

BEFORE THE INDUSTRIAL COMMISSION

OF THE STATE OF NORTH DAKOTA

CASE NO. 7218  
ORDER NO. 8428

IN THE MATTER OF A HEARING  
CALLED ON A MOTION OF THE  
COMMISSION TO CONSIDER THE  
APPLICATION OF LYCO OPERATING  
COMPANY FOR AN ORDER PURSUANT  
TO SECTION 43-02-03-88.1 OF THE  
NORTH DAKOTA ADMINISTRATIVE  
CODE EXEMPTING THE  
PLUMER-LUNDQUIST #25-2 WELL,  
LOCATED IN NW/4 NE/4 OF SECTION  
25, T.161N., R.99W, DIVIDE COUNTY,  
NORTH DAKOTA, FROM THE  
PROVISIONS OF SECTION 38-08-06.4 OF  
THE NORTH DAKOTA CENTURY CODE,  
RELATING TO THE FLARING OF GAS.

ORDER OF THE COMMISSION

THE COMMISSION FINDS:

(1) This cause came on for hearing at 9:00 a.m. on the 24th day of February, 1999.

(2) Pursuant to North Dakota Administrative Code (NDAC) Section 43-02-03-88.1, the Director is authorized to sign, on behalf of the Commission, orders relating to, inter alia, flaring exemptions in North Dakota Century Code (NDCC) Section 38-08-06.4 and in NDAC Section 43-02-03-60.2.

(3) NDCC Section 38-08-06.4 states:

As permitted under rules of the industrial commission, gas produced with crude oil from an oil well may be flared during a one-year period from the date of first production from the well, or until June 30, 1986, for wells in production prior to July 1, 1985. Thereafter, flaring of gas from the well must cease and the well must either be capped or connected to a gas gathering line. For a well operated in violation of this section, the producer shall pay royalties to royalty owners upon the value of the flared gas and shall also pay gross production tax on the flared gas at the rate imposed under section 57-51-02.2. The industrial commission may enforce this section and, for each well operator found to be in violation of this section, may determine the value of flared gas for purposes of payment of royalties under this section and its determination is final. A producer may obtain

an exemption from this section from the industrial commission upon application and a showing that connection of the well to a natural gas gathering line is economically infeasible at the time of the application or in the foreseeable future or that a market for the gas is not available.

(4) Applicant is the owner or operator of the following well in the Burg-Silurian Pool, Divide County, North Dakota:

File #	Well Name & Number	Location
14775	Plumer-Lundquist #25-2	NW NE 25-161-99

(5) The Burg-Silurian Pool is an oil reservoir, but gas is produced in association with the oil at the wellhead as a by-product of oil production.

(6) By previous order of the Commission, said well currently is authorized to flare so that all owners of interests in the well herein described may receive the maximum benefits of the oil production in such a manner that will prevent waste and protect correlative rights.

(7) The well currently is not connected to a gas gathering facility and that evidence presented to the Commission indicates that the well currently produces approximately 31 MCF per day, of which 4 MCF is used for lease operations and 27 MCF is surplus gas and is being flared.

(8) The well is located approximately 6.5 miles from the Amerada Hess-Tioga gas gathering system.

(9) The applicant has estimated the total project cost of purchasing and installing a 3" polyethylene pipeline at approximately \$57,000.

(10) The applicant submitted evidence indicating estimated recoverable gas reserves of 65572 MCF, of which 58097 MCF is surplus gas that would be available for sale.

(11) The applicant has estimated the value of the gas to be \$0.83 per MCF, based upon the value of gas being sold in the area which is similar in composition.

(12) The net value (after royalty payments and state taxes) of the gas available for sale is \$39,751.78, therefore, since the total project cost is \$57,000, there are insufficient reserves of surplus gas to recoup the costs of installing and operating a gas gathering facility.

(13) The applicant has submitted evidence that under current market conditions the surplus casinghead gas presently being produced by the well and the estimated recoverable reserves of surplus gas from the well are insufficient to recoup the costs of installing and operating a gas gathering facility.

(14) If applicant's request is not granted, taxes and royalties must be paid on flared gas which will increase operating costs, raise the economic limit and cause premature abandonment of the well; or the well must be connected to a gas pipeline at an economic loss which would also cause premature abandonment, or flaring must cease and the well must be "capped," resulting in the loss of oil production and the loss of the benefits of that production by all owners of interest in the well and the State of North Dakota.

(15) Considering the amount of surplus gas being produced by the well, the amount of estimated recoverable reserves from the well, and the cost to connect the well to a gas pipeline, it is not economic at this time, or in the foreseeable future, to connect the well to a gas gathering facility.

(16) In order to prevent waste, and protect correlative rights this application should be granted.

IT IS THEREFORE ORDERED:

(1) The applicant, its assigns and successors, hereby is allowed to flare surplus casinghead gas produced with crude oil from the Burg-Silurian Pool through the well listed below under the exemption provided for in NDCC Section 38-08-06.4.

File #	Well Name & Number	Location
14775	Plumer-Lundquist #25-2	NW NE 25-161-99

(2) This order shall remain in full force and effect until further order of the Commission.

Dated this 17th day of March, 1999.

INDUSTRIAL COMMISSION  
STATE OF NORTH DAKOTA

By the Director, on behalf of the Commission.

/s/ Lynn D. Helms, Director

CROWLEY, HAUGHEY, HANSON, TOOLE & DIETRICH P.L.L.P.

ATTORNEYS AT LAW

113 EAST BROADWAY  
P.O. BOX 1206  
WILLISTON, ND 58802-1206  
TELEPHONE (701) 572-2200

490 NORTH 31ST STREET  
P.O. BOX 2529  
BILLINGS, MT 59103-2529  
PHONE (406) 252-3441

100 NORTH PARK AVENUE  
SUITE 300, P.O. BOX 797  
HELENA, MT 59624  
PHONE (406) 449-4165

431 FIRST AVENUE WEST  
P.O. BOX 759  
KALISPELL, MT 59903-0759  
PHONE (406) 752-8044

CALE CROWLEY  
(1912-1997)

OF COUNSEL  
MORRIS HANSON  
BRUCE E. TOOLE  
JOHN M. DIETRICH  
LOUIS E. MOORE  
CARL F. KRIG  
NEIL S. KEEFER  
FRED L. WHISENAND  
CALVIN E. ROBINSON

RETIRED  
JAMES N. HAUGHEY  
STUART W. CONNER

ARTHUR F. LAMET, JR.  
WYLES J. THOMAS  
GEORGE C. DALTON  
DAVID L. JOHNSON  
I. JAMES BECKWITH  
KEEF J. WILSON  
FRED G. RATHER  
BERNARD I. FISCH, III  
TERRY D. COSOVICH  
RONALD E. LODDERS  
JOHN B. DUDIK, JR.  
LAWRENCE B. COZZENS  
STEVEN RUFFATTO  
ALLAN L. KANELL  
JAMES P. SITES  
DANIEL D. JONES  
CAROLYN S. OSTBY  
STEVEN J. LENMAN  
JOHN H. MAYNARD  
CHRISTOPHER MANGEN, JR.  
MICHAEL E. WEBSTER  
DANIEL N. MCLEAN  
ROBERT O. MICHELOTTI, JR.  
DONALD E. MURRAY, JR.  
JOHN R. ALEXANDER  
DONALD L. HARRIS  
WILLIAM D. LAMDIS, III  
WILLIAM J. HAYTIN  
PETER F. HASKIN  
MICHAEL S. DOCKERY  
DEBRA D. PARKER  
MALCOLM N. GOODRICH  
MARY SCRIM DYRE  
JON T. DYRE

ERIC K. ANDERSON  
BRUCE A. FREDRICKSON  
RENEE L. COPPOCK  
JANICE L. REBERO  
JOE C. MAYNARD, JR.  
PATRICK G. SOGARD  
JOHN B. LEE  
STEVEN E. WILCOX  
SCOTT M. BEARD  
LEONARD E. SMITH  
MARCIA DAVENPORT  
KEIL G. WESTBEN  
ANTOINETTE M. YEASE  
JILL B. KELLER  
MICHAEL S. LAMB  
BURT O. ALME  
MICHAEL E. FRANK  
DAVID M. WALSH  
SHANE D. PETERSON  
ROBERT C. GRIFFIN  
MATTHEW F. MCLEAN  
ALICE J. RINSMAN  
WILLIAM L. DAVIES  
VINCENT O. RIEGER  
ALAN C. BEVAN  
ALLISON P. FORTENOT  
COLETTE BAUNGGARDNER-DAVIES  
JEFFREY A. COOP  
KEN A. MALVIG  
KELLIE M. GASTON  
ASHLEY BURLESON  
IAN MCINTOSH  
GARY M. CONNELLEY  
KRISTIN L. ONVIO

January 14, 1999



Ms. Karlene Fine  
Executive Director and Secretary  
North Dakota Industrial Commission  
600 East Boulevard Avenue, Dept. 405  
Bismarck, North Dakota 58505-0840

Re: Application for Flaring Relief - Lyco Operating Company

Dear Ms. Fine:

Enclosed herewith for filing is an Application of Lyco Operating Company for hearing at the Commission's regularly-scheduled hearings on February 24, 1999. An affidavit in support of the application will be forwarded for filing and consideration by the Commission early next week.

Thank you for your assistance. If you have any questions, please feel free to contact the undersigned at your convenience.

Very truly yours,

JOHN R. LEE

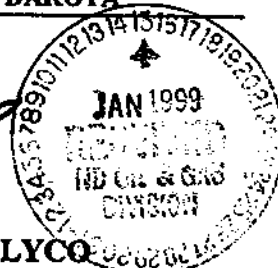
Enclosures

cc: Mr. James W. Hyink (w/encl.)  
Mr. Lynn D. Helms (w/encl.)

BEFORE THE INDUSTRIAL COMMISSION OF THE STATE OF NORTH DAKOTA

IN THE MATTER OF THE APPLICATION OF LYCO OPERATING COMPANY FOR AN ORDER OF THE COMMISSION (1) AMENDING THE FIELD RULES FOR THE BURG-SILURIAN POOL SO AS TO AUTHORIZE THE FLARING OF GAS FROM THE PLUMER - LUNDQUIST #25-2 WELL WITHOUT REGARD TO THE PRODUCTION RESTRICTIONS PROVIDED BY SECTION (12) OF COMMISSION ORDER NO. 8351, AND (2) AUTHORIZING THE FLARING OF GAS FROM THE PLUMER - LUNDQUIST #25-2 WELL AS AN EXCEPTION TO THE PROVISIONS OF SECTION 38-08-06.4 OF THE NORTH DAKOTA CENTURY CODE, AND/OR SUCH OTHER AND FURTHER RELIEF AS THE COMMISSION DEEMS APPROPRIATE

7217  
CASE NO. 7218



APPLICATION OF LYCO OPERATING COMPANY FOR AN ORDER AUTHORIZING THE FLARING OF GAS

\*\*\*\*\*

COMES NOW the applicant, LYCO OPERATING COMPANY ("Lyco"), 6688 North Central Expressway, Suite 1600, Dallas, Texas 75206-3927, and respectfully states as follows:

1.

That Lyco is the operator of the Plumer - Lundquist #25-2 well, the spacing unit for which was established by Commission Order No. 8351 as comprised of the SE/4 of Section 24, and the NE/4 of Section 25, in Township 161 North, Range 99 West, 5th P.M., Divide County, North Dakota.

2.

The Plumer - Lundquist #25-2 well is located within the boundaries of the Burg - Silurian Pool, an oil reservoir, but small amounts of gas are produced in association with crude oil at the wellhead as a by-product of oil production.

3.

The Plumer - Lundquist #25-2 well is currently not connected to a gas gathering facility, and all casinghead gas being produced by said well and not being used for lease operations is being flared.

4.

Under current market conditions the surplus casinghead gas presently being produced by the Plumer - Lundquist #25-2 well and the estimated recoverable reserves from the well are insufficient to recoup the costs of installing and operating a gas gathering facility.

5.

If applicant's request is not granted, taxes and royalties must be paid on flared gas which will increase operating costs, raise the economic limit and cause premature abandonment of the well; or the well must be connected to a gas pipeline at an economic loss which would also result in premature abandonment; or flaring must cease at some future time and the well must be "capped," resulting in the loss of oil production and the loss of the benefits of that production by all owners of interests in said well and the State of North Dakota.

Applicant respectfully requests that evidence and testimony in support of the application be allowed to be submitted to the Commission through affidavit, and that the Commission take the matter under advisement based upon such testimony and evidence. Evidence regarding flaring was also presented by the Applicant in Case No. 7145, and Applicant therefore respectfully requests that such evidence and testimony be incorporated by reference into the Case to be established in connection with this application.

WHEREFORE, Lyco respectfully requests that this matter be set for hearing at the next regularly-scheduled session of the Commission on February 24, 1999, that the Commission make a determination that the requested flaring exception be in the best interests of conservation and the prevention of waste, and that thereafter the Commission enter its order granting the relief requested.

DATED this 14<sup>th</sup> day of January, 1999.

LYCO OPERATING COMPANY

CROWLEY, HAUGHEY, HANSON,  
TOOLE & DIETRICH P.L.L.P.

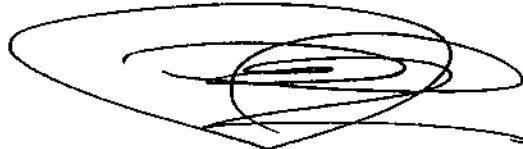


By \_\_\_\_\_

JOHN R. LEE  
Attorneys for Applicant  
Lyco Operating Company  
113 East Broadway, P.O. Box 1206  
Williston, ND 58802-1206

STATE OF NORTH DAKOTA    )  
  :  
COUNTY OF WILLIAMS     )

JOHN R. LEE, being first duly sworn, deposes and states that he is the attorney for the applicant named herein, that he has read the foregoing application, knows the contents thereof, and that the same is true to the best of this affiant's knowledge, information and belief.



\_\_\_\_\_  
JOHN R. LEE

Subscribed and sworn to before me this 14<sup>th</sup> day of January, 1999.

ELLEN McCABE-Notary Public  
Williams County, Williston, ND  
My Commission Expires 6-28-2002  
STATE OF NORTH DAKOTA  
(SEAL) NOTARY PUBLIC SEAL

Ellen McCabe  
Notary Public  
Residing at \_\_\_\_\_  
My commission expires \_\_\_\_\_

7217  
7218

CROWLEY, HAUGHEY, HANSON, TOOLE & DIETRICH R.L.L.P.

ATTORNEYS AT LAW

113 EAST BROADWAY  
P.O. BOX 1208  
WILLISTON, ND 58802-1208  
TELEPHONE (701) 572-2200

400 NORTH 31ST STREET  
P.O. BOX 2529  
BILLINGS, MT 59103-2529  
PHONE (406) 252-3441

100 NORTH PARK AVENUE  
SUITE 300, P.O. BOX 797  
HELENA, MT 59624  
PHONE (406) 449-4165

431 FIRST AVENUE WEST  
P.O. BOX 759  
KALISPELL, MT 59903-0759  
PHONE (406) 752-6644

CALE CROWLEY  
(1912-1997)

OF COUNSEL

NORMAN HANSON  
BRUCE B. TOOLE  
JOHN M. DIETRICH  
LOUIS B. MOORE  
GAROLD F. ERIEG  
NEIL S. KEEFER  
FRED E. WHISENAND  
CALVIN S. ROBINSON

RETIRED  
JAMES M. HAUGHEY  
STUART W. GONNER

ARTHUR F. LAMRY, JR. NYLES J. THOMAS OROBOR C. DALTRORP DAVID L. JOHNSON J. JAMES HECKATHORN KEMP J. WILSON FRED G. HATBERT HERBERT I. FIERCE, III TERRY B. COSGROVE RONALD E. LODDERS JOHN R. DUDIS, JR. LAWRENCE B. COZZENS STEVEN RUFFATTO ALLAN L. KARELL JAMES P. SITES DANIEL D. JOHNS CAROLYN S. OSTBY STEVEN J. LENKMAN JOHN K. MATYARD CHRISTOPHER MANGEN, JR. MICHAEL E. WEBSTER DANIEL M. MCLEAN ROBERT O. MICHELOTTI, JR. DONALD E. MURRAY, JR. JOHN W. ALEXANDER DONALD L. HARRIS WILLIAM D. LANDIN, III WILLIAM J. MATTIX PETER F. HABEIN MICHAEL S. DOCKERY DEBRA D. PARKER MALCOLM H. GOODRICH MARY SCRIM DYRE JON T. DYRE	ERIC K. ANDERSON BRUCE A. FREDRICKSON RENÉE L. COPPOCKE JANICE L. BENDERG JOE C. MATYARD, JR. PATRICK O. SOGARD JOHN E. LEE STEVEN E. MILCH SCOTT M. HEARD LEONARD E. SMITH MARCIA DAVENPORT NEIL O. WESTESEN ANTOINETTE M. TEASE JILL B. KULLER MICHAEL S. LAHR KURT O. ALME MICHAEL E. FRANK DAVID M. WALNER SHANE D. PETERSON ROBERT C. ORIFFIN MATTHEW F. MCLEAN ALICE J. HINSHAW WILLIAM L. DAVIES VINCENT O. BIRGER ALAN C. BRYAN ALLISON P. FONTENOT COLETTE BAUNGARDNER-DAVIES JEFFREY A. COOP KEN A. KALVIG KELLIE M. GASTON ASHLEY BURLESON IAN MCINTOSH GARY M. CONNELLEY KRISTIN L. ONVIG
---	--

February 1, 1999

Ms. Karlene Fine  
Executive Director and Secretary  
North Dakota Industrial Commission  
Capitol Building, 10th Floor  
600 East Boulevard  
Bismarck, North Dakota 58505-0310

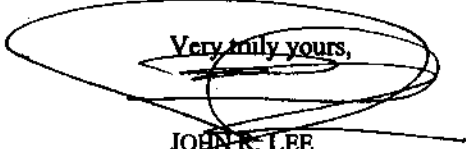
Re: Application for Flaring Relief - Lyco Operating Company Case Nos. 7217 and 7218

Dear Ms. Fine:

Enclosed herewith for consideration by the Commission at the Commission's regularly scheduled hearing on February 24, 1999, is the Affidavit of Charles B. Wiley (two originals) of Lyco Operating Company. As set forth in the affidavit, Lyco respectfully requests that the Commission exempt associated casinghead gas produced from the Plumer-Lundquist #25-2 well from the provisions of Section 38-08-06.4, N.D.C.C., and from the provisions of Section (12) of Commission Order No. 8351.

I would request that this affidavit be made part of the record in Case Nos. 7217 and 7218, as I presently do not plan to be present in Bismarck to participate in those dockets. Although I believe the averments as contained in the Affidavit are sufficient for purposes of the Commission granting the requested relief, if the Commission or staff require supplemental information from Mr. Wiley, I would ask that the record in these cases be left open for purposes of furnishing such additional evidence. In additional, much of the testimony set forth in the affidavit was presented to the Commission in connection with the hearing of Case No. 7145.

Thank you for your assistance. If you have any questions, please feel free to contact the undersigned at your convenience.

Very truly yours,  
  
JOHN R. LEE

Enclosures

cc: Mr. James W. Hyink (w/o encl.)  
Mr. Lynn D. Helms (w/encl.)  
Mr. F.E. (Jack) Wilborn (w/encl.)

BEFORE THE INDUSTRIAL COMMISSION OF THE STATE OF NORTH DAKOTA

IN THE MATTER OF THE APPLICATION OF LYCO OPERATING COMPANY FOR AN ORDER OF THE COMMISSION (1) AMENDING THE FIELD RULES FOR THE BURG-SILURIAN POOL SO AS TO AUTHORIZE THE FLARING OF GAS FROM THE PLUMER - LUNDQUIST #25-2 WELL WITHOUT REGARD TO THE PRODUCTION RESTRICTIONS PROVIDED BY SECTION (12) OF COMMISSION ORDER NO. 8351, AND (2) AUTHORIZING THE FLARING OF GAS FROM THE PUMER-LUNDQUIST #25-2 WELL AS AN EXCEPTION TO THE PROVISIONS OF SECTIONS 38-08-06.4 OF THE NORTH DAKOTA CENTURY CODE, AND/OR SUCH OTHER AND FURTHER RELIEF AS THE COMMISSION DEEMS APPROPRIATE

CASE NO. \_\_\_\_\_

AFFIDAVIT OF  
CHARLES B. WILEY

\*\*\*\*\*

STATE OF TEXAS            )  
                                  : ss  
COUNTY OF                )

**CHARLES B. WILEY**, being first duly sworn, deposes and states as follows:

1. I am employed as a Petroleum Engineer with Lyco Operating Company ("Lyco"), 6688 North Central Expressway, Suite 1600, Dallas, TX 75206-3927, and am percipient to testify to the facts set forth hereinafter.
2. Lyco is the operator of the Plumer - Lundquist #25-2 well, the spacing unit for which was established by Commission Order No. 8351 as comprised of the SE/4 of Section 24, and the NE/4 of Section 25, in Township 161 North, Range 99 West, 5<sup>th</sup> P.M., Divide County, North Dakota.
3. The Burg - Silurian Pool is an oil reservoir, but small amounts of gas are produced in association with crude oil at the wellhead as a by-product of oil production.
4. The Plumer - Lundquist #25-2 well is currently not connected to a gas gathering facility, and all casinghead gas being produced by said well and not being used for lease operations is being flared.
5. Attached to this Affidavit are Exhibits 1 through 6, each of which was prepared by me, or by others under my supervision or control, and each of which is true and correct to the best of my knowledge and belief. Your Affiant respectfully requests that Exhibits 1 through 6 be accepted in evidence, together with this Affidavit, in support of the Application of Lyco filed with the Commission in this case.
6. Exhibit 1 is a "Well Data" sheet setting forth pertinent well data concerning the Plumer-Lundquist #25-2 well. This exhibit was previously submitted and accepted in evidence in North Dakota Industrial Commission Case No. 7145.
7. Exhibit 2 is a "Volumetric Analysis" which calculates out the reserves for the Plumer - Lundquist #35-2 well using the parameters set forth in Exhibit 1. As can be seen from this exhibit, the gas reserves on the Plumer-Lundquist #25-2 well are calculated at 65, 572 MCF, with 58,097 MCF available for sale.



8. Exhibit 3 is styled "Gas Flaring Exemption Data", and is an economics summary setting forth pertinent information concerning gas production rates and remaining reserves thereof, pricing, gas used for lease operations, costs associated with connecting the Plumer-Lundquist #25-2 well to a gas line, and net undiscounted cash flow reflecting a gas sales connection. As the exhibit clearly demonstrates, the surplus casinghead presently being produced by the Plumer-Lundquist #25-2 well and the estimated recoverable reserves from the well are insufficient to recoup the costs of installing and operating a gas sales line, and project cash flow will be reduced by approximately \$8,779.49 if a gas sales line must be installed under current market conditions. Exhibits 3a, 3b and 3c are submitted as backup data for the summarized information set forth in Exhibit 3.

9. Exhibit 4 is an explanatory letter previously furnished to the Commission in connection with Case No. 7145. Significantly, as you may note from the second page of my letter, Amerada Hess declined to submit a bid to purchase casinghead gas from the Plumer - Lundquist #25-2 well due to the limited available volumes.

10. Exhibit 5 is a "Gas Measurement Test" conducted on the Plumer - Lundquist #25-2 well by Ron Evitt, a petroleum engineer with Double EE Service, Inc., an independent consulting firm, which reflects that the average gas flowrate (As of December 2-3, 1998) was 29.80 MCFD, which figure supports the Daily Salable Gas figure set forth in Exhibit 3. Exhibit 6 is simply a photocopy of the "Gas-Oil Ratio Report-Form 9" previously filed with the Commission by Mr. Evitt evidencing the gas measurement test results.

11. It is Affiant's opinion as an expert in the field of petroleum engineering that if the application of Lyco in this case is not granted as submitted, that (i) taxes and royalties which must be paid of flared gas will increase operating costs, raise the economic limit and cause premature abandonment of the well; (ii) that if the well must be connected to a gas sales line at an economic loss this will also result in premature abandonment; and (iii) that if flaring must cease at some future time under the current provisions of Paragraph 12, Order No. 8351 and the well "capped," it will result in the loss of oil production and the loss of benefits of that production by all owners of interests in the Plumer - Lundquist #25-2 well, as well as the State of North Dakota.

12. Inquiries regarding this Affidavit and the application related thereto may be directed either to the undersigned at (214) 890-4400, or Lyco's attorney, John R. Lee, at (701) 572-2200.

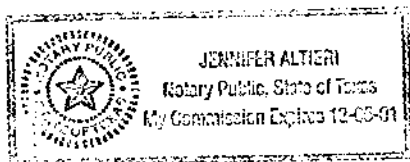
Further Affiant Sayeth not.

DATED this 26<sup>th</sup> day of January, 1999.

Charles B. Wiley  
CHARLES B. WILEY

STATE OF TEXAS )  
 ) : ss  
COUNTY OF \_\_\_\_\_ )

On this 26<sup>th</sup> day of January, 1999, before me, a Notary Public for the State of Texas, personally appeared Charles B. Wiley, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same.



(SEAL)

Jennifer Altieri  
Notary Public  
Residing at Dallas, Texas  
My commission expires November 5, 2001

## WELL DATA

### 1) OPERATOR

Lyco Operating Co.  
North Central Expressway  
Suite 1600  
Dallas, TX 75206-3927

### 2) REQUESTED SPACING

320 acre spacing  
spacing unit for discovery well: SE/4 24, NE/4 25, T161N-R99W, Divide Co, ND  
660' set back from spacing unit boundary  
1980' between wells

### 3) FORMATION TO BE SPACED

Silurian Interlake Formation from the Top of the Interlake to the Base of the Interlake or what ever interval the Commission deems releavelent

### 4) AREA TO BE SPACED

T161N-R99W  
Section 24, SE/4  
Section 25, NE/4

### 5) DISCOVERY WELL

Lyco Opersting Co.  
Lundquist #25-2  
(120' FNL, 1680' FEL)  
NE/4 25, T161N-R99W  
Divide Co., ND

### 6) CASING INFORMATION

Surface Casing: 9 5/8" casing set @ 1644', cemented w/1500 sx  
(Cement Top @ Surface)  
Production Casing: 5 1/2" casing set @ 11670', cemented w/2560 sx  
(Cement Top @ 3230')  
Production Tubing: 2 7/8" anchored @ 10404', Model 'R' packer @ 11404

### 7) RESERVOIR DATA

Trap Type:	Structural
Datum:	-8323'
Initial Reservoir Pressure	4940#
Oil Gravity:	45 API
Oil Gas Ratio:	158 CF/BBL
Reservoir Temperature:	223 °F
Gross Pay:	37'
Avg. Porosity of Gross Pay:	14%
Estimated Sw:	25%
Reservoir Drive Mechanism:	Solution Gas & Water Drive
Resistivity of Produced Water:	0.51 @ 67 °F, 200,000 ppm Cl <sub>2</sub>
Formation Volumm Factor:	1.2 RB/STB
Perforated Interval:	10440-10445'



Initial Potential: 10453-10458'  
10461-10468'  
240 BOPD  
0 BSWPD  
38 MCFGPD

Current Producing Rate: 140 BOPD  
103 BSWPD  
23 MCFGPD  
Flowing @ 200# Flowing Tubing Pressure

Cum. Production (from 6/16/98 to 10/11/98)  
24585 BO  
3408 BSW  
3885 MCF

Disposition of Fluids: Oil, Sold to Murphy Oil Company  
Water, Trucked to approved SWD in Ambrose Field  
Gas, Flared

Electric Logs: DLL-MSFL-GR-CALIP  
FDC-CNL-GR-CALIP  
BHCI Sonic-GR-CALIP  
CBL-GR  
(All logs on file with the NDIC)

**8) RESERVE DATA**

Estimated OOIP: 2.536 Million Barrels  
Potential Productive Area: 101 Acres  
Estimated Recoverable Oil: 415,000 BO  
Estimated recoverable gas: 65,500 MCF  
Development Costs: \$1,100,000  
Estimated return on Investment: 4.2-1

VOLUMETRIC ANALYSIS  
OIL RESERVOIR WITH SOLUTION GAS

OPERATOR: LYCO ENERGY CORP.  
WELL NAME: LUNDQUIST #25-2  
FIELD: PLUMBER  
LOCATION: NWNW 25, T161N-R99W  
COUNTY: DIVIDE  
STATE: NORTH DAKOTA  
FORMATION: INTERLAKE

BASIC DATA & ESTIMATED RESERVES

DATUM:	-8323 FEET
RESERVOIR PRESSURE:	4940 PSI
RESERVOIR TEMPERATURE:	223 DEGREES F
AVERAGE POROSITY:	14.00%
AVERAGE CONATE WATER SATURATION:	25.00%
OIL GRAVITY (API @ 60 DEGREES F):	45 DEGREES API
SOLUTION GOR (CUBIC FEET/BBL):	158 CUBIC FEET/BBL
FORMATION VOLUME FACTOR:	1.2
SPACING UNIT (ACRES):	101 ACRES
RECOVERY FACTOR:	16.36%
RESERVOIR THICKNESS:	37 FEET
OIL IN PLACE:	2,536,769 BARRELS OIL
RECOVERABLE OIL:	415,015 STOCK TANK BARRELS
RECOVERABLE SOLUTION GAS:	65,572 MCF GAS
LEASE USE GAS	11.4%
GAS AVAILABLE FOR SALE	58097 MCF GAS

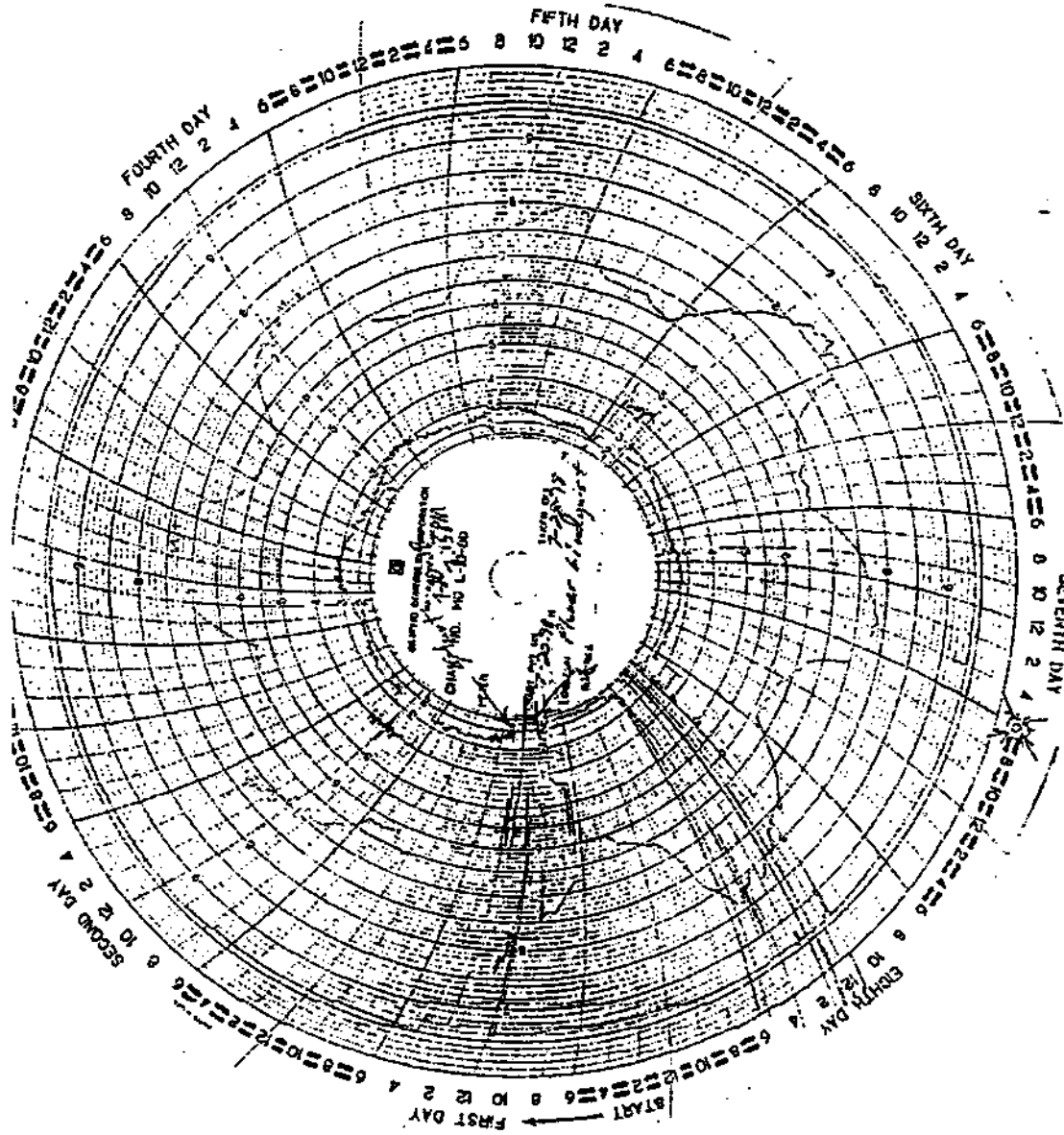
EXHIBIT

2

**GAS FLARING EXEMPTION DATA**

**GAS CONTRACT DATA:**

Potential Purchaser:	Custom Energy Construction, Inc. Amerada Hess Corp.
Gas Sales Price	\$ 0.53 per MMBTU
Connecting Costs (as per Purchaser):	\$ 57,000.00
Daily Salable Gas:	31 MCFGPD
Lease Gas Usage:	4 MCFGPD
GOR (as determined by Amerada Hess)	1567
Gas Value Adjusted for BTU:	\$ 0.83 MCF
Est. Ultimate Gas Reserves (see Vol. Analysis)	58097 MCF
Estimated value of Gas Reserves	\$ 48,220.51
Gas Value (Sales Value - Connection Costs):	-\$ 8,779.49



Lyco-Plumer Lindquist.txt

AMERADA HESS CORPORATION

TIOGA GAS PLANT

SETTLEMENT TEST

Well # : PLUMER LINDQUIST  
Producer : LYCO  
Secured by : KN  
Pressure : 32 PSI  
Analysis Date : Jul 30 1998  
Date Sample Taken: 07-28-98  
Effective Date :  
Temperature : 82 F

Chromatogram 1: \7SETT\PLUM\_01.A01  
Chromatogram 2: \7SETT\PLUM\_01.A02

Component Name	Mole %	GPM
Carbon Dioxide	2.819	
Nitrogen	11.267	
Methane	38.396	
Hydrogen Sulfide	.010	
Ethane	18.498	
Propane	17.189	4.731
Iso-butane	3.268	1.069
N-Butane	5.387	1.698
Iso-pentane	.980	.359
N-Pentane	1.371	.496
Hexanes Plus	.815	.358

GPM for Pentanes+ : 1.213  
GPM for Butanes+ : 3.980  
GPM for Propane+ : 8.711

Test Correlation: 1.725

Calc BTUs@ 14.73 Psia (Dry Basis): 1567

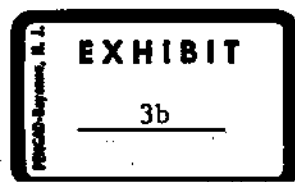
Specific Gravity (Measured - Ranarex) : .000  
Specific Gravity (Calculated w/H2S - Ideal): 1.078  
Specific Gravity (Calculated w/H2S - Real) : 1.084

tribution

Master Files - Plant  
roducer  
Gas Measurement- AHC Houston  
Field Files - Hawkeye  
Kathi Rossland - AHC Williston

Remarks:

Page 1



Test Dates: July 20-28, 1998  
 Orifice Size: 0.75"  
 Volumes not Adjusted for Temperature, Visual Chart Readings

		Static	Differential	Coef.	Daily Rate
7/21/98 Gas	High	9.8	4	1.499	58.8 MCFD
	Low	9.8	2.5	1.499	36.7 MCFD
	Average	9.8	2.75	1.499	40.4 MCFD
Oil					257 BBL
Water					0 BBL
GOR					157 SCF/B
7/22/98 Gas	High	9.8	4	1.499	58.8 MCFD
	Low	9.8	2.25	1.499	33.1 MCFD
	Average	9.8	2.5	1.499	36.7 MCFD
Oil					249 BBL
Water					0 BBL
GOR					147 SCF/B
7/23/98 Gas	High	9.8	3	1.499	44.1 MCFD
	Low	9.8	2.2	1.499	32.3 MCFD
	Daily	9.8	2.3	1.499	33.8 MCFD
Oil					229 BBL
Water					0 BBL
GOR					148 SCF/B
7/24/98 Gas	High	9.8	3.2	1.499	47.0 MCFD
	Low	9.8	2.3	1.499	33.8 MCFD
	Daily	9.8	2.4	1.499	35.3 MCFD
Oil					225 BBL
Water					0 BBL
GOR					157 SCF/B
7/25/98 Gas	High	9.8	4	1.499	53.8 MCFD
	Low	9.8	2.2	1.499	32.3 MCFD
	Daily	9.8	2.7	1.499	39.7 MCFD
Oil					224 BBL
Water					0 BBL
GOR					177 SCF/B
7/26/98 Gas	High	9.8	2.7	1.499	39.7 MCFD
	Low	9.8	2.3	1.499	33.8 MCFD
	Daily	9.8	2.4	1.499	35.3 MCFD
Oil					248 BBL
Water					0 BBL
GOR					142 SCF/B
7/27/98 Gas	High	9.8	2.8	1.499	41.1 MCFD
	Low	9.8	2.3	1.499	33.8 MCFD
	Daily	9.8	2.4	1.499	35.3 MCFD
Oil					212 BBL
Water					0 BBL
GOR					166 SCF/B
7/28/98 Gas	High	9.8	6	1.499	88.1 MCFD
	Low	9.8	1.4	1.499	20.6 MCFD
	Daily	9.8	3	1.499	44.1 MCFD
Oil					262 BBL
Water					0 BBL
GOR					168 SCF/B



# LYCO OPERATING COMPANY

---

Brian J. Wright  
Project Engineer

Industrial Commission Of North Dakota, Oil and Gas Division  
900 E Blvd.  
Bismarck, ND 58505

Gentlemen:

Re: Case # 7145, October, 20, 1998

In response to Red River "C" gas production potential questions regarding Case #7145, Lyco Operating Company submits the following information.

The Red River "C" zone was initially on production in late February of 1998. Production declined rapidly and salt water production began to increase. A 500 gallon acid cleanup resulted in a marginally economic operation in the Red River "C" which produced 48 BO, 204 BSW, and flared an estimated 40-45 MCF of gas on the last day of Red River "C" production, June 11, 1998. The Red River was subsequently isolated behind a bridge plug and the Interlake zone was perforated and is the current producing interval.

Reservoir pressures recorded during pressure build up testing indicates that the Interlake (4,920 psi @ 10,471' datum or 0.469 psi/ft gradient [on 9/21/98]) and the Red River (5,180 psi @ 11,267' datum or 0.459 psi/ft gradient [on 2/16/98]) will exhibit cross flow if co-mingled due to a very strong water drive in the Interlake. This strong water drive is confirmed by no decline in the original DST BHP, after over 90 days of production.

For the above reason, Lyco will make no attempt to co-mingle the production between the Interlake and the Red River zones in the Plumer-Lundquist #25-2. Current plans are to produce the Interlake until it becomes unprofitable, then evaluate additional shallower potential.

Clarification of an additional point has been requested regarding the gas bid tendered for the subject well. The original bid was submitted by Custom Energy of Casper, Wyoming from which the installation costs and gas prices submitted were obtained. The actual gas volume test was conducted by Amerada Hess which declined to submit a bid due to limited available volumes.

Please contact me at the below address with any questions.

Regards,



Brian Wright  
Project Engineer

# Double **EE** Service, Inc.

Oilfield Production Sales & Service  
and Manufacturer's Representative  
2210 4th Avenue West  
WILLISTON, NORTH DAKOTA 58802

## LYCO OPERATING CO.

### GAS MEASUREMENT TESTS GAS-OIL RATIO DETERMINATION WATER-OIL RATIO DETERMINATION

WELL NAME : PLUMER-LUNDQUIST #25-2  
COUNTY & STATE : DIVIDE COUNTY, NORTH DAKOTA  
FIELD NAME : BURG

WELL FILE NO. : 14775  
POOL : SILURIAN  
LOCATION : NW NE SEC. 25 - T161N - R99W

TESTS RUN BY : RON EVITT  
DOUBLE EE SERVICE, INC.  
P.O. BOX 2417  
WILLISTON, ND 58802-2417

EQUIPMENT USED : CLIFF MOCK PRESSURE RECORDER  
RECORDER SIZE -----> 0 TO 50 PSI  
2 INCH WELL TESTER  
PLATE SIZE -----> 0.250 INCH

GAS SOURCE : GAS LINE FROM TREATER  
GAS SPECIFIC GRAVITY : 0.900 (AIR = 1.00) ASSUMED, NO GAS TEST AVAILABLE  
TEMPERATURE OF GAS : 39 DEG. F

FLOWRATES REPORTED AT : 14.73 PSIA AND 60 DEG. F.  
LENGTH OF TEST : 24 HOURS

#### RESULTS:

\*\*\*\*\*

TEST DATE -----> 12/2 TO 12/3/98

OIL PRODUCTION FOR 24 HOURS -----> 95.19 BARRELS  
SALTWATER PRODUCTION FOR 24 HOURS -----> 250 BARRELS

AVERAGE GAS FLOWRATE TO METER -----> 8.05 MCF/DAY  
AVERAGE GAS FLOWRATE TO TREATER BURNER, (MEASURED) -----> 15.75 MCF/DAY  
AVERAGE GAS FLOWRATE TO AJAX ENGINE (FROM PREV TEST) -----> 6.00 MCF/DAY

TOTAL GAS FLOWRATE -----> 29.80 MCF/DAY  
GAS-OIL RATIO -----> 313.10 SCF/STB  
WATER-OIL RATIO -----> 2.63 BBL/BBL

#### ADDITIONAL OBSERVATIONS:

\*\*\*\*\*

PUMPING UNIT IS ROD HEAVY.  
UPSTROKE WAS TIMED AT 5.47 SECOND AVERAGE.  
DOWNSTROKE WAS TIMED AT 4.34 SECOND AVERAGE.  
PEAK TORQUE CAN BE REDUCED BY MOVING COUNTERWEIGHTS OUT ON CRANKARM.

SUBMITTED BY: RON EVITT, PETROLEUM ENGINEER





**GAS-OIL RATIO REPORT - FORM 9**  
**INDUSTRIAL COMMISSION OF NORTH DAKOTA**  
**OIL AND GAS DIVISION**  
 SFN 5755 (2-82)

**INSTRUCTIONS**

The original and one copy of this report must be submitted to the OIL AND GAS DIVISION, 600 EAST BOULEVARD, BISMARCK, ND 58505.

All volumes must be corrected to 60 degrees F. and 14.73 PSIA.

Name of Operator <b>Lyco Operating Company</b>		Field <b>Burg</b>	Pool <b>Silurian</b>
Address <b>6688 N. Central Exprsway, Suite 1600</b>		City <b>Dallas</b>	State - Zip Code <b>TX 75206-3927</b>
Equipment Used <b>Cliff Mock Prss Recorder &amp; 2" Well Tester</b>			Month / Year <b>Dec 98</b>

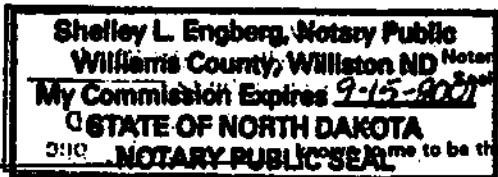
WELL NAME AND NUMBER	WELL FILE NO.	DATE OF TEST	PROD. METHOD	CHOKE SIZE	TEST HOURS	DAILY ALLOW BBLs.	PRODUCED DURING TEST			GOR. SCF/ STB
							WATER BBLs.	OIL BBLs.	GAS MCF	
Plumer-Lundquist #25-2	14775	12/2	Pump	---- Orif. Plate Size 0.250 inch	24	---	250	95.19	29.8	313.1

Name(s) of Person(s) Making Above Tests <b>Ron Evitt</b>	Name of Company or Operator <b>Double EE Serv./Evitt Oper &amp; Cons.</b>
---	--

I certify that the above information is true and correct.

Signature 	Title <b>Petroleum Engineer</b>	Date <b>12/4/98</b>
---------------	------------------------------------	------------------------

STATE OF North Dakota  
 COUNTY OF Williams



On Dec 4th 19 98, Ron Evitt

executed the foregoing instrument, personally appeared before me and acknowledged that (s)he executed the same as a free act and deed.  
Shelley L. Engberg  
 Notary Public My Commission Expires Sept. 15, 2001



BEFORE THE INDUSTRIAL COMMISSION OF THE STATE OF NORTH DAKOTA

IN THE MATTER OF THE APPLICATION OF LYCO OPERATING COMPANY FOR AN ORDER OF THE COMMISSION (1) AMENDING THE FIELD RULES FOR THE BURG-SILIARIAN POOL SO AS TO AUTHORIZE THE FLARING OF GAS FROM THE PLUMER - LUNDQUIST #25-2 WELL WITHOUT REGARD TO THE PRODUCTION RESTRICTIONS PROVIDED BY SECTION (12) OF COMMISSION ORDER NO. 8351, AND (2) AUTHORIZING THE FLARING OF GAS FROM THE PUMER-LUNDQUIST #25-2 WELL AS AN EXCEPTION TO THE PROVISIONS OF SECTIONS 38-08-06.4 OF THE NORTH DAKOTA CENTURY CODE, AND/OR SUCH OTHER AND FURTHER RELIEF AS THE COMMISSION DEEMS APPROPRIATE

CASE NO. \_\_\_\_\_

AFFIDAVIT OF  
CHARLES B. WILEY

\*\*\*\*\*

STATE OF TEXAS            )  
                                  : ss  
COUNTY OF                )

**CHARLES B. WILEY**, being first duly sworn, deposes and states as follows:

1. I am employed as a Petroleum Engineer with Lyco Operating Company ("Lyco"), 6688 North Central Expressway, Suite 1600, Dallas, TX 75206-3927, and am percipient to testify to the facts set forth hereinafter.
2. Lyco is the operator of the Plumer - Lundquist #25-2 well, the spacing unit for which was established by Commission Order No. 8351 as comprised of the SE/4 of Section 24, and the NE/4 of Section 25, in Township 161 North, Range 99 West, 5<sup>th</sup> P.M., Divide County, North Dakota.
3. The Burg - Silurian Pool is an oil reservoir, but small amounts of gas are produced in association with crude oil at the wellhead as a by-product of oil production.
4. The Plumer - Lundquist #25-2 well is currently not connected to a gas gathering facility, and all casinghead gas being produced by said well and not being used for lease operations is being flared.
5. Attached to this Affidavit are Exhibits 1 through 6, each of which was prepared by me, or by others under my supervision or control, and each of which is true and correct to the best of my knowledge and belief. Your Affiant respectfully requests that Exhibits 1 through 6 be accepted in evidence, together with this Affidavit, in support of the Application of Lyco filed with the Commission in this case.
6. Exhibit 1 is a "Well Data" sheet setting forth pertinent well data concerning the Plumer-Lundquist #25-2 well. This exhibit was previously submitted and accepted in evidence in North Dakota Industrial Commission Case No. 7145.
7. Exhibit 2 is a "Volumetric Analysis" which calculates out the reserves for the Plumer - Lundquist #35-2 well using the parameters set forth in Exhibit 1. As can be seen from this exhibit, the gas reserves on the Plumer-Lundquist #25-2 well are calculated at 65, 572 MCF, with 58,097 MCF available for sale.

8. Exhibit 3 is styled "Gas Flaring Exemption Data", and is an economics summary setting forth pertinent information concerning gas production rates and remaining reserves thereof, pricing, gas used for lease operations, costs associated with connecting the Plumer-Lundquist #25-2 well to a gas line, and net undiscounted cash flow reflecting a gas sales connection. As the exhibit clearly demonstrates, the surplus casinghead presently being produced by the Plumer-Lundquist #25-2 well and the estimated recoverable reserves from the well are insufficient to recoup the costs of installing and operating a gas sales line, and project cash flow will be reduced by approximately \$8,779.49 if a gas sales line must be installed under current market conditions. Exhibits 3a, 3b and 3c are submitted as backup data for the summarized information set forth in Exhibit 3.

9. Exhibit 4 is an explanatory letter previously furnished to the Commission in connection with Case No. 7145. Significantly, as you may note from the second page of my letter, Amerada Hess declined to submit a bid to purchase casinghead gas from the Plumer - Lundquist #25-2 well due to the limited available volumes.

10. Exhibit 5 is a "Gas Measurement Test" conducted on the Plumer - Lundquist #25-2 well by Ron Evitt, a petroleum engineer with Double EE Service, Inc., an independent consulting firm, which reflects that the average gas flowrate (As of December 2-3, 1998) was 29.80 MCFD, which figure supports the Daily Salable Gas figure set forth in Exhibit 3. Exhibit 6 is simply a photocopy of the "Gas-Oil Ratio Report-Form 9" previously filed with the Commission by Mr. Evitt evidencing the gas measurement test results.

11. It is Affiant's opinion as an expert in the field of petroleum engineering that if the application of Lyco in this case is not granted as submitted, that (i) taxes and royalties which must be paid of flared gas will increase operating costs, raise the economic limit and cause premature abandonment of the well; (ii) that if the well must be connected to a gas sales line at an economic loss this will also result in premature abandonment; and (iii) that if flaring must cease at some future time under the current provisions of Paragraph 12, Order No. 8351 and the well "capped," it will result in the loss of oil production and the loss of benefits of that production by all owners of interests in the Plumer - Lundquist #25-2 well, as well as the State of North Dakota.

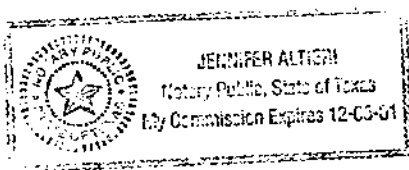
12. Inquiries regarding this Affidavit and the application related thereto may be directed either to the undersigned at (214) 890-4400, or Lyco's attorney, John R. Lee, at (701) 572-2200.

Further Affiant Sayeth not.

DATED this 26<sup>th</sup> day of January, 1999.  
Charles B. Wiley  
CHARLES B. WILEY

STATE OF TEXAS )  
 ) : ss  
COUNTY OF \_\_\_\_\_ )

On this 26<sup>th</sup> day of January, 1999, before me, a Notary Public for the State of Texas, personally appeared Charles B. Wiley, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same.



(SEAL)

Jennifer Altieri  
Notary Public  
Residing at Dallas, Texas  
My commission expires December 3, 2001

## WELL DATA

### 1) OPERATOR

Lyc0 Operating Co.  
North Central Expressway  
Suite 1600  
Dallas, TX 75206-3927

### 2) REQUESTED SPACING

320 acre spacing  
spacing unit for discovery well: SE/4 24, NE/4 25, T161N-R99W, Divide Co, ND  
660' set back from spacing unit boundary  
1980' between wells

### 3) FORMATION TO BE SPACED

Silurian Interlake Formation from the Top of the Interlake to the Base of the Interlake or what ever interval the Commission deems releavelent

### 4) AREA TO BE SPACED

T161N-R99W  
Section 24, SE/4  
Section 25, NE/4

### 5) DISCOVERY WELL

Lyc0 Opersting Co.  
Lundquist #25-2  
(120' FNL, 1680' FEL)  
NE/4 25, T161N-R99W  
Divide Co., ND

### 6) CASING INFORMATION

Surface Casing: 9 5/8" casing set @ 1644', cemented w/1500 sx  
(Cement Top @ Surface)  
Production Casing: 5 1/2" casing set @ 11670', cemented w/2560 sx  
(Cement Top @ 3230')  
Production Tubing: 2 7/8" anchored @ 10404', Model 'R' packer @ 11404

### 7) RESERVOIR DATA

Trap Type:	Structural
Datum:	-8323'
Initial Reservoir Pressure	4940#
Oil Gravity:	45 API
Oil Gas Ratio:	158 CF/BBL
Reservoir Temperature:	223 °F
Gross Pay:	37'
Avg. Porosity of Gross Pay:	14%
Estimated Sw:	25%
Reservoir Drive Mechanism:	Solution Gas & Water Drive
Resistivity of Produced Water:	0.51 @ 67 °F, 200,000 ppm Cl <sub>2</sub>
Formation Volumm Factor:	1.2 RB/STB
Perforated Interval:	10440-10445'



Initial Potential: 10453-10458'  
10461-10468'  
240 BOPD  
0 BSWPD  
38 MCFGPD

Current Producing Rate: 140 BOPD  
103 BSWPD  
23 MCFGPD  
Flowing @ 200# Flowing Tubing Pressure

Cum. Production (from 6/16/98 to 10/11/98)  
24585 BO  
3408 BSW  
3885 MCF

Disposition of Fluids: Oil, Sold to Murphy Oil Company  
Water, Trucked to approved SWD in Ambrose Field  
Gas, Flared

Electric Logs: DLL-MSFL-GR-CALIP  
FDC-CNL-GR-CALIP  
BHCI Sonic-GR-CALIP  
CBL-GR  
(All logs on file with the NDIC)

**8) RESERVE DATA**

Estimated OOIP: 2.536 Million Barrels  
Potential Productive Area: 101 Acres  
Estimated Recoverable Oil: 415,000 BO  
Estimated recoverable gas: 65,500 MCF  
Development Costs: \$1,100,000  
Estimated return on Investment: 4.2-1



VOLUMETRIC ANALYSIS  
OIL RESERVOIR WITH SOLUTION GAS

OPERATOR: LYCO ENERGY CORP.  
WELL NAME: LUNDQUIST #25-2  
FIELD: PLUMBER  
LOCATION: NWNW 25, T161N-R99W  
COUNTY: DIVIDE  
STATE: NORTH DAKOTA  
FORMATION: INTERLAKE

BASIC DATA & ESTIMATED RESERVES

DATUM: -8323 FEET  
RESERVOIR PRESSURE: 4940 PSI  
RESERVOIR TEMPERATURE: 223 DEGREES F  
AVERAGE POROSITY: 14.00%  
AVERAGE CONATE WATER SATURATION: 25.00%  
OIL GRAVITY (API @ 60 DEGREES F): 45 DEGREES API  
SOLUTION GOR (CUBIC FEET/BBL): 158 CUBIC FEET/BBL  
FORMATION VOLUME FACTOR: 1.2  
SPACING UNIT (ACRES): 101 ACRES  
RECOVERY FACTOR: 16.36%  
RESERVOIR THICKNESS: 37 FEET

OIL IN PLACE: 2,536,769 BARRELS OIL

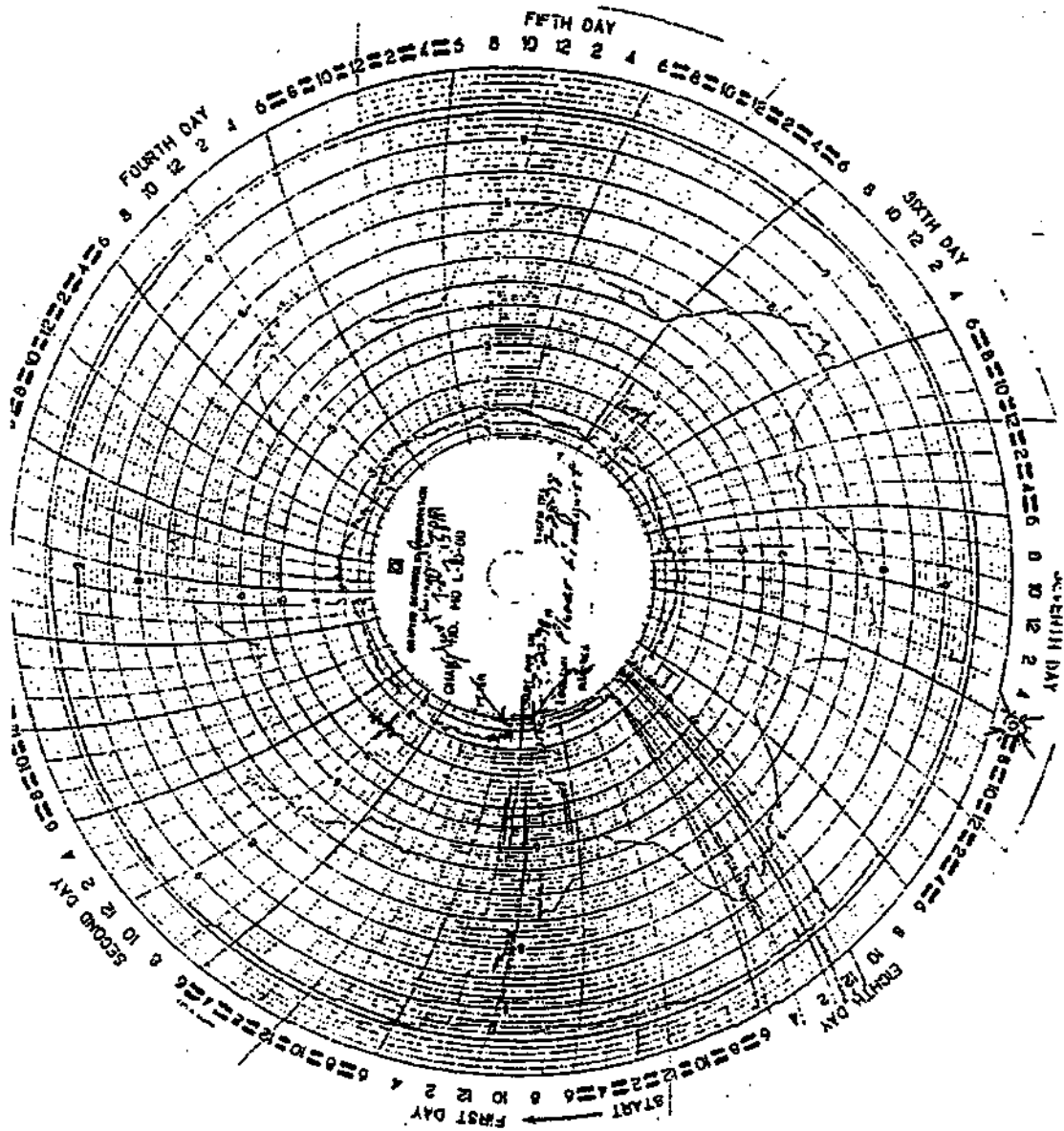
RECOVERABLE OIL: 415,015 STOCK TANK BARRELS

RECOVERABLE SOLUTION GAS: 65,572 MCF GAS  
LEASE USE GAS 11.4%  
GAS AVAILABLE FOR SALE 58097 MCF GAS

**GAS FLARING EXEMPTION DATA**

**GAS CONTRACT DATA:**

Potential Purchaser:	Custom Energy Construction, Inc. Amerada Hess Corp.
Gas Sales Price	\$ 0.53 per MMBTU
Connecting Costs (as per Purchaser):	\$ 57,000.00
Daily Salable Gas:	31 MCFGPD
Lease Gas Usage:	4 MCFGPD
GOR (as determined by Amerada Hess)	1567
Gas Value Adjusted for BTU:	\$ 0.83 MCF
Est. Ultimate Gas Reserves (see Vol. Analysis)	58097 MCF
Estimated value of Gas Reserves	\$ 48,220.51
Gas Value (Sales Value - Connection Costs):	-\$ 8,779.49



Lyco-Plumer Lindquist.txt

AMERADA HESS CORPORATION  
TIOGA GAS PLANT

SETTLEMENT TEST

Well # : PLUMER LINDQUIST      Analysis Date : Jul 30 1998  
Producer : LYCO                      Date Sample Taken: 07-28-98  
Secured by : KN                      Effective Date :  
Pressure : 32 PSI                      Temperature : 82 F

Chromatogram 1: \7SETT\PLUM\_01.A01  
Chromatogram 2: \7SETT\PLUM\_01.A02

Component Name	Mole %	GPM
Carbon Dioxide	2.819	
Nitrogen	11.267	
Methane	38.396	
Hydrogen Sulfide	.010	
Ethane	18.498	
Propane	17.189	4.731
Iso-butane	3.268	1.069
N-Butane	5.387	1.698
Iso-pentane	.980	.359
N-Pentane	1.371	.496
Hexanes Plus	.815	.358

GPM for Pentanes+: 1.213  
GPM for Butanes+ : 3.980  
GPM for Propanes+ : 8.711

Test Correlation: 1.725

Calc BTUs@ 14.73 Psia (Dry Basis): 1567

Specific Gravity (Measured - Renorex) : .000  
Specific Gravity (Calculated w/H2S - Ideal): 1.078  
Specific Gravity (Calculated w/H2S - Real) : 1.084

Distribution

Plies - Plant

Measurement- AHC Houston  
Plies - Hawkeye  
Crossland - AHC Williston

Remarks:

Page 1

EXHIBIT

3b

PERCUT-Systems, L.P.

Tax Dates: July 20-28, 1998  
 Orifice Size: 0.75"  
 Volumes not Adjusted for Temperature, Visual Chart Readings

		Static	Differential Coef.	Daily Rate	
7/21/98 Gas	High	9.8	4	1.499	58.8 MCFD
	Low	9.8	2.5	1.499	36.7 MCFD
	Average	9.8	2.75	1.499	40.4 MCFD
Oil					257 BBL
Water					0 BBL
GOR					157 SCF/B
7/22/98 Gas	High	9.8	4	1.499	58.8 MCFD
	Low	9.8	2.25	1.499	33.1 MCFD
	Average	9.8	2.5	1.499	36.7 MCFD
Oil					249 BBL
Water					0 BBL
GOR					147 SCF/B
7/23/98 Gas	High	9.8	3	1.499	44.1 MCFD
	Low	9.8	2.2	1.499	32.3 MCFD
	Daily	9.8	2.3	1.499	33.8 MCFD
Oil					229 BBL
Water					0 BBL
GOR					148 SCF/B
7/24/98 Gas	High	9.8	3.2	1.499	47.0 MCFD
	Low	9.8	2.3	1.499	33.8 MCFD
	Daily	9.8	2.4	1.499	35.3 MCFD
Oil					225 BBL
Water					0 BBL
GOR					157 SCF/B
7/25/98 Gas	High	9.8	4	1.499	58.8 MCFD
	Low	9.8	2.2	1.499	32.3 MCFD
	Daily	9.8	2.7	1.499	39.7 MCFD
Oil					224 BBL
Water					0 BBL
GOR					171 SCF/B
7/26/98 Gas	High	9.8	2.7	1.499	39.7 MCFD
	Low	9.8	2.3	1.499	33.8 MCFD
	Daily	9.8	2.4	1.499	35.3 MCFD
Oil					248 BBL
Water					0 BBL
GOR					142 SCF/B
7/27/98 Gas	High	9.8	2.8	1.499	41.1 MCFD
	Low	9.8	2.3	1.499	33.8 MCFD
	Daily	9.8	2.4	1.499	35.3 MCFD
Oil					212 BBL
Water					0 BBL
GOR					166 SCF/B
7/28/98 Gas	High	9.8	6	1.499	88.1 MCFD
	Low	9.8	1.4	1.499	20.6 MCFD
	Daily	9.8	3	1.499	44.1 MCFD
Oil					262 BBL
Water					0 BBL
GOR					168 SCF/B

# LYCO OPERATING COMPANY

---

Brian J. Wright  
Project Engineer

Industrial Commission Of North Dakota, Oil and Gas Division  
900 E Blvd.  
Bismarck, ND 58505

Gentlemen:

Re: Case # 7145, October, 20, 1998

In response to Red River "C" gas production potential questions regarding Case #7145, Lyco Operating Company submits the following information.

The Red River "C" zone was initially on production in late February of 1998. Production declined rapidly and salt water production began to increase. A 500 gallon acid cleanup resulted in a marginally economic operation in the Red River "C" which produced 48 BO, 204 BSW, and flared an estimated 40-45 MCF of gas on the last day of Red River "C" production, June 11, 1998. The Red River was subsequently isolated behind a bridge plug and the Interlake zone was perforated and is the current producing interval.

Reservoir pressures recorded during pressure build up testing indicates that the Interlake (4,920 psi @ 10,471' datum or .469 psi/ft gradient [on 9/21/98]) and the Red River (5,180 psi @ 11,267' datum or 0.459 psi/ft gradient [on 2/16/98]) will exhibit cross flow if co-mingled due to a very strong water drive in the Interlake. This strong water drive is confirmed by no decline in the original DST BHP, after over 90 days of production.

For the above reason, Lyco will make no attempt to co-mingle the production between the Interlake and the Red River zones in the Plumer-Lundquist #25-2. Current plans are to produce the Interlake until it becomes unprofitable, then evaluate additional shallower potential.

Telephone: (214) 890-4400 • Fax: (214) 385-1271 • E-mail: bwright@lycoenergy.com  
6688 North Central Expressway • Suite 1600 • Dallas, Texas 75206-3927

EXHIBIT

4

Clarification of an additional point has been requested regarding the gas bid tendered for the subject well. The original bid was submitted by Custom Energy of Casper, Wyoming from which the installation costs and gas prices submitted were obtained. The actual gas volume test was conducted by Amerada Hess which declined to submit a bid due to limited available volumes.

Please contact me at the below address with any questions.

Regards,



Brian Wright  
Project Engineer

# Double **EE** Service, Inc.

Oilfield Production Sales & Service  
and Manufacturer's Representative  
2210 4th Avenue West  
WILLISTON, NORTH DAKOTA 58802

## LYCO OPERATING CO.

### GAS MEASUREMENT TESTS GAS-OIL RATIO DETERMINATION WATER-OIL RATIO DETERMINATION

WELL NAME : PLUMER-LUNDQUIST #25-2  
COUNTY & STATE : DIVIDE COUNTY, NORTH DAKOTA  
FIELD NAME : BURG

WELL FILE NO. : 14775  
POOL : SILURIAN  
LOCATION : NW NE SEC. 25 - T161N - R99W

TESTS RUN BY : RON EVITT  
DOUBLE EE SERVICE, INC.  
P.O. BOX 2417  
WILLISTON, ND 58802-2417

EQUIPMENT USED : CLIFF MOCK PRESSURE RECORDER  
RECORDER SIZE -----> 0 TO 50 PSI  
2 INCH WELL TESTER  
PLATE SIZE -----> 0.250 INCH

GAS SOURCE : GAS LINE FROM TREATER  
GAS SPECIFIC GRAVITY : 0.900 (AIR = 1.00) ASSUMED, NO GAS TEST AVAILABLE  
TEMPERATURE OF GAS : 39 DEG. F

FLOWRATES REPORTED AT : 14.73 PSIA AND 60 DEG. F.  
LENGTH OF TEST : 24 HOURS

#### RESULTS:

\*\*\*\*\*

TEST DATE -----> 12/2 TO 12/3/98

OIL PRODUCTION FOR 24 HOURS -----> 95.19 BARRELS

SALTWATER PRODUCTION FOR 24 HOURS -----> 250 BARRELS

AVERAGE GAS FLOWRATE TO METER -----> 8.05 MCF/DAY

AVERAGE GAS FLOWRATE TO TREATER BURNER, (MEASURED) -----> 15.75 MCF/DAY

AVERAGE GAS FLOWRATE TO AJAX ENGINE (FROM PREV TEST) -----> 6.00 MCF/DAY

TOTAL GAS FLOWRATE -----> 29.80 MCF/DAY

GAS-OIL RATIO -----> 313.10 SCF/STB

WATER-OIL RATIO -----> 2.63 BBL/BBL

#### ADDITIONAL OBSERVATIONS:

\*\*\*\*\*

PUMPING UNIT IS ROD HEAVY.  
UPSTROKE WAS TIMED AT 5.47 SECOND AVERAGE.  
DOWNSTROKE WAS TIMED AT 4.34 SECOND AVERAGE.  
PEAK TORQUE CAN BE REDUCED BY MOVING COUNTERWEIGHTS OUT ON CRANKARM.

SUBMITTED BY: RON EVITT, PETROLEUM ENGINEER

EXHIBIT  
5





**GAS-OIL RATIO REPORT - FORM 9**  
**INDUSTRIAL COMMISSION OF NORTH DAKOTA**  
**OIL AND GAS DIVISION**  
 SFN 5755 (2-92)

**INSTRUCTIONS**

The original and one copy of this report must be submitted to the OIL AND GAS DIVISION, 800 EAST BOULEVARD, BISMARCK, ND 58505.

All volumes must be corrected to 60 degrees F. and 14.73 PSIA.

Name of Operator <b>Lyco Operating Company</b>		Field <b>Burg</b>	Pool <b>Silurian</b>	
Address <b>6688 N. Central Exprsway, Suite 1600</b>		City <b>Dallas</b>	State <b>TX</b>	Zip Code <b>75206-3927</b>
Equipment Used <b>Cliff Mock Prss Recorder &amp; 2" Well Tester</b>			Month / Year <b>Dec 98</b>	

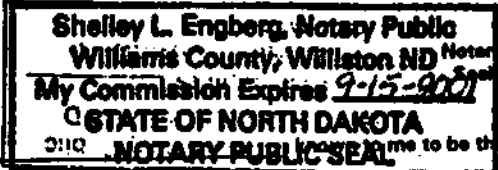
WELL NAME AND NUMBER	WELL FILE NO.	DATE OF TEST	PROD. METHOD	CHOKE SIZE	TEST HOURS	DAILY ALLOW BBL.	PRODUCED DURING TEST			GOR.
							WATER BBL.	OIL BBL.	GAS MCF	
Plumer-Lundquist #25-2	14775	12/2	Pump	----  Orif. Plate Size  0.250 inch	24	---	250	95.19	29.8	313.1  SCF/ STB

Name(s) of Person(s) Making Above Tests <b>Ron Evitt</b>	Name of Company or Operator <b>Double EE Serv./Evitt Oper &amp; Cons.</b>
---	--

I certify that the above information is true and correct.

Signature 	Title <b>Petroleum Engineer</b>	Date <b>12/4/98</b>
---------------	------------------------------------	------------------------

STATE OF North Dakota  
 COUNTY OF Williams



On Dec 4<sup>th</sup> 19 98, Ron Evitt

executed the foregoing instrument, personally appeared before me and acknowledged that (s)he executed the same as a free act and deed.

Shelley L. Engberg  
 Notary Public

My Commission Expires Sept. 15, 2001



STATE OF NORTH DAKOTA )

AFFIDAVIT OF MAILING

COUNTY OF BURLEIGH )

I, Donna Bauer, being duly sworn upon oath, depose and say: That on the 19th day of March 1999, enclosed in separate envelopes true and correct copies of the attached Order No. 8428 of the North Dakota Industrial Commission, and deposited the same with the United States Postal Service in Bismarck, North Dakota, with postage thereon fully paid, directed to the following persons by the Industrial Commission in Case No. 7218 :

John Morrison  
Fleck, Mather & Strutz Ltd.  
P. O. Box 2798  
Bismarck, ND 58502

Lawrence Bender  
Pearce & Durick  
P. O. Box 400  
Bismarck, ND 58502

John Lee  
Crowley Law Office  
P. O. Box 1206  
Williston, ND 58802

Lycos Operating Co.  
6688 N. Central Expressway  
Suite 1600  
Dallas, TX 75206-3927

Donna Bauer  
Donna Bauer  
Oil & Gas Division

On this 19th day of March 1999, before me personally appeared Donna Bauer to me known as the person described in and who executed the foregoing instrument and acknowledged that she executed the same as her free act and deed.

Eric Roberson  
Notary Public  
State of North Dakota County of Burleigh  
My Commission expires 11-3-2004

**CROWLEY, HAUGHEY, HANSON, TOOLE & DIETRICH P.L.L.P.**

**ATTORNEYS AT LAW  
113 East Broadway  
(P. O. Box 1206)  
Williston, North Dakota 58802-1206  
Telephone: (701) 572-2200**

**DATE/TIME: March 5, 1999**

**FAX CORRESPONDENCE:**

**TO: Dave Hvinden**

**FAX #: 701-328-8022**

**FROM: John Lee**

THIS TRANSMISSION CONSISTS OF 2 PAGES (INCLUDING THIS COVER SHEET)

A HARD COPY OF THIS FAX WILL X WILL NOT      BE SENT BY MAIL.

IF FAX IS NOT FULLY RECEIVED, CALL 572-2200, AND ASK FOR CHARLENE OR JOHN.

\*\*\*\*\*

FOR RETURN FAX MESSAGES, SEND TO -- (701) 572-7072

---

**MESSAGE: Dave. Re: Plumer - Lundquist #25-2 Flaring Exemption. Have a good weekend. JRL.**

---

The information contained in this fax transmittal is confidential, may be subject to the attorney-client privilege and is intended only for the use of the recipient named above. If the reader is not the intended recipient, or the employee or agent responsible for delivery of this information to the intended recipient, you are notified that this is not a waiver of privilege and any dissemination, distribution or copying of this information is strictly prohibited. If you have received this transmittal in error, please immediately notify the sender by telephone, and return this transmittal to the sender, by U.S. Postal Service, at the above address. Thank you.

File No.: 72-077-054

**CROWLEY, HAUGHEY, HANSON, TOOLE & DIETRICH P.L.L.P.**

ATTORNEYS AT LAW

500 TRANSWESTERN PLAZA II  
400 NORTH 31ST STREET  
P.O. BOX 2329BILLINGS, MONTANA 59103-2529  
TELEPHONE (406) 252-3441100 NORTH PARK AVENUE  
SUITE 300, PO BOX 787  
HELENA, MT 59624  
PHONE (406) 440-4183103 EAST BROADWAY  
PO BOX 1200  
WILLISTON, ND 58802-1200  
PHONE (701) 572-2400431 FIRST AVENUE WEST  
PO BOX 759  
KALISPELL, MT 59903-0759  
PHONE (406) 752-0044CALL CROWLEY  
(406-252-3441)OF COUNSEL  
NORMAN HANSON  
BRUCE E. TOOLE  
JOHN W. DIETRICH  
LOUIS R. MOORE  
GARRETT F. WALKER  
NEIL S. HOFFER  
FRID L. WHELAN  
CALVIN D. ROBINSONRETIREE:  
JAMES M. HAUGHEY  
STUART W. CONNERARTHUR F. LANEY, JR.  
ATILES J. THOMAS  
GEORGE C. BALTHORP  
DAVID L. JOHNSON  
I. JAMES HECKATHORN  
KEET J. WILSON  
HERBERT I. PIRROCK, III  
TERRY B. COSCROVE  
RONALD W. LODDERS  
JOHN B. DUDIS, JR.  
LAWRENCE B. GOZZENS  
STEVEN BUFFATTO  
ALAN L. KARELL  
JAMES F. SITTS  
DANIEL D. JOHNS  
CAROLYN M. OSTRY  
STEVEN J. LEHMAN  
CHRISTOPHER HANCOCK, JR.  
MICHAEL E. VESTER  
DANIEL M. MCLEAN  
ROBERT G. MICHELOTTI, JR.  
DONALD R. MURRAY, JR.  
JOHN E. ALEXANDER  
DONALD L. HARRIS  
WILLIAM D. LAMBIN, III  
WILLIAM J. MATTIN  
PETER F. HAZEN  
MICHAEL S. DOCKERTY  
DEBRA D. PARKER  
MALCOLM H. GOODRICH  
MARY SORELY DYRE  
JON T. DYERERIC W. ANDERSON  
BRUCE A. FREDRICKSON  
BRUCE L. COPPOCK  
JANICE L. REITHNER  
JOE G. MATHEW, JR.  
PATRICK G. SOGARD  
JOHN R. LEE  
STEVEN M. MILON  
SCOTT M. HEARD  
LEONARD E. SMITH  
WEL D. WESTERF  
ANTOINETTE K. FLASE  
JILL B. KILLER  
MICHAEL S. JAMB  
KURT G. ALAN  
MICHAEL E. FRANK  
DAVID M. WAGNER  
ERANE S. PETERSON  
MATTHEW F. MOLEMAN  
ALJON J. HINSHAW  
JOHN M. FITZPATRICK  
M. SCOTT BERAN  
WILLIAM L. DANVER  
VINCENT O. BIERKE  
KRISTA L. KUTCH  
ALAN C. BRNAN  
ALLISON P. FONTENOT  
COLLEEN BAUKHARDTNER-DAVIES  
JEFFREY A. COOT  
KEW A. HAINTE  
CARY M. O'CONNELLY  
KRISTIN L. ONVIC

March 5, 1999

VIA FACSIMILE AND REGULAR MAIL.North Dakota Industrial Commission,  
Oil and Gas Division  
Capitol Building, 10th Floor  
600 East Boulevard  
Bismarck, North Dakota 58505-0310

Attention: Mr. David Hvinden

Re: Plumer-Lundquist #25-2 Well - Flaring Exemption  
Our File No. 72-077-054

Dear Dave:

Further to your request of February 24, 1999 regarding the captioned well, please be advised as follows:

- The distance to the nearest sales pipeline connection is approximately 6.5 miles. That sales pipeline is operated by Amerada Hess Corporation
- The anticipated pipeline specifications would be "3" poly
- Total royalty liability (non-cost bearing lease burdens) is 17.5625%

Dave, I trust this information is adequate for your purposes. If you need any additional information, however, feel free to contact the undersigned.

Very truly yours,

John K. Lee

JRL:jrl

cc: John K. (Jack) Walker, III, Consulting Landman

# CROWLEY, HAUGHEY, HANSON, TOOLE & DIETRICH R.L.L.P.

ATTORNEYS AT LAW

500 TRANSWESTERN PLAZA II  
490 NORTH 31ST STREET  
P.O. BOX 2529

BILLINGS, MONTANA 59103-2529  
TELEPHONE (406) 252-3441

100 NORTH PARK AVENUE  
SUITE 300, PO BOX 797  
HELENA, MT 59624  
PHONE (406) 449-4165

113 EAST BROADWAY  
PO BOX 1206  
WILLISTON, ND 58902-1206  
PHONE (701) 572-2200

431 FIRST AVENUE WEST  
PO BOX 759  
KALISPELL, MT 59903-0759  
PHONE (406) 752-6644

CALE CROWLEY  
(1912-1997)

OF COUNSEL  
NORMAN MANSON  
BRUCE R. TOOLE  
JOHN M. DIETRICH  
LOUIS R. MOORE  
GAREL F. KRIGER  
NEIL S. KEEFER  
FRED E. WHISENAND  
CALVIN S. ROBINSON

RETIRED  
JAMES M. HAUGHEY  
STUART W. GONNER

ARTHUR F. LAMEY, JR.  
MYLES J. THOMAS  
GEORGE C. DALTHORP  
DAVID L. JOHNSON  
I. JAMES HECKATHORN  
KEMP J. WILSON  
HERBERT J. PIERCE, III  
TERRY B. COSOVROVE  
RONALD R. LODDERS  
JOHN B. DUDIS, JR.  
LAWRENCE B. COZZENS  
STEVEN BUFFALTO  
ALLAN L. KARELL  
JAMES P. SITES  
DANIEL D. JOHNS  
CAROLYN S. OSTBY  
STEVEN J. LEMMAN  
CHRISTOPHER MANDEN, JR.  
MICHAEL E. WEBSTER  
DANIEL N. MCLEAN  
ROBERT O. MICHELOTTI, JR.  
DONALD R. MURRAY, JR.  
JOHN R. ALEXANDER  
DONALD L. HARRIS  
WILLIAM D. LAMDIN, III  
WILLIAM J. MATTIK  
PETER F. HABEIN  
MICHAEL S. DOCKERY  
DEBRA D. PARKER  
MALCOLM H. GOODRICH  
MARY SCRIM DYRE  
JON T. DYRE

ERIC E. ANDERSON  
BRUCE A. FREDRICKSON  
RENKE L. COPPOCK  
JANICE L. RENBERG  
JOE C. MAYNARD, JR.  
PATRICK O. SOOARD  
JOHN R. LEE  
STEVEN R. MILCH  
SCOTT M. HEARD  
LEONARD H. SMITH  
NEIL G. WESTESSEN  
ANTOINETTE M. TEASE  
JILL B. KELLER  
MICHAEL S. LAHR  
KURT O. ALME  
MICHAEL E. FRANK  
DAVID M. WAGNER  
SHANE D. PETERSON  
MATTHEW F. MCLEAN  
ALICE J. HINSHAW  
JOHN M. FITZPATRICK  
M. SCOTT REGAN  
WILLIAM L. DAVIES  
VINCENT O. RIEGER  
KRISTA L. MUTCH  
ALAN C. BRYAN  
ALLISON P. FONTENOT  
COLETTE BAUNGARDNER-DAVIES  
JEFFREY A. COOP  
KEN A. KALVIG  
GARY M. CONNELLEY  
KRISTIN L. OMVIG

March 5, 1999



## VIA FACSIMILE AND REGULAR MAIL

North Dakota Industrial Commission,  
Oil and Gas Division  
Capitol Building, 10th Floor  
600 East Boulevard  
Bismarck, North Dakota 58505-0310

Attention: Mr. David Hvinden

Re: Plumer-Lundquist #25-2 Well - Flaring Exemption  
Our File No. 72-077-054

Dear Dave:

Further to your request of February 24, 1999 regarding the captioned well, please be advised as follows:

- The distance to the nearest sales pipeline connection is approximately 6.5 miles. That sales pipeline is operated by Amerada Hess Corporation
- The anticipated pipeline specifications would be "3" poly
- Total royalty liability (non-cost bearing lease burdens) is 17.5625%

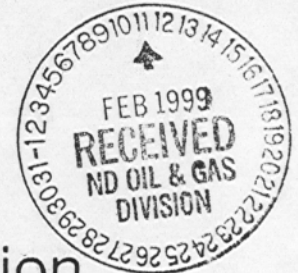
Dave, I trust this information is adequate for your purposes. If you need any additional information, however, feel free to contact the undersigned.

Very truly yours,

John K. Lee

JRL:jrl

cc: John K. (Jack) Walker, III, Consulting Landman



# Notice of publication

## NORTH DAKOTA INDUSTRIAL COMMISSION BISMARCK, NORTH DAKOTA

The State of North Dakota by its Industrial Commission hereby gives notice pursuant to law and the rules and regulations of said Commission promulgated thereunder of the following public hearing to be held at 9:00 a.m. on February 24, 1999, Holiday Inn, 605 East Broadway Renoir/Russell Room, Bismarck, North Dakota. For the purpose of this hearing, the Commission, any member thereof acting as Examiner, or an Examiner appointed by the Commission will receive testimony and exhibits.

ATTENTION PERSONS WITH DISABILITIES: If you plan to attend the hearing and will need special facilities or assistance relating to a disability, please contact the North Dakota Industrial Commission at 701-328-3722 by February 10, 1999.

### STATE OF NORTH DAKOTA TO:

All named parties and persons having any right, title, interest, or claim in the following cases and notices to the public.

**CASE NO. 7213:** ON A MOTION OF THE COMMISSION TO CONSIDER THE PROPER SPACING FOR THE DEVELOPMENT OF THE DANEVILLE-GUNTON POOL, DIVIDE COUNTY, NORTH DAKOTA, REDEFINE THE LIMITS OF THE FIELD, AND ENACT SUCH SPECIAL FIELD RULES AS MAY BE NECESSARY. BASIC EARTH SCIENCE SYSTEMS, INC.

**CASE NO. 7215:** ON A MOTION OF THE COMMISSION TO CONSIDER THE APPLICATION OF JORDAN EXPLORATION COMPANY, L.L.C. FOR AN ORDER ALLOWING A WELL TO BE DRILLED AT A

LOCATION APPROXIMATELY 2140 FEET FROM THE EAST LINE AND 34 FEET FROM THE SOUTH LINE OF SECTION 9, T.162N., R.96W., DIVIDE COUNTY, NORTH DAKOTA, AS AN EXCEPTION TO THE APPLICABLE STATEWIDE WELL LOCATION RULES.

**CASE NO. 7217:** ON A MOTION OF THE COMMISSION TO CONSIDER THE APPLICATION OF LYCO OPERATING COMPANY FOR AN ORDER AMENDING THE FIELD RULES FOR THE BURG-SILURIAN POOL SO AS TO AUTHORIZE THE FLARING OF GAS FROM THE PLUMER-LUNDQUIST #25-2 WELL, LOCATED IN THE NW/4 NE/4 OF SECTION 25, T.161N., R.99W, DIVIDE COUNTY, NORTH DAKOTA, WITHOUT REGARD TO THE PRODUCTION RESTRICTIONS PROVIDED BY PARAGRAPH 12 OF COMMISSION ORDER NO. 8351.

**CASE NO. 7218:** ON A MOTION OF THE COMMISSION TO CONSIDER THE APPLICATION OF LYCO OPERATING COMPANY FOR AN ORDER PURSUANT TO SECTION 43-02-03-88.1 OF THE NORTH DAKOTA ADMINISTRATIVE CODE EXEMPTING THE PLUMER-LUNDQUIST #25-2 WELL, LOCATED IN NW/4 NE/4 OF SECTION 25, T.161N., R.99W, DIVIDE COUNTY, NORTH DAKOTA, FROM THE PROVISIONS OF SECTION 38-08-06.4 OF THE NORTH DAKOTA CENTURY CODE, RELATING TO THE FLARING OF GAS.

Signed by: Edward T. Schafer, Governor, Chairman, ND Industrial Commission

OK

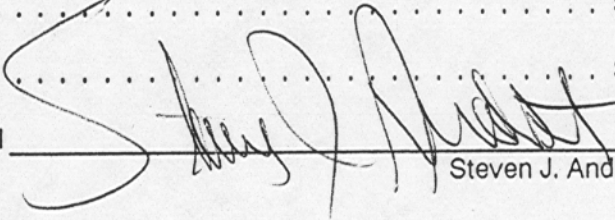
# Affidavit of Publication

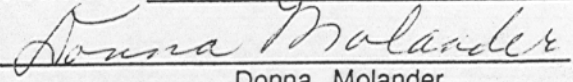
State of North Dakota, County of Divide, ss:  
I, Steven J. Andrist, being first duly sworn, on my oath, say that I am the publisher of The Journal, a weekly newspaper of general circulation and official newspaper of Divide County, State of North Dakota, published in the city of Crosby, ND, and that the advertisement headed

### Notice of publication

a printed copy of which is here attached, was published in The Journal on the following dates:

_____	Lines @ _____	= \$ _____
_____	Lines @ _____	= \$ _____
_____	Lines @ _____	= \$ _____
February 3, 1999	14½ Column Inches @ 4.00	= \$ 58.00
_____	Column Inches @ _____	= \$ _____
_____	Column Inches @ _____	= \$ _____
Notary/Affidavit Fee	_____	\$ _____
Total Charge	_____	\$ 58.00

Signed  Steven J. Andrist, Publisher

Subscribed and sworn to before me February 4, 1999  
  
Donna Molander

Notary Public, State of North Dakota  
My Commission Expires December 14, 2000

P.O. BOX 5516  
BISMARCK, NORTH DAKOTA 58506-5516

**NOTICE OF PUBLICATION  
NORTH DAKOTA  
INDUSTRIAL COMMISSION  
BISMARCK, NORTH DAKOTA**

The State of North Dakota by its Industrial Commission hereby gives notice pursuant to law and the rules and regulations of said Commission promulgated thereunder of the following public hearing to be held at 9:00 a.m. on February 24, 1999, Holiday Inn, 605 East Broadway, Renoir/Russell Room, Bismarck, North Dakota. For the purpose of this hearing, the Commission, any member thereof acting as Examiner, or an Examiner appointed by the Commission will receive testimony and exhibits.

**ATTENTION PERSONS WITH DISABILITIES:** If you plan to attend the hearing and will need special facilities or assistance relating to a disability, please contact the North Dakota Industrial Commission at 701-328-3722 by February 10, 1999.

**STATE OF NORTH DAKOTA TO:**

All named parties and persons having any right, title, interest, or claim in the following cases and notices to the public: **CASE NO. 7213: ON A MOTION OF THE COMMISSION TO CONSIDER THE PROPER SPACING FOR THE DEVELOPMENT OF THE DANVILLE-GUNTON POOL, DIVIDE COUNTY, NORTH DAKOTA, REDEFINE THE LIMITS OF THE FIELD, AND ENACT SUCH SPECIAL FIELD RULES AS MAY**

**BE NECESSARY. BASIC EARTH SCIENCE SYSTEMS, INC. CASE NO. 7214: ON A MOTION OF THE COMMISSION TO CONSIDER THE PROPER SPACING FOR THE DEVELOPMENT OF THE SIOUX-STONEWALL POOL, MCKENZIE COUNTY, NORTH DAKOTA, REDEFINE THE LIMITS OF THE FIELD, AND ENACT SUCH SPECIAL FIELD RULES AS MAY BE NECESSARY. EXXON COMPANY, U.S.A. CASE NO. 7215: ON A MOTION OF THE COMMISSION TO CONSIDER THE APPLICATION OF JORDAN EXPLORATION COMPANY, L.L.C. FOR AN ORDER ALLOWING A WELL TO BE DRILLED AT A LOCATION APPROXIMATELY 2140 FEET FROM THE EAST LINE AND 34 FEET FROM THE SOUTH LINE OF SECTION 9, T.162N., R.96W., DIVIDE COUNTY, NORTH DAKOTA, AS AN EXCEPTION TO THE APPLICABLE STATEWIDE WELL LOCATION RULES. CASE NO. 7205 (CONTINUED) ON A MOTION OF THE COMMISSION TO CONSIDER THE PROPER SPACING FOR THE DEVELOPMENT OF THE HARDCRABBLE-STONEWALL POOL, WILLIAMS COUNTY, NORTH DAKOTA, REDEFINE THE LIMITS OF THE FIELD, AND ENACT SUCH SPECIAL FIELD RULES AS MAY BE NECESSARY. PANTERRA PETROLEUM. CASE NO. 7216: ON A MOTION OF THE COMMISSION TO CONSIDER THE APPLICATION OF PANTERRA PETROLEUM FOR AN ORDER AMENDING THE PROVISIONS OF ORDER NO. 7935, RELATING TO THE COMMINGLING OF HYDROCARBONS FROM THE HARDCRABBLE-RED RIVER POOL AND THE HARDCRABBLE-STONEWALL POOL IN THE WELL BORE OF THE SKURDAL #6-24 WELL, LOCATED IN THE SW/4 SE/4 OF SECTION 24, T.153N., R.102W., WILLIAMS COUNTY, NORTH DAKOTA, OR FOR SUCH OTHER AND FURTHER RELIEF AS THE COMMISSION DEEMS APPROPRIATE. CASE NO. 7217: ON A MOTION OF THE COMMISSION TO CONSIDER THE APPLICATION OF LYCO OPERATING COMPANY FOR AN ORDER AMENDING THE FIELD RULES FOR THE BURG-SILURIAN POOL SO AS TO AUTHORIZE THE FLARING OF GAS FROM THE PLUMER-LUNDQUIST #25-2 WELL, LOCATED IN THE NW/4 NE/4 OF SECTION 25, T.161N., R.99W, DIVIDE COUNTY, NORTH DAKOTA, WITHOUT REGARD TO THE PRODUCTION RESTRICTIONS PROVIDED BY PARAGRAPH 12 OF COMMISSION ORDER NO. 8351. CASE NO. 7218: ON A MOTION OF THE COMMISSION TO CONSIDER THE APPLICATION OF LYCO OPERATING COMPANY FOR AN ORDER PURSUANT TO SECTION 43-02-03-88.1 OF THE NORTH DAKOTA ADMINISTRATIVE CODE EXEMPTING THE PLUMER-LUNDQUIST #25-2 WELL, LOCATED IN NW/4 NE/4 OF SECTION 25, T.161N., R.99W, DIVIDE COUNTY, NORTH DAKOTA, FROM THE PROVISIONS OF SECTION 38-08-06.4 OF THE NORTH DAKOTA CENTURY CODE, RELATING TO THE FLARING OF GAS.**

Signed by,  
Edward T. Schafer, Governor  
Chairman, ND Industrial Commission  
2/4 - 33819

1	BILLING PERIOD	2	ADVERTISER/CLIENT NAME
02/05/99		OIL AND GAS DIVISION	
23	TOTAL AMOUNT DUE	*UNAPPLIED AMOUNT	3
64.31		PLEASE PAY BY FEB 13.	
21	CURRENT NET AMOUNT DUE	22	30 DAYS
		60 DAYS	OVER 90 DAYS

BILLED ACCOUNT NAME AND ADDRESS		9	REMITTANCE ADDRESS
AND GAS DIVISION E BOULEVARD AV MARCK ND 58501		**CROO	BISMARCK TRIBUNE PO BOX 1498 BISMARCK ND 58502

INVOICE #02884380 TL

AMT PAID \$ \_\_\_\_\_

CHECK # \_\_\_\_\_

**LEGAL PUBLICATIONS**

DETACH AND RETURN UPPER PORTION WITH YOUR REMITTANCE ↑

DESCRIPTION - OTHER COMMENTS/CHARGES	15	16	SAU SIZE BILLED UNITS	17	18	TIMES RUN RATE	19	GROSS AMOUNT	20	NET AMOUNT
CEOF PUBL										
SS CODE - 0001			109L			.59	1	64.31		64.31

OK



**AFFIDAVIT OF PUBLICATION  
STATE OF NORTH DAKOTA**

County of Burleigh } ss  
BEFORE ME, A NOTARY PUBLIC FOR THE STATE OF NORTH DAKOTA, PERSONALLY APPEARED Kirsten WHO,  
WHO DULY SWORN, DEPOSES AND SAYS THAT HE(SHE) IS THE CLERK OF THE BISMARCK TRIBUNE COMPANY, AND  
THAT THE ABOVE PUBLICATIONS Notice of WERE MADE THROUGH THE AFORESAID NEWSPAPER  
ON THE DATES SHOWN 2/4 SIGNED Kirsten WHO  
AND SUBSCRIBED TO BEFORE ME THIS 8 DAY OF February 1999

Notary Public in and for the State of North Dakota, Residing at Bismarck

DU AMOUNTS	60 DAYS	OVER 90 DAYS	*UNAPPLIED AMOUNT	23	TOTAL AMOUNT DUE
					64.31

**LEGAL PUBLICATIONS**

ADVERTISER INFORMATION					
6	BILLED ACCOUNT NUMBER	7	ADVERTISER/CLIENT NUMBER	2	ADVERTISER/CLIENT NAME
	288438-0		288438-0		OIL AND GAS DIVISION