

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

IN THE MATTER OF THE APPLICATION )  
OF GRYNBERG PETROLEUM COMPANY )  
FOR AN ORDER REDUCING THE )  
SPACING AREA OF THE PYLES NO. 1 )  
WELL, LOCATED IN THE NW/4 SE/4 )  
SECTION 6 T20S R48W, FROM 640 )  
ACRES TO 160 ACRES IN THE SE/4 )  
SECTION 6, T20S R48W, KIOWA )  
COUNTY, COLORADO )

CAUSE NO. 105

DOCKET No. \_\_\_\_\_

**VERIFIED APPLICATION**

Grynberg Petroleum Company ("Applicant") by its attorneys, The Hayes Law Firm LLC, respectfully submits this application to the Oil and Gas Conservation Commission of the State of Colorado ("Commission") for an order modifying Oil and Gas Conservation Cause No. 105, to reduce the spacing area of the Pyles No. 1 Well, located in the NW/4 SE/4 Section 6, T20S R48 W, Kiowa County, CO, from 640 acres to 160 acres in the SE/4 Section 6 T20S R48W, Kiowa County: The following lands are affected by this Application (the "Application Lands"):

Township 20 South, Range 48 West, 6th P.M.  
Section 6: All

In support of this Application, Applicant states as follows:

**I. Applicant**

The Applicant is an individual authorized to conduct business in the State of Colorado under the registered trade name Grynberg Petroleum Company. The Applicant owns leasehold interests in the Application Lands. The Applicant is the Operator of the Well on the Application Lands.

Jack Grynberg, (Colo. Professional Engineer Reg. No. 29586 ) has prepared an Attestation that outlines the engineering calculations he performed on behalf of the Applicant to reach the conclusion set forth in this Application. The Attestation refers to Exhibit Numbers that do not conform to the Commission's exhibit criteria; in the interest of clarity the exhibits are also labeled in accordance with the Commission criteria, but they are presented in the order discussed in Mr. Grynberg's Attestation statement.

**II. Application Lands and Well History**

1. The Application Lands are located in the McClave Field, Spacing and Unit Designation Area defined by the Commission in Cause No. 105 Order No. 1 and subsequent orders.

2. According to Cause No. 105 Order Nos. 1 and 2, wells in the McClave Field Area may be drilled in each 640-acre governmental section within the field area, and located within 990 feet of the center of such section.

3. There is a well currently located on the Application Lands, the "State Pyles No 1" in the NW/4 SE/4 Section 6 (API No. 05-061-06155) (the "Well").

4. First production on the Well was made in June 1974.

5. Cumulative production from the Well is 774 MMCF from first production through 1995.

6. The Well is currently shut in..

7. The prior operator received an NOAV on May 26, 1999, for having kept the well shut in for more than two years. The NOAV was resolved on September 30, 1999

8. The Colorado Oil and Gas Commission were prepared to plug Pyles #1 at the State of Colorado's expense. Grynberg Petroleum contacted the State and offered to assume the Pyles #1 Well, including all plugging costs, if the State would approve Form 10 granting Grynberg the right to operate the well and place it back on production. The State agreed and this is an important reason Grynberg is applying for spacing reduction to 160 acres.

9. The Applicant is now the Operator of the Well; the Applicant's Form 10 Certificate of Clearance/ Change of Operator form was approved August 1, 2007..

10. The Applicant estimates that there are additional recoverable reserves of 174 MMSCF to be produced from the Well, provided that the spacing area is reduced from 640 acres to 160 acres.

11. The Applicant will not only have saved the State the expense of the plugging the Pyles #1 but also offers a chance to generate additional royalty and severance tax income to the mineral holders, Kiowa County and the State of Colorado.

12. Applicant intends to re-complete the Well and return it to production to produce the remaining reserves.

### **III. Reservoir Conditions on the Application Lands**

1. Current spacing on the Well is dictated by Cause No. 105, Orders No. 1 and 2, to be 640 acres with well location to be no more than 990 Ft. from the center of the 640 acre regular sections governed by those orders.

2. Applicant's reservoir calculations indicate that there are approximately 174 MMSCF gas remaining to be produced from the Well. (See Exhibits H-1 through H-5.)

3. Applicant's calculations show that the maximum area that can efficiently and economically be drained by the Well in producing the remaining reserves is 148 acres. (See Exhibit H.-4)

4. Producing the Well on the current 640 acre spacing area (See Exhibit A-1) will result in an uneconomic dilution of interests in the well. Because of the pooling of interests required to make up 640 acres, as opposed to the 148 acres that will actually be drained by the recompleted Well, the Applicant will not be able to recomplete the Well economically at 640 acres spacing.

5. Upon granting of the relief requested in this Application, the Applicant intends to recomplete the Well in the McClave Formation. Royalties will be payable to those mineral interest owners having an interest in the SE/4 Section 6 T20S R48W (listed in Exhibits B-1 and A-3).

#### **IV. Exceptions and Waivers**

1. The Commission has the authority to prevent waste and protect correlative rights by issuing spacing orders and variances thereto.

2. The Commission, upon application, notice and hearing, may decrease the size of drilling units within established units, to prevent or assist in preventing waste. C.R.S. §34-60-116(4).

3. The Applicant has determined that the area to be drained by recompleting the existing Well in the Application Lands will be 148 acres, and that continuing the existing 640 spacing in the Application lands will render efforts to recomplete the Well uneconomic.


4. If the Well is not recompleted then 174 MMSCF of gas that could be produced from such recompletion, will be wasted.

#### **V. Request for Relief.**

1. Therefore, the Applicant respectfully requests that the Colorado Oil and Gas Conservation Commission declare that the minimum spacing for the recompletion of the Well is reduced to 160 acres, centered on the existing Well.

Respectfully submitted on June 29, 2009

The Hayes Law Firm LLC



By: /s/ Christopher G. Hayes

Christopher G. Hayes

The Hayes Law Firm LLC  
1580 Lincoln Street, Suite 700  
Denver, CO 80203  
Telephone: 303-860 1800  
Facsimile: 303-302 -3088  
[chayes@hayeslawfirmllc.com](mailto:chayes@hayeslawfirmllc.com)

**Applicant's Contact Information:**

Grynberg Petroleum Company  
Prentice Point, Suite 500  
5299 DTC Boulevard  
Greenwood Village, CO 80111-3321  
Telephone: 303-850-7490  
Facsimile: 303-296-3601

VERIFICATION

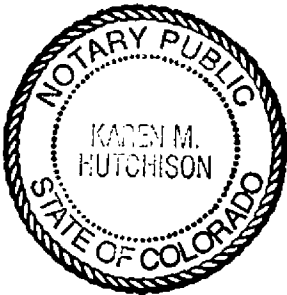
STATE OF COLORADO            )  
  ) ss.  
CITY & COUNTY OF DENVER    )

Jack J. Grynberg, being of lawful age, being first duly sworn upon oath, deposes and says that he is a Registered Professional Engineer in the State of Colorado and President for Grynberg Petroleum Company, that he has read the foregoing Application, and that the matters therein contained are true to the best of his knowledge, information, and belief.

*[Handwritten signature of Jack J. Grynberg]*  
/s/ Jack J. Grynberg  
\_\_\_\_\_  
Jack J. Grynberg

SUBSCRIBED AND SWORN TO before me this 27<sup>th</sup> day of June, 2009.

Witness my hand and official seal.



*[Handwritten signature of Karen M. Hutchison]*  
/s/ Karen M. Hutchison  
Notary Public

My commission expires: May 8, 2010

## **Attestation**

### **APPLICATION TO REDUCE SPACING AREA FROM 640 ACRES TO 160 ACRES FOR THE PYLES #1 WELL NW/4 SE/4 SECTION 6 T20S R48W, KIOWA COUNTY, COLORADO**

I am a Registered Professional Engineer and President of Grynberg Petroleum Company. A copy of my Resume is attached hereto.

Attached please find a series of reservoir computations and analyses, which I have performed on the Pyles #1 Well located at the edge of the McClave Field in the NW¼, SE¼ of Section 6, Township 20 South, Range 48 West, Kiowa County, State of Colorado.

Figure 1 is an historical production of the Pyles #1 Well, a semi logarithmic plot of monthly production versus yearly.

Figure 2 is an historic production with the results of additional recoverable reserves of 174 MMSCF. Below it is the calculated drainage area of 148 acres based on figures attached thereto. There are several dry holes offsetting the Pyles #1 to the East, to the South and to the West. Most offsetting producers are located to the South, and we are applying 160-acre spacing covering the SE¼ of Section 6 in order to place this well back into production.

Figure 3 is based on a plot of P over Z, with P being "pressure" and Z being "factor compressibility factor" which was determined from original reservoir data to be 0.86. When the well was last shut in, the pressure was 189 psi while the initial pressure of compressibility was

1,023 psi. Thus, you can see that the remaining recoverable reserves up to a gathering pressure of 25 psi are 174 MMSCF.

Figure 4 consists of supporting computations where I have determined the porosity of the McClave sand from acoustic velocity log to be 17% with a net pay thickness of 15 feet. I have calculated the formation factor F from the porosity value to be 36. I have determined that the atmospheric pressure at the elevation of 4,005 feet to be 12.69 psia. From the logs run in the well, I have calculated the formation temperature to be 116F. I applied a thin bed correction factor of 10% to determine that the resistivity was 44 ohm-meters.

Using the above parameters, I calculated a water saturation of 22% pore space, giving me a gas saturation of 78% of pore space.

Using the standard gas volume determination formula with an abandonment pressure of 25 psi, I calculated the drainage area to be 148 acres.

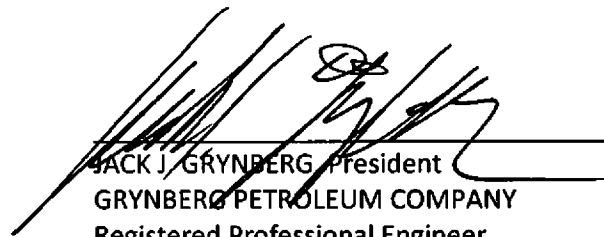
Figure 5 has the supporting computation of necessary parameters to determine the formation water resistivity. I measured the spontaneous potential from the well log to be minus 67.5 millivolts. I took from the well log the mud-filtered resistivity 0.60 meters at 46°F and the standard K factor of 70 calculated an  $R_w$  of 0.0651 ohm-meters at 116°F which I used with a temperature correction to calculate the water saturation.

Figure 6 is a map of the surrounding wells indicating that the well to the Southeast, the Castlewood 1-8, produced a cumulative 386 MMCF. The Pyles 15-1 to the Southwest produced only 154 MMCF. The State Boyce #1 Well immediately to the West is a dry hole that tested 159 MCFPD.

Based on the above production data, it is obvious that the Pyles #1 Well cannot drain 640 acres, which is the present spacing, and is limited to a drainage area of 148 acres which I determined in the above calculations.

The alternative is to plug the well and deprive potential revenue to the mineral owners, Kiowa County, and the State of Colorado.

Dated this 27<sup>th</sup> day of June, 2009.



JACK J. GRYNBERG, President  
GRYNBERG PETROLEUM COMPANY  
Registered Professional Engineer  
*Regis. No. 29586, Colorado*  
*Regis. No. 3663, Oklahoma*  
*Regis. No. 5582, South Dakota*  
*Regis. No. 14578, Texas*  
ADDRESS: 5299 DTC Boulevard, Suite 500  
Greenwood Village, CO 80111  
PHONE:(303) 850-7490  
EMAIL: grynpetro@grynberg.com



# RESUME OF JACK J. GRYNBERG

(February 2009)

## EDUCATION

Colorado School of Mines

Professional Degrees:

- 1/1950-5/1952 Master of Engineering\* (Petroleum Refining (Chemical) Engineer)
- 8/1952-5/1953 Completed Graduate Studies for a Doctor of Science in  
Geophysical Engineering except thesis
- 1/1959-5/1959 Master of Engineering\* (Professional Degree as Petroleum  
(Production) Engineer)
- 5/1976 Honorary Degree and Distinguished Achievement Medal in the  
Field of Mineral Engineering
- 3/1976-3/1981 Member Board of Trustees, Colorado School of Mines, Golden,  
Colorado

\* Formerly Professional Engineer's Degree

## REGISTERED PROFESSIONAL ENGINEER

Active and in Good Standing:

Colorado	Registration No. 29586
Oklahoma	Registration No. 3663
South Dakota	Registration No. 5582
Texas	Registration No. 14578

## PROFESSIONAL EXPERIENCE

- 2007-Present President and CEO. Pangee Production and Development
- 2007-Present Founder. President and CEO. MOST Ethanol Company. LLC
- 2006-Present President and CEO. CentrAm Petroleum Ltd.
- 2006-Present Chairman. President and CEO. Superior Energy Company. Inc.
- 2005-Present President and CEO. GADECO. LLC
- 1996-Present Chairman. President and CEO. RSM Production Corporation
- 1990-Present President and CEO. Pricaspian Development Corporation
- 1990-Present Founder of a number of oil & gas and gold ventures exploration and  
development in the former Soviet Union
- 1988-Present Active in international oil and natural gas and gold in the former  
Soviet Union, Middle East, Africa, Far East and Latin America
- 1985-Present President and CEO. Grynberg Production Corporation
- 1980-Present Chairman and CEO. Transworld Resources Corporation
- 1962-Present Independent Oil, Gas, and Mineral Operator, U.S.A.  
Domestic operations within the continental United States with oil and gas  
production and exploration in California, Colorado, Louisiana, Michigan,  
Mississippi, South Dakota, Montana, New Mexico, North Dakota,  
Oklahoma, Texas, Utah and Wyoming
- 1954-Present President. Grynberg Petroleum Company and its predecessor,  
Jack Grynberg and Associates

- 1976-1982 President and CEO. Olympic Uranium Company. Uranium exploration and development, U.S.A.
- 1974-1981 Founder. Chairman and CEO. Universal Drilling Company and Universal Drilling Services. Inc.. a 6-rig drilling contractor with 10,000 to 22,000 foot rigs. Companies sold in 1981
- 1974-1981 President and CEO. Universal Drilling S.A.. Panama
- 1973-1974 President. Hess Exploration Company (affiliate of Amerada Hess), beneficiary of 20% credited interest
- 1969-1976 Founder and Principal Stockholder (76%). Chairman. President and CEO. Oceanic Exploration Company, a public company engaged in off-shore and onshore oil, gas and mineral exploration and production in the following areas outside the continental United States: British North Sea, Dutch North Sea, Cameroon, Greece, Madagascar, Malaysia, Nicaragua, Peru, Timor and Taiwan. A public company whose stock was traded over the counter. Company sold in 1981.
- 1954-1962 Partner (60%-owner). Pirson-Grynberg Associates  
Through this partnership with Dr. Sylvain J. Pirson, jointly conducted 2-week intensive well log interpretation and 4-week advanced reservoir engineering courses in the U.S.A. (Austin, Texas and Denver, Colorado), Canada, Venezuela, England, France, Italy and the Middle East.
- 1954-1962 Owner, Jack Grynberg and Associates. Consulting petroleum, petrophysical, geological and geophysical engineers
- 1953-1954 Research Engineer. Research and Development Department. Continental Oil Company. Ponca City, Oklahoma

### **PROFESSIONAL ATTAINMENTS, APPOINTMENTS AND MEMBERSHIPS**

- Patent Holder: United States Patent #4,492,862 - January 8, 1985  
"Method and Apparatus for Analyzing Components of Hydrocarbon Gases Recovered from Oil, Natural Gas and Coal Drilling Operations" Invented by: Jack J. Grynberg, Leonard Y. Nelson and Stephen E. Moody
- Appointments: Appointed by Colorado Governor Richard Lamm to the Board of Trustees, Colorado School of Mines, March 1975 to March 1981
- Appointed to the International Board of Advisors,  
Gubkin State Oil and Gas University, Moscow, Russia-1992
- Appointed to the Presidential Council, Colorado School of Mines, 1989-Present
- Committee on Nuclear and Alternative Energy Systems of the National Academy of Sciences and National Academy of Engineering ~  
Presidential Appointments by President Gerald Ford (1974-1976) and President Jimmy Carter (1976-1980)
- Appointed by President Bill Clinton to panel consisting of chief executives of American oil and gas companies to represent the American oil and gas industry in the Russian Republic in order to enhance American-Russian oil and gas joint ventures, 1994.

Speaking Invitations: Speaker at 6th African United Nations Oil & Gas, Trade & Finance Conference in Douala, Cameroon, October 2002

Represented the U.S. Department of Energy and U.S. Department of Commerce at 7th African United Nations Oil & Gas, Trade & Finance Conference in Luanda, Angola, and made a presentation on behalf of the U.S. Government, May 2003

Speaker at African Petroleum Forum in London, England, March 2004

Speaker at 8th African United Nations Oil & Gas, Trade & Finance Conference in Marrakech, Morocco, April 2004

Speaker at 10th Annual Latin Oil & Gas 2004 Conference in Rio de Janeiro, Brazil, June 2004

Speaker at African Petroleum Forum in Houston, Texas, April 14-15, 2005

Speaker at Africa Energy Forum 2005 in Barcelona, Spain, June 22-24, 2005

Speaker at Upstream Oil & Gas Summit at Amelia, Island, Florida, February 5-7, 2006; topic "Effective Strategies to Deal with the Top Challenges of Remote Supply Markets"

Speaker and Chairman of a Gas21 Session at Africa Energy Forum 2006 in Lille, France, June 28-30, 2006; topic "The Gas Potential of Africa"

Speaker at Tribal (American Indian) Energy in the Southwest Conference in Albuquerque, New Mexico, December 11-12, 2006

Speaker at a Gas21 Session at the Africa Energy Forum 2007 in Hamburg, Germany, June 27-29, 2007

Member of Market Watch Panel and Speaker on "African Bio-Fuels Potential" at Africa Energy Forum 2008 in Nice, France, July 2-4, 2008

Principal speaker at National Association of Royalty Owners (NARO) 28<sup>th</sup> Annual Convention on "Mismeasurement and Shortchanging of Royalty Owners by Gas Pipeline Companies and Oil Companies" in Little Rock, Arkansas, September 18-20, 2008

Speaker at Energy Freedom Summit on "Biofuels: Ethanol, Biodiesel, Methanol, Compressed Natural Gas (CNG) and Gas to Liquids (GTL)" in Chicago, Illinois, October 24-25, 2008

Memberships: National Society of Professional Engineers Society of Exploration Geophysicists (SEG)  
 American Association of Petroleum Geologists (AAPG)  
 American Institute of Mining and Engineers (AIME)  
 Society of Petroleum Engineers (SPE)  
 Association of International Petroleum Negotiators

European Society of Exploration Geophysicists (ESEG)\*  
Rocky Mountain Association of Geologists (RMAG)  
American Petroleum Institute (API)\*  
Member Board of Trustees, Colorado Energy Research  
Institute, March 1975 to March 1981  
Honorary Consul, Republic of Panama, 1974-1986  
Member, Uranium Subpanel of Supply and Delivery Panel

**\*Member Emeritus**

**PUBLICATIONS**

"Induction Log Departure Curves for No Invasion" (Oil Base Mud or Air)

By: Jack J. Grynberg - 1953

"The Microlog - Its Application and Interpretation"

By: Jack J. Grynberg and Leendert de Witte - 1954

"Quantitative Electric Log Interpretation of "D" and "J" Sands-Denver Basin"

By: Jack J. Grynberg - 1956

"The Continuous Dipmeter"

Articles in April 1 and 22, 1957, The Oil and Gas Journal

By: Jack J. Grynberg and Morris I. Ettinger

"Log Interpretation Charts"

By: Sylvain J. Pirson and Jack J. Grynberg - 1958

"Selected Well Logging Problems for Geologists and Petroleum Engineers"

By: Sylvain J. Pirson and Jack J. Grynberg - 1958

"DST - Success or Failure?"

Article in June 22, 1959, The Oil and Gas Journal

By: Jack J. Grynberg

"Log Interpretation Manual Number 2"

Supplement-A-Ri-Rt Conversion Charts

Based on Lectures by Jack J. Grynberg and Sylvain J. Pirson - 1960

"Handbook of Well Log Analysis" McGraw-Hill - 1964 Based on

Lectures by Sylvain J. Pirson and Jack J. Grynberg

"Application of Water Resistivity Data"

By: Jack J. Grynberg and B.L. Carlberg - 1974

Study of Nuclear and Alternative Energy Systems

Supporting Paper 1 - 1978

"Problems of U.S. Uranium Resources and Supply to the Year 2010"

By: The National Research Council, The National Academy of Science By:

Leon T. Silver, Jack J. Grynberg, David S. Robertson, Joseph B. Rosenbaum and  
Arnold J. Silverman

**Study of Nuclear and Alternative Energy Systems**

"U.S. Energy Supply Prospects to 2010" - 1979

By: The National Research Council, National Academy of Science

By: Jack J. Grynberg and others.

**LANGUAGES**

English, French, German, Polish, Russian and Hebrew

**MILITARY SERVICE**

Volunteer, Israel's War of Independence, 1947-1949

U.S. Army Corps of Engineers; U.S. Army Research and Development Command,

Soviet Radioactive Warfare Section, and worked as a scientific spy 1956-1957

Honorable Discharge

**PERSONAL**

U.S. Citizen, born January 21, 1932, Brest, Poland

Married June 1959 to Celeste C. Bachove

Three children and three grandchildren

Figure 1  
 Pages # 1

McClave (Keyes) Gas

NM/4 SE/4 Section 6  
 T-20S R-48W  
 Kiowa County, CO

DAYS, MCFD & MCFM

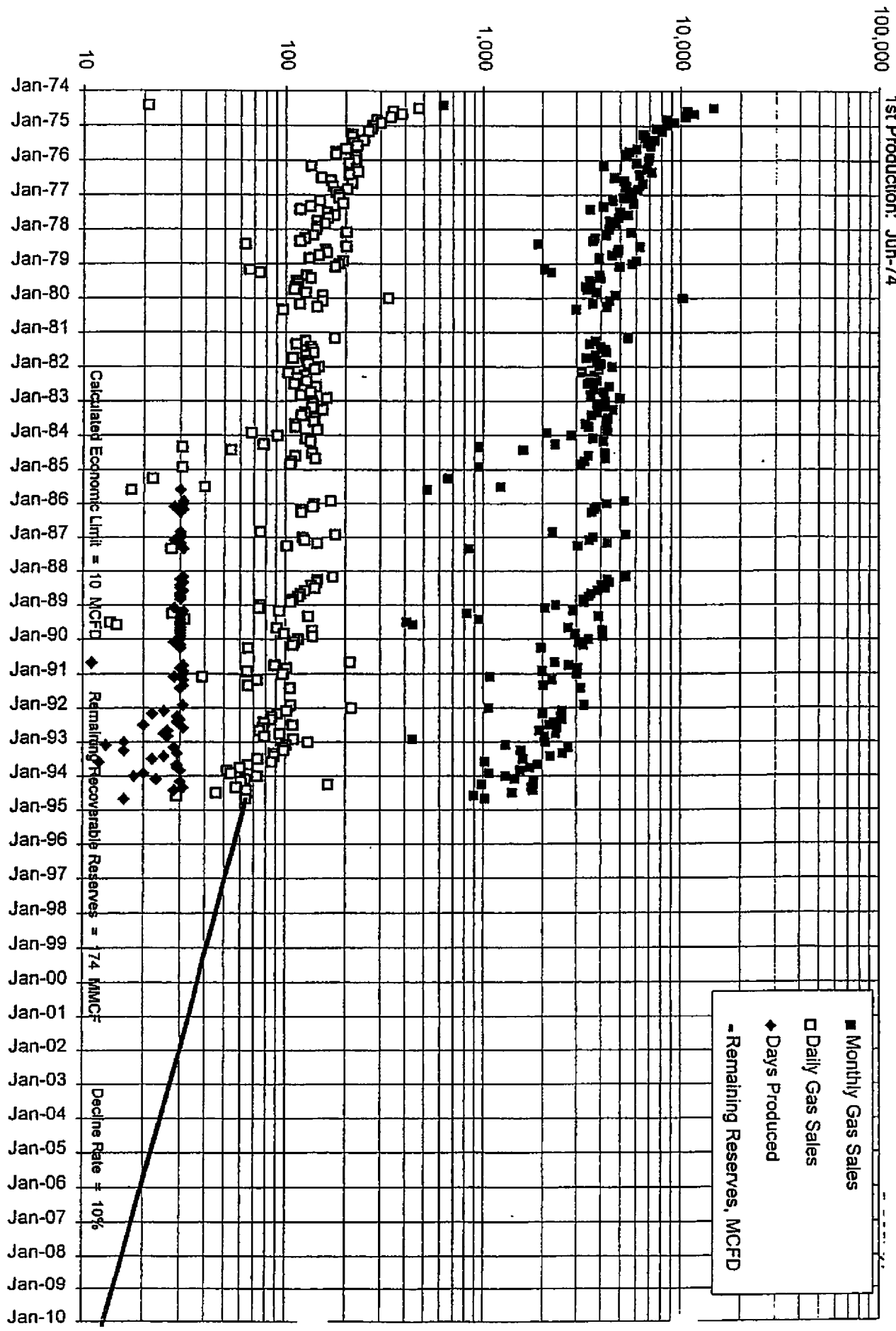


Figure 2

**The Pyles #1 Well in the McClave Field is located in the NW/4 – SE/4 of Section 6, T20S-R48W in Kiowa County, CO. First production transpired in the month of June, 1974. The well has a cumulative production of 774 MMSCF and estimated additional recoverable reserves of 174 MMSCF.**

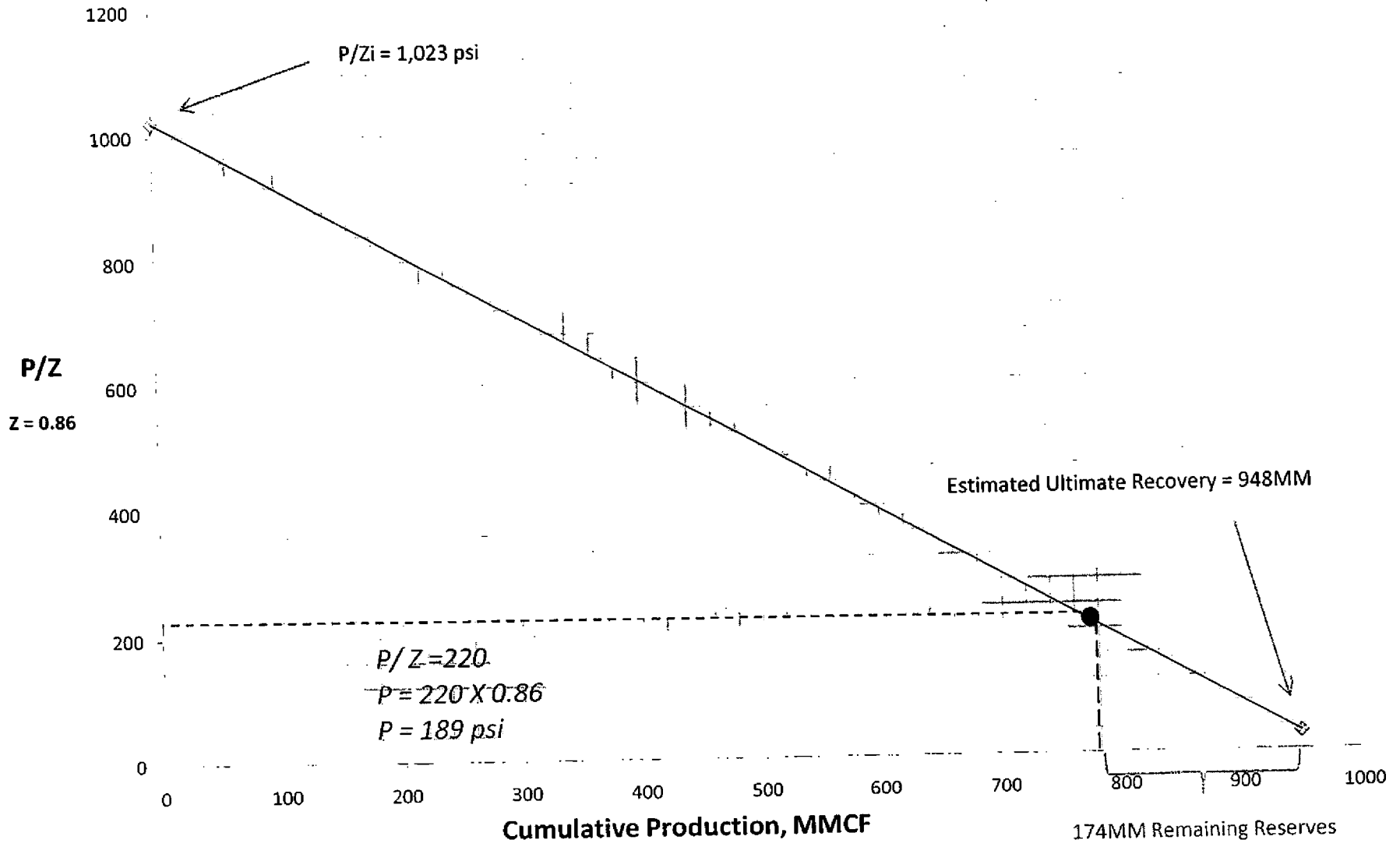
**Drainage Area of 148 Acres has been calculated based on reservoir data with figures attached to this report based on computed and empirical data.**

**There are several dry holes offsetting this producer to the East, South and West. Most offsetting producers are located to the South of the Pyles #1 well. Cumulative gas production from offsetting wells has been included in this report. See final page.**

**We are applying for 160 acres spacing comprising the SE/4 of Section 6 to enable us to place this well back on production.**

Figure 3

**Pyles #1 Well McClave Field**  
**NW/4-SE/4 of SECTION 6, T20S-R48W**  
**Kiowa County, CO**



Applicants Exhibit No.: H-3	Cause No.: 105
Scale:	Docket No.:
Applicant: Grynberg Petroleum	Exhibit Type: Graph
Exhibit Author: Grynberg Petroleum	County: Kiowa
	Field: McClave



Figure 4

## Pyles #1 Well McClave Field.

### NW/4-SE/4 of Section 6, T20S-R48W

- Formation Data: 17% porosity from the acoustic velocity log and 15 feet of net pay
- Formation Factor,  $F = 36$ ; calculated from the porosity value
- Compressibility Factor,  $Z = 0.86$
- Atmospheric Pressure @ 4005 feet of elevation is 12.69 psia
- Formation Temperature = 116°F
- Also applying a thin bed correction of 10% resulting in  $R_T = 44$  Ohm- meters
- $S_w = (36 \times 0.06/44)^{0.5} = 22\%$  of pore space, Gas Saturation is 78% of pore space
- Abandonment Pressure = 25 psi

$$174MM = 43,560 \times 0.17 \times 0.78 \times 15 \times \text{Drainage Area} \times \frac{189-25}{12.69} \times \frac{520}{576} \times \frac{1.0}{0.86}$$

$$174MM = 86,641 \times \text{Drainage Area} \times 12.92 \times 0.90 \times 1.16$$

Drainage = 148 Acres

Figure 5

Pyles #1 Well McClave Field

NW/4-SE/4 of Section 6, T20S-R48W

**Given the following:**

$$\text{S.P.} = -67.5 \text{ millivolts}$$

$$R_{mf} = 0.6 \text{ ohm-meters @ } 116 \text{ }^\circ\text{F}$$

$$K = 70; \text{ standard for Rocky Mountains}$$

**Finding  $R_w$ :**

$$-67.5 = 70 \times \log \times 0.6/R_w$$

$$0.9643 = \log_{10} \times 0.6/R_w$$

$$10^{0.9643} = 10 \log_{10} \times 0.6/R_w$$

$$9.2106 = 0.6/R_w$$

$$R_w = 0.6/9.2106$$

$$R_w = 0.0651 \text{ Ohm-meters}$$

$$R_t = 40 \text{ ohm-meters}$$

$$R_t = 44 \text{ ohm-meters corrected for thin bed}$$

# Topographical Map

## Township 20 South, Range 48 West (Pyles Well #1)

**Red Lines**

**OIL AND GAS WELLS**

- Oil and Gas Wells
- ✕ Temporary Point
- **Well Status**
  - Location
  - Producing
  - Shut In
  - ✕ Temp Aban
  - ◇ Injecting
  - ✦ Plugged
  - ◇ Dry & Aban
  - Domestic
  - Gas Storage
  - Waiting On
  - Location
  - ✕ Aban Loc
  - Unknown
  - Verbal Plugging

**Well Name**

**API Number**

**CITIES TOWNS PLACES**

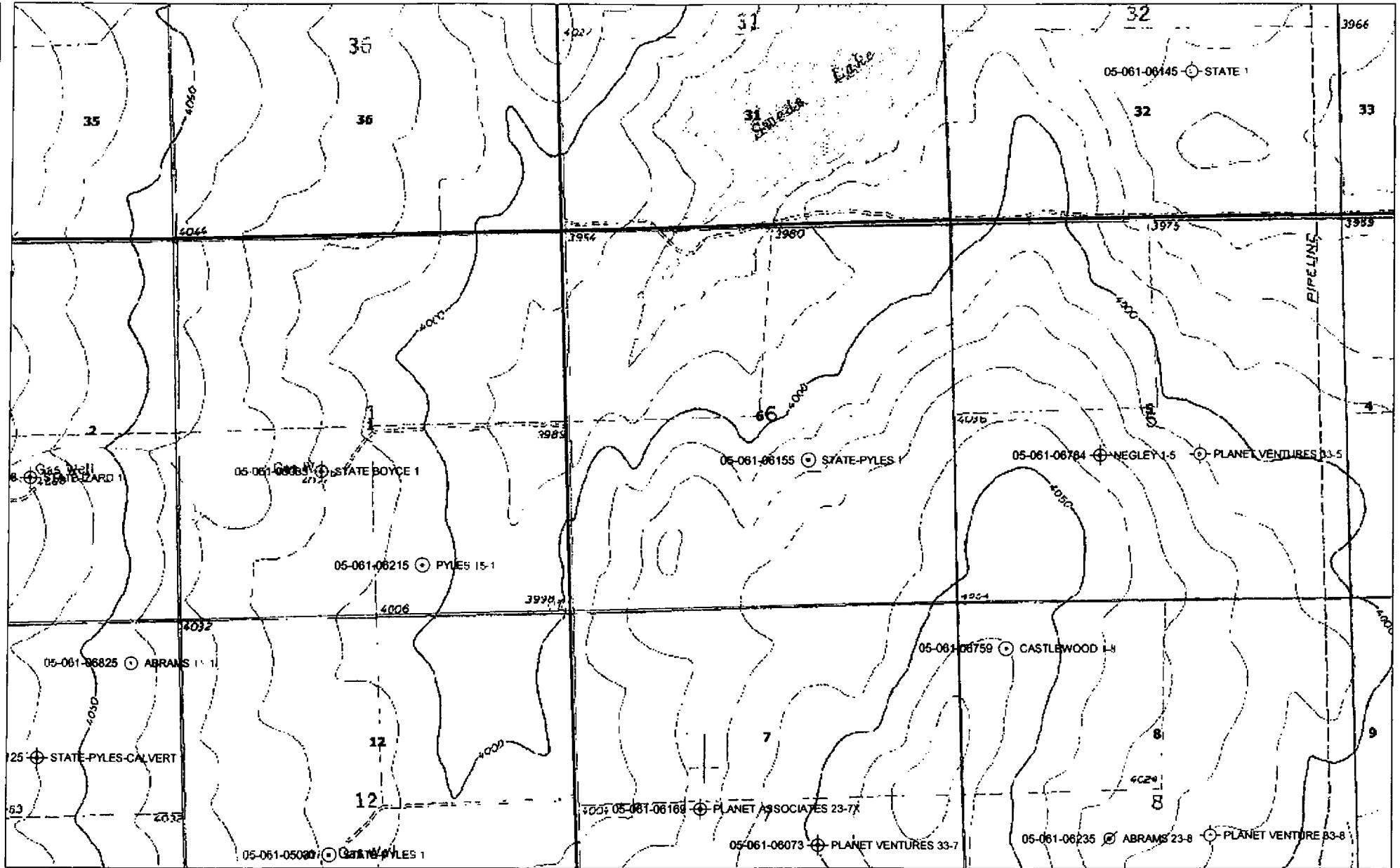
- Towns and Places

**ROADS AND RRS**

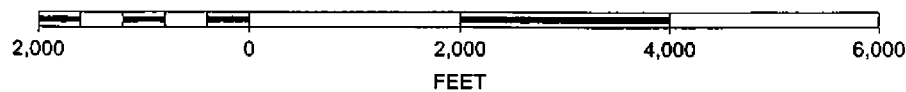
- Major Highways

**TOPOS (1: 24K)**

- SE Colorado Topo



SCALE 1 : 22,079



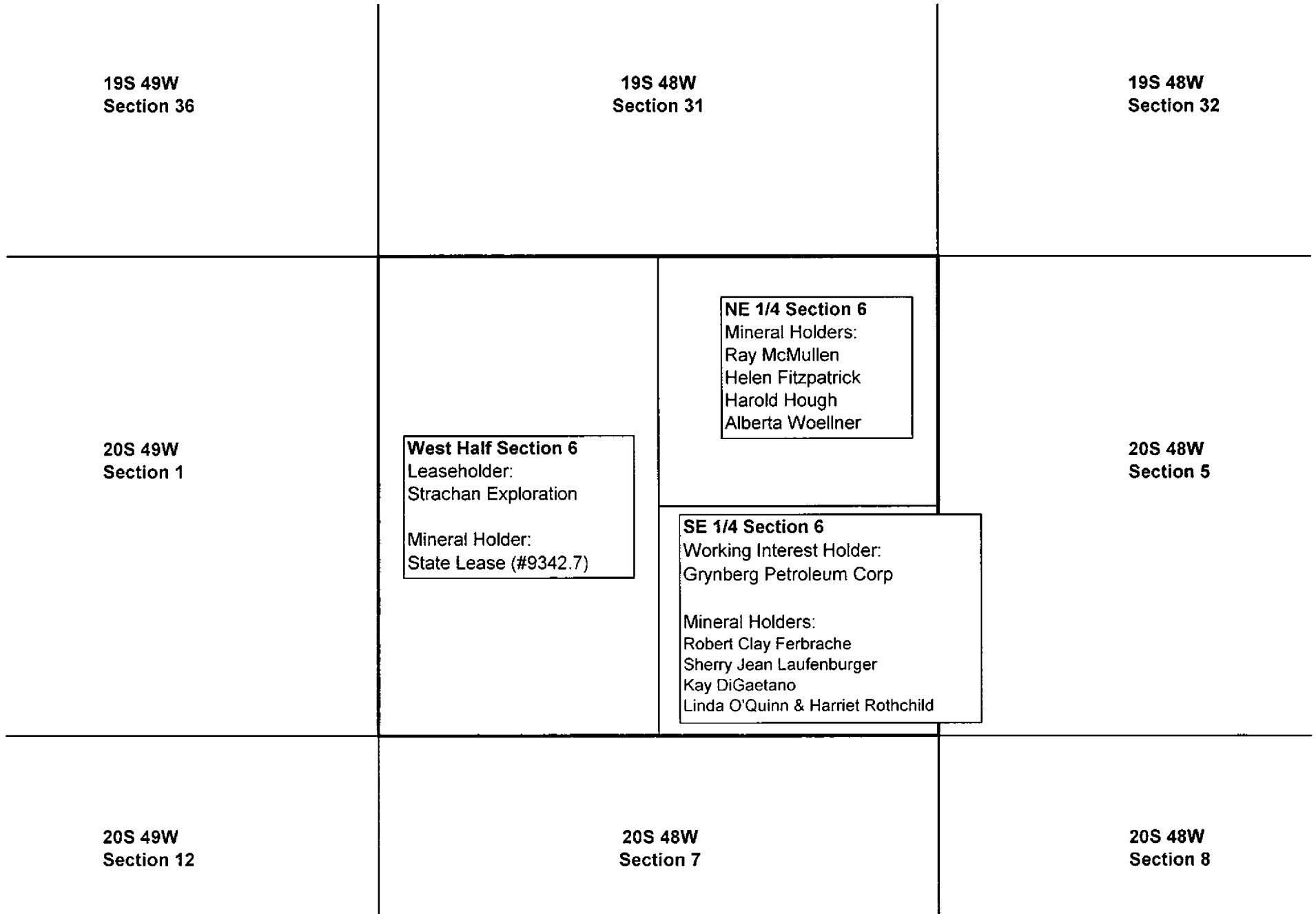
Applicants Exhibit No.: C  
 Scale: 1: 22,079  
 Applicant: Grynberg Petroleum  
 Exhibit Author: Grynberg Petroleum

Cause No.: 105  
 Docket No.:  
 Exhibit Type: Map  
 County: Kiowa  
 Field: McClave



# Land Map

## Township 20 South, Range 48 West (Pyles Well #1)



**Exhibit B-2**

**WORKING INTEREST OWNER, UNLEASED MINERAL INTEREST OWNERS AND OTHER INTERESTED PARTIES**

- 1. Applicant is the Working Interest Owner in the SE/4 Section 6**
- 2. There are no unleased mineral interests.**
- 3. Other interested parties are:**
  - i. The following persons, who are owners of mineral interests in the indicated tracts in the Application Lands, and will be served notice pursuant to Rule 507.b (1):**

SE Quarter Section 6:

Robert Clay Ferbrache  
3605 W. 85<sup>th</sup> Avenue  
Westminster, CO 80030  
303 429 0954

SE Quarter Section 6:

Kay DiGaetano  
17802 LaRosa Lane  
Fountain Valley, CA 92708  
714 593 9411

SE Quarter Section 6:

Sherry Jean Laufenburger  
10674 El Soneto  
Fountain Valley, CA 92708

NE Quarter Section 6

Ray W. McMullen  
22411 Robin Oaks Terrace  
Diamond Bar, CA 91765  
909 861 6580

NE Quarter Section 6

Harold Hough  
1407 Broad Street  
Camden, SC 29020

NE Quarter Section 6

Helen Fitzpatrick  
823 S. Chapel Avenue #8  
Alhambra, CA 91801-4428  
626 281 9735

NE Quarter Section 6

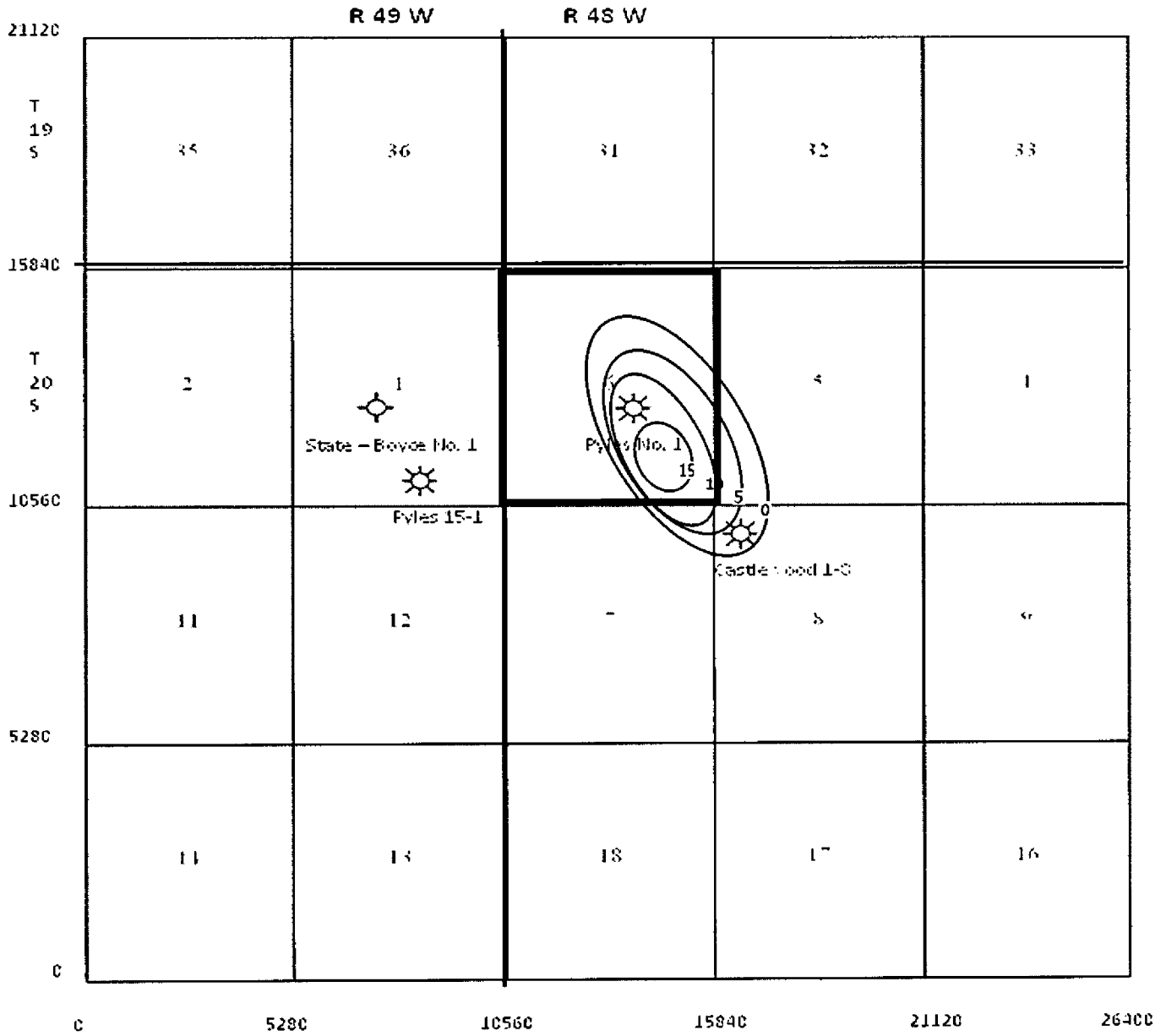
Alberta Woellner  
Deceased, address of personal representative  
unknown

West Half Section 6

Strachan Exploration  
838 Inverness Parkway, Suite 360  
Englewood, CO 80112  
303 785 7006

# Proposed Spaced Area

## Pyles #1 / Section 6: T20S, R48W



**Spaced Area =** **Proposed Spaced Area =**  
**CT = 5 FEET**

	<u>Cumulative Production</u>	<u>Reserves</u>
• Pyles #1 (Ref)	776MMCF	174MMCF
• Castlewood #1-8 (SE)	386 MMCF	75 MMCF
• Pyles 15-1	154 MMCF	25 MMCF
• ST- Boyce #1 (West)	Tested at 159 MCFD (Dry Hole)	

Applicants Exhibit No.: F	Cause No.: 105
Scale: 1" = 4225 ft	Docket No.:
Applicant: Grynberg Petroleum	Exhibit Type: Map
Exhibit Author: Grynberg Petroleum	County: Kiowa