

BEFORE THE INDUSTRIAL COMMISSION

OF THE STATE OF NORTH DAKOTA

CASE NO. 6153  
ORDER NO. 7123

IN THE MATTER OF A HEARING CALLED ON A MOTION OF THE COMMISSION TO CONSIDER THE PROPER SPACING FOR THE DEVELOPMENT OF THE SADLER-BAKKEN POOL, DIVIDE COUNTY, NORTH DAKOTA, REDEFINE THE LIMITS OF THE FIELD, AND ENACT SUCH SPECIAL FIELD RULES AS MAY BE NECESSARY. SAMEDAN OIL CORPORATION.

ORDER OF THE COMMISSION

BY THE COMMISSION:

Pursuant to legal notice this cause came on for hearing at 9:00 a.m. on the 27th day of September, 1995, in Bismarck, North Dakota, before an examiner appointed by the Industrial Commission of North Dakota, hereinafter referred to as the "Commission."

NOW, on this 5th day of October, 1995, the Commission, a quorum being present, having considered the testimony adduced and the exhibits received at said hearing, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That geological and engineering evidence presented to the Commission relative to the matter of well spacing indicates that the Sadler-Bakken Pool, as classified and defined in this order, should be developed on a pattern of one well to 160 acres in order to drain efficiently the recoverable oil from said pool, assure rapid development, avoid the drilling of unnecessary wells, and prevent waste in a manner that will protect correlative rights.

(3) That proper 160-acre spacing in the Bakken Pool in this field will result in the efficient and economical development of the field as a whole and will operate so as to prevent waste and provide maximum ultimate recovery, will avoid the drilling of unnecessary wells, and will protect correlative rights.

(4) That the unrestricted flaring of gas produced from the Sadler-Bakken Pool could be considered waste, and in order to minimize such, production from the pool should be restricted until the wells producing therefrom are connected to a gas gathering and processing facility.

(5) That certain special field rules are necessary to prevent waste and protect against the contamination and pollution of surface lands and fresh waters.

IT IS THEREFORE ORDERED:

(1) That the Sadler Field is hereby redefined as the following described tracts of land in Divide County, North Dakota:

TOWNSHIP 161 NORTH, RANGE 95 WEST, 5TH PM  
ALL OF SECTIONS 16 AND 17, THE S/2 OF SECTIONS 8 AND 9, AND  
THE N/2 OF SECTIONS 20 AND 21,

together with those additional quarter sections or governmental lots corresponding thereto as may be proven productive by wells drilled on lands within one mile of the boundaries of the field as set forth above, provided further that such extensions of the field boundaries shall include only sufficient acreage to form a spacing unit for such wells, and any intervening lands.

(2) That the Sadler-Bakken Pool be, and the same is hereby defined as that accumulation of oil and gas found in the interval from below the base of the Lodgepole Formation to above the top of the Three Forks Formation within the limits of the field as set forth above.

(3) That effective this date, the proper spacing for the development of the Sadler-Bakken Pool be, and the same is hereby set at one well to 160 acres.

(4) That all wells hereafter drilled to said pool shall be located not less than 500 feet from a spacing unit boundary nor closer than 1650 feet to a well permitted to or producing from the pool. Wells presently permitted to or producing from the pool that do not conform to this spacing pattern shall be considered exceptions.

(5) That spacing units for the Sadler-Bakken Pool shall consist of a governmental quarter section, or lots corresponding thereto, as determined by governmental survey.

(6) That no well shall be drilled hereafter in the Sadler-Bakken Pool except in conformity with the regulations above without special order of the Commission after due notice and hearing.

(7) That the following rules concerning the casing, tubing and equipping of wells shall apply to the subsequent drilling and operation of wells in the Sadler-Bakken Pool:

(a) The surface casing shall consist of new or reconditioned pipe that has been previously tested to 1000 pounds per square inch. The casing shall be set and cemented at a point not less than 50 feet below the base of the Fox Hills Formation. Sufficient cement shall be used to fill the annular space outside the pipe to the surface of the ground or the bottom of the cellar, and sufficient scratchers and centralizers shall be used to assure a good cement job. Cement shall be allowed to stand a minimum of 12 hours before drilling the plug or initiating tests;

(b) The producing or oil string shall consist of new or reconditioned pipe that has been previously tested to 2000 pounds per square inch. Casing shall be set and cemented at a point not higher than the top of the producing formation, or at a point approved by the Director. Sufficient cement shall be used and applied in such manner as to adequately protect and isolate all formations containing oil and/or gas, protect the pipe through salt sections encountered, and to isolate the Dakota-Lakota Series. The cement shall be allowed

to stand a minimum of 24 hours before drilling the plug or initiating tests. After cementing, the casing shall be tested by application of pump pressure of at least 2000 pounds per square inch. If, at the end of 30 minutes this pressure shall have dropped 150 pounds per square inch or more, the casing shall be repaired. Thereafter, the casing shall again be tested in the same manner. Further work shall not proceed until a satisfactory test has been obtained;

(c) All well-head fittings and connections shall have a working pressure in excess of that to which they are expected to be subjected; and,

(d) All wells shall be equipped with tubing; all tubing shall be of sufficient internal diameter to allow the passage of a bottom hole pressure gauge for the purpose of obtaining bottom hole pressure measurements.

(8) That the gas-oil ratio of each well shall be measured during the months of May and November, and the reservoir pressure of flowing wells shall be measured in the months of May and November, and in pumping wells when the rods are pulled but at least once annually and reported to the Director within 15 days following the end of the month in which they are determined. Pressure measurements shall be made at or adjusted to a subsea datum of 6280 feet after the well has been shut in for 48 hours. All gas-oil ratio and reservoir pressure determinations shall be made under the supervision of and by methods approved by the Director. The Director is authorized to waive these requirements if the necessity therefor can be demonstrated to his satisfaction.

(9) That no salt water, drilling mud, crude oil, or waste oil shall be stored in pits in this field, except in an emergency, and approved by the Director.

(10) That multiple completion of wells for the purpose of producing oil and/or gas from the various pools encountered in the Sadler Field, is hereby authorized, subject to the following requirements:

(a) Administrative approval may be given by the Director upon the filing of an application in which the applicant states that the requirements described in (b) through (e) below and other applicable rules and orders of the Commission will be complied with;

(b) An approved production packer shall be set between each of the producing horizons in a manner which will effectively isolate each during the production process;

(c) Production from each producing horizon shall be through separate continuous strings of tubing installed in such a manner with respect to the production packers as will prevent commingling of production in the well bore;

(d) An approved wellhead of a type which allows independent suspension and packing of the tubing shall be used; and,

(e) All tubing shall be of sufficient internal diameter to allow the passage of a bottom hole pressure gauge for the purpose of obtaining bottom hole pressure measurements.

(11) That all wells in the Sadler-Bakken Pool shall be allowed to

produce at an unrestricted rate for a period of 30 days commencing on the first day oil is produced through well-head equipment into tanks from the ultimate producing interval after casing has been run; thereafter, oil production from such wells shall not exceed an average of 100 barrels of oil per day; if and when such wells are connected to a gas gathering and processing facility the foregoing restrictions shall be removed, and the wells shall be allowed to produce at a maximum efficient rate.

(12) That if the flaring of gas produced with crude oil from the Sadler-Bakken Pool causes, or threatens to cause, degradation of ambient air quality, production from the pool shall be further restricted.

(13) That this order shall cover all of the Sadler-Bakken Pool common source of supply of crude oil and/or natural gas as herein defined, and shall continue in full force and effect until further order of the Commission or until the last well in the pool has been plugged and abandoned.

Dated this 5th day of October, 1995.

INDUSTRIAL COMMISSION  
STATE OF NORTH DAKOTA

/s/ Edward T. Schafer, Governor

/s/ Heidi Heitkamp, Attorney General

/s/ Sarah Vogel, Commissioner of Agriculture

STATE OF NORTH DAKOTA )

COUNTY OF BURLEIGH )

AFFIDAVIT OF MAILING

I, Donna Bauer, being duly sworn upon oath, depose and say: That on the 11th day of October 1995, I enclosed in separate envelopes true and correct copies of the attached Order No. 7123 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. 6153 :

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

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

Mr. Steve Schmitz  
Samedan Oil  
1050 17th St.  
Suite 1100  
Denver, CO 80265

Donna Bauer  
Donna Bauer  
Oil & Gas Division

On this 11<sup>th</sup> day of October, 1995, 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.

Margaret Beyer  
Notary Public  
State of North Dakota County of Burleigh  
My Commission expires 9-21-99

# SAMEDAN OIL CORPORATION

DENVER REGION

1050 Seventeenth Street, Suite 1100

Denver, Colorado 80265

(303) 534-1533

Fax (303) 534-1103

September 8, 1995

Mr. F.E. Wilborn  
Deputy Enforcement Officer  
North Dakota Industrial Commission  
Oil & Gas Division  
600 East Boulevard  
Bismarck, North Dakota 58505

Mr. Wilborn

Samedan Oil Corporation acknowledges receipt of your letter advising that Case No. 6153 "On a motion of the commission to consider the proper spacing for the development of the Sadler-Bakken pool, Divide County, North Dakota, redefine the limits of the field, and enact such special field rules as may be necessary" will be heard in the Pioneer Room of the State Capitol in Bismarck on September 27, 1995.

In accordance with your directions please find three copies of the attached information to be filed with your office on or before September 22, 1995. Additionally, regulatory matters can be addressed to the undersigned. Legal counsel will be provided by Mr. John Morrison of the law offices of Fleck, Mather, & Strutz.

Samedan requests that the Sadler Field be redefined as the following described tracts of land in Divide County, North Dakota:

Township 161N, Range 95 West, 5th P.M.

All of Section 17, all of Section 16, the S/2 of Section 8 & 9 and the N/2 of Sections 20 & 21.

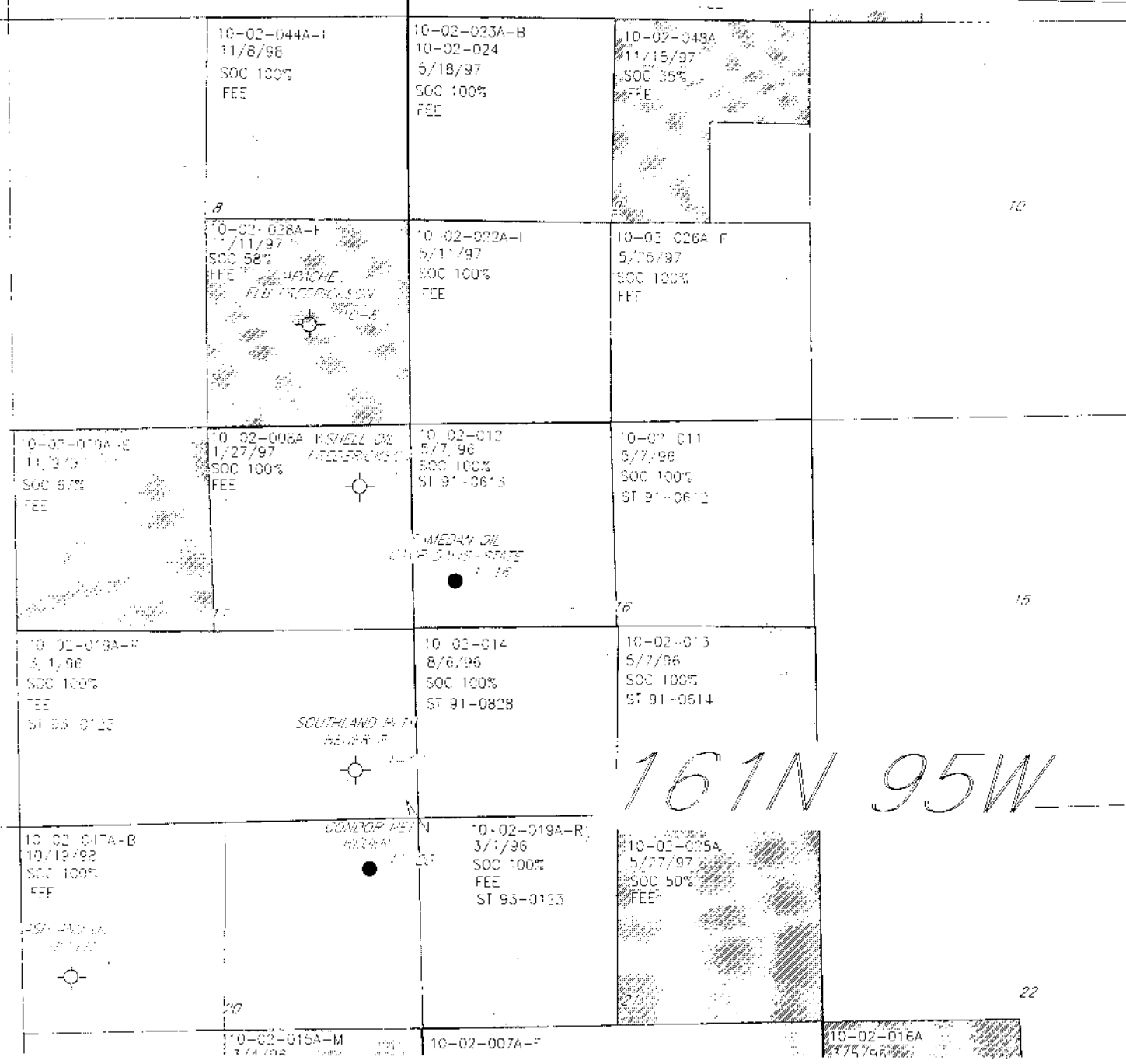
Respectfully,

*Steven H. Schmitz*

Steven H. Schmitz, P.E.

Attached Exhibits:

1. Lease Ownership Map
2. Size & shape of the spacing unit, well locations & map showing all wells within and adjacent to the area of spacing and pools producing. Pools geologic formation and areal limits of the proposed field.
3. Cross Section
4. Reservoir Rock & Fluid Data
5. Production History & Decline Curve Estimate of Ultimate Reserves(5.1 & 5.2 production decline curves)
6. Volumetric Estimate of Ultimate Reserves
7. Economics
8. Temporary NDIC Order Dated 31st March, 1994.



NORTH DAKOTA INDUSTRIAL COMMISSION

HEARING DATE: SEPTEMBER 27, 1995

CASE NO. 6153

EXHIBIT NO. 1

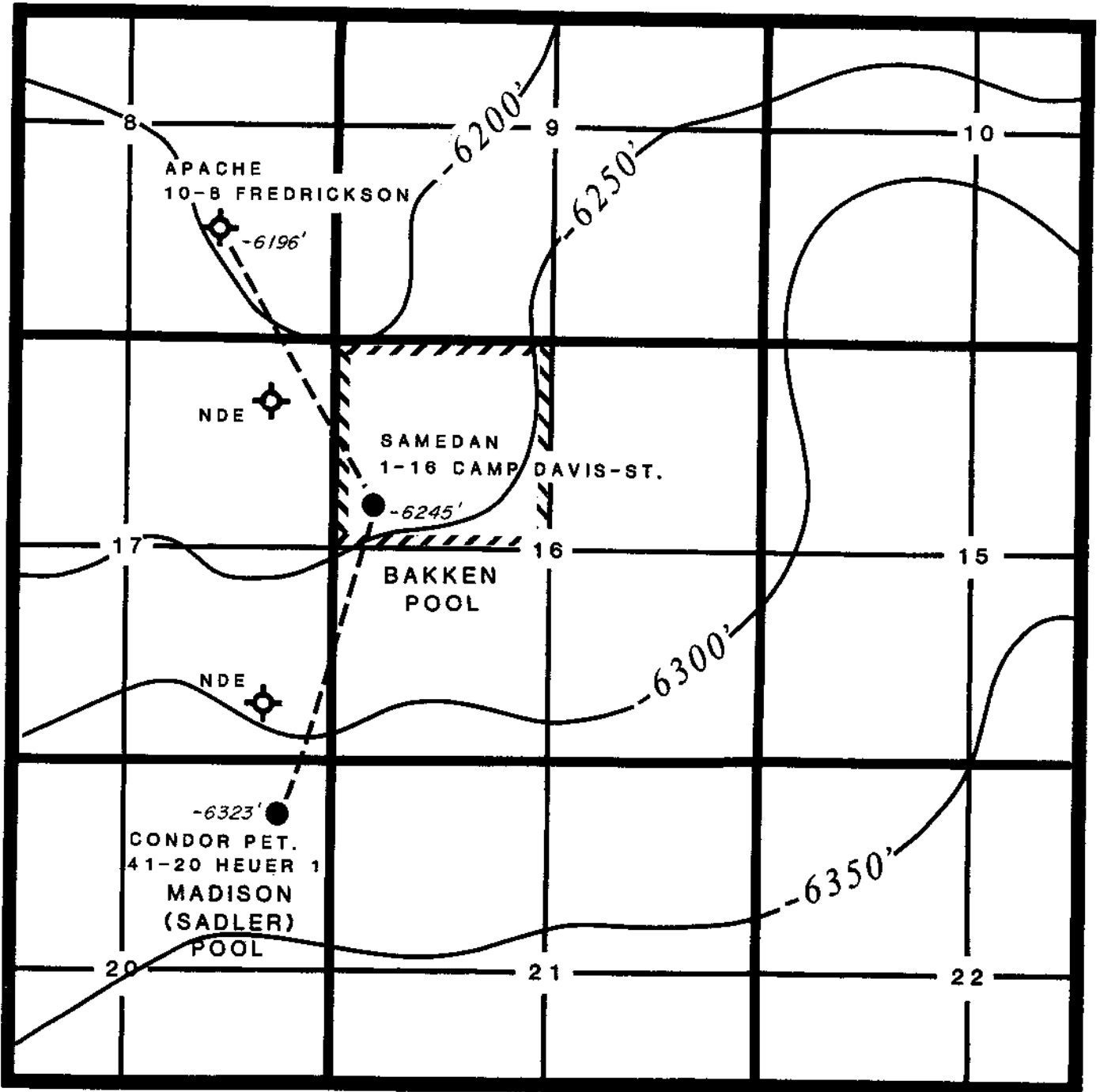
Samedan Oil Corporation		
CAMP DAVIS PROSPECT Divide County, North Dakota		
Geol: Frank Senz	C.I. =	9/8/95
Geoph: Ken Grubbs	Tech: C. Tompkins	CMPNDIND.gpt

# SAMEDAN OIL CORPORATION

1050 17th STREET, SUITE 1100

DENVER, CO 80265

(303)534-1533



BAKKEN STRUCTURE MAP R 95 W  
C. I. = 50'



160 ACRE SPACING

N. D. INDUSTRIAL  
COMMISSION HEARING  
SEPTEMBER 27, 199

CASE NO. 61  
EXHIBIT 2



NORTH APACHE CORP.  
10-8 FREDRICKSON  
C SE 8-T161N-R95W  
KB: 2389' COMP: 10/1987

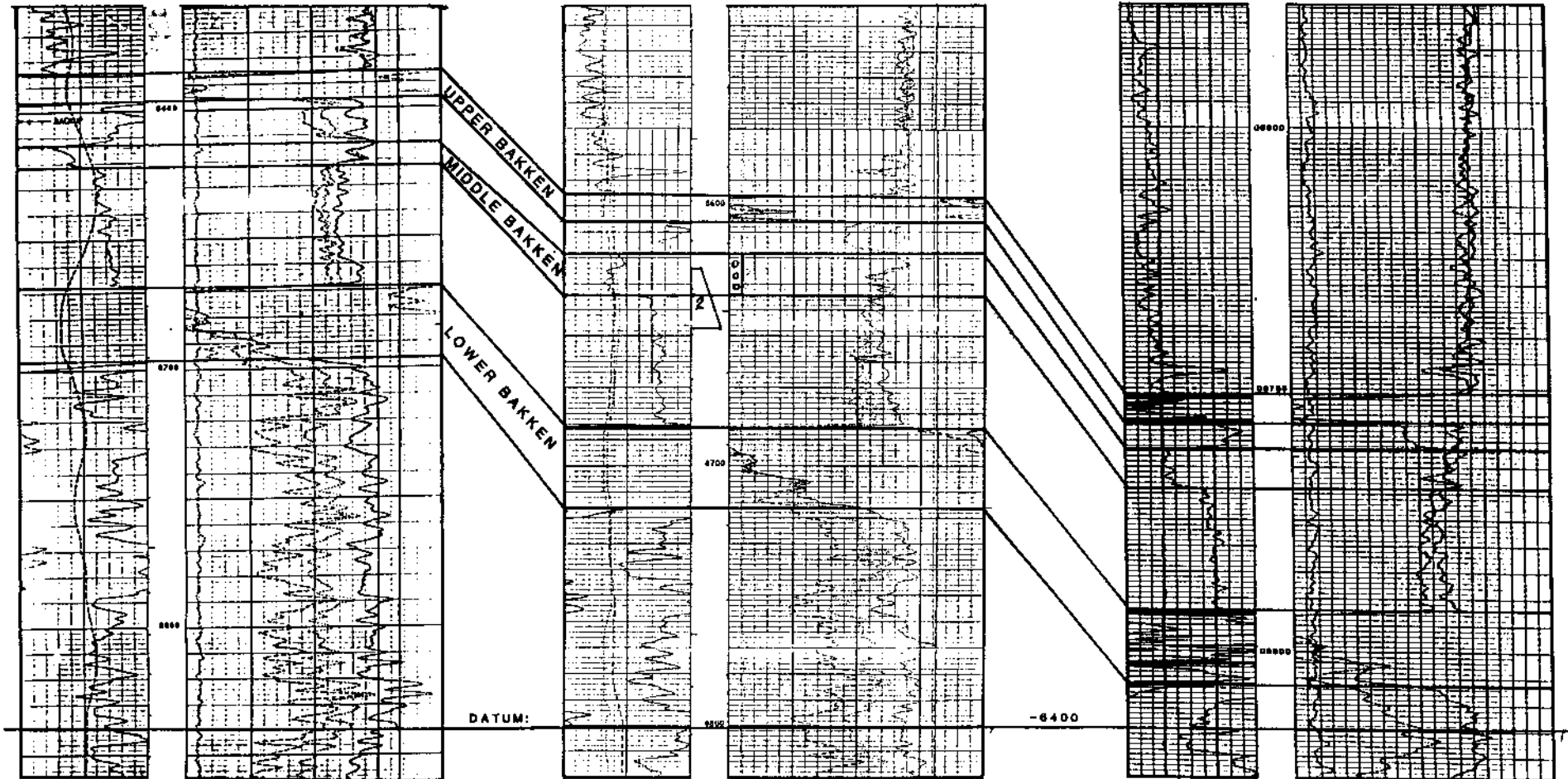


SAMEDAN OIL CORP.  
1-16 CAMP DAVIS-ST.  
SW NW 16-T161N-R95W  
KB: 2351' COMP: 10/1993

SOUTH CONDOR PET.  
1 HEUER 41-20  
C NE NE 20-T161N-R95W  
KB: 2379' COMP: 9/1985

IP: 140 BO 147 MCF 0 BW - BAKKEN

IP: 52 BO 6 MCF 221BW - MADISON



DST 2: 8624-8647' Rec 188' GCOWE,  
70' GCO w/M&WE, .015 CFG,  
1250 cc OWME.  
SIP 1413-4225#.

N. D. INDUSTRIAL  
COMMISSION HEARING  
SEPTEMBER 27, 1995

Operator: SAMEDAN OIL CORPORATION  
 Address: 1050 17th Street, Suite 1100  
 Denver, Colorado 80265  
 (303) 534-1533

Well Name: Camp Davis State #1-16  
 NDIC File No.: 13578  
 Location: 2080' FNL & 560' FWL SWNW Sec. 16 T161N R95W  
 Divide County, North Dakota

Date Spud: September 5, 1993  
 Date TD: October 13, 1993  
 Date Completed: December 20, 1993

KB Elevation: 2351'  
 Total Depth: 12,067'  
 Casing: 5 1/2" set @ 11916'  
 PBD: 11000'

Formation: Bakken & Ratcliff  
 Age: Mississippian  
 Lithology: Dolomitic Sandstone  
 Reservoir Drive: Solution Gas and Expansion  
 Perforations: 7307-7403(Ratcliff) Completed 12/93  
 8618-8634 (Bakken) Commingled 3/95

Reservoir Temperature: 216 deg F (DST #2)  
 Reservoir Pressure: 4258 psi (DST #2)

Oil Gravity: 41 deg API  
 Gas Gravity: .7  
 Oil Pour Point: -38 deg F  
 Gas Oil Ratio: 650 SCF/BBL  
 Bubble Point: 2400 psi (Standings Correlation)  
 FVF: 1.36 RB/STB (Standing's Correlation)

Porosity: 7% (Open Hole Logs)  
 Permeability: .87 md (DST #2)  
 Rw: .02 ohm-m  
 Formation Rt: 13 ohm-m  
 Water Saturation: 50%  
 Effective Pay: 16 ft

Exhibit 4  
 Well Information  
 & Rock & Fluid  
 Properties

Operator: SAMEBAN OIL CORPORATION  
Address: 1050 17th Street, Suite 1100  
Denver, Colorado 80265  
(303) 534-1533

#### PRODUCTION HISTORY & DECLINE CURVE ANALYSIS

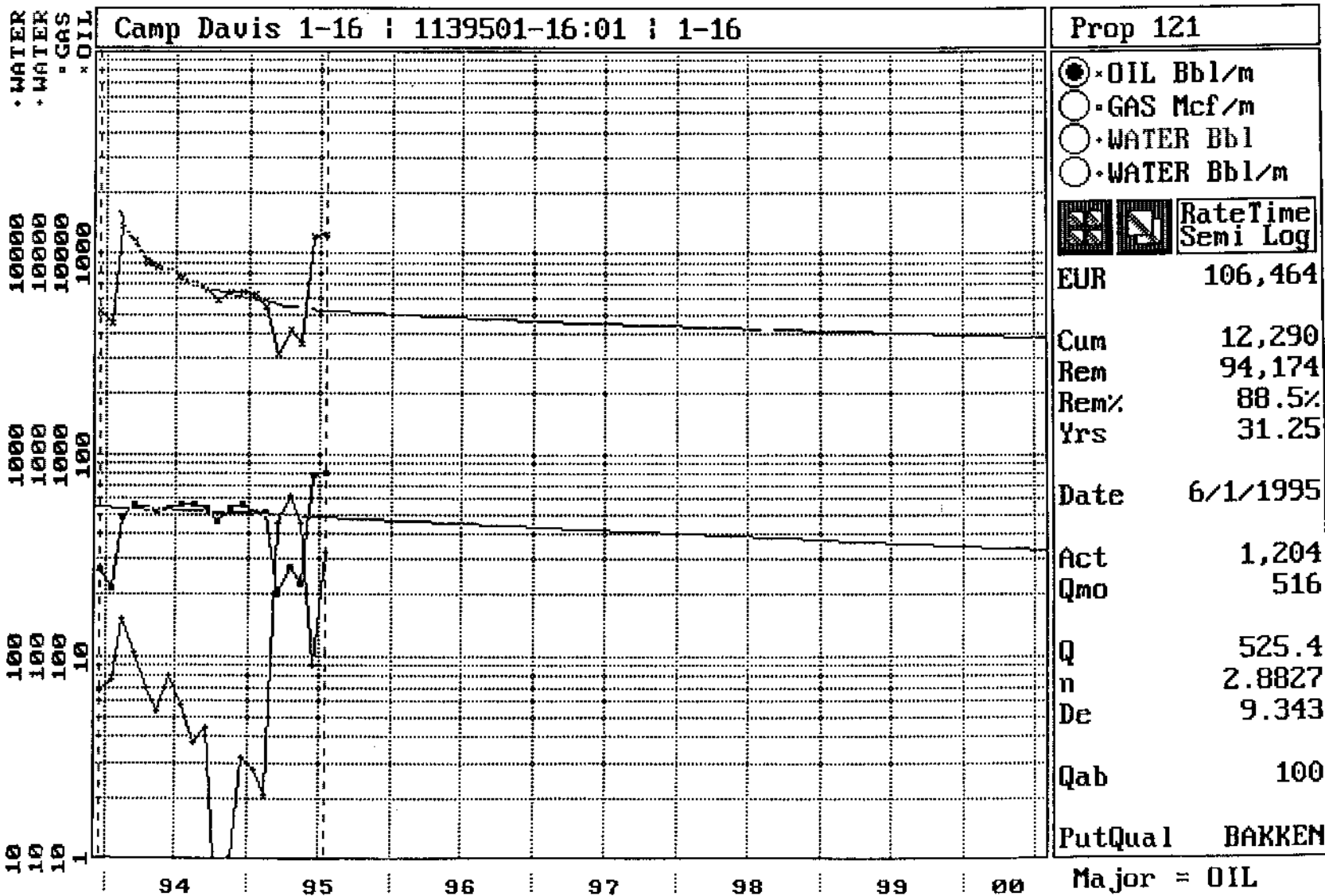
March 1993 through February 1995: Produced Bakken only  
February 1995 through May 1995: Produced Madison Only  
May 1995 through present: Produced Bakken & Madison commingled.

**Attached decline curve analysis indicates that the Bakken formation will have an estimated ultimate recovery of 106,464 barrels of oil and 63,198 mcf.**

Disposition of Oil: Transported and Purchased by Koch Oil Company  
Disposition of Gas: Currently flared. A gas line is being constructed by Samedan pending negotiation of right-of-way with landowners. A gas contract has been negotiated with Western Gas Resources.

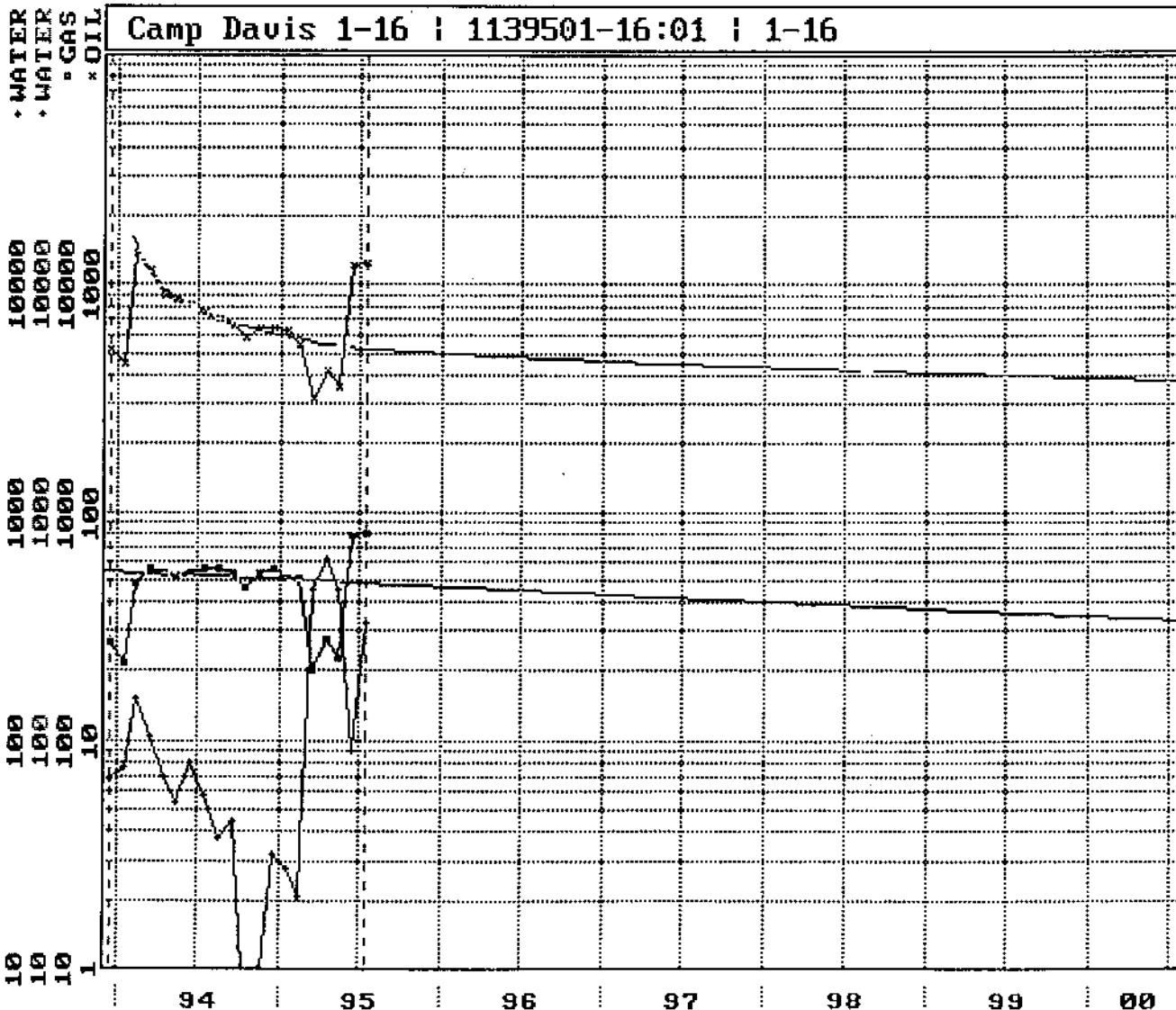
Exhibit 5  
Production History  
& Decline Curve  
Estimate of Ultimate  
Reserves

*Bakken production only was used to project estimated performance, although total commingled production is plotted.*



15

52



Camp Davis 1-16 | 1139501-16:01 | 1-16

Prop 121

- OIL Bbl/m
- GAS Mcf/m
- WATER Bbl
- WATER Bbl/m

RateTime  
Semi Log

EUR	63,198
Cum	8,066
Rem	55,132
Rem%	87.2%
Yrs	15.92
Date	6/1/1995
Act	782
Qmo	481
Q	488.8
n	0
De	7.187
Qab	150
PutQual	BAKKEN

Major = OIL

Operator:  
Address:

**SAMEDAN OIL CORPORATION**  
1050 17th Street Suite 1100  
Denver, Colorado 80265  
(303) 534-1533

**Camp Davis State #1-16**

OOIP is Original Oil In Place

$$\text{OOIP} = \frac{7758 * A * h * O * (1 - Sw)}{Bo}$$

Where: A = 160 acres  
h = 16 feet  
O = 7%  
Sw = 50%  
Bo = 1.36 RB/STB

$$\text{OOIP} = \frac{7758 * 160 * 16 * .07 * (1 - 0.50)}{1.36}$$

**OOIP = 511,115 STBO**

Wells in neighboring Bakken fields (i.e. Stoneview) recover approximately 100,000 BO

**Recovery Factor = 100,000/511,115 = 20%**

Offset Bakken wells recover 1 MCF gas for every barrel oil produced.

**Reserve assignment for Camp Davis St. #1-16 is 100,000 BO + 100,000 MCF**

**Exhibit #6**  
**Reserve Estimation**

Operator:  
Address:

**SAMEDAN OIL CORPORATION**  
1050 17th Street Suite 1100  
Denver, Colorado 80265  
(303) 534-1533

**Camp Davis State #1-16**

## ECONOMICS

### PARAMETERS

IP: 40 BOPD + 40 MCFPD  
Decline Rate: 10% annual  
WI / NRI: 100% / 80%  
Drilling Costs: \$660,000  
Operating Costs: \$3000 per month  
Oil Price: \$12/BBL  
Gas Price: \$1/MCF  
Inflation Rate: 3%

### PREDICTED RESULTS

Life of Well: 12.6 yrs  
Gross Oil Reserves: 100,000 bbls  
Gross Gas Reserves: 100,000 MCF  
Cumulative Cash Flow: \$546,000  
Net Income: -\$114,000  
Return on Investment: 0.83  
Rate of Return: 0

Minimum oil price for a Bakken well to be economical: \$18.00 per bbl  
(Payout and a 10% rate of return over the life of the well)

### CONCLUSION

Drilling for Bakken reserves alone is not economical at current low oil prices. Oil prices must get to \$18/bbl or other zones (such as Madison) must be present and can be simultaneously produced with the Bakken to justify additional drilling.

DATE: 4/8/74  
COPY SENT TO: John Long

BEFORE THE INDUSTRIAL COMMISSION  
OF THE STATE OF NORTH DAKOTA

CASE NO. 5876  
(CONTINUED)  
ORDER NO. 6817

IN THE MATTER OF A HEARING CALLED  
ON A MOTION OF THE COMMISSION TO  
CONSIDER THE TEMPORARY SPACING  
FOR THE DEVELOPMENT OF AN OIL  
AND/OR GAS POOL DISCOVERED BY THE  
SAMEDAN OIL CORPORATION #1-16 CAMP  
DAVIS STATE WELL, LOCATED IN THE  
SW NW OF SECTION 16, T.161N.,  
R.96W., DIVIDE COUNTY, NORTH  
DAKOTA, DEFINE THE LIMITS OF THE  
FIELD, AND ENACT SUCH SPECIAL  
FIELD RULES AS MAY BE NECESSARY.

TEMPORARY ORDER OF THE COMMISSION

BY THE COMMISSION:

Pursuant to legal notice this cause came on for hearing at 9:00 a.m. on the 23rd day of March, 1994, in Bismarck, North Dakota, before an examiner appointed by the Industrial Commission of North Dakota, hereinafter referred to as the "Commission."

NOW, on this 31st day of March, 1994, the Commission a quorum being present, having considered the testimony adduced and the exhibits received at said hearing, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That geological and engineering evidence presented to the Commission relative to the matter of well spacing indicates that the Sadler-Bakken Pool, as classified and defined in this order, should be developed on a pattern of one well to 160 acres in order to drain efficiently the recoverable oil from said pool, assure rapid development, avoid the drilling of unnecessary wells, and prevent waste in a manner that will protect correlative rights.

(3) That temporary 160-acre spacing in the Bakken Pool in this field will result in the efficient and economical development of the field as a whole and will operate so as to prevent waste and provide maximum ultimate

Exhibit 8  
Temporary Order  
Case 6153



Case No. 5876  
(Continued)  
Order No. 6817

recovery, will avoid the drilling of unnecessary wells, and will protect correlative rights.

(4) That the unrestricted flaring of gas produced from the Sadler-Bakken Pool could be considered waste, and in order to minimize such, production from the pool should be restricted until the wells producing therefrom are connected to a gas gathering and processing facility.

(5) That certain special field rules are necessary to prevent waste and protect against the contamination and pollution of surface lands and fresh waters.

IT IS THEREFORE ORDERED:

(1) That the following described tracts of land in Divide County, North Dakota, be, and the same are hereby designated the Sadler Field:

TOWNSHIP 161 NORTH, RANGE 95 WEST, 5TH PM  
ALL OF SECTIONS 16 AND 17, THE S/2 OF SECTIONS 8 AND 9, AND  
THE N/2 OF SECTIONS 20 AND 21,

together with those additional quarter sections or governmental lots corresponding thereto as may be proven productive by wells drilled on lands within one mile of the boundaries of the field as set forth above, provided further that such extensions of the field boundaries shall include only sufficient acreage to form a spacing unit for such wells, and any intervening lands.

(2) That the Sadler-Bakken Pool be, and the same is hereby defined as that accumulation of oil and gas found in the interval from below the base of the Lodgepole Formation to above the top of the Three Forks Formation within the limits of the field as set forth above.

(3) That effective this date, the temporary spacing for the development of the Sadler-Bakken Pool be, and the same is hereby set at one well to 160 acres.

(4) That all wells hereafter drilled to said pool shall be located not less than 500 feet from a spacing unit boundary nor closer than 1650 feet to a well permitted to or producing from the pool. Wells presently permitted to or producing from the pool that do not conform to this spacing pattern shall be considered exceptions.

(5) That spacing units for the Sadler-Bakken Pool shall consist of a governmental quarter section, or governmental lots corresponding thereto, as determined by governmental survey.

(6) That no well shall be drilled hereafter in the Sadler-Bakken Pool except in conformity with the regulations above without special order of the Commission after due notice and hearing.

(7) That the following rules concerning the casing, tubing and equipping of the wells shall apply to the subsequent drilling and operation of wells in the Sadler-Bakken Pool:

Case No. 5878  
(Continued)  
Order No. 6817

- (a) The surface casing shall consist of new or reconditioned pipe that has been previously tested to 1000 pounds per square inch. The casing shall be set and cemented at a point not less than 50 feet below the base of the Fox Hills Formation. Sufficient cement shall be used to fill the annular space outside the pipe to the surface of the ground, or the bottom of the cellar, and sufficient scratchers and centralizers shall be used to assure a good cement job. Cement shall be allowed to stand a minimum of 12 hours before drilling the plug or initiating tests;
- (b) The producing or oil string shall consist of new or reconditioned pipe that has been previously tested to 2000 pounds per square inch. Casing shall be set and cemented at a point not higher than the top of the producing formation, or at a point approved by the Director. Sufficient cement shall be used and applied in such manner as to adequately protect and isolate all formations containing oil and/or gas, protect the pipe through salt sections encountered, and to isolate the Dakota-Lakota Series. The cement shall be allowed to stand a minimum of 24 hours before drilling the plug or initiating tests. After cementing, the casing shall be tested by application of pump pressure of at least 2000 pounds per square inch. If, at the end of 30 minutes this pressure shall have dropped 150 pounds per square inch or more, the casing shall be repaired. Thereafter, the casing shall again be tested in the same manner. Further work shall not proceed until a satisfactory test has been obtained;
- (c) All well-head fittings and connections shall have a working pressure in excess of that to which they are expected to be subjected; and,
- (d) All wells shall be equipped with tubing; all tubing shall be of sufficient internal diameter to allow the passage of a bottom hole pressure gauge for the purpose of obtaining bottom hole pressure measurements.

(8) That the gas-oil ratio of each well shall be measured during the months of May and November, and the reservoir pressure of flowing wells shall be measured in the months of May and November, and in pumping wells when the rods are pulled but at least once annually and reported to the Commission within 15 days following the end of the month in which they are determined. Pressure measurements shall be made at or adjusted to a subsea datum of 8280 feet after the well has been shut in for 48 hours. All gas-oil ratios and reservoir pressure determinations shall be made under the supervision of and by methods approved by the Director. The Director is authorized to waive these requirements if the necessity therefor can be demonstrated to his satisfaction.

(9) That no salt water, drilling mud, crude oil or waste oil shall be stored in pits in this field, except in an emergency, and approved by the Director.

Case No. 5876  
(Continued)  
Order No. 8817

(10) That multiple completion of wells for the purpose of producing oil and/or gas from the various pools encountered in the Sadler Field, is hereby authorized, subject to the following requirements:

- (a) Administrative approval may be given by the Director upon the filing of an application in which the applicant states that the requirements described in (b) through (e) below and other applicable rules and orders of the Commission will be complied with;
- (b) An approved production packer shall be set between each of the producing horizons in a manner which will effectively isolate each during the production process;
- (c) Production from each producing horizon shall be through separate continuous strings of tubing installed in such a manner with respect to the production packers as will prevent commingling of production in the well bore;
- (d) An approved well-head of a type which allows independent suspension and packing of the tubing shall be used; and,
- (e) All tubing shall be of sufficient internal diameter to allow the passage of a bottom hole pressure gauge for the purpose of obtaining bottom hole pressure measurements.

(11) That for the purposes of division of production to owners of interests in spacing units established by this order, and proven productive prior to the date hereof, this order shall be retroactive to the date of first production.

(12) That all wells in the Sadler-Bakken Pool shall be allowed to produce at an unrestricted rate for a period of 30 days commencing on the first day oil is produced through well-head equipment into tanks from the ultimate producing interval after casing has been run; thereafter, oil production from such wells shall not exceed an average of 100 barrels of oil per day; if and when such wells are connected to a gas gathering and processing facility the foregoing restrictions shall be removed, and the wells shall be allowed to produce at a maximum efficient rate.

(13) That if the flaring of gas produced with crude oil from the Sadler-Bakken Pool causes, or threatens to cause, degradation of ambient air quality, production from the pool shall be further restricted.

(14) That this order shall cover all of the Sadler-Bakken Pool, common source of supply of crude oil and/or natural gas as herein defined, and shall continue in full force and effect until the 31st day of October, 1995. That the proper spacing for the pool will be considered by the Commission on or before the regularly scheduled meeting in September, 1995.

Case No. 5878  
(Continued)  
Order No. 6817

Dated this 31<sup>st</sup> day of March, 1994.

**INDUSTRIAL COMMISSION  
STATE OF NORTH DAKOTA**

**/s/ Edward T. Schafer**

\_\_\_\_\_  
Edward T. Schafer, Governor

**/s/ Heidi Heitkamp**

\_\_\_\_\_  
Heidi Heitkamp, Attorney General

**/s/ Sarah Vogel**

\_\_\_\_\_  
Sarah Vogel, Commissioner of Agriculture

NORTH DAKOTA INDUSTRIAL COMMISSION

OIL AND GAS DIVISION

Wesley D. Norton  
DIRECTOR

F. E. Wilborn  
ASSISTANT DIRECTOR

August 30, 1995

Samedan Oil Corporation  
1050 17th St., Ste. 1100  
Denver, CO 80265

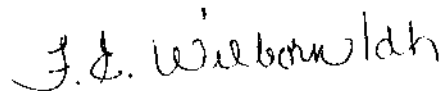
Dear Sir:

The proper spacing for the development of the Sadler-Bakken Pool, Divide County, North Dakota, will be considered at the North Dakota Industrial Commission hearing on September 27, 1995.

As you have previously been informed, all exhibits to be used at the hearing are to be prefiled in our office approximately five (5) days prior to the date of hearing.

Thank you for your assistance in this matter.

Sincerely,



F.E. Wilborn  
Deputy Enforcement Officer

FEW/dh  
enc.

**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 September 27, 1995, Pioneer Room, State Capitol, 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 September 13, 1995.

**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. 6153: ON A MOTION OF THE COMMISSION TO CONSIDER THE PROPER SPACING FOR THE DEVELOPMENT OF THE SADLER-BAKKEN POOL, DIVIDE COUNTY, NORTH DAKOTA, REDEFINE THE LIMITS OF THE FIELD, AND ENACT SUCH SPECIAL FIELD RULES AS MAY BE NECESSARY. SAMEDAN OIL CORPORATION.**

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

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by 2440  
9-19-95  
& 2940  
#8296



**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 @	= \$
September 6, 1995	7 Column Inches @ 4.20	= \$ 29.40
.....	Column Inches @	= \$
.....	Column Inches @	= \$

Notary/Affidavit Fee ..... \$

Total Charge ..... \$ 29.40

Signed Steven J. Andrist  
Steven J. Andrist, Publisher

Subscribed and sworn to before me September 6, 1995  
Donna Molander  
Donna Molander  
Notary Public, State of North Dakota  
My Commission Expires December 14, 2000

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 September 27, 1995, Pioneer Room, State Capitol, 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.

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. 6146: ON A MOTION OF THE COMMISSION TO CONSIDER THE APPLICATION OF WILLIAM HERBERT HUNT TRUST ESTATE FOR AN ORDER ALLOWING A SECOND WELL TO BE COMPLETED IN AND TO PRODUCE OIL AND GAS FROM A SPACING UNIT FOR THE TREE TOP MADISON POOL, DESCRIBED AS THE NW/4 OF SECTION 22, T.142N., R.106W., BILLINGS COUNTY, NORTH DAKOTA.

CASE NO. 6147: ON A MOTION OF THE COMMISSION TO CONSIDER THE APPLICATION OF LUFF EXPLORATION COMPANY FOR AN ORDER AMENDING THE APPLICABLE ORDERS GOVERNING SPACING FOR THE CEDAR HILLS-RED RIVER "B" POOL, SO AS TO INCLUDE ALL OF SECTION 5, T.129N., R.103W., BOWMAN COUNTY, NORTH DAKOTA, AND ALL OF SECTIONS 31 AND 32, T.130N., R.103W., BOWMAN COUNTY, NORTH DAKOTA, WITHIN ZONE 1 OF SUCH POOL, OR ALTERNATIVELY EXCLUDING SUCH LANDS FROM THE POOL AND ITS BUFFER ZONE, OR FOR SUCH OTHER AND FURTHER RELIEF AS THE COMMISSION DEEMS APPROPRIATE.

CASE NO. 6148: ON A MOTION OF THE COMMISSION TO CONSIDER THE APPLICATION OF TOTAL MINATOMO CORPORATION FOR AN ORDER ALLOWING FLUIDS PRODUCED FROM THE HORSE CREEK-RED RIVER UNIT TO BE COMINGLED IN THE WELLBORES OF VARIOUS WELLS WITH FLUIDS PRODUCED FROM NON-UNITIZED PORTIONS OF THE HORSE CREEK-RED RIVER POOL AND THE SOUTH HORSE CREEK-RED RIVER POOL, BOWMAN COUNTY, NORTH DAKOTA.

CASE NO. 6149: ON A MOTION OF THE COMMISSION TO CONSIDER THE APPLICATION OF TOTAL MINATOMO CORPORATION FOR AN ORDER DETERMINING THAT THE PLAN OF UNITIZATION, AS AMENDED, FOR THE HORSE CREEK-RED RIVER UNIT AREA, BOWMAN COUNTY, NORTH DAKOTA, HAS BEEN SIGNED, RATIFIED, OR APPROVED BY LESSEES, OWNING THE REQUIRED PERCENTAGE INTEREST IN AND TO THE UNIT AREA IN ACCORDANCE WITH SECTION 38-08-09.3 OF THE NORTH DAKOTA CENTURY CODE.

CASE NO. 6150: ON A MOTION OF THE COMMISSION TO CONSIDER THE APPLICATION OF MERIDIAN OIL INC. FOR AN ORDER ALLOWING WELLS DRILLED TO THE RED RIVER FORMATION IN BOWMAN COUNTY, NORTH DAKOTA, IN AREAS OR FORMATIONS WHICH ARE NOT SUBJECT TO EXISTING SPACING ORDERS TO BE DRILLED AT ANY LOCATION WITHIN A GOVERNMENTAL QUARTER SECTION, OR LOTS CORRESPONDING THERETO, NOT CLOSER THAN 660 FEET TO THE BOUNDARY OF SUCH QUARTER SECTION, WITHOUT REGARD TO THE PROXIMITY OF SUCH WELLS TO BOUNDARIES OF GOVERNMENTAL QUARTER SECTION OR LOTS WITHIN SUCH QUARTER SECTIONS, OR SUCH OTHER AND FURTHER RELIEF AS THE COMMISSION DEEMS APPROPRIATE AND WHICH WILL ALLOW THE 31 26H CLARK WELL, WITH A SURFACE LOCATION APPROXIMATELY 800 FEET FROM THE NORTH LINE AND 1600 FEET FROM THE EAST LINE OF SECTION 26, T.131N., R.106W., BOWMAN COUNTY, NORTH DAKOTA, TO BE VERTICALLY COMPLETED AND PRODUCE OIL AND GAS FROM THE RED RIVER FORMATION.

THE BISMARCK TRIBUNE

P.O. BOX 1498 BISMARCK, NORTH DAKOTA 58502-1498 (701) 223-2500 STATE (800) 472-2273 FAX (701) 223-4240

THE COMMISSION TO CONSIDER THE APPLICATION OF ARMSTRONG OPERATING, INC. FOR AN ORDER AUTHORIZING THE SIDETRACKING OF THE HONDL 30.1 WELL TO A LOCATION IN THE APPROXIMATE CENTER OF SECTION 30, T.139N., R.96W., STARK COUNTY, NORTH DAKOTA, AS AN EXCEPTION TO THE APPLICABLE FIELD RULES FOR THE ELAND LODGEPOLE POOL AND THE PROVISIONS OF SECTION 43-02-03-18 OF THE NORTH DAKOTA ADMINISTRATIVE CODE, AND DESIGNATING ALL OF SECTION 30 AS A 640 ACRE DRILLING UNIT FOR SAID WELL AND SUCH OTHER AND FURTHER RELIEF AS THE COMMISSION DEEMS APPROPRIATE.

CASE NO. 6151: ON A MOTION OF THE COMMISSION TO CONSIDER THE TEMPORARY SPACING FOR THE DEVELOPMENT OF AN OIL AND/OR GAS POOL DISCOVERED BY THE ARMSTRONG OPERATING, INC. #15-1 HONDL WELL LOCATED IN THE NE SE OF SECTION 30, T.139N., R.96W., STARK COUNTY, NORTH DAKOTA, DEFINE THE LIMITS OF THE FIELD, AND ENACT SUCH SPECIAL FIELD RULES AS MAY BE NECESSARY.

CASE NO. 6152: ON A MOTION OF THE COMMISSION TO CONSIDER THE APPLICATION OF CANYON ENERGY INC. FOR AN ORDER AUTHORIZING THE DRILLING OF A WELL AT A LOCATION APPROXIMATELY 2600 FEET FROM THE NORTH LINE AND 1550 FEET FROM THE EAST LINE OF SECTION 22, T.142N., R.98W., BILLINGS COUNTY, NORTH DAKOTA, AS AN EXCEPTION TO THE PROVISIONS OF SECTION 43-02-03-18 OF THE NORTH DAKOTA ADMINISTRATIVE CODE AND SUCH OTHER AND FURTHER RELIEF AS THE COMMISSION DEEMS APPROPRIATE.

CASE NO. 6153: ON A MOTION OF THE COMMISSION TO CONSIDER THE PROPER SPACING FOR THE DEVELOPMENT OF THE SADLER BAKKEN POOL, DIVIDE COUNTY, NORTH DAKOTA, REDEFINE THE LIMITS OF THE FIELD, AND ENACT SUCH SPECIAL FIELD RULES AS MAY BE NECESSARY.

CASE NO. 6154: ON A MOTION OF THE COMMISSION TO CONSIDER THE PROPER SPACING FOR THE DEVELOPMENT OF THE MARQUIS MADISON POOL, BILLINGS COUNTY, NORTH DAKOTA, REDEFINE THE LIMITS OF THE FIELD, AND ENACT SUCH SPECIAL FIELD RULES AS MAY BE NECESSARY IN EXPLORATION & PRODUCTION LTD. PARTNERSHIP.

CASE NO. 6155: ON A MOTION OF THE COMMISSION TO CONSIDER THE APPLICATION OF CONTINENTAL RESOURCES, INC. FOR AN ORDER POOLING ALL INTERESTS IN A SPACING UNIT FOR THE CEDAR HILLS-RED RIVER "B" POOL DESCRIBED AS ALL OF SECTION 17, T.131N., R.103W., BOWMAN COUNTY, NORTH DAKOTA, AUTHORIZING THE RECOVERY FROM EACH NONPARTICIPATING LESSEE A RISK PENALTY AS PROVIDED BY SECTION 38-08-08 OF THE NORTH DAKOTA CENTURY CODE AND SUCH OTHER AND FURTHER RELIEF AS THE COMMISSION DEEMS APPROPRIATE.

CASE NO. 6156: (CONTINUED) ON A MOTION OF THE COMMISSION TO CONSIDER THE APPLICATION OF AMERAD HESS CORPORATION FOR AN ORDER POOLING ALL INTERESTS IN A SPACING UNIT FOR THE FRYBURG-MADISON AND FRYBURG-HEATH POOLS DESCRIBED AS THE N/2 OF SECTION 29, T.139N., R.101W., BILLINGS COUNTY, NORTH DAKOTA, AND FURTHER AUTHORIZING THE RECOVERY OF A RISK PENALTY FROM THOSE LESSEES ELECTING NOT TO PARTICIPATE IN THE RISK AND COSTS OF DRILLING A WELL THEREON, PURSUANT TO SECTION 38-08-08.3 OF THE NORTH DAKOTA CENTURY CODE.

CASE NO. 6156: ON A MOTION OF THE COMMISSION TO CONSIDER THE APPLICATION OF CONDOR PETROLEUM, INC. FOR AN ORDER PURSUANT TO NORTH DAKOTA ADMINISTRATIVE CODE SECTION 43-02-03-88.1 POOLING ALL INTERESTS IN A SPACING UNIT FOR THE ARLO MOBERG #2 WELL IN THE NORTH TIOGA-MADISON POOL DESCRIBED AS THE E/2 NW/4 OF SECTION 20, T.139N., R.94W., BURKE COUNTY, NORTH DAKOTA.

Signed by: Edward T. Schafer, Governor, Chairman, ND Industrial Commission 918-25257

BILLING PERIOD	5	OIL & GAS DIVISION
AMOUNT DUE	113.95	TERMS OF PAYMENT
UNAPPLIED AMOUNT		30 DAYS
		60 DAYS
		OVER 90 DAYS

ADDRESS: \*\*CR54  
 BISMARCK TRIBUNE  
 PO BOX 1498  
 BISMARCK ND 58502

OK LEGAL CALCULATIONS

PER PORTION WITH YOUR REMITTANCE

CHARGES	SAU SIZE BILLED UNITS	TIMES RUN RATE	GROSS AMOUNT	NET
215L	53	1	113.95	11



Clota Marti  
 THE STATE OF NORTH DAKOTA, PERSONALLY APPEARED WHO, AS THE CLERK OF THE BISMARCK TRIBUNE COMPANY, AND IN THE PRESENCE OF THE CLERK OF THE BISMARCK TRIBUNE COMPANY, AND MADE THROUGH THE AFORESAID NEWSPAPER  
 Office of Public Information  
 918  
 SIGNED Clota Marti  
 14 DAY OF September 1995

of North Dakota, Residing at Bismarck	113.
TOTAL AMOUNT	113.

OK LEGAL CALCULATIONS

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