



02110412



CYPRESS

Sugarloaf Prospect

Plan of Development

February 14, 2010

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CYPRESS

Cypress Production, Inc

Sugarloaf Plan of Development

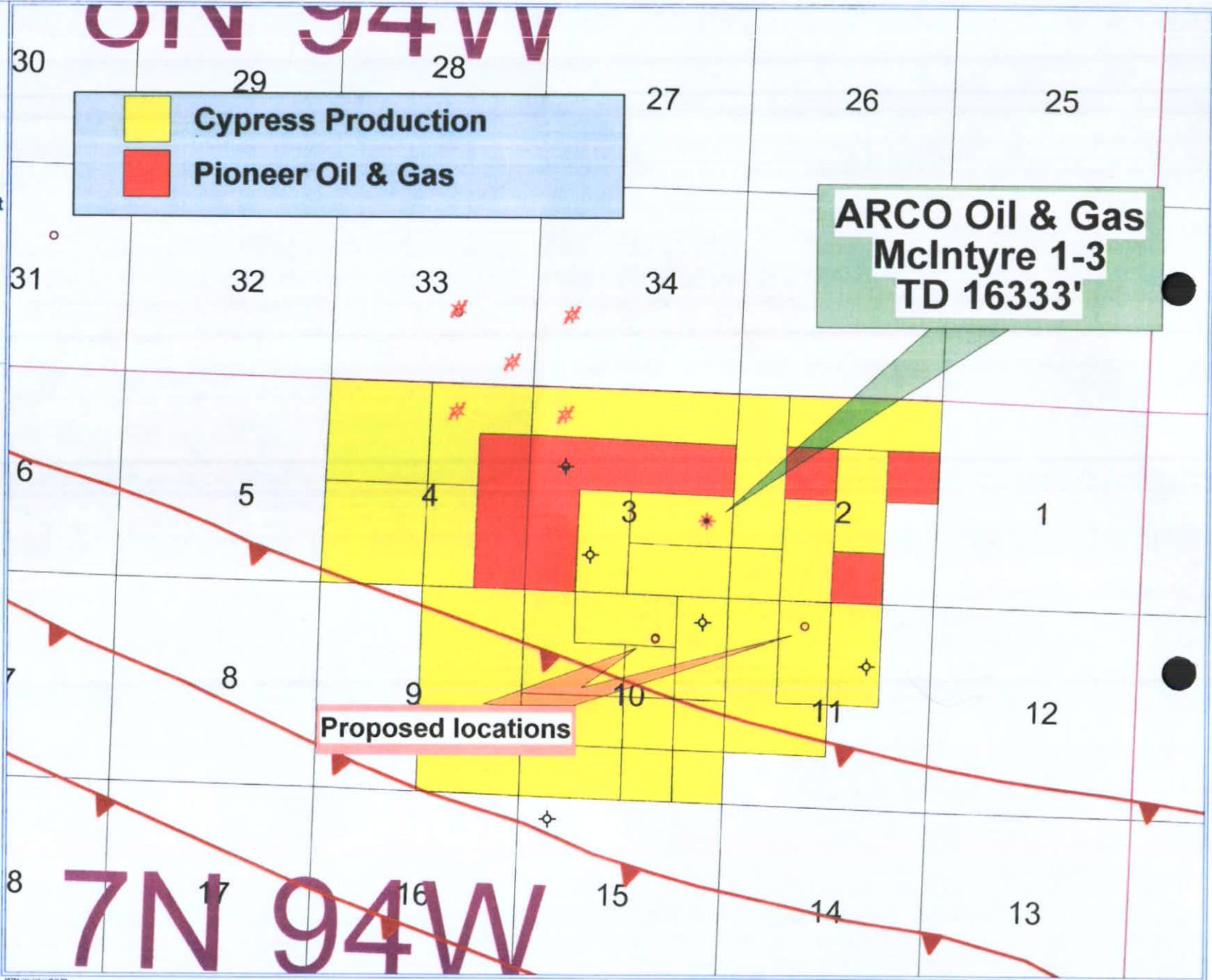
Land Exhibit 1

Land position



By JRV

February 15, 2010



| | |
|--|------------------------------|
| | Cypress Production |
| | Pioneer Oil & Gas |

**ARCO Oil & Gas
McIntyre 1-3
TD 16333'**

Proposed locations

7N 94W



CYPRESS

Cypress Production, Inc

Sugarloaf Plan of Development

Land Exhibit 2

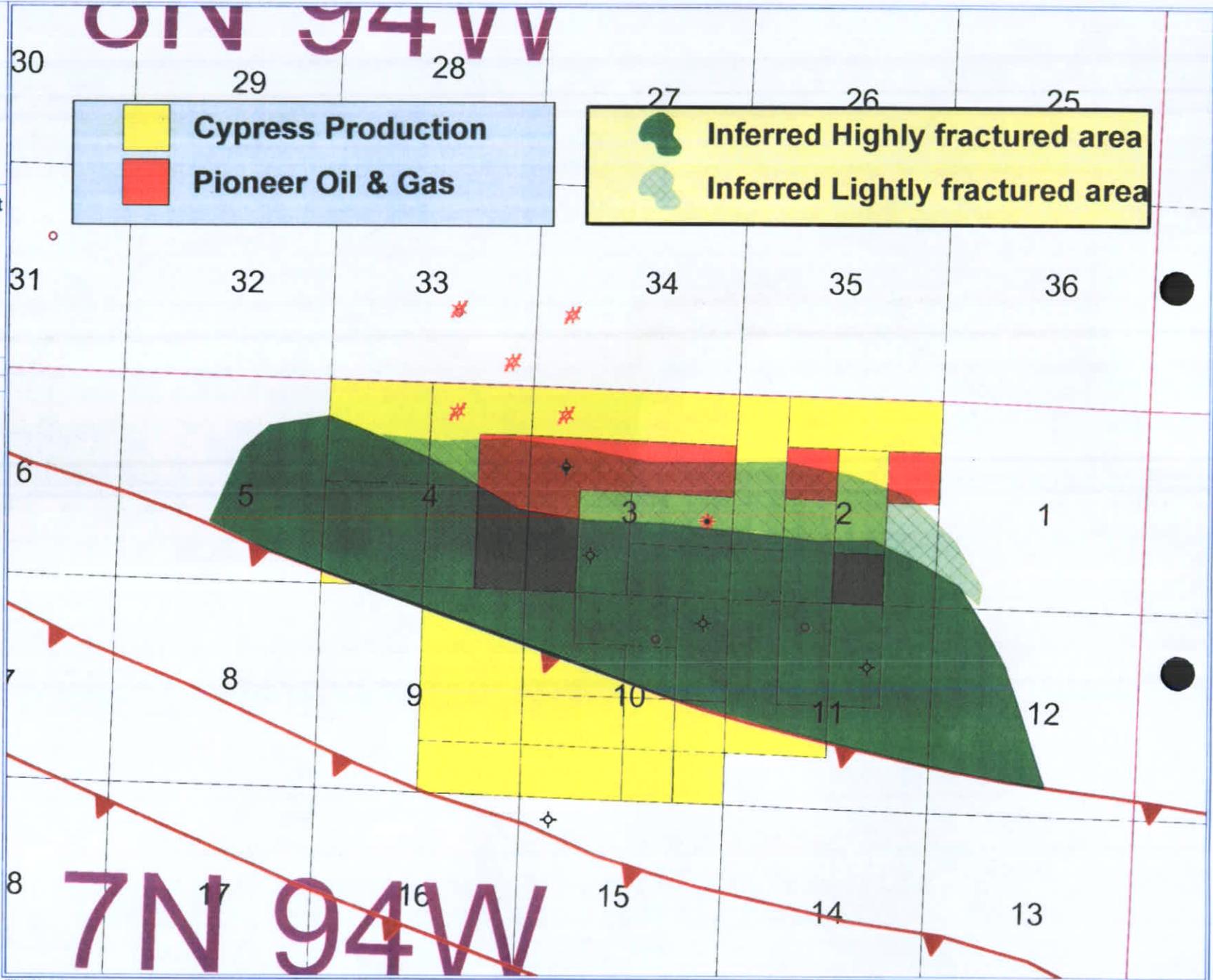
Land position

Inferred fractured Niobrara reservoir



By JRV

February 15, 2010





CYPRESS

Cypress Production, Inc

Sugarloaf Plan of Development

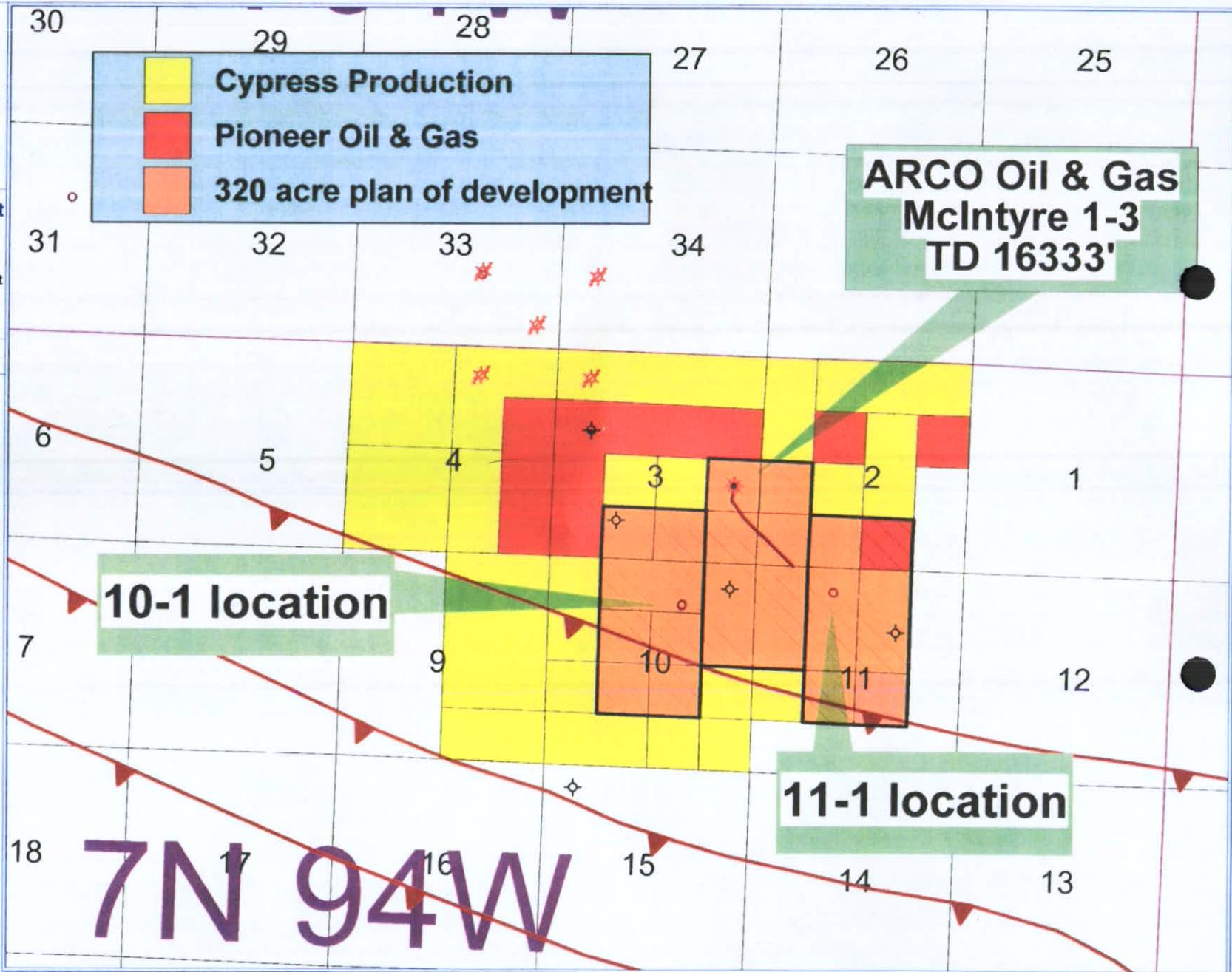
Land Exhibit 3

Land position & 320 acre plan of development



By JRV

February 15, 2010





CYPRESS

Cypress Production, Inc

Sugarloaf Prospect

Land Exhibit 4

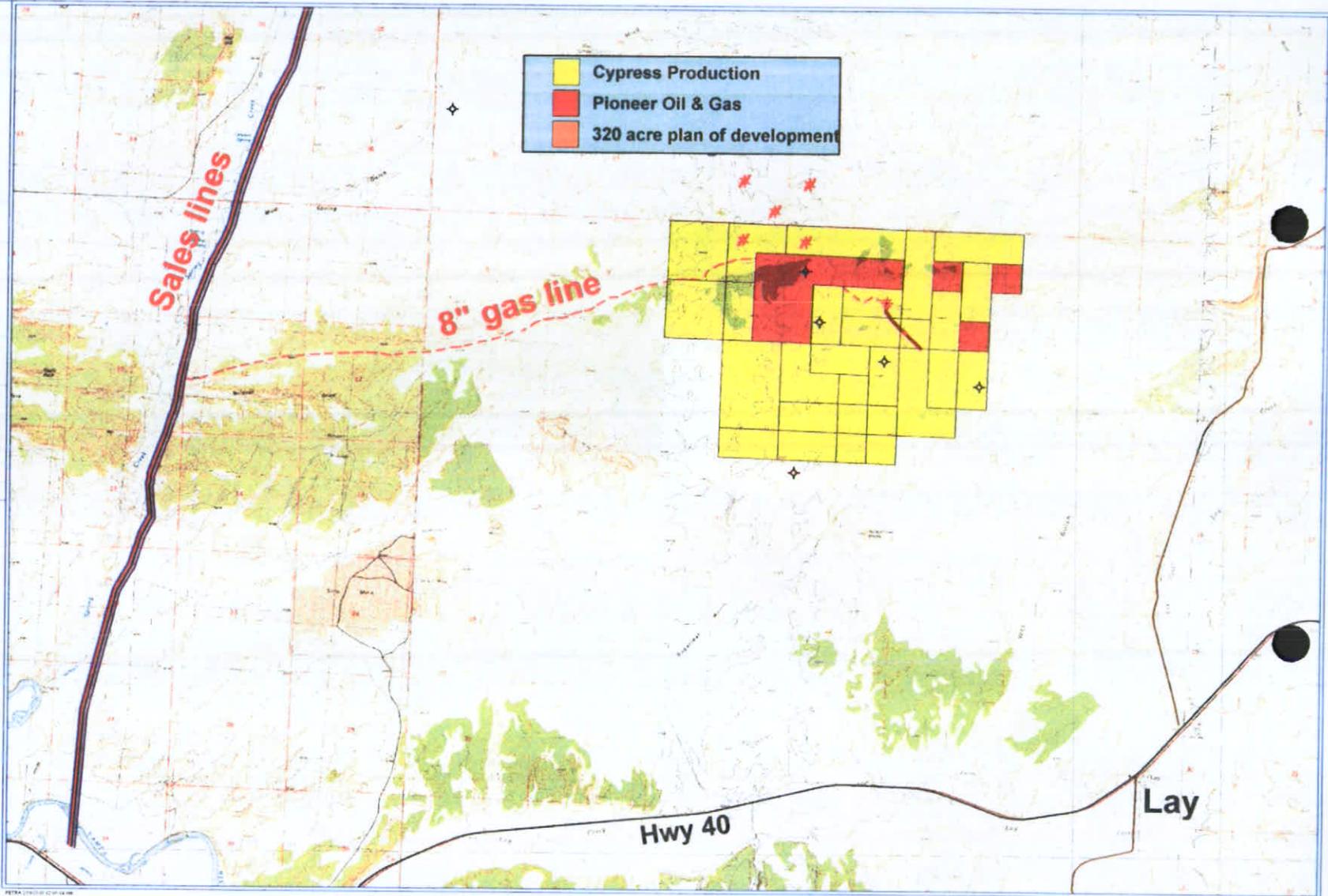
Topographic map

Pipeline map



- WELL SYMBOLS
- Gas Well
 - Dry Hole
 - Junked Gas Well
 - Dry Hole With Show of Oil

By: JRV
February 18, 2010





CYPRESS

Cypress Production

Sugarloaf Prospect

Land Exhibit 5

Cypress Production

McIntyre 1-3 sidetrack

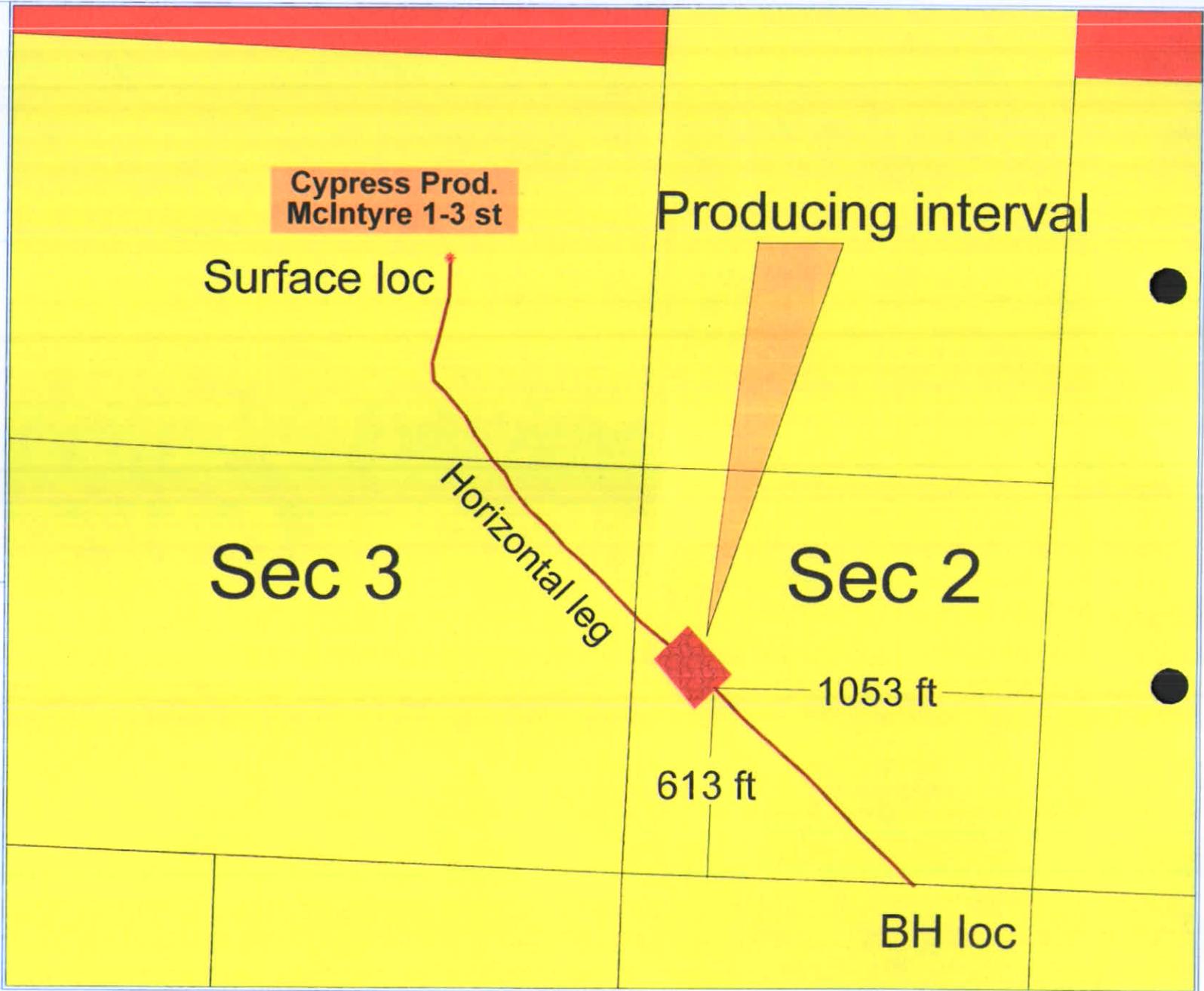


REMARKS

Gas and condensate producing interval is located 613 ft from Sec 11 leases.

By: JRV

February 16, 2010





CYPRESS

Cypress Production, Inc

Sugarloaf Prospect

Geology Exhibit 1

Structure contour on top of Niobrara

Highly fractured area in green



POSTED WELL DATA

Well Name
Well Number
FMTOPS - NIOBRARA[JRV] (SS)

WELL SYMBOLS

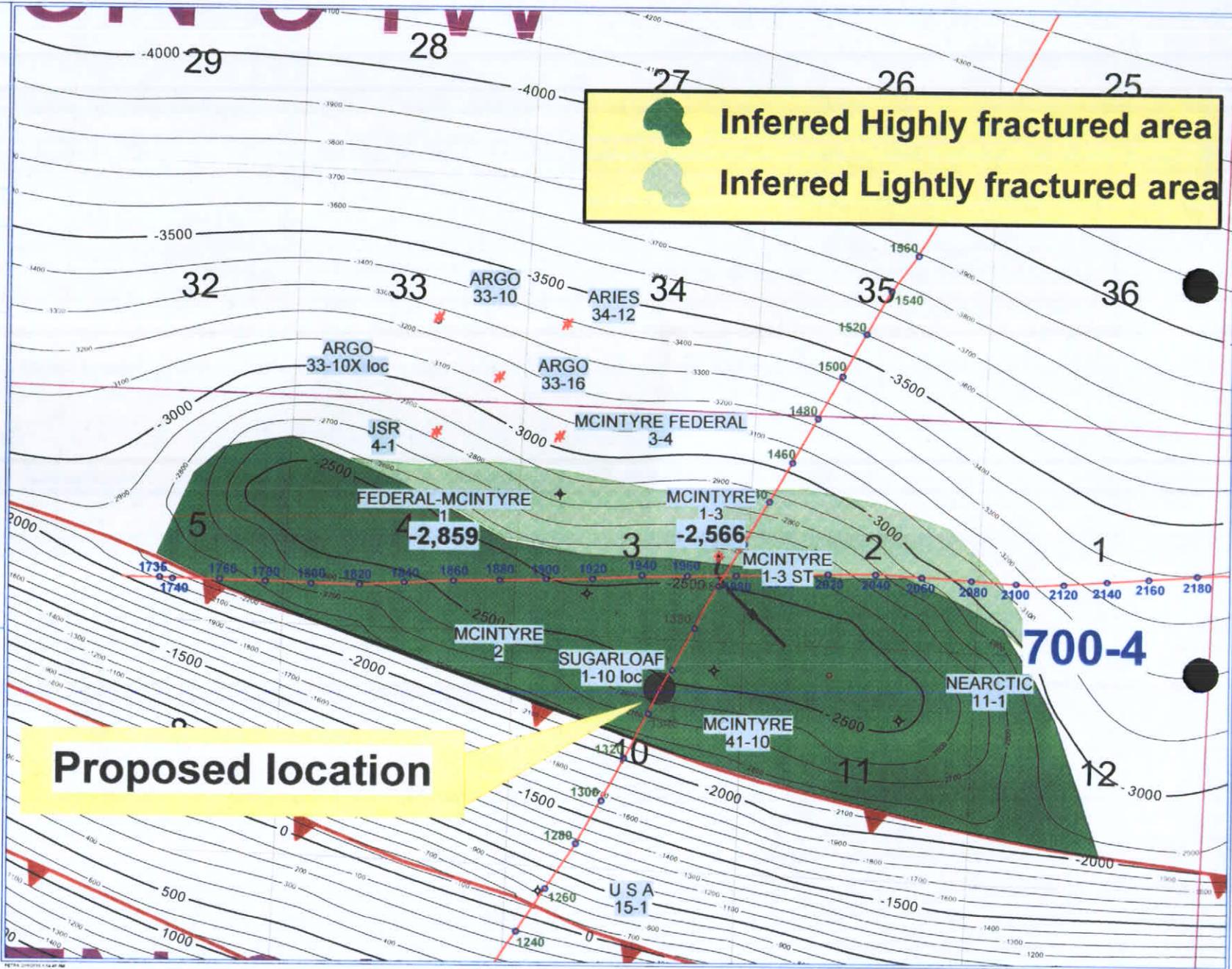
- LOCATION
- Gas Well
- Dry Hole
- Junked Gas Well
- Shut In Oil and Gas
- Dry Hole With Show of Oil

REMARKS

100' contours in subsea elevation

By JRV

February 16, 2010



Inferred Highly fractured area

Inferred Lightly fractured area

Proposed location



CYPRESS

Cypress Production

Sugarloaf Prospect

Geology Exhibit 2

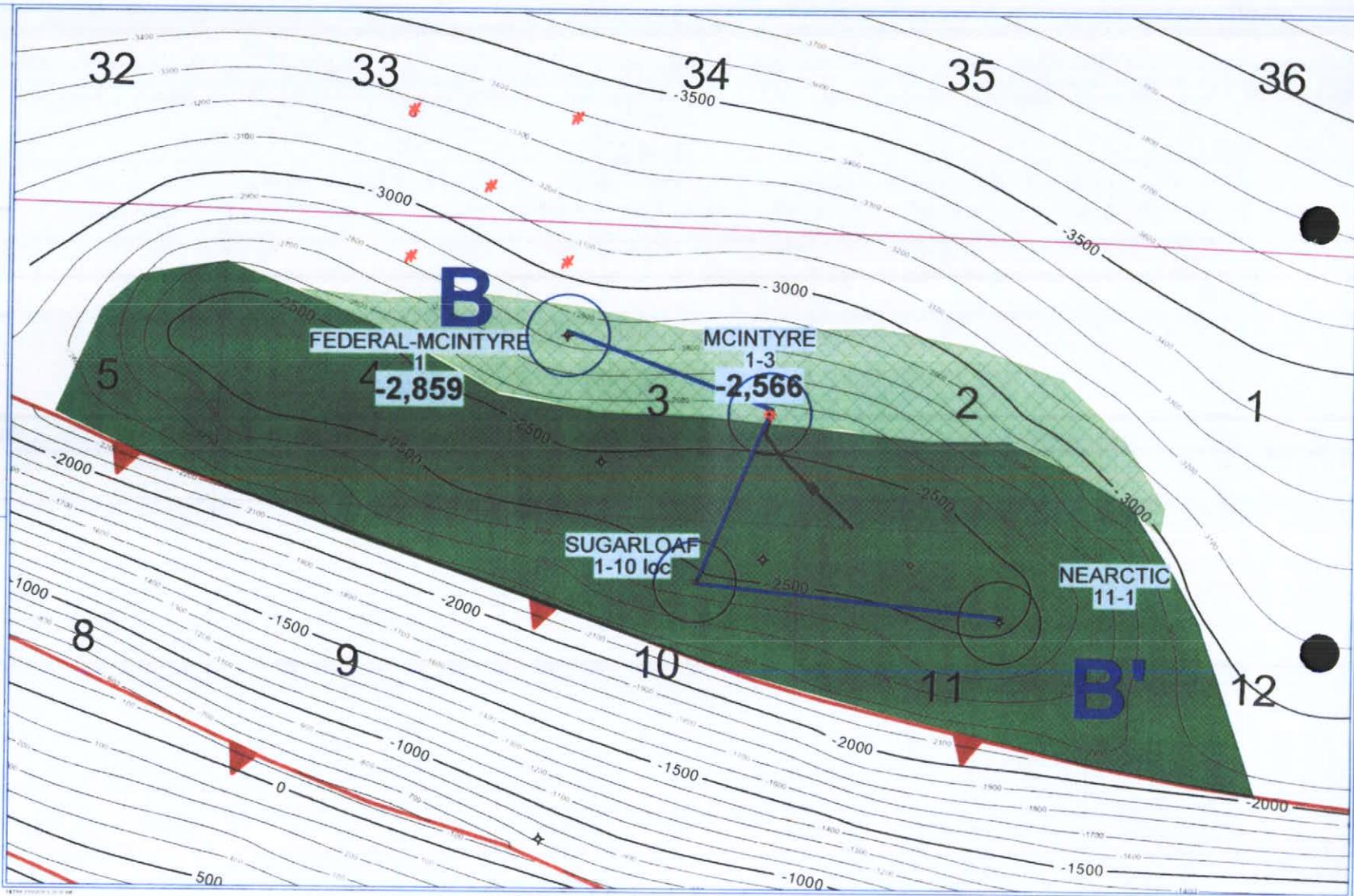
B - B' Log cross section location



POSTED WELL DATA

Well Name
Well Number
FMTOPS - NIOBRARA[JR]V (SS)

By: JRV
February 16, 2010





CYPRESS

Cypress Production

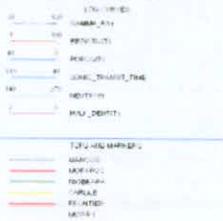
Sugarloaf Prospect

Geology Exhibit 3

Sugarloaf well log cross section

Mancos to base of Niobrara

Horizontal Scale = 319.1
Vertical Scale = 100.0
Vertical Exaggeration = 1.2x



FEDERAL-MCINTYRE

MCINTYRE 1-3

MCINTYRE 10-1

NEARCTIC 11-1

B'

MANCOS

MORAPOS

MANCOS

MORAPOS

7,238

1-3 sidetrack

NIOBRARA

Lightly fractured shale

CARLILE

Highly fractured shale

12,312

16,333

DST Recoveries
160 HGOCM
720 HGOCMV
1890 HGOCMV
180 G&VCM
519 MCFD

DST Recoveries
140' Mud

DST Recoveries
170' Mud

DST Recoveries
none

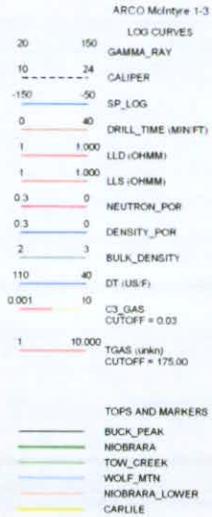
DST 3 Recoveries
1937' GCM
Est. rate of 870 MCFD

DST 4 Recoveries
30.8 Mbls Condensate
8969 Gas
Est. rate of 3.1 MMCFD

DST 5 Recoveries
235' C
200' M
1' CFG
350 cc C

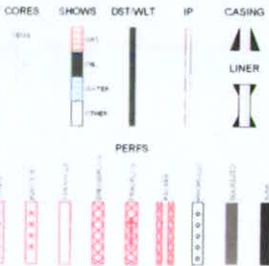
Sugarloaf Prospect

Geology Exhibit 4



Well Name
Well Number
Hist.Operator

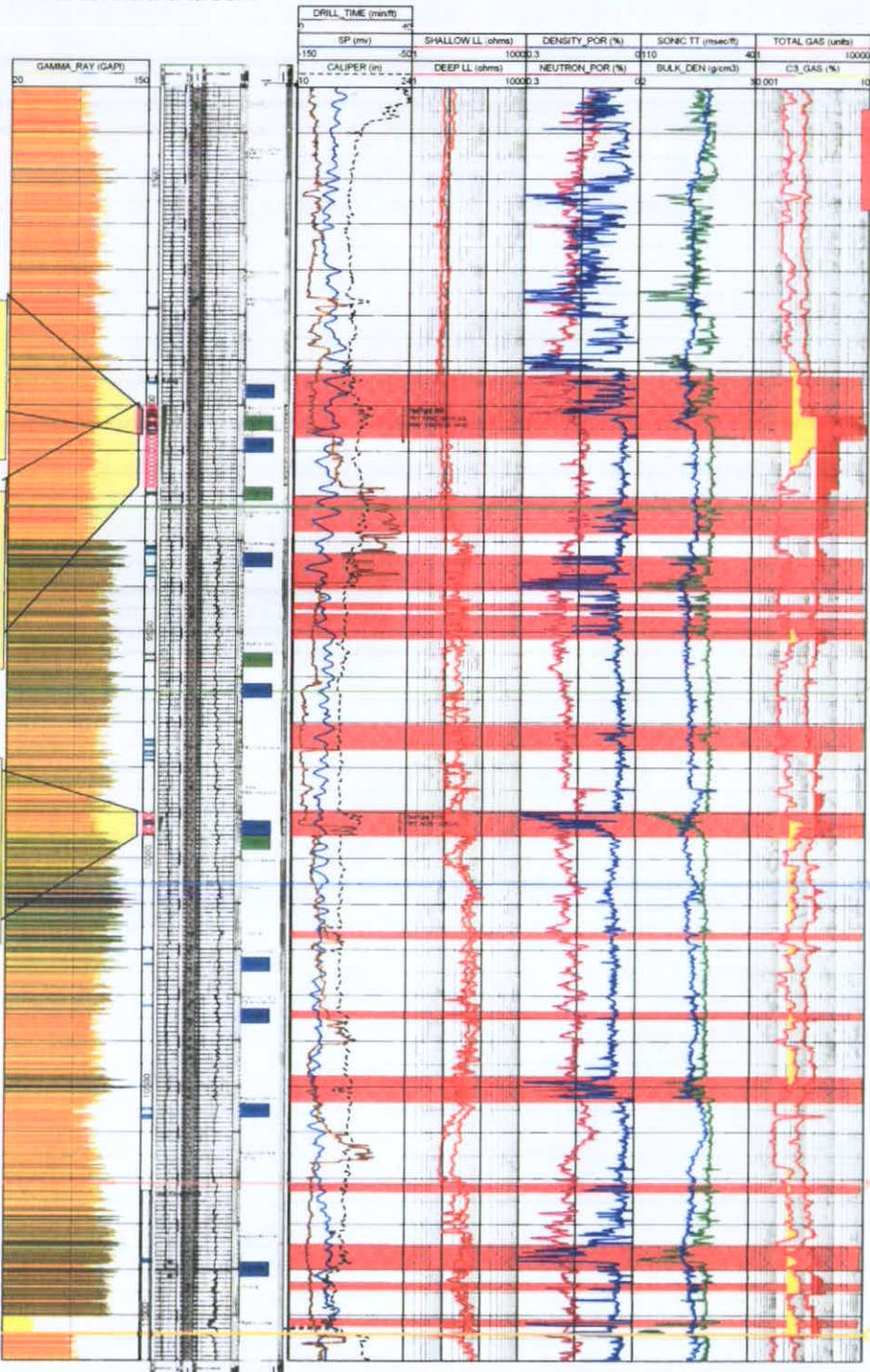
TEXT BELOW TRACKS
WELL - TD



TEST #3 9018-9059'
Partially successful test. Tool did not open for second flow test. Interval shows good effective permeability to gas and exhibits some wellbore damage. Recovered 107 cc Condensate, 1.35 SCF Gas. 642 ft fresh water. 1937 ft GCM. Shut-In 4645#

TEST #4 8998-9174'
Completely successful test. Relatively high gas flow suggest a high effect perm to gas and general character of the shut-in suggests only a fair perm, typical of fracture porosity. Recovered 30.8 bbl Condensate, 2150 cc Mud, 17.44 cc Gas & Condensate, 8969 ft Gas. Shut-In 4452#

TEST #5 9910-9948'
Partially successful test. Invalid shut-in pressure. Test suggests low to fair effective permeability to gas or deep wellbore damage. Recovered 235 ft Condensate, 200 cc Mud, 1 SCF gas, 350 cc Condensate. Shut-In 2713#



Zones of fracturing within the shale

BUCK PEAK
NIOBRARA
TOW CREEK
WOLF MTN
NIOBRARA_LOWER
CARLILE

Exhibit No E-1
 Docket No _____
 Cause No _____

Drainage Area Calculation

| Well | Units | McIntyre 1-3* | Unnamed | Unnamed |
|-----------------------------|---------|-------------------|--------------------|--------------------|
| Surface Location | | Sec 3 T7N R94W | Sec 10 T7N R94W | Sec 11 T7N R94W |
| EUR | MBO | 100 | 100 | 100 |
| Thickness | ft | 251 | 251 | 251 |
| Estimated Fracture Porosity | | 1% | 1% | 1% |
| Estimated Water Saturation | | 15% | 15% | 15% |
| Formation Volume Factor | RB /STB | 1.38 | 1.38 | 1.38 |
| Estimated Recovery Factor | | 5% | 5% | 5% |
| Estimated Drainage Area | Acres | 167 | 167 | 167 |

Note: All values except thickness assumed to be the same as Samson State 33-15 #1 474-7

* EUR assumes well will be able to be cleaned up once it is on production

Exhibit No E-2
 Docket No _____
 Cause No _____

Results of Economic Analysis

| | | | |
|---------------------------------------|------------|--------------|------|
| Oil EUR | BO | 100,000 | |
| Gas Sales | | None | |
| Wellhead Oil Price | \$/bbl | 65 | flat |
| Completed Well Cost | | \$ 2,000,000 | |
| Initial Production Rate | bopd | 80 | |
| Effective Exponential Decline Rate | 1/yr | 25% | |
| Working Interest | | 100% | |
| Net Revenue Interest | | 75% | |
| Severance & Advalorem Tax Rate | | 6.55% | |
| Operating Cost | \$/Well/Mo | \$ 2,000 | |
| Discounted (10%) Net Cash Flow | | \$ 1,261,210 | |
| Payout | Years | 1.72 | |
| Discounted (10%) Return on Investment | | 1.63 | |

*SAMSON RESOURCES
COMPANY*

RECEIVED
FEB 10 2009
COGCC

Cause No 474
Docket No 0902-SP-09



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

RECEIVED
FEB 10 2009
COGCC

IN THE MATTER OF THE APPLICATION OF)
SAMSON RESOURCES COMPANY FOR AN)
ORDER ESTABLISHING SPACING AND WELL)
LOCATION RULES FOR THE NIOBRARA)
FORMATION FOR CERTAIN DESCRIBED LANDS)
IN CRAIG FIELD, MOFFAT COUNTY,)
COLORADO)

Cause No 474

Docket No 0902-SP-09

REQUEST FOR RECOMMENDATION OF
APPROVAL OF APPLICATION WITHOUT A HEARING

Samson Resources Company ("Applicant") by and through its undersigned attorneys, hereby requests pursuant to Rule 511b of the Rules and Regulations of the Colorado Oil and Gas Conservation Commission for the Director to recommend approval of the verified application and the supporting exhibits without a hearing

Applicant requests that the captioned matter be so approved based upon the merits of the Application and exhibits to be submitted since it is a straight forward application to establish 320-acre drilling and spacing unit for production from the Niobrara Formation. The only protest to this Application has been withdrawn

Applicant will provide sworn written testimony verifying sufficient facts along with exhibits that adequately support the relief requested in the Application for a Commission order

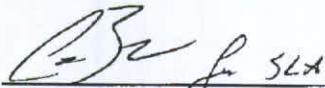
In the event that this request is denied, Applicant requests that the administrative hearing for this matter occur at a convenient time prior to the Commission hearing on February 23 and 24, 2009

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

DATED this 10th day of February, 2009

Respectfully submitted,

SAMSON RESOURCES, INC

By 
Susan L. Aldridge
BEATTY & WOZNIAK, P C
216 16th Street, Suite 1100
Denver, CO 80202
(303) 407-4499



474-7

RECEIVED
JAN 05 2009
COGCC

Reference Map

7N 92W

7N 91W

7N 90W

7N 89W

6N 92W

6N 91W

6N 90W

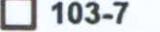
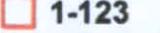
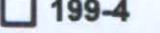
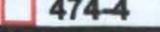
6N 89W

5N 91W

5N 90W

5N 89W

COGCC Spacing

-  274 1-3
-  474-3
-  445-1
-  103-7
-  1-123
-  199-4
-  474-4

State 33

15

Land Testimony

My name is Michael Horton, and I am employed as a Sr District Landman for Samson Resources Corporation ("Samson") I have my bachelor's degree in Business Administration in Energy Management from the University of Oklahoma I have 8 years experience as a Landman and have been with Samson since January of 2006 working directly with the properties that are the subject of today hearing My curriculum vitae is attached to Samson's Exhibit Booklet

In support of our application today, I have prepared one exhibit The exhibit is attached to my sworn testimony and form the basis for our application to obtain orders to establish a 320-acre drilling and spacing unit in Moffat County, Colorado

1 Exhibit No 1 Lease Map

Exhibit No 1 graphically depicts the proposed 320 acre spacing unit Lease boundaries are set forth on this map as well as the location for the State 33-15 #1 Well (the location of this well and its proposed drainage are the basis for the boundary of our proposed spacing unit)

The proposed 320 acre spacing unit is made up entirely of State mineral interests, which have been leased to Samson's partner Ponder Exploration Ltd d/b/a Lynn Properties

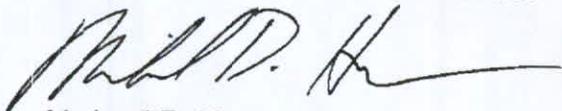
In accordance with the provisions of Rule 530 of the Rules and Regulations of the Colorado Oil & Gas Conservation Commission, at least 30 days have elapsed since the written notice has been provided to the interested parties Moreover, based upon my experience, I believe that the proposed spacing unit will equitably divide proceeds and will protect correlative rights

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

Dated this 9th day of February, 2009

Respectfully submitted,

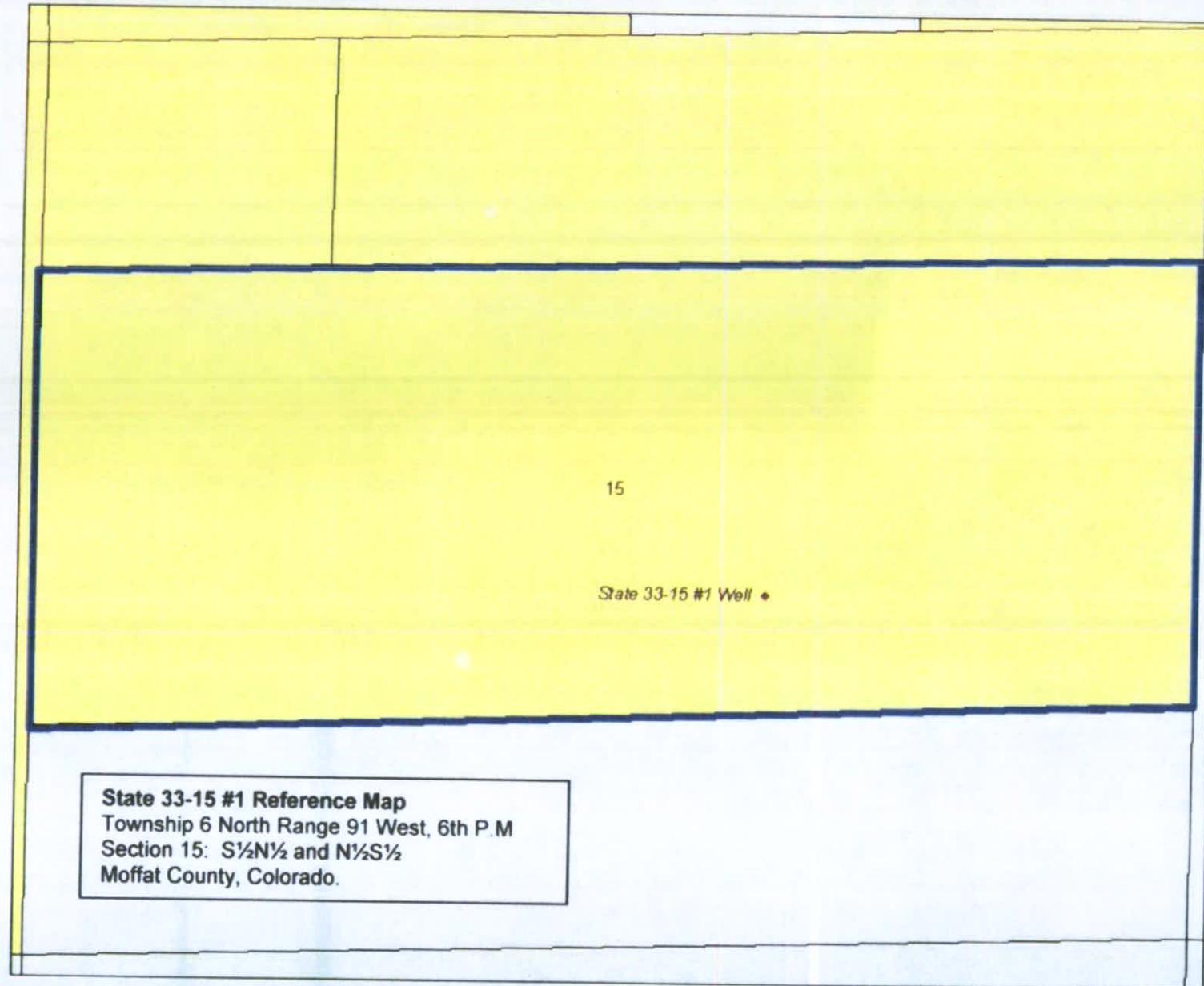
SAMSON RESOURCES COMPANY



Michael D Horton
Sr District Landman

474-7

Exhibit No. 1
Lease Map



State 33-15 #1 Reference Map
Township 6 North Range 91 West, 6th P.M
Section 15: S $\frac{1}{2}$ N $\frac{1}{2}$ and N $\frac{1}{2}$ S $\frac{1}{2}$
Moffat County, Colorado.

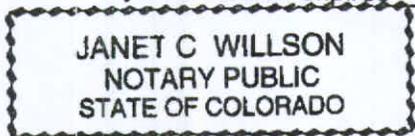
ACKNOWLEDGMENT

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

The foregoing instrument was acknowledged before me this 9th day of February, 2009, by Michael Horton

Witness my hand and official seal

My commission expires 6/11/2010



My Commission Expires 06/11/2010

Janet C. Willson
Notary Public
Address 8147 W. Virginia Ave.
Lakewood, CO 80226

(SEAL)

**MICHAEL HORTON
SR. DISTRICT LANDMAN**

EXPERIENCE

SAMSON RESOURCES COMPANY, DENVER, CO
SR DISTRICT LANDMAN, JANUARY 2006-PRESENT

ANADARKO PETROLEUM CORPORATION, HOUSTON, TX
LANDMAN, JUNE 2002-DECEMBER 2005

EDUCATION

UNIVERSITY OF OKLAHOMA, NORMAN, OK
BACHELOR OF BUSINESS ADMINISTRATION, ENERGY MANAGEMENT, MAY 2002

Engineering Testimony

My name is Kimberly Sands, and I am employed by Samson Resources Corporation ("Samson") as an Asset Engineer, Rocky Mountains Division. I have my Bachelor of Science Degree in Petroleum Engineering from Colorado School of Mines. I have 9 years experience as a Petroleum Engineer and have been with Samson since 2005 and have been working directly with the properties that are the subject of today hearing since August of 2006. My curriculum vitae is attached to Samson's Exhibit Booklet.

In support of our application today, I have prepared four exhibits. The exhibits are attached to my sworn testimony and form the basis for our application to obtain orders to establish a 320-acre drilling and spacing unit in Moffat County, Colorado.

1 Exhibit No. 1 Zimmerman-Chamberlin Decline Curve

Exhibit No. 1 depicts a decline curve for the Zimmerman-Chamberlin well which was selected for the drainage analogy as it is one of the two wells with significant Niobrara production on the Craig Dome structure.

2 Exhibit No. 2 Allen 44-8 #1 Decline Curve

Exhibit No. 2 depicts a decline curve for the Allen well which was selected for the drainage analogy as it is one of the two wells with significant Niobrara production on the Craig Dome structure.

3 Exhibit No. 3 Drainage Area Calculation

Exhibit No. 3 projects a drainage area radius for the State 33-15 #1 well based on fracture porosity in the brittle calcareous intervals of the Niobrara formation. Matrix porosity and permeability are assumed to be minimal contributors to production.

4 Exhibit No. 4 Discounted Cash Flow Economics

Exhibit No. 4 projects the economic impact of the State 33-15 #1 well based on the estimated ultimate recovery of 100,000 barrels of oil.

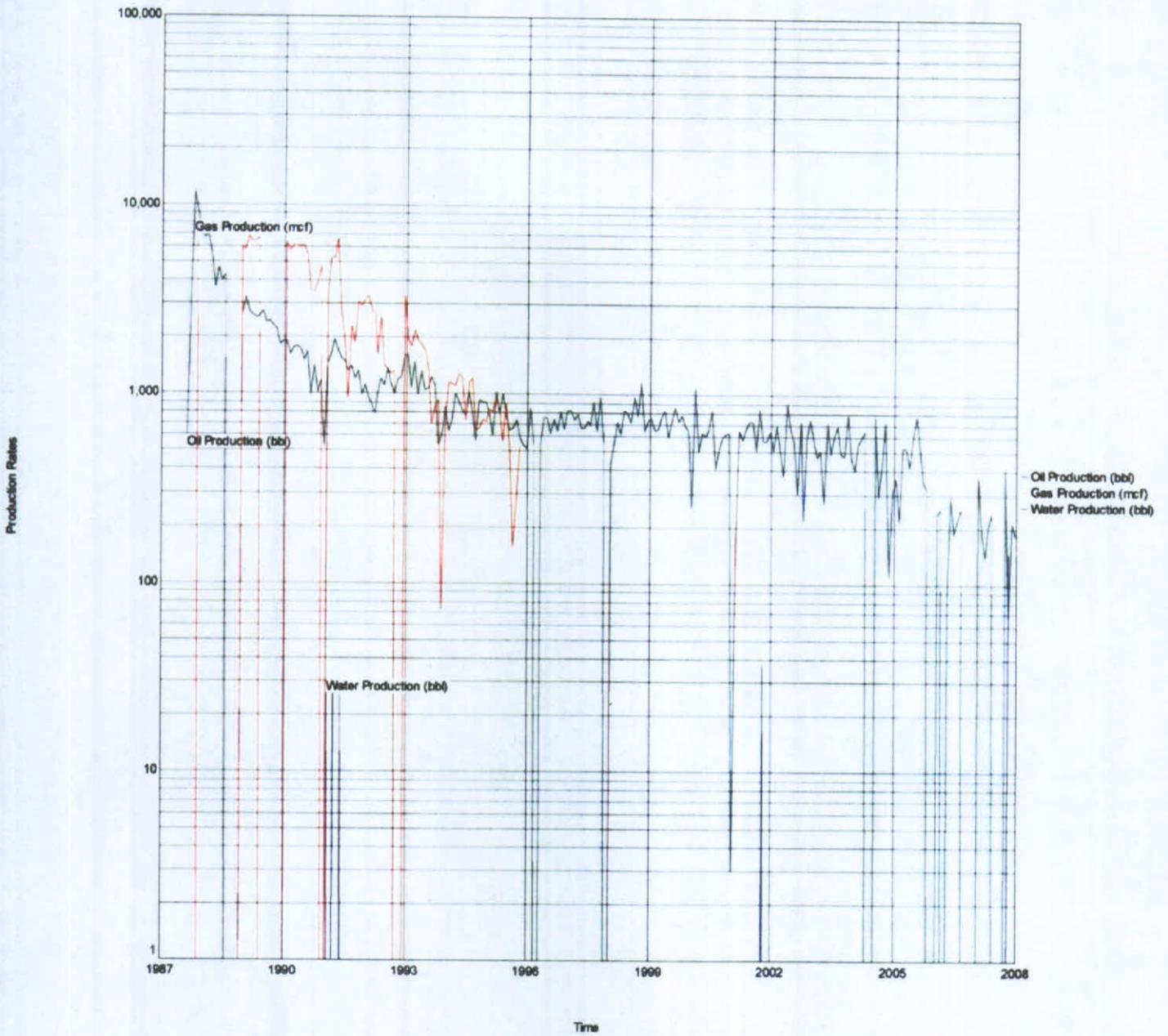
Based upon my analysis, I believe that creation of a 320-acre drilling and spacing unit will economically and efficiently drain the Niobrara formation in this area. Three hundred and twenty acre unit is not smaller than the maximum area that can be drained by this well. Depending upon the actual results of the State 33-15 #1 well, we are requesting the optional right to drill one additional well in this drilling and spacing unit.

The matters described herein were all conducted under my direction and control.

474-7

Exhibit No. 1
Zimmerman-Chamberlain #1 Decline Curve

ZMRRMN CHAMBERLIN#1 - CRAIG



474-7

Exhibit No. 2
Allen 44-8 #1 Decline Curve

ALLEN - CRAIG

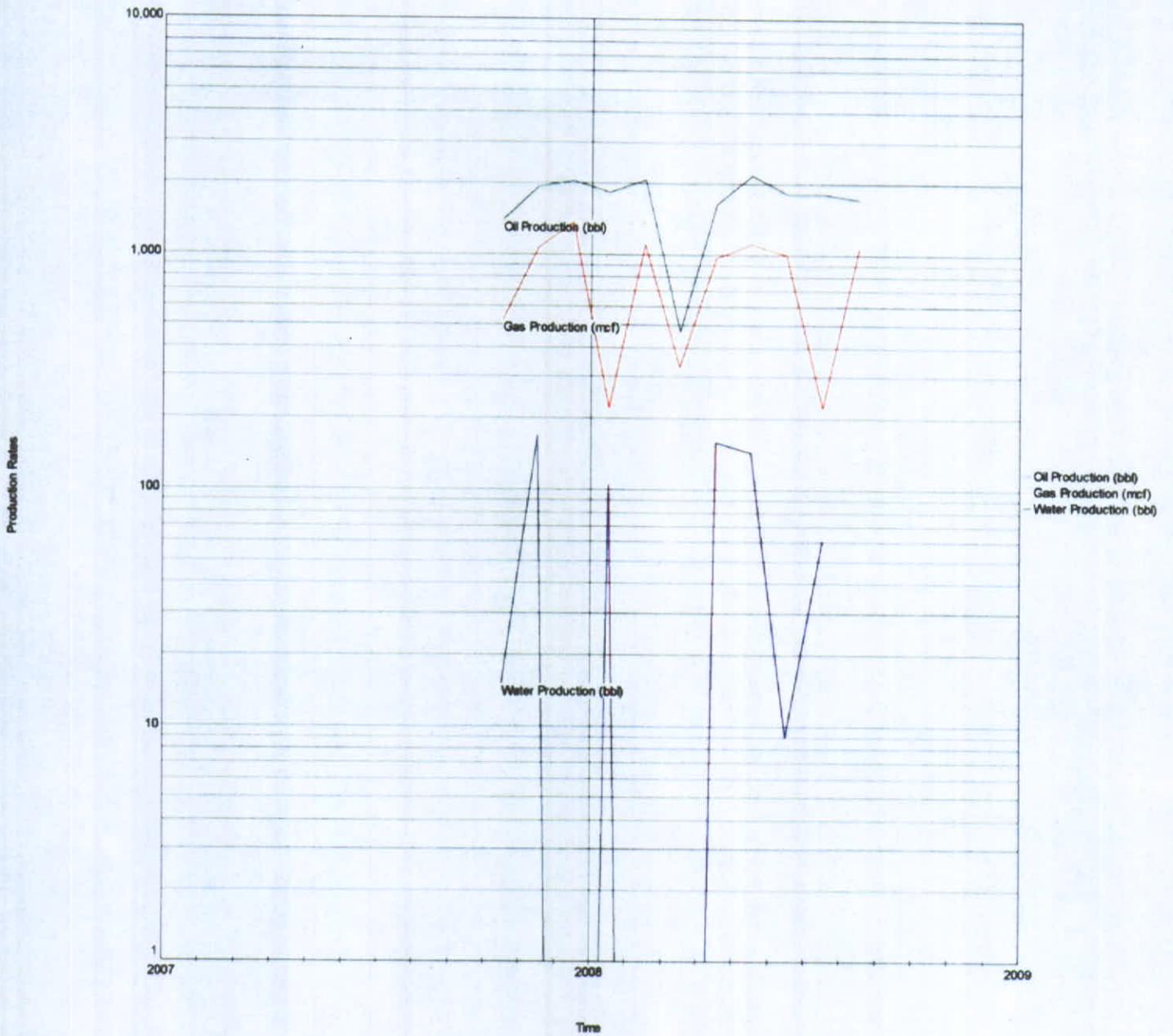


Exhibit No 3
 Drainage Area Calculations
 Niobrara Formation, Craig Field, Moffat County, Colorado
 Docket #
 Cause #

Drainage area calculations are based on fracture porosity in the brittle calcareous intervals of the Niobrara formation. Matrix porosity and permeability are assumed to be minimal contributors to production. The Zimmerman-Chamberlain well and the Allen 44-8 #1 wells were selected for the drainage analogies as they are the only other wells with significant Niobrara production on the Craig Dome structure.

| Well | Zimmerman Chamberlain #1 | Allen 44-8 #1 | State 33-15 #1 |
|-----------------------------------|--------------------------|------------------|----------------|
| Location | NW SW Sec 4, 6N-91W | SE Sec 8, 6N-91W | Sec 8, 6N-91W |
| Recovery as of 1-1-09 | 254 565 MBO | 26 198 MBO | |
| EUR | 260 MBO | 100 MBO | 100 MBO |
| Productive Thickness* | 280 ft | 280 ft | 280 ft |
| Initial Potential (first 30 days) | 350 BOPD | 80 BOPD | 80 BOPD |
| Estimated Fracture Porosity | 2% | 1% | 1% |
| Water Saturation | 15% | 15% | 15% |
| Oil Gravity | 37 degrees API | 37 degrees API | 37 degrees API |
| Original Reservoir Pressure | 2430 psi | 2430 psi | 2430 psi |
| Formation Volume Factor | 1.38 rb/bbl | 1.38 rb/bbl | 1.38 rb/bbl |
| Reservoir Temperature | 194 degrees F | 194 degrees F | 194 degrees |
| Estimated Recovery Factor | 5% | 5% | 5% |
| Estimated Drainage Area | 194 acres | 194 acres | 194 acres |

*Thicknesses are estimated to be equivalent between the two wells. No electric logs were available for the Zimmerman-Chamberlain well. The amount of section within the total thickness of the calcareous intervals which is actually fractured and contributing to production is unknown.

Exhibit No 4
Discounted Cash Flow Economics

| | |
|---------------------------------------|-------------------|
| Estimated Ultimate Recovery | 100,000 BO |
| Gas Sales | None |
| Wellhead Oil Price | \$50 00/BO flat |
| Completed Well Cost | \$2,300,000 |
| Initial Production Rate | 80 BOPD |
| Exponential Decline Rate | 25% per year |
| Net Revenue Interest | 77 5% |
| Severance and Ad Valorem Taxes | 6 55% |
| Operating Cost | \$3,000 per month |
| Discounted Cash Flow at 10% Discount | \$ 195,000 |
| Discounted Return on Investment (ROI) | 1 08 |
| Discounted Payout | 3 74 years |

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 this 5th day of February 2009

Respectfully submitted,

SAMSON RESOURCES COMPANY

Kimberly Sands

Kimberly Sands
Asset Engineer, Rocky Mountain Division

ACKNOWLEDGMENT

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

The foregoing instrument was acknowledged before me this 5th day of February, 2009, by Kimberly Sands

Witness my hand and official seal

My commission expires 6/11/2010

JANET C. WILLSON
NOTARY PUBLIC
STATE OF COLORADO

My Commission Expires 06/11/2010

Janet C. Willson

Notary Public
Address 8147 W. Virginia Ave.
Lakewood, CO 80226

(S E A L)

Kimberly Sands
Asset Engineer

Experience

Samson Resources Company, Denver, CO
Asset Engineer, April 2005 – Present

EnCana USA, Denver, CO
Completions Engineer, June 2004 – April 2005

BP America, Houston, TX
Consulting Drilling Engineer, March 2004 – May 2004

BP America, Houston, TX
Drilling Engineer, January 2001 – March 2004

Vastar Resources, Houston, TX
Production Engineer, June 2000 – January 2001

Education

Colorado School of Mines, Golden, CO
Bachelor of Science, Petroleum Engineering, May 2000

Geology Testimony
Cause No 474
Docket No 0902-SP-07

My name is Rusty Kelly, and I am employed as a Sr District Geologist for Samson Resources Company ("Samson") I have BS and MS degrees in Geological Sciences from Ohio University I have eight years experience as a Geologist and have been with Samson since October of 2002, and have been working the Niobrara Formation or equivalent intervals in Colorado for the past 2 years, with a specific concentration on the northwest Colorado area for the past 15 months My qualifications are attached to Samson's Exhibit Booklet

In support of our application today, I have prepared five exhibits The exhibits are attached to my sworn testimony and form the basis for our application to obtain orders to establish a 320-acre drilling and spacing unit in Moffat County, Colorado

1 Exhibit No 1 Location Map

Exhibit No 1 depicts the proposed 320 acre spacing unit in a red dashed outline The subject unit is located in Section 15, township 6 North , Range 91 West

All wells drilled in the surrounding sections are displayed A producing formation color code has been applied to indicate which zone(s), if any are productive Five wells have produced from the Niobrara Formation, one well has produced from the Frontier formation, and one well has produced (water only) from the Williams Fork Coal A cross-section index line is posted on the map to indicate the location of the fourth geologic exhibit

2 Exhibit No 2 Type Log

Exhibit No 2 is a type log for the Niobrara Formation in the application area The well used for this type log is the Samson Resources Company Allen 44-8#1 well in section 8, Township 6N, Range 91W The log types on this exhibit include a gamma ray, deep induction, and conductivity logs The shale dominated Niobrara Formation is indicated on this log along with three calcareous rich intervals which are designated by blue shading and are labeled with industry nomenclature The thickness of these units is indicated to the left of underlying shales within the Niobrara Formation and therefore have a greater ability to fracture Fractures within these brittle calcareous intervals are the reservoir target within the Niobrara Formation in this area

3 Exhibit No 3 Structure Map

Exhibit No 3 is a structure map constructed on top of the Niobrara Formation in the application area The foundation of this map is from wireline log tops picked in the application area Mapping of this structural surface reveals that there is a fault bounded anticlinal structure underlying the application area Steep dips and faulting indicate an area of greater fracture development and dilation, which allows for greater fractured reservoir storage The area of our application, has been identified due to this increased fracturing within the brittle

calcareous intervals This "fracture fairway" allows for increased deliverability from an otherwise impermeable and uneconomic reservoir

4 Exhibit No 4 Cross-Section

Exhibit No 4 is an Isopach map for the calcareous rich intervals within the Niobrara Formation Wireline logs were reviewed to identify the three reservoir units, the gross interval was then calculated and summed together for a gross thickness of these brittle units These values were then posted on the map and an isopach map was created to display the thickness of the brittle calcareous units within the Niobrara

5 Exhibit No 5 Isopach Map

Exhibit No 5 is an Isopach map for the calcareous rich intervals within the Niobrara Formation Wireline logs were reviewed to identify the three reservoir units, the gross interval was then calculated and summed together for a gross thickness of these brittle units These values were then posted on the map and an isopach map was created to display the thickness of the brittle calcareous units within the Niobrara This map indicates a minimum thickness of 280' of brittle calcareous rich Niobrara beneath the application lands

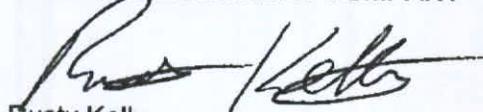
The Geology exhibits attached and described above demonstrate that the Niobrara formation is present, and fractured, beneath the application lands The presence of fractures allows for the economic extraction of oil from this reservoir Based upon my experience, I believe that the proposed spacing unit will equitably divide proceeds and will protect correlative rights

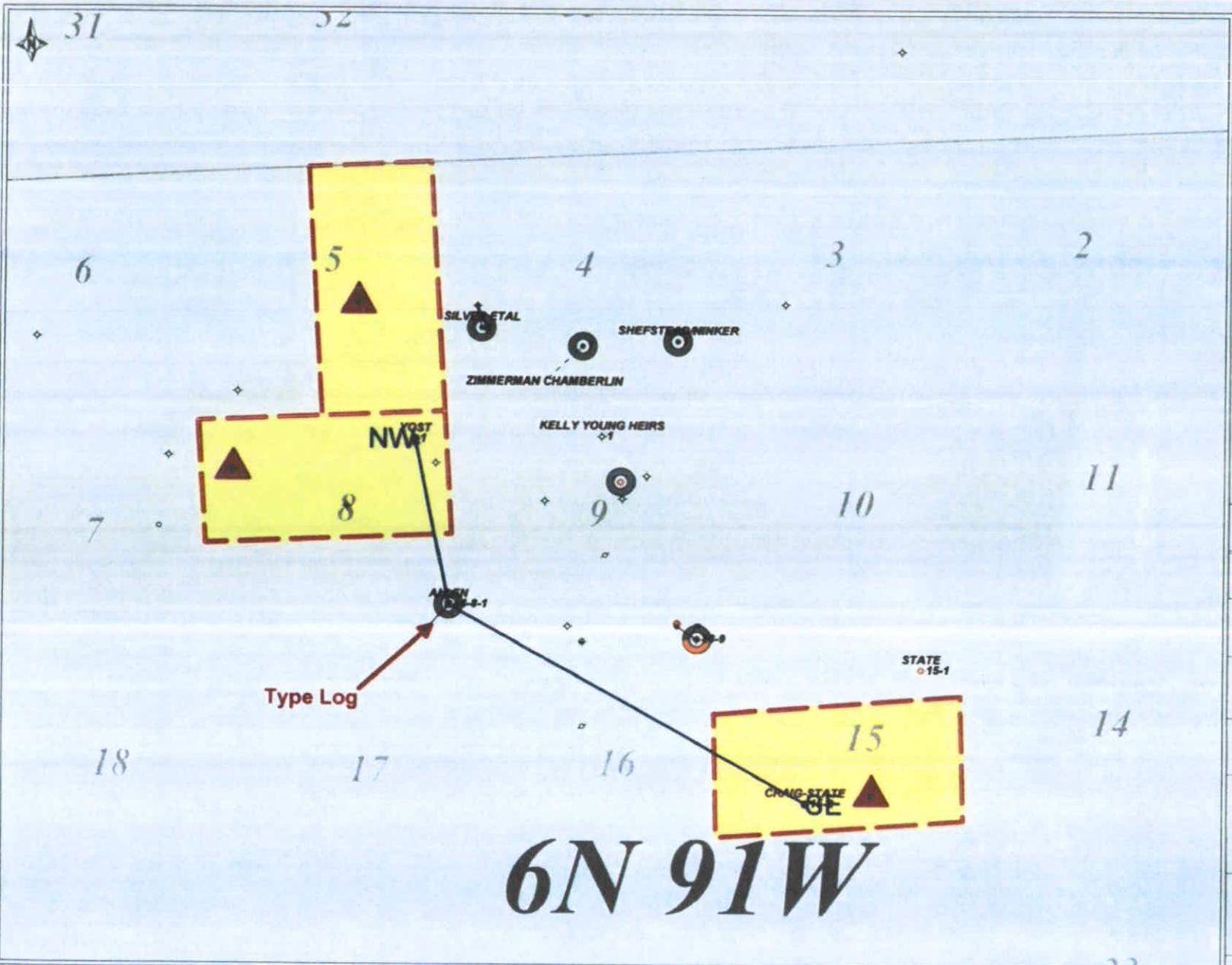
The matters described herein were all conducted under my direction and control To the best of my knowledge and belief, all of the matters set forth herein, my testimony and in the exhibits are true, correct and accurate

Dated this 9th Day of February, 2009

Respectfully submitted,

SAMSON RESOURCES COMPANY


Rusty Kelly
Sr District Geologist



Samson

GEOLOGY EXHIBIT #1
LOCATION MAP-CRAIG FIELD

0 2,000 4,000
FEET

ATTRIBUTE MAP
 NIobrara PRODUCTION
 FRONTIER PROD.
 WM FK COAL PROD

SYMBOL HIGHLIGHT
 CRAIG DOME LOCS

WELL SYMBOLS
 Location Only
 Oil Well
 Gas Well
 Dry Hole
 Abandoned Well
 Dry Hole, With Show of Oil

REMARKS
 DOCKET #: 0902-SP-07
 DOCKET #: 0902-SP-08
 DOCKET #: 0902-SP-09
 CAUSE #: 474

By: RKELLY



474-7

Type Log-Geology Exhibit 2



01408690

424-7

05081073990000

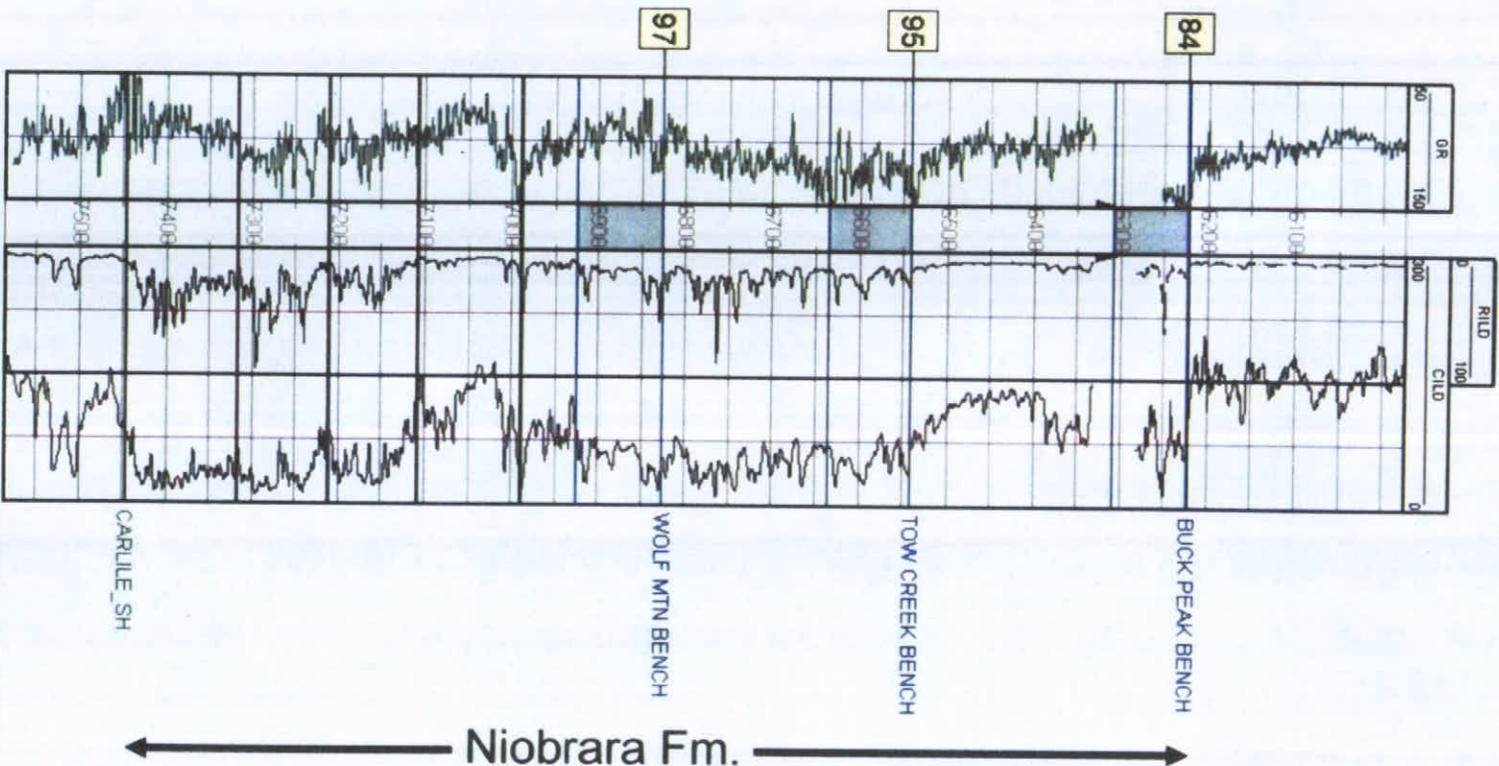
SAMSON RESOURCES CO

ALLEN

• 44-8-1

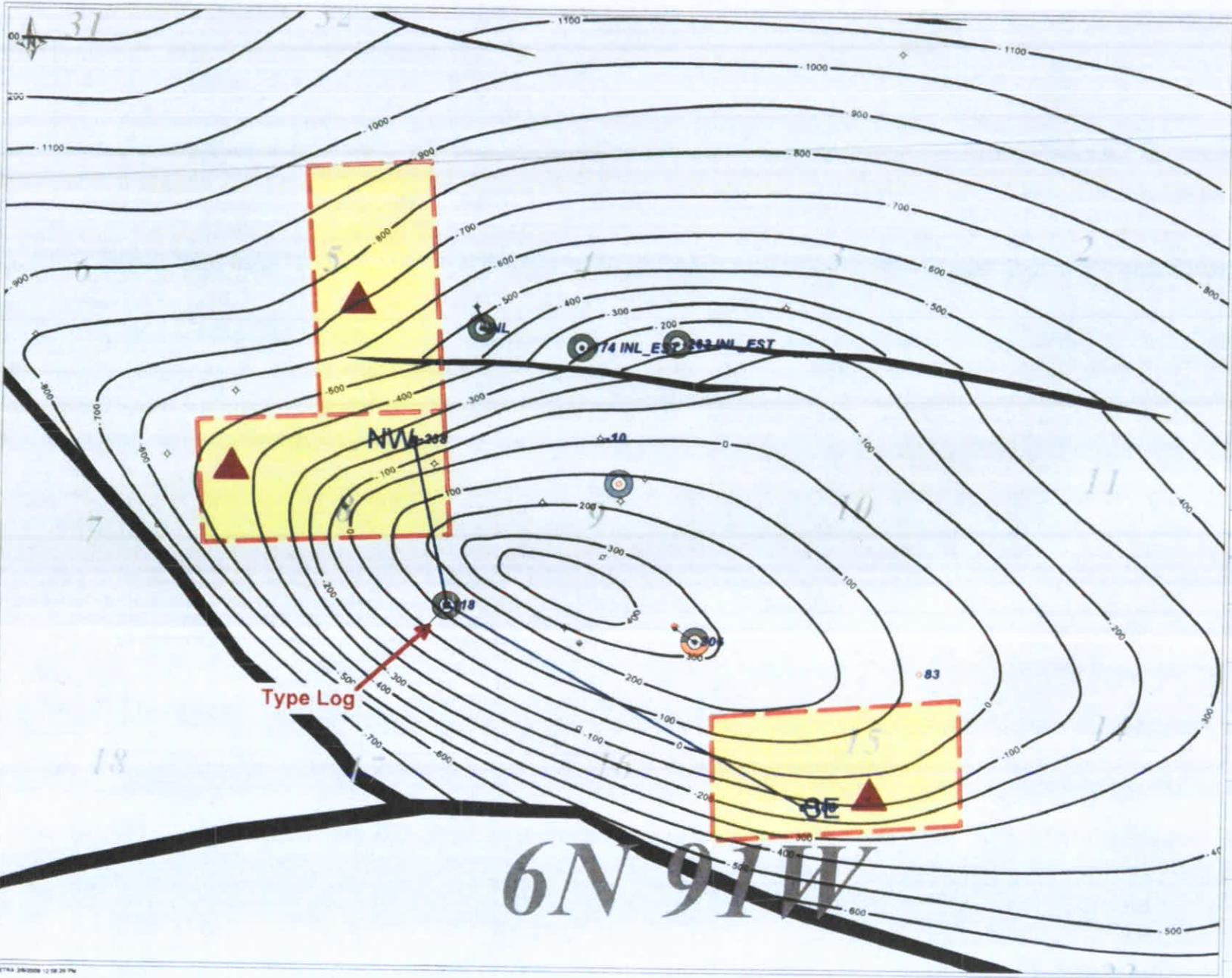
T6N R91W S8

SE SE



TD : 7,629

Brittle Interval



Samson

GEOLOGY EXHIBIT #3
 NIORARA STRUCTURE MAP



ATTRIBUTE MAP

- NIORARA PRODUCTION
- FRONTIER PROD.
- WM FX COAL PROD.

SYMBOL HIGHLIGHT

- CRAG DOME LOCS

WELL SYMBOLS

- Location Only
- Oil Well
- Gas Well
- Dry Hole
- Abandoned Well
- Dry Hole, With Show of Oil

REMARKS

DOCKET #: 0902-SP-07
 DOCKET #: 0902-SP-08
 DOCKET #: 0902-SP-09
 CAUSE #: 474

By RKELLY



474-7

NW

SE

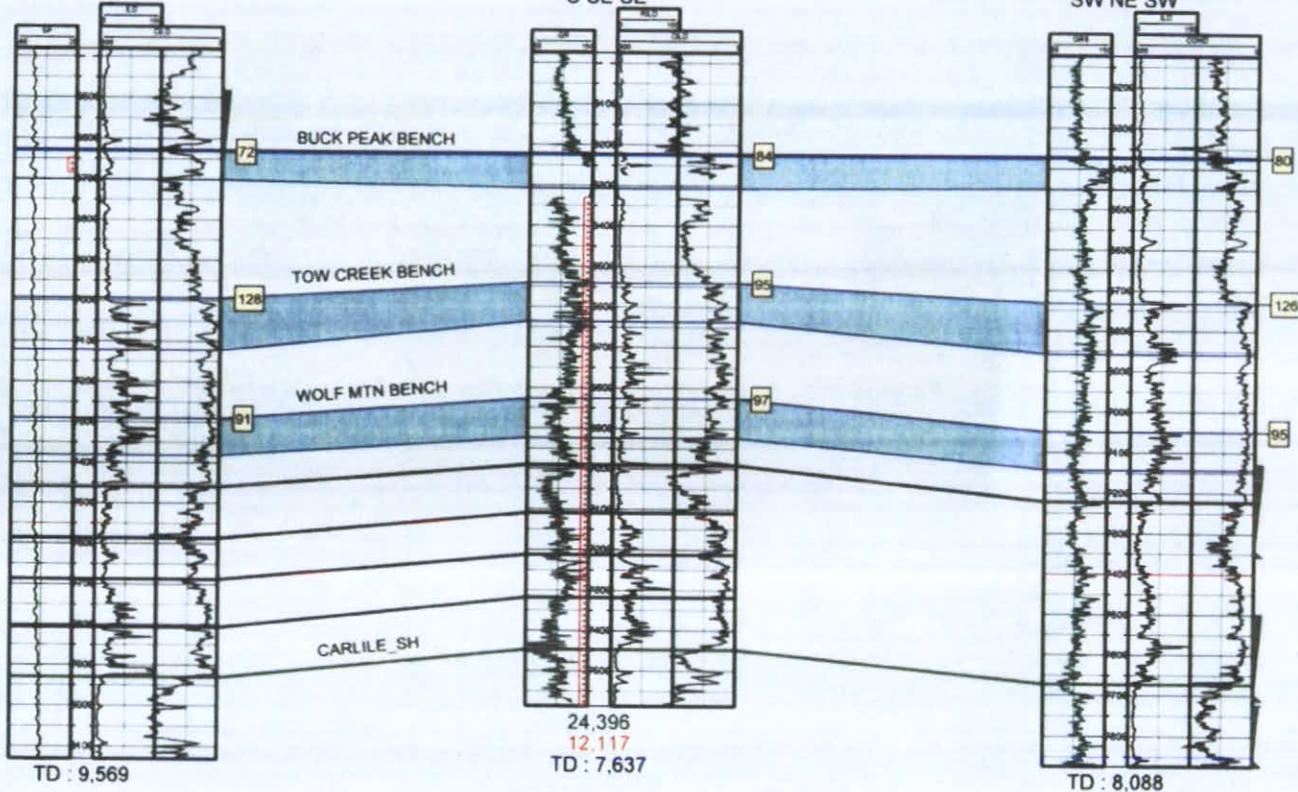
05081053450000
 CONTINENTAL OIL CO
 YOST
 ±1
 T6N R91W S8
 NE NE

<3.823FT>

05081073990000
 SAMSON RESOURCES COMPANY
 ALLEN
 24,396
 12,117
 • 44-8-1
 T6N R91W S8
 C SE SE

<8.480FT>

05081066720000
 K-N OPRTRNG CORPRTN
 CRAIG-STATE
 ±15-2
 T6N R91W S15
 SW NE SW



Samson
 GEOLOGY EXHIBIT #4
 Stratigraphic X-section
 DATUM: TOP OF NIobrARA
 Horizontal Scale = 500.0
 Vertical Scale = 100.0
 Vertical Exaggeration = 5.0x

CORES SHOWS DETAIL SP CASE

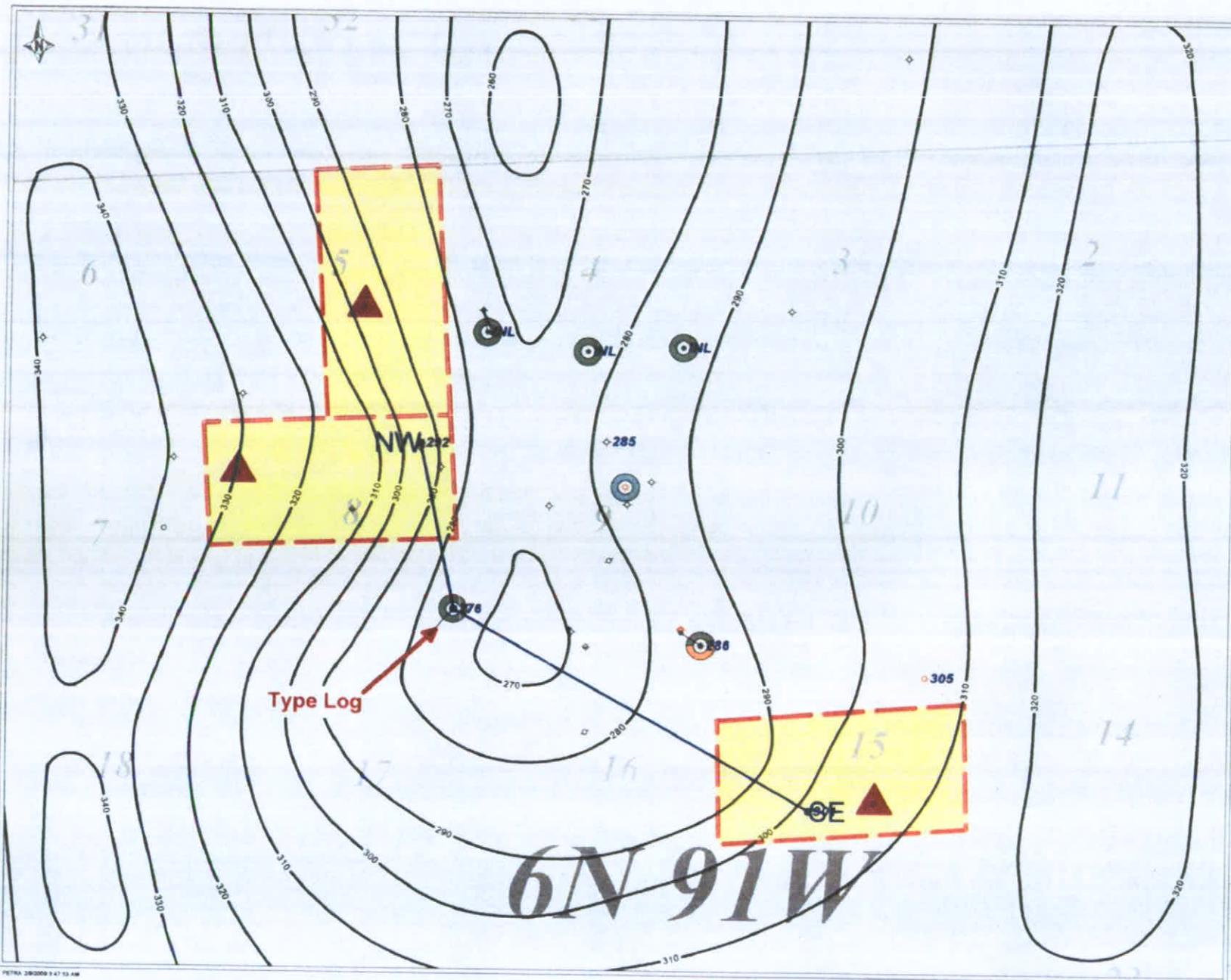
DOCKET # 0902-SP-07
 DOCKET # 0902-SP-08
 DOCKET # 0902-SP-09
 CAUSE # 474

BY: RRELLY



01408692

474-7



PETRA 282009 1:47 13 AM

Samson

GEOLOGY EXHIBIT #5
 NIOBRARA CALCAREOUS BENCH ISOPACH
 GROSS INTERVAL MAP (10' C.I.)

0 2,000 4,000
 FEET

ATTRIBUTE MAP
 NIOBRARA PRODUCTION
 FRONTIER PROD.
 WM FX COAL PROD.

SYMBOL HIGHLIGHT
 ▲ CRAIG DOME LOCS

WELL SYMBOLS
 ○ Location Only
 ● Oil Well
 ◐ Gas Well
 ◑ Dry Hole
 ◒ Abandoned Well
 ◓ Dry Hole, With Show of Oil

REMARKS
 DOCKET #: 0902-SP-07
 DOCKET #: 0902-SP-08
 DOCKET #: 0902-SP-09
 CAUSE #: 474

By RKELLY



474-7

Geological Witness

Russell (Rusty) Kelly

Education:

MS Geology Ohio University 2002

BS Geology Ohio University 1999

Work Experience:

Geologist-Samson Resources Company

Denver CO.

1/2005-Present

Tulsa OK.

10/2002-1/2005

Geologist-Texas Keystone Inc.

Pittsburgh PA.

3/2001-10/2002

John D. Wright, PhD, P.E.

John D. Wright is Chief Engineer of Wright Consulting Company in Golden, Colorado. He has more than 40 years of domestic and international oil and gas experience in reservoir engineering, coalbed natural gas development, and property evaluation and has been an expert witness in more than 40 oil and gas industry cases. He has testified in front of conservation commissions, state courts, federal courts, and arbitrations.

Dr. Wright has been a principal in two petroleum engineering consulting firms for a total of 25 years and taught Petroleum Engineering at the Colorado School of Mines for eight years. He co-authored a book titled Oil Property Evaluation and has taught numerous short courses domestically and internationally. Dr. Wright is active in a number of professional societies and is a registered professional engineer in three states. He is a member of a number of professional societies including SPE, SPEE, SIPES, and SPWLA. He served on the Board of Directors for the Society of Petroleum Evaluation Engineers.

MICHAEL T. SULLIVAN
6371 Lemon Gulch Drive
Castle Rock, Colorado 80108

PERSONAL: Age: 63
Married, Three Children
Health: Excellent
Education:
A.S. Civil Engineering, 1969 Otero Jr. College
B.S. Chemistry, 1975, University of Denver

WORK EXPERIENCE:

1970-1975 Bell Surveying and Engineering
Registered Land Surveyor
1975-1977 Chemical Analyst, Melcor Labs, Denver, Colorado
1977-1980 Amoco Production Company, Denver, Colorado
Area Landman
1980-1982 Dome Petroleum Corporation, Denver, Colorado
District Manager, Rocky Mountain Region
1982-1983 DMC Corporation, Denver, Colorado
District Manager
1983-1985 Amerada Hess Corporation, Denver, Colorado
Area Landman, California and Rocky Mountains
1985-1986 Arco Oil and Gas Company, Denver, Colorado
Land Manager, Denver Office
1986-1987 Arco Oil and Gas Company, Midland, Texas
Property Sales Manager, Central District
1987-1991 El Paso Mineral Company, Midland, Texas
Vice President of Acquisitions, Division Orders
1991-2000 Santa Fe Natural Resources, Inc. and Santa Fe Royalties, Inc.
Sr. Vice President of Land, Acquisitions and Division Orders.
2000- Present President and CFO Durango Pipeline Corp. and Durango LLC.

James R. Van Meter
10826 Elder Ave.
Conifer, CO 80433
AAPG Certified Geologist #4813

Education:

1980 BA degree Geology Western State College, Gunnison CO
1990 MS degree Geology Colorado School of Mines, Golden CO

Work Experience:

1980-1981 Geologist Rocky Mountain Geo-Engineering Grand Junction, CO
1981-1982 Geologist Gustavson Associates, Boulder CO
1983-1986 Geologist Steven D. Reynolds Exploration, Denver CO
1987-1990 Graduate Student Colorado School of Mines
1990- 1993 Senior Geological Engineer, Tenneco Gas Pipeline, Houston, TX
1993-1995 Chief Geologist, DNR Oil & Gas, Denver, CO
1995-Present Consulting Petroleum Geologist, Van Meter Geosciences, Inc.
Conifer, CO

AAPG certified petroleum geologist, over 29 years of domestic/international experience in exploration/development geology. Proficiency at log analysis, prospect generation/evaluation, reserves estimation and net pay analysis, field/regional studies, well site operations. Experienced with 2-D/3-D seismic modeling/interpretation, geochem and E-M field data retrieval, data digitization and various other engineering and geologic duties and have worked for consulting firms, oil companies and a gas pipeline company since 1980. Areas of experience include Rocky Mountain oil and gas basins including Powder River, San Juan, Greater Green River, Williston, Piceance, Uinta, as well as Mid-Continent region, Gulf Coast (on & off-shore), Appalachia, California, and overseas (Myanmar, Mexico, FSU). Projects included an array of structural and stratigraphic tectonic regimes, involving conventional/non-conventional reservoirs including basin centered gas, fractured shale reservoirs and coal bed methane.

JAMES R. VAN METER, M.S., CPG
PETROLEUM GEOLOGIST

EDUCATION

1990 M. S. Geology
Colorado School of Mines
Golden, Colorado

1980 B.A. Geology
Western State College
Gunnison, Colorado

ASSOCIATIONS

American Association of
Petroleum Geologists
Certified Petroleum
Geologist #4813

Rocky Mountain
Association of Geologists
Member

Society of Petroleum Engineers
Member

EXPERTISE

Reservoir Petrophysical analysis

Economic forecasting and
reserves calculation

California heavy oil

CBM/tight sands/fractured shale
exploration and development

Petra and Geographix
geologic mapping
and reservoir simulation

Prospect generation
and evaluation

Regional field studies

Horizontal and wellsite coiled
tubing technology

Subsurface mapping

Petrophysical log analysis,
seismic interpretation/modeling

PROFESSIONAL HIGHLIGHTS

More than twenty-eight years of oil and gas experience in domestic and international petroleum geology as a senior exploration/development geologist and geological engineer.

WORK EXPERIENCE

1999 to 2010 Senior Consulting Geologist

- Cypress Production, Inc.
- Tiorco, LLC, Denver, CO
- SCA Consultants, Houston, TX
- MHA Petroleum Consultants, Lakewood, Colorado
- Norwest Corp., Golden, Colorado
- Hilcorp Energy Co, Houston, TX
- Halliburton Energy Services, Denver, Colorado
- Infinity Oil and Gas of Wyoming, Denver Colorado
- Gustavson Associates Inc., Boulder, Colorado
- Encana Oil and Gas, Inc., Denver, Colorado
- Niobrara fractured shale – Eastern Sandwash Basin, CO
- Barnett fractured shale -, Ft. Worth Basin, TX
- California heavy and light oil plays, San Joaquin Basin.
- Coal bed methane evaluation/exploration in Piceance, Cherokee, Arkoma, Uinta, and Wind River basins, KS, AR, UT, CO, MT and WY.
- Horizontal drilling onsite supervision Niobrara fractured shale.
- Basin-centered gas and coal-bed methane plays in the Uinta, Piceance, Green River, San Juan, and Sand Wash basins, UT, CO, WY and NM.
- Field and regional geologic studies within Rocky Mountain area evaluating drilling and completion prospects for Infinity Oil and Gas of Wyoming/Texas and Halliburton Integrated Solutions, Denver.
- Drilling evaluation for proposed infill drilling, Wattenburg Field, Colorado and Williston Basin.
- Reserves estimation and regional/field mapping of various oil fields in Mexico, Kazakhstan, Yemen and Australia.

QUESTA ENGINEERING CORPORATION, GOLDEN, COLORADO

1997–1999 Senior Geologist

- Baker-Hughes Myanmar Project: Supervised office in Yangon, Myanmar. Objective: Remap and enhance production within the geologically complex Mann Oil Field.
- Coordinated the gathering of all pertinent geological, geophysical and reservoir engineering data from Myanmar government.
- Supervised digitizing, correlation and evaluation of more than 600 well logs.
- Supervised operational logistics and coordination of personnel to the field.
- Worked in conjunction with a large 3-D seismic survey to develop exploration targets and field exploitation candidates.

1993–1997 INDEPENDENT GEOLOGICAL CONSULTANT, LAKEWOOD, CO

- Geological consultant with a wide variety of responsibilities for Denver area clients (Wavetech Geophysical, Resolute Natural Resources, Atoka Exploration, K.P. Kauffmann, Stratasearch, DNR Oil and Gas) encompassing many phases of production and exploration geology including prospect evaluation and screening, lease acquisition, field mapping, production

acquisition, well-site geology, log analysis, secondary work-over, computer mapping, data acquisition and data base maintenance.

- Areas of responsibilities include the Rocky Mountain region, Mid-continent, Gulf Coast, Cincinnati Arch.
- Conducted regional study and resource assessment of fields in the North Caspian region of the Astrakhan Oblast, Russia, which involved evaluating prospective bidding areas, creating and managing various databases, editing technical translations and supervising other consultants and translators.

**TENNECO GAS PIPELINE, HOUSTON, TEXAS
1990–1993 Senior Geological Engineer**

- Appraise potential gas reserves for delivery to pipeline through basin and field studies.
- Estimate reservoir gas volumes, economics and deliverability.
- Prepare volumetric calculations of attached or prospective oil and gas wells/fields Gulf Coast, Texas on-shore, and Mid-continent region for presentation to management.

1987–1990 Graduate Student, Colorado School of Mines

- Summer 1989: Mobil Oil Corporation, Denver, Colorado: Production Geologist; log evaluation and mapping clastic reservoirs, South Belridge Field, Kern County, California.
- Summer 1988: Pendleton Land & Exploration, Englewood, Colorado Seismic modeling of shallow carbonate reservoirs, Central Kansas (thesis)
- Summer 1987: Inquest Energy / G.E.O., Denver, Colorado

RADER AND REYNOLDS, INC.

**STEPHEN D. REYNOLDS EXPLORATION, DENVER, COLORADO
1983–1986 Consultant**

- Geological mapping and regional geologic studies for client companies.
- Prospect generation and well-site supervision within Mid-Continent and Rocky Mountain basins.

**GUSTAVSON ASSOCIATES, INC., BOULDER, COLORADO
1981–1982 Geologist**

- Well log and reservoir evaluation, geologic studies of oil and gas fields in Rocky Mountain region.
- Recommend oil well completions, multiple well directional and horizontal drilling programs.
- Prepared reserve economics and volumetric estimation.
- Responsible for all field operations in newly developed technology for mudlogging and wellsite geology.

**ROCKY MOUNTAIN GEO-ENGINEERING, GRAND JUNCTION, COLORADO
1980–1981 Geologist, Mudlogger**

- Rocky Mountain region, including Paradox, Piceance, San Juan, Uinta, Sand Wash, Williston, Powder River, Hanna Basins.

SOFTWARE SKILLS

Geoplus Petra, Geoplus Petraseis, Geographix, Surfer, Excel, PowerPoint, Power Tools; Kingdom, Landmark Stratworks, and Geoquest 3-D.