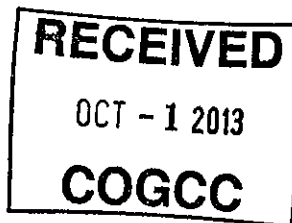




02419725

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



IN THE MATTER OF THE APPLICATION OF EE3, )  
LLC, FOR AN ORDER TO APPROVE ONE )  
ADDITIONAL HORIZONTAL WELL IN A 617.38- )  
ACRE DRILLING AND SPACING UNIT LOCATED )  
IN SECTION 18, TOWNSHIP 7 NORTH, RANGE 80 )  
WEST, 6<sup>TH</sup> P.M. FOR THE NIOBRARA )  
FORMATION, UNNAMED FIELD, JACKSON )  
COUNTY, COLORADO )

CAUSE NO. 531

DOCKET NO. 1309-AW-51

ORIGINAL

REQUEST FOR RECOMMENDATION OF  
APPROVAL OF APPLICATION WITHOUT A HEARING

EE3, LLC, Inc. 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 July 18, 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 1<sup>st</sup> day of October, 2013.

Respectfully submitted,

NOBLE ENERGY, INC.

By: 

Jamie L. Jost

Gregory J. Nibert, Jr.

Beatty & Wozniak, P.C.

Attorneys for Applicant

216 16<sup>th</sup> Street, Suite 1100

Denver, Colorado 80202

(303) 407-4499

**EE3 LLC**

**Land Testimony – Douglas C. Sandridge**

Cause No.

Docket No. 1309-AW-51

Increased Density Application – Niobrara Formation

Unnamed Field

October 2013 Colorado Oil and Gas Conservation Commission Hearing

My name is Douglas C. Sandridge. I am the Vice President of Land for EE3 LLC ("EE3" or "Applicant"). I have worked directly or in a supervisory role with the properties that are subject of this matter. A copy of my curriculum vitae is attached.

In support of EE3's Application, I am submitting the following exhibits. This testimony and exhibits attached to my sworn testimony and outline the parameters for the application filed in the above-referenced docket ("Application") to approve up to three (3) horizontal wells in an established approximate 640-acre drilling and spacing unit, comprised of the following lands (the "Application Lands"):

Township 7 North, Range 80 West, 6<sup>th</sup> P.M.  
Section 18: All

Exhibit No. L-1: Leasehold Interests.

Exhibit L-1: EE3 owns leasehold interest covering 100% of the Application Lands.

Exhibit No. L-2: Surface Ownership.

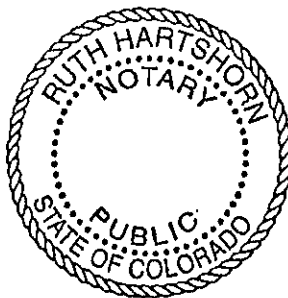
Exhibit L-2 shows the surface ownership of the Application Lands. 100% of the surface ownership of the Application Lands are owned in fee.

Exhibit No. L-3: Mineral Ownership.

Exhibit L-3 shows the mineral ownership of the Application Lands. 100% of the mineral ownership of the Application Lands are owned in fee.

Exhibit No. L-4: Topography.

Exhibit L-4 shows the topography of the Application Lands. The contour interval for the Application Lands is 80' feet.



***DOUGLAS C. SANDRIDGE***

*6083 Rodgers Circle*

*Golden, Colorado 80403*

303-279-3672 Home / 303-444-8881 Office

Email Address: [dsandrige@ee3llc.com](mailto:dsandrige@ee3llc.com)

**EMPLOYER**

EE3 LLC

4410 Arapahoe, Suite 100

Boulder, Colorado 80303

**OCCUPATION**

Petroleum Landman (31 years)

**EDUCATION**

University of Oklahoma

Bachelor of Business Administration (BBA)

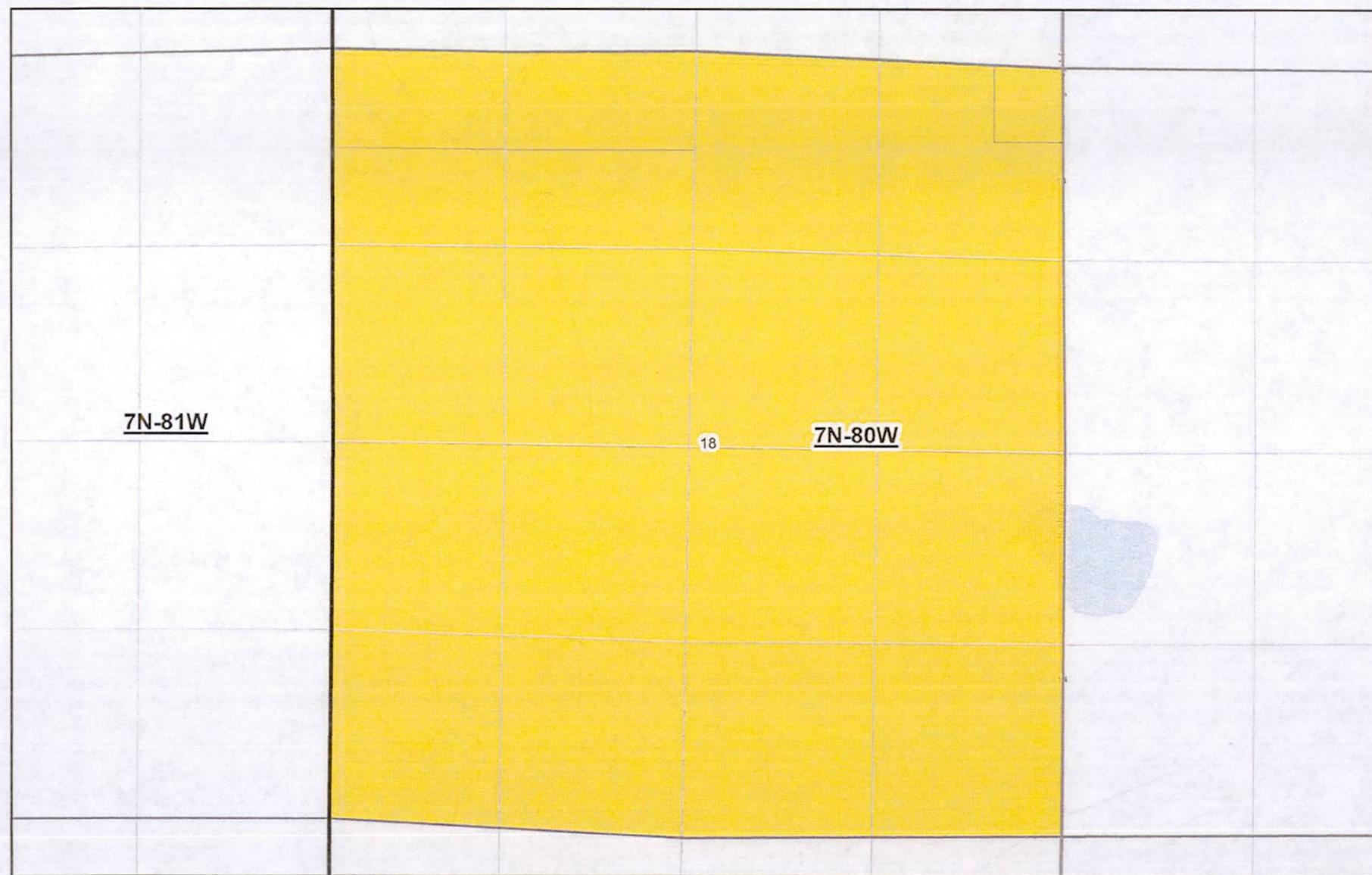
Petroleum Land Management (PLM), May, 1982

University of Colorado Denver

Master of Science

Global Energy Management, May 2011

Exhibit L-1  
Mineral Leasehold




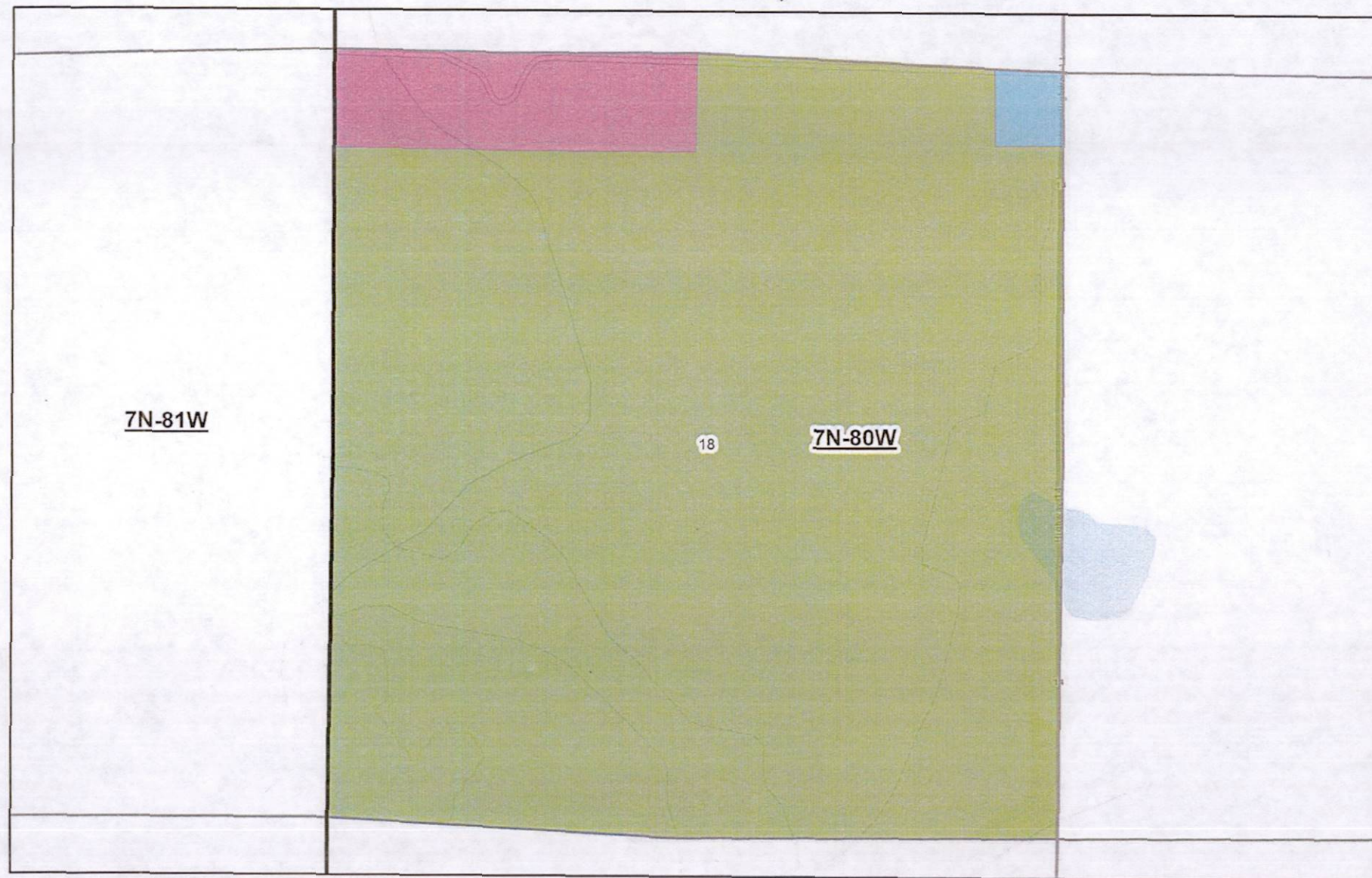
 EE3 Mineral Leasehold



Exhibit L-2  
Surface Ownership



Evans Land Company, LLC



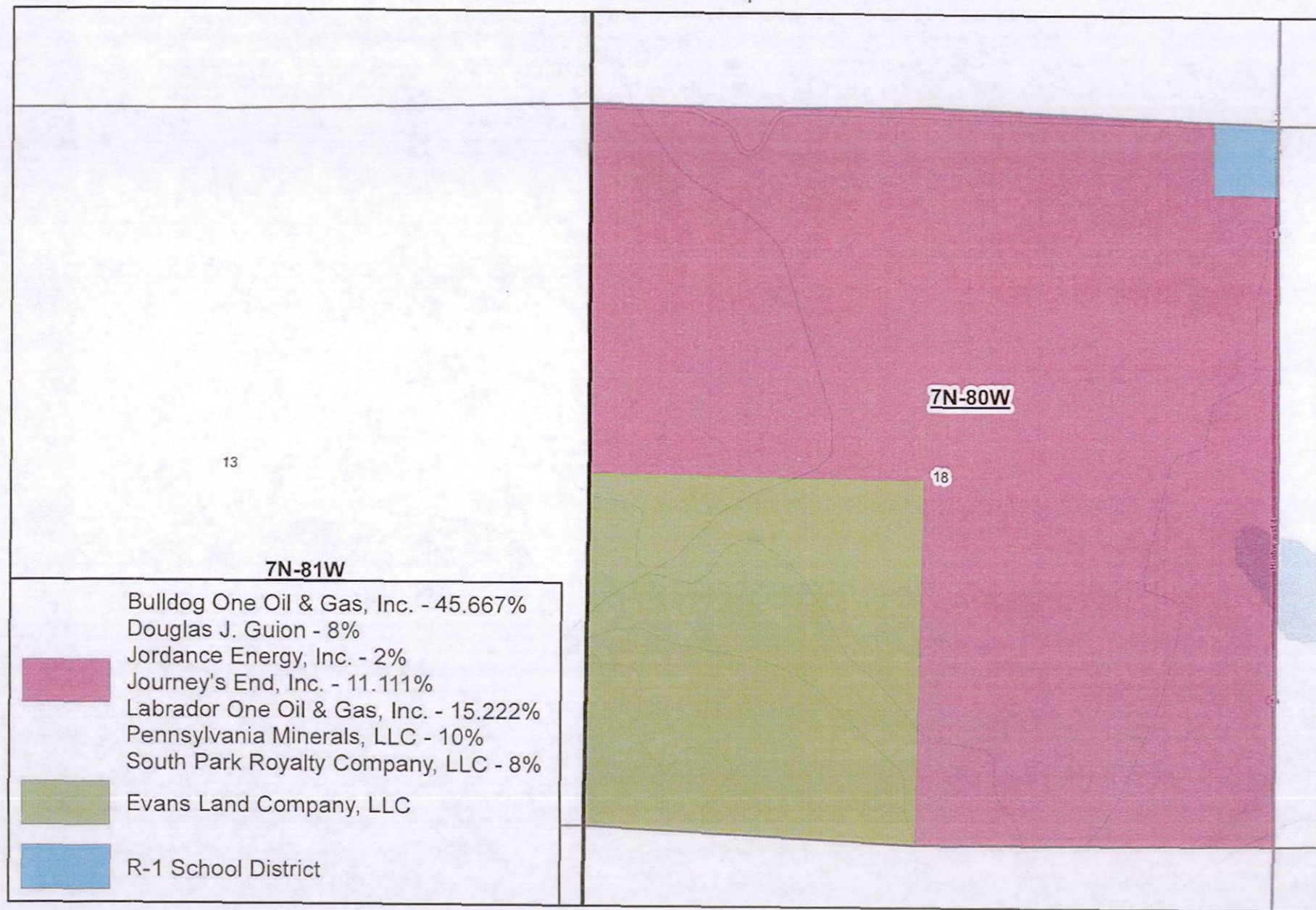
R-1 School District



Richard E. and Sharon L. Wamsley



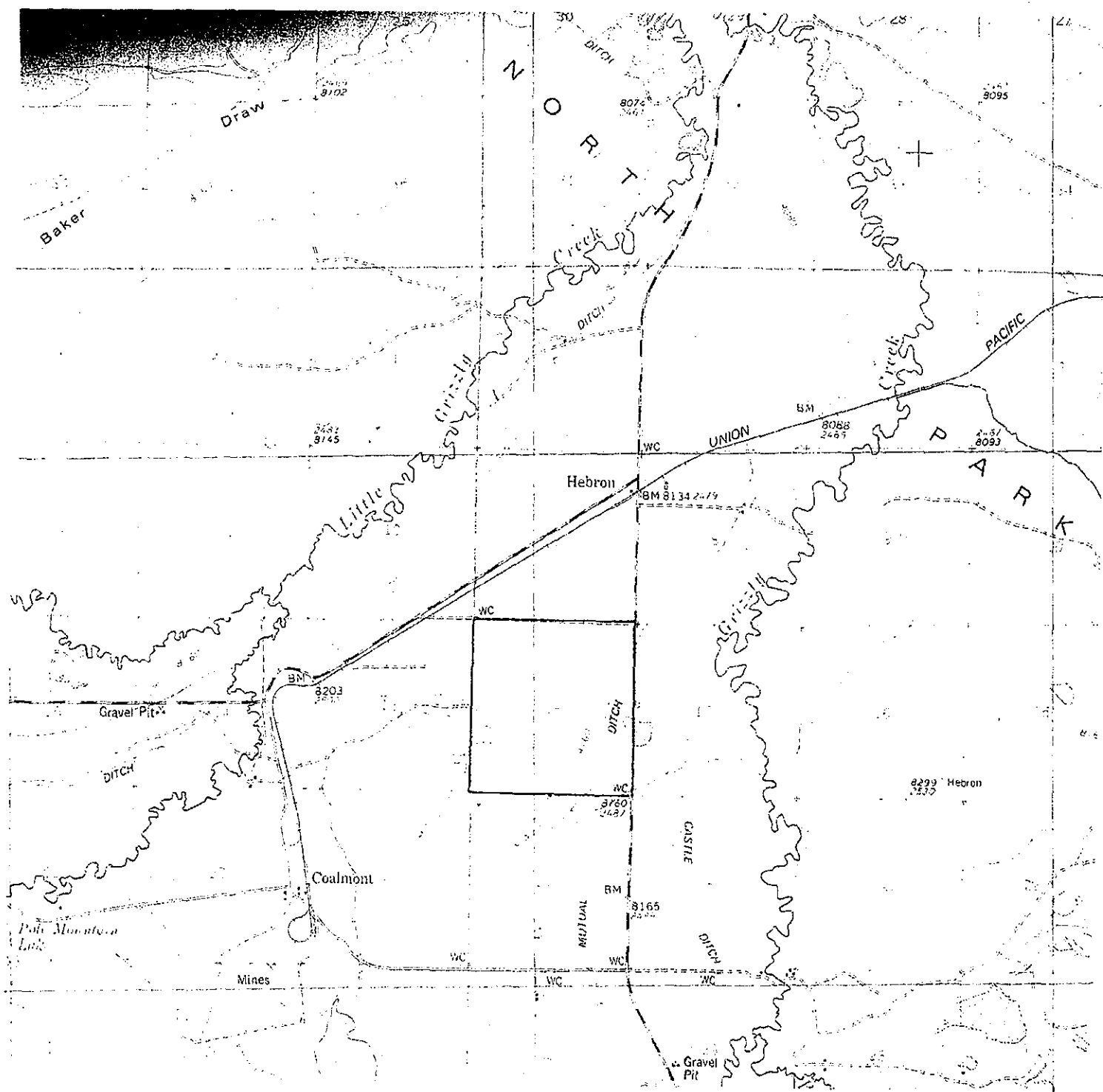
Exhibit L-3  
Mineral Ownership



## Topography

Section 18

Jackson County, Colorado





**EE3 LLC**

**Jeffery Dynda- Geology Testimony**

Cause No. 531

Docket No. 1309-AW-51

Increased Density Application – Niobrara Formation

Unnamed Field

October 2013 Colorado Oil and Gas Conservation Commission Hearing

My name is Jeffery Dynda, and I am currently the Geologist for EE3 LLC. I have a Bachelors of Science Degree in Geology from Indiana University of Pennsylvania. I have over 15 years' experience in Oil and Gas exploration and development in the Continental United States. I am familiar with the lands described, and the matters set forth in the October 2013 verified application ("Application").

In support of EE3's Application, I am submitting the following exhibits. This testimony and exhibits attached to my sworn testimony and outline the parameters for the application filed in the above-referenced docket ("Application") to approve up to three (3) horizontal wells in an established approximate 640-acre drilling and spacing unit, comprised of the following lands (the "Application Lands"):

Township 7 North, Range 80 West, 6th P.M.

Section 18: All

Exhibit G1 - Cross section location map

Exhibit G1 is the location map for the cross section labeled with the three wells.

Exhibit G2 - Cross section

Exhibit G2 is the cross section displaying the near uniform thickness of the Niobrara in vicinity of the proposed unit.

Exhibit G3 - Niobrara Top Subsea Structure

Exhibit G3 is the generalized structure map for the Niobrara Top Subsea contoured in 500' increments.

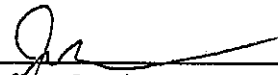
Exhibit G4 - Optimum well direction

Exhibit G4 displays our preferred well azimuth. This interpretation is based upon propriety micro-seismic and seismic data acquired by EOG and is intended to be perpendicular to fracture orientation.

All four exhibits are intended to illustrate that the Niobrara is Uniform and contiguous throughout the area and that our intention with lateral azimuth is to maximize stimulation of the reservoir.

The matters described herein were all conducted under my direction and control. I hereby swear that 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.

Dated 23<sup>rd</sup> day of September, 2013,

  
\_\_\_\_\_  
Jeffery Dynda  
Geologist  
EE3 LLC

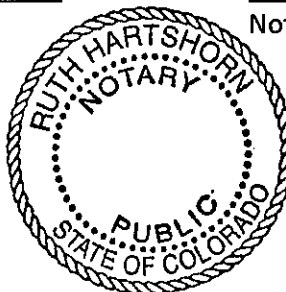
STATE OF COLORADO                    )  
  ) ss.  
CITY AND COUNTY OF BOULDER        )

The foregoing instrument was subscribed and sworn to before me this 23<sup>rd</sup> day of September 2013, by Jeffery Dynda, Geologist, for EE3 LLC.

Witness my hand and official seal.

My commission expires: 03/11/2014

  
\_\_\_\_\_  
Notary Public



Jeffery Dynda

4410 Arapahoe Avenue, Suite 100

Boulder, CO 80303

{303} 444-8881

### Professional Employment

Over fifteen years of experience, including:

EE3 LLC

Geologist

Boulder, Colorado

RenWell Energy LLC,

### Consulting Geologist

Morrison, Colorado

**Ellora Energy, Inc.**

Exploration Manager – TX/LA

Boulder, Colorado

MAK-J Energy

Staff Geologist

Denver, Colorado

EnCana Oil &amp; Gas

## Geo-Science Analyst

Denver, Colorado

### Education

Bachelor of Science Degree, Indiana University of Pennsylvania

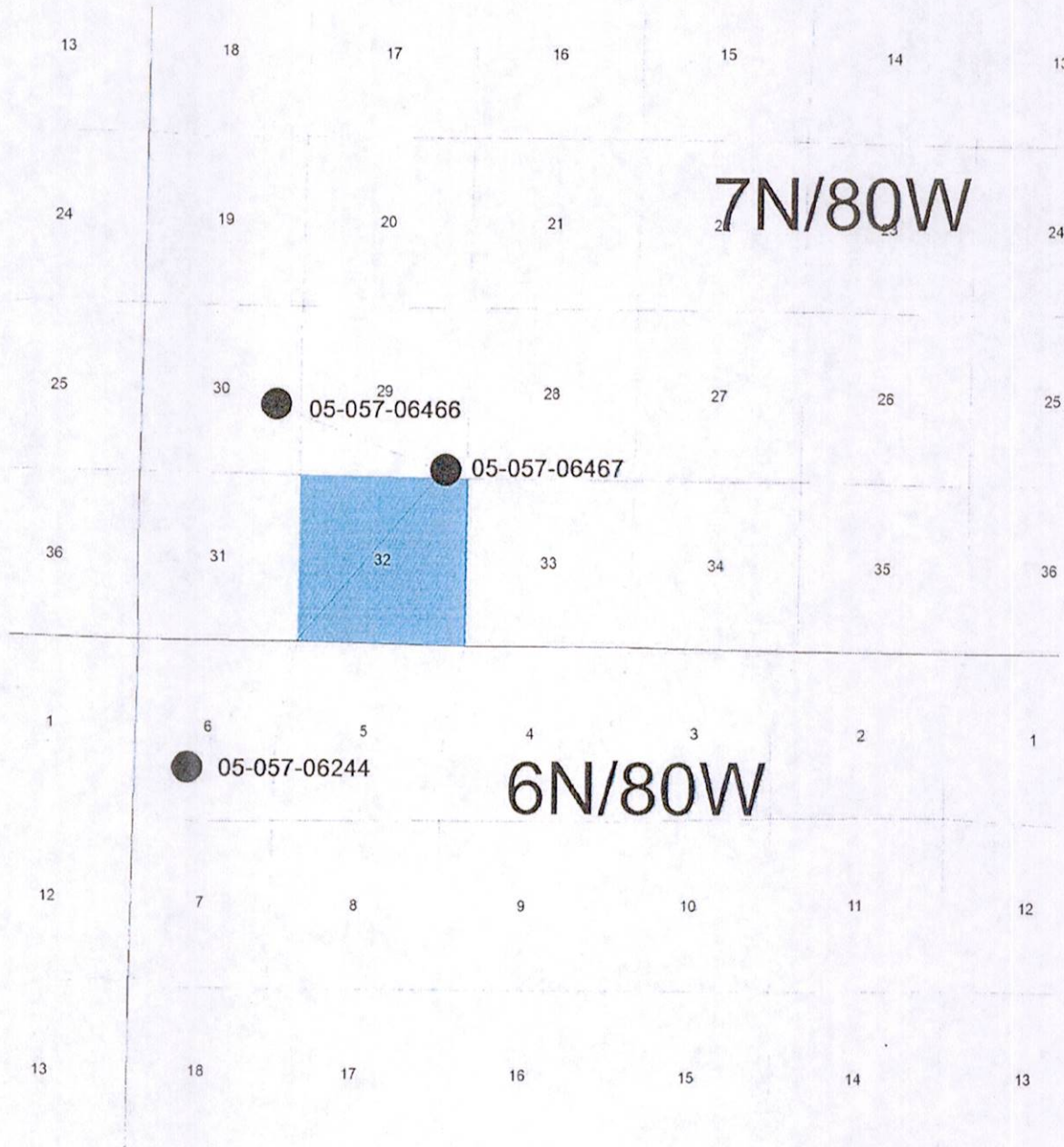
Major: Geology

Minor: Computer Science



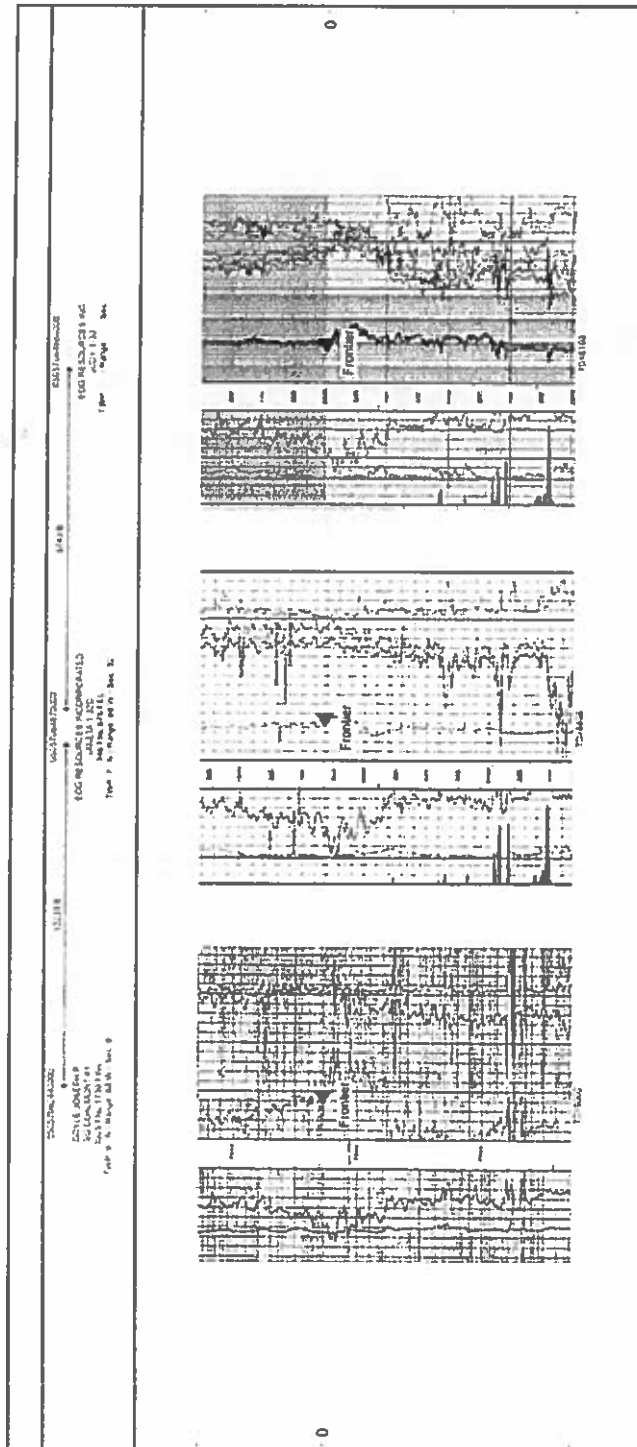
Exhibit G-1

Cross Section Location Map



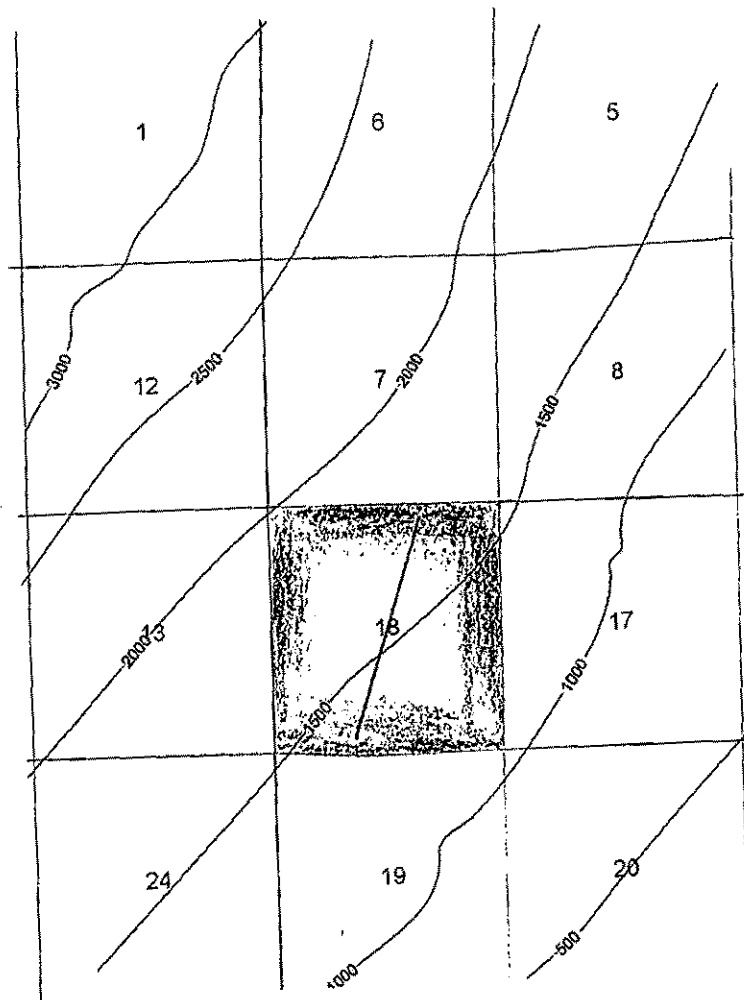
## Exhibit G-2

### Cross Section



**Exhibit G-3**

**Niobrara Top Subsea Structure**





**Exhibit G-4**

Optimum Well Direction

1	6	5
12	7	8
13	18	17
24	19	20

**EE3 LLC**

**Richard McClure- Engineering Testimony**

Cause No. 531

Docket No. 1309-AW-51

Increased Density Application – Niobrara Formation

Unnamed Field

October 2013 Colorado Oil and Gas Conservation Commission Hearing

My name is Richard F. McClure, and I am currently President for EE3 LLC supervising development operations for the company's operations in Jackson County, Colorado. I received a Bachelor's of Science degree and a Master of Engineering degree in Petroleum Engineering from the Colorado School of Mines in Golden, Colorado. I have over 30 years of experience in oil and gas engineering. I am familiar with the lands described, and the matters set forth in the October 2013 verified application ("Application").

In support of EE3's Application, I am submitting the following exhibits. This testimony and exhibits attached to my sworn testimony and outline the parameters for the application filed in the above-referenced docket ("Application") to approve up to three (3) horizontal wells in an established approximate 640-acre drilling and spacing unit, comprised of the following lands (the "Application Lands"):

Township 7 North, Range 80 West, 6th P.M.

Section 18: All

Exhibit E-1- Surface Map

Our well azimuth is 20 Degrees East of North. This orientation and a 4800' lateral allow for 3 wells per section. This is an increase in recoverable hydrocarbons of 300% over the previous 640-acre scenario which only allowed for a single horizontal well.

A minimum of 1,000' of surface casing will be set prior to drilling the horizontal portion of the well to protect ground water aquifers.

Exhibit E-2 – Calculations of OOIP and EUR's

Exhibit No. E-2 represents calculations of the Original Oil In Place (OOIP) and anticipated drainage area for an analog Niobrara oil well located in EE3's operational area of Jackson County. Reservoir parameters utilized for the calculations are based on results observed from logs run in 7 area EE3-operated wells for which pilot holes were drilled in two wells. The producing interval includes Niobrara "A", "B", "C", and "D" Chalks. Calculated drainage area for

an analog well with an ultimate recoverable reserve potential of 126 MBOE is 169 acres. Calculated drainage area for the horizontal wells varies between 16 and 317 acres.

Based on the foregoing testimony and the attached exhibits, I conclude that the drilling, completion and production of a horizontal well in the Application Lands will capture reserves from the reservoir in two sections and thereby prevent waste. This drilling, completion and production will also protect correlative rights.

The matters described herein were all conducted under my direction and control. I hereby swear that 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.

Dated 23<sup>rd</sup> day of September, 2013,

Rich McClure

Richard F McClure  
President  
EE3 LLC

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

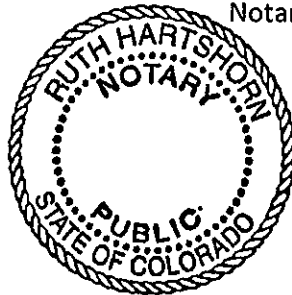
The foregoing instrument was subscribed and sworn to before me this 23<sup>rd</sup> day of September 2013, by Richard F. McClure, President for EE3 LLC.

Witness my hand and official seal.

My commission expires: 03/11/2014

Ruth Hartshorn

Notary Public





## Richard F. McClure, P.E.

4410 Arapahoe Avenue, Suite 100

Boulder, CO 80303

(303) 444-8881

---

### Professional Employment

Over thirty one years of experience, including:

EE3 LLC	Boulder, Colorado	<i>President</i>
Ellora Energy, Inc.	Boulder, Colorado	<i>Chief Operating Officer</i>
Questa Engineering	Golcen, Colorado	<i>Consulting Engineer</i>
ARCO	Prudhoe Bay, Alaska	<i>Drilling Engineer</i>

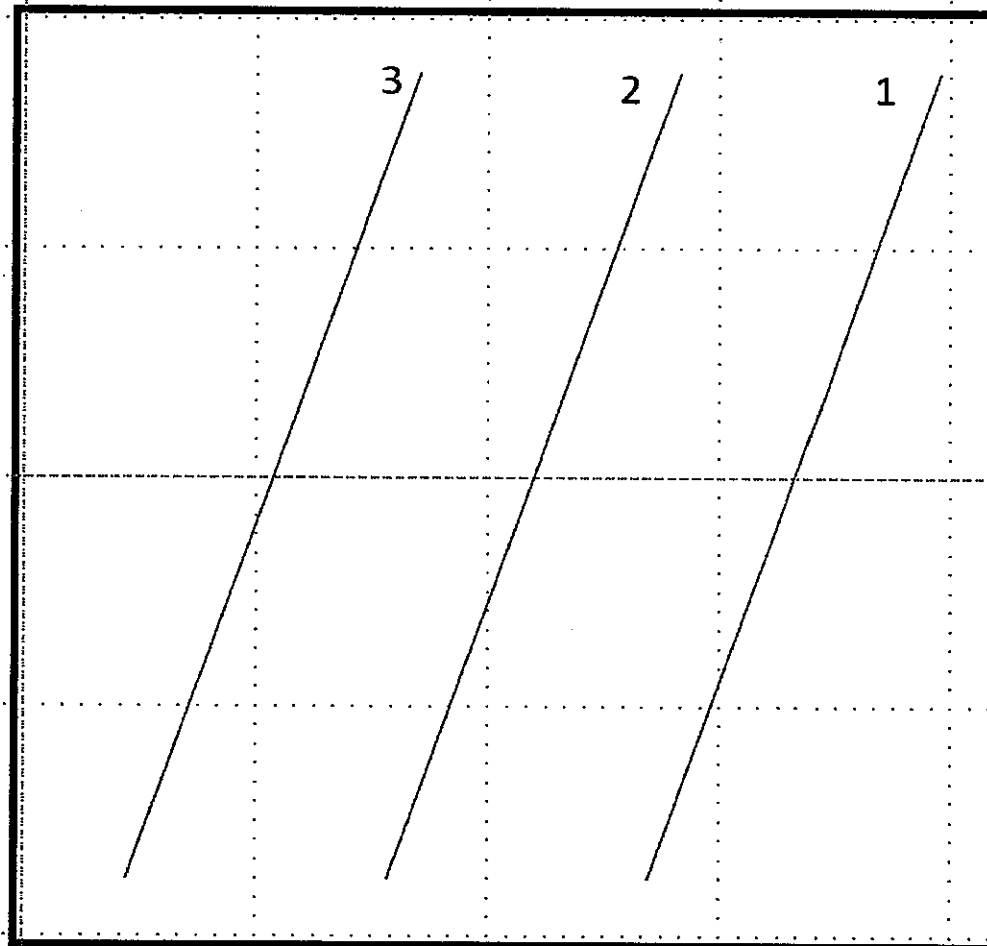
### Education

Bachelor of Science Degree, Colorado School of Mines  
Major: Petroleum Engineering

Master of Engineering in Petroleum Engineering, Colorado School of Mines

Registered engineer in Colorado and New Mexico

# Exhibit E1 – Surface map



Not to Scale

## Exhibit E-2 – Calculation of OOIP and EUR's

### EE3 Niobrara Well- Eclipse Field Jackson County, CO Oil Reserve Worksheet

Description of Parameter	Value Of Parameter
Depth (TVD below Ground Level)	7,200
Porosity	6.00%
Sw (Water Saturation-Percent of Pore Space)	50.00%
Height (Thickness) of Formation	90'
Initial Reservoir Pressure (PSIA)	3,456
Initial Reservoir Temperature (degF)	210
Initial Gas-Oil Ratio (CuFt/Stock Tank Bbl)	1,400
Oil Gravity (deg API)	38.0
Sep Gas Gravity (air = 1.0)	0.85
Formation Volume Factor (Reservoir Bbls/Stock Tank Bbl)	1.4000
Original Oil in Place (OOIP) Stock Tank Bbls per Acre assuming uniform Height	14,962
Recovery Efficiency-Percent of Original Oil in Place to be Produced [Estimated]	5.00%
Recoverable Oil (Bbls per acre Drained at Recovery Efficiency)	748

Analog Niobrara well is anticipated to have an ultimate recover potential of approximately 185 MBO.

Drainage area (acres) per well: 159

## Niobrara Formation & Spacing Unit Application

### Economic Calculations

	CAPEX \$/M	Oil Price \$/Bbl (NYMEX)	Gas Price \$/MCF (NYMEX)	NPV10 BFIT \$M	ROR %	Oil EUR MBbl	Gas EUR MMCF
Unrisked	<b>\$4,500</b>	\$83.34	\$0.00	\$3752	62.30%	228.5	251
Unrisked:	<b>\$4,500</b>	\$83.34	\$0.00	\$1,716	27.98 %	173.6	191
Unrisked	<b>\$4,500</b>	\$83.34	\$0.00	\$73	10.65%	126.7	139
<hr/>							
Unrisked	<b>\$6,000</b>	\$83.34	\$0.00	\$2252	26.89%	228.50	251
Unrisked:	<b>\$6,000</b>	\$83.34	\$0.00	\$1,663	11.66 %	173.60	191
Unrisked	<b>\$6,000</b>	\$83.34	\$0.00	\$0	0.00%	128.60	139

#### Key Assumptions

Operating Expenses \$4,500/Month

WI = 100.000%, Royalty = 12.500%, NRI = 87.500%

The economics for this project are sound.

Niobrara Formation Drilling & Spacing Unit Application  
North Park Basin  
Drainage Calculations

WELLNAME	API NO.	Well Orientation	FIELD	SEC.	TSHP.	RGE.	EUR OIL (BBL)	OOIP (BBL)	H (ft)	Porosity	Calculated Drainage Area (Acres)
<b>VERTICAL WELLS</b>											
Titanium #1-26	5057060940000	Vertical	Coalmont	26	7N	81W	132,249	2,644,980	90	0.06	177
State #1-36	5057060650000	Vertical	Coalmont	36	7N	81W	115,522	2,310,440	90	0.06	154
Fed 1-35	5057060610000	Vertical	Coalmont	35	7N	81W	13,723	247,460	90	0.06	18
Average							87,165	1,743,293			177
<b>HORIZONTAL WELLS</b>											
Buffalo Ditch 1-32H	50570646303	Horizontal	North Park	32	7N	80W	45,880	917,600	90	0.06	336
Mutual 2-30H	50570646501	Horizontal	North Park	30	7N	80W	126,600	2,532,000	90	0.06	61
Mutual 7-17H	50570647201	Horizontal	North Park	8	7N	80W	185,670	3,713,400	90	0.06	169
Surprise 4-06H	50570648001	Horizontal	North Park	7	6N	80W	104,970	2,099,400	90	0.06	248
Hebron 1-18H	50570650100	Horizontal	North Park	7	7N	80W	12,330	246,600	90	0.06	140
Hebron 5-18H	50570650200	Horizontal	North Park	18	7N	80W	237,250	4,745,000	90	0.06	317
Average							118,783	2,375,667			212

Bo= 1.4 rvb/STB (from Observed API Gravity and GOR data)  
Sw= 0.50 fraction (calculated from Archie Sw calculation)  
RF= 0.05 fraction (assumed)

Equations used:

$$\text{OOIP} = \text{EUR} / \text{RF}$$

$$\text{Area} = \text{OOIP} * \text{Bo} / 7758 / \text{h} / \text{por} / (1 - \text{Sw})$$

Where:

OOIP = original oil in place (BBL)  
EUR = estimated ultimate recovery (BBL)  
RF = recovery factor (fraction)  
Area = drainage area (acres)  
Bo = formation volume factor (rvb/STB)  
H = thickness, (ft)

Por = porosity (fraction)  
Sw = water saturation (fraction)