

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 South First, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Form C-101  
Revised March 17, 1999

Oil Conservation Division  
2040 South Pacheco  
Santa Fe, NM 87505

Submit to appropriate District Office  
State Lease - 6 Copies  
Fee Lease - 5 Copies

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

<sup>1</sup> Operator Name and Address Conoco Inc., 10 Desta Drive, Suite 649W, Midland, TX 79705		<sup>2</sup> OGRID Number 005073
		<sup>3</sup> API Number 30-025-34929
<sup>4</sup> Property Code 25333	<sup>5</sup> Property Name State B-19	<sup>6</sup> Well No. 4

<sup>7</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	19	18S	37E		985	North	660	East	Lea

<sup>8</sup> Proposed 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

<sup>9</sup> Proposed Pool 1

Abo Wildcat

Goodwin, ABO

<sup>10</sup> Proposed Pool 2

<sup>11</sup> Work Type Code N	<sup>12</sup> Well Type Code O	<sup>13</sup> Cable/Rotary R	<sup>14</sup> Lease Type Code S	<sup>15</sup> Ground Level Elevation 3741'
<sup>16</sup> Multiple No	<sup>17</sup> Proposed Depth 8250'	<sup>18</sup> Formation Abo	<sup>19</sup> Contractor	<sup>20</sup> Spud Date 3/1/00

<sup>21</sup> Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12-1/4"	M-50, 8-5/8"	23#	1650'	795	Surface
7-7/8"	J-55, 5-1/2"	17#	7950'	1310	Surface

22 Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

- Well Location and Acreage Dedication Plat (C-102)
- Proposed Well Plan Outline
- Cementing Program
- BOP/Choke Diagram

Permit Expires 1 Year From Approval  
Deno. for Drilling Underway

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief.		OIL CONSERVATION DIVISION	
Signature: <i>Ann Johnson</i>		Approved by: ORIGINAL SIGNED BY CHRIS WILLIAMS DISTRICT I SUPERVISOR	
Printed name: Ann Johnson		Title:	
Title: Sr. Property Analyst		Approval Date: FEB 14 2000	Expiration Date:
Date: 2/9/00	Phone: 915-686-5515	Conditions of Approval:	
		Attached <input type="checkbox"/>	

**DISTRICT II**  
**511 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 Ed., Artes, NM 87410

# OIL CONSERVATION DIVISION

**DISTRICT IV**  
**2040 South Pacheco, Santa Fe, NM 87505**

2040 South Pacheco  
Santa Fe, New Mexico 87505

☐ AMENDED REPORT

# WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-34929	Pool Code —	Pool Name Abo Wildcat
Property Code 25333	Property Name STATE "B-19"	Well Number 4
OGRID No. 005073	Operator Name CONOCO INC.	Elevation 3741'

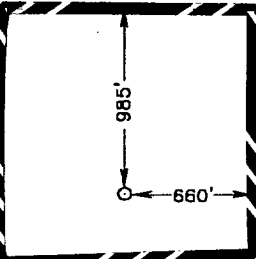
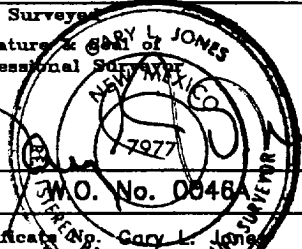
### Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	19	18 S	37 E		985	NORTH	660	EAST	LEA

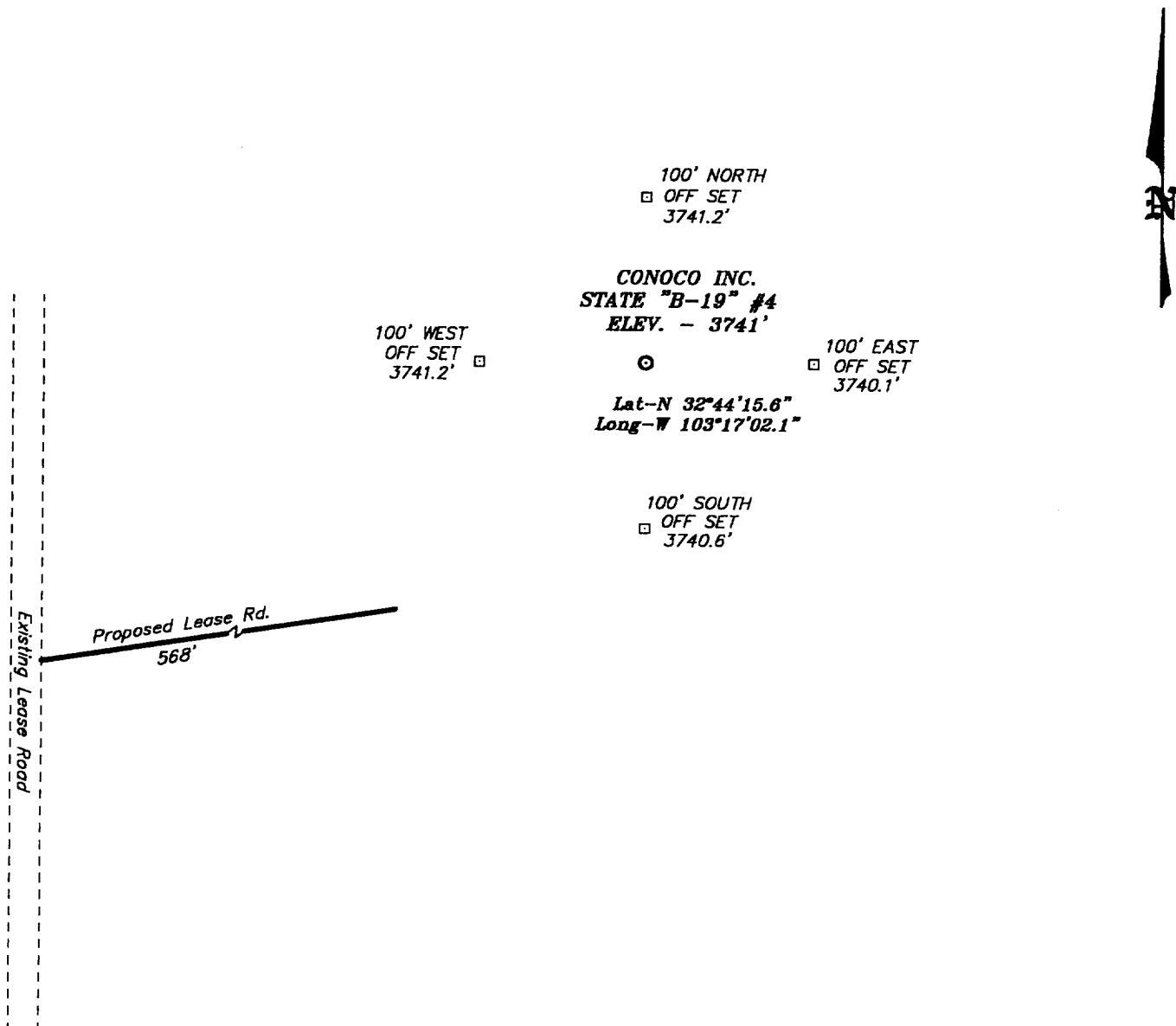
### Bottom Hole Location If Different From Surface

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.						

**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**

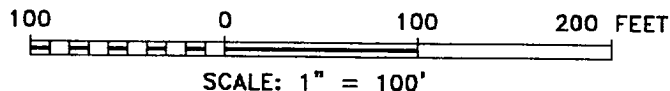
				<p><b>OPERATOR CERTIFICATION</b></p> <p><i>I hereby certify the information contained herein is true and complete to the best of my knowledge and belief.</i></p> <p><u>Jo Ann Johnson</u> Signature</p> <p><u>Jo Ann Johnson</u> Printed Name</p> <p><u>Sr. Property Analyst</u> Title</p> <p><u>February 9, 2000</u> Date</p>
		<p>LAT - N 32°44'15.8"</p> <p>LONG - W 103°17'02.1"</p>		<p><b>SURVEYOR CERTIFICATION</b></p> <p><i>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.</i></p> <p><b>January 28, 2000</b></p> <p>Date Surveyed</p> <p><u>GARY L. JONES</u> Signature of Professional Surveyor</p> <p></p> <p>Certificate No. <u>00468</u></p> <p><u>GARY L. JONES</u> Professional Surveyor</p> <p>7977</p> <p><b>BASIN SURVEYS</b></p>

SECTION 19, TOWNSHIP 18 SOUTH, RANGE 37 EAST, N.M.P.M.,  
LEA COUNTY, NEW MEXICO.



DIRECTIONS TO WELL LOCATION:

FROM JUNCTION US 62/180 AND CO. RD. 41, GO NORTH 1.5 MILE THROUGH GATE; THENCE EAST 3900 FEET; THENCE NORTH 1.25 MILE TO A PROPOSED LEASE ROAD WHICH LIES 568 FEET FROM THE PROPOSED WELL LOCATION.



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

W.O. Number: 0046 Drawn By: K. GOAD

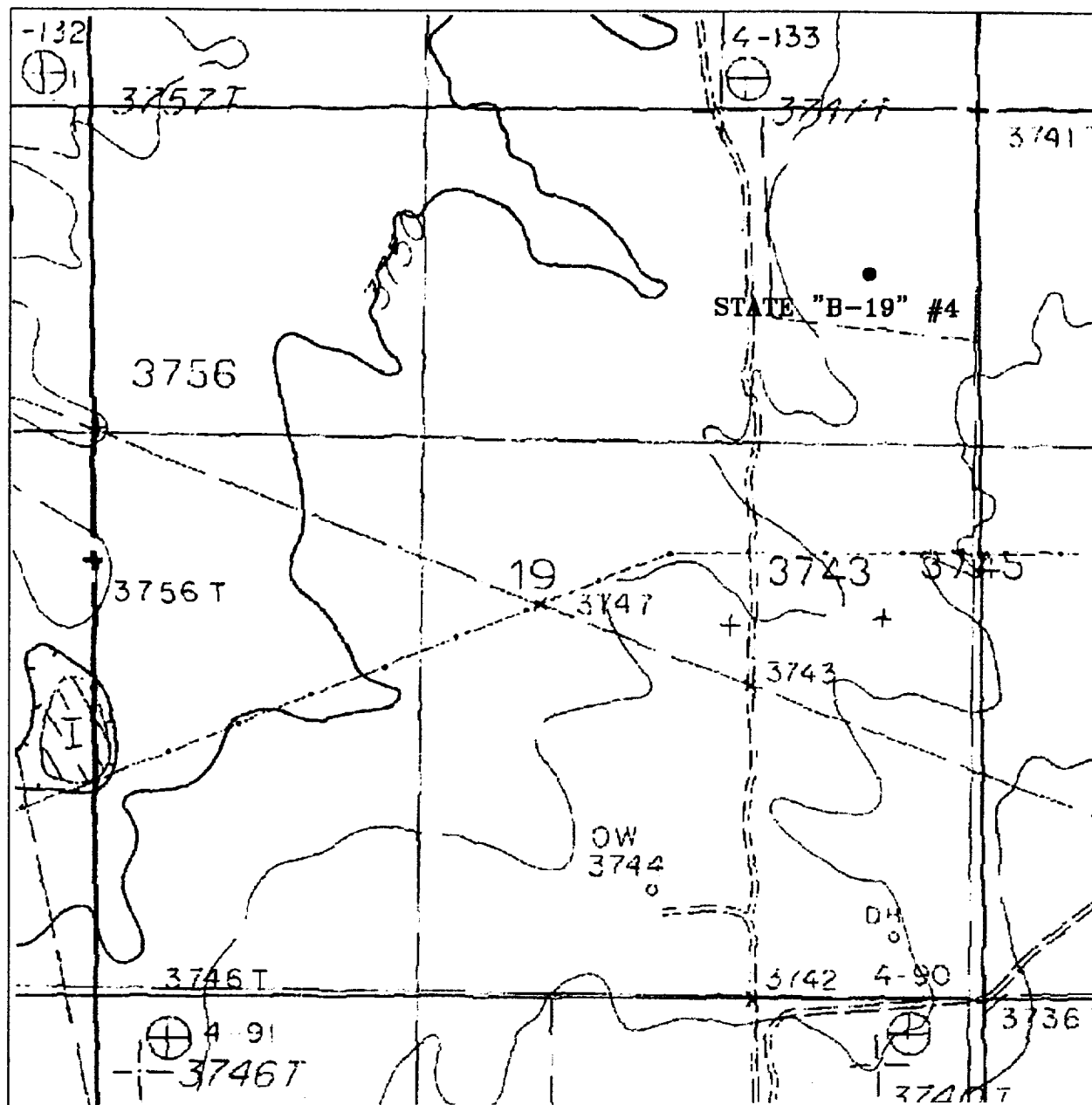
Date: 01-31-2000 Disk: KJG #122 - 0046A.DWG

**Conoco Inc.**

REF: STATE "B-19" No. 4 / Well Pad Topo

THE STATE "B-19" No. 4 LOCATED 985' FROM THE NORTH LINE AND 660' FROM THE EAST LINE OF SECTION 19, TOWNSHIP 18 SOUTH, RANGE 37 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.

Survey Date: 01-28-2000 Sheet 1 of 1 Sheets



# STATE "B-19" #4

Located at 985' FNL and 660' FEL  
 Section 19, Township 18 South, Range 37 East,  
 N.M.P.M., Lea County, New Mexico.

**basin**  
**surveys**

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: 0046AA - KJG #122

Survey Date: 01-28-2000

Scale: 1" = 1000'

Date: 01-31-2000

CONOCO INC.

# PROPOSED WELL PLAN OUTLINE

WELL NAME  
LOCATION

State 8-19 No. 4  
660' FEL & 985' FNL Sec 19 -T18S-R37E

Ground Level : 3,743'  
Kelly Bushing:

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 @ 1,644'				8-5/8", 23#, M-50 ST&C @ 0'-1,650'				3
2000		Washouts in Salt Section		7-7/8"	Circulate Cement		Less than 8.4	10 Brine	
	Base Salt @ 2,705' Yates @ 2,859'		H2S Monitor on @ 2,700' Mud Loggers F/ 2,800' - TD						
3000	7 Rivers @ 3,168'								
	Queen @ 3,790'								
4000	Grayburg @ 4,189'								7
	San Andres @ 4,511'	Lost Returns in San Andres							
5000									
6000	Glorietta @ 5,965'	Possible differential sticking thru Glorietta & Paddock							
	Blaine Mkr @ 6,344'								
7000	Tubb @ 7,274' Drinkard @ 7,274'								
	Abo @ 7,452'		First Log Run: GR-CAL-DLL-MLL-Sonic FDC-CNL-PE : TD to 2,800' Pull GR-CNL-Cal to Surf						
8000	TD @ 7,950'		Second Log Run: FMI imaging log		5-1/2", 17.0#, J-55 LT&C f/0'-7,950' Circulate Cement			10 ppg Starch Gel	20

Note:

DATE

02-Feb-00

Bruce Wiley, Geologist

APPROVED

Yong Cho, Drilling Engineer

Jim Hubbard, Reservoir Engineer



Proposal No: 180253009A

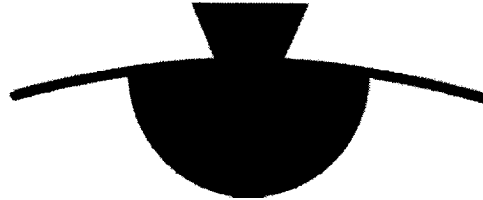
**Conoco**  
**State B-19 No. 4**

Sec. 19-T18S-R37E  
Lea County, New Mexico  
January 25, 2000

**Well Recommendation**

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

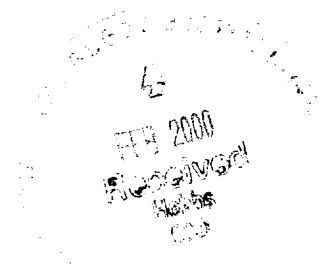
**Prepared by:**  
Rocky Chambers  
Region Engineer  
Bus Phone: 915/683-2781  
Mobile: 915/557-1239  
Pager: 915/498-1605



**P O W E R V I S I O N<sup>TM</sup>**

**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:** State B-19 No. 4  
**Job Description:** 8 5/8" Surface Casing  
**Date:** January 25, 2000



**Proposal No:** 180253009A

## **JOB AT A GLANCE**

Depth (TVD)	1,650 ft
Depth (MD)	1,650 ft
Hole Size	12.25 in
Casing Size/Weight :	8 5/8 in, 24 lbs/ft
Pump Via	Casing 8 5/8" O.D. (8.097" I.D) 24 #
Total Mix Water Required	7,210 gals
Pre-flush	
Mud Clean I	1,500 gals
Density	8.4 ppg
Lead Slurry	
LEAD SLURRY	581 sacks
Density	12.7 ppg
Yield	1.88 cf/sack
Tail Slurry	
TAIL SLURRY	214 sacks
Density	14.8 ppg
Yield	1.34 cf/sack
Displacement	
Water	103 bbls
Density	8.4 ppg



**Operator Name:** Conoco  
**Well Name:** State B-19 No. 4  
**Job Description:** 8 5/8" Surface Casing  
**Date:** January 25, 2000



**Proposal No:** 180253009A

## WELL DATA

### ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
12.250 HOLE	1,650	1,650

### SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
8.625	8.097	24	1,650	1,650

Float Collar set @ 1,610 ft  
 Mud Density 8.40 ppg  
 Est. Static Temp. 90 ° F  
 Est. Circ. Temp. 85 ° F

### VOLUME CALCULATIONS

1,320 ft x 0.4127 cf/ft with 100 % excess = 1089.8 cf  
 330 ft x 0.4127 cf/ft with 101 % excess = 273.5 cf  
 40 ft x 0.3576 cf/ft with 0 % excess = 14.3 cf (inside pipe)  
**TOTAL SLURRY VOLUME = 1377.6 cf**  
 = 246 bbls

RECEIVED  
FEB 2000  
HARRIS  
65

**Operator Name:** Conoco  
**Well Name:** State B-19 No. 4  
**Job Description:** 8 5/8" Surface Casing  
**Date:** January 25, 2000



**Proposal No:** 180253009A

### FLUID SPECIFICATIONS

Pre-flush				1,500.0 gals Mud Clean I @ 8.4 ppg
<u>FLUID</u>	<u>VOLUME CU-FT</u>	<u>VOLUME FACTOR</u>	<u>AMOUNT AND TYPE OF CEMENT</u>	
Lead Slurry	1090	/ 1.88	= 581 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	288	/ 1.34	= 214 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.005 gps FP-6L + 56.3% Fresh Water	
Displacement				102.5 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:** State B-19 No. 4  
**Job Description:** 5-1/2" Production Casing  
**Date:** January 25, 2000



**Proposal No:** 180253009A

### **JOB AT A GLANCE**

Depth (TVD)	7,950 ft
Depth (MD)	7,950 ft
Hole Size	7.875 in
Casing Size/Weight :	5 1/2 in, 17 lbs/ft
Pump Via	Casing 5 1/2" O.D. (4.892" I.D) 17 #
Total Mix Water Required	11,604 gals
Pre-flush	
Mud Clean I	1,500 gals
Density	8.4 ppg
Lead Slurry	
LEAD SLURRY	912 sacks
Density	12.7 ppg
Yield	1.85 cf/sack
Tail Slurry	
TAIL SLURRY	398 sacks
Density	14.8 ppg
Yield	1.34 cf/sack
Displacement	
Water	184 bbls
Density	8.4 ppg

**Operator Name:** Conoco  
**Well Name:** State B-19 No. 4  
**Job Description:** 5-1/2" Production Casing  
**Date:** January 25, 2000



**Proposal No:** 180253009A

## WELL DATA

### ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
8.097 CASING	1,650	1,650
7.875 HOLE	7,950	7,950

### SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
5.500	4.892	17	7,950	7,950

Float Collar set @ 7,910 ft  
 Mud Density 10.00 ppg  
 Mud Type Water Based  
 Est. Static Temp. 128 ° F  
 Est. Circ. Temp. 121 ° F

### VOLUME CALCULATIONS

1,650 ft	x	0.1926 cf/ft	with	0 % excess	=	317.8 cf
3,950 ft	x	0.1733 cf/ft	with	100 % excess	=	1368.7 cf
2,350 ft	x	0.1733 cf/ft	with	30 % excess	=	530.0 cf
40 ft	x	0.1305 cf/ft	with	0 % excess	=	5.2 cf (inside pipe)
<b>TOTAL SLURRY VOLUME</b>					=	2221.7 cf
					=	396 bbls

**Operator Name:** Conoco  
**Well Name:** State B-19 No. 4  
**Job Description:** 5-1/2" Production Casing  
**Date:** January 25, 2000



**Proposal No:** 180253009A

## FLUID SPECIFICATIONS

Pre-flush

1,500.0 gals Mud Clean I @ 8.4 ppg

<u>FLUID</u>	<u>VOLUME CU-FT</u>	<u>VOLUME FACTOR</u>	<u>AMOUNT AND TYPE OF CEMENT</u>
Lead Slurry	1686	/ 1.85	= 912 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	535	/ 1.34	= 398 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			183.9 bbls Water + 55.7% Fresh Water @ 8.4 ppg

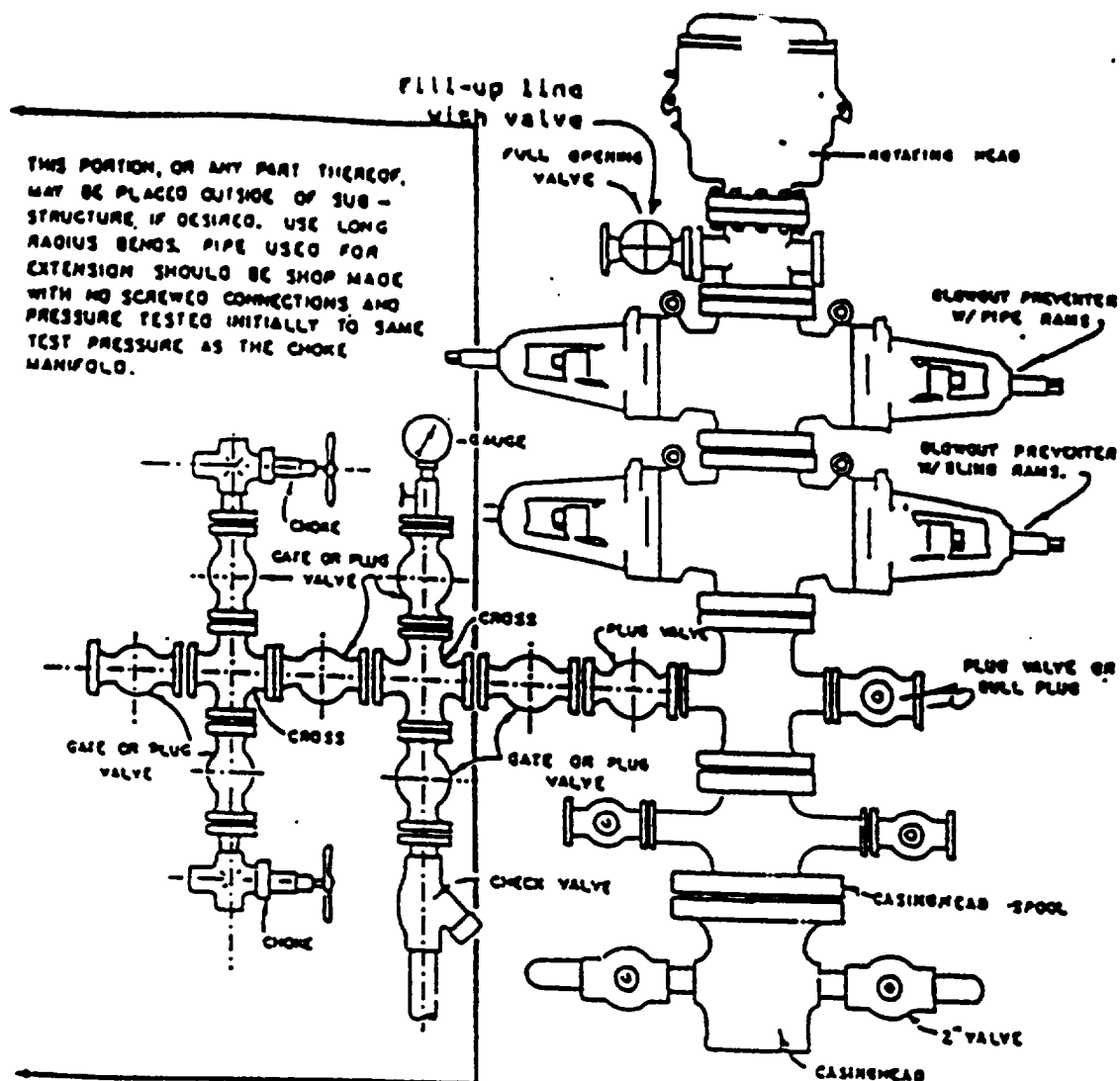
## **CEMENT PROPERTIES**

	<b>SLURRY NO. 1</b>	<b>SLURRY NO. 2</b>
Slurry Weight (ppg)	12.70	14.80
Slurry Yield (cf/sack)	1.85	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





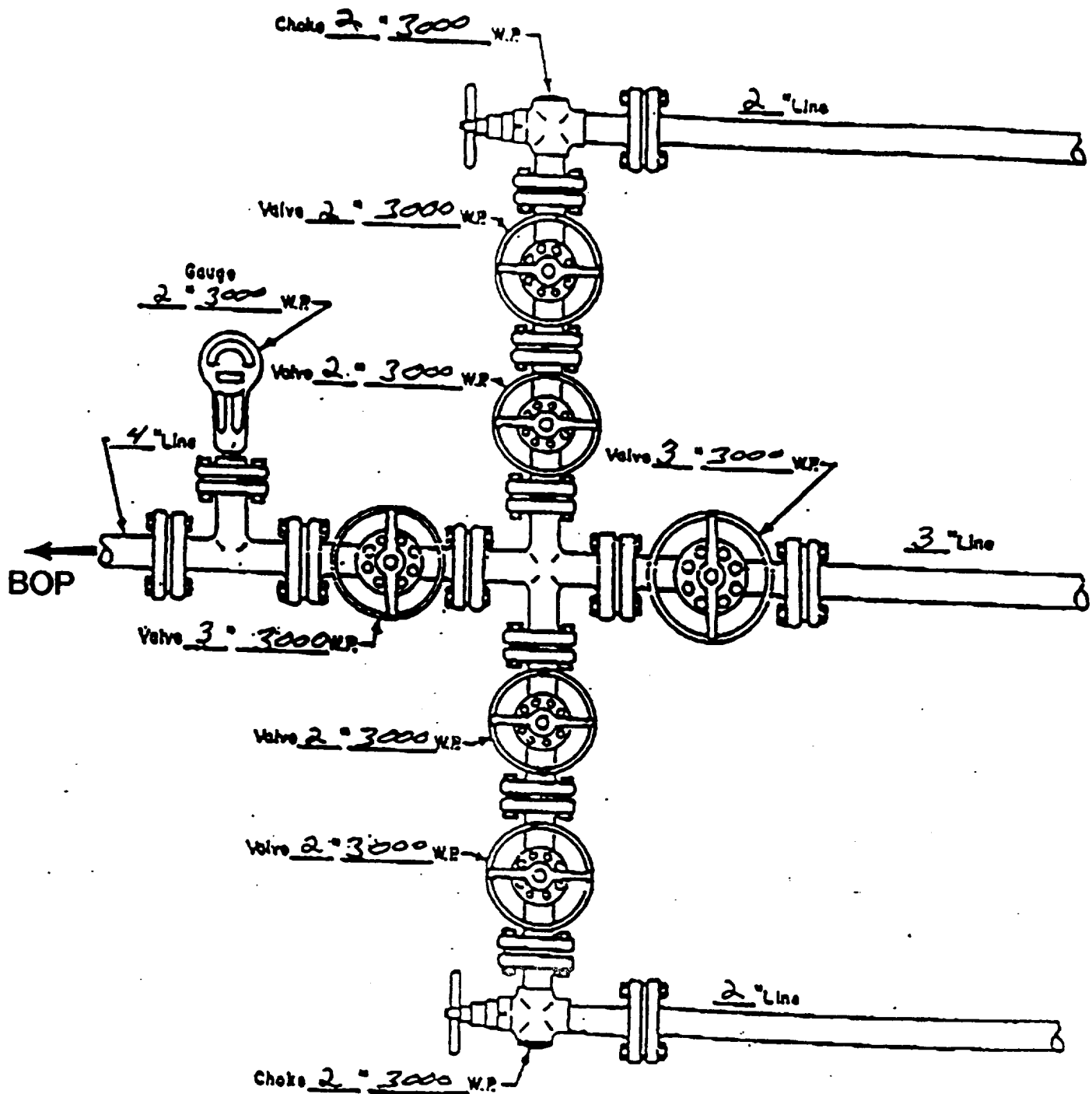
### BLOWOUT PREVENTER HOOKUP

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 DIA GRAM



MANIFOLD  
3000 # W.P.

- ☒ Manual
- ☐ Hydraulic