

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. NMSF079341
1b. Type of Well: <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other: CBM <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator PHILLIPS PETROLEUM COMPANY		7. If Unit or CA Agreement, Name and No. 31348
3a. Address 5525 HWY. 64 FARMINGTON, NM 87401		8. Lease Name and Well No. SAN JUAN 32 FED 23 2A
3b. Phone No. (include area code) Ph: 505.599.3454 Fx: 505-599-3442		9. API Well No. 30 045 31314
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NWNW 780FNL 820FWL 36.97500 N Lat, 107.75440 W Lon At proposed prod. zone		10. Field and Pool, or Exploratory BASIN FRUITLAND COAL
14. Distance in miles and direction from nearest town or post office* 20.5 MILES FROM AZTEC, NM		11. Sec., T., R., M., or Blk. and Survey or Area D Sec 23 T32N R9W Mer NMP
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 780	16. No. of Acres in Lease 1560.00	12. County or Parish SAN JUAN
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth 3626 MD 3626 TVD	13. State NM
21. Elevations (Show whether DF, KB, RT, GL, etc.) 6836 GL	22. Approximate date work will start 02/01/2003	17. Spacing Unit dedicated to this well 317.51 W/2
		20. BLM/BIA Bond No. on file ES0048
		23. Estimated duration 30 DAYS

24. Attachments

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

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature (Electronic Submission)	Name (Printed/Typed) PATSY CLUGSTON	Date 01/02/2003
Title AUTHORIZED REPRESENTATIVE		
Approved by (Signature) /s/ David J. Mankiewicz	Name (Printed/Typed)	Date JAN 23 2003
Title	Office	

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 #17258 verified by the BLM Well Information System
For PHILLIPS PETROLEUM 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".

** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL **

NMOC

DISTRICT I
P.O. Box 1980, Hobbs, N.M. 88241-1980

DISTRICT II
811 South First, Artesia, N.M. 88210

DISTRICT III
1000 Rio Brancos Rd., Artec, N.M. 87410

DISTRICT IV
8040 South Pacheco, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
P.O. 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 30-045-31314		*Pool Code 71629	*Pool Name Basin Fruitland Coal
*Property Code 24281	*Property Name 31348 SAN JUAN 32 FED 23		*Well Number 2A
*OGRID No. 017654	*Operator Name 217817 PHILLIPS PETROLEUM COMPANY		*Elevation 6836

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
D	23	32N	9W		780	NORTH	820	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
D									

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
317.51 W/2	Y	U	

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

¹⁶ Section 23 SF-079341 1560.0 acres S88°58'W 5225.88' 780' 820' 5289.24' N0°14'E S88°37'W 5252.28'				¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. Signature: <u>Patsy Clugston</u> Printed Name: <u>Patsy Clugston</u> Title: <u>SHEAR Administrative Assistant</u> Date: <u>November 26, 2002</u>	
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. Date of Survey: <u>11/12/02</u> Signature and Seal of Professional Surveyor: HENRY P. BROADHURST NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR 11393					

PHILLIPS PETROLEUM COMPANY

WELL NAME: San Juan 32 Fed 23 #2A

DRILLING PROGNOSIS

Location of Proposed Well: Unit D, 780' FNL & 820' FWL
Section 23, T32N, R9W

2. Unprepared Ground Elevation: @ 6836'
3. The geological name of the surface formation is San Jose.
4. Type of drilling tools will be rotary
5. Proposed drilling depth is 3626'.
6. The estimated tops of important geologic markers are as follows:
- | | |
|--------------------------|-------------------------------|
| <u>Nacimiento - 871'</u> | |
| <u>Ojo Alamo - 2151'</u> | <u>Base of Coal - 3626'</u> |
| <u>Kirtland - 2171'</u> | <u>Picture Cliffs - 3636'</u> |
| <u>Fruitland - 3271'</u> | <u>Interm. Casing - 3396'</u> |
| | <u>T. D. - 3626'</u> |
7. The estimated depths at which anticipated water, oil, gas or other mineral bearing formations are expected to be encountered are as follows:

Water:	<u>Ojo Alamo -</u>	<u>2151' - 2171'</u>
Oil:	<u>none</u>	
Gas:	<u>Fruitland Coal -</u>	<u>3291' - 3626'</u>
Gas & Water:	<u>Fruitland Coal -</u>	<u>3291' - 3626'</u>

8. The proposed casing program is as follows:

Surface String: 9-5/8", 32.3#, H-40 @ 200' *
Intermediate String: 7", 20#, J/K-55 @ 3396'
Production Liner: 5-1/2", 15.5# J/K-55 @ 3376' - 3626' (see details below)

* The surface casing will be set at a minimum of 200', but could be set deeper if required to maintain hole stability.

9. Cement Program:
- Surface String: 102.7 sx Type III cement. Cement to surface w/110% excess of casing/hole annulus volume w/Type III cement + 2% bwoc Calcium Chloride + 0.25#/sx Cello-flake + 60.6% Fresh water (14.5 ppg). (1.41 cf/sx yield = 145 cf)

9. Cement program: (continued from Page 1)

Intermediate String: Lead Cement: 389.1 sx Type III cement. Cement to surface - 110% excess casing/hole annular volume w/ Type III cement + 0.25#/sx Cello-flake + 5#/sx Gilsonite + 6% bwoc Bentonite + 10#/sx CSE + 3% bwow KCL + 0.4% bwoc FL-25 mixed + 0.02#/sx static free mixed at 12.0 ppg. (2.52 cf/sx yield = 981cf)

Tail: 50 sx Type III cement + 0.25#/sx Cello-flake + 1% Calcium Chloride mixed at 14.5 ppg. (1.40 cf/sx yield = 70 cf)

Note: Phillips Petroleum continually works to improve the cement slurries on our wells. BJ Services is currently trying to improve what we are using now and before we would use a new cement program it would have to have stronger properties than we are currently using.

Centralizer Program:

Surface: Total four (4) - 10' above shoe and top of 2nd, 3rd, & 4th jts.

Intermediate: Total seven (7) - 10' above shoe and top of 1st, 2nd, 4th, 6th, 8th, & 1st jt. into shoe.

Turbulators: Total three (3) - one at 1st jt below Ojo Alamo and next 2 jts up.

Liner :

If the coal is cleated a 5 1/2" 15.5# liner will be run in the open hole without being cemented.

If the coal is NOT cleated, a 4-1/2" 11.6# liner will be run & cemented. The well will then be completed by fracture stimulation. The top of the liner will be set approx. 200' into the 7" casing and be set @ TD and be cement in place as follows:

Lead Cement: Type III cement - 150% excess casing/hole annular volume w/Type III cement + 0.25#/sx Cello-flake + 5#/sx Gilsonite + 6% bwoc Bentonite + 10#/sx CSE + 3% bwow KCL + 0.4% bwoc FL-25 mixed + 0.02#/sx static free mixed at 12.0 ppg. (2.52 cf/sx yield)

Tail: 50 sx Type III cement + 0.25#/sx Cello-flake + 1% Calcium Chloride mixed at 14.5 ppg. (1.40 cf/sx yield = 70 cf)

10. The minimum specifications for pressure control equipment which are to be used, a schematic diagram thereof showing sizes, pressure ratings (or) API series and the testing procedure and testing frequency are enclosed within the APD packet.
1. Drilling Mud Prognosis: Surface - spud mud on surface casing.
Intermediate - fresh water w/polymer sweeps. Bentonite as required for viscosity.
Below Intermediate - air drilled.
12. The testing, logging, and coring programs are as follows:
D.S.T.s or cores:
Logs: Mud logs only
13. Anticipated no abnormal pressures or temperatures to be encountered or any other potential hazards such as Hydrogen Sulfide Gas. Low risk H₂S equipment will be used.

Estimated Bottomhole pressures: Fruitland Coal - +/- 1267 psi
14. The anticipated starting date is sometime around February 1, 2003 with duration of drilling operations for approximately 30 days thereafter.

San Juan 32 Fed 23 #2A

SURFACE CASING

Drill Bit Diameter	12.25 "	
Casing Outside Diameter	9.625 "	8.989
Casing Weight	32.3 ppf	
Casing Grade	H-40	
Shoe Depth	200 '	30 '
Cement Yield	1.41 cuft/sk	
Excess Cement	110 %	
Casing Capacity	0.0785 bbl/ft	0.4407 cuft/ft
Hole / Casing Annulus Capacity	0.0558 bbl/ft	0.3132 cuft/ft
Cement Required	102.7 sx	

SHOE 200 ', 9.625 ", 32.3 ppf,

INTERMEDIATE CASING :

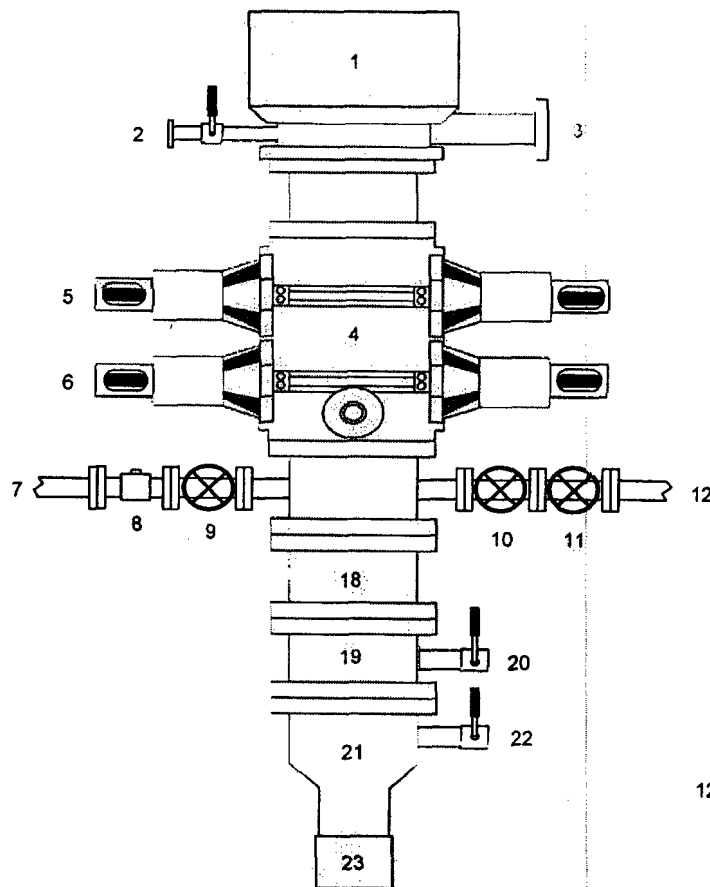
Drill Bit Diameter	8.75 "	
Casing Outside Diameter	7 "	6.455
Casing Weight	20 ppf	
Casing Grade	J-55	
Shoe Depth	3396 '	
Lead Cement Yield	2.52 cuft/sk	
Lead Cement Excess	110 %	
Tail Cement Length	200 '	30 '
Tail Cement Yield	1.4 cuft/sk	
Tail Cement Excess	110 %	
Casing Capacity	0.0405 bbl/ft	0.2272 cuft/ft
Casing / Casing Annulus Capacity	0.0309 bbl/ft	0.1734 cuft/ft
Hole / Casing Annulus Capacity	0.0268 bbl/ft	0.1503 cuft/ft
Lead Cement Required	389.1 sx	
Tail Cement Required	50.0 sx	

LINER TOP 3376 '

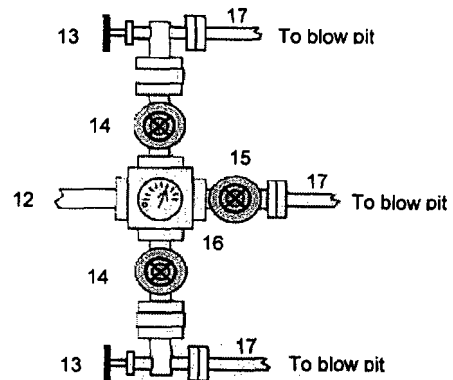
SHOE 3396 ', 7 ", 20 ppf,

LINER BOTTOM 3626

BLOWOUT PREVENTER HOOKUP



1. Rotating Head
2. Fill-up Line & valve
3. Flowline
4. Blowout Preventer (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. Spacer Spool
19. Casing Spool "B" Section
20. Casing Spool "B" Section 2" Valve
21. Casing Head "A" Section
22. Casing Head "A" Section 2" Valve
23. 9 5/8" Casing Collar



Drilling contractors used in the San Juan Basin 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. The above diagram of the BOP system 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.

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