

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

IN THE MATTER OF THE APPLICATION OF AXIA)
ENERGY, LLC FOR AN ORDER TO ESTABLISH)
AN APPROXIMATE 2280-ACRE UNIT IN)
SECTIONS 27, 28, 33 AND 34, TOWNSHIP 8)
NORTH, RANGE 91 WEST, 6TH P.M., UNNAMED)
FIELD, MANCOS AND NIOBRARA FORMATIONS,)
MOFFAT COUNTY, COLORADO)

CAUSE NO. 540
DOCKET NO. 1303-SP-41

ORIGINAL

REQUEST FOR RECOMMENDATION OF
APPROVAL OF APPLICATION WITHOUT A HEARING

Axia Energy, LLC ("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 for the Director to recommend approval of its January 24, 2013, amended January 31, 2013, 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 12th day of March, 2013.

Respectfully submitted,

AXIA ENERGY, LLC

By: 

Jamie L. Jost
Gregory J. Nibert Jr.
Beatty & Wozniak, P.C.
Attorneys for Applicant
216 16th Street, Suite 1100
Denver, Colorado 80202
(303) 407-4499

Axia Energy, LLC

Cause No. 540
Docket No. 1303-SP-41

AXIA ENERGY, LLC
Tab McGinley – Land Testimony

Cause 540; Docket No. 1303-SP-41
Drilling and Spacing Unit Application – Mancos-Niobrara Formations
Unnamed Field, Moffat County, Colorado

March 2013 Colorado Oil and Gas Conservation Commission Hearing

My name is Tab McGinley, and I am currently employed as Vice President of Land for Axia Energy LLC (“Applicant”). I graduated from Rice University in Houston, Texas in 1983 with a degree in Energy Land Management. I have over 29 years of experience in oil and gas land work. I have worked directly or in a supervisory role with the properties that are subject of this matter.

In support of Applicant’s application and my sworn testimony herein, I am submitting five (5) exhibits. This testimony and exhibits provide the supporting basis for approval of the Applicant’s request for an order establishing an approximate 2,280.00-acre drilling and spacing unit for the production of oil, gas and associated hydrocarbons from the Mancos and Niobrara formations underlying the following lands (“Application Lands”):

Township 8 North, Range 91 West, 6TH P.M.
Section 27: ALL
Section 28: N $\frac{1}{2}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$
Section 33: N $\frac{1}{2}$, N $\frac{1}{2}$ S $\frac{1}{2}$
Section 34: N $\frac{1}{2}$, N $\frac{1}{2}$ S $\frac{1}{2}$, S $\frac{1}{2}$ SE $\frac{1}{4}$

Moffat County, Colorado.

Exhibit L-1: Location Map; Mineral and Leasehold Ownership Map:

Exhibit L-1 is a map showing the location of the Application Lands and the leasehold ownership. The Application Lands consist of 100% fee mineral interests. The following parties own leasehold or unleased mineral interests in the Application Lands:

INTEREST HOLDER	% WI
AXIA ENERGY, LLC	70.88509%
OXY USA INC.	23.60219%
CATHLEEN M. LEACH, <i>ET. AL.</i>	5.51272%
TOTAL:	100.00000%

Exhibit L-2: Property Location Plat:

Attached as Exhibit L-2 is a Property Location Plat which sets forth the surface location for the Bulldog 27-41H-891 well. The Well has a surface location of 300’ Feet From North Line and 1319’ Feet From East Line in the NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 27, Township 8 North, Range 91 West and a bottomhole location of 660’ Feet From East Line and 625’ Feet From South Line in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 34, Township 8 North, Range 91 West. The Applicant has conformed to its statement that the initial perforation of the Mancos and Niobrara formations, and the ultimate bottom hole location of the well, is not closer than 600’ feet from the boundaries of the 2,280.00-acre drilling and spacing unit.

Tab McGinley

2993 South Milwaukee Circle, Denver CO 80210

Email: tmcginley@axiaenergy.com

Phone (720) 371-6473

Professional Experience

Axia Energy, LLC

Vice President of Land

October 2010 to Present, Denver, CO

- Currently working projects in Piceance and Sand Wash Basins of Colorado and Uinta Basin of Utah

Ultra Resources, Inc.

Land Manager

May 2005 to April 2010, Englewood, CO

- Managed assets in Pinedale & Jonah Fields of Wyoming and Marcellus Shale play in Pennsylvania

Bill Barrett Corporation

Senior Landman

July 2002 to May 2005, Denver, CO

- Assembled projects and initiated drilling programs in Colorado, Montana, North Dakota, Utah, and Wyoming

The St. Croix Group

Land Manager and Working Interest Partner,

Manager of Operations/Corporate Secretary for St. Croix Operating Inc.

1989 to 2002, Denver, CO

- Assembled, marketed, negotiated, and conducted closings on over 50 drilling, exploratory, seismic, and producing projects and properties located in Louisiana, Utah, Wyoming, North and South Dakota, Montana, and Colorado
- Acted as Corporate Secretary and Manager of Operations for St. Croix Operating Inc.

Stephen Smith, Inc.

Staff Landman

1986 to 1989, Denver, CO

- Staff Landman for Independent Oil Producer working in California, Louisiana, North Dakota, Wyoming, Utah, and Oklahoma Panhandle.

Professional Experience (Continued)

Murff F. Bledsoe, III

Independent Lease Broker

1984 to 1986, Houston, TX and Denver, CO

- Ran title and bought leases in South Texas, East Texas, Western Louisiana, North Dakota, Nebraska, and Western Wyoming

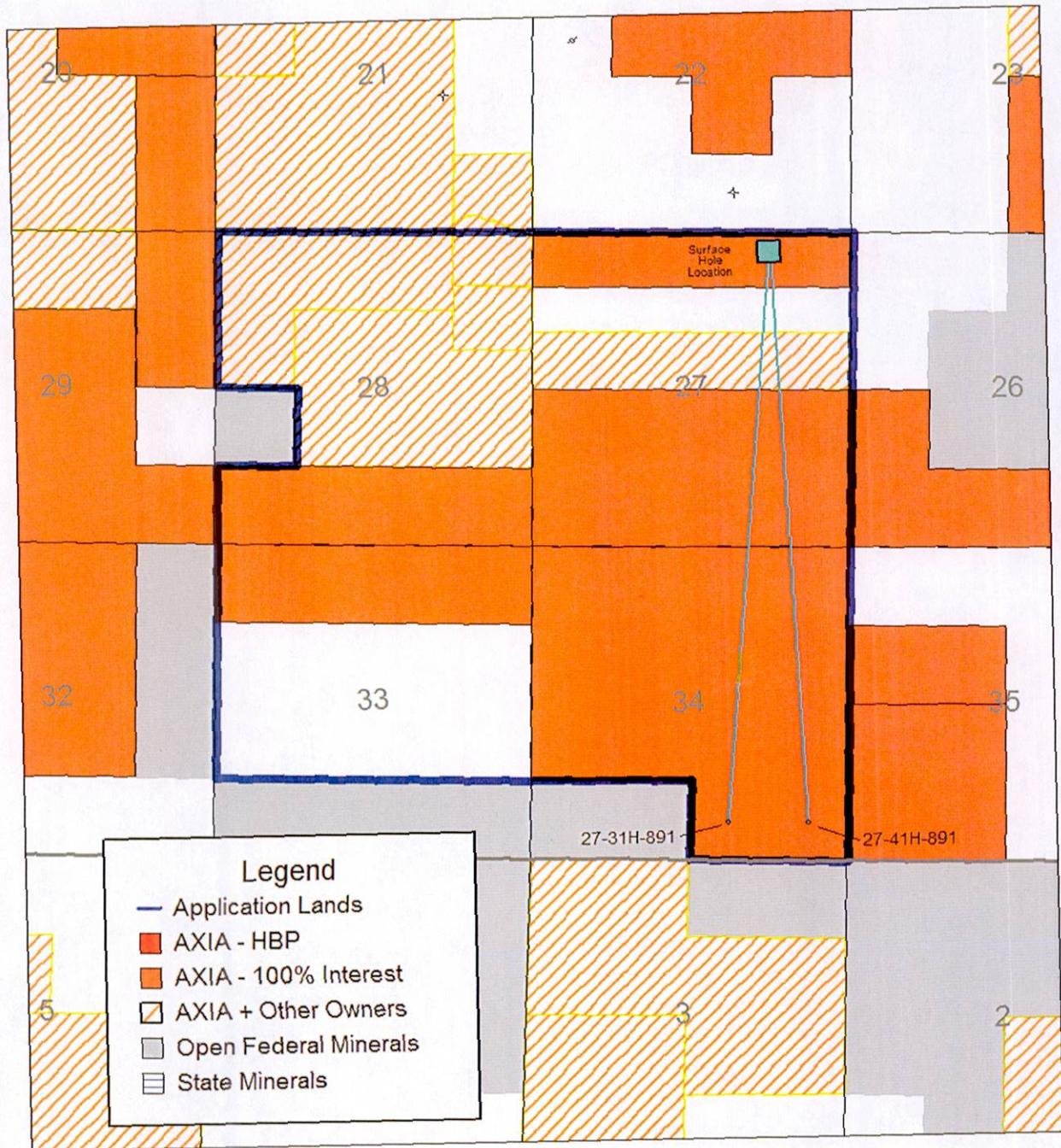
Professional Affiliations

- **2008 to 2010** Former Board Member of *Petroleum Association of Wyoming (PAW)*
- **2009 to 2010** Former Board Member of *Marcellus Shale Coalition*
- **2002 to 2005** Member of Uintah Basin Advisory Committee (UBAC) for IPAMS; former chairman of Energy Days, an annual IPAMs event held in Vernal Utah.
- **2000 to 2004** Former Board Member and Sponsorship Chairman, *Denver Prospect Fair & Technofest*, an annual event held at the Colorado Convention Center in Denver, CO
- **1986 to present** Member of *American Association of Professional Landmen*
- **1986 to present** Member, former Vice President & Treasurer, *Denver Association of Petroleum Landmen*

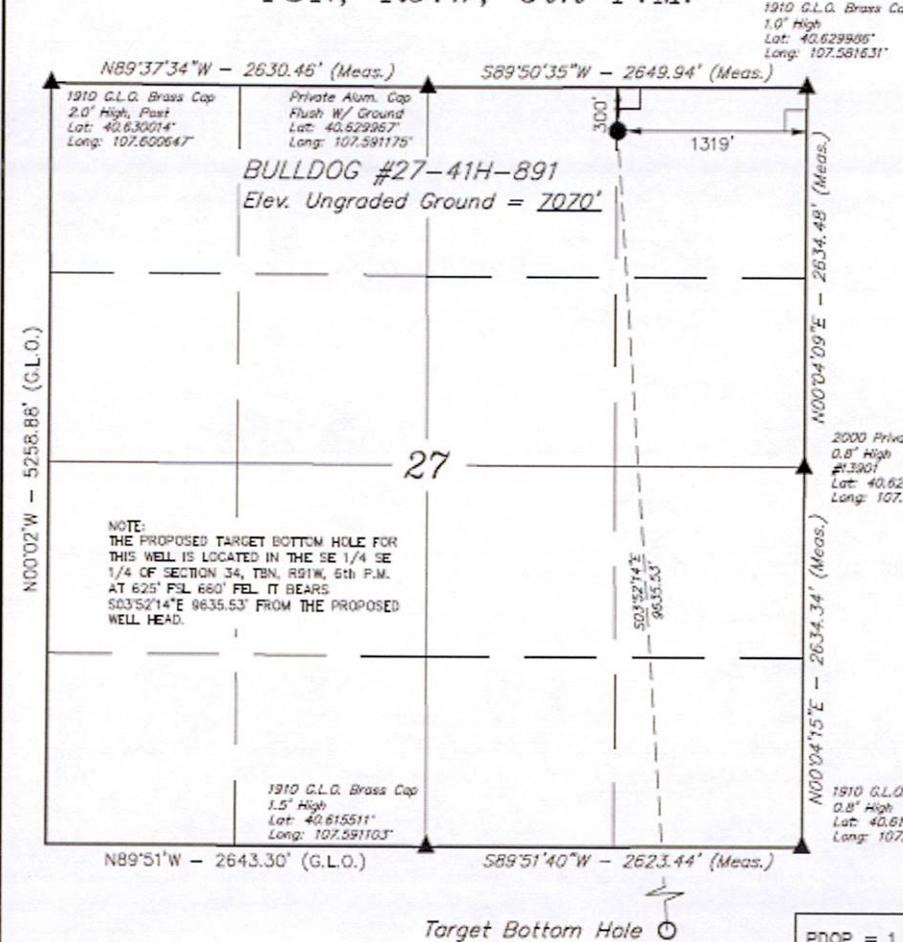
Education

- **1983 B.A** *Energy Land Management*, Rice University, Houston, Texas

Exhibit L-1: Cause 540, Docket No. 1303-SP-41
Location Map; Mineral and Leasehold Ownership Map
 Bulldog #27-41H-891
 Sections 27, 28, 33 and 34, Township 8 North, Range 91 West
 Moffat County, Colorado



T8N, R91W, 6th P.M.



NOTE:
THE PROPOSED TARGET BOTTOM HOLE FOR THIS WELL IS LOCATED IN THE SE 1/4 SE 1/4 OF SECTION 34, T8N, R91W, 6th P.M. AT 625' PSL 680' FEL IT BEARS S03°52'14"E 9635.53' FROM THE PROPOSED WELL HEAD.

- LEGEND:**
- └─┘ = 90° SYMBOL
 - = PROPOSED WELL HEAD.
 - ▲ = SECTION CORNERS LOCATED.

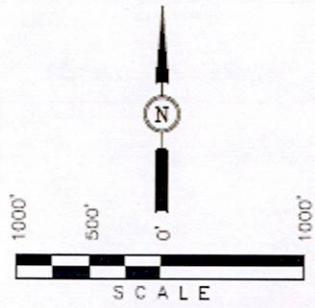
NAD 83 (SURFACE LOCATION)	
LATITUDE = 40°37'44.95" (40.629153)	
LONGITUDE = 107°35'10.98" (107.586383)	
NAD 27 (SURFACE LOCATION)	
LATITUDE = 40°37'45.08" (40.629183)	
LONGITUDE = 107°35'08.73" (107.585759)	
STATE PLANE NAD 83	
N: 747805.14 E: 74209.38 64	
STATE PLANE NAD 27	
N: 478853.81 E: 1421086.25	

PDOP = 1.2

AXIA ENERGY
Well location, BULLDOG #27-41H-891 (SURFACE LOCATION), located as shown in the NE 1/4 NE 1/4 of Section 27, T8N, R91W, 6th P.M., Moffat County, Colorado.

BASIS OF ELEVATION
SPOT ELEVATION LOCATED AT THE SOUTHWEST CORNER OF SECTION 15, T7N, R91W, 6th P.M. TAKEN FROM THE CRAIG QUADRANGLE, COLORADO, MOFFAT COUNTY, 7.5 MINUTE QUAD (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 6672 FEET.

BASIS OF BEARINGS
BASIS OF BEARINGS IS A G.P.S. OBSERVATION.



CERTIFICATE
THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Robert L. ...
REGISTERED LAND SURVEYOR
REGISTRATION NO. 10750
STATE OF COLORADO
09-22-13

UINTAH ENGINEERING & LAND SURVEYING			
85 SOUTH 200 EAST - VERNAL, UTAH 84078			
(435) 789-1017			
SCALE	DATE SURVEYED:	DATE DRAWN:	
1" = 1000'	01-11-13	01-16-13	
PARTY	REFERENCES		
G.M. M.A. T.B.	G.L.O. PLAT		
WEATHER	FILE		
COLD	AXIA ENERGY		

Exhibit L-2: Cause 540, Docket No. 1303-SP-41
 Property Location Plat: Surface Location
 Bulldog #27-41H-891
 Sections 27, 28, 33 and 34, Township 8 North, Range 91 West
 Moffat County, Colorado

T8N, R91W, 6th P.M.

AXIA ENERGY

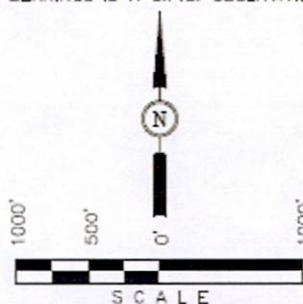
Well location, BULLDOG #27-41H-891 (TARGET BOTTOM HOLE), located as shown in the SE 1/4 SE 1/4 of Section 34, T8N, R91W, 6th P.M., Moffat County, Colorado.

BASIS OF ELEVATION

SPOT ELEVATION LOCATED AT THE SOUTHWEST CORNER OF SECTION 15, T7N, R91W, 6th P.M. TAKEN FROM THE CRAIG QUADRANGLE, COLORADO, MOFFAT COUNTY, 7.5 MINUTE QUAD (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 6672 FEET.

BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.

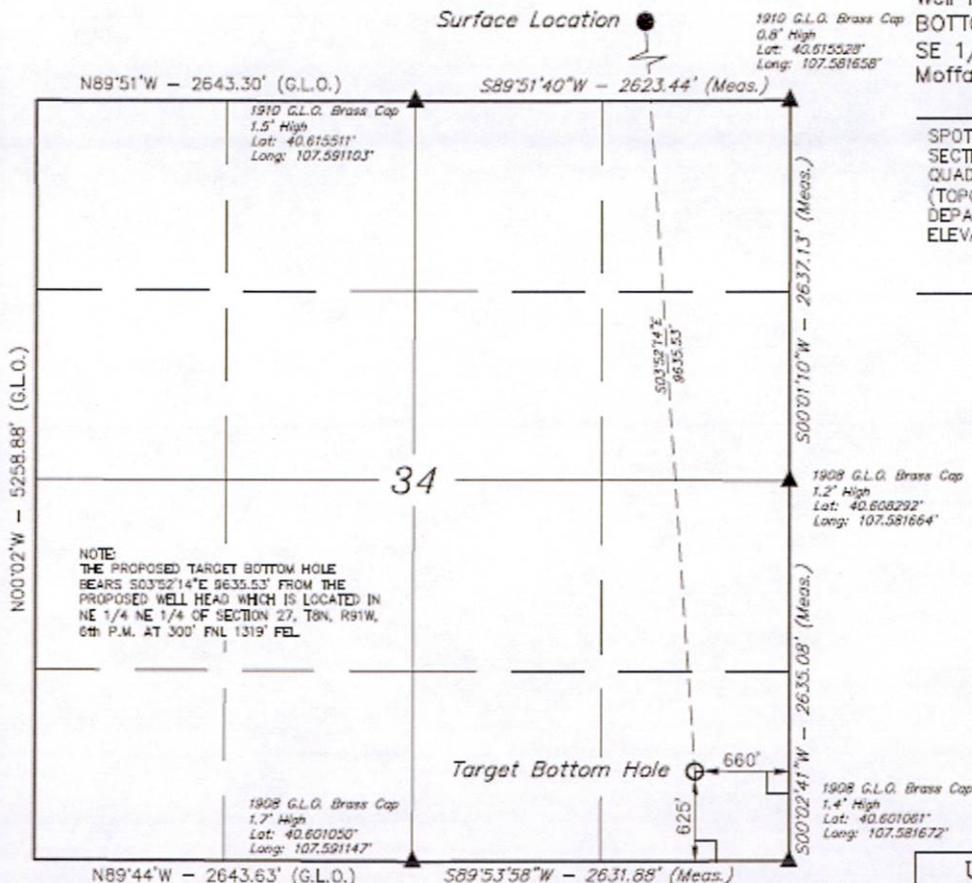


CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Robert L. ...
REGISTERED LAND SURVEYOR
REGISTRATION NO. 107520
STATE OF COLORADO 09-22-13

UNTAEH ENGINEERING & LAND SURVEYING
85 SOUTH 200 EAST - VERNAL, UTAH 84078
(435) 789-1017



LEGEND:

- └─┘ = 90° SYMBOL
- = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.

NAD 83 (TARGET BOTTOM HOLE)	
LATITUDE = 40°36'09.99" (40.602775)	
LONGITUDE = 107°35'02.57" (107.584047)	
NAD 27 (TARGET BOTTOM HOLE)	
LATITUDE = 40°36'10.09" (40.602803)	
LONGITUDE = 107°35'00.33" (107.583425)	
STATE PLANE NAD 83	
N: 7463732.13 E: 7421360.98	
STATE PLANE NAD 27	
N: 469230.89 E: 1421508.62	

SCALE	DATE SURVEYED:	DATE DRAWN:
1" = 1000'	01-11-13	01-16-13
PARTY	REFERENCES	
G.M. M.A. T.B.	G.L.O. PLAT	
WEATHER	FILE	
COLD	AXIA ENERGY	

Exhibit L-2: Cause 540, Docket No. 1303-SP-41
Property Location Plat: Bottom Hole Location
Bulldog #27-41H-891
Sections 27, 28, 33 and 34, Township 8 North, Range 91 West
Moffat County, Colorado

Exhibit L-3: Cause 540, Docket No. 1303-SP-41
Surface Ownership Map
 Bulldog #27-41H-891
 Sections 27, 28, 33 and 34, Township 8 North, Range 91 West
 Moffat County, Colorado

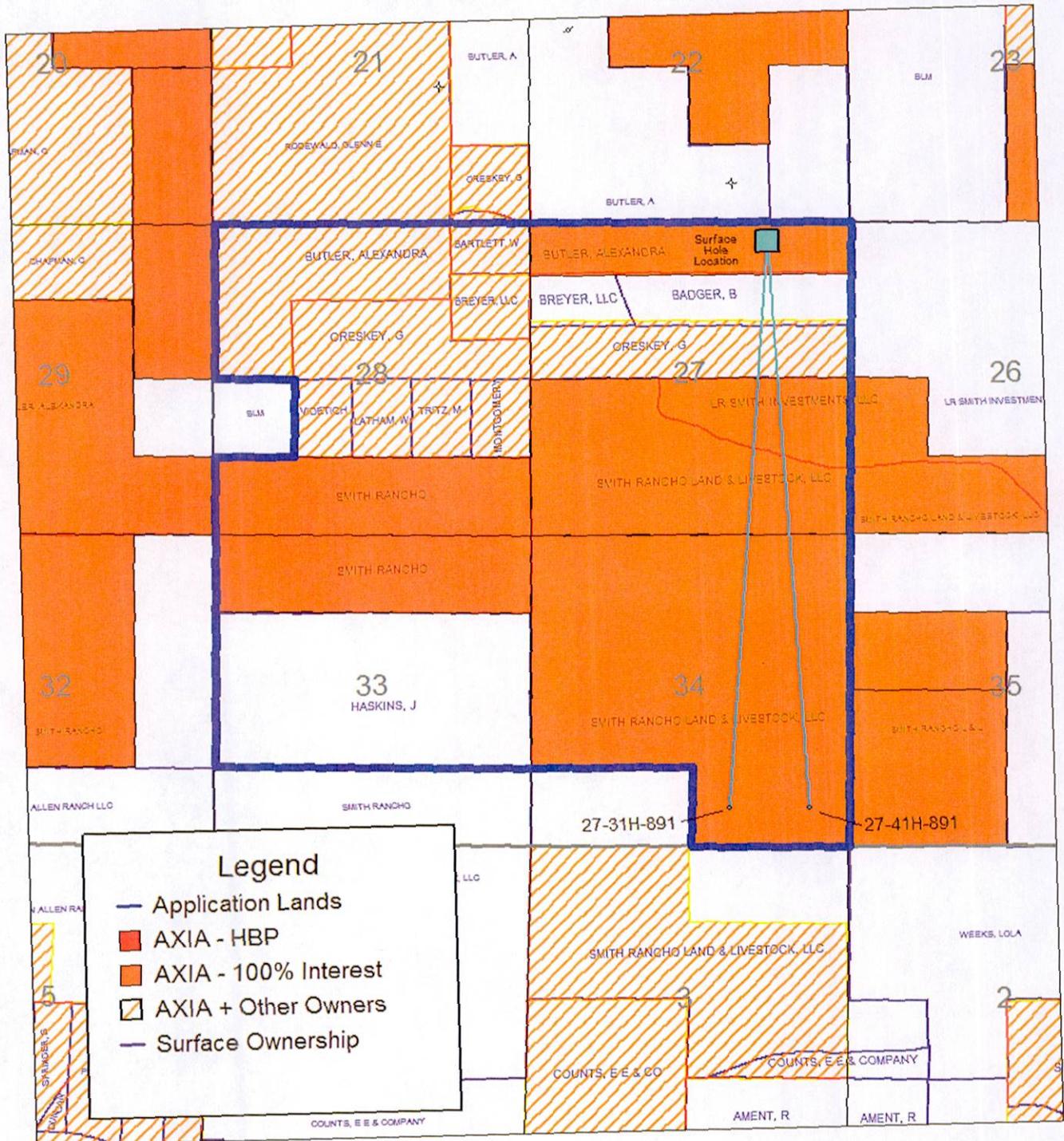
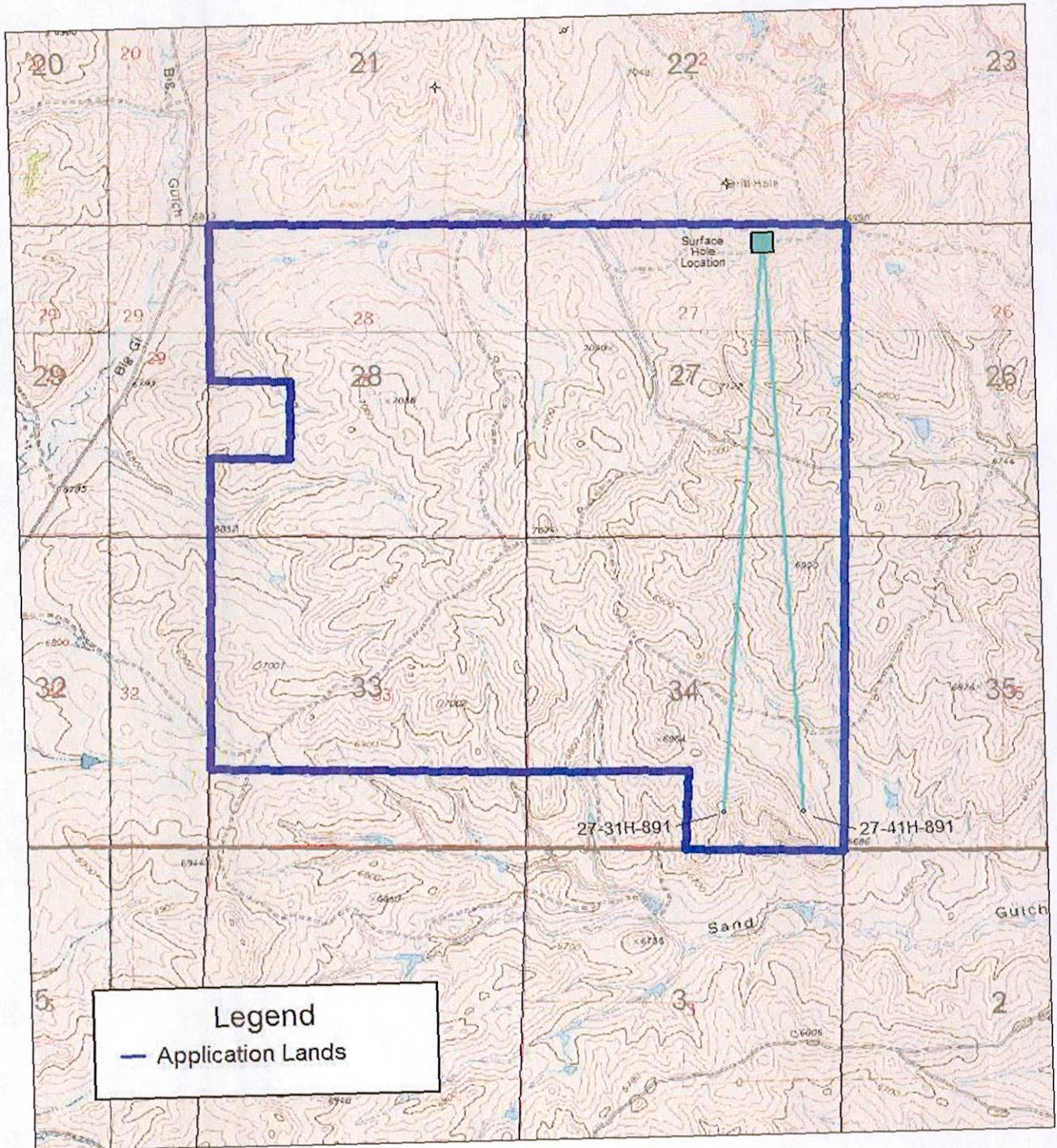


Exhibit L-4: Cause 540, Docket No. 1303-SP-41
Topographic Map
Bulldog #27-41H-891
Sections 27, 28, 33 and 34, Township 8 North, Range 91 West
Moffat County, Colorado



**Exhibit A:
Interested Parties**

AXIA ENERGY, LLC
1430 LARIMER STREET, SUITE 400
DENVER, CO 80202

JEFF COMSTOCK
MOFFAT COUNTY
221 W VICTOR WAY, SUITE 130
CRAIG, CO 81625

BREYER, LLC
PO BOX 628
HAYDEN, CO, 81639-0628

KENT KUSTER
COLORADO DEPARTMENT OF
PUBLIC HEALTH & ENVIRONMENT
4300 CHERRY CREEK DRIVE SOUTH
DENVER, CO 80246-1530

CATHLEEN M. LEACH
1365 CAMBRIDGE DR
VENICE, FL 34293-2810

MICHAEL WARREN
ENERGY LIAISON
COLORADO PARKS AND WILDLIFE
NORTHWEST REGIONAL OFFICE
711 INDEPENDENT AVE.
GRAND JUNCTION, CO 81505

WILLIAM B. BARTLETT JR. & ANNA O.
BARTLETT REVOCABLE TRUST
237 E 1300 N
RUPERT, ID, 83350

LITTLE SNAKE FIELD OFFICE
BUREAU OF LAND MANAGEMENT
ATTENTION: MARTY O'MARA
455 EMERSON STREET
CRAIG, COLORADO 81625

AXIA ENERGY, LLC

Brian Berwick – Geology Testimony

Cause 540; Docket No. 1303-SP-41

Mancos-Niobrara Formations

Unnamed Field, Moffat County, Colorado

March 2013 Colorado Oil and Gas Conservation Commission Hearing

My Name is Brian Berwick and I am currently employed as Senior Geologist by Axia Energy ("Axia"). I received a Bachelors of Science in Geology degree from the University of Colorado, Denver in 2003 and a Master's of Science degree in Petroleum Geology from the Colorado School of Mines in 2008. I have 10 years of experience in oil and gas geology. I am familiar with the lands described, and the matters set forth in the March 25th and 26th verified application ("Application").

In support of Axia's application in the above referenced docket, I am submitting the following nine exhibits. These exhibits are attached to my sworn testimony and form the bases of Axia's application for an order establishing one 2280 acre spacing unit for the drilling of one or more horizontal or vertical wells for production of oil, gas and associated hydrocarbons from the Mancos and Niobrara formations underlying sections 27, 28, 33 and 34 of Township 8 North, Range 91 West, Moffat County, Colorado.

Exhibit #G1 – Type Log

Exhibit #G1 is a type log that shows the Mancos and Niobrara formations. The inset map shows the location of the type log relative to the Application Land. The log has two tracks: gamma ray and resistivity. The top of the Niobrara is marked by a sharp increase in gamma ray intensity as well as a general increase in resistivity. In the Mancos several relatively sandy intervals are indicated by a decrease in gamma ray intensity. In the Sand Wash Basin production has been established from both the Niobrara and Mancos, predominantly from vertical well bores. On the south and east flank of the basin historic Niobrara producers average more than 150,000 barrels of oil per well.

Exhibit #G2 – Correlation Cross-Section and Mancos and Niobrara logs

Exhibit #G2 shows a two well cross-section in the general area of the Application Lands. The logs have up to three tracks: gamma ray, resistivity and density porosity. The cross section shows the regional relationships of the Mancos and Niobrara and the isopach interval that is included in exhibit #4. This cross section demonstrates that the Mancos and Niobrara formations are present throughout the Application Lands to be spaced.

Exhibit #G3 – Structure Contour Map

Exhibit #G3 is a subsea structure map constructed on the top of the Niobrara formation. The contour interval of the map is 200 feet. Structural dip in the Application lands is approximately 1.5 degrees to the south – southeast. Production from the Niobrara formation has been established in all three Bulldog wells independent of structural closure. Production of this nature demonstrates the characteristic of a shale resource play throughout the Application Lands to be spaced.

Exhibit #G4 – Isopach Map: Top Mancos to Base Niobrara

Exhibit #G4 is an isopach map of the interval from the top of the Mancos to the base of the Niobrara. Total thickness of this interval on the Application lands averages 3900'. This isopach map demonstrates that the Mancos and Niobrara formations are present throughout the Application Lands to be spaced.

Exhibit #G5

Exhibit #G5 is a Horizontal Wellbore Overview of the Bulldog 26-34H through the Niobrara formation. The log has three tracks: gamma ray, total gas and mud weight. The total gas curve in track #2 of the wellbore overview exhibits elevated levels of formation gas throughout the curve and lateral sections of the well. This demonstrates continuous hydrocarbon saturation characteristic of a shale resource play. Additionally, the elevated mud weight necessary to control formation gas– shown on track #3– demonstrates the Niobrara formation hydrocarbon reservoir is over-pressured. This over-pressured condition is a characteristic of shale resource plays. All three Bulldog wells encountered similar over-pressured conditions demonstrating that over-pressured Niobrara formation hydrocarbon reservoirs are present throughout the Application Lands to be spaced.

Exhibit #G6

Exhibit #G6 is a Horizontal Wellbore Overview accompanied by the Pilot-Hole Log of the Bulldog 20-12H through the Niobrara formation. The horizontal log has three tracks: gamma ray, total gas and mud weight. The pilot-hole log has three tracks: gamma ray, resistivity and total gas. The total gas curve in track #2 of the wellbore overview exhibits elevated levels of formation gas throughout the curve and lateral sections of the well. This demonstrates continuous hydrocarbon saturation characteristic of a shale resource play. Additionally, the elevated mud weight necessary to control formation gas– shown

on track #3— demonstrates the Niobrara formation hydrocarbon reservoir is over-pressured. This over-pressured condition is a characteristic of shale resource plays. All three Bulldog wells encountered similar over-pressured conditions demonstrating that over-pressured Niobrara formation hydrocarbon reservoirs are present throughout the Application Lands to be spaced.

Exhibit #G7

Exhibit #G7 is a Horizontal Wellbore Overview of the Bulldog 5-31H through the Niobrara formation. The log has three tracks: gamma ray, total gas and mud weight. This wellbore overview demonstrates continuous hydrocarbon saturation.

Exhibit #G8

Exhibit #G8 is a well log that shows typical mud gas characteristics of the Mancos and Niobrara formations throughout the area of the Application Lands. Track one contains a gamma ray curve while track two contains a total gas curve. The total gas curve exhibits elevated levels of formation gas throughout the Mancos and Niobrara formations. This suggests the presence of hydrocarbons throughout both formations and presents the potential to exploit the resource with multiple, stacked lateral wellbores.

Exhibit #G9— Offset Well Locations

Exhibit 9 shows all existing well locations on and in the vicinity of the Application lands. The surface and bottom-hole locations of the Bulldog 27-31H-891 and Bulldog 27-41H-891 are also shown. Note that very few wells currently exist within the Application lands. Those that are present are either dry holes, or produce from formations above the Mancos and Niobrara formations.

The Niobrara formation is a calcareous shale deposited throughout a broad area in the Cretaceous Western Interior Seaway. In addition to clay and carbonate, silt and clay sized quartz grains are common constituents of the Niobrara formation. Due to its fine grained nature, the reservoir permeability of Niobrara formation is very low - typically in the microdarcy range.

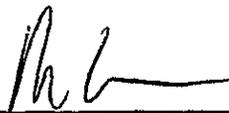
The Mancos formation is composed of predominantly of clay rich shale, and like the Niobrara formation, it was deposited throughout a broad area in the Cretaceous Western Interior Seaway. In addition to clay, siltstone and fine grained sandstone are common constituents of the Mancos formation. Due to its fine grained nature, the reservoir permeability of Niobrara formation is very low - typically in the microdarcy range.

Due to the widespread nature of deposition of the Mancos and Niobrara within the Cretaceous Seaway, it is my conclusion that both formations underlie the Application Lands to be spaced.

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.



Brian Berwick
Senior Geologist
Axia Energy, LLC

STATE OF COLORADO

)

CITY AND COUNTY OF DENVER

) ss.

)

The foregoing instrument was subscribed and sworn to before me this 11th day of March, 2012, by Brian Berwick, as Senior Geologist for Axia Energy, LLC.

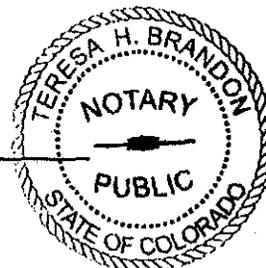
Witness my hand and official seal.

[SEAL]

My commission expires: 8/7/16



Notary Public



Brian R. Berwick

7634 Bison Court
Littleton, Colorado 80125
303.204.2356
bercycle@gmail.com

Petroleum Exploration Geologist

PROFESSIONAL WORK HISTORY

Axia Energy

February 2012 - Current

Senior Geologist - Denver, CO

Exploration Geologist with primary responsibility for prospect generation in several Rocky Mountain Basins to include the Sand Wash Basin, Powder River Basin Uintah Basin, Greater Green River Basin, Wind River Basin, Rock Springs Uplift as well as the Illinois and Michigan Basins.

Samson Resources Company

June 2004-February 2012

*District Geologist - Denver, CO
Williston Basin, ND & MT*

Developed and marketed normally pressured and over-pressured Bakken/Three Forks prospects. Defined the petroleum systems, stratigraphy, depositional environment, petrophysics, rock mechanics and geochemistry for both the Three Forks and Bakken Formations throughout the Williston Basin.

Generated multiple non-Bakken oil prospects in carbonate rocks within the Williston basin to include:

- Fractured resource play within the Lodgepole Formation encompassing 250,000 acres and recoverable reserves of 80 - 100 MBO
- Two prospects and 6 leads within the Dawson Bay Formation. Potential recovery of 20 MBO within the prospects and lead areas
- Generated multiple Red River prospects throughout the Williston Basin utilizing DST interpretation, log analysis and 2-D mapping
- Generated multiple prospects in the Mission Canyon and Ratcliffe Formations in both Montana and North Dakota

Successfully drilled and steered 37 horizontal wells (640 & 1280s) within the Sanish member of the Three Forks Formation, 8 horizontal wells with the Middle Bakken member of the Bakken Formation and 1 horizontal well in the Lodgepole Formation.

- Integrate all subsurface data in mapping including formation tops, fault cuts, sequence stratigraphic framework and reservoir rock properties

- Used industry standard software (Powerlog) to identify and map by-passed pay within the Williston Basin. Currently using my petrophysical and rock mechanics/physics models to identify areas of new potential for ductile vs. brittle zones.

Green River Basin, WY

- Re-defined the Lower Almond member of the Almond Formation within the Greater Wamsutter area. Added nearly 200 additional drilling locations within the acreage position. Drilled and completed 9 successful wells within the Lower Almond returning a average Proved Value Index of 1.28
- Provided operational support including overseeing well-site work, mud logging, open-hole logging and open-hole testing (cores, perms and DST's) on many vertical, directional and horizontal wells in several basins
- Successfully drilled 20 vertical wells within the Greater Wamsutter area

Savant Resources LLC

June 2002-May 2004

Geological Technician - Denver, CO

EDUCATION and PROFESSIONAL AFFILIATIONS

Colorado School of Mines, Golden, Colorado (2008)

Masters of Science: **Petroleum Geology**

*DEPOSITIONAL ENVIRONMENT, MINERALOGY, AND SEQUENCE
STRATIGRAPHY OF THE LATE DEVONIAN SANISH MEMBER (UPPER
THREE FORKS FORMATION), WILLISTON BASIN, NORTH DAKOTA*

University of Colorado, Denver, Colorado (2003)

Bachelor of Liberal Arts and Sciences

Major: **Geology**

American Association of Petroleum Geologists (AAPG) / Rocky Mountain Association of Geologists (RMAG) / Society of Sedimentary Geology - Rocky Mountain Section (RMS - SEPM) / Society of Petrophysicists and Well Log Analysts (SPWLA) / Denver Well Logging Society (DWLS) / American Rock Mechanics Association (ARMA) / Society of Petroleum Engineers (SPE)

Expert witness with the State of North Dakota

PUBLICATIONS AND PRESENTATIONS

Berwick, B.R. and M. L. Hendricks, 2011, Depositional lithofacies of the Upper Devonian Three Forks Formation and the Grassy Butte member of the Lower Bakken Shale, Chapter 7, Rocky Mountain Association of Geologist, Bakken - Three Forks Petroleum Systems in the Williston Basin. (*Released Sept. 2011*)

Berwick, B.R., March 2009, RMS - SEPM Luncheon Speaker. Depositional environment, mineralogy, and sequence stratigraphy of the Late Devonian Sanish member (Upper Three Forks), Williston Basin, North Dakota.

Berwick, B.R., 2008, Depositional environment, mineralogy, and sequence stratigraphy of the Late Devonian Sanish member (Upper Three Forks), Williston Basin, North Dakota: Master's Thesis, Colorado School of Mines, 263 p.

Type Log Mancos and Niobrara

TEXAS PACIFIC OIL CO
BEAR 1
T7N R89W S26
9/7/1978
05107060540000

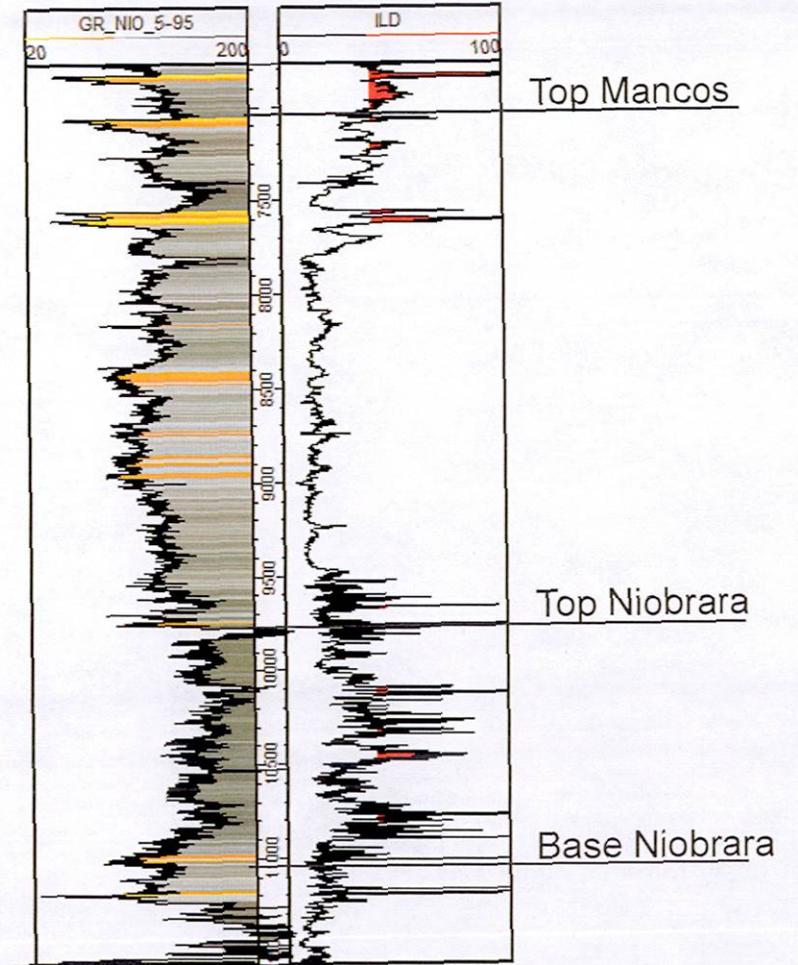
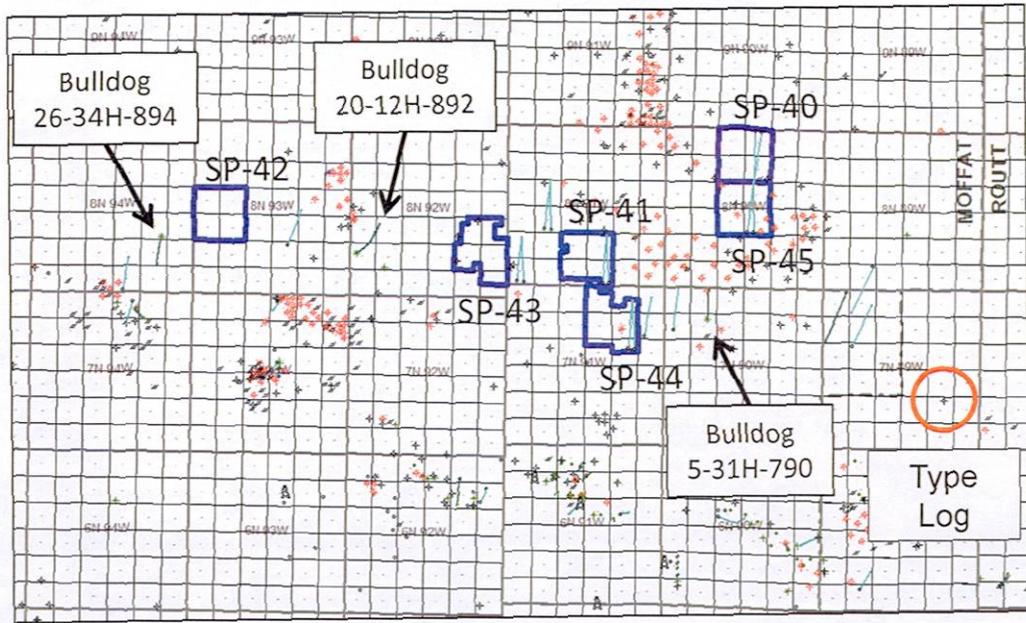
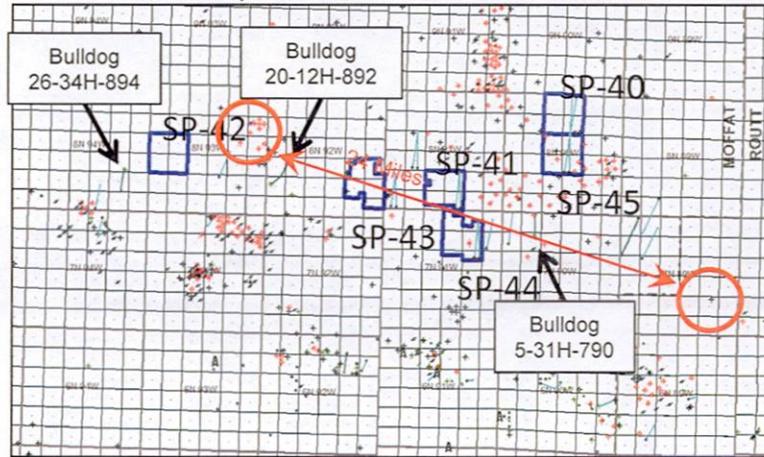


Exhibit G-2
Cause 540
Docket No. 1303 SP-41

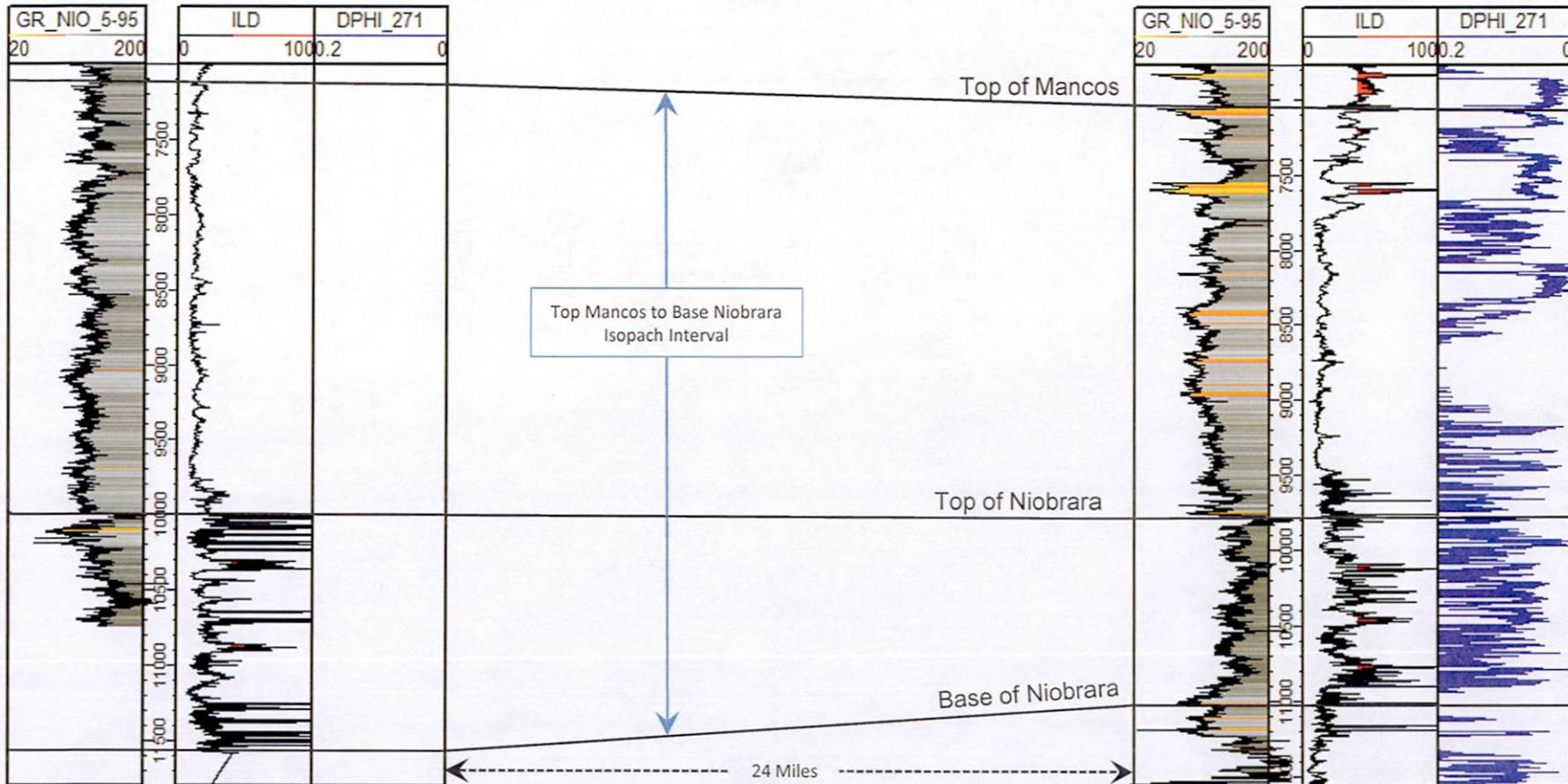
Index Map for Two Well Cross Section



Northwest – Southeast
Correlation Cross-Section
Showing
Mancos and Niobrara Thickness
and Porosity

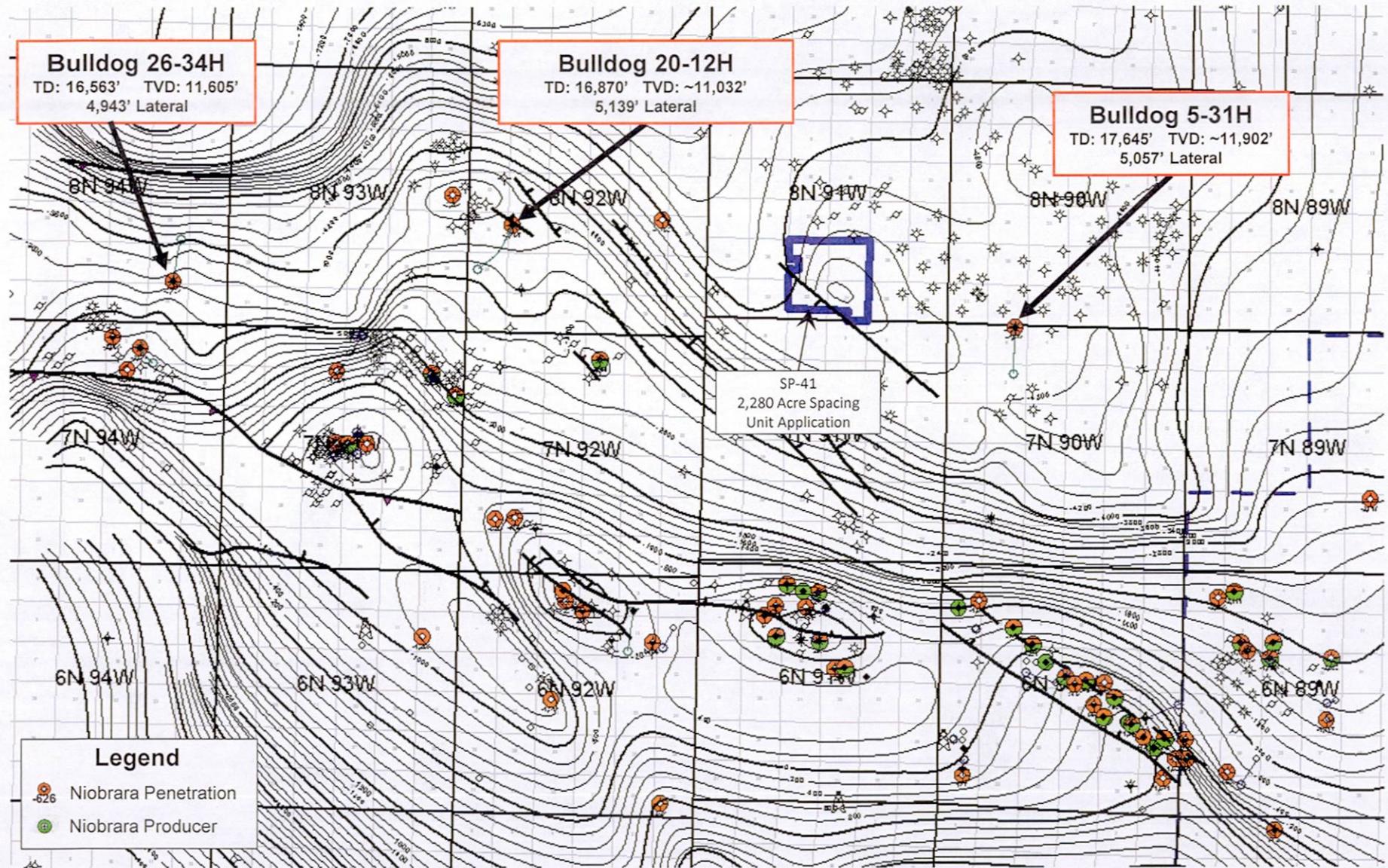

HUMBLE OIL & REFG CO
LAY CREEK 1
T8N R93W S13
3/22/1969
05081060510000


TEXAS PACIFIC OIL CO
BEAR 1
T7N R89W S26
9/7/1978
05107060540000

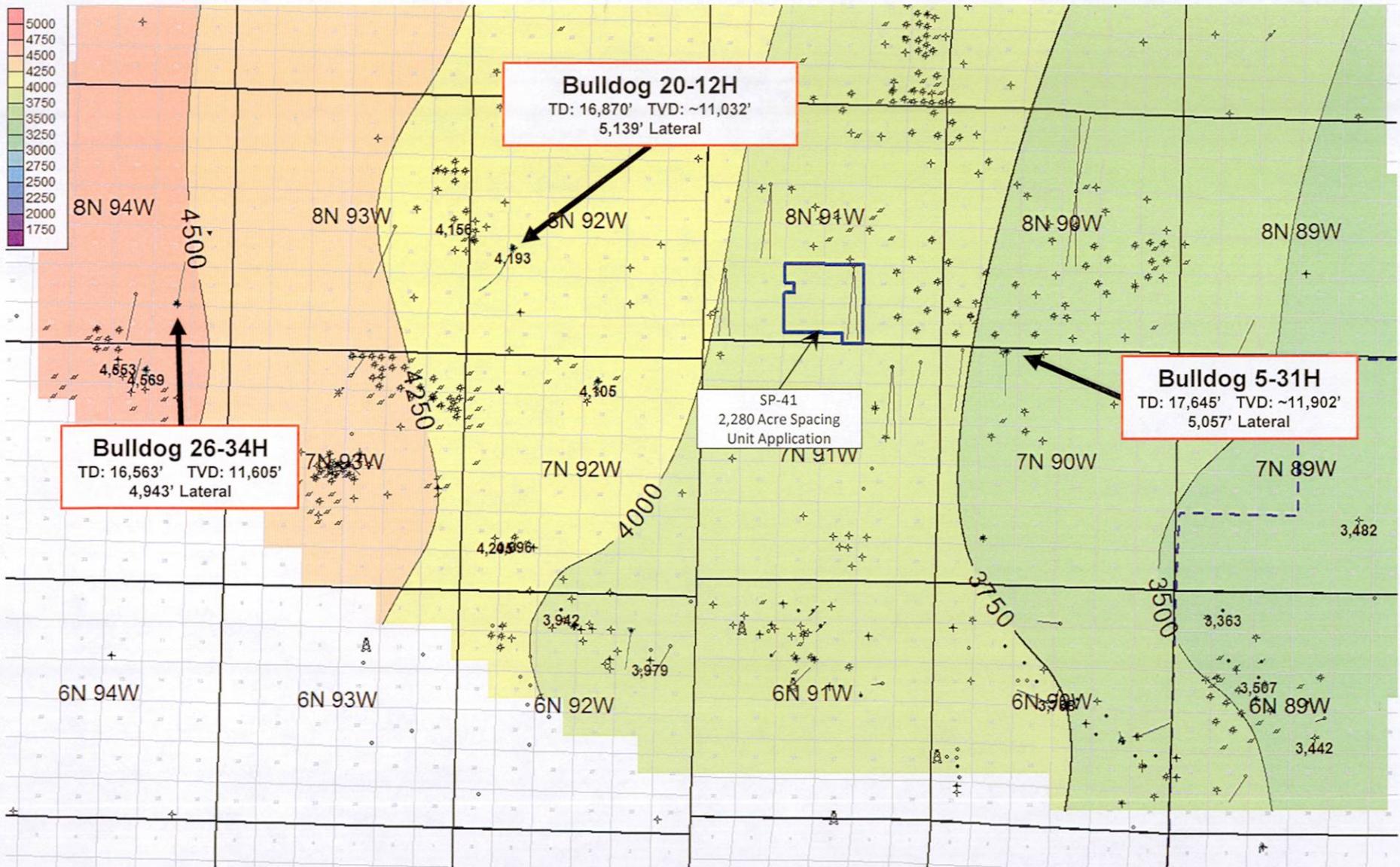


Structure Top Niobrara

CI = 200'



Top Mancos to Base Niobrara Isopach Map CI = 250'

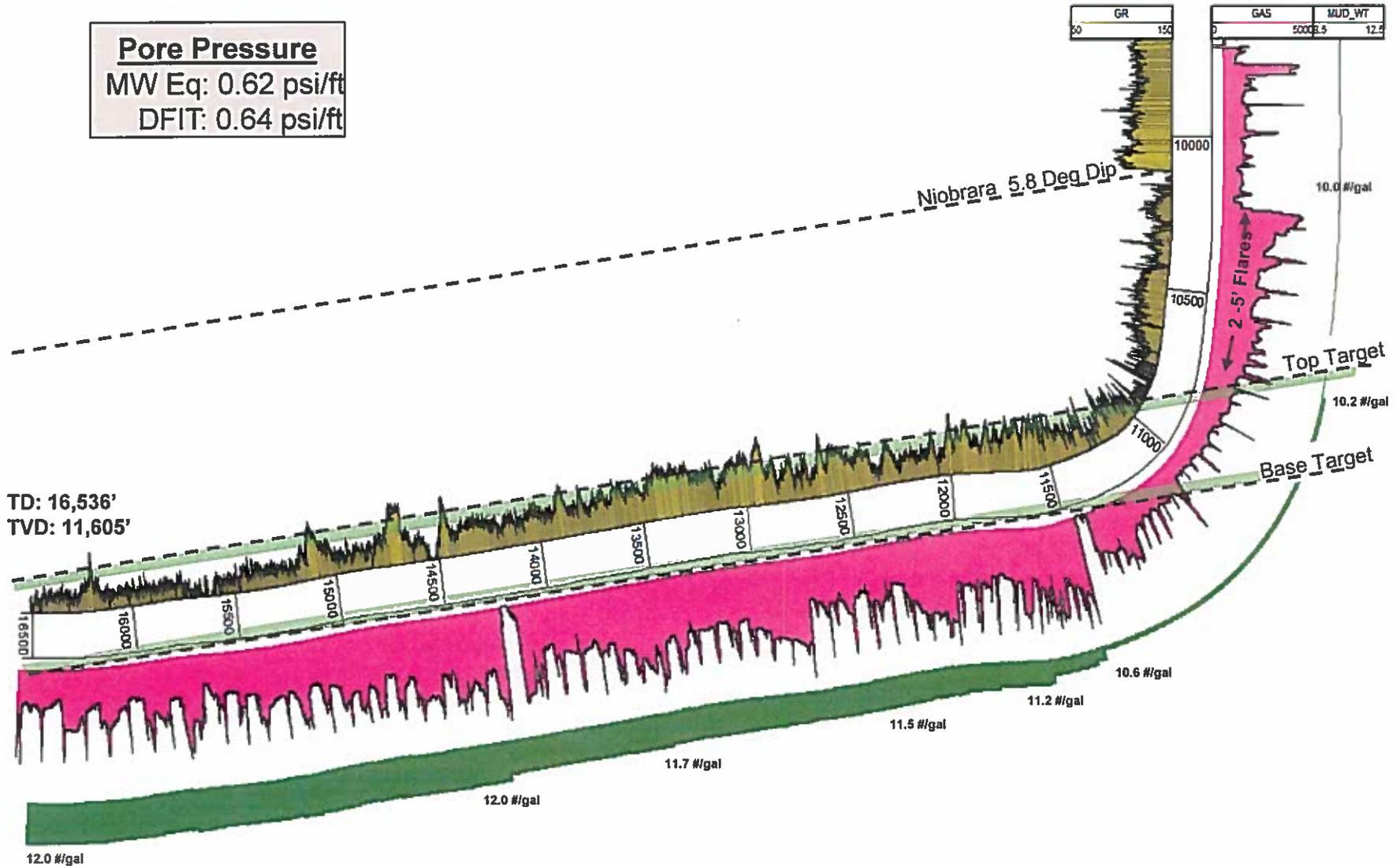


Cause 540, Docket 1303-SP-41: Exhibit G-4

Bulldog 26-34H – HZ Wellbore Overview

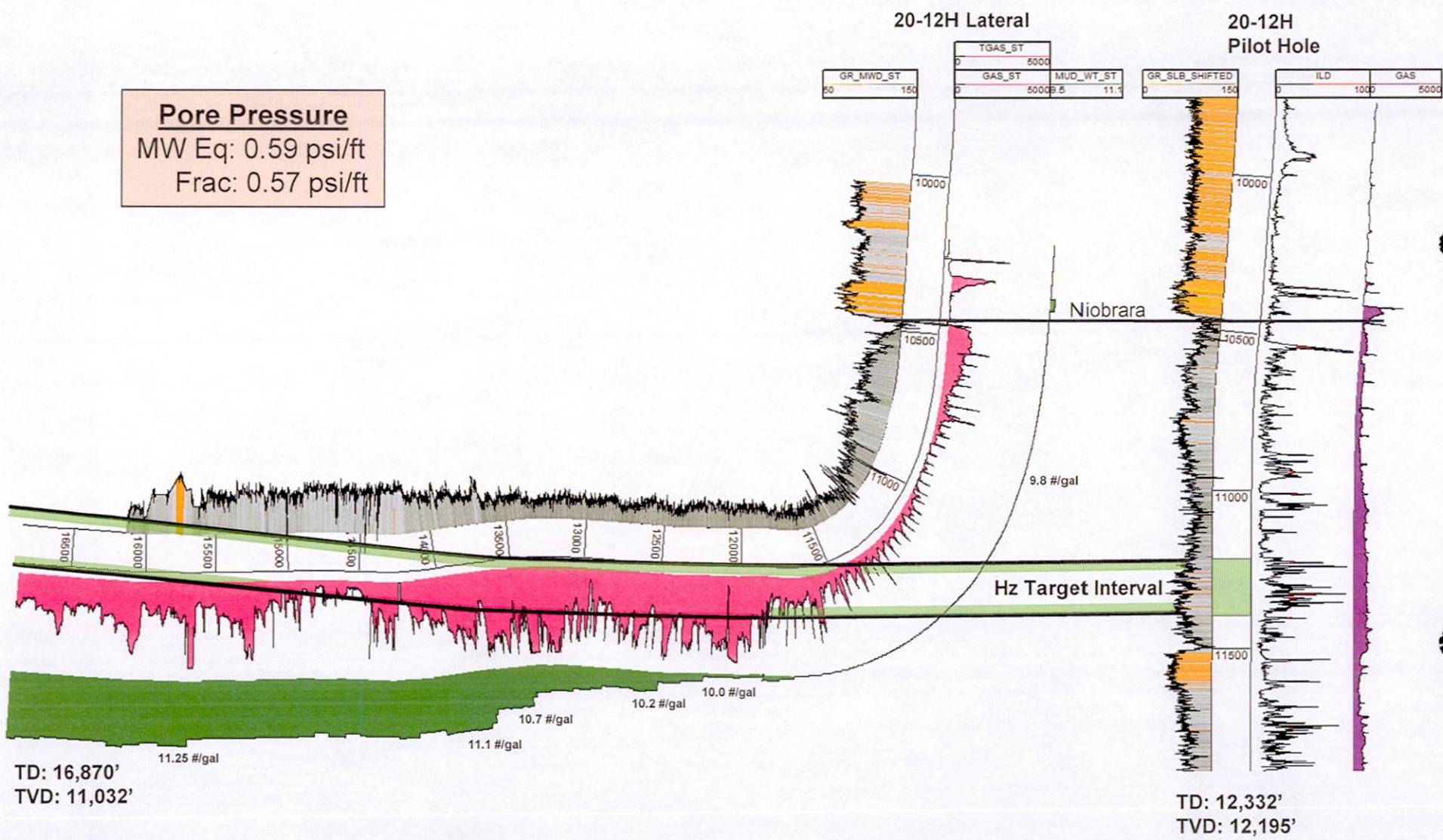
AXIA ENERGY
 BULLDOG 26-34H-894
 T8N R94W S26

Pore Pressure
 MW Eq: 0.62 psi/ft
 DFIT: 0.64 psi/ft



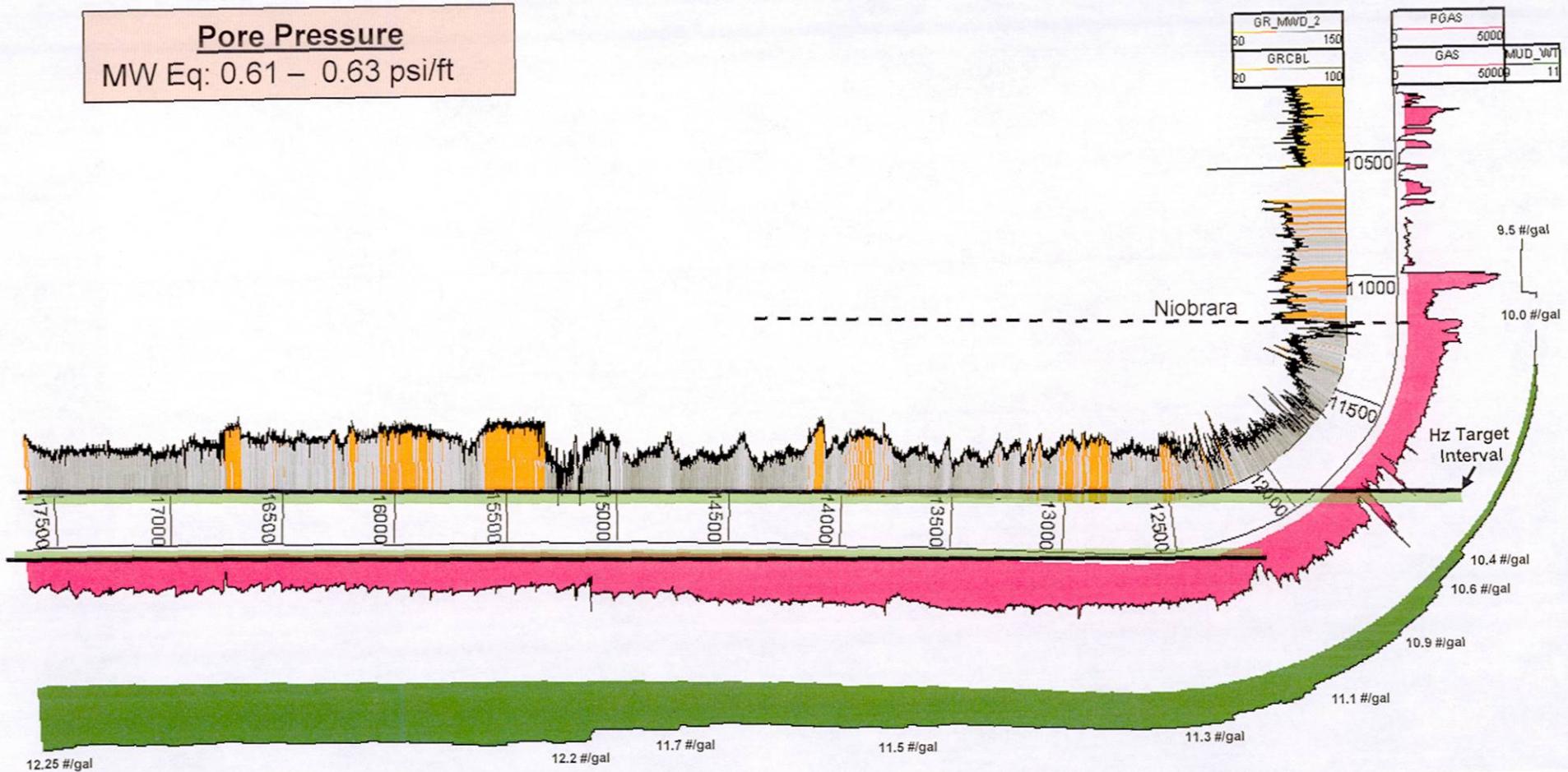
Bulldog 20-12H – HZ Wellbore Overview

Pore Pressure
 MW Eq: 0.59 psi/ft
 Frac: 0.57 psi/ft



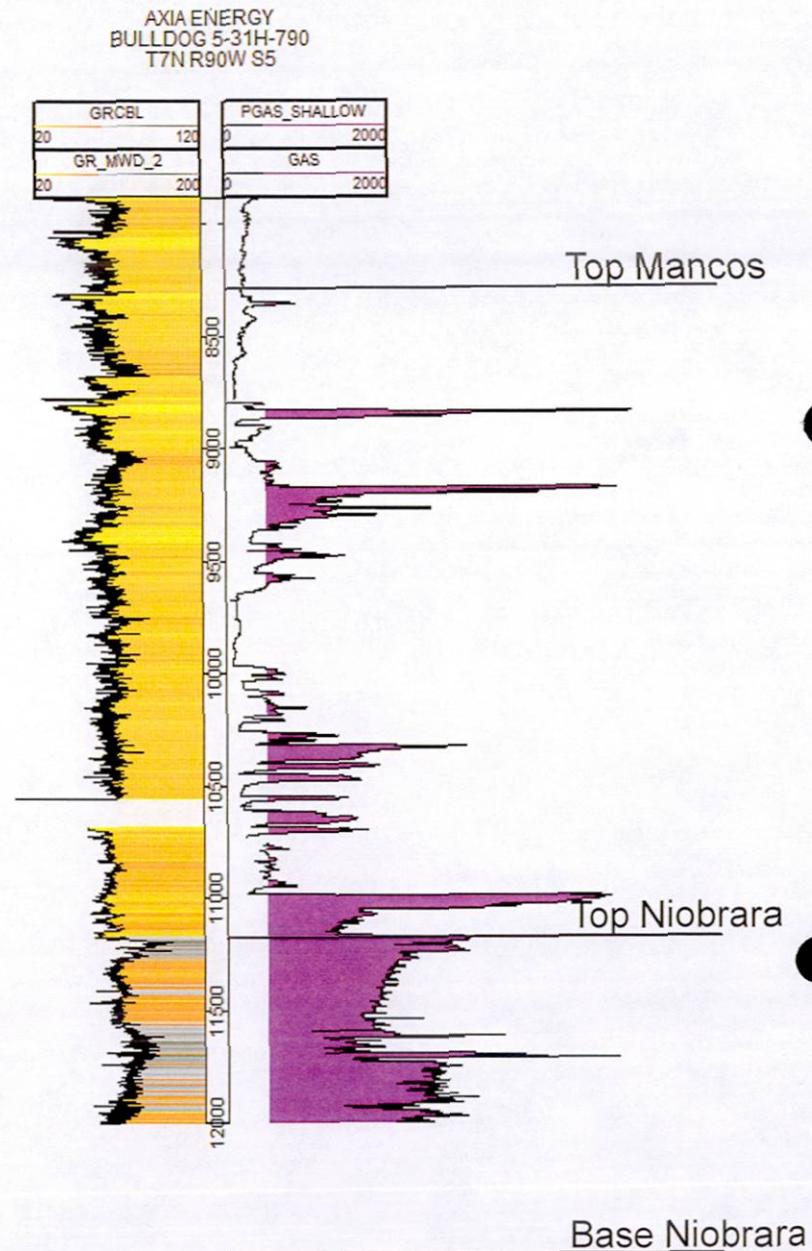
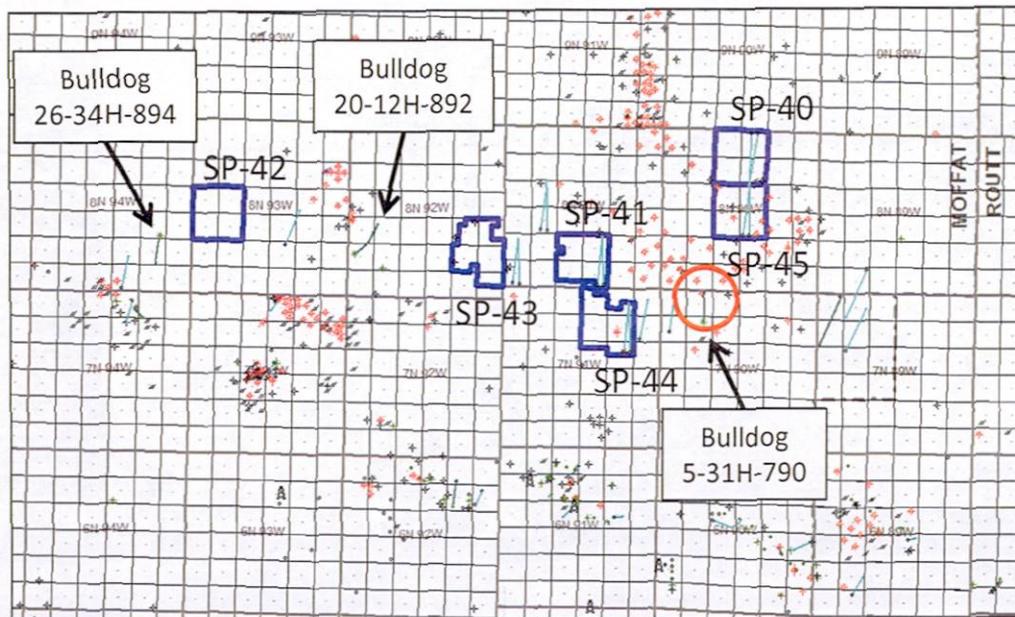
Bulldog 5-31H – HZ Wellbore Overview

Pore Pressure
 MW Eq: 0.61 – 0.63 psi/ft

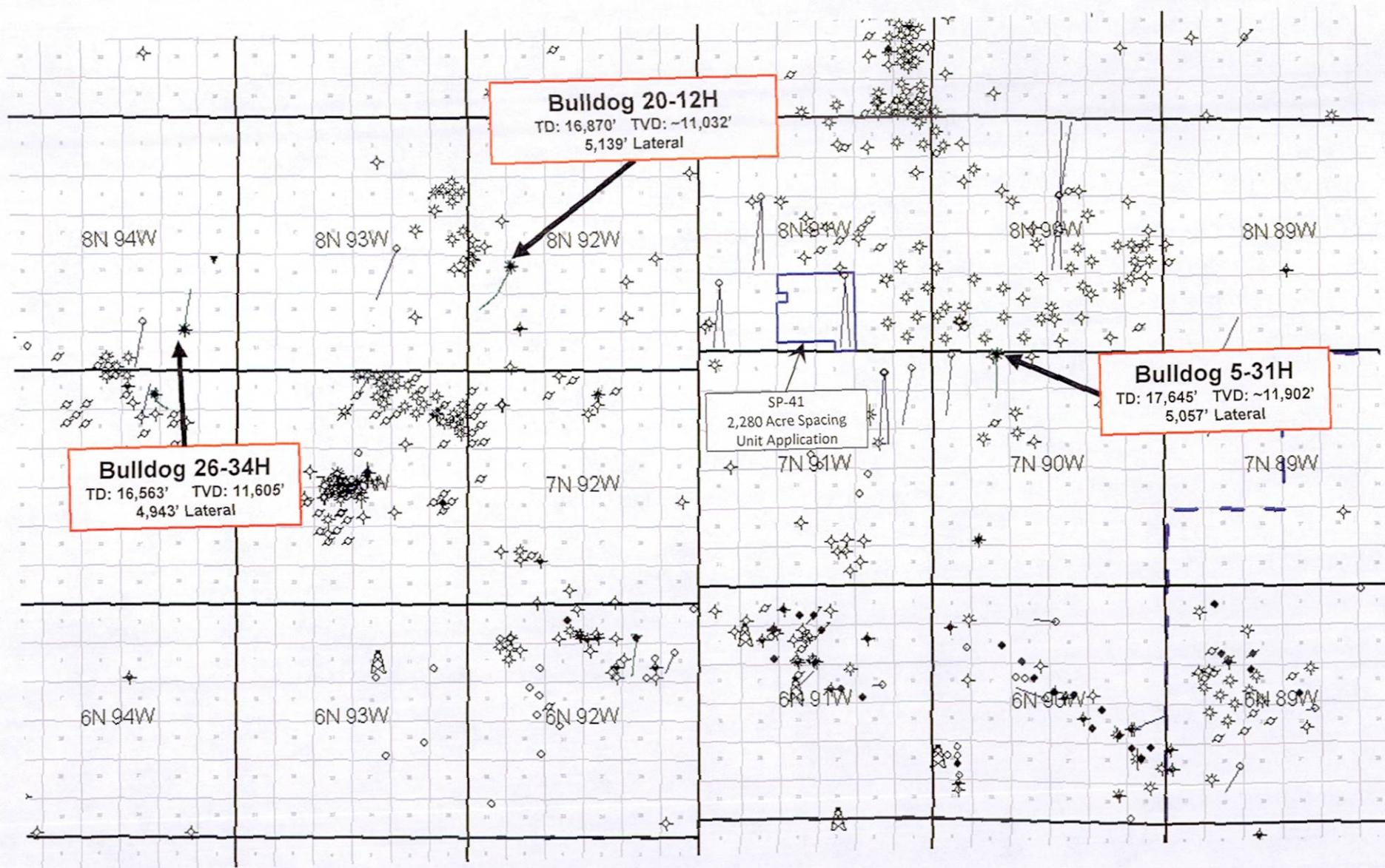


TD: 17,645'
 TVD: 11,902'

Gas Shows Bulldog 5-31H



Offset Well Locations



AXIA ENERGY, LLC

Taryn Frenzel - Engineering Testimony

Moffat County, Colorado
Cause No. 540, Docket No. 1303-UP-54
Mancos/Niobrara Formation

My name is Taryn Frenzel. I am currently employed as a Senior Completions Engineer for the Sand Wash Team of Axia Energy, LLC ("Axia"). I have over 12 years of experience as a Completions Engineer. I have been and am presently responsible for and have knowledge of the reservoir characteristics of the Mancos and Niobrara formations underlying the Application Lands, as defined in Tab McGinley's Land Testimony submitted herewith. A copy of my curriculum vitae is attached hereto.

In support of Axia's application in the above-referenced docket, I am submitting four (4) exhibits. The exhibits are attached to my sworn testimony and form the basis for Axia's application to gain approval to establish the unit set forth in the aforementioned Docket No. and well location rules for the drilling and producing of wells from the Mancos and Niobrara Formations covering the Application Lands.

Exhibits E-1 through E-4

Exhibit E-1 shows the average gross thickness of the Mancos and Niobrara formation across Axia Energy's acreage position. The average net pay was calculated from open hole logs from wells that were drilled prior to Axia Energy as well as using 3 wells that were drilled and completed by Axia Energy during 2012. The location of the three (3) wells that were drilled by Axia Energy can be seen on Exhibit E-2. Exhibit E-2 also illustrates the resource play aspect of the Niobrara and Mancos. Axia Energy's wells were placed across the acreage position and were not drilled on structure thereby proving the resource play potential across the entire acreage position.

Due to the fact that the Niobrara and Mancos covers a large gross interval as shown in Exhibit E-1, stacked laterals will become a necessity to develop the resource. Exhibit E-3 shows a stacked lateral development. Multiple stacked lateral wells need to be drilled and stimulated in order to effectively drain the Mancos and Niobrara. Based upon frac simulator work conducted by Axia on the three (3) wells drilled in 2012, our estimated effective frac height is estimated to be 300'. The average reservoir pressure is .62 psi/ft based upon drilling and completion results and the total system porosity is 6.5% as shown in Exhibit E-4. The ability to drill 9,000' laterals allow for the more efficient development of the Mancos and Niobrara by eliminating unnecessary surface locations. By approving these spacing and pooling units, Axia Energy will be able to save over 40 acres of surface development per unit. By utilizing reservoir pressure, porosity, 9,000' laterals, Axia's estimated frac geometry and a recovery factor of 20%, Axia may realize 10 Bcfe of potential. Axia Energy's current well results support this type of potential for a 9,000' lateral when based on the current 5,000' configuration. These results more than exceed Axia Energy's economic hurdles.

Summary and Benefits

Approval of Axia's application for pooling and spacing will allow for the ability to optimally configure well locations and in turn maximize ultimate recovery of gas-in-place. Allowing for 9,000 foot laterals will greatly reduce surface pads needed to develop the spacing unit. In addition, pooling the interests in this resource play will allow for combined surface facilities thereby reducing the size and visual impacts of the locations required. Reducing the number of surface locations also results in having less completion pits, truck traffic and drilling rig moves. Self-skidding rigs would be able to develop spacing units much more efficiently by having less impactful rig mobilizations. It is my opinion that to maximize the ultimate recovery of gas in place in the Mancos and Niobrara Formation underlying the Application Lands, this spacing unit should be permitted and that by granting the Application in the above-referenced docket the waste of leaving recoverable Mancos and Niobrara gas in place will be

avoided and that correlative rights will be protected and the gas will be recovered more economically, efficiently and allow for as few of pads as possible.

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.



Taryn Frenzel
Senior Completions Engineer, Axia Energy LLC.

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.



Taryn Frenzel, Senior Completions Engineer
Axia Energy, LLC

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

The foregoing instrument was subscribed and sworn to before me this 11th day of March, 2013, by Taryn Frenzel, as Senior Completions Engineer, for Axia Energy, LLC.

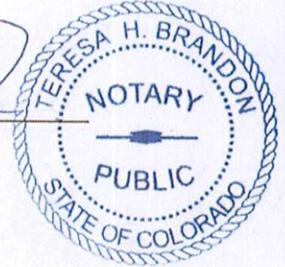
Witness my hand and official seal.

[SEAL]

My commission expires: 8/7/16



Notary Public



Taryn Frenzel

Experience

Axia Energy December 2009 – Present

Sr. Completions Engineer

- Project evaluation including economic analysis, reserves, completions and production specializing in the Piceance Basin

Orion Energy Partners March 2008 – October 2009

Sr. Completions Engineer

- Completions and production engineering. Provided Engineering support on reserves, and project evaluation.

Bill Barrett Corp. July 2005 – March 2008

Sr. Completions Engineer

- *Implemented new completion technique that improved production by over 4x taking the project from uneconomic levels to highly economic providing a 10 year project.*
- Coordinated all operations for completions with over 100 wells per year
- Took production from 12 MMscf/day to over 100 MMscf/day
- Implemented and ran water pipeline infrastructure to compliment the new completion style which considerably reduced truck traffic, and saved over \$10,000,000 per year.
- Provided Engineering support to all completion engineers and responsible for all Exploratory completion projects

Schlumberger June 1997-July 2005

- Ran Field Operations in cementing and stimulation services
- Supervisor for field operations, provided technical support to field ops teams
- *Wrote software to assist in accurately calculating cementing volumes to ultimately improve QC*
- Ran the Lab for All services
- In House Engineer for Tom Brown Inc. responsible for all aspects of the account. Improved market share from 50% to almost 90% in 3 years time.

Education

Montana Tech of the University of Montana 1994 – 1997

Butte, MT

- B.S., Engineering Science
- GPA: 3.79

Dawson County College Fall 1992 – 1994

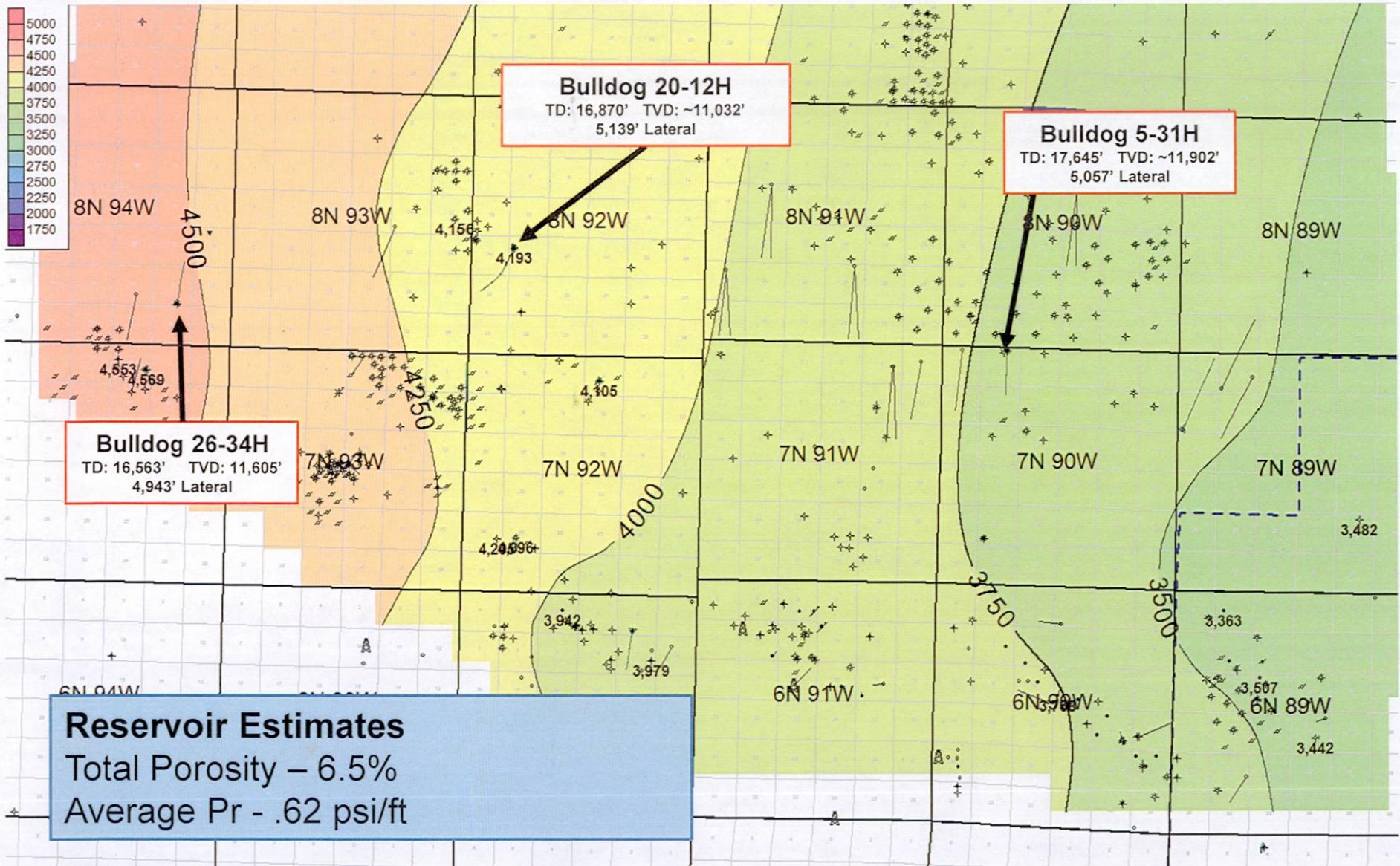
Glendive, MT

- Associates of Applied Science



Exhibits E-1 Gross Niobrara/Mancos Thickness

Cause No. 540
Docket No. 1303-SP-41





Exhibits E-2 Structure Top Niobrara (CI = 200')

Cause No. 540
Docket No. 1303-SP-41

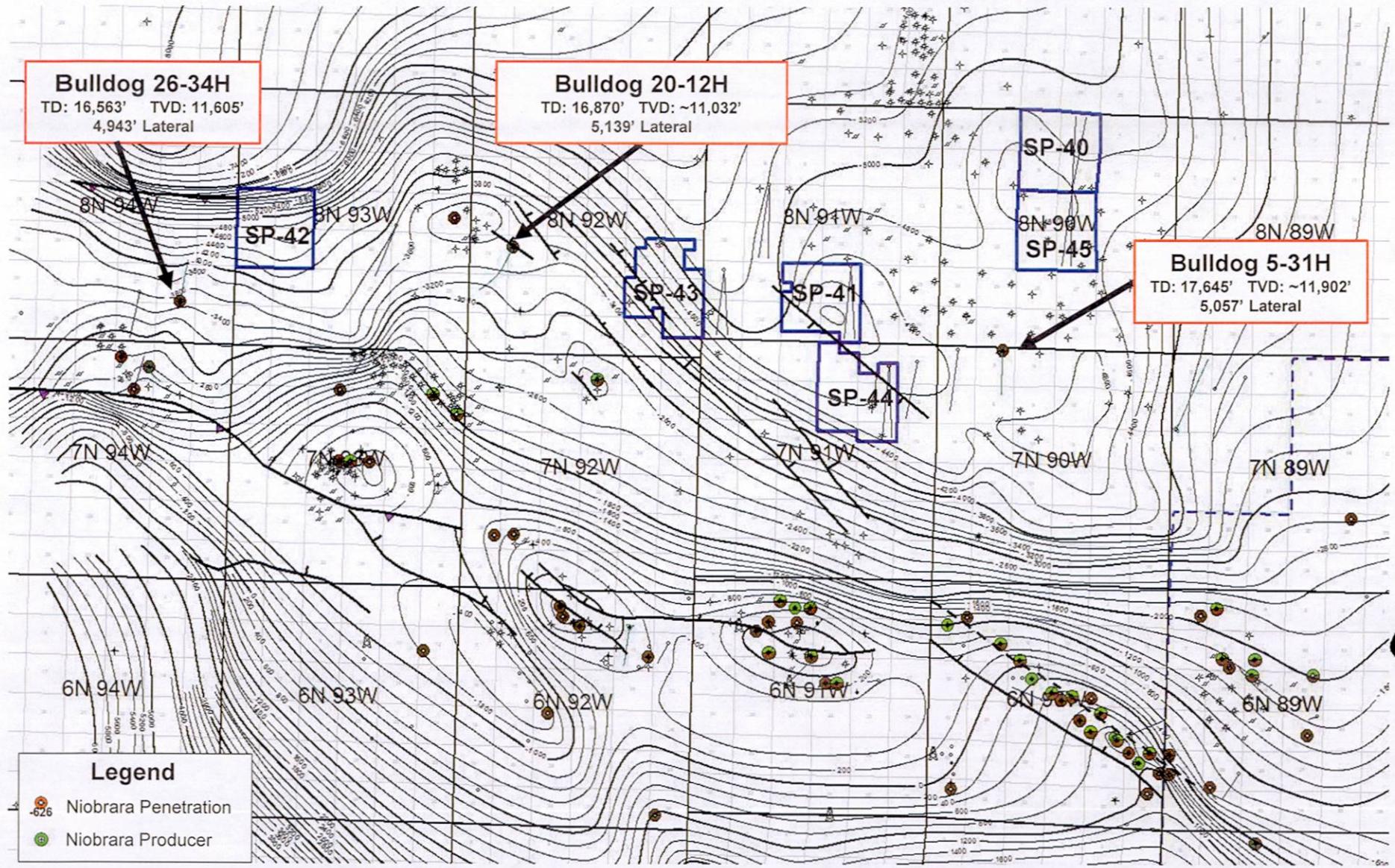




Exhibit E-3 Stacked Lateral Potential

Cause No. 540
Docket No. 1303-SP-41

Vertical Section

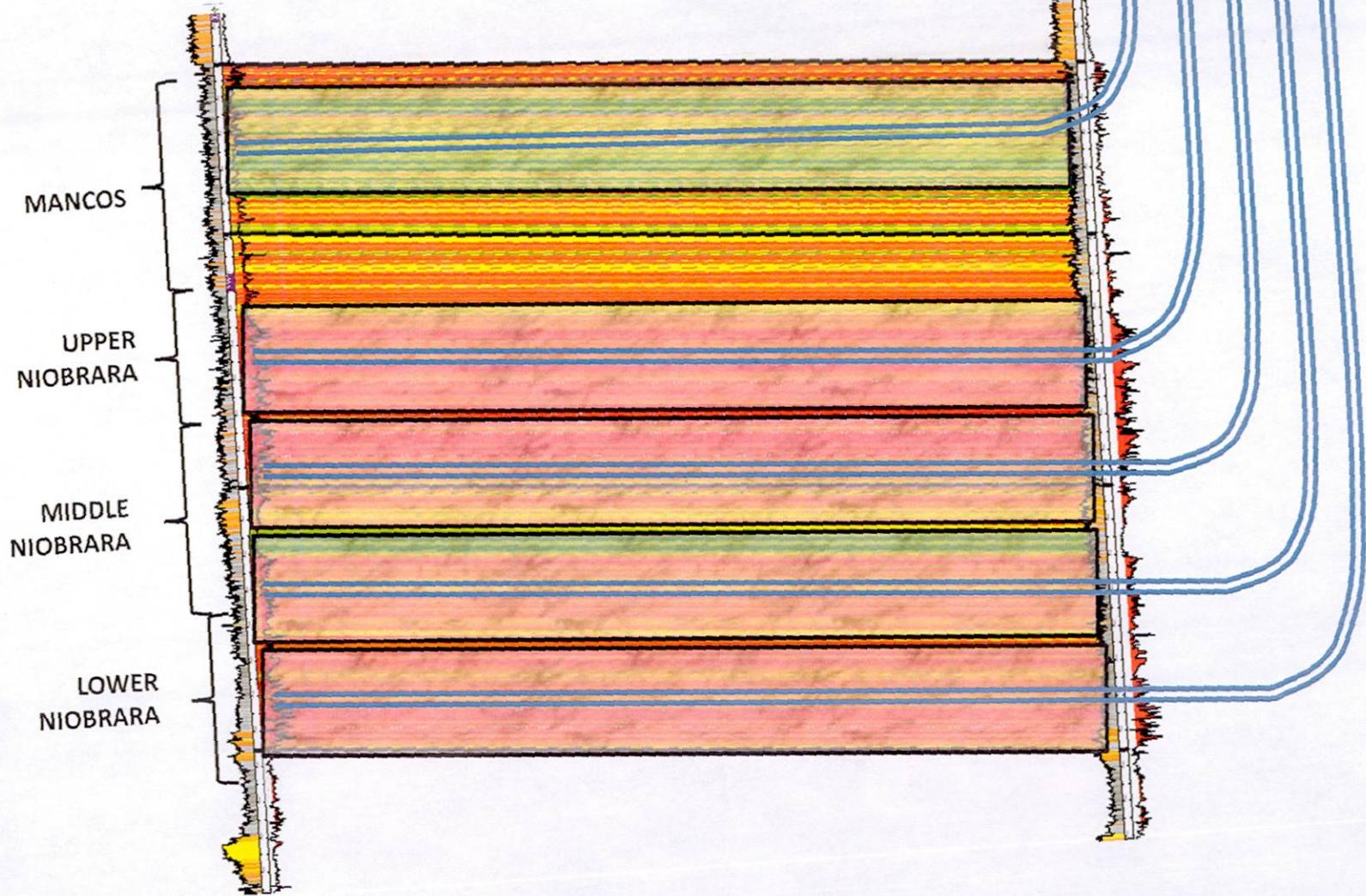




Exhibit E-4 OGIP

Cause No. 540
Docket No. 1303-SP-41

Reserve Inputs

Average Total Porosity – 6.5%

Average Pr - .62

Lateral length – 9,000 foot

OGIP and Recovery for a Horizontal Well Analysis 9,000 foot lateral

Niobrara Horizontal					
	Gross	Net	Net to Gross %	Avg Por	PhiH
Middle Niobrara	300	300	100.0%	6.5%	19.5

20% Recover per 9,000 foot lateral		
Gas (Bcf)	Oil (MMBO)	BCFE
8.4	0.420	10.9