

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0136  
Expires November 30, 2000

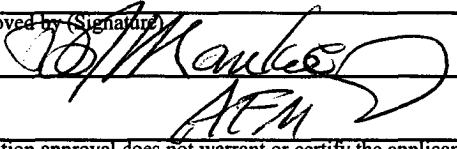
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM-011360-A
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator CONOCOPHILLIPS COMPANY		7. If Unit or CA Agreement, Name and No.
Contact: VICKI WESTBY E-Mail: Vicki.R.Westby@conocophillips.com		8. Lease Name and Well No. SAN JUAN 29-5 UNIT 66G
3a. Address 4001 PENBROOK, SUITE 346 ODESSA, TX 79762	3b. Phone No. (include area code) Ph: 915.368.1352	9. API Well No. 30-039-29211
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SESW 770FSL 2630FWL At proposed prod. zone		10. Field and Pool, or Exploratory BLANCO MESAVERDE BASIN DAKO
14. Distance in miles and direction from nearest town or post office*		11. Sec., T., R., M., or Blk. and Survey or Area Sec 33 T29N R5W Mer NMP
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)		12. County or Parish RIO ARRIBA
16. No. of Acres in Lease		13. State NM
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.		17. Spacing Unit dedicated to this well W/2 320
19. Proposed Depth 7993 MD		20. BLM/BIA Bond No. on file
21. Elevations (Show whether DF, KB, RT, GL, etc.) 6580 GL		23. Estimated duration
22. Approximate date work will start		

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- |                                                                                                                                                 |                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 1. Well plat certified by a registered surveyor.                                                                                                | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan.                                                                                                                             | 5. Operator certification                                                                       |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information as the BLM may require by the authorized officer.       |
- SEE ATTACHED FOR CONDITIONS OF APPROVAL**

25. Signature (Electronic Submission)	Name (Printed/Typed) VICKI WESTBY	Date 08/19/2004
Title AGENT		
Approved by (Signature) 	Name (Printed/Typed) AFM	Date 1-27-05
Title FFO		

Application approval does not warrant or certify 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, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Additional Operator Remarks (see next page)

Electronic Submission #34861 verified by the BLM Well Information System  
For CONOCOPHILLIPS COMPANY, sent to the Farmington

NMOCD

\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

District I  
PO Box 1980, Hobbs, NM 88241-1980

District II  
PO Drawer 00, Artesia, NM 88211-0719

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

District IV  
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

Form C-102  
Revised February 21, 1994  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number <b>30-039-29211</b>		*Pool Code 72319 \ 71599	*Pool Name BLANCO MESAVERDE \ BASIN DAKOTA
*Property Code 31325	*Property Name SAN JUAN 29-5 UNIT		*Well Number 66G
*GRID No. 217817	*Operator Name CONOCOPHILLIPS COMPANY		*Elevation 6580'

<sup>10</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
N	33	29N	5W		770	SOUTH	2630	WEST	RIO ARriba

<sup>11</sup> 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>12</sup> Dedicated Acres 320.0 Acres - W/2 (MV) 320.0 Acres - W/2 (DK)					<sup>13</sup> Joint or Infill		<sup>14</sup> Consolidation Code		<sup>15</sup> 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

<div><p>16</p><p>5287.92'</p><p>LEASE NM-011350-A</p><p>33</p><p>5280.00'</p><p>2630'</p><p>770'</p><p>5280.00'</p><p>LAT: 36°40.6175' N LONG: 107°21.7327' W DATUM: NAD27</p></div>	<div><p>17 OPERATOR CERTIFICATION</p><p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p><p><i>Vicki Westby</i> Signature Vicki R. Westby Printed Name Sr. Analyst Title <i>August 9, 2004</i> Date</p></div>
	<div><p>18 SURVEYOR CERTIFICATION</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>Date of Survey: MAY 23, 2004</p><p>Signature and Seal of Professional Surveyor</p><div><p>JASON C. EDWARDS NEW MEXICO 15269 REGISTERED PROFESSIONAL SURVEYOR</p></div><p><i>JASON C. EDWARDS</i> Certificate Number 15269</p></div>

Submit 3 Copies To Appropriate District Office  
District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Ave., Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-103  
May 27, 2004

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b> (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO.
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other <input type="checkbox"/>		5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>
2. Name of Operator ConocoPhillips Company		6. State Oil & Gas Lease No.
3. Address of Operator 4001 Penbrook, Odessa, TX 79762		7. Lease Name or Unit Agreement Name <u>San Juan 29-5</u>
4. Well Location Unit Letter <u>N</u> : <u>770</u> feet from the <u>South</u> line and <u>2630</u> feet from the <u>West</u> line Section <u>33</u> Township <u>29N</u> Range <u>5W</u> NMPM <u>Rio Arriba</u> County		8. Well Number <u>166G</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) <u>6580</u> GL		9. OGRID Number <u>217817</u>
Pit or Below-grade Tank Application <input type="checkbox"/> or Closure <input type="checkbox"/>		10. Pool name or Wildcat <u>Blanco Mesaverde / Basin Dakota</u>
Pit type <u>Drill</u> Depth to Groundwater <u>50-100'</u> Distance from nearest fresh water well <u>&gt;1000'</u> Distance from nearest surface water <u>200-1000'</u>		
Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____		

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

<b>NOTICE OF INTENTION TO:</b>		<b>SUBSEQUENT REPORT OF:</b>	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
OTHER: <u>Drill Pit Notification</u> <input checked="" type="checkbox"/>		OTHER: <input type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

ConocoPhillips Company's Generic Pit Plan is on file at NMOCD in Aztec, NM. See the attached diagram that details the location of the pit in reference to the proposed wellhead. The drill pit will be lined. The drill pit will be closed after the well has been completed. The solids left after the water has been disposed of will be sampled and NMOCD approval will be obtained prior to closure of this pit.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Vicki Westby (sj) TITLE Sr. Analyst DATE 8/19/04

Type or print name Vicki Westby E-mail address: Vicki.R.Westby@ConocoPhillips.com Telephone No. 432-368-1352

For State Use Only

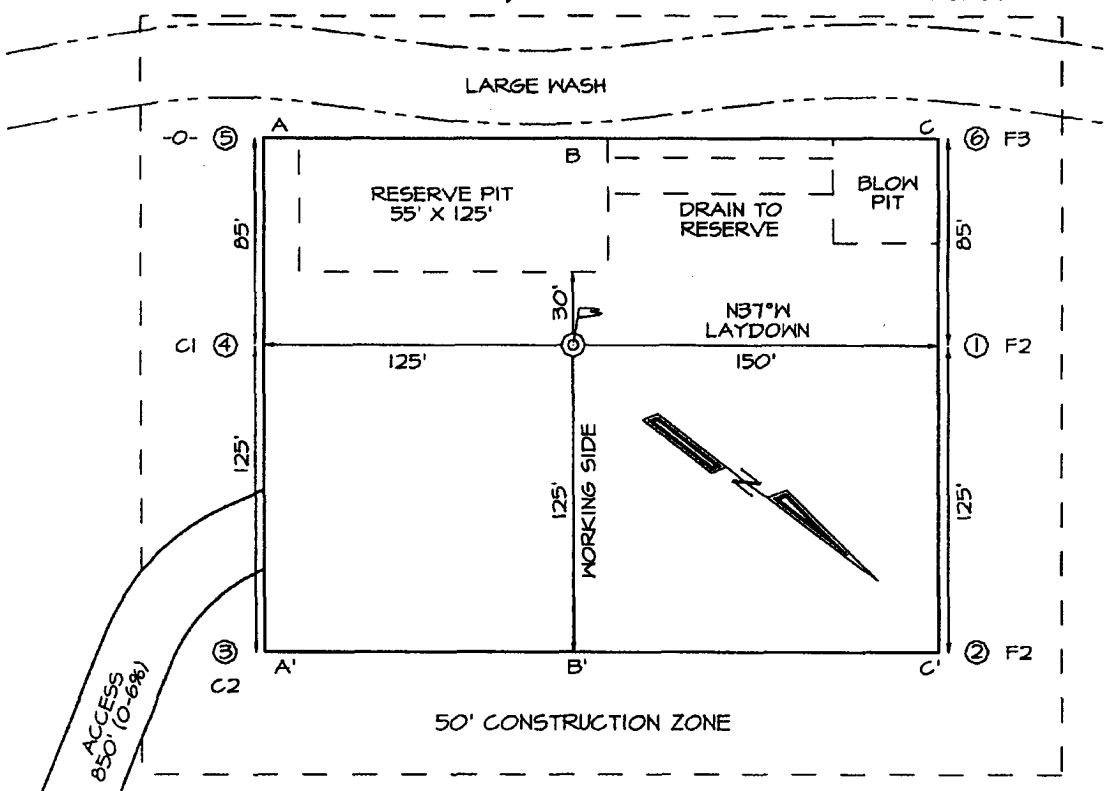
APPROVED BY: [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. 13 DATE JAN 31 2005  
Conditions of Approval (if any):

**CONOCOPHILLIPS COMPANY SAN JUAN 29-5 UNIT #66G**  
**770' FSL & 2630' FWL, SECTION 33, T29N, R5W, NMPM**  
**RIO ARriba COUNTY, NEW MEXICO ELEVATION: 6580'**

**LATITUDE: 36.67696° N**  
**LONGITUDE: 107.36221° W**  
 DATUM: NAD1927

PLAT NOTE:

\*SURFACE OWNER\*  
 Bureau of Land  
 Management



A-A'						
6590'						
6580'						
6570'						

B-B'						
6590'						
6580'						
6570'						

C-C'						
6590'						
6580'						
6570'						

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB NO. 1004-0135  
Expires: November 30, 2000

**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.**

**SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

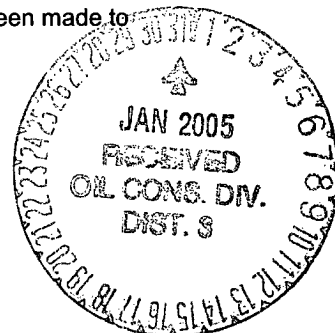
1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. NMNM011350A
2. Name of Operator CONOCOPHILLIPS COMPANY		6. If Indian, Allottee or Tribe Name
3a. Address PO BOX 2197 WL3 6054 HOUSTON, TX 77252		7. If Unit or CA/Agreement, Name and/or No. NMNM78415B
3b. Phone No. (include area code) Ph: 915.368.1352		8. Well Name and No. SAN JUAN 29-5 66G
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 33 T29N R5W SESW 770FSL 2630FWL		9. API Well No. 30-039-29211-00-X1
		10. Field and Pool, or Exploratory BASIN DAKOTA BLANCO MESAVERDE
		11. County or Parish, and State RIO ARRIBA COUNTY, NM

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Change to Original A
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	PD

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

ConocoPhillips requests to submit a corrected "project proposal". This revision has been made to correct the casing information for the surface casing for this well.



14. I hereby certify that the foregoing is true and correct. <b>Electronic Submission #35530 verified by the BLM Well Information System</b> <b>For CONOCOPHILLIPS COMPANY, sent to the Farmington</b> <b>Committed to AFMSS for processing by ADRIENNE BRUMLEY on 09/02/2004 (04AXB3317SE)</b>	
Name (Printed/Typed) VICKI WESTBY	Title AGENT
Signature (Electronic Submission)	Date 09/01/2004

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved By <i>[Signature]</i>	Title AFM	Date 1-27-05
Conditions of approval, if any, are attached. Approval of this notice 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.	Office FFO	

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\***

**NMOCD**



San Juan Business Unit

## PROJECT PROPOSAL - New Drill / Sidetrack

SAN JUAN 29-5 66G

Lease:	AFE #:	AFE \$:
Field Name: hPHILLIPS 29-5	Rig:	State: NM County: RIO ARRIBA
Geoscientist: Glaser, Terry J	Phone: (832)486-2332	Prod. Engineer: Moody, Craig E. Phone: 486-2334
Res. Engineer: Johnson, Tom B.	Phone: (832)-486-2347	Proj. Field Lead: Franssen, Eric E. Phone:

### Primary Objective (Zones):

Zone	Zone Name
FRR	BASIN DAKOTA (PRORATED GAS)
RON	BLANCO MESAVERDE (PRORATED GAS)

Location: Surface					Straight Hole	
Latitude: 36.68	Longitude: -107.36	X:	Y:	Section: 33	Range: 5W	
Footage X: 2630 FWL	Footage Y: 770 FSL	Elevation: 6580 (FT)	Township: 29N			

### Tolerance:

Location Type: Year Round	Start Date (Est.):	Completion Date:	Date In Operation:
Formation Data: Assume KB = 6593	Units = FT		

Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks
Surface Casing	213	6380	<input type="checkbox"/>			12 1/4" Hole. 9 5/8", 32.3 ppf, H-40, STC casing. Circulate cement to surface.
NCMT	1273	5320	<input type="checkbox"/>			
OJAM	2793	3800	<input type="checkbox"/>			Possible water flows.
KRLD	2933	3660	<input type="checkbox"/>			
FRLD	3253	3340	<input type="checkbox"/>			Possible gas.
PCCF	3503	3090	<input type="checkbox"/>			
LEWS	3703	2890	<input type="checkbox"/>			
Intermediate Casing	3803	2790	<input type="checkbox"/>			8 3/4" Hole. 7", 20 ppf, J-55, STC Casing. Circulate cement to surface.
CHRA	4503	2090	<input type="checkbox"/>			
CLFH	5313	1280	<input type="checkbox"/>	1300		Gas; possibly wet
MENF	5393	1200	<input type="checkbox"/>			Gas.
PTLK	5693	900	<input type="checkbox"/>			Gas.
MNCS	5943	650	<input type="checkbox"/>			
GLLP	6943	-350	<input type="checkbox"/>			Gas. Possibly wet.
GRHN	7643	-1050	<input type="checkbox"/>			Gas possible, highly fractured
CBBO	7833	-1240	<input type="checkbox"/>			Gas
Total Depth	7993	-1400	<input type="checkbox"/>	3300		6 1/4" Hole. 4 1/2", 11.6 ppf, N-80, LTC casing. Circulate cement a minimum of 100' inside the previous casing string. No open hole logs. Cased hole TDT with GR to surface.

### Reference Wells:

Reference Type	Well Name	Comments
----------------	-----------	----------

### Logging Program:

Intermediate Logs:	<input type="checkbox"/> Log only if show	<input type="checkbox"/> GR/ILD	<input type="checkbox"/> Triple Combo
TD Logs:	<input type="checkbox"/> Triple Combo	<input type="checkbox"/> Dipmeter	<input type="checkbox"/> RFT <input type="checkbox"/> Sonic <input type="checkbox"/> VSP <input checked="" type="checkbox"/> TDT
Additional Information:			

Comments: General/Work Description - Drilling Mud Program:  
Surface: spud mud

Printed on: 9/1/2004 3:26:47 PM

## San Juan 29-5 #66G

### SURFACE CASING :

Drill Bit Diameter	9.625"	
Casing Outside Diameter	9.625"	Casing Inside Diam. 9.000"
Casing Weight	32.3	ppf
Casing Grade	H-40	
Shoe Depth	230'	
Cement Yield	16	cuft/sk
Excess Cement	125	%
Cement Required	18.8	bx

SHOE 230 ', 9.625 ", 32.3 ppf, H-40 STC

### INTERMEDIATE CASING :

Drill Bit Diameter	7"	
Casing Outside Diameter	7"	Casing Inside Diam. 6.456"
Casing Weight	20	ppf
Casing Grade	J-55	
Shoe Depth	3803'	
Lead Cement Yield	150	cuft/sk
Lead Cement Excess	150	%
Tail Cement Length	200'	
Tail Cement Yield	150	cuft/sk
Tail Cement Excess	150	%
Lead Cement Required	10.5	bx
Tail Cement Required	22.5	bx

SHOE 3803 ', 7 ", 20 ppf, J-55 STC

### PRODUCTION CASING :

Drill Bit Diameter	4.5"	
Casing Outside Diameter	4.5"	Casing Inside Diam. 4.000"
Casing Weight	11.6	ppf
Casing Grade	N-80	
Top of Cement	3803'	200' inside intermediate casing
Shoe Depth	7993'	
Cement Yield	50	cuft/sk
Cement Excess	50	%
Cement Required	46.4	bx

SHOE 7993 ', 4.5 ", 11.6 ppf, N-80 STC

San Juan 29-5 #66G			
	Surf. Csg.	Int. Csg.	Prod. Csg.
OD	9.625	7	4.5
ID	9.001	6.456	4.000
Depth	230	3803	7993
Hole Diam.	12.25	8.75	6.25
% Excess Lead		150	
% Excess Tail	125	150	50
Lead Yield		272	
Tail Yield	116	121	124
Lead Tail Slurry	230	760.6	4390
Top of Tail Slurry	0	3042.4	3603
Top of Lead Slurry	N/A	0	N/A
Mud Wt (ppg)	8.9	9.0	air drill
Mud Type	WBM	WBM	air drill

Surface Casing						
	Ft	Cap	XS Factor	bbls	cuft	sx
Open Hole Annulus	230	0.055804	2.25	27.2	153.0	131.9
Shoe Track Volume	42	0.078735	1	3.3	18.6	16.0
Total				30.6	171.6	147.9

Intermediate Casing						
	Ft	Cap	XS Factor	bbls	cuft	sx
Lead Open Hole Annulus	2812.4	0.026775	2.5	188.3	1057.0	388.6
Lead Cased Hole Annulus	230	0.031104	1	7.2	40.2	14.8
Lead Total				195.4	1097.1	403.4
Tail Open Hole Annulus	760.6	0.026775	2.5	50.9	285.9	218.2
Tail Shoe Track Volume	42	0.04049	1	1.7	9.5	7.3
Tail Total				52.6	295.4	225.5

Production Casing						
	Ft	Cap	XS Factor	bbls	cuft	sx
Open Hole Annulus	4190	0.018275	1.5	114.9	644.9	447.8
Cased Hole Annulus	200	0.020818	1	4.2	23.4	16.2
Total				119.0	668.3	464.0



San Juan 29-5 #66G		
9 5/8 Surface Casing		
Cement Recipe	Class G Standard Cement	
	+ 2% S001 Calcium Chloride	
	+ 0.25 lb/sx D029 Cellophane Flakes	
Cement Volume	3.48	sc
Cement Yield	1.16	cuff/sx
Cement Volume	3.48	sc
Cement Density	15.8	ppg
Water Required	4.983	gal/sx
Compressive Strength		
Sample cured at 60 deg F for 8 hrs		
12 hrs	1174	psi
36 hrs	2763	psi

San Juan 29-5 #66G

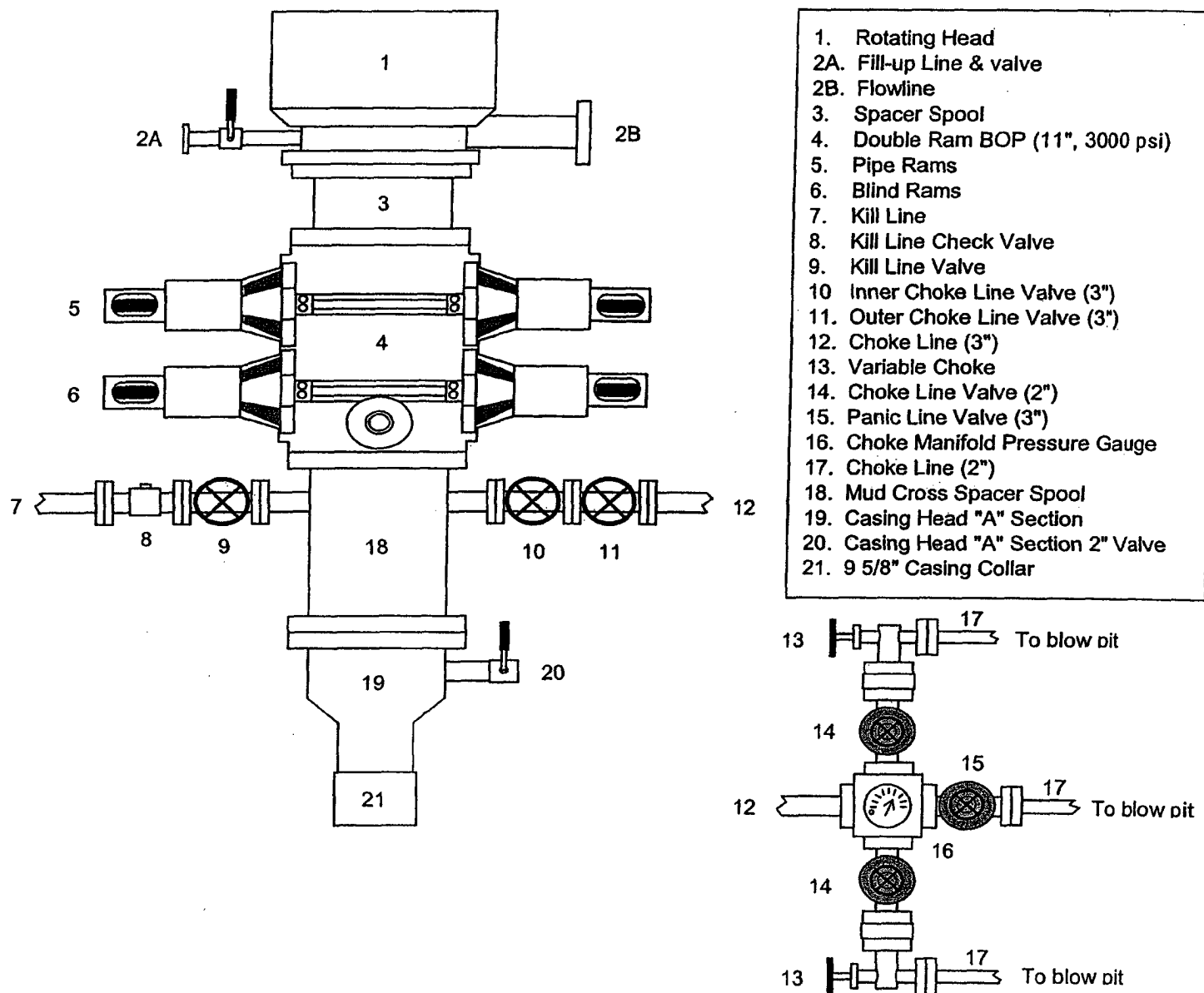
7" Intermediate Casing		
Lead Slurry		
Cement Recipe	Class G Standard Cement	
	+0.25 lb/sx D029 Cellophane Flakes	
	+ 3% D079 Extender	
	+ 0.20% D046 Antifoam	
	+ 10 lb/sx Pheno Seal	
Cement Required	303	sx
Cement Yield	2.72	cuft/sx
Slurry Volume	1007	cuft
	195.4	bbls
Cement Density	11.7	ppg
Water Required	15.74	gal/sx
Compressive Strength		
Sample cured at 140 deg F for 24 hrs		
2 hr 37 min	50	psi
39 hr 40 min	500	psi

7" Intermediate Casing		
Tail Slurry		
Cement Slurry	50 / 50 POZ Standard Cement	
	+0.25 lb/sx D029 Cellophane Flakes	
	+ 2% D020 Bentonite	
	+ 1.5 lb/sx D024 Gilsonite Extender	
	+ 2% S001 Calcium Chloride	
	+ 0.10% D046 Antifoam	
	+ 6 lb/sx Pheno Seal	
Cement Required	225	sx
Cement Yield	1.31	cuft/sx
Slurry Volume	295.4	cuft
	52.6	bbls
Cement Density	13.5	ppg
Water Required	5.317	gal/sx
Compressive Strength		
Sample cured at 140 deg F for 24 hrs		
24 hr	908	psi
48 hr	1950	psi

San Juan 29.5 #66C		
4 1/2" Production Casing		
Cement Recipe	50 / 50 POZ Glass G Standard Cement	
	+0.25 lb/sx D029 Cellophane Flakes	
	+ 3% D020 Bentonite	
	+ 1.0 lb/sx D024 Gilsonite Extender	
	+ 0.25% D167 Fluid Loss	
	+ 0.15% D065 Dispersant	
	+ 0.1% D800 Retarder	
	+ 0.1% D046 Antifoamer	
	+ 3.5 lb/sx PhenoSeal	
Cement Quantity	462	lb/sx
Cement Yield	1.44	cuft/sx
Cement Volume	368	cuft
Cement Density	13	ppg
Water Required	6.43	gal/sx
Compressive Strength		
Sample cured at 200 deg F for 24 hrs		
6 hr 35 min	500	psi
24 hr	2373	psi

# BLOWOUT PREVENTER ARRANGEMENT & PROGRAM

## For Drilling to Intermediate Casing Point & Setting 7" Intermediate Casing



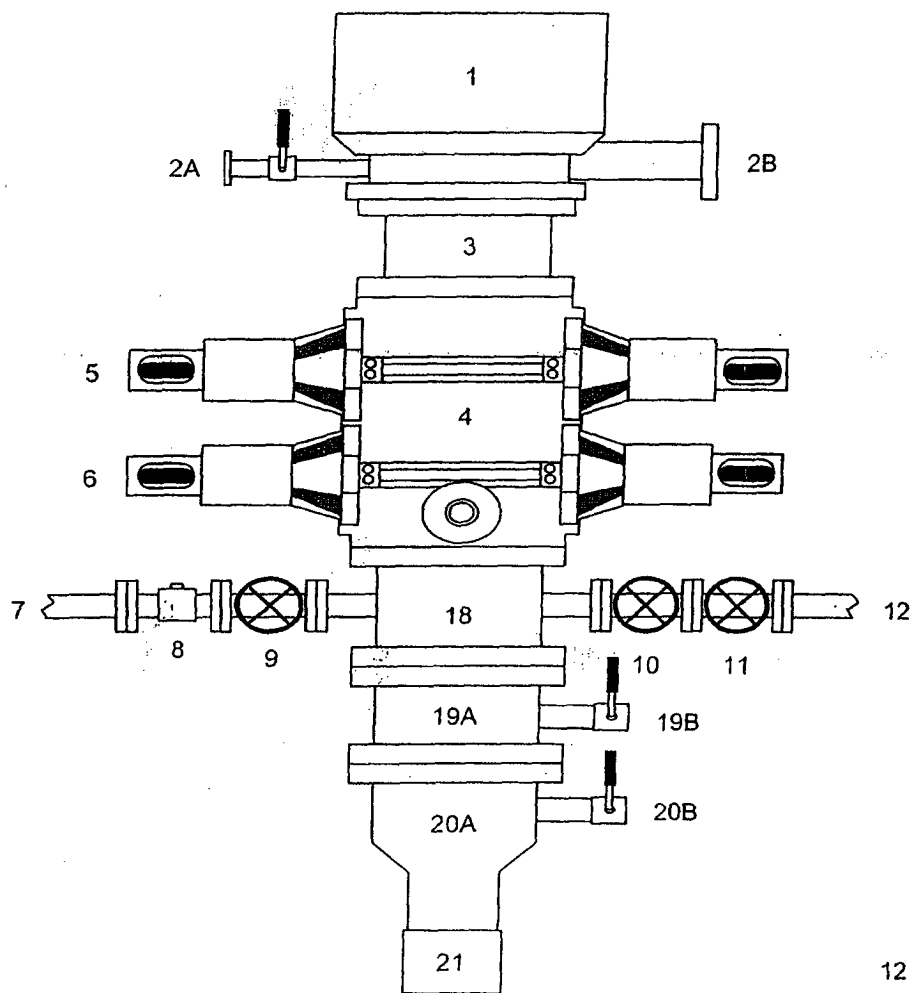
A 12-1/4" hole will be drilled to approximately 220' and the 9-5/8" surface casing will be run and cemented. The Casing Head "A" Section will be screwed onto the 9-5/8" surface casing stub. The BOP will be installed on the Casing Head "A" Section. A test plug will be set in the wellhead and the pipe rams and choke manifold will be tested to 200 psi to 300 psi (low pressure test) for 2-3 minutes and to 1000 psi (high pressure test) for 10 minutes. Then the test plug will be removed, and the 9-5/8" casing will be pressure tested against closed blind rams to 200 psi to 300 psi for 2-3 minutes and to 1000 psi for 30 minutes (this value is one 44% of the minimum internal yield pressure of the 9-5/8" casing). (Note: per regulatory requirements we will wait on cement at least 8 hrs after placement before testing the 9-5/8" surface casing). Then an 8-3/4" hole will be drilled to intermediate casing point and 7" intermediate casing will be run and cemented.

In addition to the equipment in the above diagram the following equipment will comprise the BOP system:

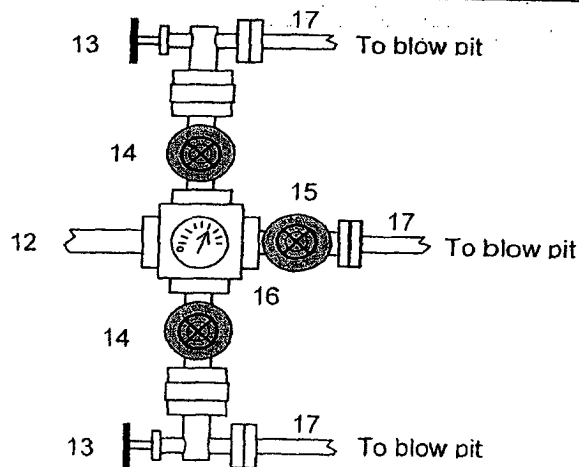
1. Upper Kelly cock Valve with handle
2. Stab-in TIW valve for all drillstrings in use

# BLOWOUT PREVENTER ARRANGEMENT & PROGRAM

For Drilling to TD and Setting 4.5 inch Casing



1. Rotating Head
- 2A. Fill-up Line & valve
- 2B. Bleeie Line (for Air Drilling)
3. Spacer Spool
4. Double Ram BOP (11", 3000 psi)
5. Pipe Rams
6. Blind Rams
7. Kill Line
8. Kill Line Check Valve
9. Kill Line Valve
10. Inner Choke Line Valve (3")
11. Outer Choke Line Valve (3")
12. Choke Line (3")
13. Variable Choke
14. Choke Line Valve (2")
15. Panic Line Valve (3")
16. Choke Manifold Pressure Gauge
17. Choke Line (2")
18. Mud Cross Spacer Spool
- 19A Csg Spool "B" Section (11", 3M)
- 19B "B" Section Csg Valve (2", 3M)
- 20A Csg Head "A" Section (11", 3M)
- 20B "A" Section Csg Valve (2", 3M)
21. 9 5/8" Casing Collar



After the 7" intermediate casing has been run and cemented, the Casing Spool ("B" Section) will be installed on the wellhead ("A" Section) and the BOP will be installed on the Casing Spool. A test plug will be set in the wellhead, and the pipe rams, blind rams, and choke manifold will be tested to 200 psi to 300 psi (low pressure test) for 2-3 minutes and to 3000 psi (high pressure test) for 10 minutes. Then the test plug will be removed and the 7" casing will be pressure tested against closed blind rams to 200 psi to 300 psi for 2-3 minutes and to 1800 psi for 30 minutes - this test pressure is 48% of the minimum internal yield strength of 3740 psi for the 7", 20#, J-55, STC casing. Then we will air drill the 6-1/4" hole to TD and run and cement the 4-1/2" casing.

In addition to the equipment in the above diagram the following equipment will comprise the BOP system:

1. Upper Kelly cock Valve with handle
2. Stab-in TIW valve for all drillstrings in use