Form 3160-3
(August 1999)

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

5. Lease Serial No.
SF-078543

6. If Indian, Allottee or Tribe Name

1a. Type of Work: ☒ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.

1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☐ Single Zone ☒ Multiple Zone

8. Lease Name and Well No.
SAN JUAN 32-7 UNIT 69M

2. Name of Operator
CONOCOPHILLIPS COMPANY
Contact: VICKI WESTBY
E-Mail: Vicki.R.Westby@conocophillips.com

9. API Well No.
30045 32439

3a. Address
4001 PENBROOK, SUITE 346
ODESSA, TX 79762

3b. Phone No. (include area code)
Ph: 915.368.1352

10. Field and Pool, or Exploratory
BASIN DAKOTA/ BLANCO MESA VEI

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface SENW 1964FNL 2505FWL
At proposed prod. zone

11. Sec., T., R., M., or Blk. and Survey or Area
F Sec 35 T32N R7W Mer NMP

OCT 2004 RECEIVED OIL CONS. DIV. DIST. 3

14. Distance in miles and direction from nearest town or post office*

12. County or Parish
SAN JUAN

13. State
NM

15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)

16. No. of Acres in Lease

17. Spacing Unit dedicated to this well
N/2 320 – DK
W/2 – MV

18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.

19. Proposed Depth
8287 MD

20. BLM/BIA Bond No. on file

21. Elevations (Show whether DF, KB, RT, GL, etc.
6624 GL

22. Approximate date work will start

23. Estimated duration

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.
2. A Drilling Plan.
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).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature
(Electronic Submission)

Name (Printed/Typed)
VICKI WESTBY

Date
07/27/2004

Title
AGENT

Approved by (Signature)

Name (Printed/Typed)

Date
10-14-04

Title
AFM

Office
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 #33638 verified by the BLM Well Information System
For CONOCOPHILLIPS COMPANY, sent to the Farmington

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS".

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

NMOCD

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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 & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised June 10, 2003
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number	² Pool Code	³ Pool Name
	71599/72319	BASIN DAKOTA/BLANCO MESA VERDE (PRORATED GAS)

⁴ Property Code	⁵ Property Name	⁶ Well Number
31329	SAN JUAN 32-7 UNIT	69M
⁷ OGRID No.	⁸ Operator Name	⁹ Elevation
27817	CONOCOPHILLIPS COMPANY	6624

¹⁰ Surface Location

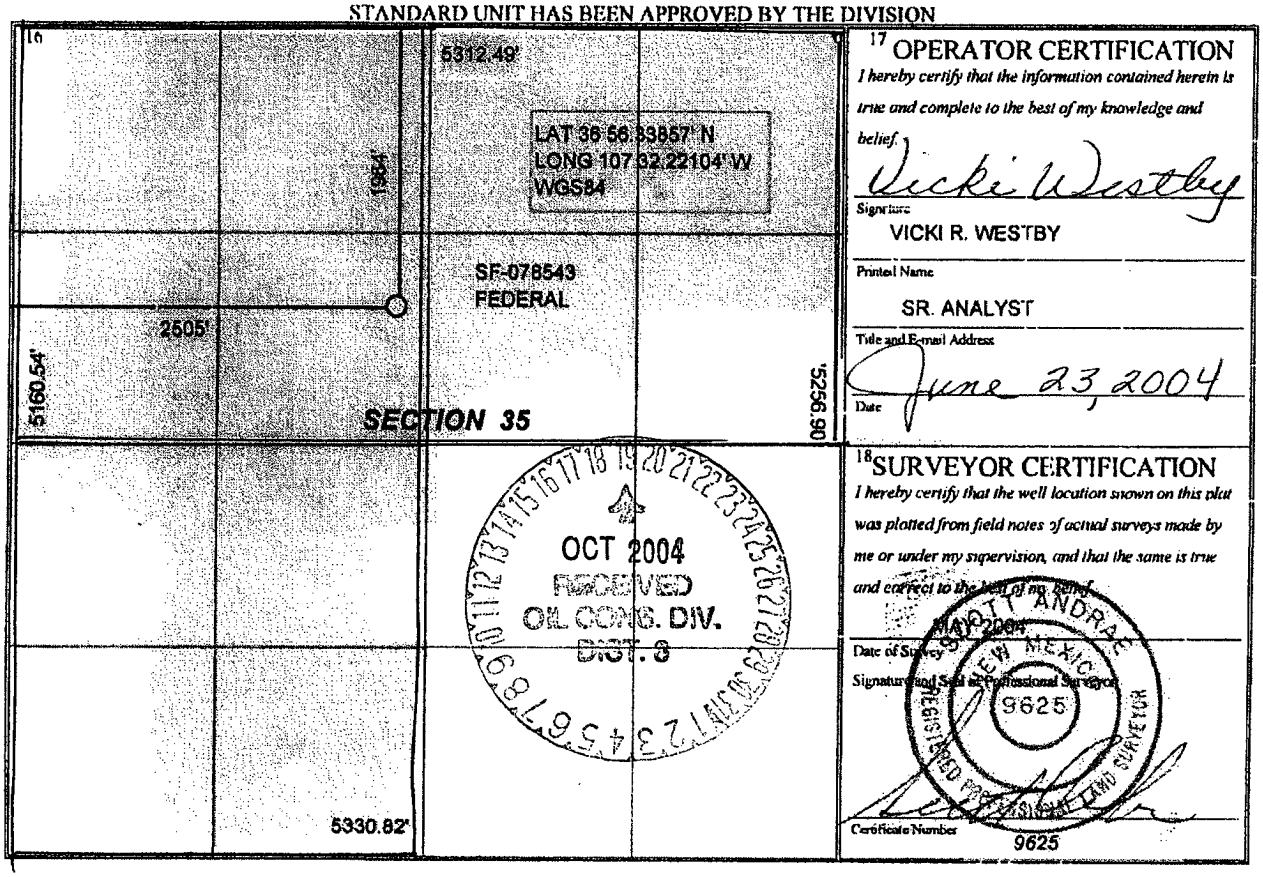
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	35	32N	7W		1964	NORTH	2505	WEST	SAN JUAN

¹¹ 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

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
N/2(320) &W2(320) DK MV			

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



¹⁷ OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature: Vicki Westby

VICKI R. WESTBY

Printed Name

SR. ANALYST

Title and E-mail Address

June 23, 2004

Date

¹⁸ SURVEYOR CERTIFICATION

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.

MAY 2004

Date of Survey

Signature and Seal of Professional Surveyor

Certificate Number 9625

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
March 4, 2004

WELL API NO.

5. Indicate Type of Lease STATE ☐ FEE ☐

6. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS
(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.)

7. Lease Name or Unit Agreement Name: San Juan 32-7

1. Type of Well: Oil Well ☐ Gas Well X☐ Other

8. Well Number: 69M

2. Name of Operator: ConocoPhillips Company

9. OGRID Number: 27817

3. Address of Operator: 4001 Penbrook, Odessa, TX 79762

10. Pool name or Wildcat: Basin Dakota / Blanco Mesa Verde (PRORATED GAS)

4. Well Location

Unit Letter F : 1964 feet from the North line and 2505 feet from the WEST line

Section 35 Township 32N Range 7W NMPM San Juan County

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*
GL

Pit or Below-grade Tank Application (For pit or below-grade tank closures, a form C-144 must be attached)

Pit Location: UL F Sect 35 Twp 32N Rng 7W Pit type Drill Pit Depth to Groundwater >100' Distance from nearest fresh water well >1,000' Distance from nearest surface water 200-1000' Below-grade Tank Location

UL_____ Sect_____ Twp_____ Rng_____ ; _____ feet from the _____ line and _____ feet from the _____ line

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

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	☐	PLUG AND ABANDON	☐	REMEDIAL WORK	☐	ALTERING CASING	☐
TEMPORARILY ABANDON	☐	CHANGE PLANS	☐	COMMENCE DRILLING OPNS.	☐	PLUG AND ABANDONMENT	☐
PULL OR ALTER CASING	☐	MULTIPLE COMPLETION	☐	CASING TEST AND CEMENT JOB	☐		
OTHER: Drill Pit Notification			√	OTHER:			☐

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 TITLE Sr. Analyst DATE ~~6/24/04~~ 6/24/04

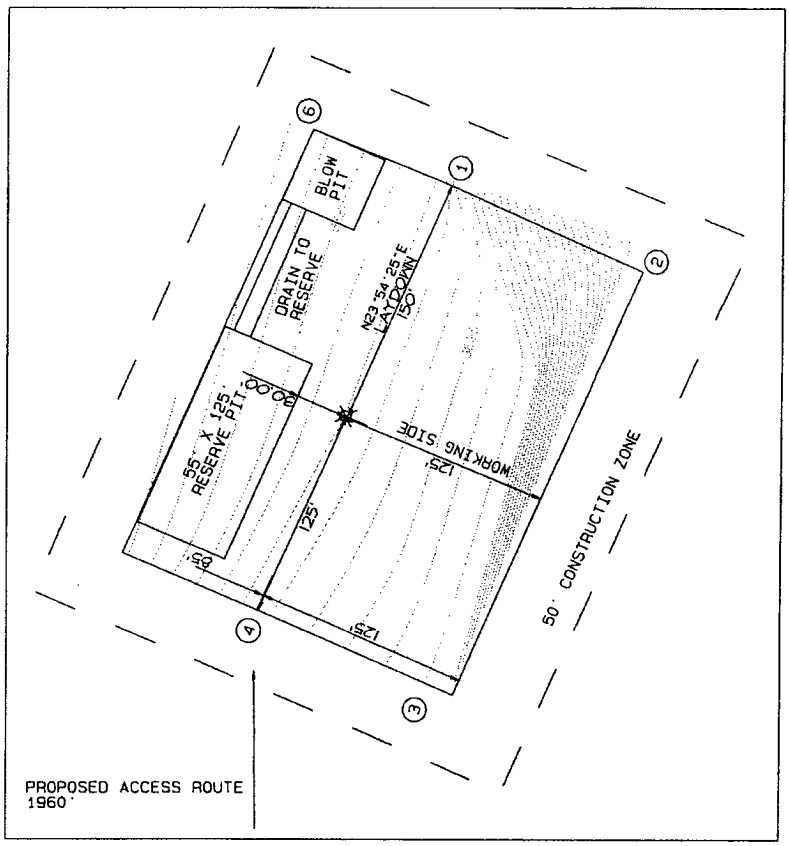
Type or print name Vicki Westby E-mail address: Vicki.R.Westby@conocophillips.com Telephone No. 432-368-1352

(This space for State use)

APPPROVED BY [signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. ☐ DATE OCT 18 2004

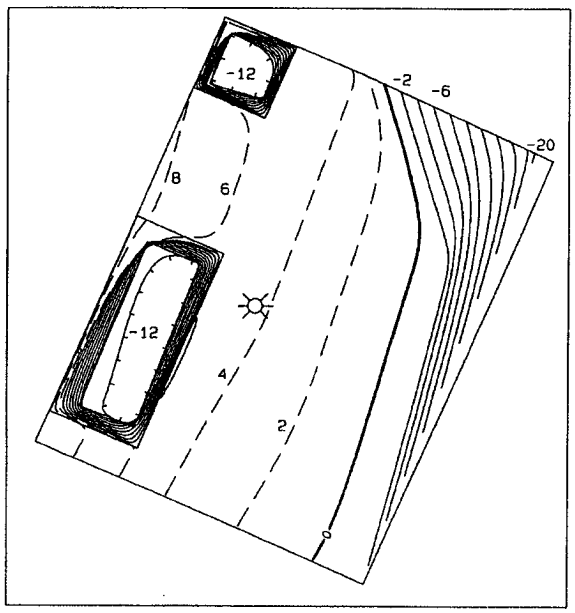
Conditions of approval, if any:

CONOCOPHILLIPS CO. SAN JUAN 32-7 #69M
1964' FNL & 2505 FWL SEC. 35 T32N R7W, NMPM
SAN JUAN COUNTY, NEW MEXICO



N

LAT 36 56.33857 N
LONG 107 32.22104
WGS84



OWNERSHIP: BLM

ConocoPhillips

PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

SAN JUAN 32-7 69M

Lease:	AFE #:			AFE $:
Field Name: hPHILLIPS 32-7	Rig: MACKLON Rig 3	State: NM	County: SAN JUAN	API #:
Geoscientist: Glaser, Terry J	Phone: (832)486-2332	Prod. Engineer: Pusch, Jennye		Phone: 832-486-2345
Res. Engineer: Tomberlin, Timothy A	Phone: 486-2328	Proj. Field Lead:		Phone:

Primary Objective (Zones):

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

Location: Surface — **Straight Hole**

Latitude: 36.56	Longitude: -107.32	X:	Y:	Section: 35	Range: 7W
Footage X: 2505 FWL	Footage Y: 1964 FNL	Elevation: 6624 (FT)	Township: 32N		

Tolerance:

Location Type: Summer Only | Start Date (Est.): | Completion Date: | Date In Operation:

Formation Data: Assume KB = 6637 Units = FT

Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks
Surface Casing	213	6424	☐			12-1/4 hole. 9 5/8" 32.3 ppf, H-40, STC casing. Circulate cement to surface.
NCMT	1047	5590	☐			
OJAM	2463	4174	☐			Possible water flows.
KRLD	2562	4075	☐			
FRLD	3137	3500	☐			Possible gas.
PC TONGUE	3457	3180	☐			
PCCF	3557	3080	☐			
LEWS	3757	2880	☐			
Intermediate Casing	3857	2780	☐			8 3/4" Hole. 7", 20 ppf, J-55, STC Casing. Circulate cement to surface.
CHRA	4807	1830	☐			
CLFH	5602	1035	☐			Gas; possibly wet
MENF	5657	980	☐			Gas.
PTLK	5907	730	☐			Gas.
MNCS	6207	430	☐			
GLLP	7212	-575	☐			Gas. Possibly wet.
GRHN	7937	-1300	☐			Gas possible, highly fractured
CBBO	8137	-1500	☐			Gas
TOTAL DEPTH_A	8287	-1650	☐			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: ☐ Log only if show ☐ GR/ILD ☐ Triple Combo

TD Logs: ☐ Triple Combo ☐ Dipmeter ☐ RFT ☐ Sonic ☐ VSP ☑ TDT

Additional Information:

Printed on: 6/24/2004 10:38:19 AM

ConocoPhillips

PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

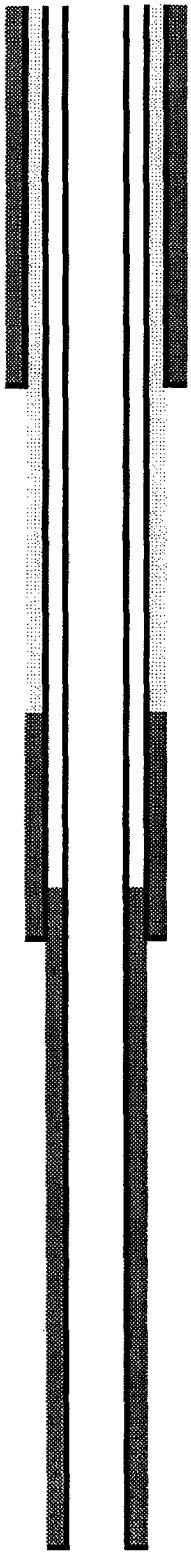
SAN JUAN 32-7 69M

Comments: Location/Tops/Logging - TD is 350' below top of the Greenhorn

General/Work Description -

Drilling Mud Program:
Surface: spud mud
Intermediate: fresh water mud with bentonite and polymer as needed
Below Intermediate: air/nitrogen/mist drilling media with foamer, polymer, & corrosion inhibitor as needed

San Juan 32-7 # 69M



SURFACE CASING :

Drill Bit Diameter	12.25	"	
Casing Outside Diameter	9.625	"	Casing Inside Diam. 9.001 "
Casing Weight	32.3	ppf	
Casing Grade	H-40		
Shoe Depth	230	'	
Cement Yield	1.21	cuft/sk	
Excess Cement	150	%	
Cement Required	162	**sx**	

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

INTERMEDIATE CASING :

Drill Bit Diameter	8.75	"	
Casing Outside Diameter	7	"	Casing Inside Diam. 6.456 "
Casing Weight	20	ppf	
Casing Grade	J-55		
Shoe Depth	3857	'	
Lead Cement Yield	2.88	cuft/sk	
Lead Cement Excess	150	%	
Tail Cement Length	771.4	'	
Tail Cement Yield	1.33	cuft/sk	
Tail Cement Excess	150	%	
Lead Cement Required	386	**sx**	
Tail Cement Required	225	**sx**	

SHOE 3857 ', 7 ", 20 ppf, J-55 STC

PRODUCTION CASING :

Drill Bit Diameter	6.25	"	
Casing Outside Diameter	4.5	"	Casing Inside Diam. 4.000 "
Casing Weight	11.6	ppf	
Casing Grade	N-80		
Top of Cement	3657	'	200' inside intermediate casing
Shoe Depth	8287	'	
Cement Yield	1.46	cuft/sk	
Cement Excess	50	%	
Cement Required	487	**sx**	

SHOE 8287 ', 4.5 ", 11.6 ppf, N-80 STC

San Juan 32-7 # 69M			
	Surf. Csg	Int. Csg	Prod. Csg
OD	9.625	7	4.5
ID	9.001	6.456	4.000
Depth	230	3857	8287
Hole Diam	12.25	8.75	6.25
% Excess Lead		150	
% Excess Tail	150	150	50
Lead Yield		2.88	
Tail Yield	1.21	1.33	1.45
Ft of Tail Slurry	230	771.4	4630
Top of Tail Slurry	0	3085.6	3657
Top of Lead Slurry	N/A	0	N/A
Mud Wt (ppg)	8.9	9.0	air dril
Mud Type	WBM	WBM	air dril

Surface Casing						
	Ft	Cap	XS Factor	bbls	cuft	sx
Open Hole Annulus	230	0.055804	2.5	32.1	180.2	148.9
Shoe Track Volume	40	0.078735	1	3.1	17.7	13.3
Total				35.2	197.8	162.2

Intermediate Casing						
	Ft	Cap	XS Factor	bbls	cuft	sx
Lead Open Hole Annulus	2855.6	0.026786	2.5	191.2	1073.6	372.8
Lead Cased Hole Annulus	220	0.031116	1	6.8	38.4	13.3
Lead Total				198.1	1112.1	386.1
Tail Open Hole Annulus	771.4	0.026786	2.5	51.7	290.0	218.1
Tail Shoe Track Volume	42	0.040505	1	1.7	9.6	7.2
Tail Total				53.4	299.6	225.2

Production Casing						
	Ft	Cap	XS Factor	bbls	cuft	sx
Open Hole Annulus	4430	0.018282	1.5	121.5	682.1	470.4
Cased Hole Annulus	200	0.020826	1	4.2	23.4	16.1
Total				125.7	705.5	486.5

San Juan 32-7 # 69M		
9 5/8 Surface Casing		
Cement Recipe	Class C Standard Cement	
	+ 3% Calcium Chloride	
	+0.25 lb/sx Flocele	
Cement Volume	162	sx
Cement Yield	1.21	cuft/sx
Slurry Volume	197.8	cuft
	35.2	bbls
Cement Density	15.6	ppg
Water Required	5.29	gal/sx
Compressive Strength		
Sample cured at 60 deg F for 8 hrs		
4hrs 38 mins	50	psi
9hrs	250	psi

San Juan 32-7 # 69M		

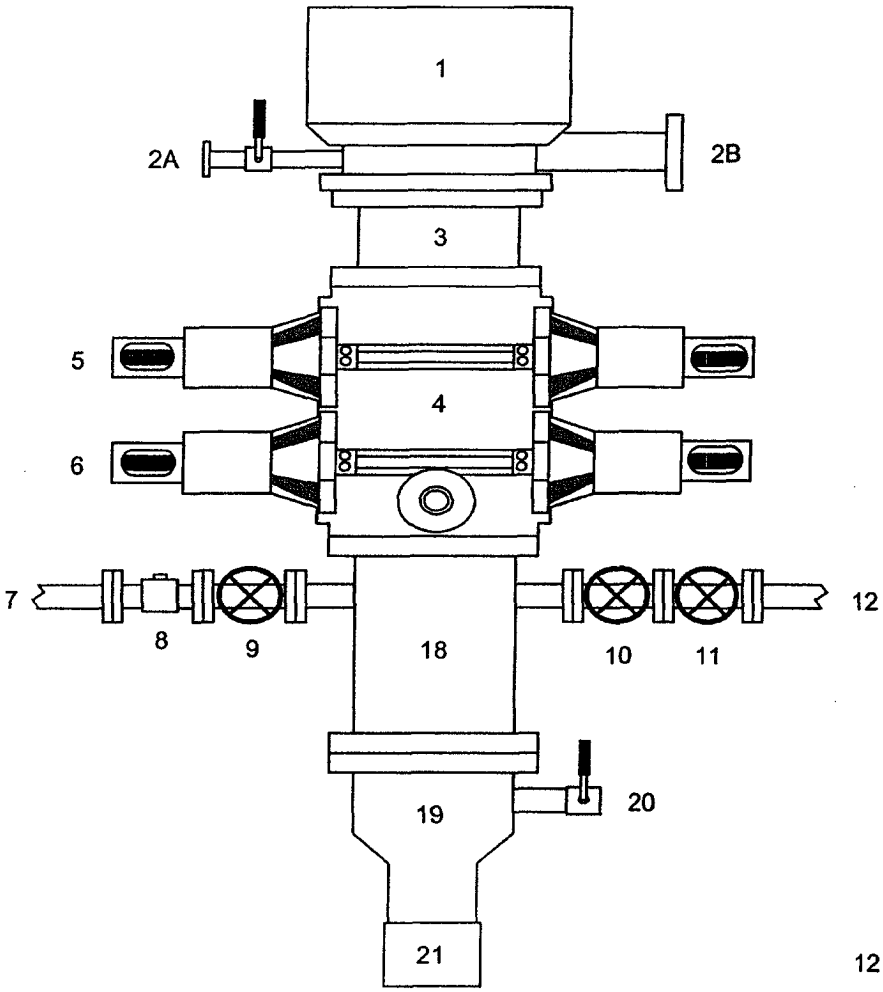
7" Intermediate Casing		
Lead Slurry		
Cement Recipe	Standard Cement	
	+ 3% Econolite (extender)	
	+ 10 lb/sx Pheno Seal	
Cement Required	[illegible]386	sx
Cement Yield	2.88	cuft/sx
Slurry Volume	[illegible]1112.1	cuft
	[illegible]198.1	bbls
Cement Density	11.5	ppg
Water Required	16.91	gal/sx
Compressive Strength		
Sample cured at 130 deg F for 24 hrs		
1 hr 47 min	50	psi
12 hr	350	psi
24 hr	450	psi

7" Intermediate Casing		
Tail Slurry		
Cement Slurry	50 / 50 POZ Standard Cement	
	+ 2% Bentonite	
	+ 6 lb/sx Pheno Seal	
Cement Required	[illegible]225	sx
Cement Yield	1.33	cuft/sx
Slurry Volume	[illegible]299.6	cuft
	[illegible]53.4	bbls
Cement Density	13.5	ppg
Water Required	5.52	gal/sx
Compressive Strength		
Sample cured at 130 deg F for 24 hrs		
2 hr 05 min	50	psi
4 hr 06 min	500	psi
12 hr	1250	psi
24 hr	1819	psi

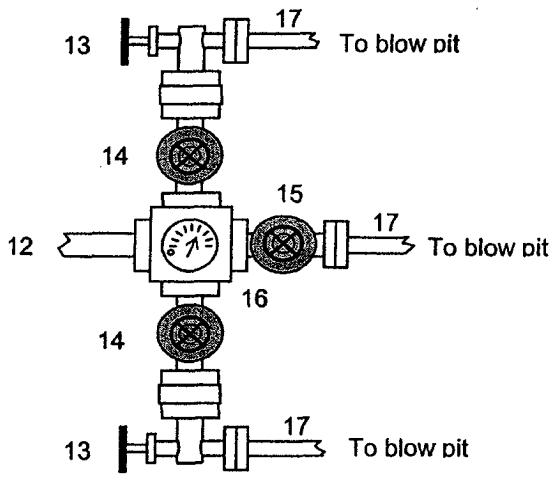
San Juan 32-7 # 69M		
4-1/2" Production Casing		
Cement Recipe	50 / 50 POZ:Standard Cement	
	+ 3% Bentonite	
	+ 3.5 lb/sx PhenoSeal	
	+ 0.2% CFR-3 Friction Reducer	
	+ 0.1% HR-5 Retarder	
	+ 0.8% Halad-9 Fluid Loss Additive	
Cement Quantity	487	sx
Cement Yield	1.45	cuft/sx
Cement Volume	705.5	cuft
	125.7	
Cement Density	13.1	ppg
Water Required	6.47	gal/sx
Compressive Strength		
Sample cured at 200 deg F for 23 hrs		
9 hr 50 min	50	psi
13 hr 45 min	500	psi
16 hr	1500	psi
23 hr	2525	psi

BLOWOUT PREVENTER ARRANGEMENT & PROGRAM

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



1. Rotating Head
2A. Fill-up Line & valve
2B. Flowline
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
19. Casing Head "A" Section
20. Casing Head "A" Section 2" Valve
21. 9 5/8" Casing Collar

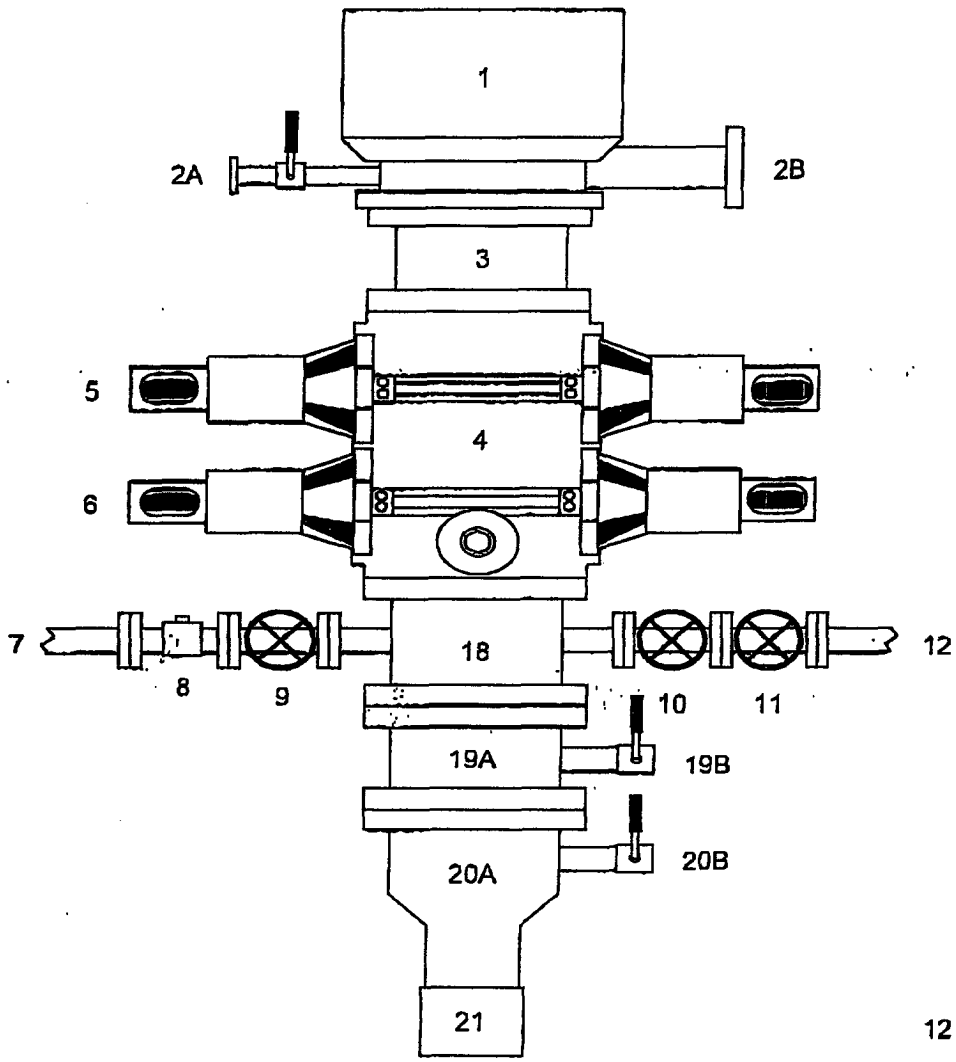


A 12-1/4" hole will be drilled to approximately 220' and the 9-5/8" surface casing will be run and cemented. The Casing Head "A" Section will be screwed onto the 9-5/8" surface casing stub. The BOP will be installed on the Casing Head "A" Section. A test plug will be set in the wellhead and the pipe 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.

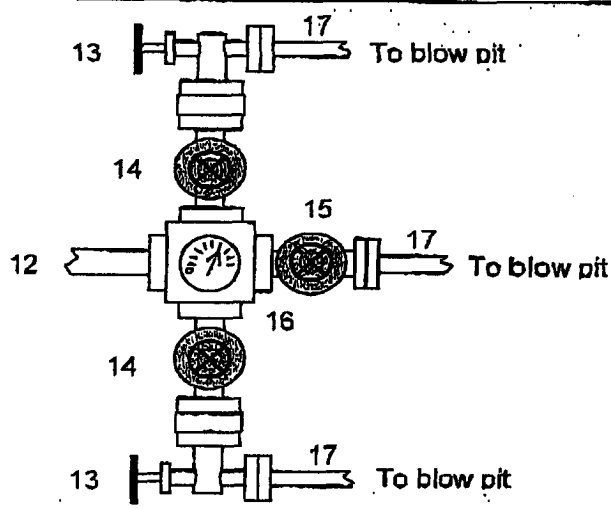
In addition to the equipment in the above diagram the following equipment will comprise the BOP system:
1. Upper Kelly cock Valve with handle
2. Stab-in TIW valve for all drillstrings in use

BLOWOUT PREVENTER ARRANGEMENT & PROGRAM

For Drilling to TD and Setting 4.5 inch Casing



1. Rotating Head
2A. Fill-up Line & valve
2B. Blooie 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

Cathodic Protection System Description

Anode Bed Type	Deep Well	
Hole Size	8"	
Hole Depth	200' - 500'	As required to place anodes below moisture and in low resistance strata.
Surface Casing	8" Diam., ≥ 20' Length. Cemented in Annular Space	When needed, casing will be installed at an adequate depth to control ground water flow. Casing will extend a minimum of 2' above grade, be surrounded by a concrete pad, and sealed with a PVC cap. Steel casing will be substituted when boulders are encountered.
Vent Pipe	1" Diam. PVC	Vent pipe will extend from bottom of hole, through top of casing cap, and sealed with a 1" perforated PVC cap.
Type Of Anodes	Cast Iron Or Graphite	
Number Of Anodes	8 - 20	Sufficient quantity to achieve a total anode bed resistance of <1 ohm and a design life ≥ 20 years.
Anode Bed Backfill	Loresco SW Calcined Petroleum Coke Breeze	Installed from bottom of hole to 10' above top anode.
Anode Junction Box	8 - 20 Circuit Fiberglass Or Metal	Sealed to prevent insect & rodent intrusion.
Current Splitter Box	2 - 5 Circuit Metal	Sealed to prevent insect & rodent intrusion.
DC / AC Cable	DC: #2, #4, #6, #8 Stranded Copper (One Size Or Any Combination Of) With High Molecular Weight Polyethylene (HMWPE) Insulation. AC: #8 Stranded Copper HMWPE	18" depth in typical situation, 24" depth in roadway, & 36" depth in arroyo's and streams. EXCEPTION: If trenching is in extremely hard substratum, depth will be 8 - 12" with cable installed in conduit. Installed above foreign pipelines if 1' clearance is available, if not, installed under foreign pipeline with 1' clearance (AC cable always installed under foreign pipeline in conduit).
Power Source	1) Rectifier 2) Solar Power Unit 3) Thermoelectric Generator	Choice of power source depending on availability of AC & other economic factors.
External Painting	Color to be selected according to BLM specifications.	Paint applied to any surface equipment associated with the CP system which can reasonably be painted.