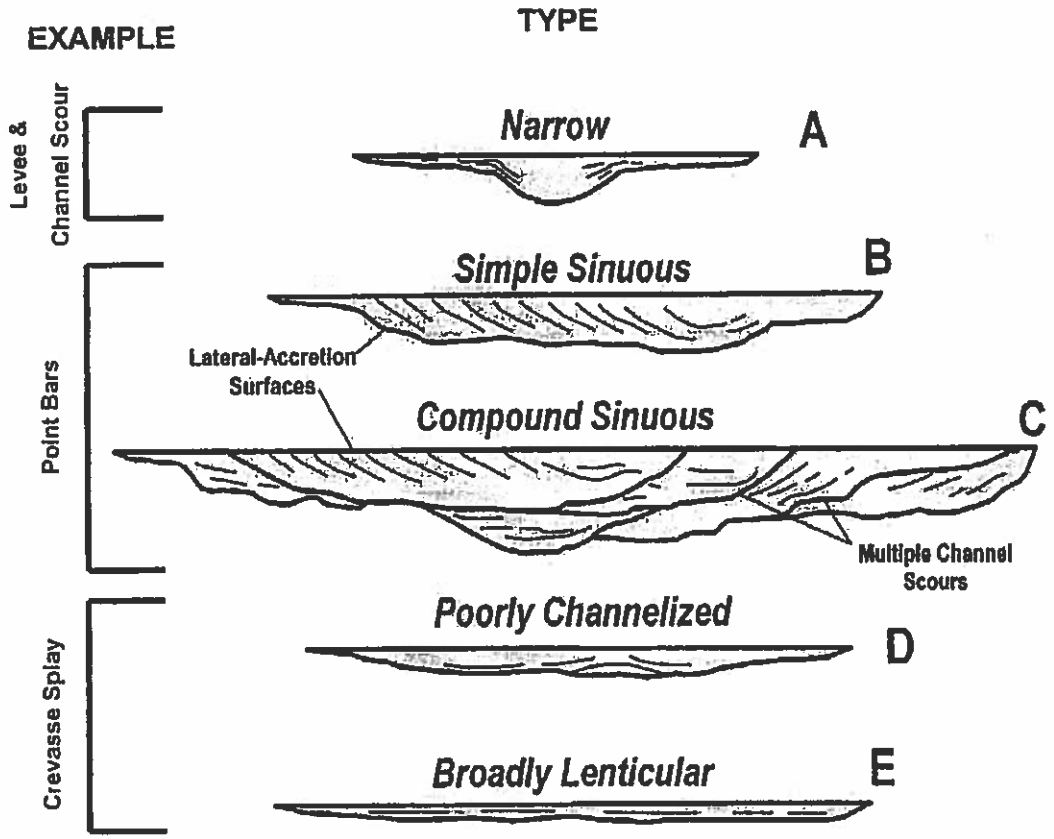


Summary of Sand-Body Dimensions



LOWER WILLIAMS FORK

SAND BODY TYPES



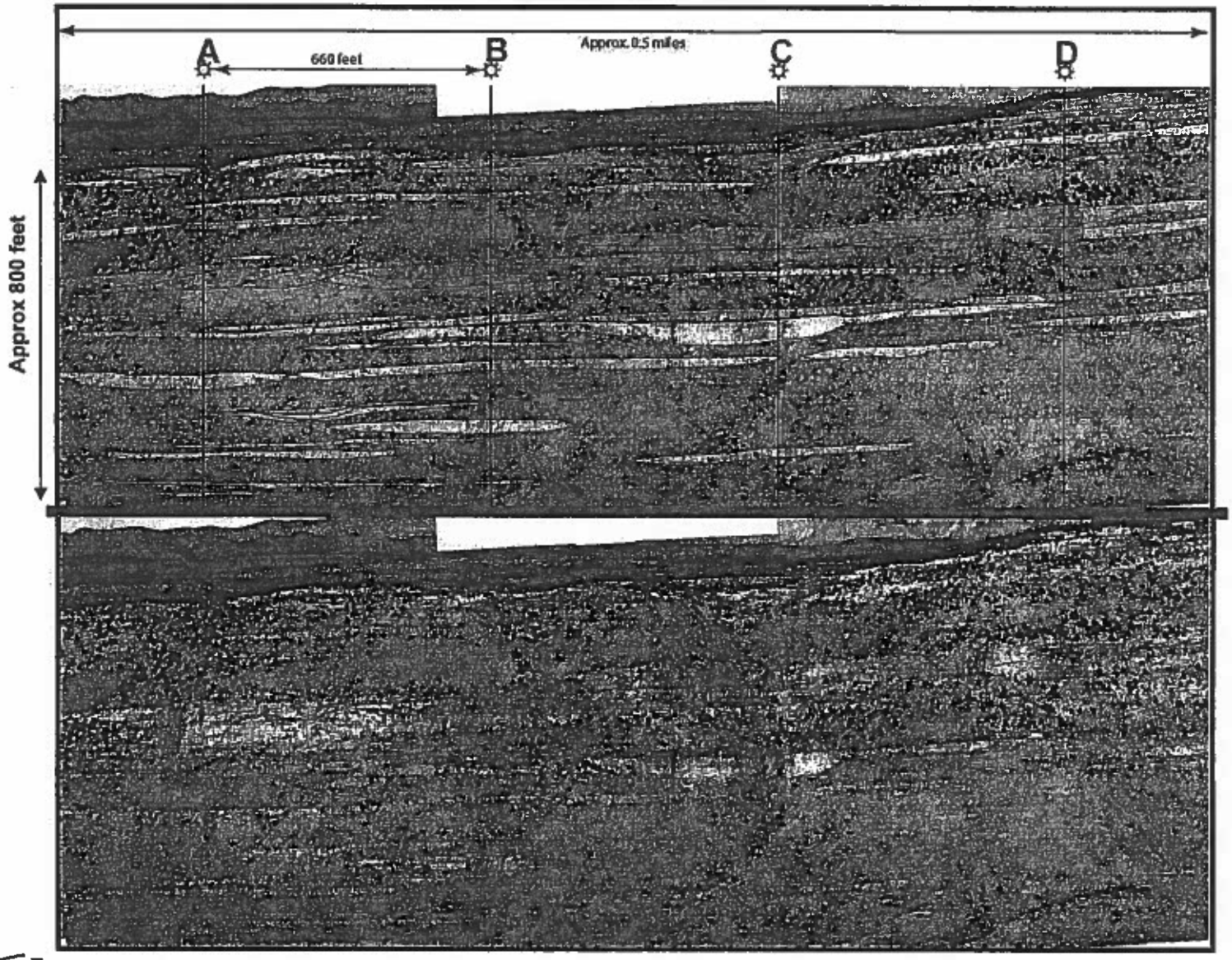
From Cole and Cumella (2005)

SAND BODY STATISTICS

	N	Min	Max	Mean	Median
Levee & Channel Scour	9	3.5	21	9.2	6
	9	46.4	290.5	98.5	81
Point Bars	30	4.1	18	8.8	7.7
	30	112	2316.3	505.1	400.2
	55	4.5	29	13.8	13.2
	55	139.7	2791.1	814.8	674.3
Crevasse Splay	14	2.5	9.1	5.4	5.4
	14	72.9	510.4	234.8	165.4
	28	0.5	6.5	2.8	2.8
	28	40.1	843.3	275.7	247.4
TOTAL POPULATION	136	0.5	29	9.3	8
Thickness (ft)	136	40.1	2791.1	526	400.2
Apparent Width (ft)					

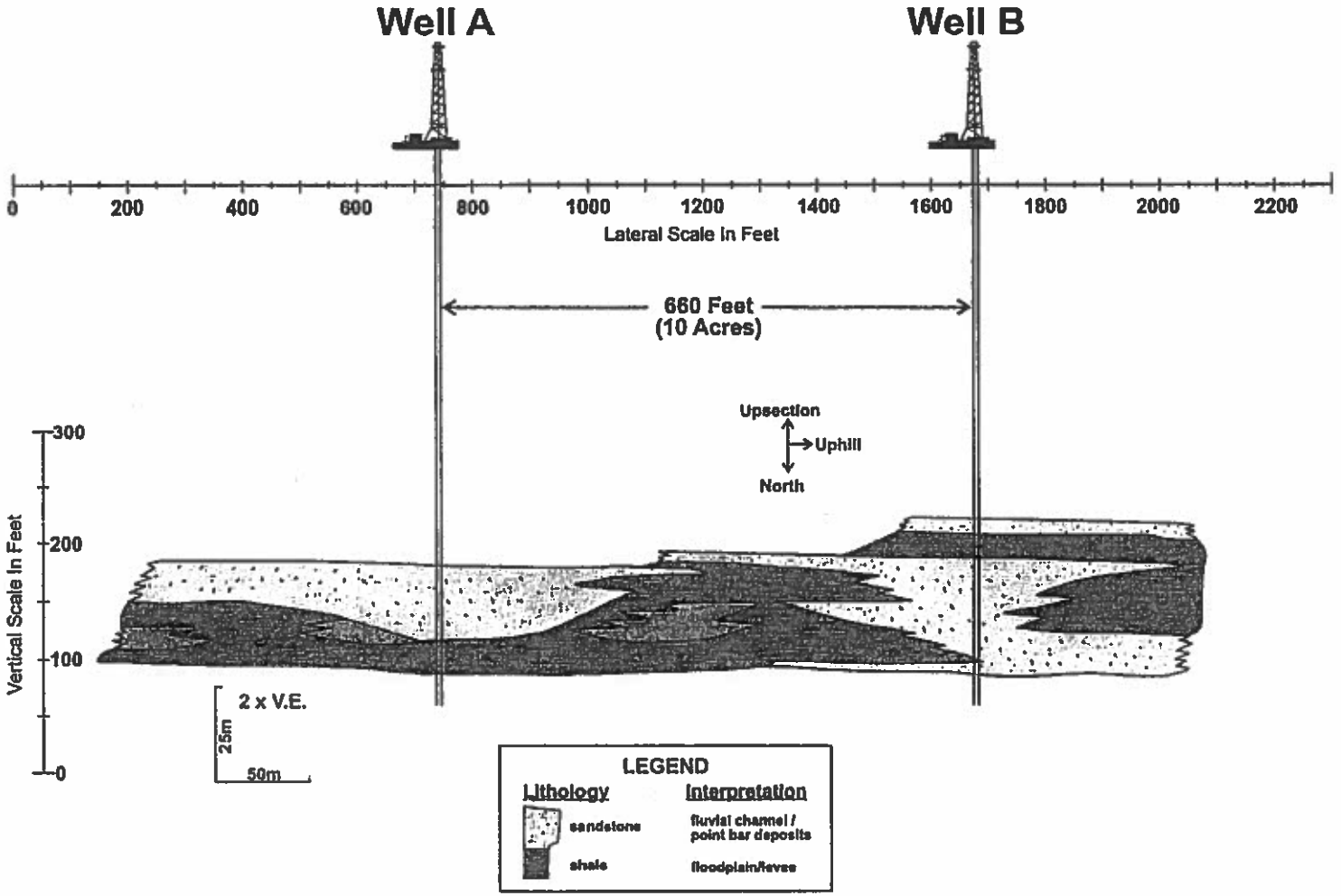
Williams.

WILLIAMS FORK IN COAL CANYON HIGHLIGHTING DISCRETE SAND BODIES



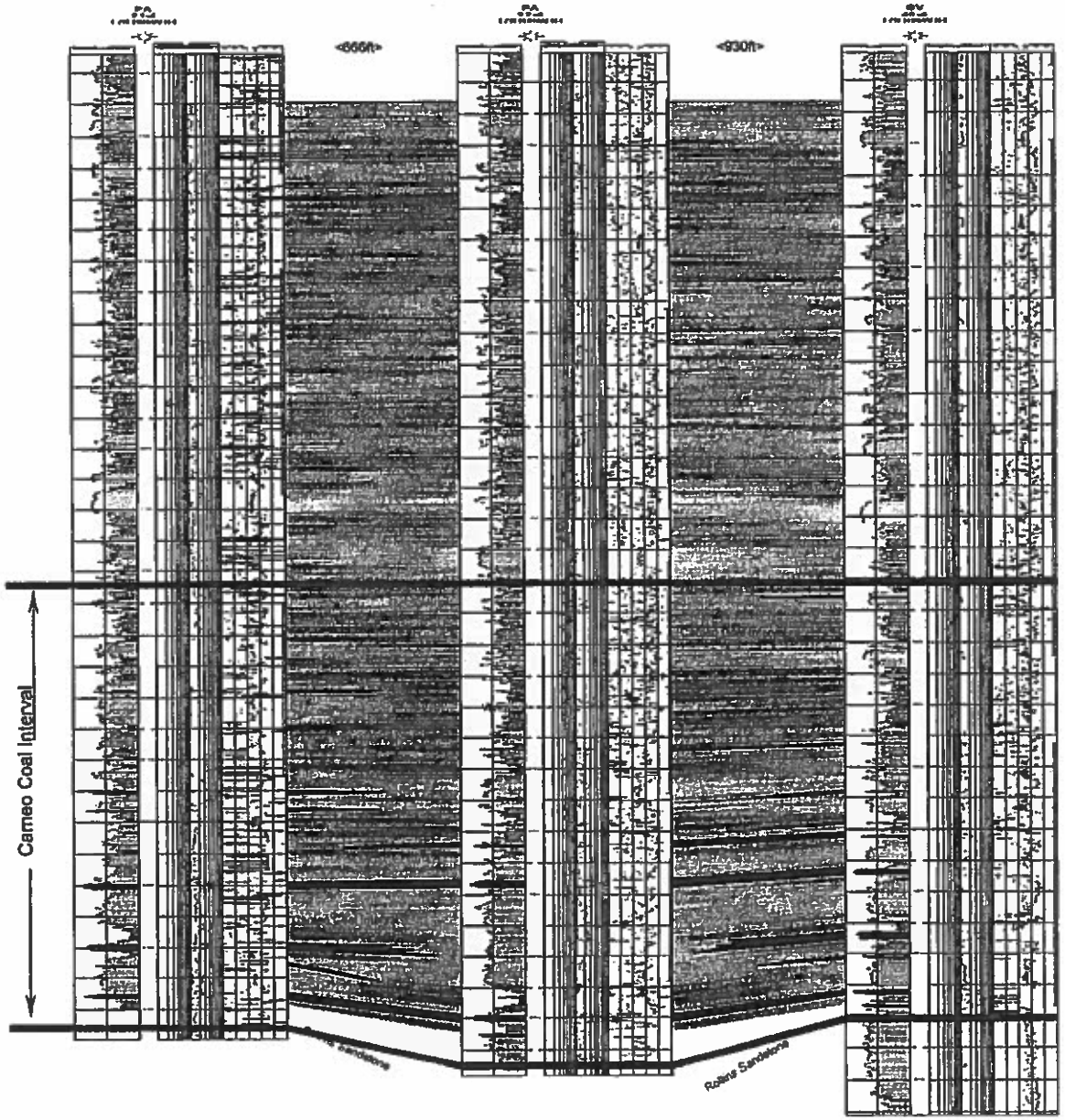
Williams.

Williams Fork Sandstone Bodies With Hypothetical 10-Acre Wells

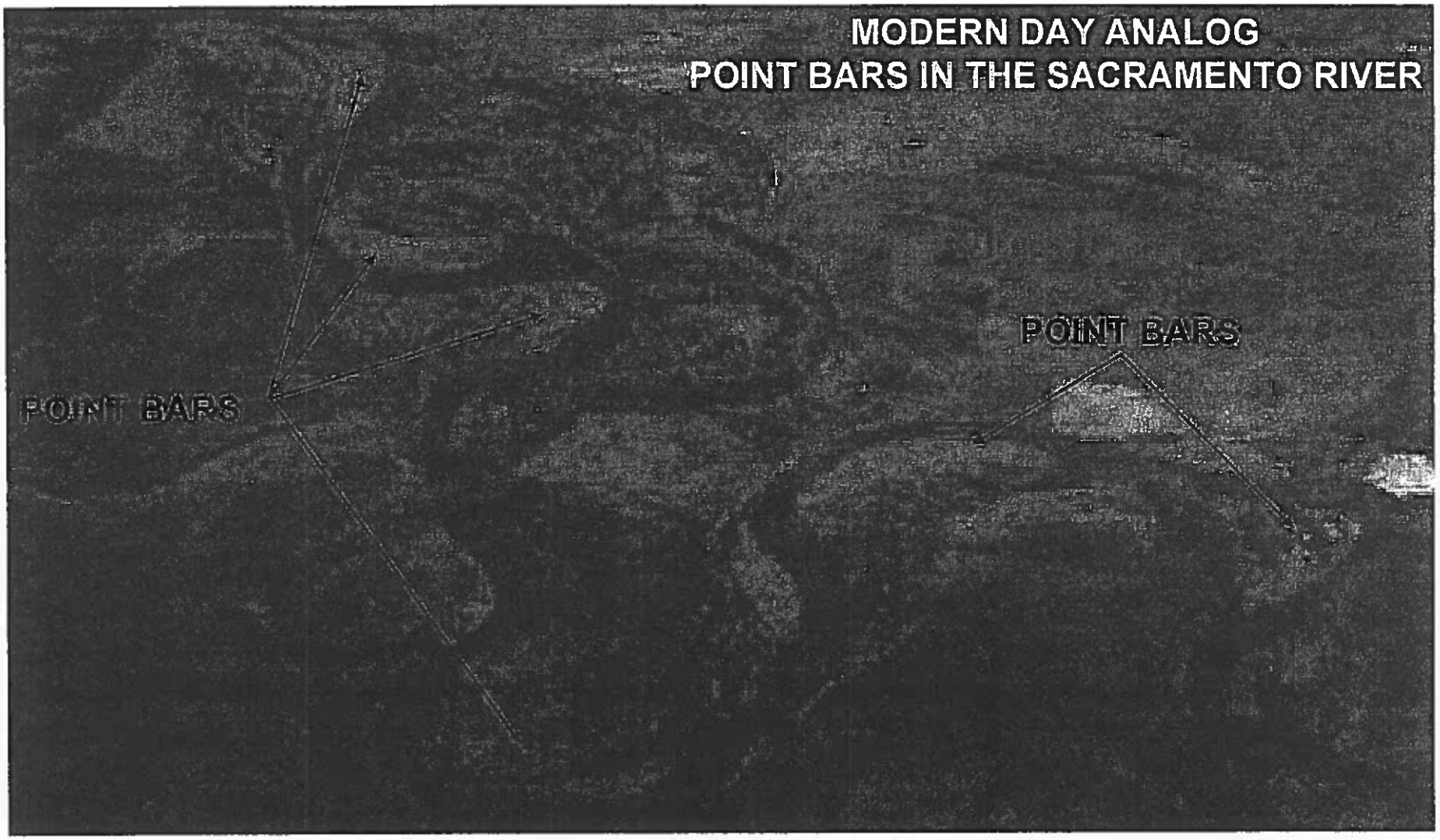


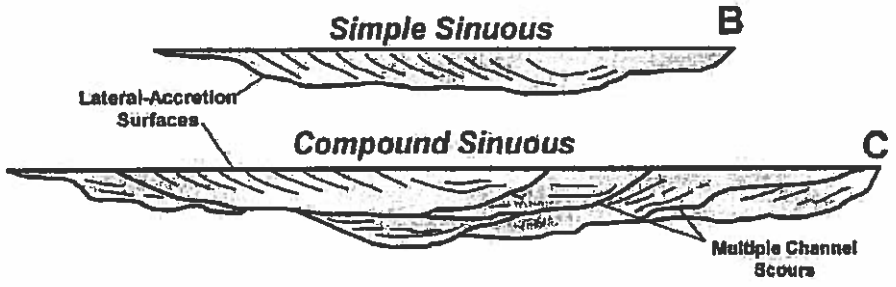
Outcrop of lens 8, west side of Rifle Gap, modified from Lorenz, 1982 (Pg. 28, Fig. 12).

Williams.


Cameo Coal Interval
Rollins Sandstone

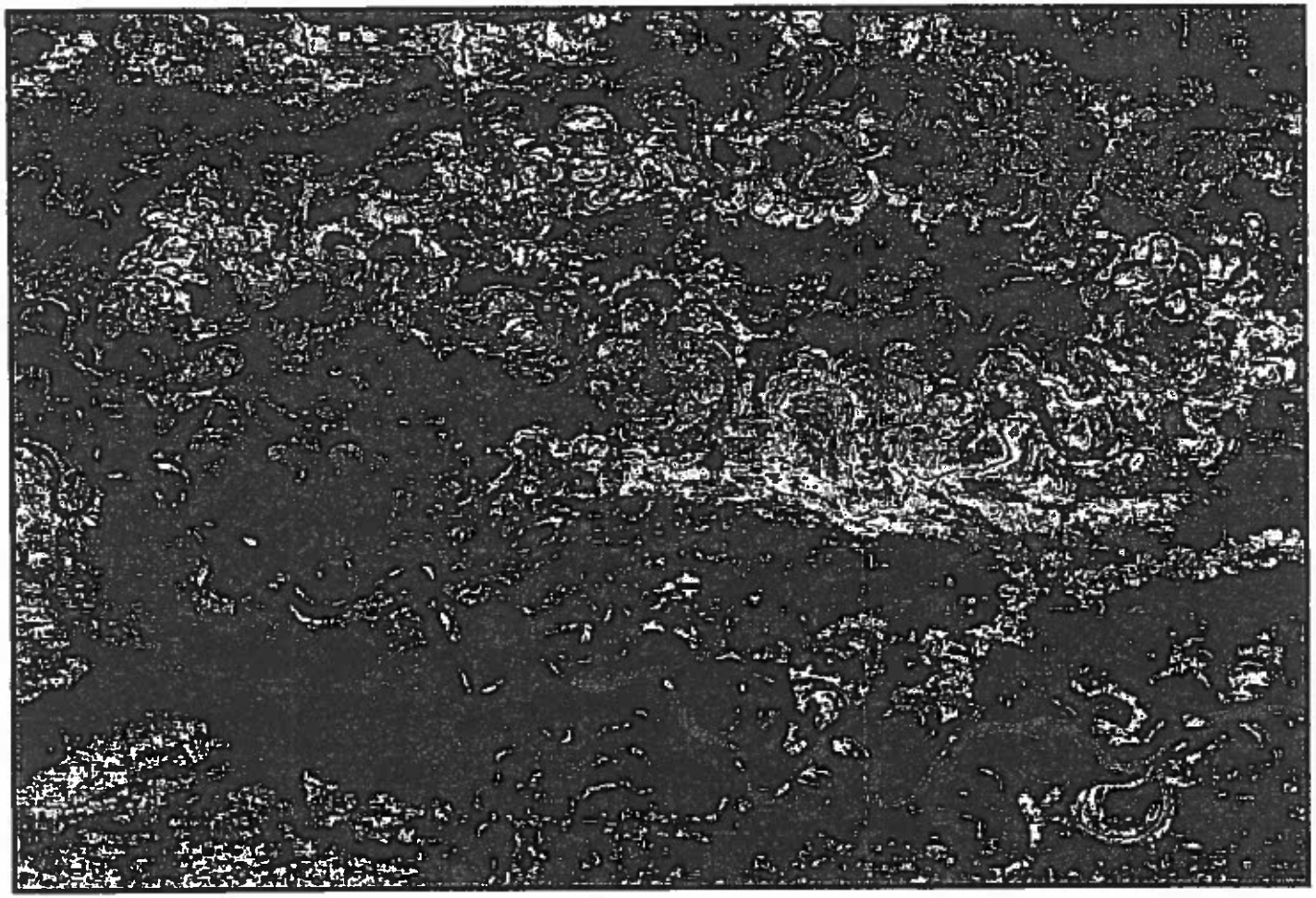
MODERN DAY ANALOG
POINT BARS IN THE SACRAMENTO RIVER

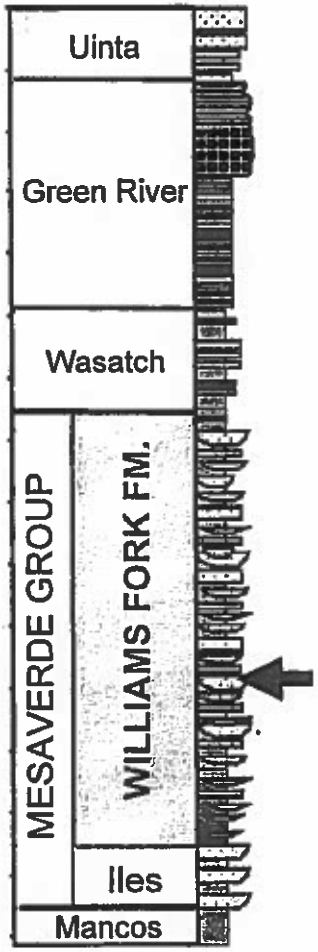




Williams.

MODERN ANALOG – MEANDERS AND POINT BARS IN THE MISSISSIPPI

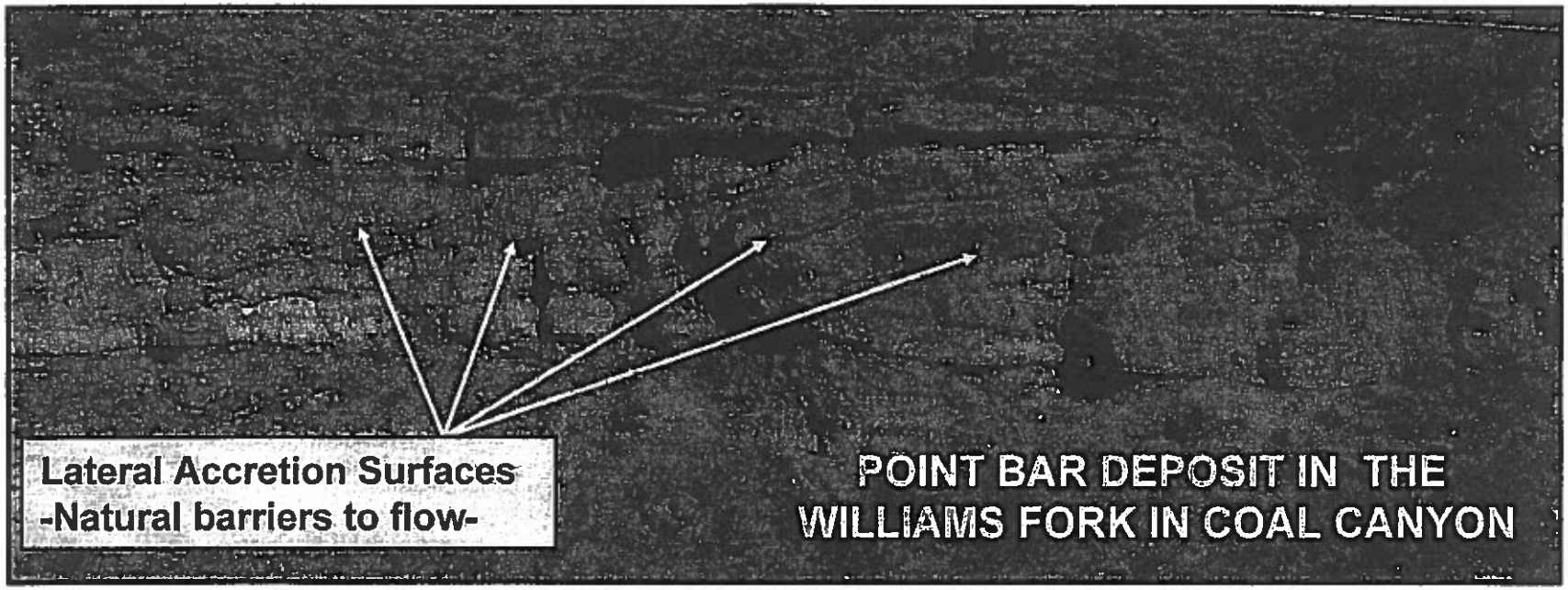


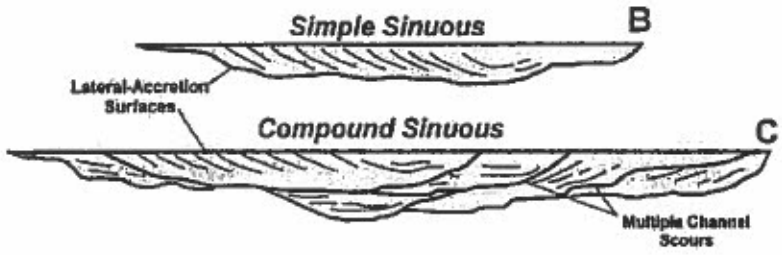


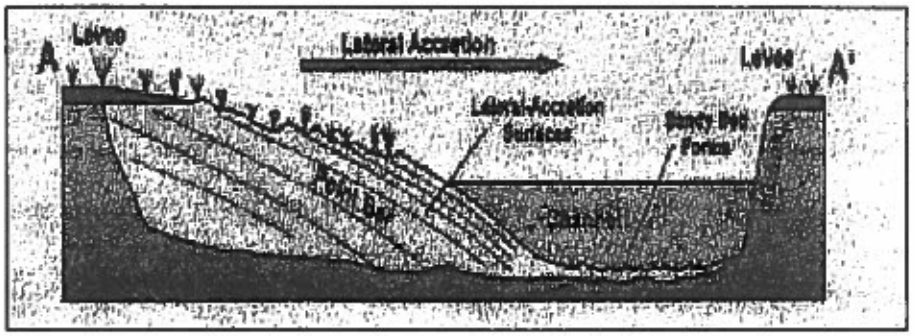
- Hundreds of point bars (small, discontinuous sand bodies)
- A snapshot in time (repeated over and over in 3000' of Williams Fork)

Williams.

SAND BODIES HAVE COMPLEX INTERNAL GEOMETRIES AND BARRIERS TO FLOW





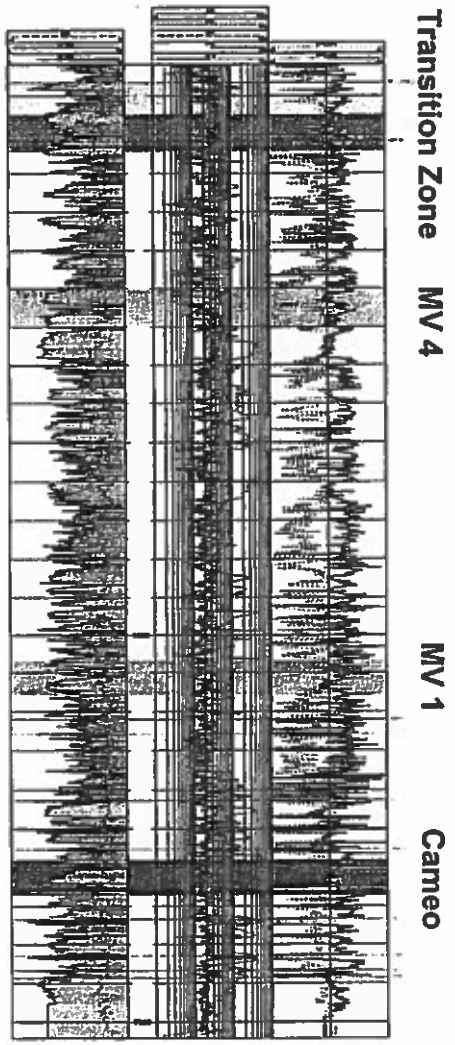


Williams.

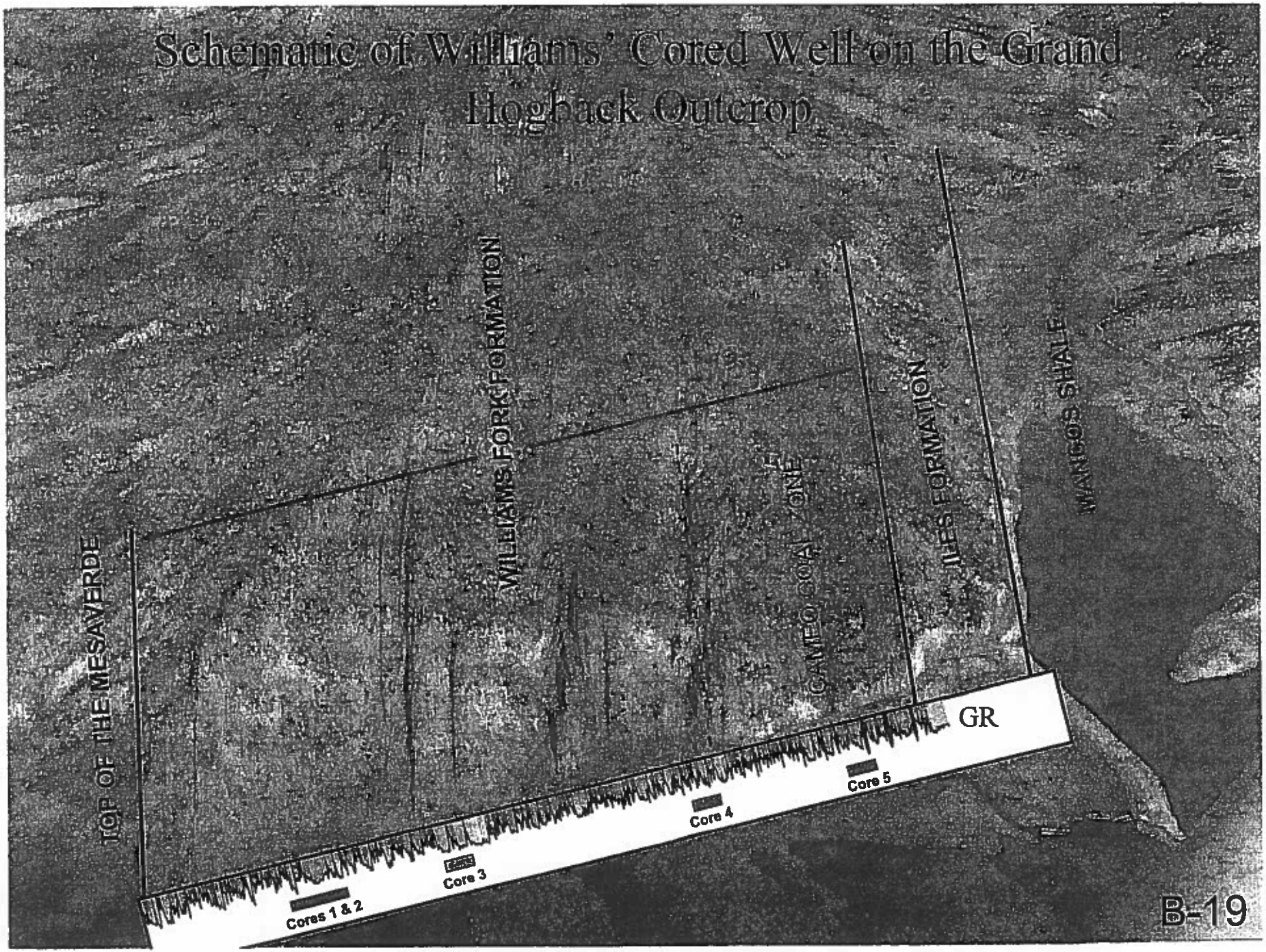
Williams 2005 Core Program

- The depositional interpretations from the core study confirm the geologic model which was created using outcrop studies, dense well control, prior core work and modern day analogs.

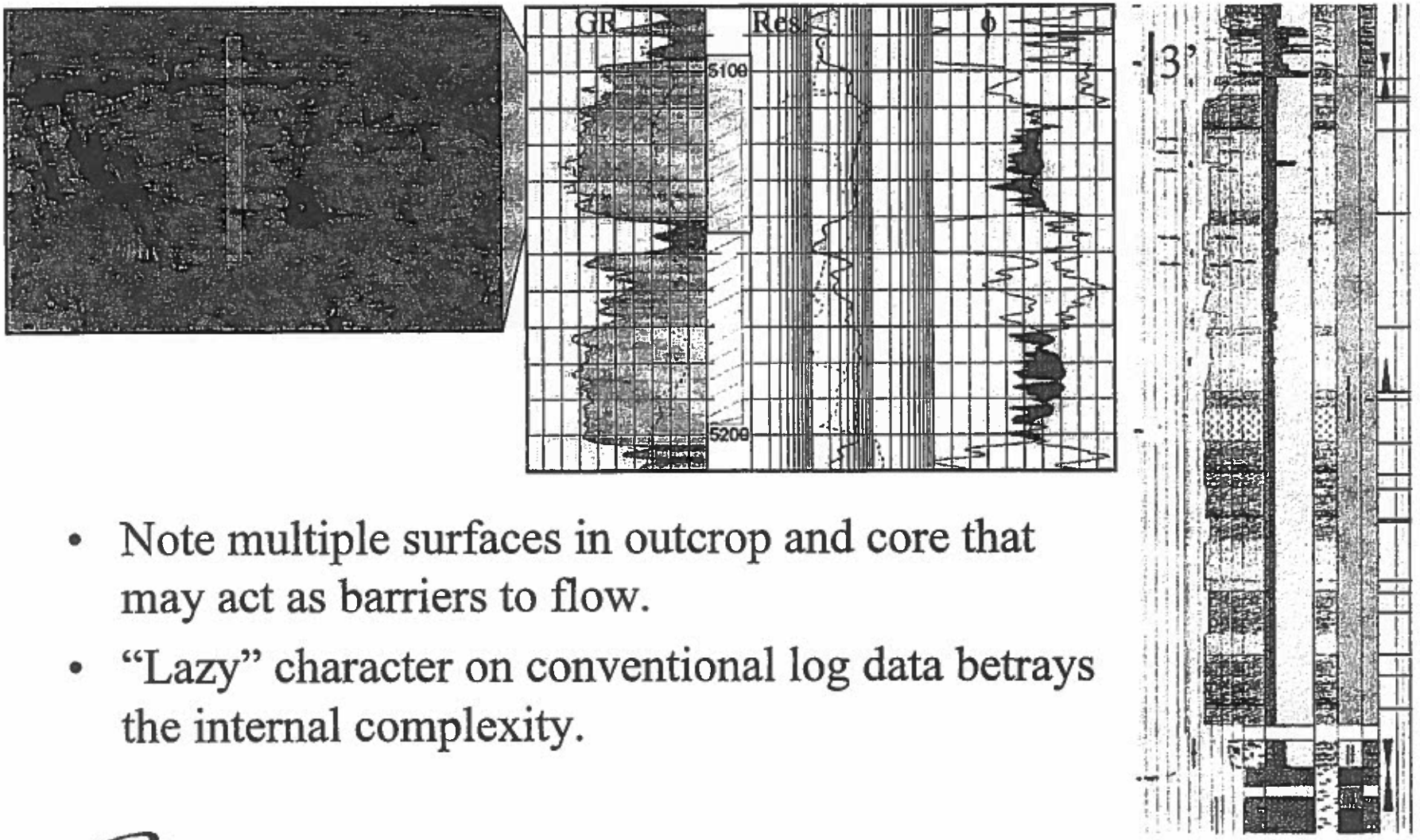
- The geologic model is supported at all scales and depths of investigation.



Williams.


Schematic of Williams' Cored Well on the Grand Hogback Outcrop
TOP OF THE MESAVERDE
WILLIAMS FORK FORMATION
CAMEO COAL ZONE
ILES FORMATION
MANCOS SHALE
GR
Cores 1 & 2
Core 3
Core 4
Core 5
B-19

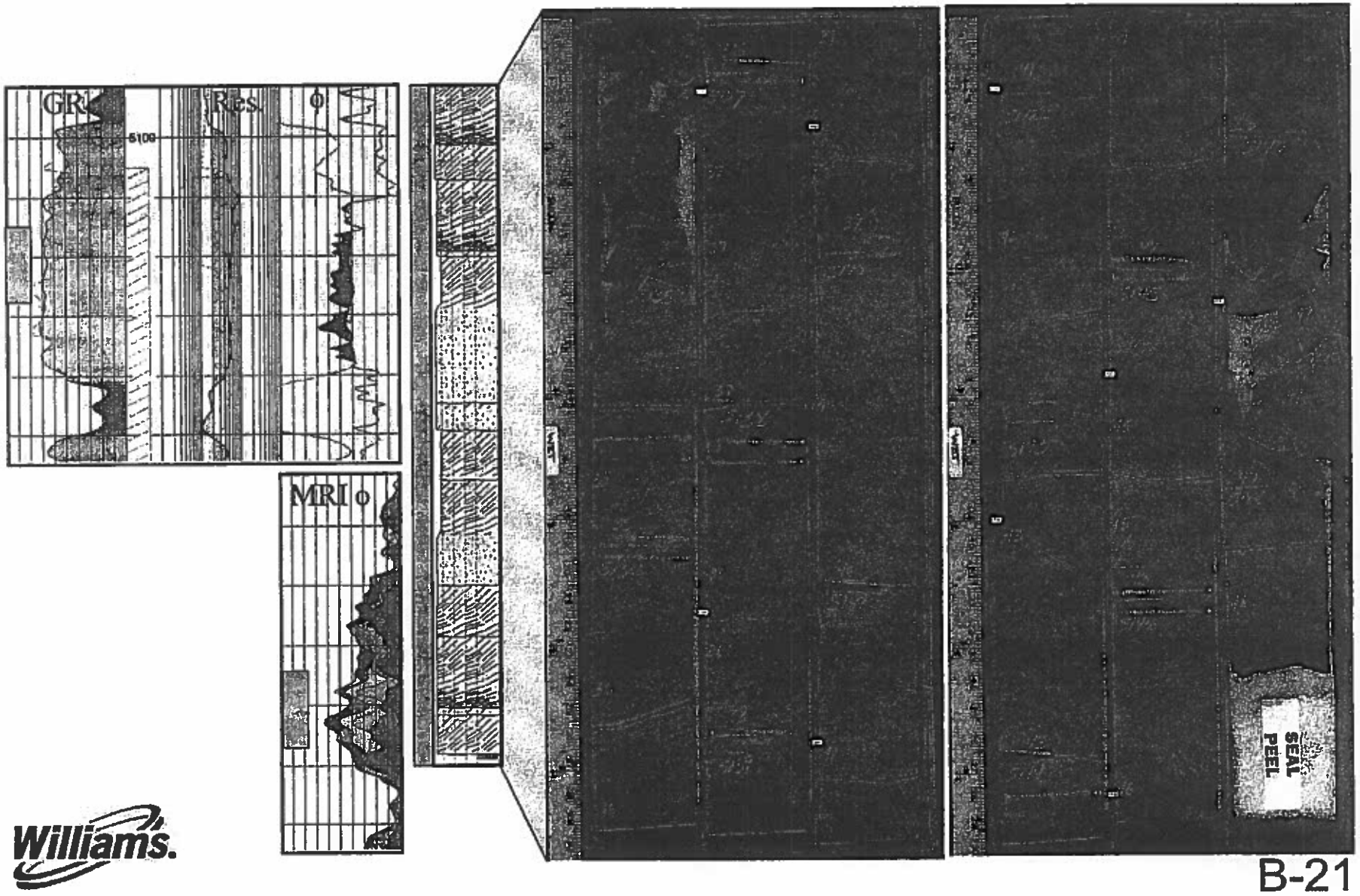
Outcrop to Subsurface Example



- Note multiple surfaces in outcrop and core that may act as barriers to flow.
- "Lazy" character on conventional log data betrays the internal complexity.

Williams.

Core Description and Finer Scaled Features



Williams.

Geologic Model Summary

- Discontinuous sand bodies of limited aerial extent were deposited in fluvial settings.
- Average apparent sand body width is 526'.
- Without 10-Acre density drilling, a significant number of sand units would never be penetrated, leaving considerable gas behind.
- Natural discontinuities exist within the sand bodies that are barriers to flow.
- Extensive outcrop around the basin, dense well control, and cored wells provided an exceptional opportunity to develop this in-depth geologic model.

10-Acre Pilot Summary

	Grand Valley	Rulison	Total
Acres:	160	160	320
Existing Wells: (20-Acre Well Density)	8	8	16
Wells Drilled: (10-Acre Well Density)	8	8	16
Pressure Tests: (Individual Sands)	96	125	221
Microseismic Monitored Hydraulic Fracs:	6	8	14

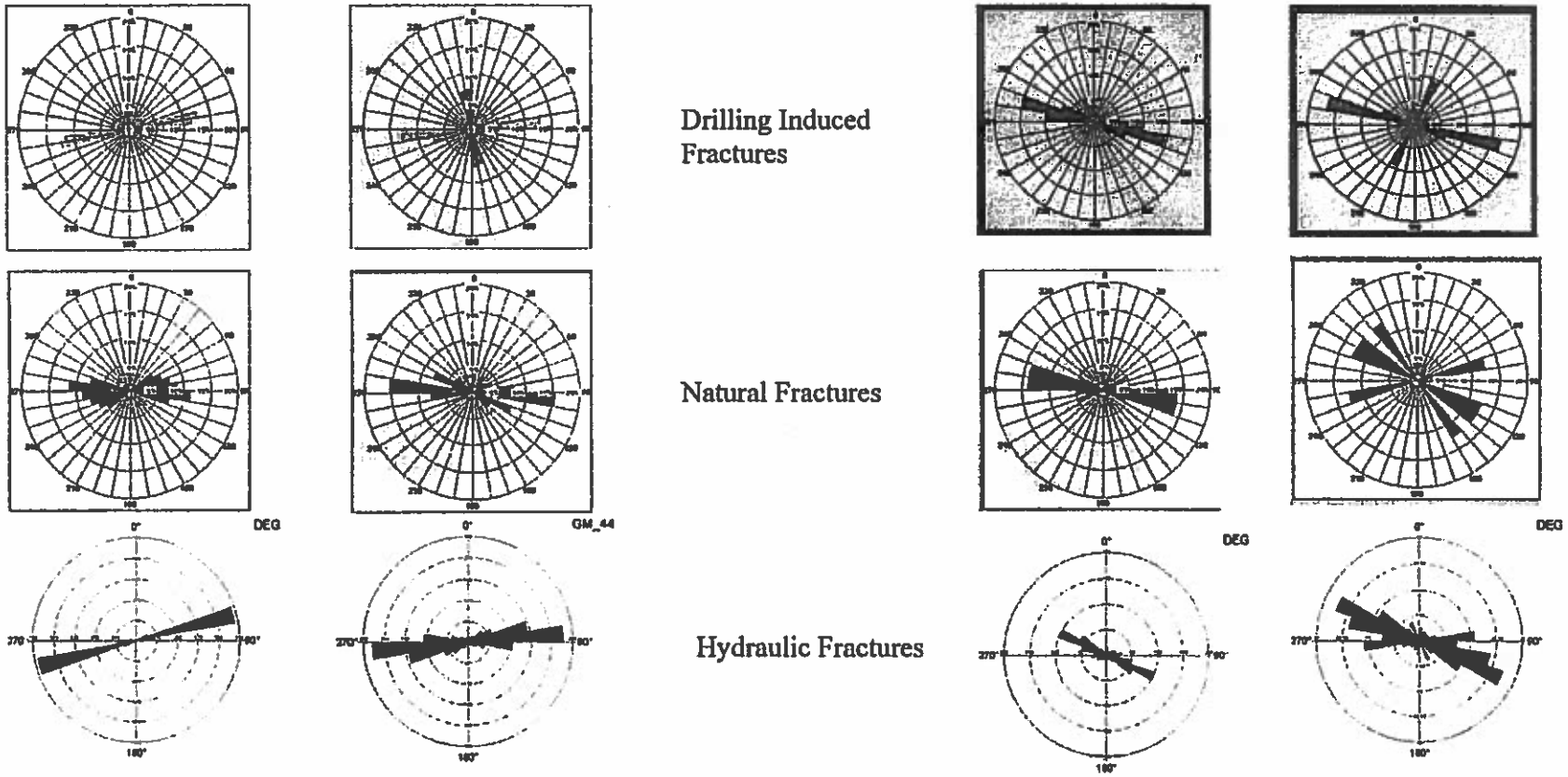
Other Tests: 4 Production Logs, 7 RFT tests, 4 FMI logs

Williams.

FMI and Microseismic Results

Grand Valley

Rulison

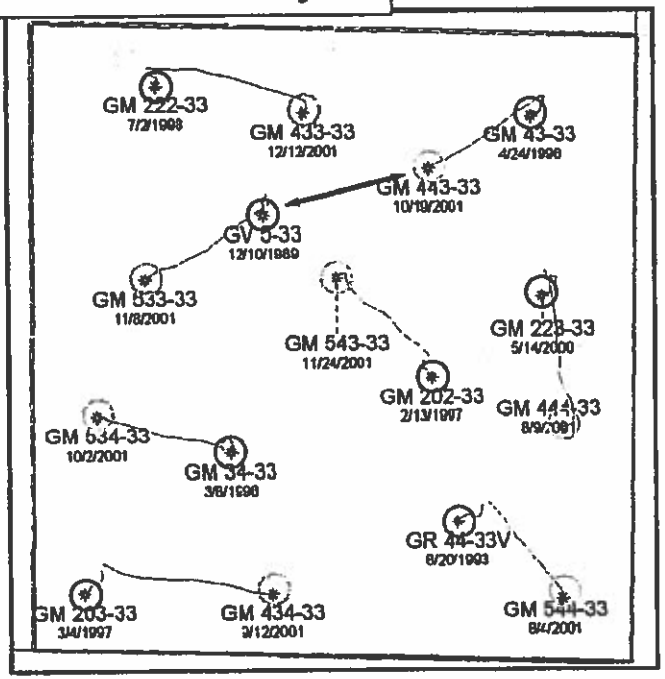


FMI and Microseismic confirm both hydraulic and natural fracture orientations are approximately the same

Williams.

Orientation is Critical

Grand Valley



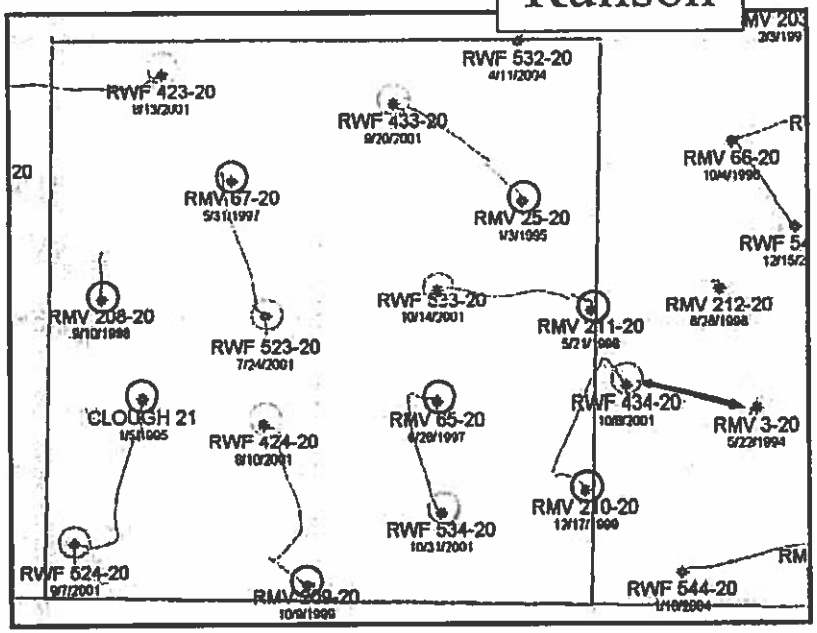
- Those 2 wells on exact orientation were poorer performers and measured more depletion
- All other 10-Acre wells (including those as close as 300 feet off orientation) performed at field average

- Two wells in each pilot were on direct fracture orientation to a parent well:

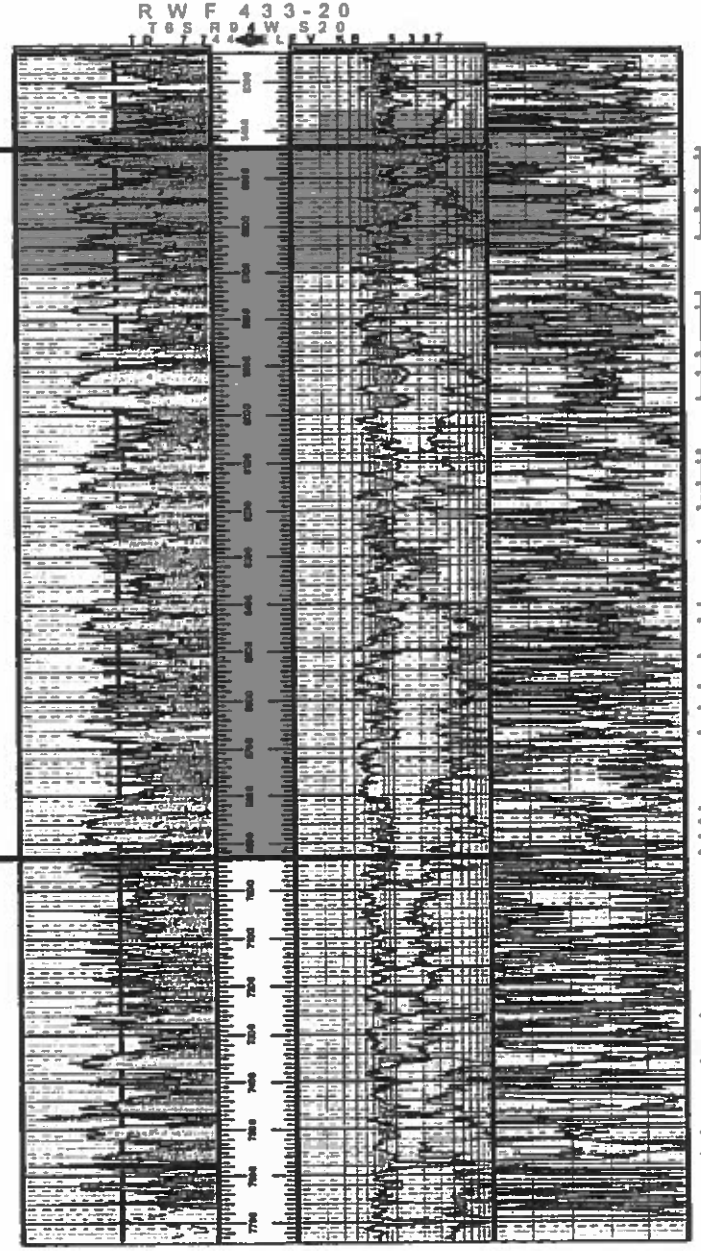
  GM 443-33

  RWF 434-20

Rulison



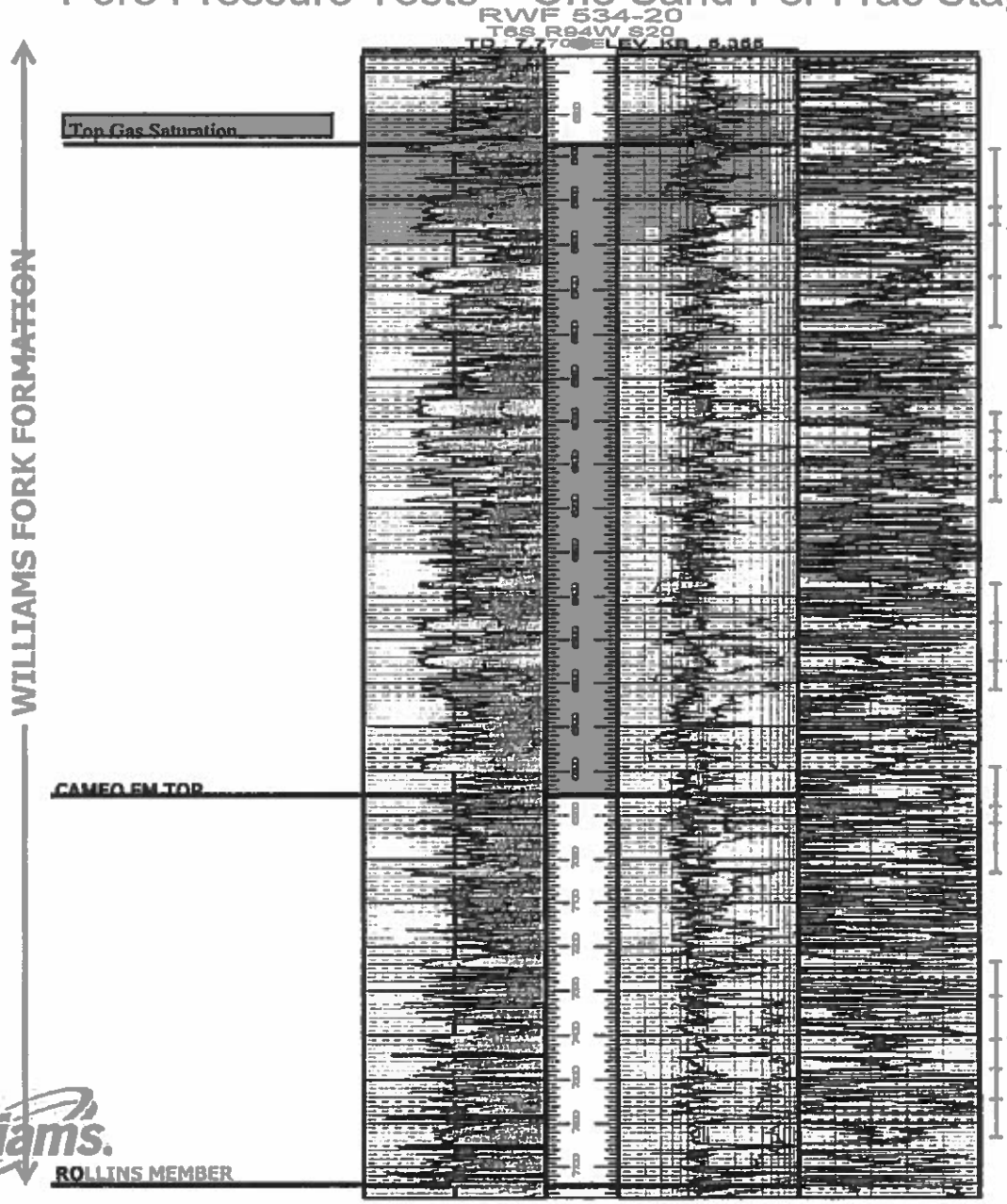
Pore Pressure Tests – All Sands Completed



Reservoir Pressure Results
(Every sand tested that was completed)

- 2,516 psi – No Depletion
- 2,520 psi – No Depletion
- 2,522 psi – No Depletion
- 2,580 psi – No Depletion
- 2,597 psi – No Depletion
- 3,226 psi – No Depletion
- 3,297 psi – No Depletion
- 3,336 psi – No Depletion
- 2,931 psi – No Depletion
- 3,428 psi – No Depletion
- 1,987 psi – Partial Depletion
- 1,566 psi – Partial Depletion
- 3,242 psi – No Depletion
- 3,263 psi – No Depletion
- 2,793 psi – Partial Depletion
- 3,232 psi – No Depletion
- 3,020 psi – No Depletion
- 3,531 psi – No Depletion
- Bad Test
- 4,104 psi – No Depletion
- 4,050 psi – No Depletion
- 4,123 psi – No Depletion
- 4,141 psi – No Depletion
- 4,534 psi – No Depletion
- 4,788 psi – No Depletion
- 4,813 psi – No Depletion
- 5,110 psi – No Depletion
- 5,234 psi – No Depletion
- 4,905 psi – No Depletion

Pore Pressure Tests – One Sand Per Frac Stage



Reservoir Pressure Results
(One sand per frac interval
– sand chosen to be most correlative to offset wells)

- 3,195 psi – No Depletion
- 3,443 psi – No Depletion
- 3,745 psi – No Depletion
- 4,152 psi – No Depletion
- 4,771 psi – No Depletion

Grand Valley Pressure Testing Summary

Type of Test	# of Tests Performed	No Depletion Results	Partially Depleted Results
40-acre Pilot Pressure Tests	6	6 100%	0 0%
20-acre Pilot Pressure Tests	7	6 86%	1 14%
10-acre Pilot Total Pressure Tests	96	71 74%	25 26%
10-acre Pilot Pressure Tests (without "Orientation" Well)	76	59 78%	17 22%

No Depletion: Virgin reservoir pressure or slightly less than virgin reservoir pressure (gas is not being effectively produced from offset wells)

Partially Depleted: Less than 85% of virgin reservoir pressure (gas from some sand bodies is being produced from offset wells)

Williams.

Rulison Pressure Testing Summary

Type of Test	# of Tests Performed	No Depletion Results	Partially Depleted Results
MWX/M-site Pressure Tests	7	7 100%	0 0%
20-acre Pilot Pressure Tests	7	7 100%	0 0%
10-acre Pilot Total Pressure Tests	125	104 83%	21 17%
10-acre Pilot Pressure Tests (without "Orientation" Well)	99	90 90%	9 9%

No Depletion: Virgin reservoir pressure or slightly less than virgin reservoir pressure (gas is not being effectively produced from offset wells)

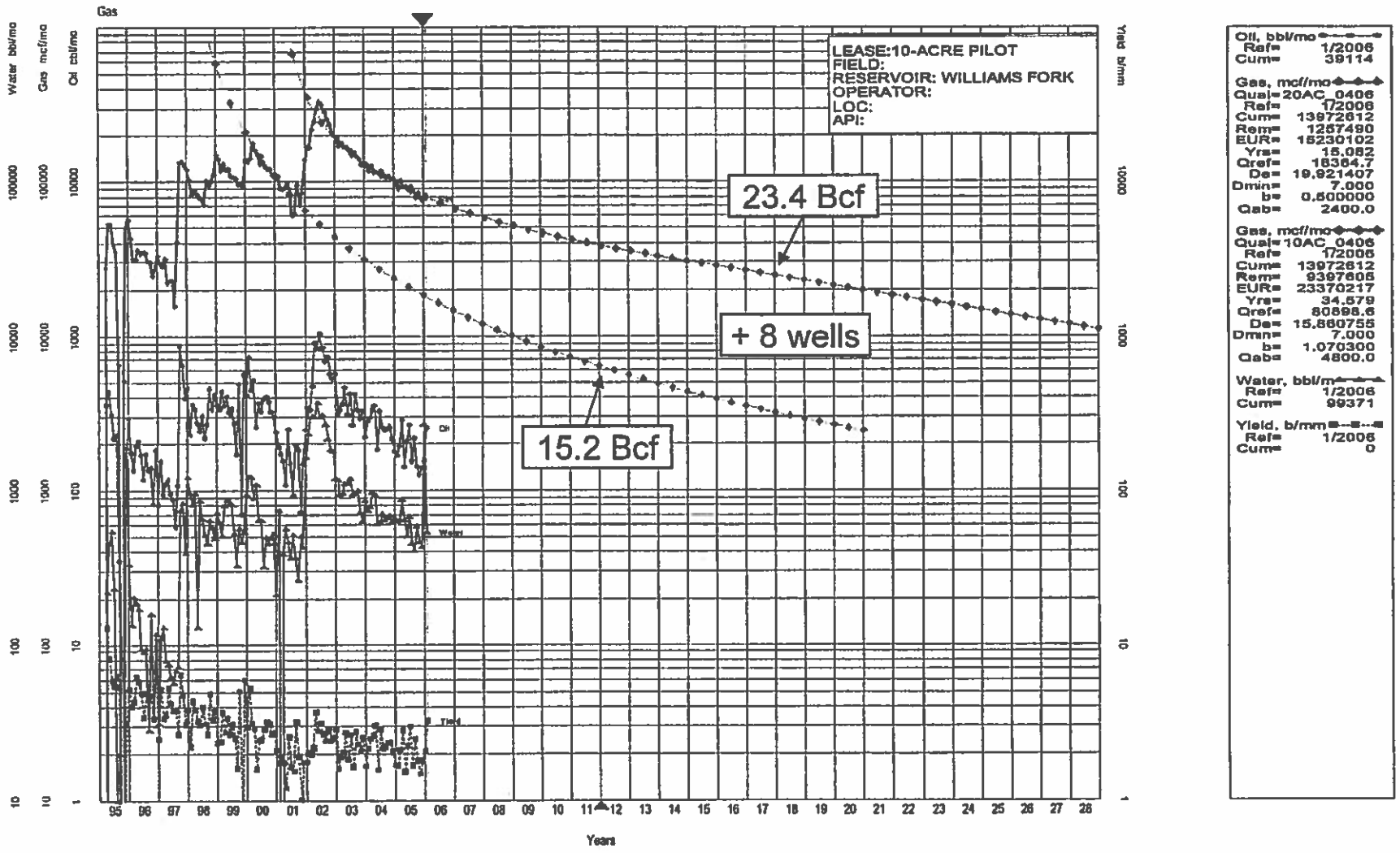
Partially Depleted: Less than 85% of virgin reservoir pressure (gas from some sand bodies is being produced from offset wells)

Williams.

Pressure Test Summary

- Minimal amount of depletion measured
- More depletion seen when wells are on exact orientation with old parent wells
- Pressure test results confirm the geologic model
- Even with some pressure reduction, 10-acre density wells will produce substantial incremental gas reserves.

Rulison 10-Acre Pilot S20-T6S-R94W

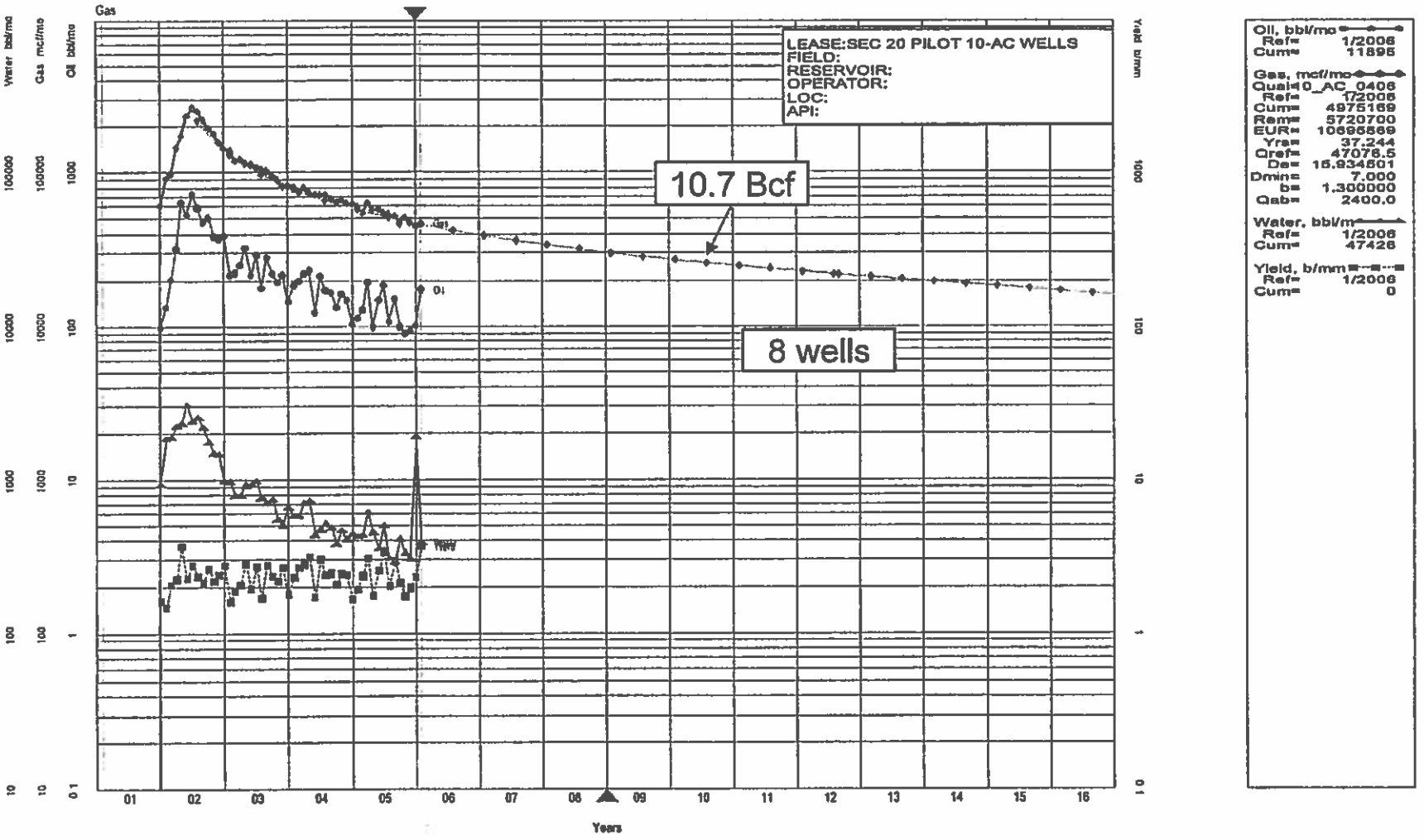


Williams.

MHA

MHA Exhibit 1

Rulison 10-Acre Pilot S20-T6S-R94W

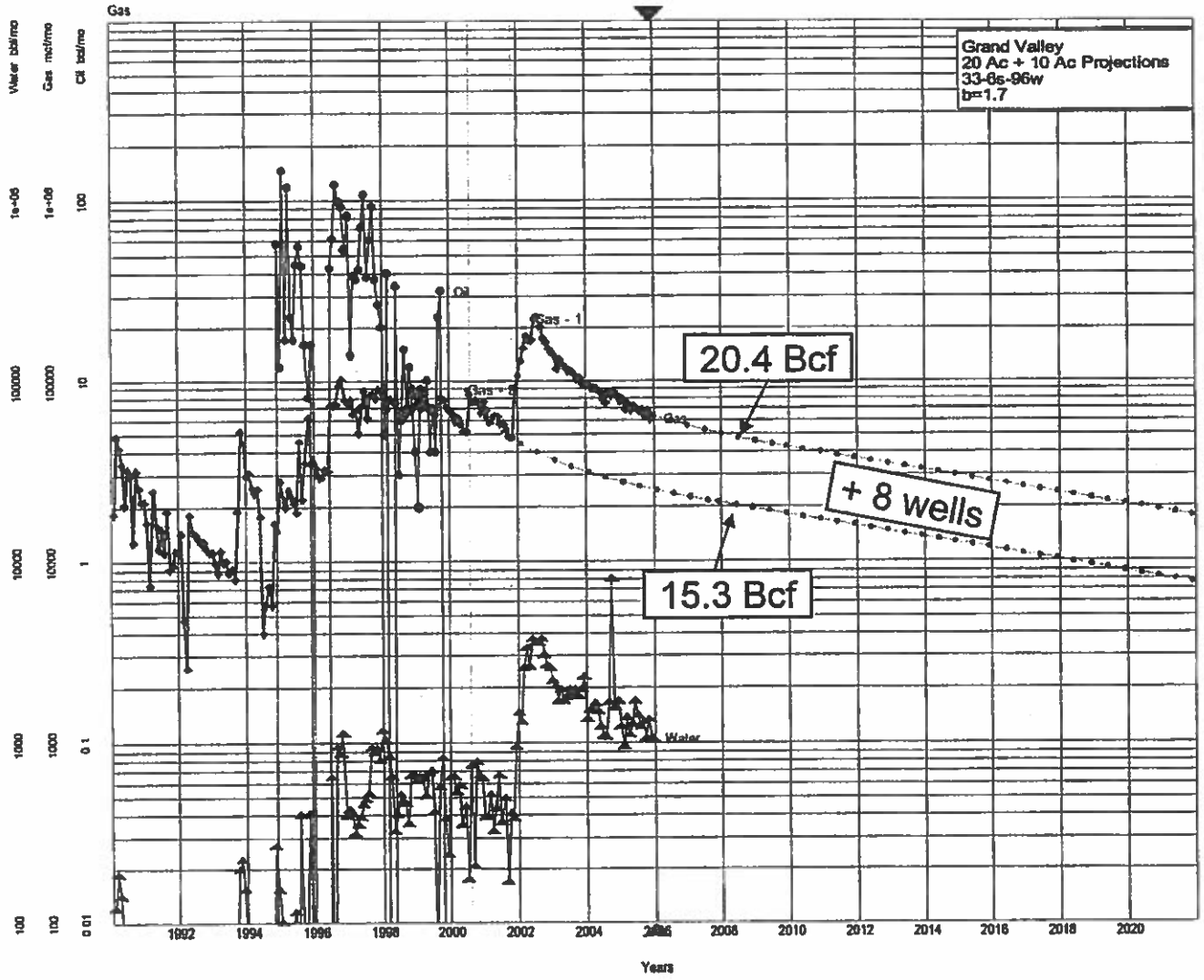


Williams.

MHA

MHA Exhibit 2

Grand Valley 10-Acre Pilot S33-T6S-R96W



Oil, bbl/mo
Ref= 12/2005
Cum= 1948

Gas, mcf/mo
Qual= Gas - 1
Ref= 12/2005
Cum= 11606980
Rem= 8750835
EUR= 20357815
Yrs= 34.164
Qref= 64104.7
De= 12.287851
Dmin= 7.000
b= 1.761967
Qab= 4800.0

Gas, mcf/mo
Qual= Gas - 3
Ref= 12/2005
Cum= 11606980
Rem= 3663019
EUR= 15269999
Yrs= 32.081
Qref= 25049.5
De= 8.506585
Dmin= 7.000
b= 1.700000
Qab= 2400.0

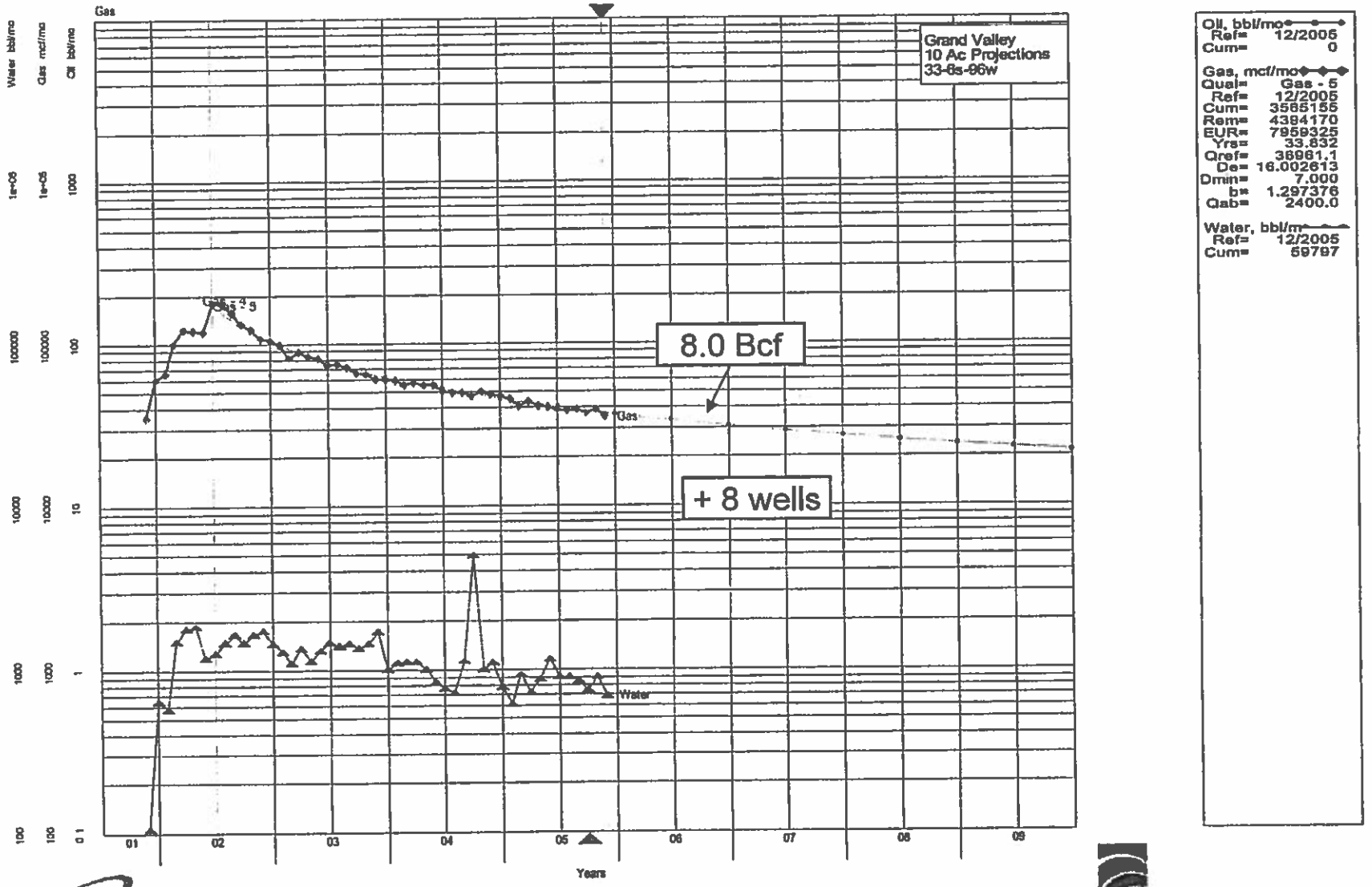
Water, bbl/m
Ref= 12/2005
Cum= 137481

Williams.

MHA

MHA Exhibit 3

Grand Valley 10-Acre Pilot S33-T6S-R96W



Oil, bbl/mo
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Cum= 0

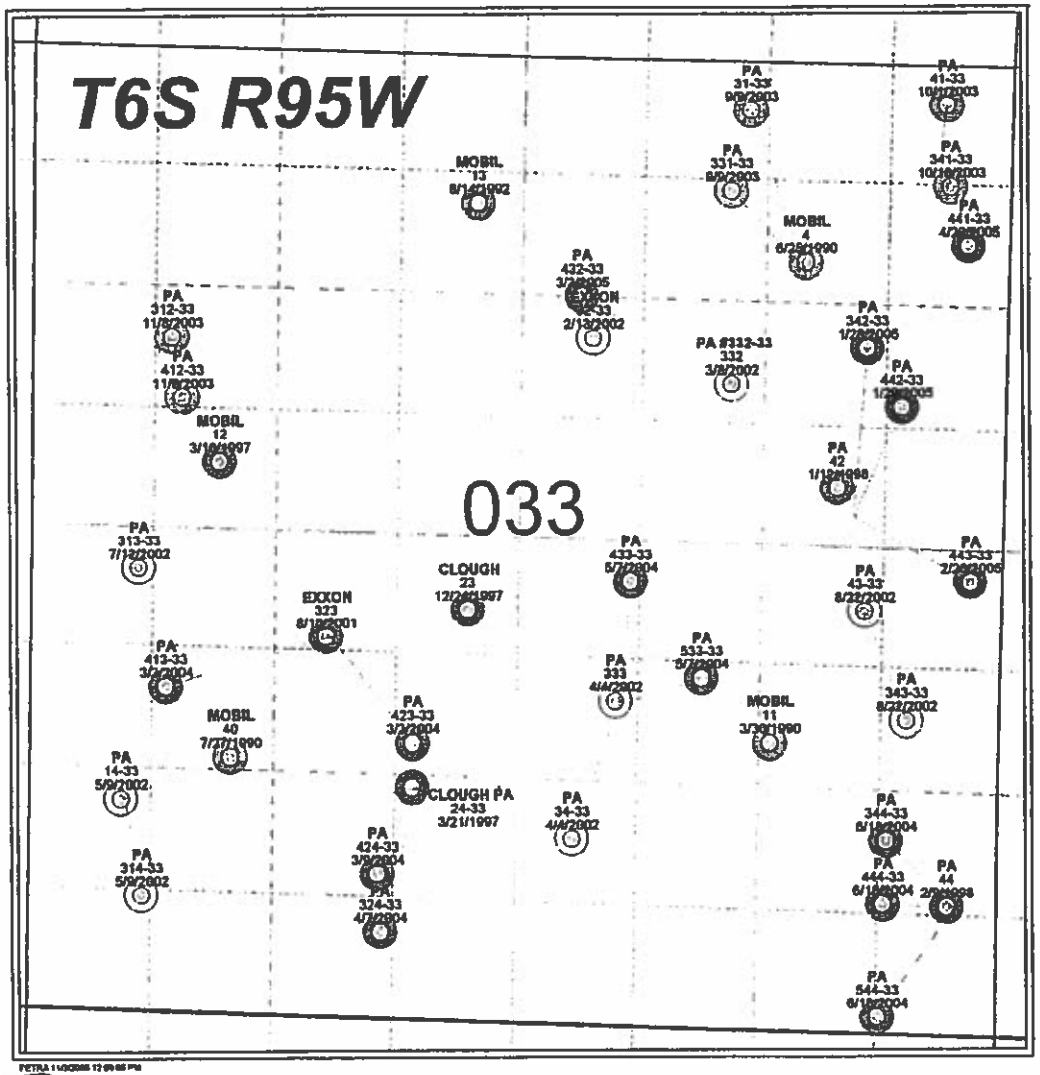
Gas, mcf/mo
Qual= Gas - 5
Ref= 12/2005
Cum= 3565155
Rem= 4384170
EUR= 7959325
Yrs= 33.832
Qref= 36961.1
De= 16.002613
Dmin= 7.000
b= 1.297376
Qab= 2400.0

Water, bbl/mo
Ref= 12/2005
Cum= 59797

Williams.

MHA Exhibit 4

Parachute Field S33-T6S-R95W

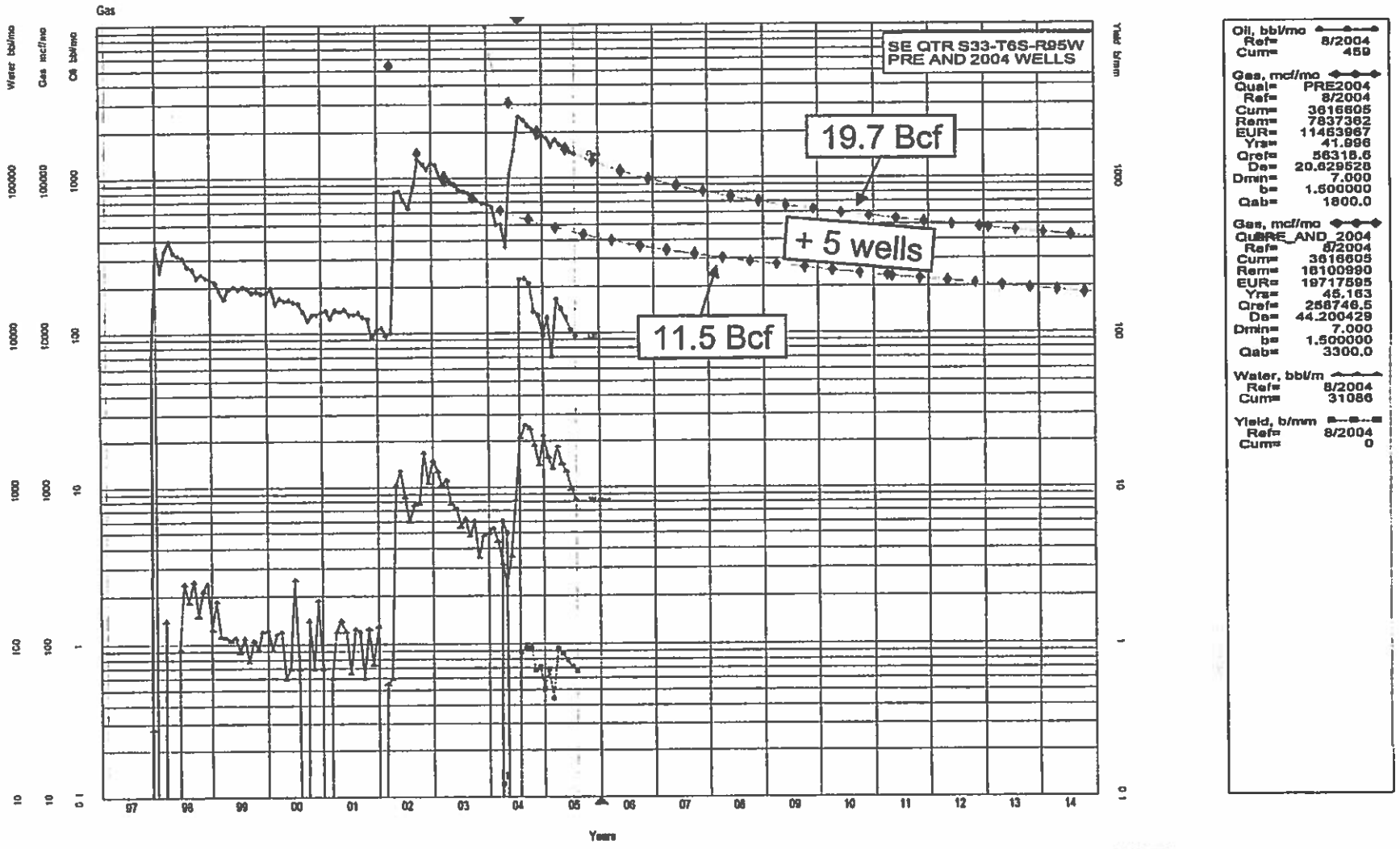


Williams.

MHA

MHA Exhibit 5

Parachute Field SEQtr S33-T6S-R95W

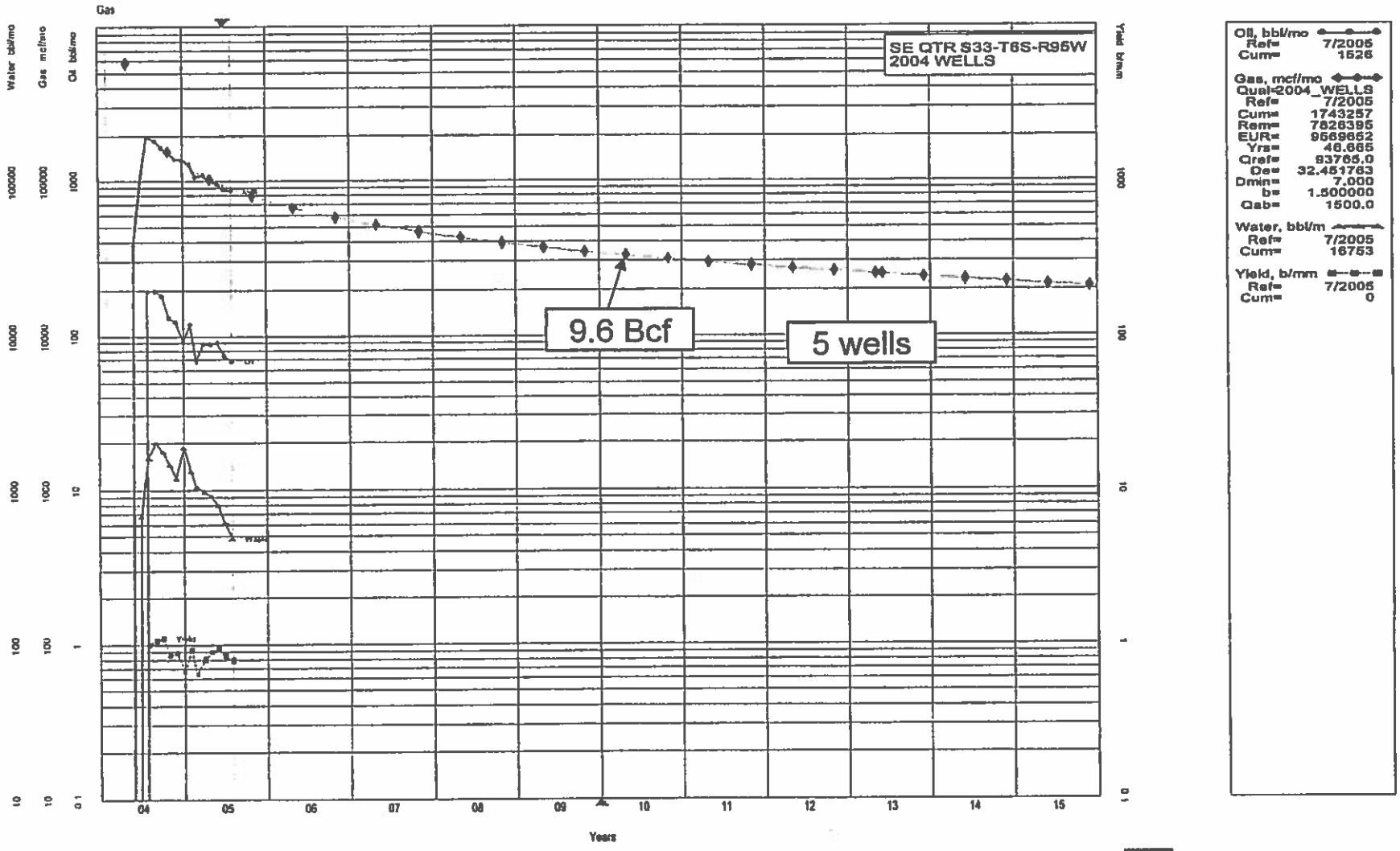


Williams.

MHA

MHA Exhibit 6

Parachute Field SEQtr S33-T6S-R95W



Williams.

MHA

MHA Exhibit 7

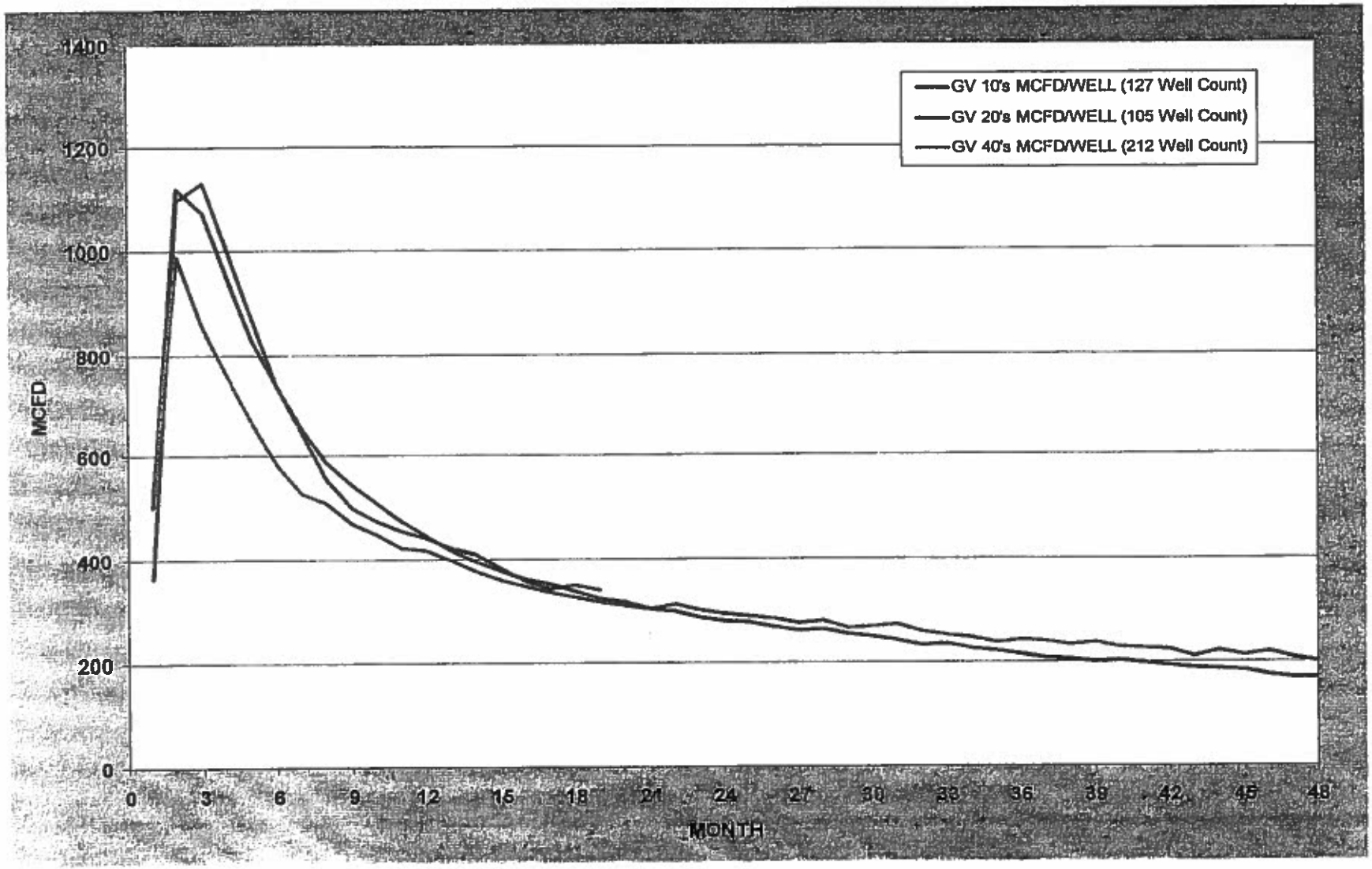
Production Decline Analysis
Williams Fork 10-Acre Density Areas

	Rulison S20-T6S-R94W	Grand Valley S33-T6S-R96W	Parachute S33-T6S-R95W
Estimated Ultimate Recovery With 20-Acre Spacing, Bcf	15.23	15.27	11.45
Estimated Ultimate Recovery With 10-Acre Spacing, Bcf	23.37	20.36	19.72
Increase in Estimated Ultimate Recovery, Bcf	8.14	5.09	8.27
Estimated Ultimate Production From10-Acre Wellbores, Bcf	10.7	7.92	9.57
Percentage of 10-Acre Well Production Representing New Reserves	76.1%	64.3%	86.4%

Williams

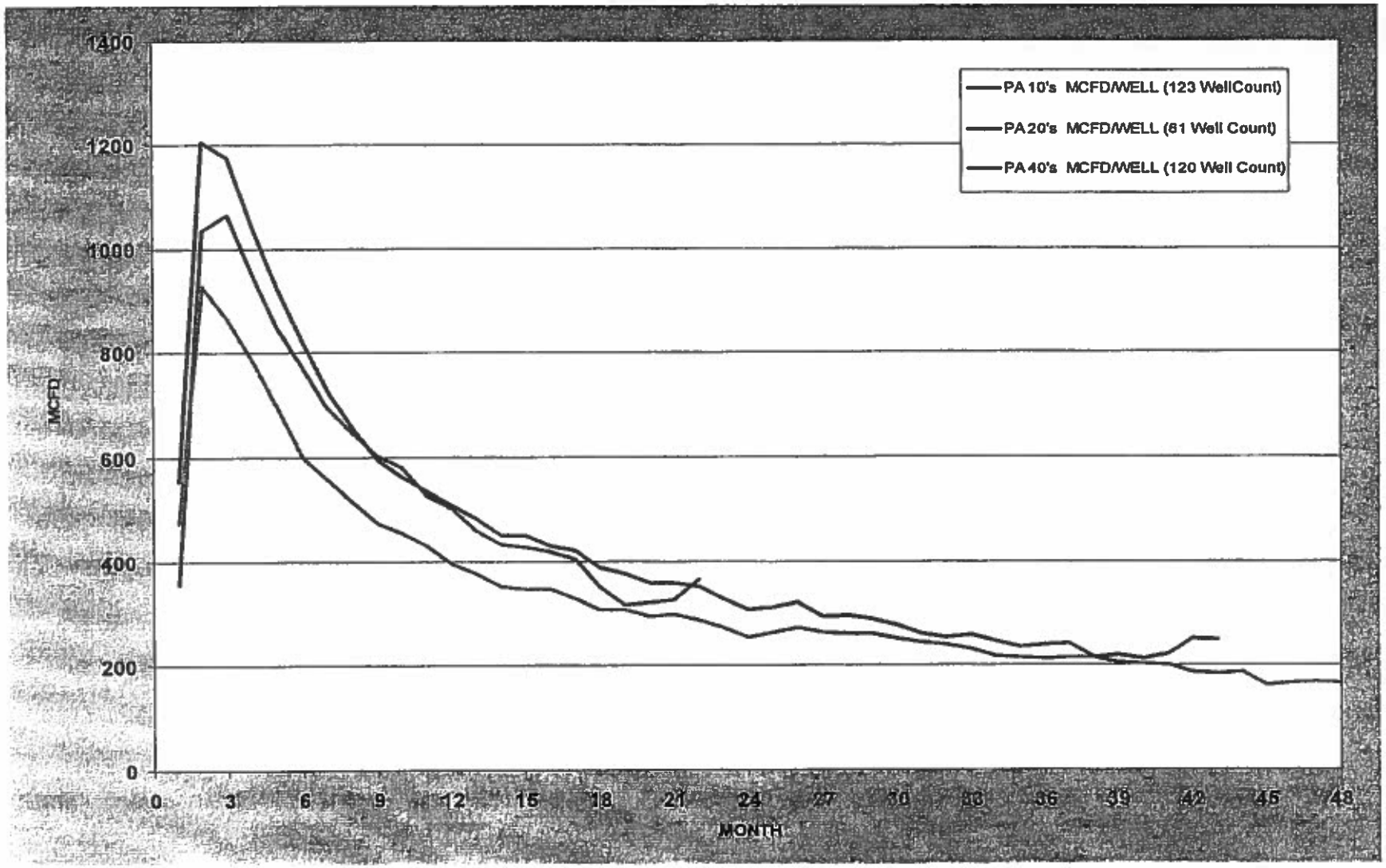
MHA Exhibit 8

Grand Valley Field Average Monthly Production Comparison



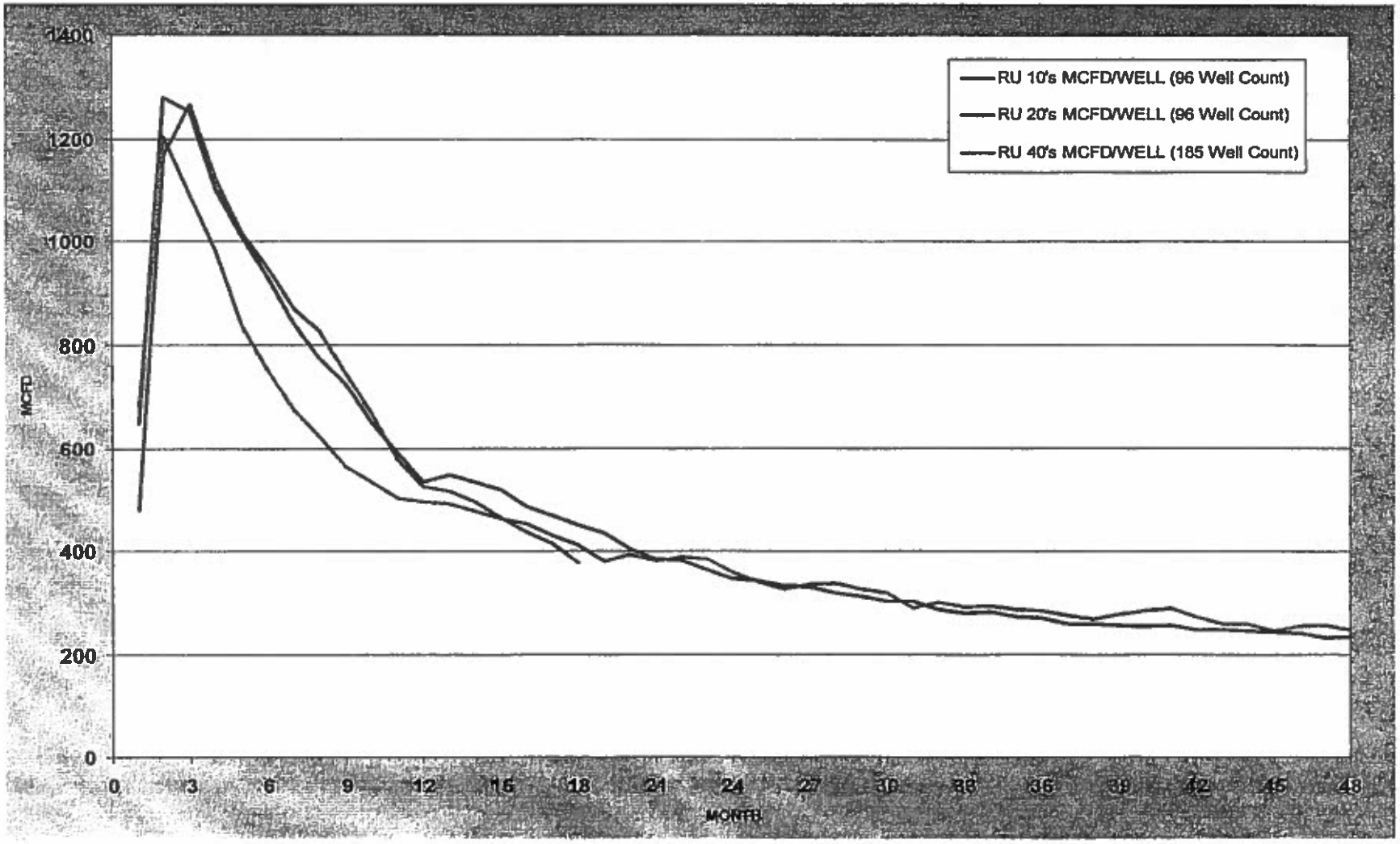
Williams.

Parachute Field Average Monthly Production Comparison



Williams.

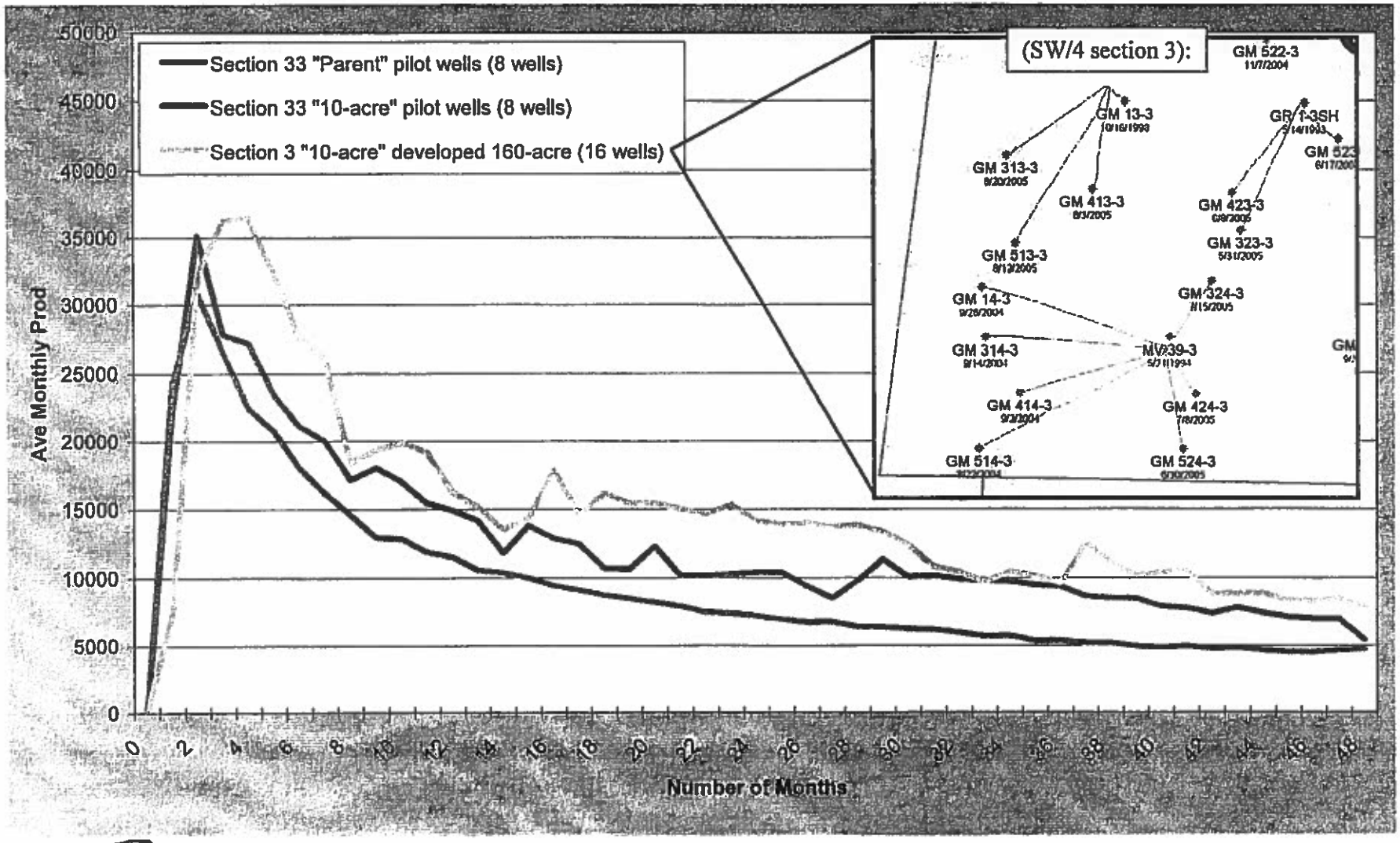
Rulison Field Average Monthly Production Comparison



Williams.

Adjacent 160-acre in Grand Valley Field

Average Monthly Production with "Optimal" Well Placement



Williams.

Summary of Gas-In-Place Estimates and Recoverable Gas Estimates

GAS IN PLACE PER 640 ACRES-WILLIAMS FORK

USGS 1987 Report	110.9 BCF	} Independent Research Reports
MWX Project - Rulison	120.9 BCF	
GRI 1999 Report	70 – 170 BCF	

Barrett 1995 GIP Analysis	87.0 BCF	Grand Valley/Parachute
Barrett 93 Well Survey	122.0 BCF	Rulison

Grand Valley 2002 Williams Analysis	105.0 BCF
Parachute 2002 Williams Analysis	120.0 BCF
Rulison 2002 Williams Analysis	135.0 BCF

RECOVERY FACTORS AT DIFFERENT WELL DENSITIES

Well Density	Grand Valley @ 1.20 BCF/Well	Parachute @ 1.35 BCF/Well	Rulison @ 1.55 BCF/Well
640 Acres	1%	1%	1%
320 Acres	2%	2%	2%
160 Acres	5%	5%	5%
80 Acres	9%	9%	9%
40 Acres	18%	18%	18%
20 Acres	37%	36%	37%
10 Acres*	73%	72%	73%

* Application Density

Williams.

Benefits of Early 10-acre Density Drilling Approved Development

Drilling

- Take advantage of one rig move to a location to develop 10-acre wells within reach. Less $$'s for rig moves and re-disturbance of pads.
- Lessening the likelihood for well problems during drilling operations; stuck pipe, sidetracking, well control issues due to possible pressure variations between individual sand bodies.

Completions

- Increase the fracture stimulation effectiveness of all targeted pay sands which can be compromised if differing pressured sands are encountered during completions.
- Cost effective to complete multiple wells on one pad at the same time.

Benefits of Early 10-acre Density Drilling
Approved Development (cont.)

Reservoir

- Ability to optimally place bottom hole locations that will in turn minimize well interference and maximize ultimate recovery of gas-in-place.

Community

- Lessens the assured return and re-disturbance of a well pad over and over for 40, 20, and 10-acre development.
- Would lessen operational time per well location and reduce prolonged road traffic.

Engineering Summary

- Pressure testing and production analysis confirms geological model
- Unique opportunity to analyze an area with staggered time development (40's, 20's, and 10's)
- Bottom hole well placement very important to minimize interference
- Proven new gas recoveries on 10-acre development
- Minimize community impact – one time development