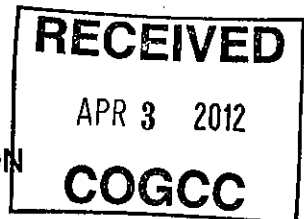




02297267

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 FOR THE)
MANCOS, NIOBRARA, FRONTIER, AND)
MOWRY FORMATIONS ("MANCOS GROUP)
FORMATIONS") FOR CERTAIN DESCRIBED)
LANDS IN THE RULISON FIELD AREA,)
GARFIELD AND MESA COUNTIES,)
COLORADO)

CAUSE NOS. 440 & 510

DOCKET NO. 1201-SP-08

ORIGINAL

REQUEST FOR RECOMMENDATION OF
APPROVAL OF APPLICATION WITHOUT A HEARING

Noble Energy, Inc. ("Applicant"), by and through its undersigned attorneys, hereby requests pursuant to Rule 511.a. of the Rules and Regulations of the Colorado Oil and Gas Conservation Commission ("Commission") for the Director to recommend approval of its November 22, 2011 verified application ("Application") and the supporting exhibits without a hearing.

Applicant requests that the above-captioned matter be approved based upon: (i) the merits of the Application, and (ii) Applicant's sworn written testimony verifying sufficient facts along with exhibits that adequately support the relief requested in the Application. To Applicant's information and belief, no protests were timely filed in this matter.

WHEREFORE, Applicant requests that its request for a recommendation for approval of its Application without a hearing be granted.

DATED this 3rd day of April, 2012.

Respectfully submitted,

NOBLE ENERGY, INC.

By: Michael J. Wozniak
Michael J. Wozniak

Jamie L. Jost

Beatty & Wozniak, P.C.

Attorneys for Applicant

216 16th Street, Suite 1100

Denver, Colorado 80202

(303) 407-4499

RECEIVED

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COGCC

NOBLE ENERGY, INC.

ORIGINAL

Cause Nos. 440 and 510
Docket No. 1201-SP-08

NOBLE ENERGY, INC.

Land Testimony – Robert Hoelsken

Cause No. 440 & 510; Docket No. 1201-SP-08
Grand Valley and Parachute Fields
Garfield and Mesa Counties, Colorado

April 2012 Colorado Oil and Gas Conservation Commission Hearing

My name is Robert Hoelsken, and I am currently employed in the capacity of Land Manager for the Piceance Basin Team of Noble Energy, Inc. ("Noble"). I graduated from the University of Colorado with a Bachelor of Science degree in Business with a major in Mineral Land Management. I have over thirty one years experience in the oil and gas industry all in land and contract work with a specific emphasis on oil and gas exploration and development activities. I am familiar with the lands that are the subject of the above-referenced application ("Application"). I have attached my resume to this verified statement.

In support of Noble Energy, Inc.'s Application in the above referenced docket, I am submitting 6 exhibits. The exhibits are attached to my sworn testimony and form the basis of Noble Energy, Inc.'s Application for an order establishing one (1) drilling and spacing unit ("Unit") pursuant to C.R.S. Section 34-60-116, as detailed below, and to establish well location rules for the Mancos, Niobrara, Frontier, and Mowry Formations ("Mancos Group Formations") covering certain described lands in the Rulison Field area, Garfield and Mesa Counties, Colorado. The subject lands are set forth on Attachment A attached hereto and incorporated herein by this reference ("Application Lands").

Exhibit No. 1 Unit Location and Land Map.

Exhibit No. 1 is a locator map showing the general area and unit boundary of the proposed drilling and spacing unit. In the Application, it was referenced that the drilling and spacing unit contained 2,921.58 acres; however based on recent resurveys, the actual lands contained in the proposed drilling and spacing unit are 2,969.36 acres. The lands contained within the unit have not changed from those described in the Application.

Exhibit No. 2 Mineral Ownership Map.

Exhibit No. 2 is a map showing the mineral ownership of the Application Lands. The Application Lands consist totally of fee ownership. There is no Federal and no State mineral ownership within the proposed drilling and spacing unit.

Exhibit No. 3 Leasehold Ownership Map.

Exhibit No. 3 is a map showing the leasehold ownership of the Application Lands. Noble holds an 82.53159% working interest ownership in the Application Lands depicted in yellow on this map. Encana Oil & Gas (USA) Inc. holds an 8.79693% working interest ownership in blue, WPX Energy

Rocky Mountain, LLC a 7.32136% working interest ownership in the Application Lands which is depicted in green on this map and David Dutton holds a 1.35012% working interest ownership (currently an unleased mineral interest owner) which is depicted in white within the unit boundary.

Note that this map also indicates the locations of the two existing vertical wells within the Unit. The first is the M. Dutton 1-34B, a vertical well, located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 1, T8S, R96W, Garfield County, Colorado. The second is the Edson Scholl 11-14, another vertical well, located within the Unit in the SE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 11, T8S, R96W, Garfield County, Colorado. Both wells are producing from the Mancos Group Formations (hereinafter referred to as "Prior Existing Wells"). Noble confirms that, for purposes of calculation of ownership participation in the proposed drilling and spacing unit, the Prior Existing Wells and ten (10) acres surrounding each of them shall be excluded from the Unit. Noble further confirms that royalty proceeds from the Prior Existing Wells shall remain distributed under Rule 318a separate and apart from the drilling and spacing unit established hereby.

Finally, this map shows the anticipated surface location for a well which Noble is currently permitting within the Unit. It is anticipated that the first group of wells drilled within the drillsite spacing unit shall be drilled from one (1) new wellpad located on surface owned by Applicant located in the NW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 1, T8S, R96W of the Application Lands.

Exhibit No. 4 Surface Ownership Map.

Exhibit No. 4 is a map showing the surface ownership of the Application Lands. The Application Lands indicate fee ownership only. There is no Federal and no State surface ownership within the proposed drilling and spacing unit.

Exhibit No. 5 Topographic Map.

Exhibit No. 5 is a topographic map showing the Application Lands. The contour interval of Exhibit 5 is 40 feet.

Exhibit No. 6 Land Summary.

Exhibit No. 6 is a summary of this testimony.

Noble confirms that it anticipates all vertical, directional, or horizontal wells drilled within the Unit will be located on a new, common, or existing well pad, however, with the exception of the NW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 1, T8S, R96W, no more than one (1) surface well pad shall be located in any governmental quarter quarter section or 40-acre equivalent thereof. Noble confirms that the well locations for any horizontal well drilled within the Unit may be located anywhere on the surface within the Unit with the treated interval of the wellbore being located downhole anywhere upon the Application Lands, but no closer than 600 feet from the boundary of the Unit, and also located no closer than 600 feet from any other well producing from the Mancos Group Formations, without exception being granted by the Commission. Noble further confirms that the Rule 318a setback of 1,200 feet from existing wells within the Unit producing from the same formation shall not apply to development within the Unit.

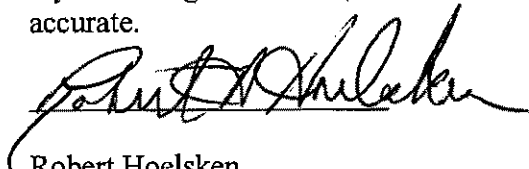
Noble has had discussions with the Bureau of Land Management about the verified Application and the BLM does not object to Noble's verified Application.

Based upon our examination of relevant documents, and under my direction and control, all of the interested parties included in Exhibit A attached to the Application received proper notice. As of the date of this testimony, Noble Energy, Inc. has not received any protests or objections to the Application.

The matters described herein were all conducted under my direction and control. To the best of my knowledge and belief, all of the matters set forth herein, my testimony and in the exhibits are true, correct and accurate.

Affirmation

The matters described herein were all conducted under my direction and control. To the best of my knowledge and belief, all of the matters set forth herein and in the exhibits are true, correct, and accurate.

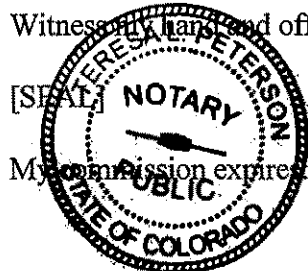


Robert Hoelsken
Land Negotiator Supervisor for the Piceance Basin Team
Noble Energy, Inc.


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

The foregoing instrument was subscribed and sworn to before me this 3rd day of April, 2012, by Robert Hoelsken, Land Negotiator Supervisor for the Piceance Basin Team, for Noble Energy, Inc.

Witness my hand and official seal.



My commission expires 10-04-13


Notary Public

ATTACHMENT A

NOBLE ENERGY, INC.

Cause No. 440 & 510
Docket No. 1201-SP-08

Grand Valley and Parachute Fields
Garfield and Mesa Counties, Colorado

Application Lands

Township 8 South, Range 95 West, 6th P.M.

Section 7: Tract 37, Tract 38

Section 18: A parcel of land situate in the northwest quarter, the northwest quarter of the northeast quarter, the southwest quarter of the northeast quarter and the southwest quarter of Section 18 in Township 8 South and Range 95 West of the Sixth Principal Meridian in Garfield and Mesa counties, Colorado and being the Government Tracts described as follows:

1. That portion of government Tract No. 38 lying within the said Section 18;
2. Government Tract No. 39;
3. Government Tract No. 40, save and except that portion described as follows:

Considering the north line of the said northwest quarter of Section 18 as bearing North 89° 55' 28" West, and all the bearings shown herein are referenced from. The terminus of the said north line being monumented with Brass Caps set during the U. S. General Land Office Independent Resurvey made in 1929.

Beginning at the southeast corner of the said Tract 40, same being angle point 4 of Tract 40 and angle point 3 of Tract 41.

THENCE, along the south line of the said Tract 40, South 88° 29' 41" West a distance of 766.15 feet;

THENCE, North 0° 05' 58" East a distance of 661.40 feet;

THENCE, South 89° 58' 02" East a distance of 755.32 feet to the east line of the said Tract 40;

THENCE, along the said east line of Tract 40, South 0° 50' 28" East a distance of 640.91 feet to the Point of Beginning.

The above described save and except portion containing 11.37 acres of land more or less.

4. Government Tract 41, save and except that portion described as follows:

Beginning at the southeast corner of the said Tract 41, same being angle point 6 of Tract 41;

THENCE, along the south line of said Tract 41, South 89° 41' 23" West a distance of 2621.10 feet to the southwest corner (angle point 5) of said Tract 41;

THENCE, along the most westerly line of said Tract 41, North 0° 39' 59" West a distance of 1344.36 feet to the most southerly northwest corner (angle point 4) of said Tract 41;

THENCE, along the most westerly north line of said Tract 41, North 88° 29' 41" East a distance of 1214.47 feet to an "ell" corner (angle point 3) of said tract 41;

THENCE, along the middle west line of said Tract 41, North 0° 50' 28" West a distance of 640.91 feet;

THENCE, South 89° 58' 02" East a distance of 522.52 feet to the east line of the southwest quarter of said Section 18;

THENCE, along the said east line of the southwest quarter, North 0° 16' 22" East a distance of 1313.13 feet to the center quarter corner location of the said Section 18;

THENCE, along the north line of the southeast quarter of said Section 18, South 89° 55' 21" East a distance of 788.83 feet to the east line of the said Tract 41;

THENCE, along the said east line of Tract 41, South 2° 04' 46" East a distance of 1983.25 feet to the northwest corner (angle point 3) of Tract 44;

THENCE, continuing along the said east line of said Tract 41, South 1° 49' 34" East a distance of 1333.29 feet to Point of Beginning.

The above described save and except portion containing 100.00 acres of land more or less.

The combined area of that portion of the said Section 18 being within the Application Lands being 352.34 acres of land, more or less.

Township 8 South, Range 96 West, 6th P.M.

Section 1: Lots 2, 3, 4, S½NW¼, SW¼NE¼, NW¼SE¼, S½SE¼, SW¼

Sections 2, 11 and 12: All

containing approximately 2,969.36 acres, more or less.

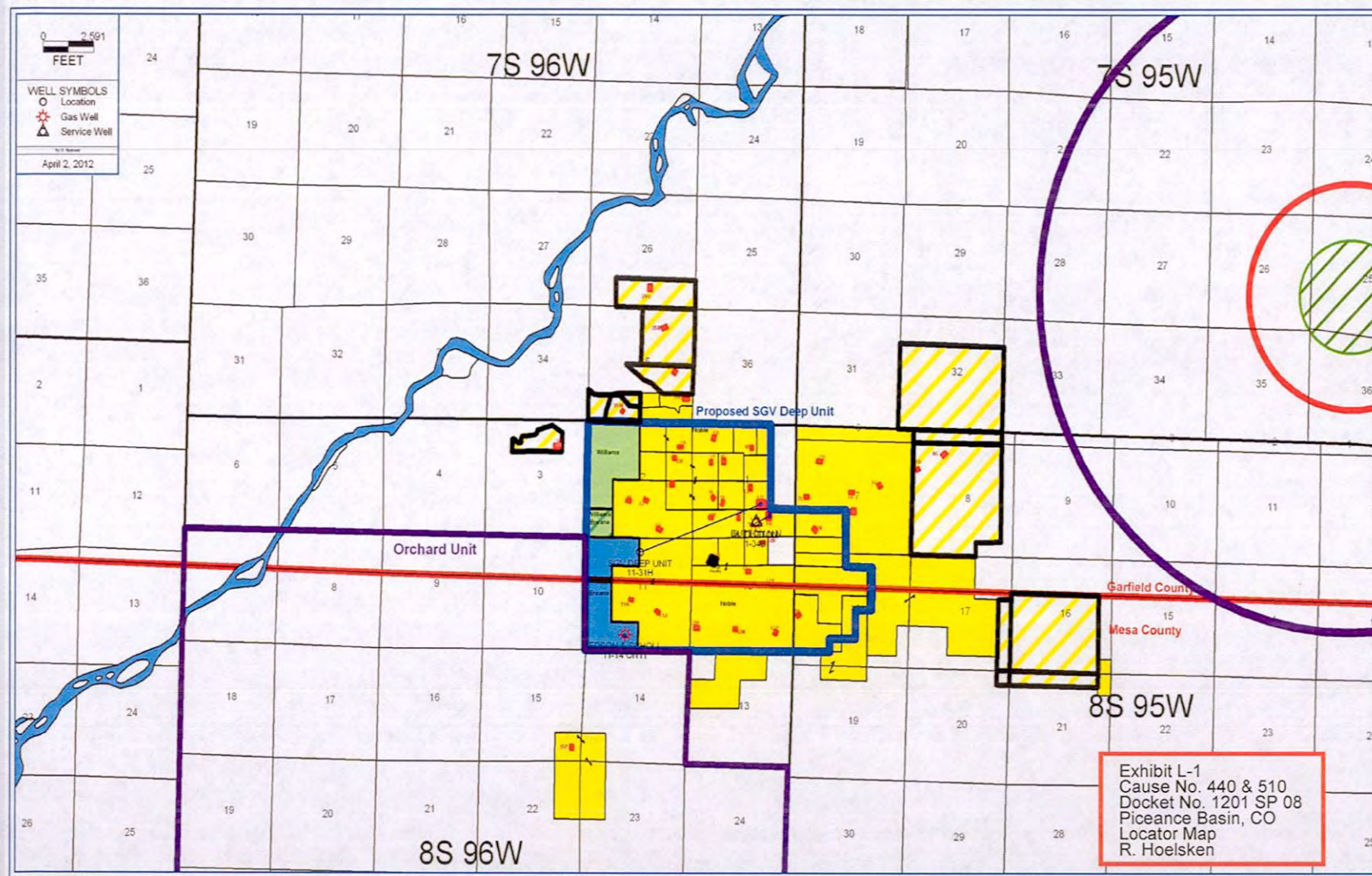
The background of the slide features a photograph of an oil rig silhouetted against a vibrant sunset sky. The sky transitions from a deep red and orange near the horizon to a lighter blue at the top. The rig's structure is visible on the left side of the frame.

NBL

NOBLE ENERGY

Cause No. 440 & 510
Docket No. 1201 SP 08
Land Exhibits
April 16, 2012

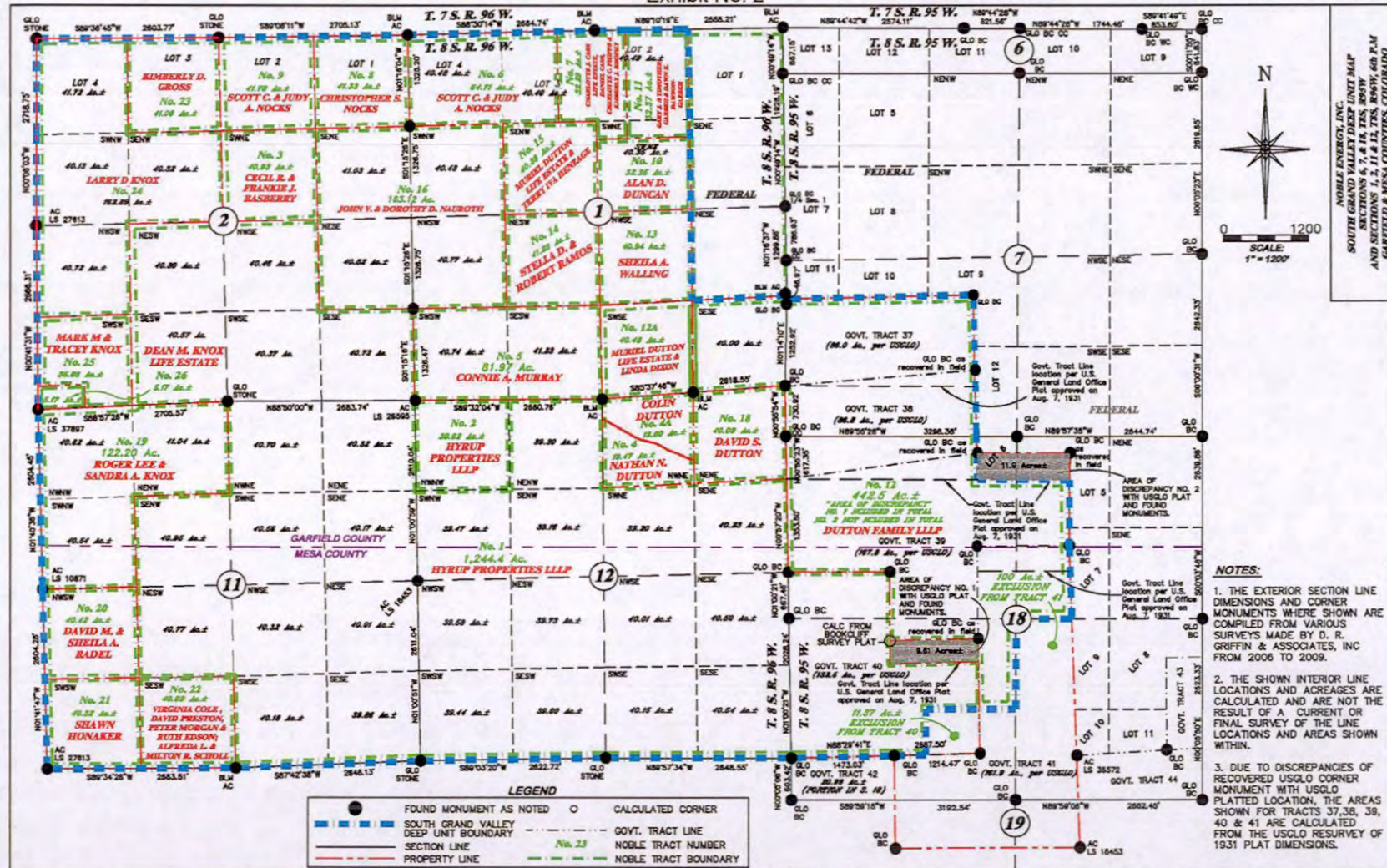
Locator Map of the South Grand Valley Deep Unit Garfield and Mesa Counties, Colorado



South Grand Valley Deep Unit Map of Mineral Ownership

Exhibit L-2
Cause No. 440 & 510
Docket No. 1201 SP 08
South Grand Valley Deep Unit
Map of Mineral Ownership
R. Hoelsken

Exhibit No. 2



0 830
FEET

WELL SYMBOLS
○ Location
★ Gas Well
△ Service Well

April 2, 2012

Proposed SGV Deep Unit

Williams

Williams Encana

Encana

Noble

Hyrup Facility

EDSON & SCHOLL
11-14 ON 11

Exhibit L-3
Cause No. 440 & 510
Docket No. 1201 SP 08
South Grand Valley Deep Unit
Map of Leasehold
R. Hoelsken

South Grand Valley Deep Unit Map of Surface Ownership

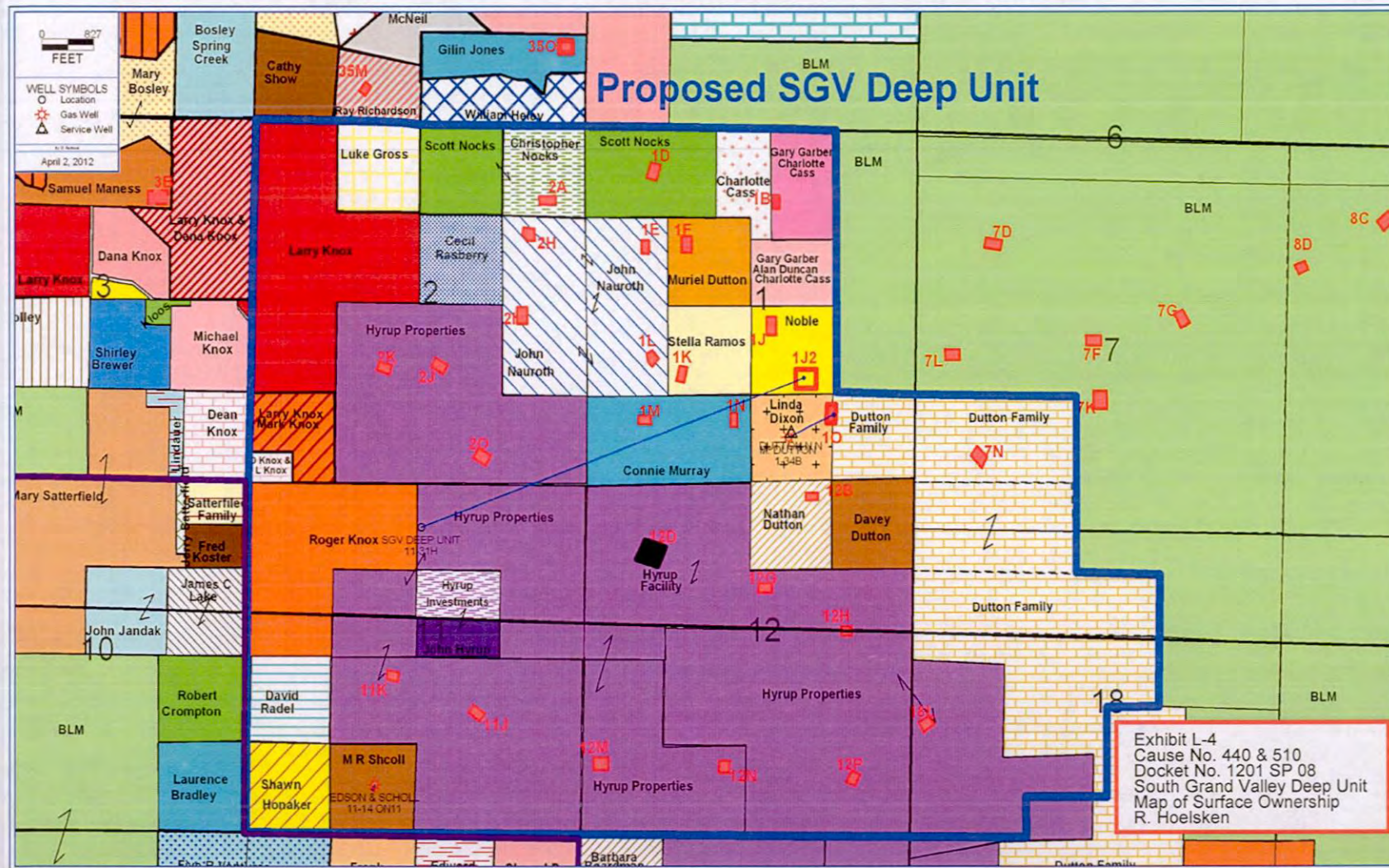
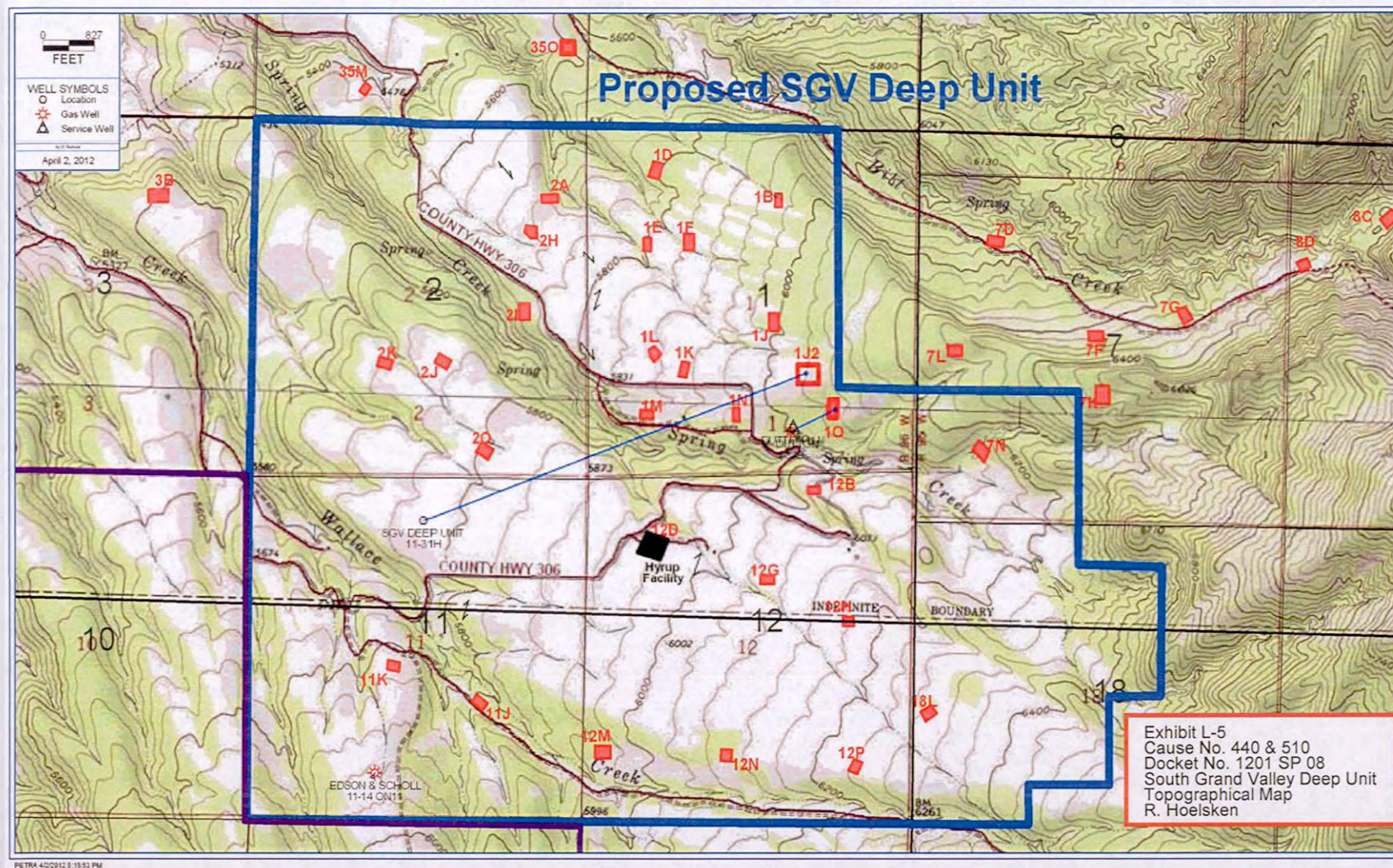


Exhibit L-4
Cause No. 440 & 510
Docket No. 1201 SP 08
South Grand Valley Deep Unit
Map of Surface Ownership
R. Hoelsken

South Grand Valley Deep Unit Topographical Map



South Grand Valley Deep Unit Land Summary

Exhibit L-6
Cause No. 440 & 510
Docket No. 1201 SP 08
Piceance Basin, CO
Land Summary
R. Hoelsken

- The proposed South Grand Valley Deep Unit encompasses approximately 2,969.36 net acres covering all or portions of Sections 7 & 18, T8S, R95W and Sections 1, 2, 11 and 12, T8S, R96W, lying in Garfield and Mesa Counties, Colorado.
- This Unit will cover only the Mancos, Niobrara, Frontier and Mowery Formations ("Mancos Group").
- This Unit contains two prior existing vertical wells which are currently producing from the Mancos Group. Specifically, The M. Dutton 1-34B, a vertical well located in the SWSE of Sec. 1, T8S, R96W, and the Edson Scholl 11-14 Well located in the SESW of Section 11, T8S, R96W. For purposes of calculation of ownership participation in the proposed drilling and spacing unit, these prior existing wells and 10 acres surrounding them shall be excluded from the Unit.
- The Initial well to be drilled within the Unit will be drilled from a surface location located in the NWSE of Section 1, T8S, R96W and it is anticipated that the terminus of this lateral well will be the NWNE of Section 11, T8S, R96W.
- No more than one surface pad shall be located in any governmental Quarter Quarter section or 40 acre equivalent thereof.
- The treated interval in the Mancos Group of any wellbore in the application lands shall be no closer than 600' from the boundary of the unit or any other well producing from the Mancos Group.

nobleenergyinc.com

NBL

ROBERT ANDREW HOELSKEN

6941 W. Moraine Dr.
Littleton, Colorado 80128
Home: 303.948.7218
Work: 303.672.6956

EMPLOYMENT HISTORY:

Land Manager Noble Energy, Inc.	May 2010 - Present Denver, CO
Land Negotiator Supervisor Noble Energy, Inc.	December 2008 – May 2010 Denver, CO
Land Negotiator Noble Energy, Inc.	October 2005- December 2008 Denver, CO
Division Landman Questar Exploration and Production Company	1997-2005 Denver, CO
Petroleum Landman Union Pacific Resources Company (Formerly Champlin Petroleum Company)	1979-1997 Denver, CO Ft. Worth, TX

ACTUAL EXPERIENCE

Oil Industry:

Environmental Assessments; Environmental Impact Statements; Record Checks; Lease Acquisition; Negotiation of land deals; Contract preparation; Federal/State onshore and offshore unitization; Title curative; Permitting; Spacing hearings; Property Sales, acquisitions and other activities involved in the complete realm of land work.

Area of Emphasis:

-Rocky Mountain Region; Piceance Basin, Green River Basin, Powder River Basin, D-J Basin, Williston Basin, Paradox Basin, Overthrust Belt.

-Mid-Continent Area; Hugoton Embayment, Las Animas Arch, East Texas.

-New Mexico Basins; San Juan Basin, Chaco Slope, Baca Basin.

-Pacific Region: San Joaquin Basin, Santa Maria Basin, Offshore California, Onshore and Offshore Alaska.

Recent Work History:

Over the past two years, I have served as a Land Manager in Noble's Rocky Mountain Business Unit. In this capacity, I have overseen the management of land personnel, as well as all land matters pertaining to the Piceance Basin in Colorado, Western Wyoming properties including the Iron Horse Unit and the San Juan Basin in Northwestern New Mexico.

EDUCATION

Bachelor of Science
University of Colorado at Denver
Business
Major: Mineral and Land Management

1979
Denver, CO

PERSONAL DATA

Family: Married, three children

NOBLE ENERGY, INC.

Geologic Testimony – Gordon “Rick” Stucker

Cause No. 440 & 510; Docket No. 1201-SP-08
Grand Valley and Parachute Fields
Garfield and Mesa Counties, Colorado

April 2012 Colorado Oil and Gas Conservation Commission Hearing

My name is Gordon “Rick” Stucker, and I am currently employed in the capacity of Senior Geologist, Rockies B U, of Noble Energy, Inc. (“Noble”). I graduated from the University of Colorado with a Bachelor’s degree in 1979 with a major in geology. I have over 14 years experience in the oil and gas industry, all in geologic and geophysical work with a specific emphasis on oil and gas exploration and development activities. I am familiar with the lands that are the subject of the above-referenced application (“Application”). I have attached my resume to this verified statement.

In support of Noble Energy, Inc.’s Application in the above referenced docket, I am submitting 15 exhibits. The exhibits are attached to my sworn testimony and form the basis of Noble Energy, Inc.’s Application for an order establishing one (1) drilling and spacing unit (“Unit”) pursuant to C.R.S. Section 34-60-116, as detailed below, and to establish well location rules for the Mancos, Niobrara, Frontier, and Mowry Formations (“Mancos Group Formations”) covering certain described lands in the Rulison Field area, Garfield and Mesa Counties, Colorado. The subject lands are set forth on Attachment A attached hereto and incorporate herein by this reference (“Application Lands”).

Exhibit No. G-1.

Exhibit No. G-1 is a locator map for the Piceance and Uinta Basin.

Exhibit No. G-2.

Exhibit No. G-2 is an illustration of the stratigraphic column of the Upper Mesozoic and Lower Cenozoic rocks in the Piceance and Uinta basins. Exhibit No. G-2 contains a summary of the pertinent geologic groups.

Exhibit No. G-3.

Exhibit No. G-3 is a Paleogeographic Reconstruction of the Rocky Mountain region, including Colorado. Exhibit No. G-3 contains a summary of the conditions under which the Mancos group underlying the Application Lands was deposited in the area.

Exhibit No. G-4.

Exhibit No. G-4 is an illustration of the depositional environments on the western margin of the late Cretaceous Interior Seaway.

Exhibit No. G-5.

Exhibit No. G-5 is an illustration of the east to west log cross-section through the Orchard, South Grand Valley and North Mamm Creek areas of the Piceance Basin. Exhibit G-5 contains a summary of the cross-section.

Exhibit No. G-6.

Exhibit No. G-6 is an overview of how shale reservoirs store gas and how gas moves through shale reservoirs.

Exhibit No. G-7.

Exhibit No. G-7 illustrates the type log for the Noble Energy, Inc. M. Dutton 1-34B Well that is a vertical well located on lands contained in the proposed Unit. Exhibit G-7 contains a description of the formations present in the subject type log.

Exhibit No. G-8.

Exhibit No. G-8 illustrates the Mancos Shale rock characteristics as inferred from the Antero Dever C7 Well. The Mancos Shale is a marine shale with silty interbeds and laminations throughout.

Exhibit No. G-9.

Exhibit No. G-9 illustrates the "Mancos A" rock characteristics as inferred from the Antero Dever C7 Well. The Mancos A is a marine argillaceous siltstone and argillaceous, silty, very fine grained sandstone.

Exhibit No. G-10.

Exhibit No. G-10 illustrates the Niobrara equivalent rock characteristics as measured in the M. Dutton 1-34B well. The Niobrara equivalent is a calcareous shale, siltstone, and a sandy, argillaceous limestone.

Exhibit No. G-11.

Exhibit No. G-11 illustrates the Mowry and Frontier Formations' rock characteristics as seen in the M. Dutton 1-34B well and described in the USGS DDS-69-B Assessment of the Uinta-Piceance province.

Exhibit No. G-12.

Exhibit No. G-12 illustrates the South Grand Valley stress and natural fracture orientations from an XRFI Image Log. An XRFI Image Log is a highly sensitive resistivity image of the borehole from which accurate determinations of in situ stress and existing natural fractures can be interpreted. Exhibit G-12 contains a summary of the XRFI Image Log.

Exhibit No. G-13.

Exhibit No. G-13 illustrates how the areal extent of the Unit was determined by Noble. Noble considered the following factors: (1) Pooling and Lateral Length, (2) Topography of the Application Lands, (3) drill depth of vertical, directional, and horizontal wells, (4) the infrastructure necessary for the development of the Application Lands, and (5) the federal lands within and outside the Application Lands.

Exhibit No. G-14.

Exhibit No. G-14 is an east to west log cross-section through the illustrating the basinward drill depth increase in recent months. Exhibit G-14 shows how rapidly the drill depth to the target formations increases beyond the eastern (basinward) boundary of the Application Lands.

Exhibit No. G-15.

Exhibit No. G-15 is a summary of the exhibits and the findings supported by this written testimony and corresponding exhibits.

Based on the this written testimony and exhibits submitted herewith, it is my professional opinion that the Mancos, Niobrara, Frontier, and Mowry Formations are located under the Application Lands and that the development of the Unit in the manner proposed in the Application will prevent waste of the oil and gas bearing hydrocarbons found in the Mancos, Niobrara, Frontier, and Mowry Formations.

The matters described herein were all conducted under my direction and control. To the best of my knowledge and belief, all of the matters set forth herein, my testimony and in the exhibits are true, correct and accurate.

Affirmation

The matters described herein were all conducted under my direction and control. To the best of my knowledge and belief, all of the matters set forth herein and in the exhibits are true, correct, and accurate.

Gordon Stucker

Gordon "Rick" Stucker
Geologist, Rockies B U
Noble Energy, Inc.

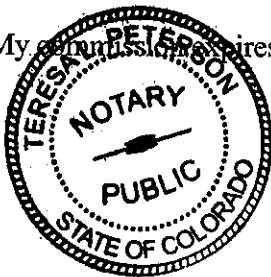
STATE OF COLORADO)
) ss.
CITY AND COUNTY OF DENVER)

The foregoing instrument was subscribed and sworn to before me this 3rd day of April, 2012, by Gordon "Rick" Stucker, Geologist, Rockies B U, for Noble Energy, Inc.

Witness my hand and official seal.

[SEAL]

My commission expires: 10-04-13



Teresa Peterson
Notary Public

Gordon F. C. Stucker "Rock"
POB 716 Evergreen, CO 80437
303.670.1229
gfcstucker@msn.com

EDUCATION

- B.A. Geology, University of Colorado – 1979
- Advanced Petroleum Geology I & II, Colorado School of Mines - 1981

EMPLOYMENT **Well Site Geologist**, Continental Laboratories 1979-1980
HISTORY *Houston, TX*

- Onshore and offshore well logging, sample evaluation and overpressure and hydrogen sulfide detection.

Exploration/Processing Geophysicist, Evergreen Geophysical Assoc. 1980-1985
Evergreen, CO

- Interpretation and mapping of seismic data.
- Processing of multi-channel digital seismic data.
- Manager of Synthetic Seismogram Department.

Exploration Geologist, Lynx Exploration 1985-1986
Denver, CO

- Developing, drilling and completing oil and gas prospects in the Denver-Julesburg basin.

Noble Energy, Inc. Currently Senior Geologist 2005 – Present
Denver, Co

I worked Mid-continent within a multi-disciplined group of engineers, techs, geophysicists and landmen to understand the geology of mature waterflood projects in southern Oklahoma with the goal of exploiting bypassed hydrocarbons, recommending drilling and recompletion projects. I prepared maps, cross-sections and evaluated well logs and utilized Petra, Powerlog, Excel and PowerPoint software to this end. I also have been responsible for preparing geoprog and staking requests and monitoring the progress of location construction. I have maintained daily communication with mudloggers, field engineers, foremen and consultants.

- Development – drilled 29 wells in Bayou Unit, helped prepare for 6 injection conversions.
- Development – drilled 6 wells in Wildcat Jim Unit, helped prepare for 6 injection conversions in 2007 and 2008.
- Development – drilled 9 development wells in the Williams Field; worked with a team of engineers and landmen to get this field unitized and commence pressure maintenance program.
- Exploration – drilled 3 close-in exploration wells in 2007, with one dry hole, and 2 new field discoveries.

I transferred to the Rockies BU in April 2008. My responsibilities and duties include:

- Supervision of up to 5 drilling rigs, including preparing geoprog, picking TD depths. We have drilled approximately 195 wells since I joined the asset team.
- Review CBL logs to evaluate cement program and pick top of cement.
- Pick perms and determine staging for well completions. Review tracer logs and work with engineers to maximize completion efficiency.
- Determine viable locations for SWD wells and assist engineering to test and complete them once drilled.
- Work with URS geologists and engineers to maximize pad stability, site inclinometer installations and surface movement monuments.
- Was the Noble Energy representative for the Piceance Basin portion of the 2009 Stream Depletion industry study group which recommended proposed rules to the State Engineer's Office.
- Spearheading the efforts to form a State Drilling Unit, shoot a 3D seismic study and prepare to drill Noble's first horizontal test in the Piceance.
- Presented a poster of the Piceance Niobrara concept at the 2011 Noble Tech Conference

PROFESSIONAL AFFILIATIONS **AAPG, RMAG, SPE, GCSSEPM**

ATTACHMENT A

NOBLE ENERGY, INC.

Cause No. 440 & 510
Docket No. 1201-SP-08

Grand Valley and Parachute Fields
Garfield and Mesa Counties, Colorado

Application Lands

Township 8 South, Range 95 West, 6th P.M.

Section 7: Tract 37, Tract 38

Section 18: A parcel of land situate in the northwest quarter, the northwest quarter of the northeast quarter, the southwest quarter of the northeast quarter and the southwest quarter of Section 18 in Township 8 South and Range 95 West of the Sixth Principal Meridian in Garfield and Mesa counties, Colorado and being the Government Tracts described as follows:

1. That portion of government Tract No. 38 lying within the said Section 18;
2. Government Tract No. 39;
3. Government Tract No. 40, save and except that portion described as follows:

Considering the north line of the said northwest quarter of Section 18 as bearing North 89° 55' 28" West, and all the bearings shown herein are referenced from. The terminus of the said north line being monumented with Brass Caps set during the U. S. General Land Office Independent Resurvey made in 1929.

Beginning at the southeast corner of the said Tract 40, same being angle point 4 of Tract 40 and angle point 3 of Tract 41.

THENCE, along the south line of the said Tract 40, South 88° 29' 41" West a distance of 766.15 feet;

THENCE, North 0° 05' 58" East a distance of 661.40 feet;

THENCE, South 89° 58' 02" East a distance of 755.32 feet to the east line of the said Tract 40;

THENCE, along the said east line of Tract 40, South 0° 50' 28" East a distance of 640.91 feet to the Point of Beginning.

The above described save and except portion containing 11.37 acres of land more or less.

4. Government Tract 41, save and except that portion described as follows:

Beginning at the southeast corner of the said Tract 41, same being angle point 6 of Tract 41;

THENCE, along the south line of said Tract 41, South 89° 41' 23" West a distance of 2621.10 feet to the southwest corner (angle point 5) of said Tract 41;

THENCE, along the most westerly line of said Tract 41, North 0° 39' 59" West a distance of 1344.36 feet to the most southerly northwest corner (angle point 4) of said Tract 41;

THENCE, along the most westerly north line of said Tract 41, North 88° 29' 41" East a distance of 1214.47 feet to an "ell" corner (angle point 3) of said tract 41;

THENCE, along the middle west line of said Tract 41, North 0° 50' 28" West a distance of 640.91 feet;

THENCE, South 89° 58' 02" East a distance of 522.52 feet to the east line of the southwest quarter of said Section 18;

THENCE, along the said east line of the southwest quarter, North 0° 16' 22" East a distance of 1313.13 feet to the center quarter corner location of the said Section 18;

THENCE, along the north line of the southeast quarter of said Section 18, South 89° 55' 21" East a distance of 788.83 feet to the east line of the said Tract 41;

THENCE, along the said east line of Tract 41, South 2° 04' 46" East a distance of 1983.25 feet to the northwest corner (angle point 3) of Tract 44;

THENCE, continuing along the said east line of said Tract 41, South 1° 49' 34" East a distance of 1333.29 feet to Point of Beginning.

The above described save and except portion containing 100.00 acres of land more or less.

The combined area of that portion of the said Section 18 being within the Application Lands being 352.34 acres of land, more or less.

Township 8 South, Range 96 West, 6th P.M.

Section 1: Lots 2, 3, 4, S½NW¼, SW¼NE¼, NW¼SE¼, S½SE¼, SW¼

Sections 2, 11 and 12: All

containing approximately 2,969.36 acres, more or less.

The background of the slide features a photograph of an oil rig silhouetted against a vibrant sunset sky with shades of orange, red, and blue. The rig is positioned on the left side of the frame.

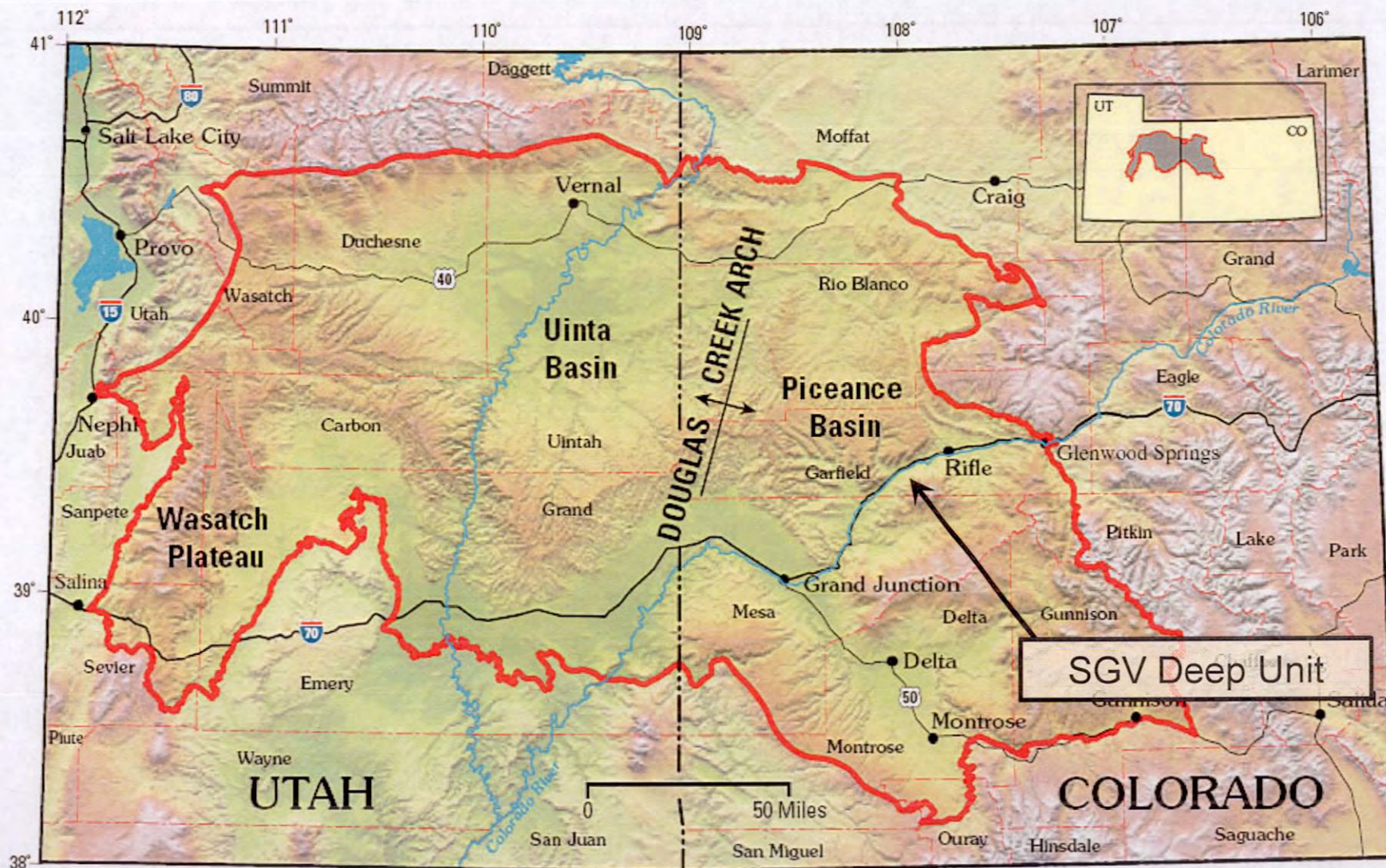
NBL

NOBLE ENERGY

Cause No. 440 & 510
Docket No. 1201 SP 08
Geology Exhibits
April 16, 2012

Piceance and Uinta Basin Locator Map

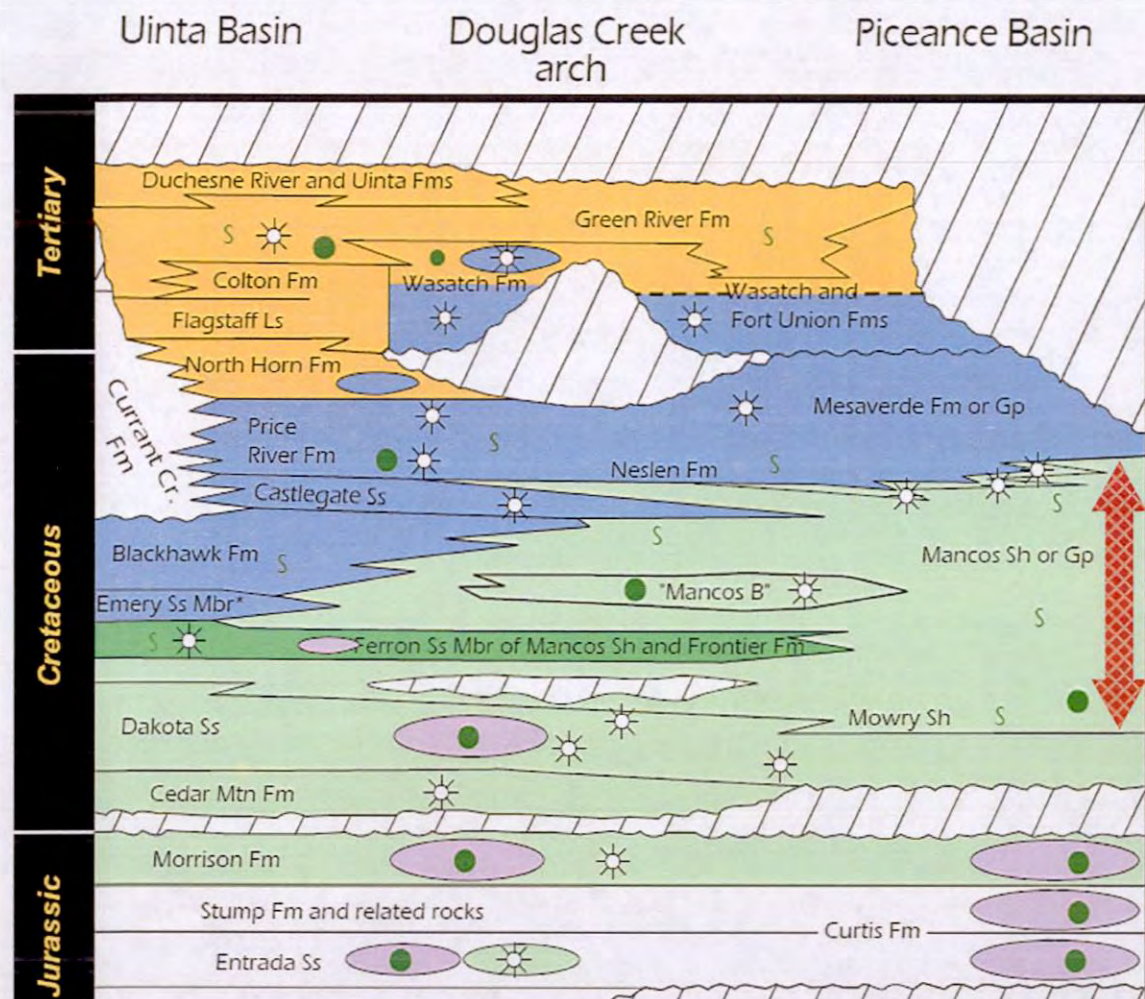
Exhibit G-1
Cause No. 440 & 510
Docket No. 1201 SP 08
Piceance Basin, CO
Basin Locator Map
G. Stucker



From USGS DDS-69-B

NBL

Stratigraphic Column of Upper Mesozoic and Lower Cenozoic Rocks In The Piceance and Uinta Basins



Mesaverde Group

- Coastal plain to marginal marine shoreline depositional environment
- Tight gas reservoirs in lenticular fluvial sands, primarily sourced by widespread coal seams

Mancos Group

- Includes Mancos Shale, Niobrara equivalent calcareous mudstone, and Mowry Shale
- Marine depositional environment basinward of prograding shorelines
- Fine grained sandy, silty, and shaly reservoirs, self sourced and thermally mature

Exhibit G-2
Cause No. 440 & 510
Docket No. 1201 SP 08
Piceance Basin, CO
Stratigraphic Column
G. Stucker

Modified From USGS DDS-69-B

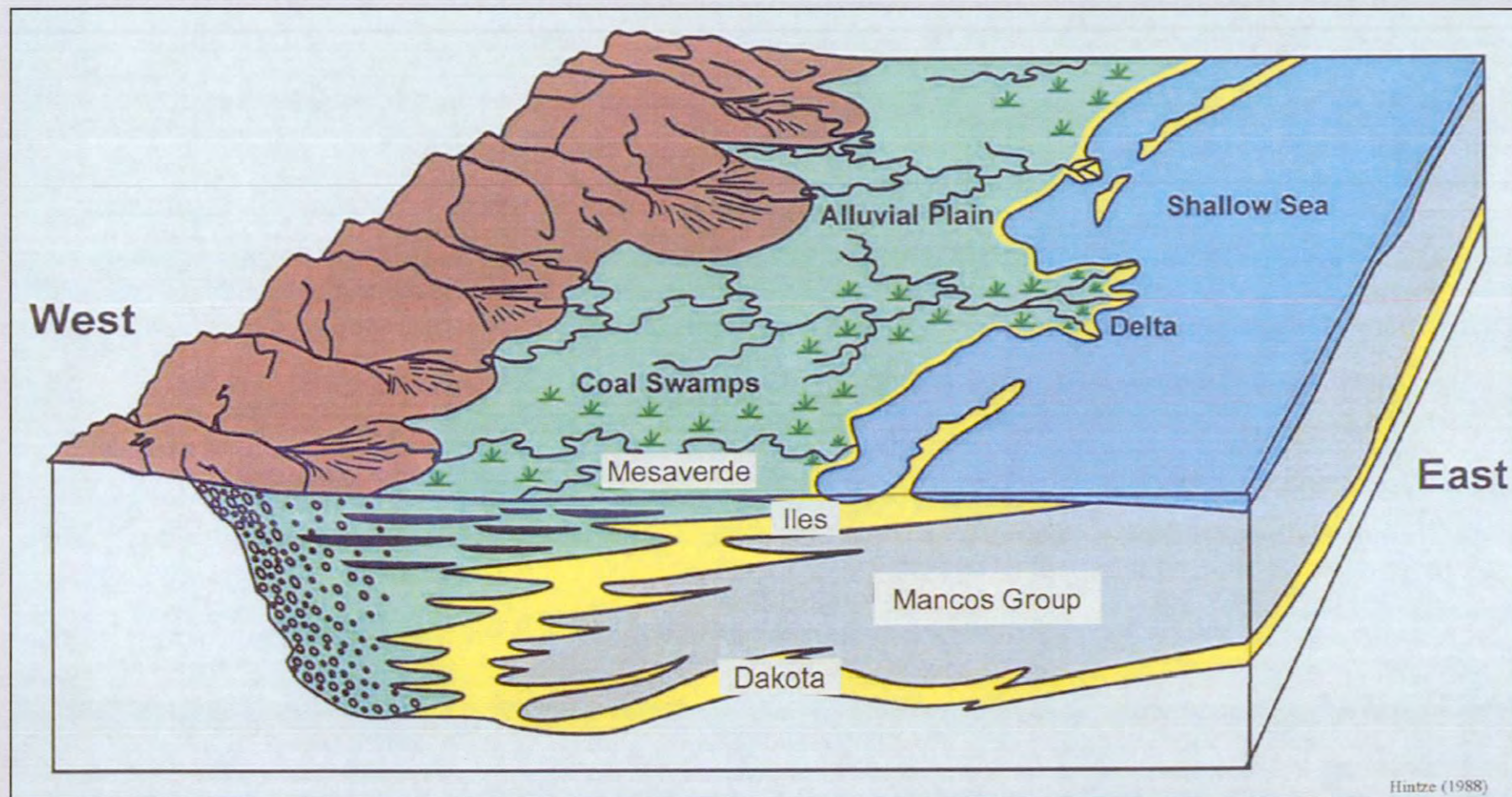
Paleogeographic Reconstruction ca. 88 Ma



- The Mancos Shale and time equivalent formations were deposited across a large swath of North America in the Western Interior Seaway.
- Although clastic sediments were derived from land masses on both sides of the Seaway, the volume contributed from the Sevier Orogenic province to the west was dominant.

Exhibit G-3
Cause No. 440 & 510
Docket No. 1201 SP 08
Piceance Basin, CO
Paleogeography
G. Stucker

Depositional Environments On The Western Margin Of The Late Cretaceous Interior Seaway

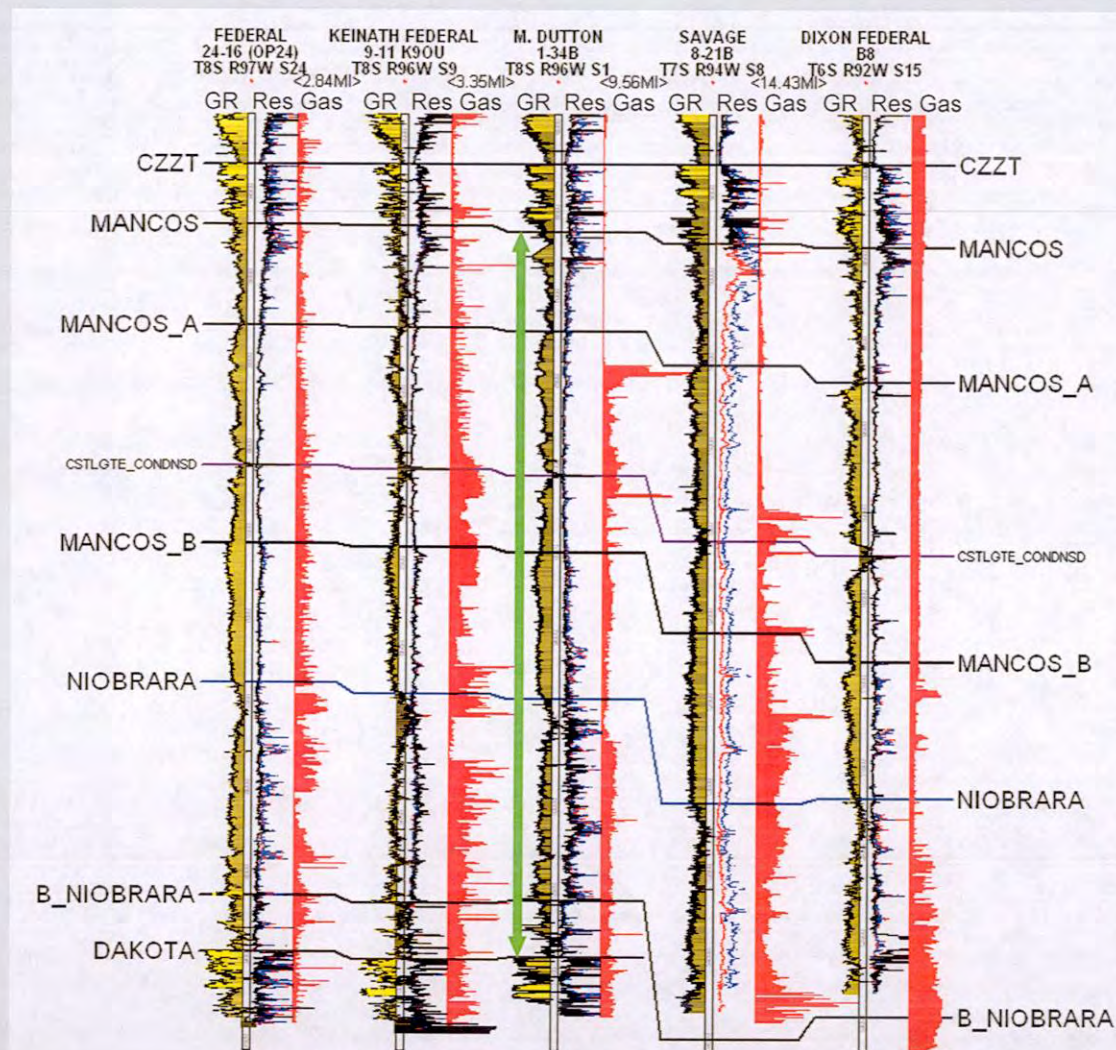


Hintze (1988)

Exhibit G-4
Cause No. 440 & 510
Docket No. 1201 SP 08
Piceance Basin, CO
Depositional Environments
G. Stucker

After Hintze (1988) and Pattison (2008)

E-W Log Section Through Orchard, SGV, N. Mamm Creek



Regional cross-section through 5 deep wells along the Colorado River

- The stratigraphy of the Mancos group is very consistent along the 30 mile section
- Gas is pervasive throughout the Mancos group
- All 5 wells are producing from or tested gas from the Mancos group

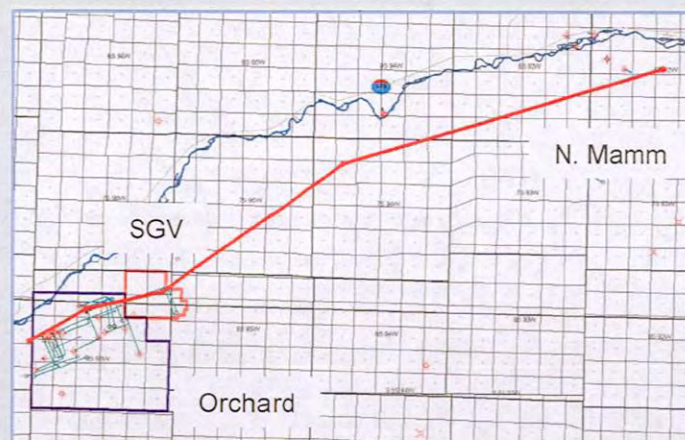


Exhibit G-5
Cause No. 440 & 510
Docket No. 1201 SP 08
Piceance Basin, CO
E-W Mancos Log X-Section
G. Stucker

Gas Storage and Flow In Shale Reservoirs

Shale reservoirs store gas in three ways:

- Free gas stored in rock matrix or in open fractures
- Sorbed gas adsorbed on organic and mineral surfaces within the matrix or natural fractures
- Dissolved gas within hydrocarbon liquids.

Gas moves through the shale reservoir in several ways

- Diffusion for pores ~5-50 nanometers
- Diffusion and Darcy flow for larger pores
- Darcy flow for natural open fractures

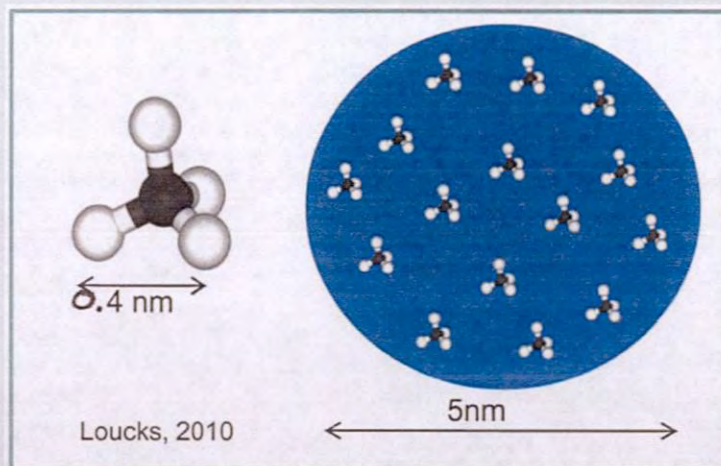
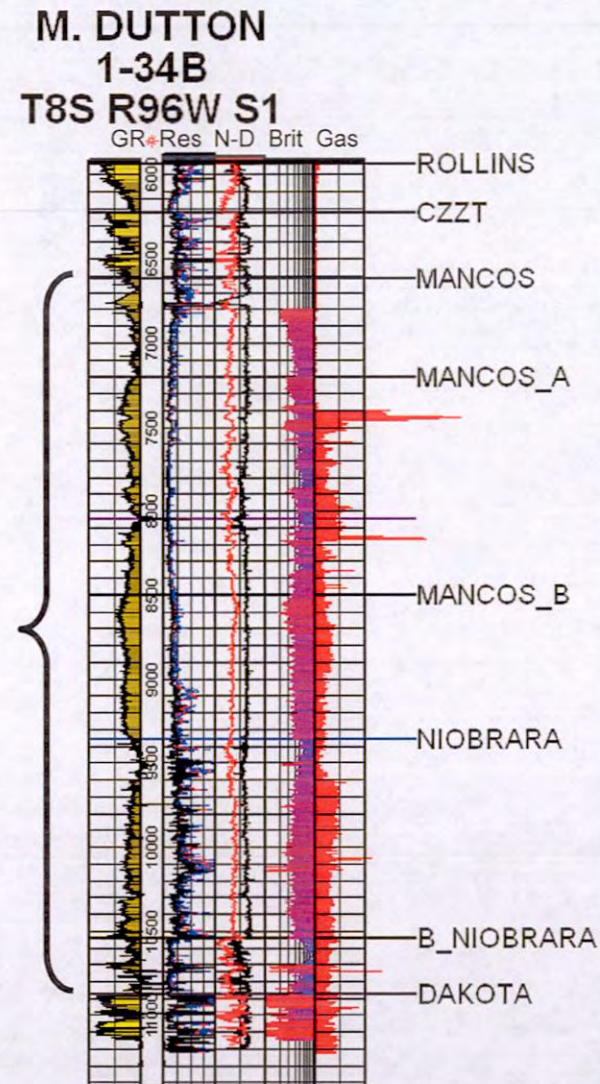


Exhibit G-6
Cause No. 440 & 510
Docket No. 1201 SP 08
Piceance Basin, CO
Shale Gas Storage & Flow
G. Stucker

South Grand Valley Deep Unit Type Log Noble Energy M. Dutton 1-34B

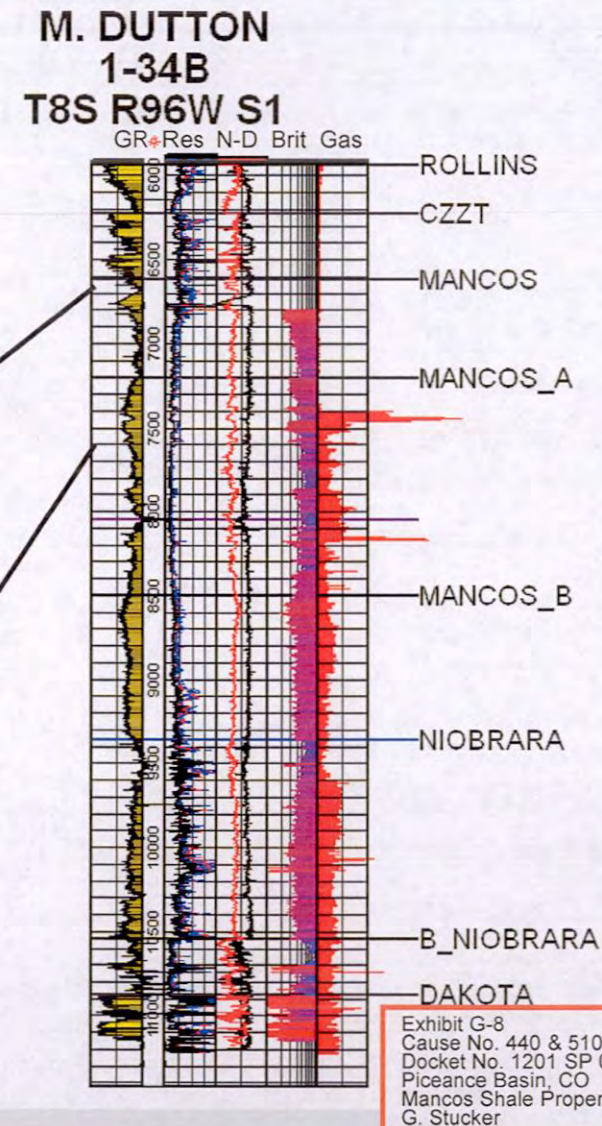
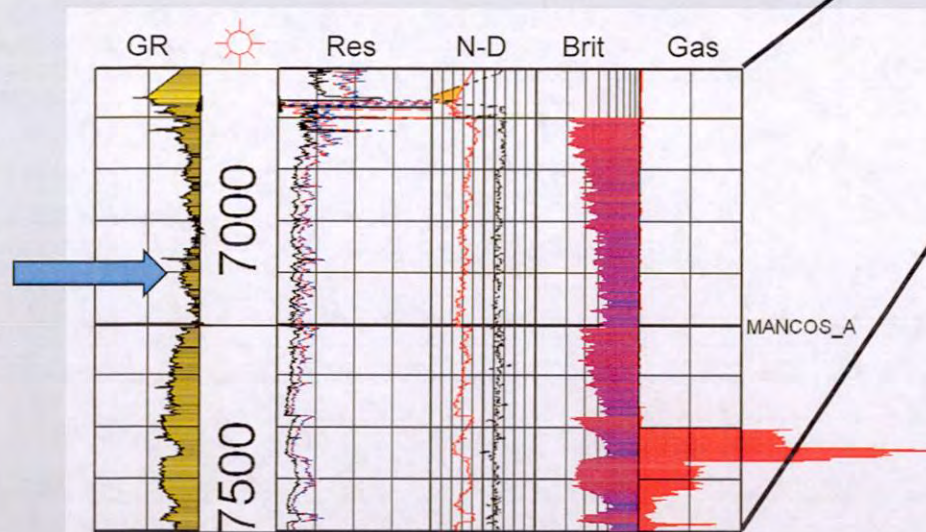
- Top Mancos Shale to top Dakota = 4262'
- Deposition in offshore marine shelf environment
- Mixed lithologies, mostly clay- to silt-sized particles, with some very fine grained sand
- Organic material is richest in the Niobrara equivalent and Mowry intervals
- High thermal maturity produces dry gas
- The reservoirs have very low permeability, contain adsorbed and free gas, and have evidence of widespread natural fracturing

Exhibit G-7
Cause No. 440 & 510
Docket No. 1201 SP 08
Piceance Basin, CO
Mancos Group Type Log
G. Stucker



Mancos Rock Characteristics Inferred From Antero Dever C7 Well (Cause No. 191, Docket No. 0901 SP3)

- Marine shale with silty interbeds and laminations
- 4-5% porosity, K in the nanodarcy range
- Adsorbed gas ~30 scf/ton (inferred from isotherm at Dever C7 & 4,030 psi)
- Total Organic Carbon 1-2%
- Relatively ductile (37% clay from XRD)



DONALD PEACOCK

Donald_Peacock@hotmail.com (970) 371-1916
7605 Jellison Ct. Arvada, CO 80005

EDUCATION

Bachelor of Science in Mechanical Engineering
Louisiana Tech University; Ruston LA

Graduation: November 2005

Masters of Engineering in Petroleum Engineering
Texas A&M University; Distance Learning

Graduation: Postponed

Key Courses: Drilling Engineering, Petroleum Project Evaluation and Management, Reservoir Engineering (Concentration in Drilling/Production/Completion)

CONTINUED EDUCATION & ACHIEVEMENTS

Well Control Certification 2 Yr.	•	Wild Well Control/March 2012
Hydraulic Fracturing Fundamentals	•	Piece/February 2012
Aries Economic Software Training	•	Halliburton/January 2011
Rod Pumping Optimization	•	Theta Oilfield Services/March 2010
Well Bore Dynamics Training Course	•	Weatherford Training / November 2007
Packers 1 Training Course	•	Weatherford Training / October 2007
Completions 1 Training Course	•	Weatherford Training / May 2007
Influential Presentation	•	Weatherford Training / May 2007
API Petroleum Technologies Certification	•	API University / November 2006
Continuing Education Hr. (7.8)		
Gas Lift Design Course	•	Weatherford Training / October 2006
Artificial Lift Training Course	•	Weatherford Training / October 2006
Mallard Instrumentation Seminar	•	Circor Energy Products / February 2006
Hydroseal Pressure Relief Valve Seminar	•	Circor Energy Products / February 2006
National Board PRV repair & inspection certification	•	National Board of PRV & Pressure Vessels / March 2006
ISN Seminar	•	ISN Network / February 2006
Fundamentals of Engineering Exam	•	Louisiana / Passed / April of 2005

PROFESSIONAL EXPERIENCE

Noble Energy Inc.; Denver, CO

June 2010 – Present

Production/Completion Engineer III

- Artificial Lift Design and review on Niobrara Horizontal Program prior to Niobrara Integration Team inception
- Production optimization of – Niobrara Western & Eastern Slope CO, Sussex, Codell, Lyons

Weatherford International Inc; Denver, CO

Aug. 2006 – June 2010

Artificial Lift Engineer / Rockies Gas Lift Coordinator

- Headed project management for field assessment and implementation of Artificial Lift candidate wells
- Instructor for Weatherford International ALS schools
- Regional Experience; Mid-Continent, Rocky Mountain, East Texas - North Louisiana, GOM South Central Louisiana offshore/onshore
- Main focus in optimizing long perforated interval gas wells from initial production to P&A

EFC Valve & Controls; Longview, TX

Summer 2005 –Aug. 2006

Mechanical Engineer / Technical Support

- Wrote training manuals for service techs (relief valves, well head safety systems, ect.)
- Engineering support for Valve Actuation, Pneumatic automated systems, PRV & SRV, Valve Repair and certification

R&M Energy Systems; Willis, TX
Engineering Intern

Summer 2004

Lufkin Industries Inc.; Lufkin, TX
Engineering Intern

Summer 2003

Hunt Oil Company; Franklin, LA
Offshore Production Hand / Engineering Intern

Summer 2002

HONORS AND MEMBERSHIPS

Society of Petroleum Engineers 3283679
 Engineering Intern in the State of Louisiana EI.0027832

ATTACHMENT A

NOBLE ENERGY, INC.

Cause No. 440 & 510
Docket No. 1201-SP-08

Grand Valley and Parachute Fields
Garfield and Mesa Counties, Colorado

Application Lands

Township 8 South, Range 95 West, 6th P.M.

Section 7: Tract 37, Tract 38

Section 18: A parcel of land situate in the northwest quarter, the northwest quarter of the northeast quarter, the southwest quarter of the northeast quarter and the southwest quarter of Section 18 in Township 8 South and Range 95 West of the Sixth Principal Meridian in Garfield and Mesa counties, Colorado and being the Government Tracts described as follows:

1. That portion of government Tract No. 38 lying within the said Section 18;
2. Government Tract No. 39;
3. Government Tract No. 40, save and except that portion described as follows:

Considering the north line of the said northwest quarter of Section 18 as bearing North 89° 55' 28" West, and all the bearings shown herein are referenced from. The terminus of the said north line being monumented with Brass Caps set during the U. S. General Land Office Independent Resurvey made in 1929.

Beginning at the southeast corner of the said Tract 40, same being angle point 4 of Tract 40 and angle point 3 of Tract 41.

THENCE, along the south line of the said Tract 40, South 88° 29' 41" West a distance of 766.15 feet;

THENCE, North 0° 05' 58" East a distance of 661.40 feet;

THENCE, South 89° 58' 02" East a distance of 755.32 feet to the east line of the said Tract 40;

THENCE, along the said east line of Tract 40, South 0° 50' 28" East a distance of 640.91 feet to the Point of Beginning.

The above described save and except portion containing 11.37 acres of land more or less.

4. Government Tract 41, save and except that portion described as follows:

Beginning at the southeast corner of the said Tract 41, same being angle point 6 of Tract 41;

THENCE, along the south line of said Tract 41, South 89° 41' 23" West a distance of 2621.10 feet to the southwest corner (angle point 5) of said Tract 41;

THENCE, along the most westerly line of said Tract 41, North 0° 39' 59" West a distance of 1344.36 feet to the most southerly northwest corner (angle point 4) of said Tract 41;

THENCE, along the most westerly north line of said Tract 41, North 88° 29' 41" East a distance of 1214.47 feet to an "ell" corner (angle point 3) of said tract 41;

THENCE, along the middle west line of said Tract 41, North 0° 50' 28" West a distance of 640.91 feet;

THENCE, South 89° 58' 02" East a distance of 522.52 feet to the east line of the southwest quarter of said Section 18;

THENCE, along the said east line of the southwest quarter, North 0° 16' 22" East a distance of 1313.13 feet to the center quarter corner location of the said Section 18;

THENCE, along the north line of the southeast quarter of said Section 18, South 89° 55' 21" East a distance of 788.83 feet to the east line of the said Tract 41;

THENCE, along the said east line of Tract 41, South 2° 04' 46" East a distance of 1983.25 feet to the northwest corner (angle point 3) of Tract 44;

THENCE, continuing along the said east line of said Tract 41, South 1° 49' 34" East a distance of 1333.29 feet to Point of Beginning.

The above described save and except portion containing 100.00 acres of land more or less.

The combined area of that portion of the said Section 18 being within the Application Lands being 352.34 acres of land, more or less.

Township 8 South, Range 96 West, 6th P.M.

Section 1: Lots 2, 3, 4, S½NW¼, SW¼NE¼, NW¼SE¼, S½SE¼, SW¼

Sections 2, 11 and 12: All

containing approximately 2,969.36 acres, more or less.

The background of the slide features a photograph of an oil rig silhouetted against a vibrant sunset sky with shades of orange, red, and blue. The rig is positioned on the left side of the frame.

NBL

NOBLE ENERGY

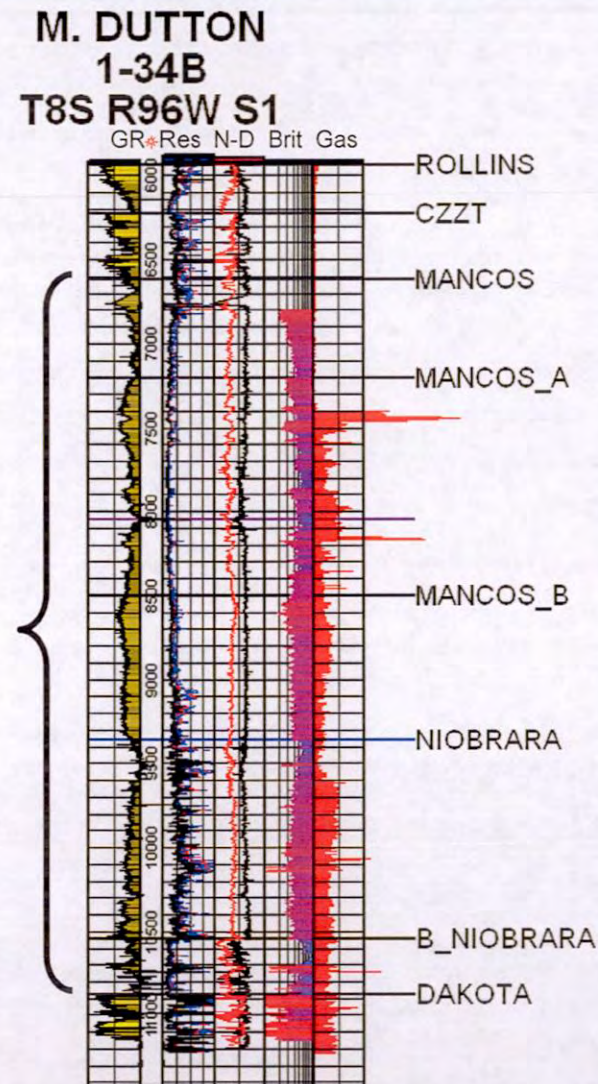
**Cause No. 440 & 510
Docket No. 1201 SP 08
Engineering Exhibits**
April 16, 2012

South Grand Valley Deep Unit Type Log

Noble Energy M. Dutton 1-34B

- Top Mancos Shale to top Dakota = 4262'
- Deposition in offshore marine shelf environment
- Mixed lithologies, mostly clay- to silt-sized particles, with some very fine grained sand
- Organic material is richest in the Niobrara equivalent and Mowry intervals
- High thermal maturity produces dry gas
- The reservoirs have very low permeability, contain adsorbed and free gas, and have evidence of widespread natural fracturing

Exhibit E-1
Cause No. 440 & 510
Docket No. 1201 SP 08
Piceance Basin, CO
Mancos Group Type Log
D. Peacock



Noble M. Dutton 1-34B Vertical Well Results

M. DUTTON 1-34B T8S R96W S1

Stages 3-5
Commingle All 5 Stages

Stage 2

IP 1.5 MMCFPD
flowed ~ 2 mo

Stage 1

IP 400 MCFD
flowed ~ 1 week

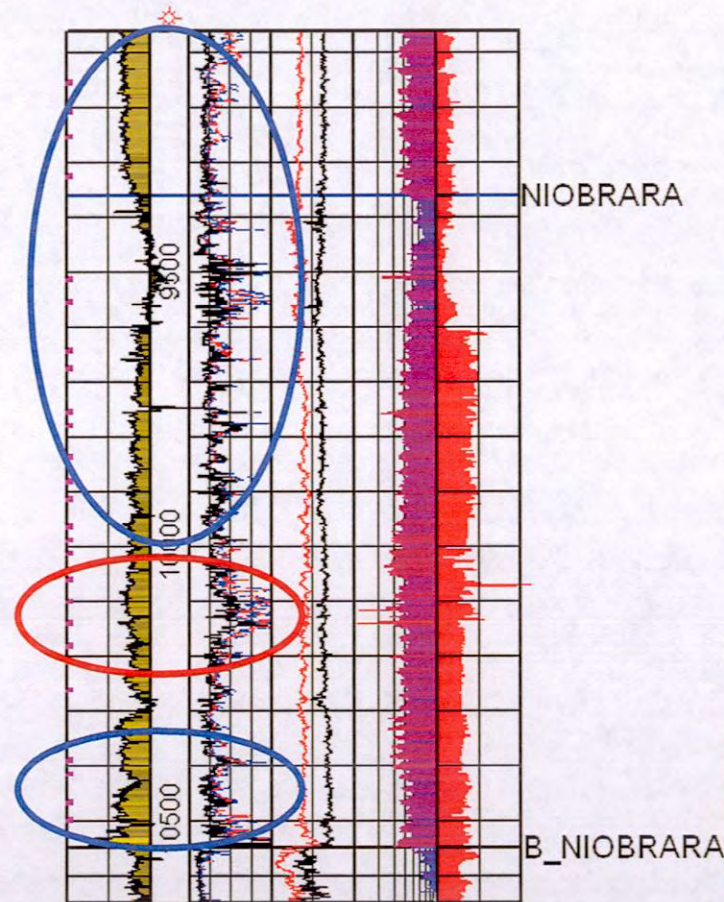
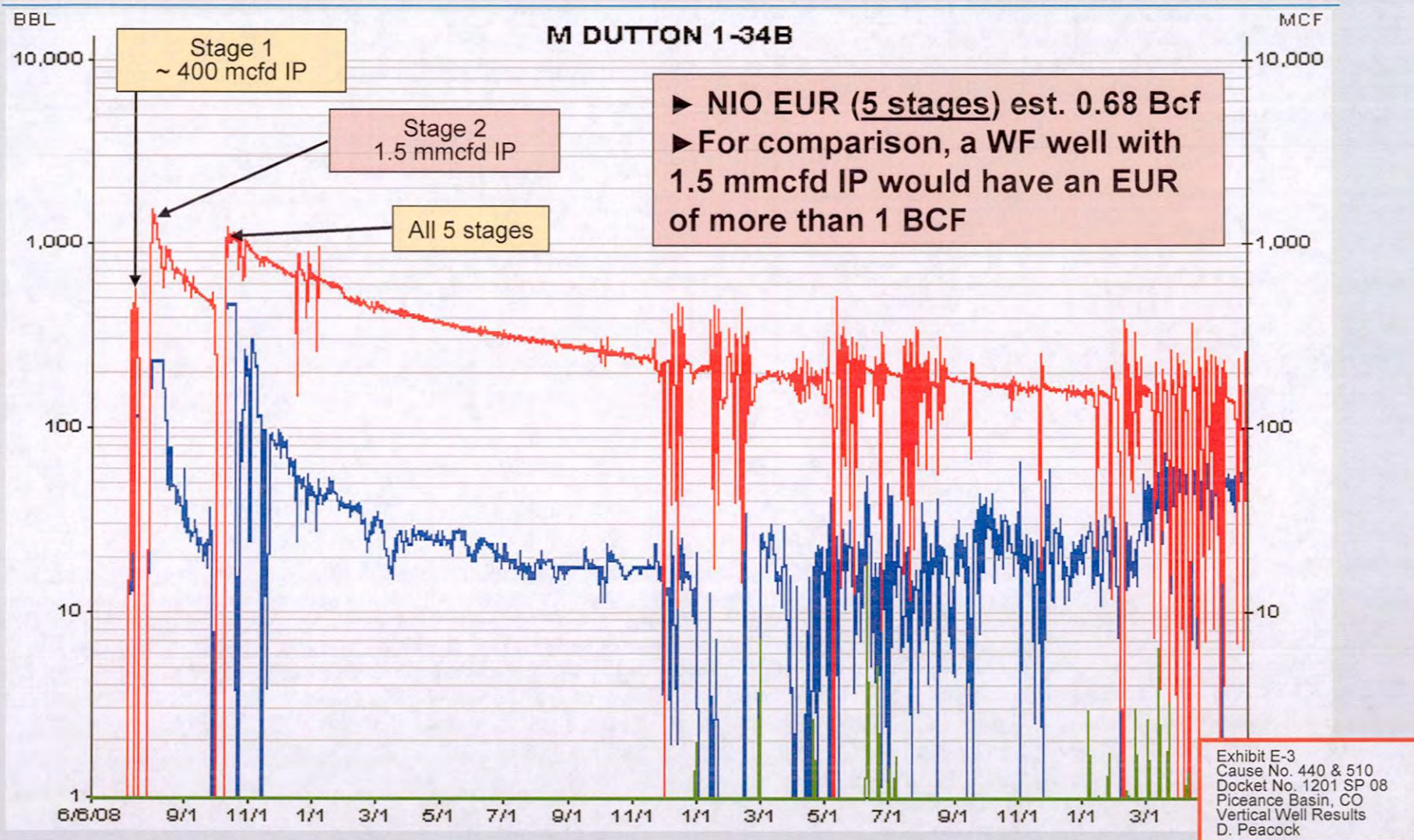
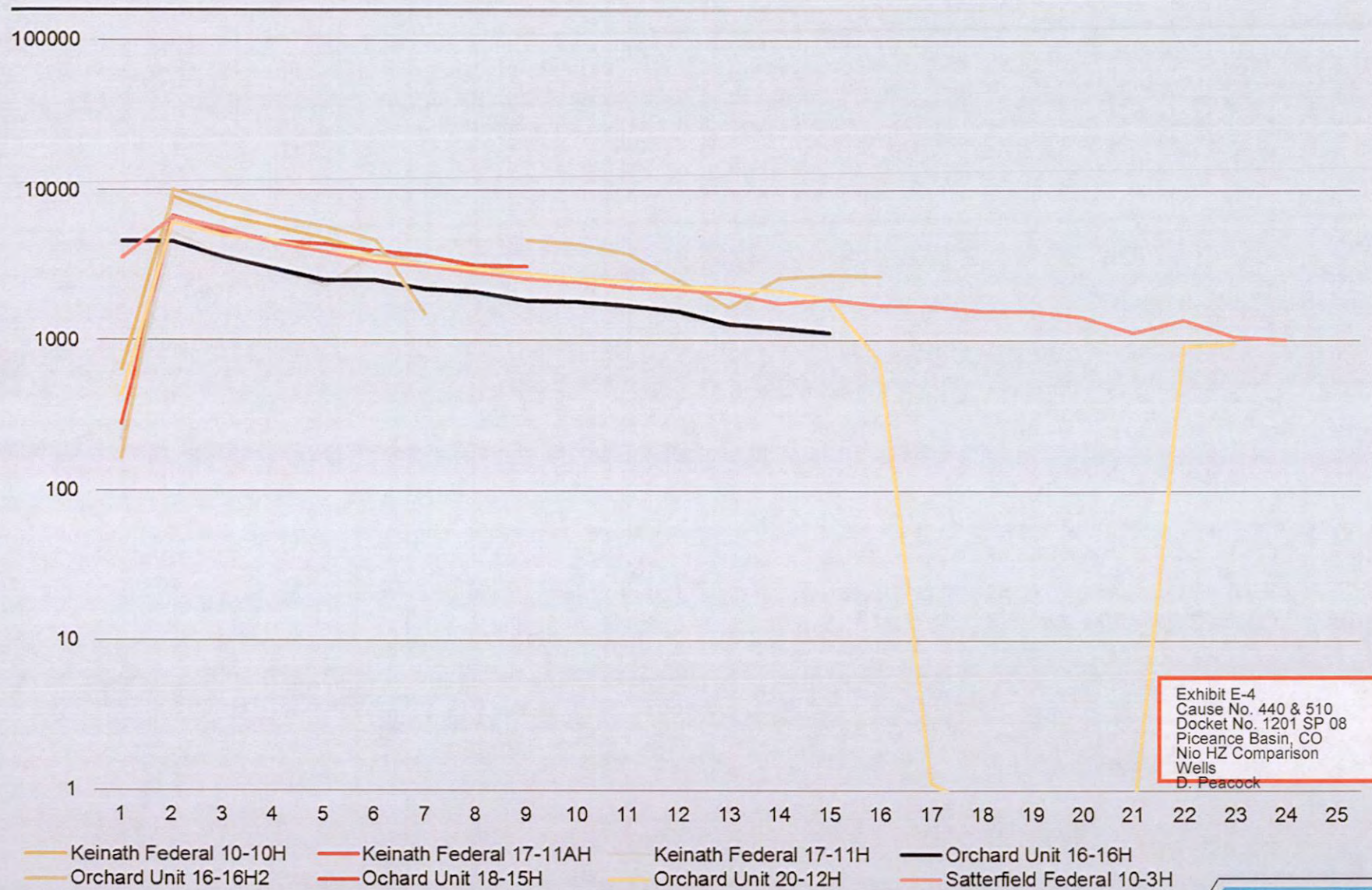


Exhibit E-2
Cause No. 440 & 510
Docket No. 1201 SP 08
Piceance Basin, CO
Vertical Well Results
D. Peacock

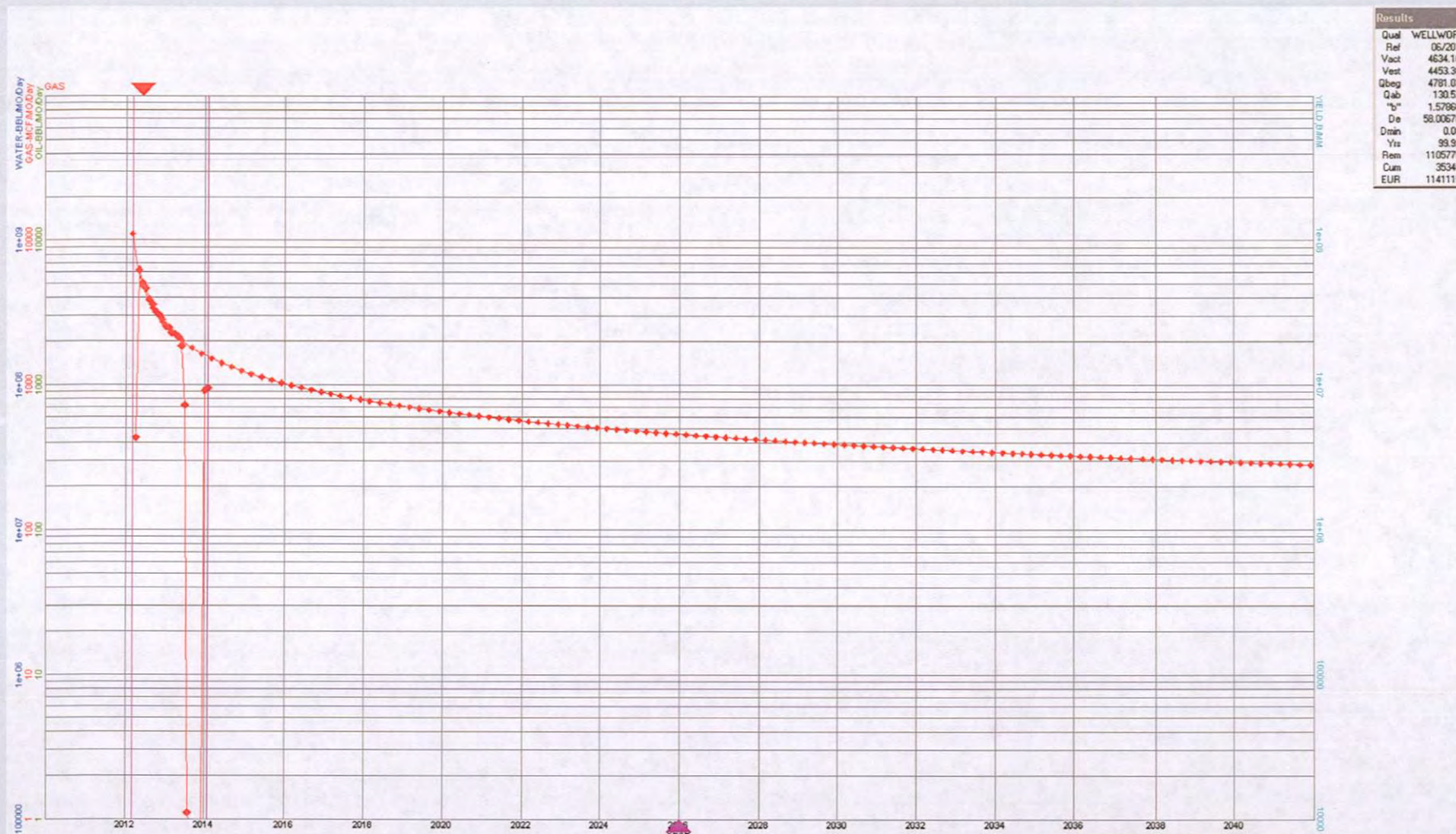
Noble M. Dutton 1-34B Vertical Well Results (Vertical Wellbore Is Not Contacting Enough Reservoir)



Niobrara HZ Comparison Wells



Niobrara HZ Type Curve Orchard Unit 20-12H



Results	
Qual	WELLWORK
Ref	06/2012
Vact	4634.104
Vest	4453.308
Qbeg	4781.030
Qab	130.535
"b"	1.578600
De	58.006783
Dmin	0.000
Yrs	99.997
Flex	11057754
Cum	353403
EUR	11411157

Exhibit E-5
Cause No. 440 & 510
Docket No. 1201 SP 08
Piceance Basin, CO
Niobrara HZ Type Curve
D. Peacock

NBL

Niobrara HZ Proposed Well Diagram

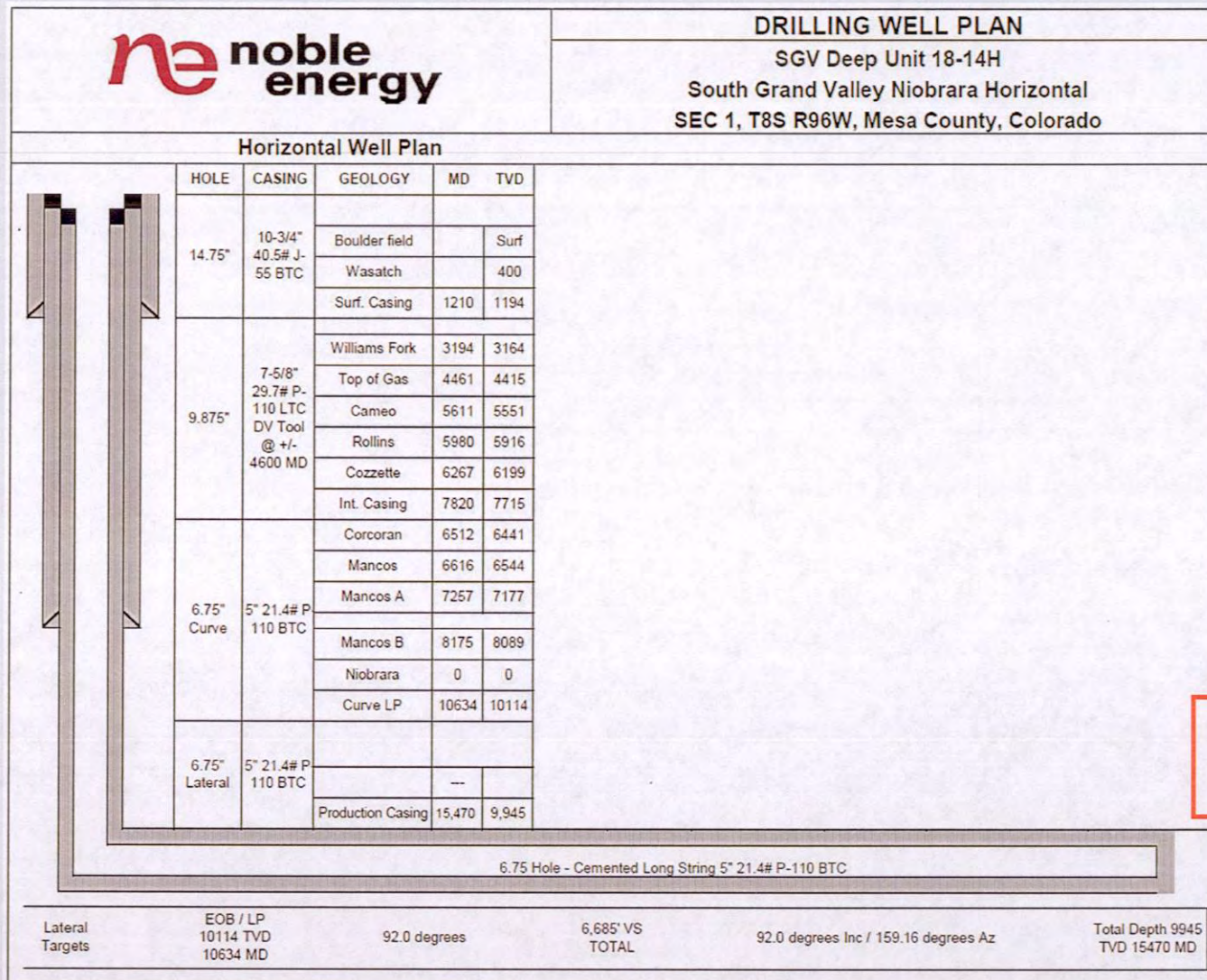


Exhibit E-6
 Cause No. 440 & 510
 Docket No. 1201 SP 08
 Piceance Basin, CO
 Nio HZ Proposed WB
 D. Peacock

Economic Summary

- D&C Cost \$9.3 MM per well
- Monthly Operation Costs \$2,400 per well
- Gas Price \$4.00/Mcf escalated 2% annually
- EUR 6.2 BCF
- 4 Separate Benches
- 20 Lateral per Bench
- Near by First Months Average 6.5 MMcf – 10 MMcf
- Est. 0.496 Tcf

Project is Economic

Exhibit E-7
Cause No. 440 & 510
Docket No. 1201 SP 08
Piceance Basin, CO
Project Unit Economics
D. Peacock

South Grand Valley Deep Unit Engineering Presentation Summary

- Currently have vertical Deep Test well – M. Dutton 1-34B
- 6 Niobrara Horizontal wells producing 2 miles west of our proposed unit (17 wells currently producing – but not all have public data)
- Seismic Data verifying the Niobrara structure
- Under current market pricing a ~0.5 Tcf of economic recoverable Hydrocarbons

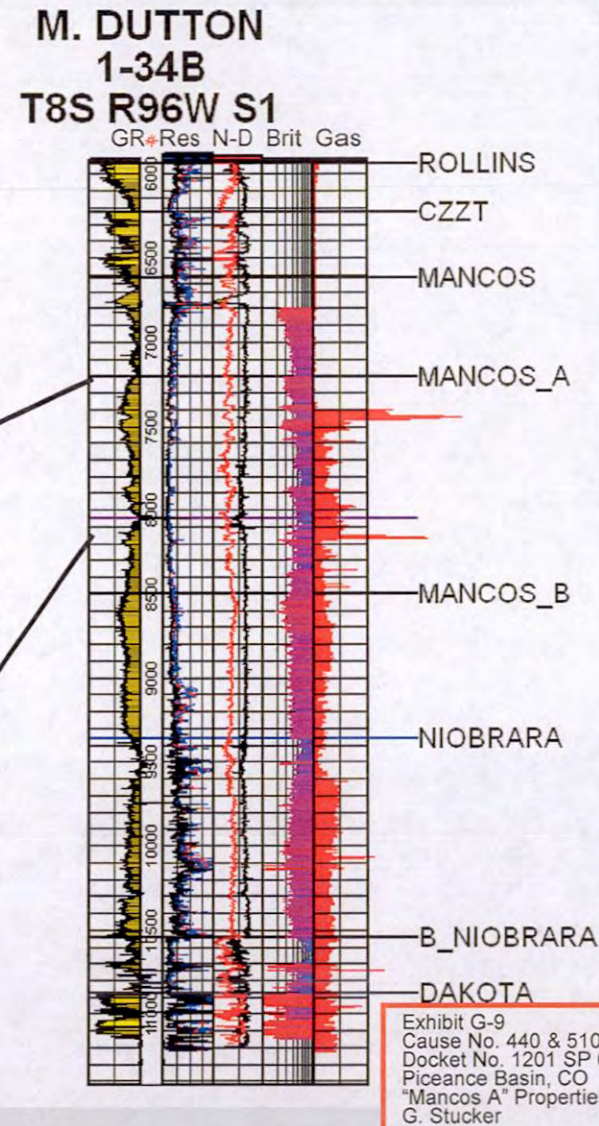
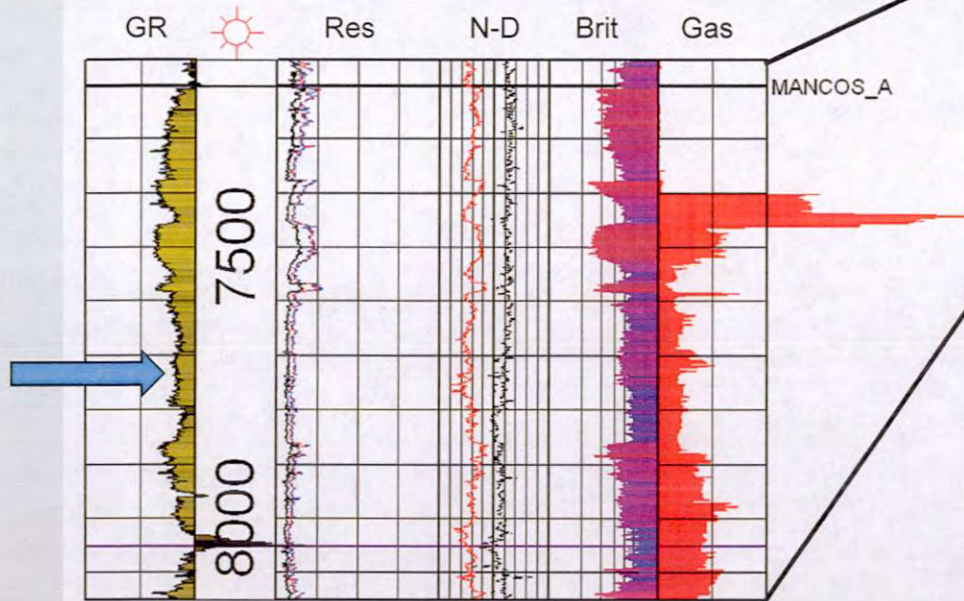
Exhibit E-8
Cause No. 440 & 510
Docket No. 1201 SP 08
Piceance Basin, CO
Unit Engineering Summary
D. Peacock

nobleenergyinc.com

NBL

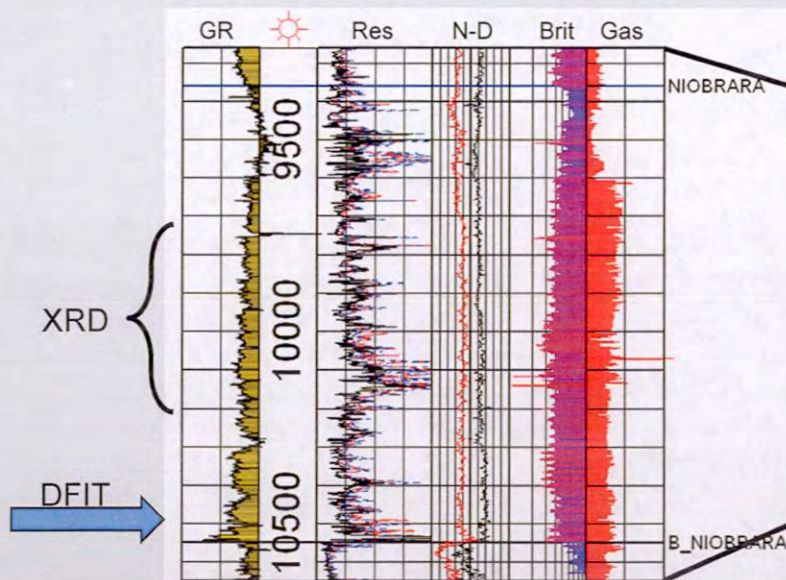
“Mancos A” Rock Characteristics Inferred From Antero Dever C7 Well (Cause No. 191, Docket No. 0901 SP3)

- Marine argillaceous siltstone and argillaceous, silty, very fine grained sandstone
- 5-6% porosity, K in the nano- to micro-darcy range
- Total Organic Carbon ~1%
- Increased brittleness (28% clay from XRD)



Niobrara Equivalent Rock Characteristics

- Calcareous shale, siltstone, and sandy, argillaceous limestone
- 5-7% porosity, $K \sim 0.2$ microdarcy (DFIT)
- Total Organic Carbon > 2%
- CaCO_3 content increases downward
- Varies from more ductile to brittle, with XRD data showing roughly 1/3 quartz, 1/3 carbonate, 1/3 clay minerals



M. DUTTON
1-34B
T8S R96W S1

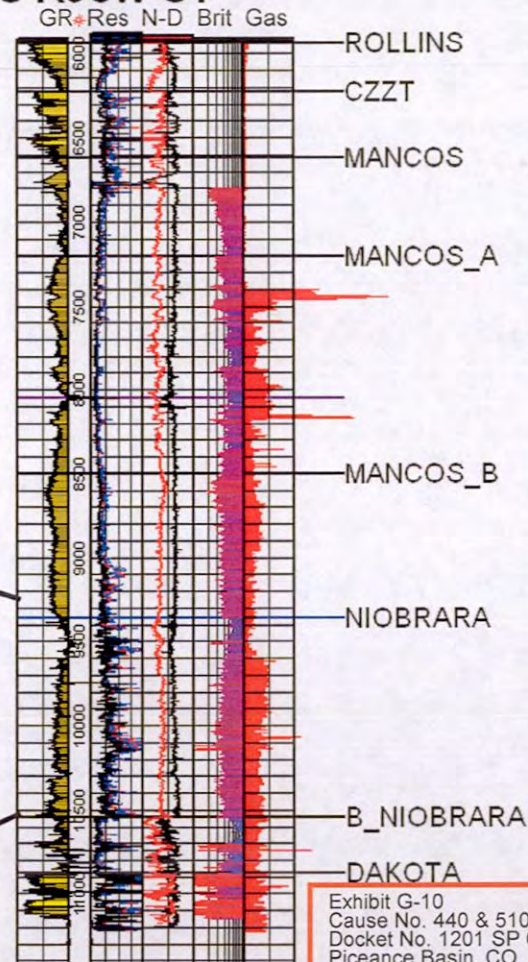


Exhibit G-10
Cause No. 440 & 510
Docket No. 1201 SP 08
Piceance Basin, CO
Niobrara Equivalent Properties
G. Stucker

Mowry And Frontier Rock Characteristics

- Mowry shale is a good source rock
 - Black shales and numerous bentonites
 - Type II and III kerogens
 - TOC up to 2.4%
- Frontier sandstone is a prospective reservoir
 - Deposited in a distal shoreface setting (USGS DDS-69-B)
- Neither of these formations within the Mancos Group are currently targeted by Noble

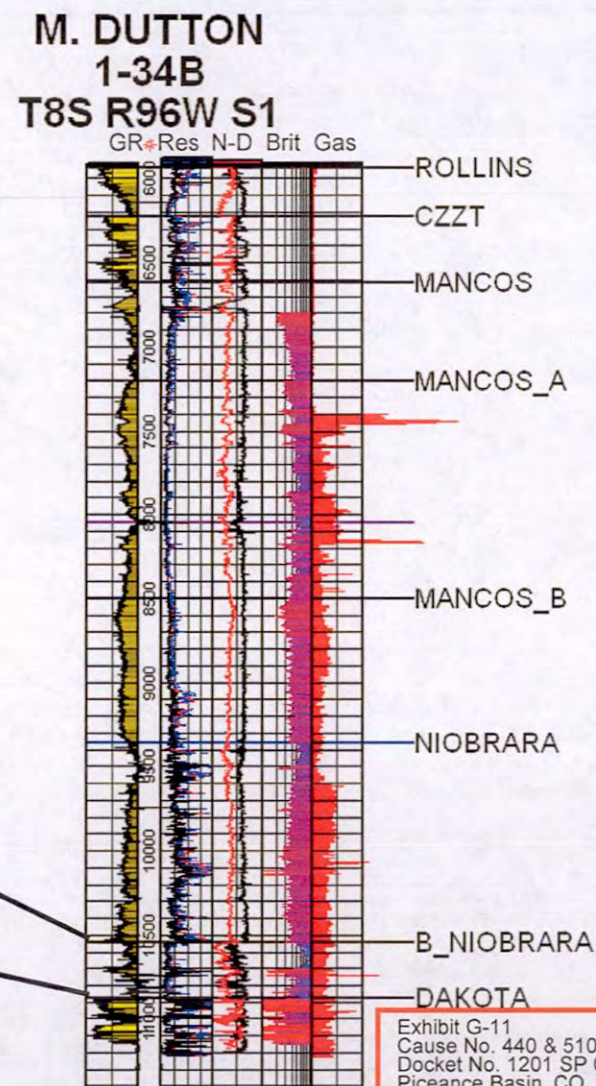
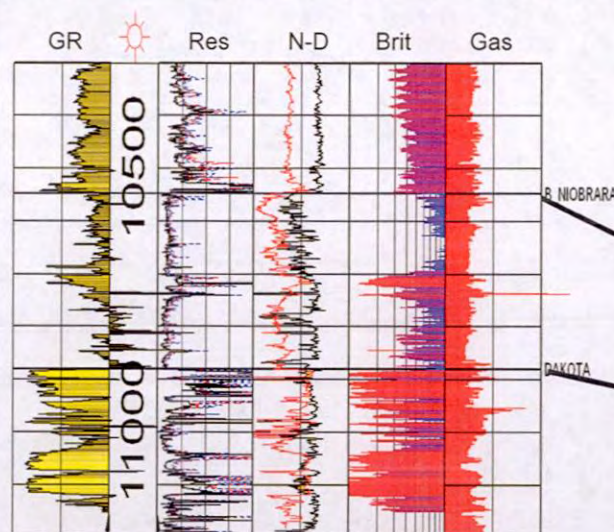
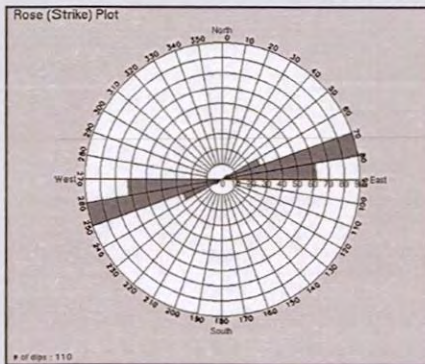
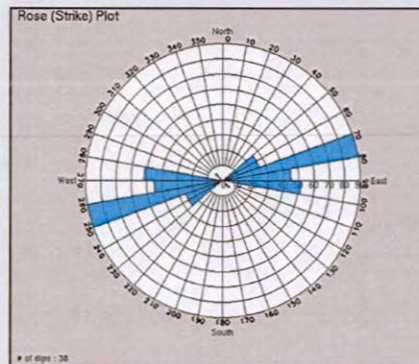


Exhibit G-11
Cause No. 440 & 510
Docket No. 1201 SP 08
Piceance Basin, CO
Mowry & Frontier Properties
G. Stucker

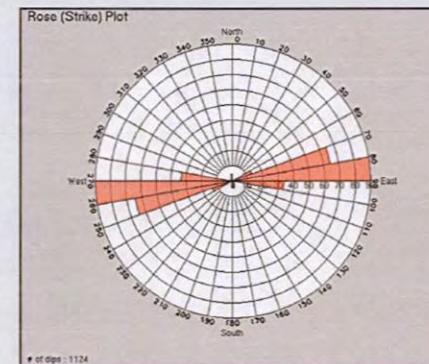
South Grand Valley Stress and Natural Fracture Orientations From XRFI Image Log



DRILLING INDUCED FRACTURES
(n = 110) .0249 FRACS/FT
Average strike: 071° / 251°



NATURAL OPEN FRACTURES
(n = 38) .0086 FRACS/FT
Average strike: 075° / 255°

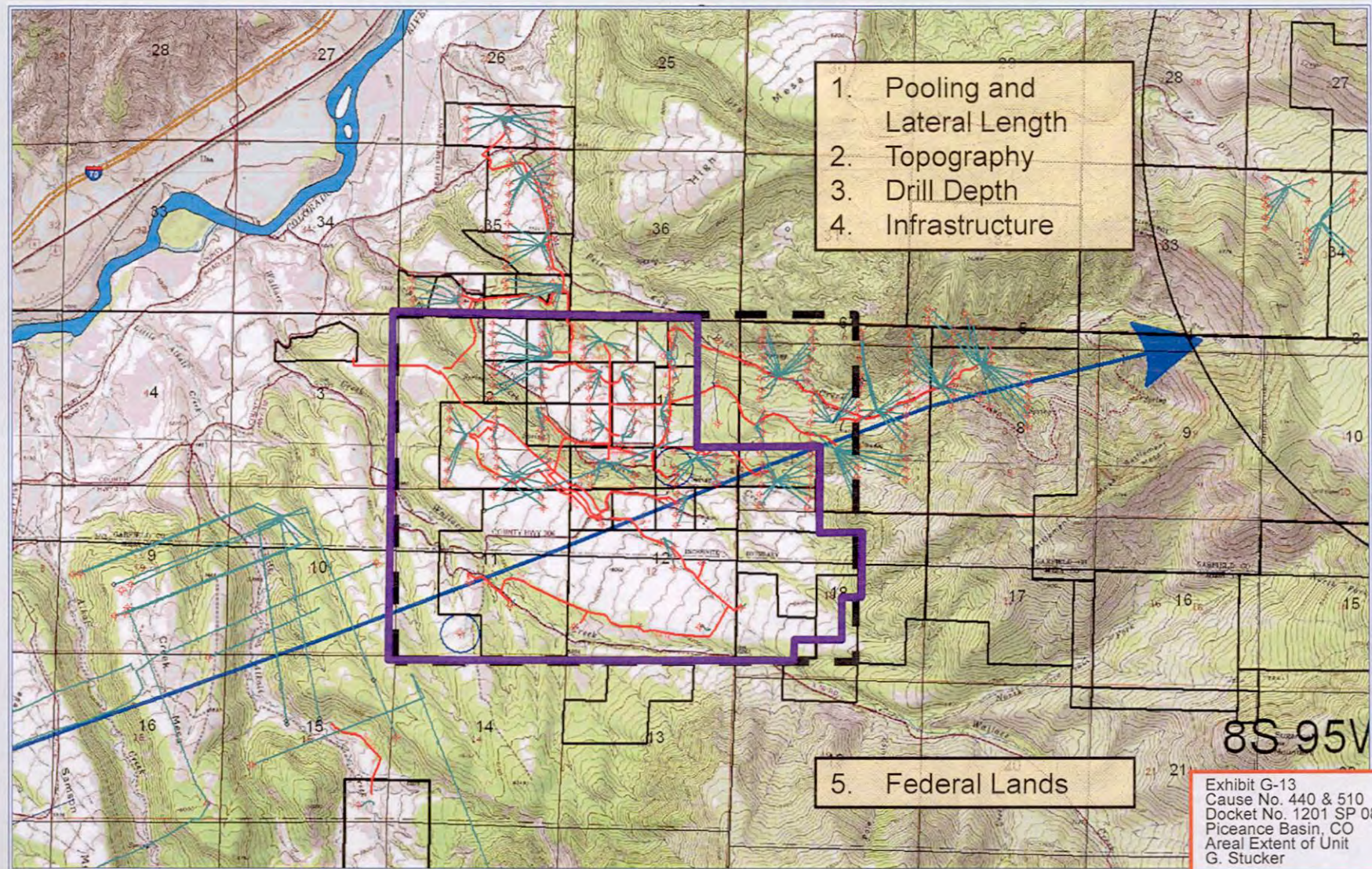


MINERALIZED FRACTURES
(n = 1125) .2545 FRACS/FT
Average strike: 081° / 261°

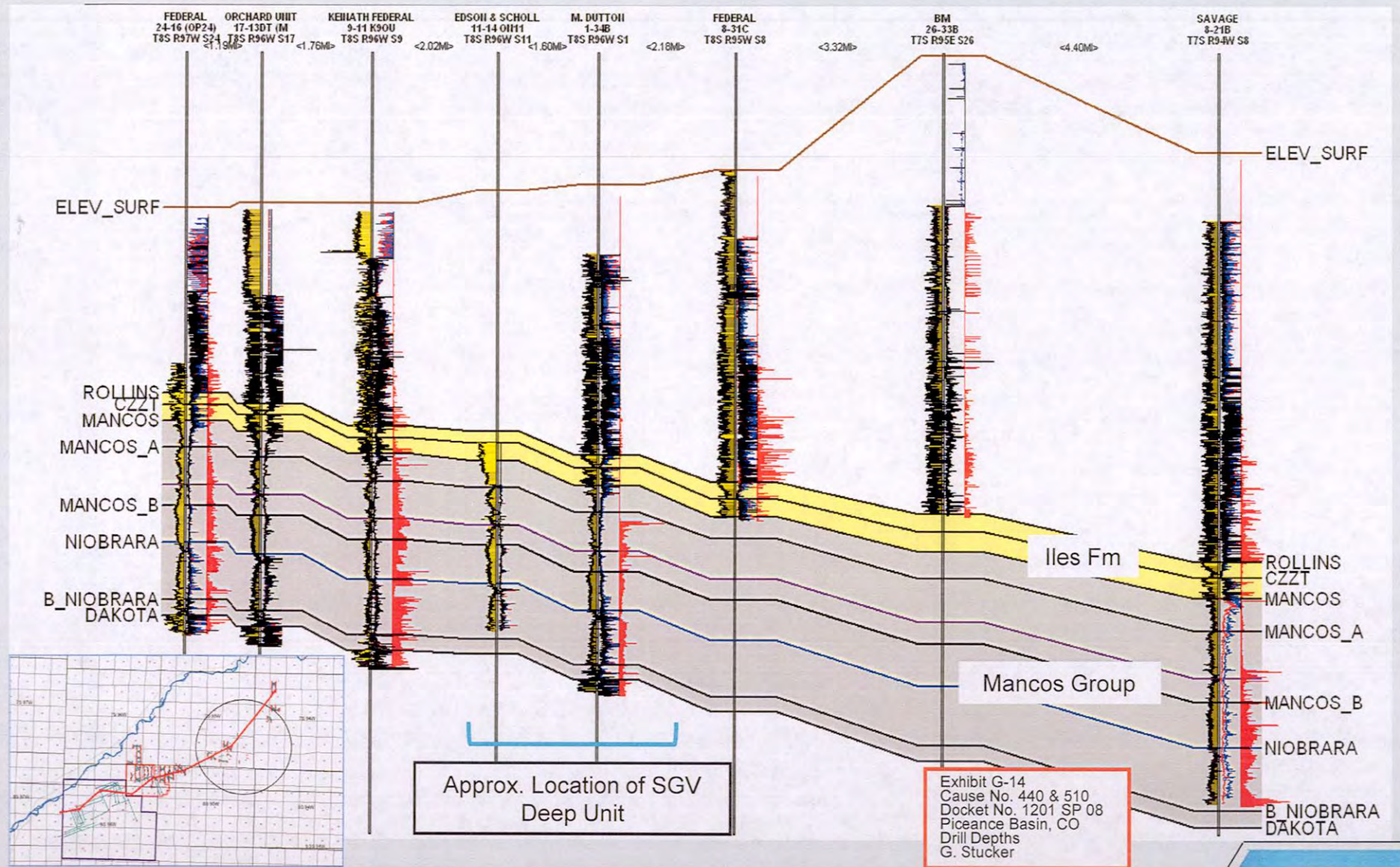
- Nearly all of the drilling induced fractures and many of the natural open fractures were in the lower portion of the wellbore (Dakota/Cedar Mtn. interval). These azimuths of present day horizontal stress agrees well with image logs run in nearby Williams Fork wells.
- The mineralized fractures are numerous, and found throughout the Mancos B and Niobrara equivalent intervals.

Exhibit G-12
Cause No. 440 & 510
Docket No. 1201 SP 08
Piceance Basin, CO
Stress & Fracture Orientations
G. Stucker

How Was The Areal Extent Of The Unit Determined?



E-W Log Section Illustrating Basinward Drill Depth Increase



South Grand Valley Deep Unit Geological Presentation Summary

- The Mancos Group Shale interval underlies the entire application boundary.
- The stratigraphy and therefore reservoir characteristics are consistent across the entire application boundary.
- The entire interval is gas bearing.
- Recent advances in horizontal drilling and hydraulic fracturing stimulation techniques have allowed operators to process the volume of rock necessary to make hydrocarbon extraction from extremely tight reservoirs economically viable.
- An order of magnitude more reservoir can be drained by horizontal wells than can be drained by vertical wells drilled in the same formation.
- Drilling and spacing units need to be large enough to accommodate the drilling of lateral wellbores 5,000' or longer.
- Drilling of multiple horizontal wells from a single pad minimizes surface disturbance.
- EnCana has had nearby success aligning wellbores both parallel and perpendicular to maximum horizontal stress and existing natural fractures. Noble Energy Inc. proposes to test both orientations.

Exhibit G-15
Cause No. 440 & 510
Docket No. 1201 SP 08
Piceance Basin, CO
Geo Presentation Summary
G. Stucker

nobleenergyinc.com

NBL

NOBLE ENERGY, INC.

Engineering Testimony – Donald Peacock

Cause No. 440 & 510; Docket No. 1201-SP-08
Grand Valley and Parachute Fields
Garfield and Mesa Counties, Colorado

April 2012 Colorado Oil and Gas Conservation Commission Hearing

My name is Donald Peacock, and I am currently employed in the capacity of Production Engineer at Noble Energy, Inc. ("Noble"). I graduated from the Louisiana Tech University with a Bachelor's of Science degree in Mechanical Engineering. I have over 6.5 years experience in the oil and gas industry with a specific emphasis in production engineering for oil and gas exploration and development activities. I am familiar with the lands that are the subject of the above-referenced application ("Application"). I have attached my resume to this verified statement.

In support of Noble Energy, Inc.'s Application in the above referenced docket, I am submitting Engineering exhibits. The exhibits are attached to my sworn testimony and form the basis of Noble Energy, Inc.'s Application for an order establishing one (1) drilling and spacing unit ("Unit") pursuant to C.R.S. Section 34-60-116, as detailed below, and to establish well location rules for the Mancos, Niobrara, Frontier, and Mowry Formations ("Mancos Group Formations") covering certain described lands in the Rulison Field area, Garfield and Mesa Counties, Colorado. The subject lands are set forth on Attachment A attached hereto and incorporate herein by this reference ("Application Lands").

Exhibit No. E-1.

Exhibit No. E-1 is a South Grand Valley Deep Unit Type Log from the Noble Energy M. Dutton 1-34B well. Exhibit E-1 contains a summary of the type log characteristics.

Exhibit No. E-2.

Exhibit No. E-2 is a close up of the completed zones in the M. Dutton 1-34B Deep test. This illustrates the contribution from each Stage (further detail is in Exhibit No. E-3) as the well was completed and brought on line.

Exhibit No. E-3.

Exhibit No. E-3 is an illustration of the Noble M Dutton 1-34B vertical well results. This well has established an EUR of ~.68 Bcf when completed vertically. Stage 1 was not as promising, but as the well's shallower Niobrara benches were completed we have seen better results.

Exhibit No. E-4.

Exhibit No. E-4 is a collection of currently producing Niobrara Horizontal wells in the Orchard Unit just west of our proposed South Grand Valley Deep Unit. All production data was found on the COGCC website. This data was used to pick the mean/median production for analogous data Orchard Unit 20-12H.

Exhibit No. E-5.

Exhibit No. E-5 is a graph of collected production data from the Orchard Unit 20-12H just west of our proposed South Grand Valley Deep Unit. This data was used to put together a Niobrara Horizontal Type Curve for Economic and Planning development. This well was chosen as the 'Type' well because its proximity to Mean/Median of available data.

Exhibit No. E-6.

Exhibit No. E-6 is a proposed well diagram for a Niobrara horizontal well located within the Unit. We plan on completing with 5# 21.4 lb/ft P-110 production casing to a Measured Depth of 15,470 ft with a Total Vertical Depth of 9,945 ft. This would allow us to contact approximately 6,685 ft of reservoir.

Exhibit No. E-7.

Exhibit No. E-7 summarizes the economics of the oil and gas development from the Mancos Group Formations within the Unit. The drilling and completion costs are estimated to be approximately \$9.3 million dollars per horizontal well, with monthly operating costs of \$2,400 per well. Exhibit No. E-8 also illustrates the project details of Drill & Complete of 80 wells over the life of the project in the South Grand Valley Deep Unit. Each Horizontal well completed in the Niobrara within this unit has a Estimated Ultimate Recovery of 6.2 Bcfe. The entire unit EUR in the Niobrara Horizontal completions is ~0.496 Tcfe. Using a \$4.00/Mcf price of gas with a 2% annual escalation this project proves to economic.

Exhibit No. E-8.


Exhibit No. E-8 is a summary of the exhibits and the findings supported by this written testimony and corresponding exhibits. Currently Noble Energy has a vertical Deep Test Well – M. Dutton 1-34B proving Niobrara reservoir exists within the proposed SGV Deep Unit. Through Noble Energy's production of the M. Dutton 1-34B we have accurate data to evaluate future wells in this zone. There are currently 6 Niobrara Horizontal wells producing within 2 miles of our proposed unit of which data is public and has been analyzed. With a total of 17 wells that will be public summer 2012. We have Seismic Data that verifies the Niobrara structure within our proposed SGV Deep Unit. Under current market pricing and est. costs, this unit a ~0.5 of economic recoverable Hydrocarbons in the 4 Niobrara benches we are targeting.

Based on this written testimony and exhibits submitted herewith, it is my professional opinion that granting of this application for establishment of the Unit will prevent waste; will not violate correlative rights and will assure the greatest ultimate efficient and economic recovery of gas and associated hydrocarbon substances from the Mancos Group Formations.

The matters described herein were all conducted under my direction and control. To the best of my knowledge and belief, all of the matters set forth herein, my testimony and in the exhibits are true, correct and accurate.

Affirmation

The matters described herein were all conducted under my direction and control. To the best of my knowledge and belief, all of the matters set forth herein and in the exhibits are true, correct, and accurate.



Donald Peacock
Production Engineer
Noble Energy, Inc.

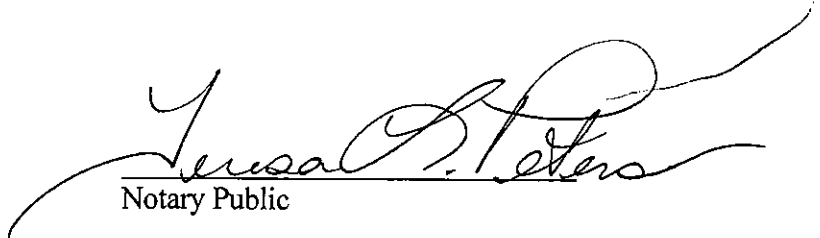
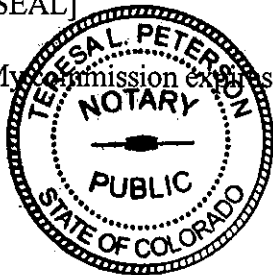
STATE OF COLORADO)
) ss.
CITY AND COUNTY OF DENVER)

The foregoing instrument was subscribed and sworn to before me this 3rd day of April, 2012, by Donald Peacock, Production Engineer, for Noble Energy, Inc.

Witness my hand and official seal.

[SEAL]

My commission expires: 10-04-13


Notary Public

STATE OF COLORADO

John W. Hickenlooper, Governor
Christopher E. Urbina, MD, MPH
Executive Director and Chief Medical Officer

Dedicated to protecting and improving the health and environment of the people of Colorado

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Phone (303) 692-2000 Denver, Colorado 80230-6928
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Colorado Department
of Public Health
and Environment

January 6, 2012

Mr. David Neslin, Director COGCC
1120 Lincoln Street, Suite 801
Denver, Colorado 80203

Re: Colorado Department of Public Health and Environment (CDPHE) Consultation on Docket No. 1201-SP-08 for Noble Energy, Inc. proposed order to establish an approximate 2,921.58-acre drilling and spacing unit

Dear Mr. Neslin:

The CDPHE has reviewed the application from Noble Energy, Inc. proposed order to establish an approximate 2,921.58-acre drilling and spacing unit in the Mancos Group Formations and establish rules for the Mancos, Niobrara, Frontier and Mowry Formations. Located in the Tract 37 and 38 of Section 7 and the NW $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$ and the SW $\frac{1}{4}$ of Section 18 in Township 8 South, Range 95 West and Lots 1, 2, 3, 4 S $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$, in Section 1 and Sections 2, 11 and 12 in Township 8 South, Range 96 West in Garfield and Mesa Counties, Colorado.

CDPHE believes that no additional conditions of approval are necessary for this request. It should be noted that CDPHE reserves the right to consult on any future variance requests (pursuant to COGCC Rule 306) within these locations. If you have questions regarding this recommendation or discussion would be helpful, please contact me at (303) 692-3662.

Sincerely,

Kent Kuster
Oil and Gas Consultation Coordinator
CDPHE

cc: Jeff Lawrence, Director DEHS, CDPHE
Greg Deranleau, O&G Assessments Supervisor, COGCC
Jane Stanczyk, Permitting Supervisor, COGCC
Thom Kerr, Permitting Manager, COGCC
Peter Gowen, Acting Hearings Manager, COGCC
Kibry Wynn, LGD, Garfield County
Randy Price, LGD, Mesa County