

STATE OF NEW MEXICO

ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:

Nomenclature  
Case No. 12182  
Order No. R-11221

APPLICATION OF CONOCO INC. FOR POOL CREATION, SPECIAL POOL  
RULES, AND THE ASSIGNMENT OF A SPECIAL DEPTH BRACKET  
ALLOWABLE, LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on May 13, 1999, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 12<sup>th</sup> day of July, 1999, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner,

FINDS THAT:

(1) Due public notice has been given and the Division has jurisdiction of this case and its subject matter.

(2) The applicant, Conoco Inc., seeks the creation of a new pool for the production of oil from the Strawn formation comprising the NE/4 of Section 36, Township 20 South, Range 37 East, NMPM, Lea County, New Mexico.

(3) The applicant further seeks the adoption of special pool rules therefor, including provisions for 160-acre spacing and proration units and designated well location requirements such that wells can be located no closer than 660 feet from the outer boundary of the spacing unit nor closer than 10 feet from any quarter-quarter section line or subdivision inner boundary. The applicant further seeks the assignment of a special depth bracket allowable of 600 barrels of oil per day.

(4) At the hearing, the applicant requested that its Hardy "36" State Well No. 26 (API No. 30-025-34311), located 870 feet from the North line and 1650 feet from the East line (Unit B) of Section 36, be assigned a bonus discovery allowable pursuant to Division Rule No. 509 in the amount of 37,825 barrels of oil.

(5) Division records indicate that by Order No. R-11183 issued in Case No. 12184 on May 19, 1999, the Division:

a) created the South Hardy-Strawn Pool comprising the NE/4 of Section 36, Township 20 South, Range 37 East, NMPM; and

b) assigned the Conoco Inc. Hardy "36" State Well No. 26 a bonus discovery allowable in the amount of 37,825 barrels of oil to be produced over a two-year period.

(6) Division records further indicate that by Order No. R-11204 issued in Case No. 12200 on June 14, 1999, the Division corrected its previous nomenclature by redesignating the South Hardy-Strawn Pool as the North Hardy-Strawn Pool.

(7) That portion of the application seeking the creation of a new pool for production of oil from the Strawn formation and for the assignment of a bonus discovery allowable to its Hardy "36" State Well No. 26 should be dismissed.

(8) In support of its proposed 160-acre spacing and special depth bracket allowable of 600 barrels of oil per day for the North Hardy-Strawn Pool, the applicant presented engineering evidence and testimony indicating that:

a) the Hardy "36" State Well No. 26 was drilled during March, 1998 and completed in the Strawn formation during April, 1998;

b) the Hardy "36" State Well No. 26 initially produced at a rate of 722 BOPD, 0 BWPD and 778 MCF gas per day. Peak production from the well, which occurred on April 29, 1998, was 1,570 BOPD, 0 BWPD and 1,331 MCF gas per day;

c) the Hardy "36" State Well No. 26 is currently capable of production in excess of 600 barrels of oil per day;

d) the North Hardy-Strawn Pool appears to be a solution gas drive reservoir;

e) extensive production testing demonstrates that producing the Hardy "36" State Well No. 26 at a rate of 600 barrels of oil per day has little or no effect on the producing GOR, which is consistently at or below 1,000 cubic feet of gas per barrel of oil; and

(f) preliminary production and drainage data demonstrate that the Hardy "36" State Well No. 26 is capable of draining an area of approximately 190 acres.

(9) The applicant requested that the proposed 160-acre well spacing and special depth bracket allowable for the North Hardy-Strawn Pool be adopted for a temporary period of eighteen months in order to provide the applicant and other operators in the pool the opportunity to gather additional engineering data to support continuation of the special pool rules on a permanent basis.

(10) No offset operator and/or interest owner appeared at the hearing in opposition to the application.

(11) Approval of this application will provide the applicant the opportunity to efficiently develop the Strawn reservoir underlying the NE/4 of Section 36, thereby preventing waste, will prevent the drilling of unnecessary wells, and will otherwise protect correlative rights.

(12) Special pool rules, including provisions for 160-acre spacing and proration units, designated well location requirements, and a special depth bracket allowable of 600 barrels of oil per day for the North Hardy-Strawn Pool should be established for a temporary period of eighteen months.

(13) The applicant did not present sufficient evidence to justify the establishment of 10-foot interior quarter-quarter section setback requirements; therefore, standard 330-foot interior quarter-quarter section setback requirements should be adopted.

(14) This case should be re-opened at an examiner hearing in December, 2000, at which time the operators in the North Hardy-Strawn Pool should be prepared to appear and present evidence and testimony to support the continuation of the special pool rules on a permanent basis.

**IT IS THEREFORE ORDERED THAT:**

(1) The application of Conoco Inc. for the creation of a new pool for the production of oil from the Strawn formation comprising the NE/4 of Section 36, Township 20 South, Range 37 East, NMPM, Lea County, New Mexico, is hereby dismissed.

(2) The application of Conoco Inc. for the assignment of a bonus discovery allowable for its Hardy "36" State Well No. 26 (API No. 30-025-34311), located 870 feet from the North line and 1650 feet from the East line (Unit B) of Section 36, in the amount of 37,825 barrels of oil is hereby dismissed.

(3) Pursuant to the application of Conoco Inc., special pool rules for the North Hardy-Strawn Pool are hereby adopted as follows:

**TEMPORARY SPECIAL POOL RULES FOR THE  
NORTH HARDY-STRAWN POOL**

**Rule 1.** Each well completed in or recompleted in the North Hardy-Strawn Pool or in the Strawn formation within one mile thereof, and not nearer to or within the limits of another designated Strawn pool, shall be spaced, drilled, operated, and produced in accordance with these Rules.

**Rule 2.** Each well completed in or recompleted in the North Hardy-Strawn Pool shall be located on a standard unit containing 160 acres, more or less, substantially in the form of a square which is a governmental quarter section and a legal subdivision of the United States Public Lands Survey.

**Rule 3.** The Director may grant an exception to the requirements of Rule 2 without hearing when an application has been duly filed under the provisions of Division Rule 104.D.(2).

**Rule 4.** Each well shall be located no closer than 660 feet to the outer boundary of the spacing unit nor closer than 330 feet to any quarter-quarter section line or subdivision inner boundary.

**Rule 5.** The Director may grant an exception to the requirements of Rule 4 without hearing when an application has been duly filed under the provisions of Division Rule No. 104.F.

**Rule 6.** The allowable for a standard proration unit (158 through 162 acres) shall be based on a special depth bracket allowable of 600 barrels of oil per day, and in the event there is more than one well on a 160-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion. The allowable assigned to a non-standard proration unit shall bear the same ratio to a standard allowable as the acreage in such non-standard unit bears to 160 acres.

**Note:** These rules will expire in December 2000, unless evidence is presented at a hearing at that time supporting their continuation on a permanent basis.

**IT IS FURTHER ORDERED THAT:**

(1) The location of any well presently drilling to or completed in the North Hardy-Strawn Pool or in the Strawn formation within one mile thereof is hereby approved. The operator of any well having an unorthodox location shall notify the Division's Hobbs District Office in writing of the name and location of the well within 20 days from the date of this order.

(2) Existing oil wells in the North Hardy-Strawn Pool shall have dedicated thereto 160 acres in accordance with the foregoing pool rules, or may have non-standard spacing or proration units established by the Division and dedicated thereto.

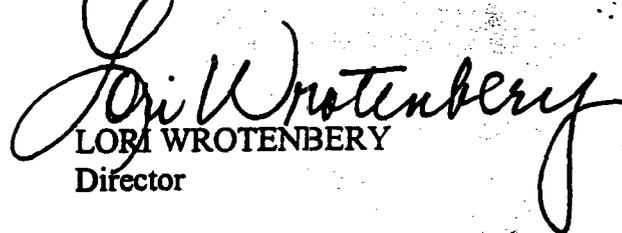
Failure to file new Forms C-102 with the Division dedicating 160 acres to a well or to obtain a non-standard unit approved by the Division within 60 days from the date of this order shall subject the well to cancellation of allowable.

(3) This case shall be re-opened at an examiner hearing in December, 2000, at which time the operators in the North Hardy-Strawn Pool should be prepared to appear and present evidence to support the continuation of the special pool rules on a permanent basis.

(4) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
LORI WROTENBERY  
Director



S E A L

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK  
DRILL  DEEPEN

b. TYPE OF WELL  
OIL WELL  GAS WELL  OTHER   
SINGLE ZONE  MULTIPLE ZONE

2. NAME OF OPERATOR  
Conoco Inc.

a. ADDRESS AND TELEPHONE NO  
10 Desta Drive, Suite W649 Midland, TX 79705-4500

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements \*)  
At surface 2310' FSL & 1850' FWL  
At proposed prod. zone 2310' FSL & 1850' FWL Unit K

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
Lea NM

5. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if Any)

16 NO OF ACRES IN LEASE

17. NO. OF ACRES ASSIGNED TO THIS WELL  
40

8. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.

19. PROPOSED DEPTH  
8150'

20. ROTARY OR CABLE TOOLS  
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc)  
3494' GR

22. APPROX. DATE WORK WILL START\*  
2/15/00

23 PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	J-55, 9-5/8"	36#	1500'	554 sxs, circ.
8-3/4"	S/P110, 7"	23#	7850'	920 sxs, circ.

It is proposed to drill a vertical wellbore as a South Cass Strawn producer. NOS was filed 1/26/00. The well will be equipped according to the plan submitted in the following attachments:

- Well Location and Acreage Dedication Plat (C-102) along with other associated maps and plats.
- Proposed Well Plan Outline
- Cementing Plan
- Surface Use Plan
- Trailer Mounted Rig Layout Drawing
- BOP & Choke Manifold Specifications
- H2S Drilling Operations Plan
- Surface owner communications

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED

This application includes ROW's for the well pad, electric line, and flowline. The undersigned accepts all applicable terms, conditions, stipulations and restrictions concerning operations conduct or potion thereof, as described above and as covered by BLM Bond File No. ES-0085.

OPER. CONTROL NO. 5073  
PROPERTY NO. 25410  
PROL. CODE 96893  
EFF. DATE 3/6/00  
API NO. 30-025-34960

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED Jo Ann Johnson TITLE Sr. Property Analyst DATE 2/7/00

(This space for Federal or State office use)

PERMIT NO \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:  
Acting Assistant Field Manager,  
Lands And Minerals  
APPROVED BY (CORIN SERRA) ARMANDO A. LOPEZ TITLE \_\_\_\_\_ DATE FEB 24 2000

\*See Instructions On Reverse Side

APPROVED FOR 1 YEAR

DISTRICT I  
1825 N. French Dr., Hobbs, NM 88240

State of New Mexico

Form C-102

Revised March 17, 1999

DISTRICT II  
811 South First, Artesia, NM 88210

Energy, Minerals and Natural Resources Department

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION

2040 South Pacheco

DISTRICT IV  
2040 South Pacheco, Santa Fe, NM 87505

Santa Fe, New Mexico 87505

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-34960	Pool Code 10460 96893	Pool Name North Hardy South Cass Strawn
Property Code 25410	Property Name MEYER B-31	Well Number 5
GRID No. 005073	Operator Name Conoco Inc., 10 Desta Drive, Ste. 649W, Midland TX 79705	Elevation 3494'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	31	20 S	38 E		2310	SOUTH	1850	WEST	LEA

Bottom Hole Location If Different From Surface

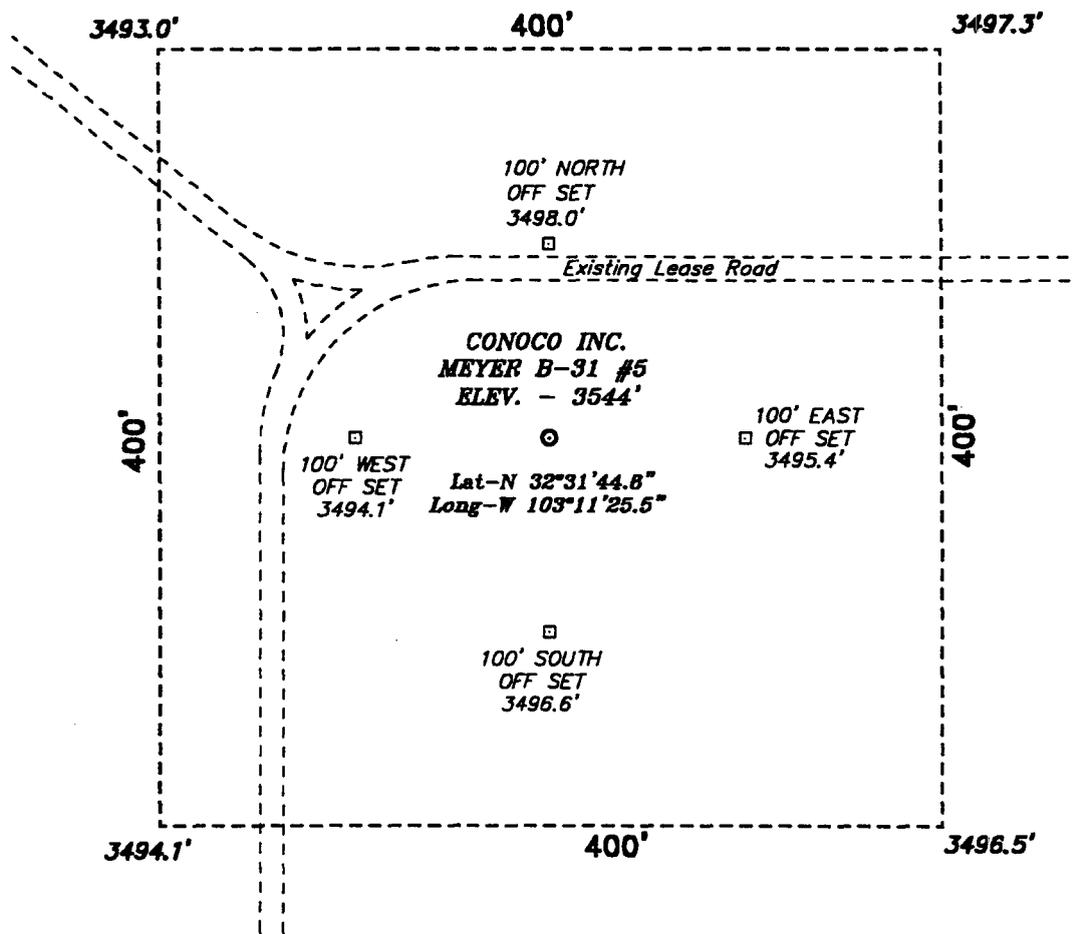
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres 40	Joint or Infill	Consolidation Code	Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

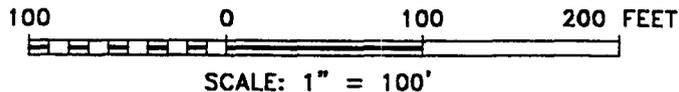
	<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Jo Ann Johnson</i> Signature</p> <p>Jo Ann Johnson Printed Name</p> <p>Sr. Property Analyst Title</p> <p>2/7/00 Date</p>
	<p><b>SURVEYOR CERTIFICATION</b></p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>January 12, 2000 Date Surveyed</p> <p>Signature of Surveyor Professional Surveyor</p> <p>NEW MEXICO W.O. No. 00184</p> <p>Certified No. Ggn Jones 7977 PROFESSIONAL LAND SURVEYOR PLAT SURVEYS</p>

**SECTION 31, TOWNSHIP 20 SOUTH, RANGE 38 EAST, N.M.P.M.,  
LEA COUNTY, NEW MEXICO.**



**DIRECTIONS TO WELL LOCATION:**

FROM JUNCTION CO. RD. 176 AND LOOP 18 IN EUNICE,  
GO NORTH ON LOOP 18 APPROX. 2.5 MILES; THENCE  
NORTHWEST ON CO. RD. C-34 APPROX. 3 MILES;  
THENCE NORTHEAST ON A LEASE ROAD 1.5 MILE TO  
THE PROPOSED WELL LOCATION.



**Conoco Inc.**

REF: MEYER B-31 No. 5 / Well Pad Topo

THE MEYER B-31 No. 5 LOCATED 2310' FROM THE  
SOUTH LINE AND 1850' FROM THE WEST LINE OF  
SECTION 31, TOWNSHIP 20 SOUTH, RANGE 38 EAST,  
N.M.P.M., LEA COUNTY, NEW MEXICO.

**BASIN SURVEYS** P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 0016

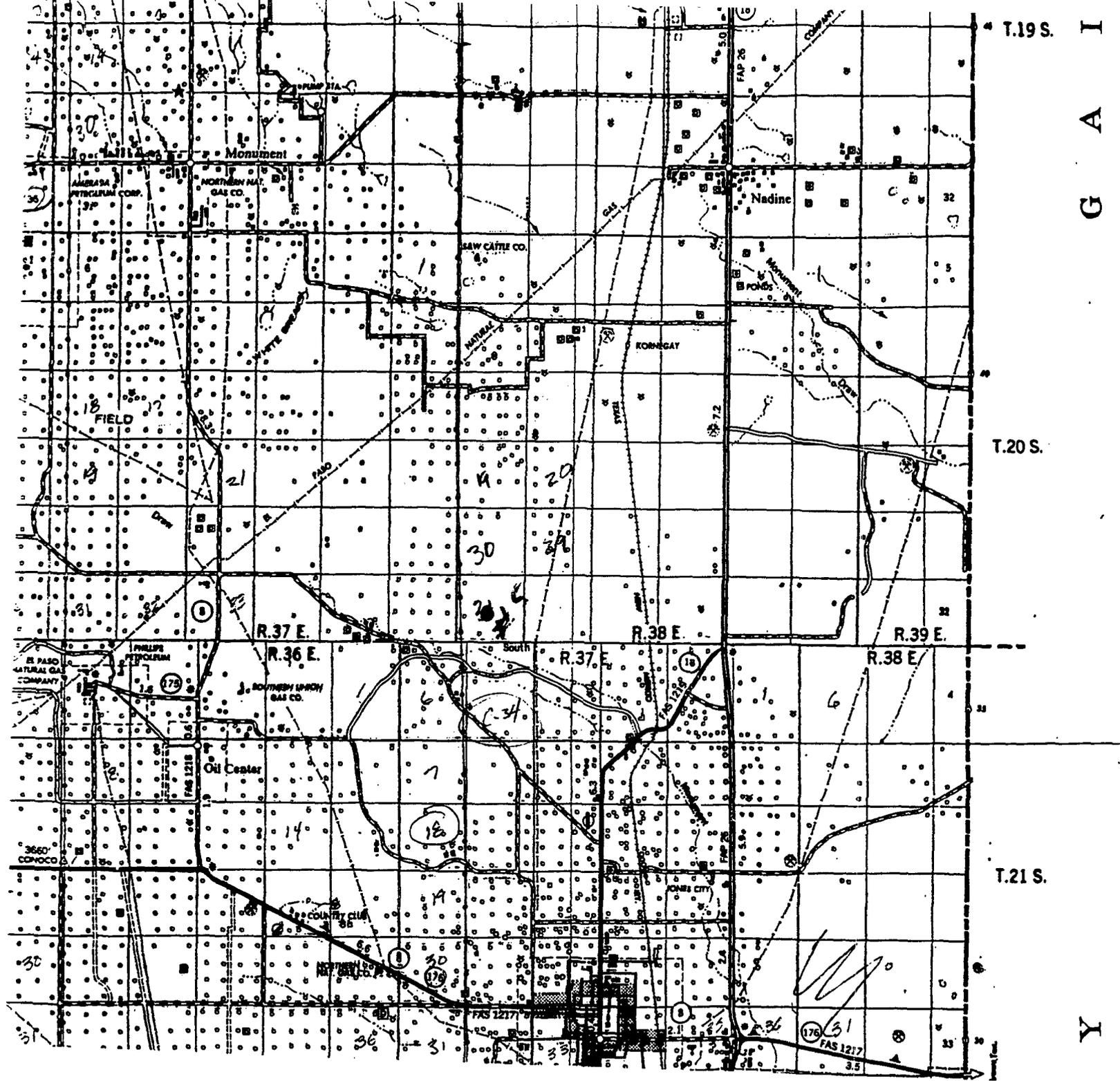
Drawn By: **K. GOAD**

Date: 01-13-2000

Disk: KJG #122 - 0016A.DWG

Survey Date: 01-12-2000

Sheet 1 of 1 Sheets



**CONOCO INC.**  
**MEYER B-31 #5**  
**2310' FSL & 1850' FWL**  
**Sec. 31, T-20-S, R-38-E,**  
**Lea County, New Mexico.**

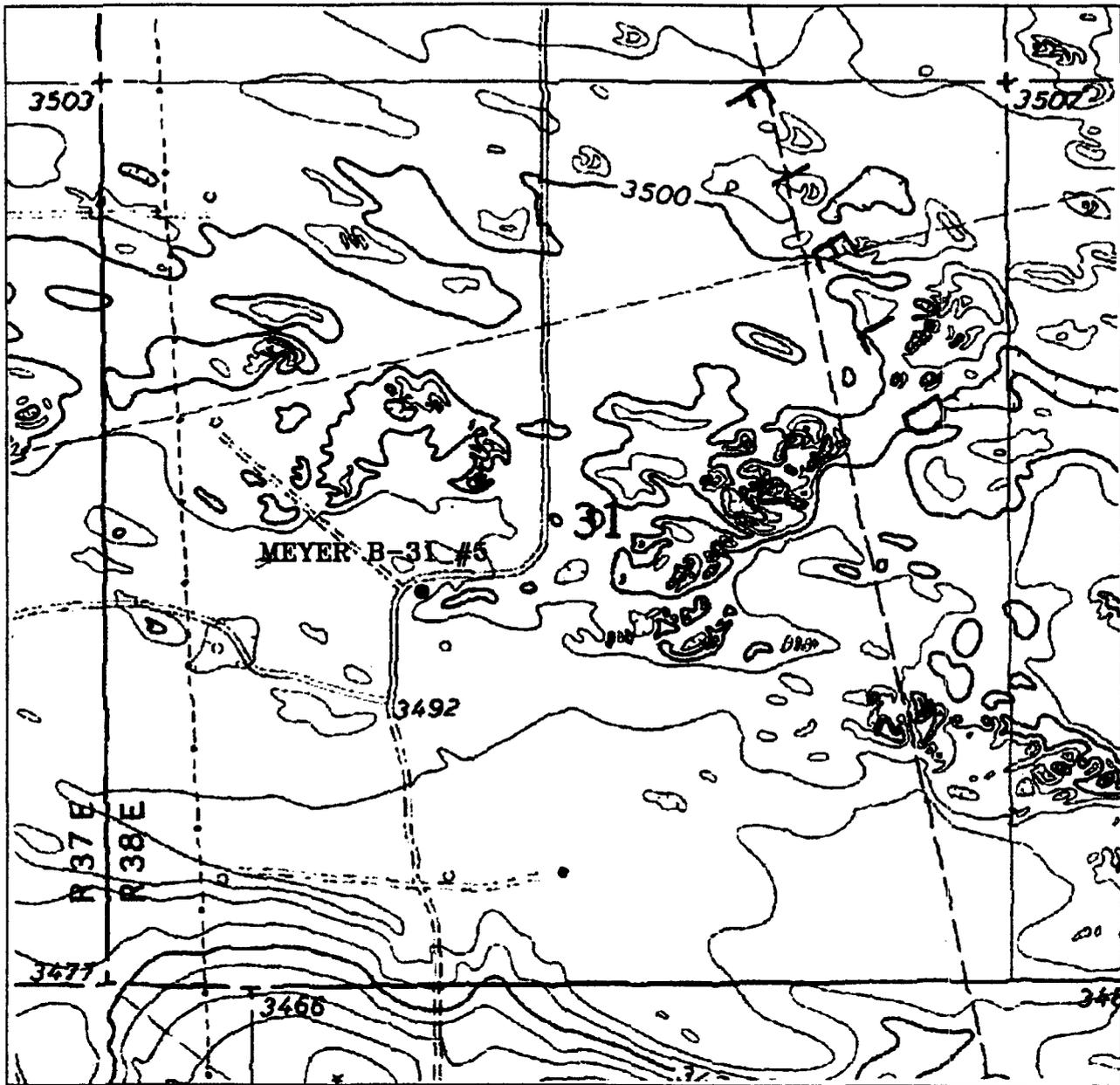
SCALE: 1"=2 MILES

**BASIN SURVEYS**

P.O. BOX 1786--HOBBS, NEW MEXICO

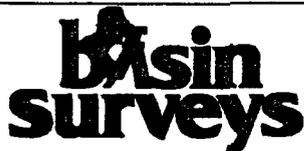


W.O. Number: 0016	Drawn By: K. GOAD	Survey Date: 01-12-2000	Sheet 1 of 1 Sheets
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**MEYER B-31 #5**

Located at 2310' FSL and 1850' FWL  
 Section 31, Township 20 South, Range 38 East,  
 N.M.P.M., Lea County, New Mexico.



focused on excellence  
 in the oilfield

P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (505) 393-7316 - Office  
 (505) 392-3074 - Fax  
 basinsurveys.com

W.O. Number: 0016AA - KJG #122

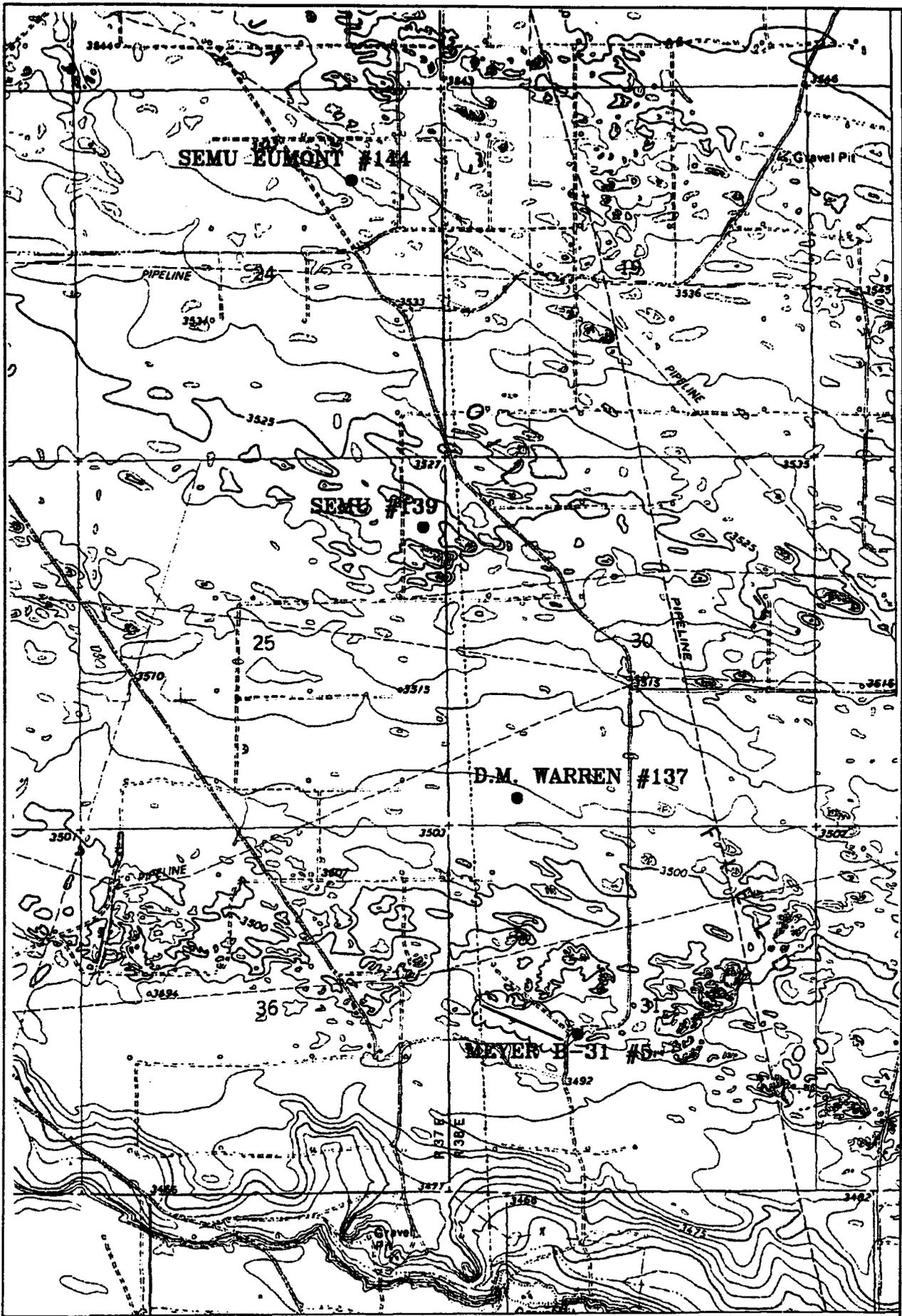
Survey Date: 01-01-2000

Scale: 1" = 1000'

Date: 01-13-2000

**CONOCO INC.**





1375' Powerline  
Overhead Installation

**PROPOSED WELL PLAN OUTLINE**

WELL NAME  
LOCATION

Meyer B-31 No.5  
1850' FWL & 2310' FSL Sec 31, T20S, R38E (Prior to Staking)

Ground Level : 7  
Kelly Bushing: 11' AGL

Depth MD	FORMATION TOPS	DRILLING PROBLEMS	TYPE OF FORMATION EVALUATION	HOLE SIZE	CASING PROGRAM	FRAC GRAD	FORM. PRES. GRAD.	Mud Weight & Type	Days
0		Possible Hole Enlargement & Sloughing		12-1/4"			Less than 8.3	8.4 - 9.5 Fresh	
1000									
	Top Salt @ 1,430'				9-5/8", 36#, J-55 ST&C @ 1,500'				3
		Washouts in Salt Section		8-3/4"	Circulate Cement			10 Brine	
2000							Less than 8.4		
	Base Salt @ 2,500'								
	Yates 2,730'		Mud Loggers F/ Yates to TD H2S Monitor on at 2900'						
	7 Rivers 2,975'								
3000									
	Queen 3,545'								
	Grayburg 3,805'								
4000	San Andres 4,035'	Lost Returns in San Andres							7
5000									
	Glorietta 5,305'	Possible differential sticking thru Glorietta & Paddock							
	Blinebry Mkr 5,875'								
6000									
	Tubb 6,325'								
	Drinkard 6,655'								
	Abo 6,920'								
7000									
	Strawn 7,500'		First Log Run: GR-CAL-DLL-MLL-Sonic FDC-CNL-PE : TD to 2700' Pull GR-CNL-Cal to Surf						
			Second Log Run: 60 rotary sidewall cores						
	TD @ 7,850'	STOP DRILLING WHEN WOODFORD SHALE IS CUT	Third Run: FMI imaging log		7", 23.0#, S/P110 LT&C f/0'-7,850'				
8000	Devonian 7,890'	Severe losses in Devonian			Circulate Cement			10 ppg Starch Gel	20

Note: The Devonian formation is associated with severe lost circulation problems. This well will be TD'd very close to the top of the Devonian. The mud loggers will pick the Woodford shale which is 40' thick and sits on top of the Devonian. Stop drilling once the Woodford is entered.

DATE 07-Jan-00

Joe Huck, Geophysical Advisor

APPROVED Yong Cho, Drilling Engineer

Joe Miller, Reservoir Engineer



Proposal No: 180252807A

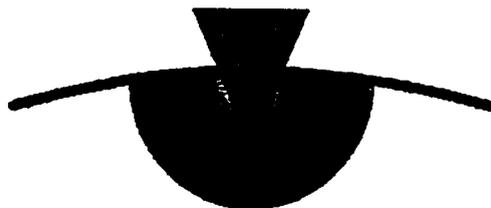
**Conoco  
Myer 'B' 31 #5**

**Sec. 31-T20S-R38E  
Lea County, New Mexico  
December 20, 1999**

**Well Recommendation**

**Prepared for:  
Mr. Yong Cho  
Drilling Engineer**

**Prepared by:  
Rocky Chambers  
Region Engineer  
Bus Phone: 915/683-2781  
Mobile: 915/557-1239  
Pager: 915/498-1605**



**P O W E R V I S I O N™**

**Service Point:  
Hobbs  
Bus Phone: (505) 392-5556  
Fax: (505) 392-7307**

**Service Representatives:  
Wayne Davis  
Account Manager  
Bus Phone: (915) 683-2781**

Operator Name: Conoco  
Well Name: Myer 'B' 31 #5  
Job Description: 9 5/8" Surface  
Date: December 20, 1999



Proposal No: 180252807A

**JOB AT A GLANCE**

Depth (TVD)	1,500 ft
Depth (MD)	1,500 ft
Hole Size	12.25 in
Casing Size/Weight :	9 5/8 in, 36 lbs/ft
Pump Via	Casing 9 5/8" O.D. (8.921" .I.D) 36 #
Total Mix Water Required	5,010 gals
Pre-flush	
Mud Clean I	1,500 gals
Density	8.4 ppg
Lead Slurry	
LEAD SLURRY	401 sacks
Density	12.7 ppg
Yield	1.88 cf/sack
Tail Slurry	
TAIL SLURRY	153 sacks
Density	14.8 ppg
Yield	1.34 cf/sack
Displacement	
Water	113 bbls
Density	8.4 ppg

Operator Name: Conoco  
 Well Name: Myer 'B' 31 #5  
 Job Description: 9 5/8" Surface  
 Date: December 20, 1999



Proposal No: 180252807A

**WELL DATA**

**ANNULAR GEOMETRY**

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
12.250 HOLE	1,500	1,500

**SUSPENDED PIPES**

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
9.625	8.921	36	1,500	1,500

Float Collar set @ 1,460 ft  
 Mud Density 8.40 ppg  
 Est. Static Temp. 89 ° F  
 Est. Circ. Temp. 85 ° F

**VOLUME CALCULATIONS**

1,200 ft x 0.3132 cf/ft with 100 % excess = 751.6 cf  
 300 ft x 0.3132 cf/ft with 100 % excess = 188.1 cf  
 40 ft x 0.4341 cf/ft with 0 % excess = 17.4 cf (inside pipe)  
**TOTAL SLURRY VOLUME = 957.1 cf**  
 = 171 bbls

**Operator Name:** Conoco  
**Well Name:** Myer 'B' 31 #5  
**Job Description:** 9 5/8" Surface  
**Date:** December 20, 1999



**Proposal No:** 180252807A

**FLUID SPECIFICATIONS**

Pre-flush				1,500.0 gals Mud Clean I @ 8.4 ppg
<b>FLUID</b>	<b>VOLUME CU-FT</b>	<b>VOLUME FACTOR</b>	<b>AMOUNT AND TYPE OF CEMENT</b>	
Lead Slurry	752	/ 1.88	= 401 sacks (35:65) Poz (Fly Ash):Class C Cement + 2% bwoc Calcium Chloride + 0.25% bwoc Cello Flake + 0.005 gps FP-6L + 6% bwoc Bentonite + 96.5% Fresh Water	
Tail Slurry	205	/ 1.34	= 153 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.005 gps FP-6L + 56.3% Fresh Water	
Displacement			112.9 bbls Water + 56.3% Fresh Water @ 8.4 ppg	

**CEMENT PROPERTIES**

	<b>SLURRY NO. 1</b>	<b>SLURRY NO. 2</b>
Slurry Weight (ppg)	12.70	14.80
Slurry Yield (cf/sack)	1.88	1.34
Amount of Mix Water (gps)	10.07	6.35
Amount of Mix Fluid (gps)	10.08	6.35
Estimated Pumping Time - 70 BC (HH:MM)	5:00	2:20

**Operator Name:** Conoco  
**Well Name:** Myer 'B' 31 #5  
**Job Description:** 7" Long String - Single Stage  
**Date:** December 20, 1999



**Proposal No:** 180252807A

**JOB AT A GLANCE**

<b>Depth (TVD)</b>	7,850 ft
<b>Depth (MD)</b>	7,850 ft
<b>Hole Size</b>	8.75 in
<b>Casing Size/Weight :</b>	7 in, 23 lbs/ft
<b>Pump Via</b>	Casing 7" O.D. (6.366" I.D) 23 #
<b>Total Mix Water Required</b>	7,948 gals
<b>Pre-flush</b>	
<b>Mud Clean I</b>	1,500 gals
<b>Density</b>	8.4 ppg
<b>Lead Slurry</b>	
<b>LEAD SLURRY</b>	586 sacks
<b>Density</b>	12.7 ppg
<b>Yield</b>	1.85 cf/sack
<b>Tail Slurry</b>	
<b>TAIL SLURRY</b>	334 sacks
<b>Density</b>	14.8 ppg
<b>Yield</b>	1.34 cf/sack
<b>Displacement</b>	
<b>Water</b>	307 bbls
<b>Density</b>	8.4 ppg

**Operator Name:** Conoco  
**Well Name:** Myer 'B' 31 #5  
**Job Description:** 7" Long String - Single Stage  
**Date:** December 20, 1999



Proposal No: 180252807A

**WELL DATA**

**ANNULAR GEOMETRY**

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
8.921 CASING	1,500	1,500
8.750 HOLE	7,850	7,850

**SUSPENDED PIPES**

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
7.000	6.366	23	7,850	7,850

**Float Collar set @** 7,810 ft  
**Mud Density** 8.40 ppg  
**Est. Static Temp.** 127 ° F  
**Est. Circ. Temp.** 121 ° F

**VOLUME CALCULATIONS**

1,500 ft x 0.1668 cf/ft with 0 % excess = 250.2 cf  
 4,100 ft x 0.1503 cf/ft with 35 % excess = 832.1 cf  
 2,250 ft x 0.1503 cf/ft with 30 % excess = 440.3 cf  
 40 ft x 0.2210 cf/ft with 0 % excess = 8.8 cf (inside pipe)  
**TOTAL SLURRY VOLUME = 1531.4 cf**  
 = 273 bbls

Operator Name: Conoco  
 Well Name: Myer 'B' 31 #5  
 Job Description: 7" Long String - Single Stage  
 Date: December 20, 1999



Proposal No: 180252807A

**FLUID SPECIFICATIONS**

Pre-flush				1,500.0 gals Mud Clean I @ 8.4 ppg
<b>FLUID</b>	<b>VOLUME CU-FT</b>	<b>VOLUME FACTOR</b>	<b>AMOUNT AND TYPE OF CEMENT</b>	
Lead Slurry	1082	/ 1.85	= 586 sacks (35:65) Poz (Fly Ash):Class C Cement + 0.25% bwoc Cello Flake + 0.005 gps FP-6L + 6% bwoc Bentonite + 95.7% Fresh Water	
Tail Slurry	449	/ 1.34	= 334 sacks Class C Cement + 1% bwoc BA-58 + 0.9% bwoc FL-50 + 0.5% bwoc CD-32 + 0.005 gps FP-6L + 0.2% bwoc Sodium Metasilicate + 55.7% Fresh Water	
Displacement				307.5 bbls Water + 55.7% Fresh Water @ 8.4 ppg

**CEMENT PROPERTIES**

	SLURRY NO. 1	SLURRY NO. 2
Slurry Weight (ppg)	12.70	14.80
Slurry Yield (cf/sack)	1.85	1.34
Amount of Mix Water (gps)	9.98	6.28
Amount of Mix Fluid (gps)	9.99	6.29
Estimated Pumping Time - 70 BC (HH:MM)	2:49	1:49
Free Water (mls) @ ° F @ 90 ° angle	0.9	

**RHEOLOGIES**

<u>FLUID</u>	<u>TEMP</u>	<u>600</u>	<u>300</u>	<u>200</u>	<u>100</u>	<u>6</u>	<u>3</u>
Lead Slurry	@ ° F	153	141	136	130	50	38
Tail Slurry	@ 80 ° F	150	102	85	68	43	35

**SURFACE USE PLAN**  
**Conoco Inc.**

**Meyer B-31 No. 5**

The following is required information concerning the possible affect which the drilling of this well may have on the environment, existing road sites, and surrounding acreage. A copy will be posted on the derrick floor so all contractors and sub-contractors will be aware of all items of this plan.

1. Existing Roads

- A. The proposed well site is 2310' FSL & 1850' FWL, Sec. 31, T20S, R38E, Lea County, New Mexico.
- B. Directions to the location are listed on the well pad plat attached.
- C. No improvement or maintenance is anticipated for the existing roads.

2. Planned Access Roads

- A. No new access road will be required.
- B. Turnouts as required by Surface Management Agency.
- C. Culverts as required by Surface Management Agency.
- D. Gates, cattleguards, or fences as required by Surface Management Agency.

3. Topographic Map and Well Location

A 7.5" quadrangle topo map was filed with the NOS.

4. Additional Rights-of-Way

Electric line and flowline as shown on attached plats.

5. Water Supply

Fresh water will be obtained from commercial sources and trucked to location by the described directions to the location.

6. Source of Construction Materials

Construction materials will be obtained from commercial sources.

7. Methods of Handling Waste Disposal

- A. The drill cuttings, fluids and completion fluids will be placed in the reserve pit. The reserve pit will be fenced on three sides away from the pad during drilling and the fourth side fenced as soon as the rig moves out. The reserve pit will be allowed to dry, and materials remaining in the reserve pit buried. The reserve pit will be backfilled, leveled and contoured so as to prevent any materials being carried into the watershed. Upon completion, the pad will be leveled, contoured, and reseeded with the appropriate seed mixture as specified by the surface managing agency.
- B. All garbage and trash will be hauled away to designated landfill by Conoco.
- C. Chemical toilets will be provided and maintained during drilling operations.

8. Ancillary Facilities

No ancillary facilities are planned.

9. Wellsite Layout

See attached Wellsite Layout. The V-door faces East. The reserve pit will be lined with plastic and the pad and pits are staked. All unguarded pits containing liquids will be fenced and any unguarded pit containing liquids will be fenced.

10. Plans for Restoration of Surface

Reserve pits will be rehabilitated once drilling fluids have been allowed to evaporate to the point the pits are dry enough for backfilling and leveling. In the event drilling fluids will not evaporate in a reasonable time period, the fluids will be removed and transported by tank truck to a state approved disposal facility. Backfilling and leveling of the location will be completed within a time period of one year upon cessation of drilling operations.

11. Surface Ownership

The surface ownership is Bob McCasland.

12. Archeological Clearance

The archeological survey has been requested and will be furnished upon completion.

13. Operator's Representative and Certification

The person who can be contacted concerning compliance of this Surface Use Plan is:

**Mike L. Mankin**  
**10 Desta Drive, Suite 649W**  
**Midland, Texas 79705**  
**(915) 686-5794**

*I hereby certify that I, or persons under my direct supervision, have inspected the proposed drilling site; that I am familiar with the conditions which currently exist; that the statements made in this plan, are, to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by Conoco Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.*

*Mike L. Mankin*  
\_\_\_\_\_

Mike L. Mankin  
Right-of-Way Agent

*2-1-00*  
\_\_\_\_\_

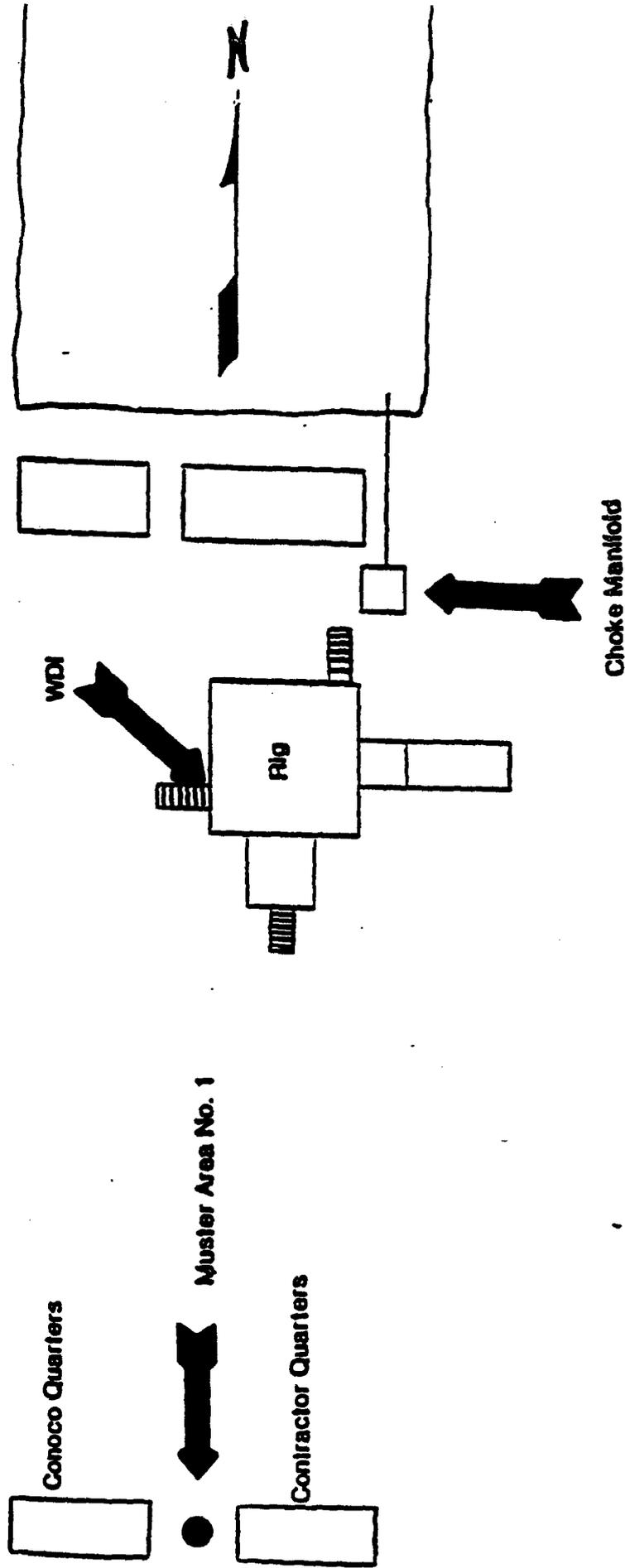
Date

WELLSITE LAYOUT



H2S Safety Contractor

Terrain is flat, and covered with native grass.  
Two of the three WDI (wind direction indicator) locations will be utilized.  
(Prevailing winds are SW to N)



Conoco Quarters

Muster Area No. 1

Contractor Quarters

Choke Manifold

Muster Area No. 2  
WDI



# TRAILER - MOUNTED RIG LAYOUT

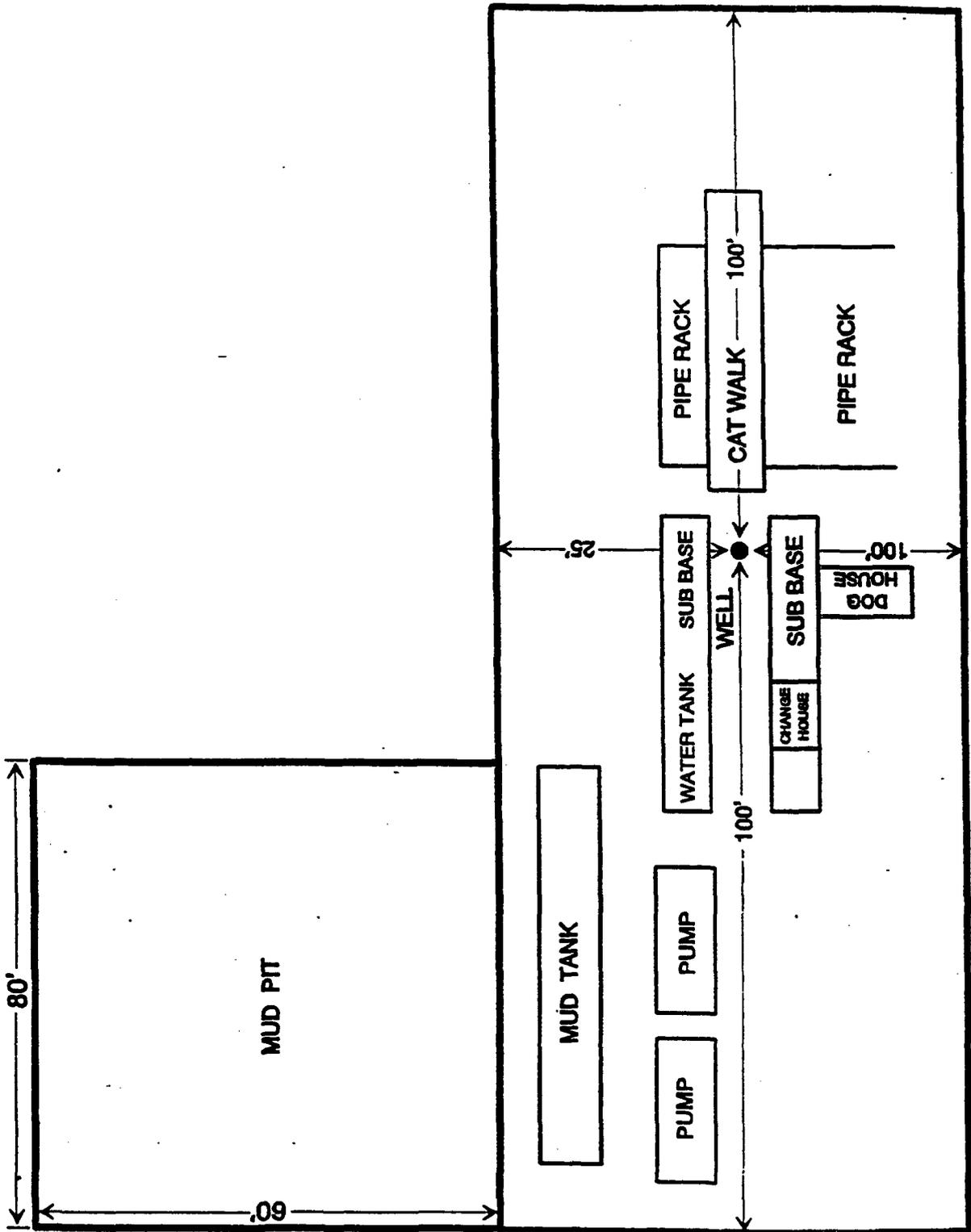
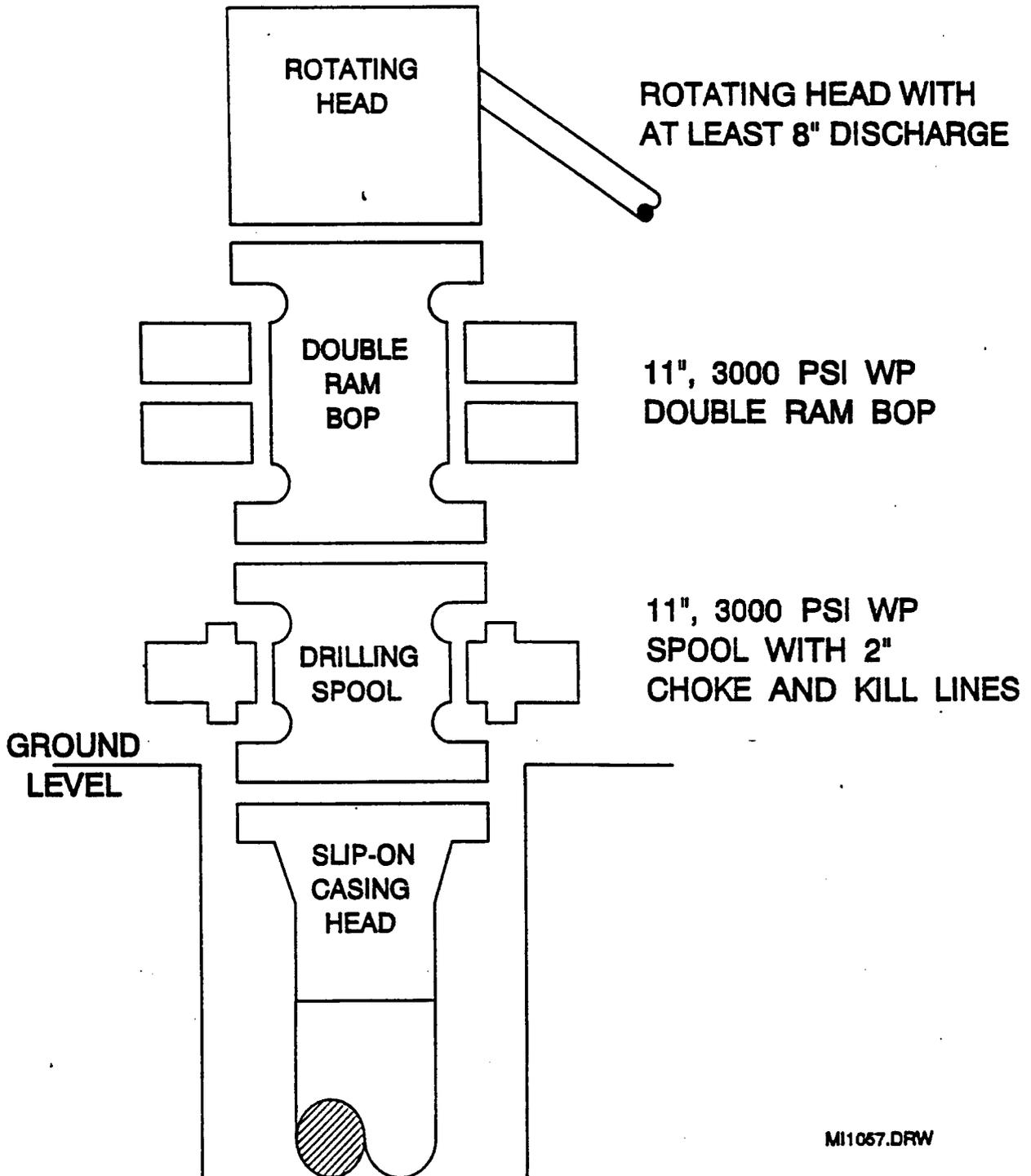
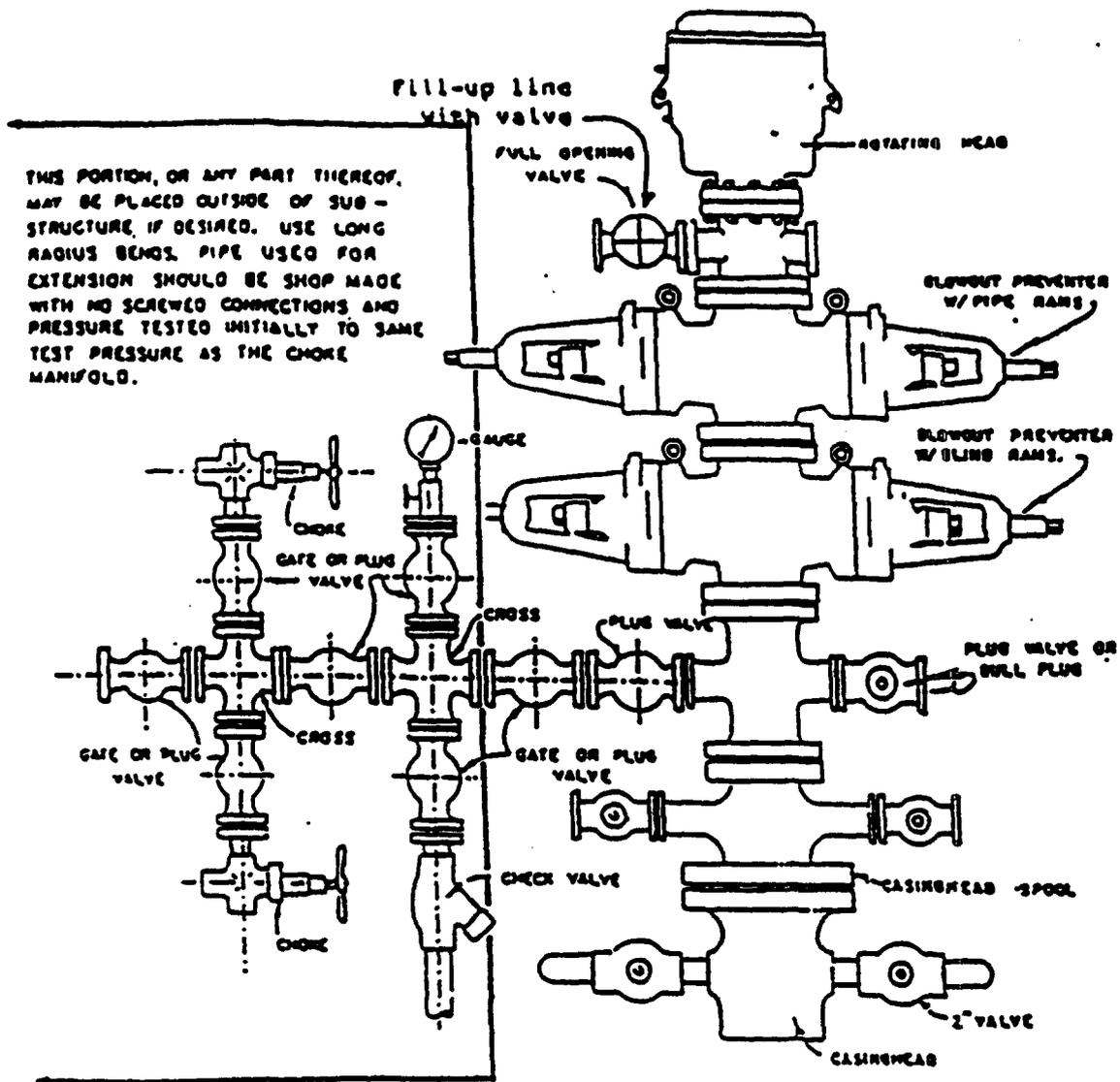


EXHIBIT D

# BOP SPECIFICATIONS



MI1067.DRW

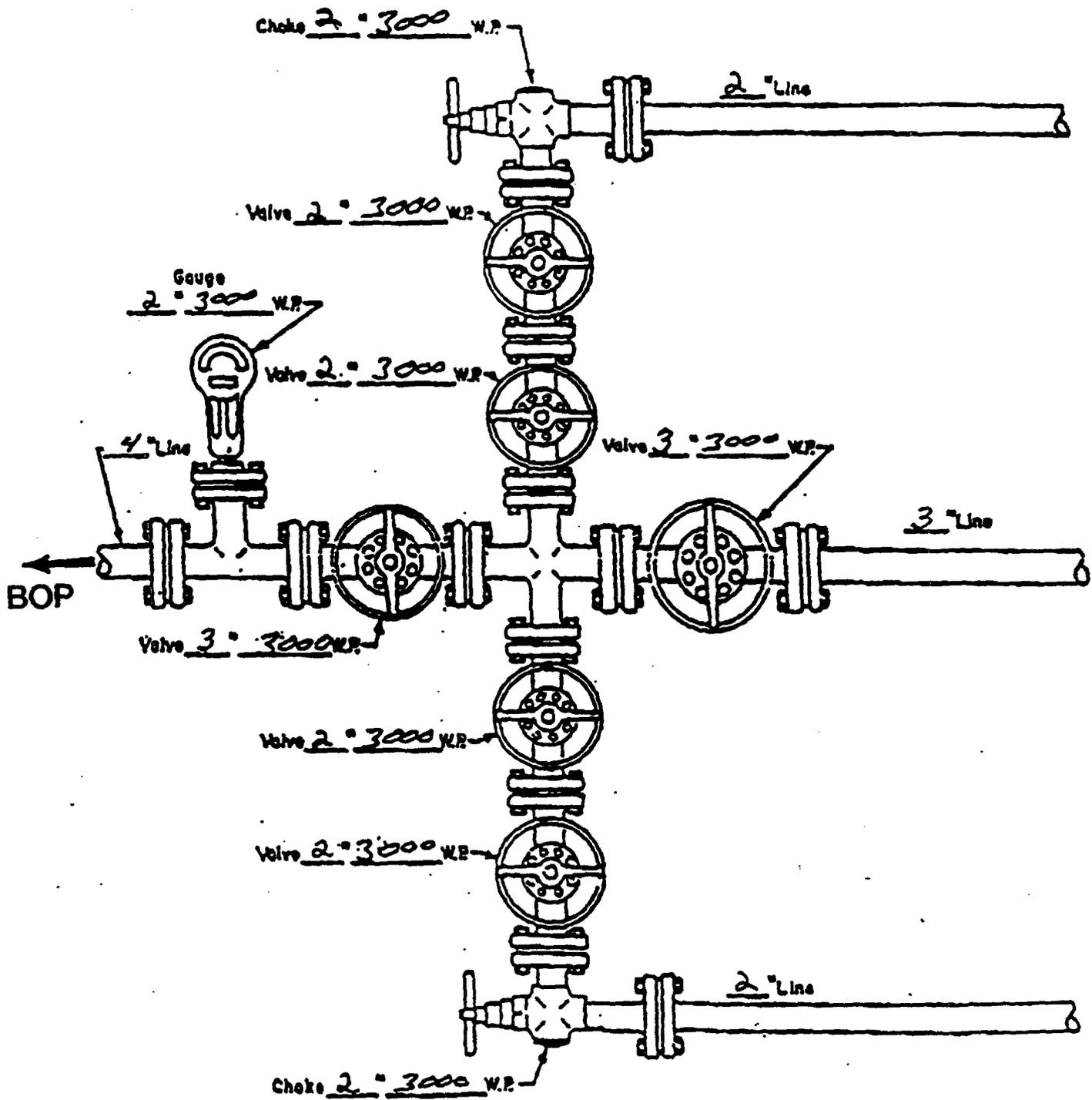


### BLOWOUT PREVENTER HOOKUP

Drilling contractors used in the San Juan Basing supply 3000 psi equipment, but cannot provide annular preventors because of sub-structure limitations. Maximum anticipated surface pressures for this well will not exceed the working pressure of the proposed BOP system. Please see the attached BOP diagram details 2000 psi equipment according to Onshore Order No. 2 even though the equipment will test to 3000 psi. The 2000 psi system allows deletion of the annular preventor and fulfills your requirements (note diagram No. 1). In addition, the following equipment will comprise the 2000 psi system:

1. Two rams with one blind and one pipe ram.
2. Kill line (2 inch maximum).
3. One kill line valve.
4. One choke line valve.
5. Two chokes (reference diagram No. 1).
6. Upper kelly cock valve with handle.
7. Safety valve and subs to fit all drill strings in use.
8. Two-inch minimum choke line.
9. Pressure gauge on choke manifold.
10. Fill-up line above the upper most preventor.
11. Rotating head.

# CHOKE MANIFOLD DIAGRAM



MANIFOLD  
3000 W.P.

- Manual
- Hydraulic

## **H2S DRILLING OPERATIONS PLAN**

**Conoco, Inc. will comply with Onshore Order No. 2 for working in an H2S environment or a potential H2S environment.**

### **I. Hydrogen Sulfide Training**

**All contractors and subcontractors employed by Conoco will receive or have received training from a qualified instructor within the last twelve months in the following areas prior to commencing drilling operations on this well.**

- 1. The hazards and characteristics of hydrogen sulfide (H2S)**
- 2. Safety precautions.**
- 3. Operations of safety equipment and life support systems.**

**In addition, contractor supervisory personnel will be trained or prepared in the following areas:**

- 1. The effect of H2S on metal components in the system, especially where high tensile strength tubulars are to be used.**
- 2. Corrective action and shutdown procedures when drilling or reworking a well, blowout prevention and well control procedures, if the nature of work performed involves these items.**
- 3. The contents and requirements of the contingency plan when such plan is required.**

**All personnel will be required to carry documentation of the above training on their person.**

### **II. H2S EQUIPMENT AND SYSTEMS**

#### **1. Safety Equipment**

**The following minimum safety equipment will be on location:**

- A. Wind direction indicators placed near rig floor/mud return lines and at points along the perimeter of the location to allow visibility of at least one indicator from any point on location.**
- B. Automatic H2S detection alarm equipment (both audio and visual).**
- C. Clearly visible warning signs. Signs will use the words "POISON GAS" and "CAUTION" with a strong color contrast.**
- D. Protective breathing equipment will be located in the doghouse and at briefing areas on location.**

#### **2. Well Control Systems**

##### **A. Blowout Prevention Equipment**

**Equipment includes but is not limited to:**

- 1. Pipe rams to accommodate all pipe sizes**
- 2. Blind rams**
- 3. Choke manifold**
- 4. Closing Unit**
- 5. Flare line and means of ignition**

#### **B. Communication**

The rig contractor will be required to have two-way communication capability. Conoco will have either land-line, satellite phone, microwave phone, or mobile (cellular) telephone capabilities.

#### **C. Mud Program**

The mud program has been designed to minimize the volume of H<sub>2</sub>S circulated to surface. Proper mud weight, safe drilling practices, and the use of H<sub>2</sub>S scavengers when appropriate will minimize hazards when penetrating H<sub>2</sub>S bearing zones.

#### **D. Drill Stem Tests**

Any planned drill stem test will be cancelled if H<sub>2</sub>S is detected prior to such test. In the event that H<sub>2</sub>S is detected during testing, the test will be terminated immediately.



**Mike L. Mankin**  
Sr. Right of Way Agent  
Right of Way and Claims

**Conoco Inc.**  
10 Desta Drive, Suite 649W  
Midland, Texas 79705-4500  
(915) 686-5794

January 31, 2000

Bureau of Land Management  
620 E. Greene  
Carlsbad, New Mexico 88220

Attn: Mr. Barry Hunt

Re: **Settlement Letter for Well Location and Appurtenances**  
**MEYER B-31, Well #5**  
**Section 31, T20S, R38E**  
**Lea County, New Mexico**

Dear Mr. Hunt,

Conoco Inc. has made settlement with the surface owner for the construction of the above referenced location and appurtenances.

If you have any questions or concerns, please contact me at 915-686-5794.

Sincerely,

Mike L. Mankin

Cc: File



County Lea Pool North South Hardy-Strawn

TOWNSHIP 20 South Range 37 East NMPM

	6	5	4	3	2	1
	7	8	9	10	11	12
	18	17	16	15	14	13
*	19	20	21	22	23	24
	30	29	28	27	26	25
	31	32	33	34	35	36

Description: <sup>NE</sup>/<sub>4</sub> Sec. 36 (R-11183, 5-19-99)

Redesignate as North Hardy-Strawn Pool (R-11203, 6-14-99)