

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

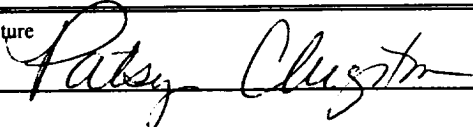
FORM APPROVED  
OMB NO. 1004-0136  
Expires: November 30, 2000

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. <b>NMNM12292</b>
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 <b>Phillips Petroleum Company</b>		7. Unit or CA Agreement Name and No. <b>NMNM78421A &amp; B</b>
3a. Address <b>5525 Highway 64, NBU 3004, Farmington, NM 87401</b>		8. Lease Name and Well No. <b>SJ 31-6 Unit #20M</b>
3b. Phone No. (include area code) <b>505-599-3454</b>		9. API Well No. <b>30-039-26992</b>
4. Location of Well (Report location clearly and in accordance with any State requirements)* At surface <b>Unit J. (NWSE) 1980' FSL &amp; 1973' FEL</b> At proposed prod. zone <b>same as above</b>		10. Field and Pool, or Exploratory <b>Basin DK &amp; Blanco MV</b>
11. Sec., T., R., M., or Blk. and Survey or Area <b>J Section 3, T30N, R6W</b>		12. County or Parish <b>Rio Arriba,</b>
13. State <b>NM</b>		
14. Distance in miles and direction from nearest town or post office* <b>23 miles NE of Blanco, NM</b>		
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any) <b>1973'</b>	16. No. of Acres in lease <b>640.48 acres</b>	17. Spacing Unit dedicated to this well <b>320.32 E/2 - both MV &amp; DK</b>
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth <b>7847'</b>	20. BLM/BIA Bond No. on file <b>ES0048</b>
21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>6261' GL</b>	22. Approximate date work will start* <b>November 2002</b>	23. Estimated duration <b>20 days</b>
This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4		
24. Attachments <b>DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS".</b>		

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 	Name (Printed/Typed) <b>Patsy Clugston</b>	Date <b>4/23/02</b>
Title <b>Sr. Regulatory/Proration Clerk</b>		
Approved by (Signautre) <b>/s/ Charlie Beecham</b>	Name (Printed/Typed)	Date <b>AUG 21 2002</b>
Title <b>ACTING</b>	Office	

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, 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.

\*(Instructions on Reverse)

670 EXPLORATION, NM  
2002 APR 23 PM 4:21

11-0000

District I  
181 Box 1980, Hobbs, NM 88241-1980  
District II  
811 South First, Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
2040 South Pacheco  
Santa Fe, NM 87505

Form C-1  
Revised October 18, 19  
Instructions on ba  
Submit to Appropriate District Off  
State Lease - 4 Cop  
Fee Lease - 3 Cop

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 APN Number <b>30-039-26992</b>		2 Pool Code <b>71599</b>	3 Pool Name <b>Basin Dakota</b>
4 Property Code <b>009259</b>	5 Property Name <b>SAN JUAN 31-6 UNIT</b>		6 Well Number <b>20M</b>
7 OGRID No. <b>017654</b>	8 Operator Name <b>PHILLIPS PETROLEUM COMPANY</b>		9 Elevation <b>6261'</b>

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
J	3	30N	6W		1980'	SOUTH	1973'	EAST	RIO ARriba

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
J									

12 Dedicated Acres <b>320.32 E/2</b>	13 Joint or Infill <b>Y</b>	14 Consolidation Code <b>U</b>	15 Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR  
NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16	West	5280.00'		17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief   Signature <b>Patsy Clugston</b> Printed Name Sr. Regulatory/Proration Clerk Title <b>10-8-01</b> Date
5281.32'				
500°03'E				
				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 <b>9/4/01</b> Signature and Seal of Registered Professional Surveyor  Certificate Number

District I  
181 Box 1980, Hobbs, NM 88241-1980  
District II  
811 South First, Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
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Submit to Appropriate District Offi  
State Lease - 4 Copi  
Fee Lease - 3 Copi

☐ AMENDED REPOF

WELL LOCATION AND ACREAGE DEDICATION PLAT

1. APN Number <b>30-039-26992</b>		2. Pool Code <b>72319</b>	3. Pool Name <b>Blanco Mesaverde</b>
4. Property Code <b>009259</b>	5. Property Name <b>SAN JUAN 31-6 UNIT</b>		6. Well Number <b>20M</b>
7. OGRID No. <b>017654</b>	8. Operator Name <b>PHILLIPS PETROLEUM COMPANY</b>		9. Elevation <b>6261'</b>

10 Surface Location

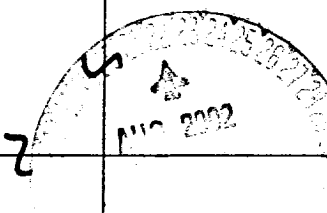
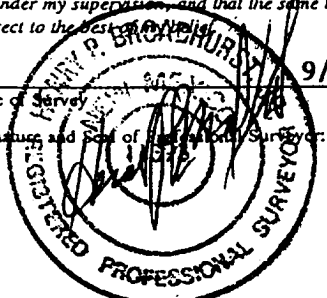
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the 1980'	North/South line	Feet from the 1973'	East/West line	County
J	3	30N	6W			SOUTH		EAST	RIO ARriba

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
J									

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

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR.  
NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16 5281.32' S00°03'E Section 3 NM012292 640.48 acres 1980' S89°56'E 5272.08'	West	5280.00'	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief  Signature <i>Patsy Clugston</i> Printed Name <b>Patsy Clugston</b> Title <b>Sr. Regulatory/Proration Cler</b> Date <b>10-8-01</b>
			
	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 <b>9/4/01</b> Signature and Seal of Registered Surveyor:  Certificate Number		
	South 5286.60'		

## PHILLIPS PETROLEUM COMPANY

WELL NAME: San Juan 31-6 Unit #20M (MV/DK)

### DRILLING PROGNOSIS

1. Location of Proposed Well: Unit J, 1980' FSL & 1973' FEL  
Section 3, T30N, R6W
2. Unprepared Ground Elevation: @ 6261' (unprepared)
3. The geological name of the surface formation is San Jose.
4. Type of drilling tools will be rotary.
5. Proposed drilling depth is 7847'.
6. The estimated tops of important geologic markers are as follows:

<u>Nacimiento - 1006'</u>	<u>Menefee Fm. - 5237'</u>
<u>Ojo Alamo - 2235'</u>	<u>Pt. Lookout - 5483'</u>
<u>Kirtland Sh - 2449'</u>	<u>Mancos Sh - 5963'</u>
<u>Fruitland Fm. - 2765'</u>	<u>Gallup Ss. - 6750'</u>
<u>Pictured Cliffs - 3134'</u>	<u>Greenhorn Ls. - 7504'</u>
<u>Lewis Shale - 3244'</u>	<u>Graneros Sh. - 7554'</u>
<u>Cliff House Ss - 5199'</u>	<u>Dakota Ss - 7677'</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 - 2235' - 2449'</u>
Gas & Water:	<u>Fruitland - 2765' - 3134'</u>
Gas:	<u>Pictured Cliffs - 3134' - 3244'</u>
	<u>Mesaverde - 5199' - 5963'</u>
	<u>Dakota - 7677' - 7847'</u>

8. The proposed casing program is as follows:

Surface String: 9-5/8", 32.3# H-40 @ 320' \*

Intermediate String: 7", 20#, J/K-55 @ 3344' (J-55 will be used, unless the K-55 is the only casing available.

Production String: 4-1/2", 11.6#, I-80 @ 7847' (TD)

\* The surface casing will be set at a minimum of 320', but could be set deeper if required to maintain hole stability.

## 9. Cement Program:

Surface String: 197.6 sx Type III cement + 2% bwoc Calcium Chloride + 0.25#/sx Cello-flake + 60.6% FW (1.41 yield = 278 cf). *Circulate*

Intermediate String: **Lead Cement:** 414.8 sx Type III cement (35:65) POZ + 5#/sx Gilsonite + 0.25 #/sx Cello-Flake + 6% bwoc Bentonite + 10#/sx CSE + 3% bwow KCL + 0.4% bwoc FL-25 + 0.02#/sx static free + 129% FW (2.37 yield = 983 cf). Cement to surface with 120% excess casing/hole annular volume.

**Tail Cement:** 50.0 sx Type III cement + 0.25#/sx Cello-Flake + 1% Calcium Chloride + 60.5% FW (1.4 yield = 70 cf). Cement to surface with 120% excess of casing/hole annulus volume.

Production String \*: **Lead Cement:** 50 sx Type III (35:65) POZ L (Fly Ash L) with 6% gel Bentonite, 5#/sx Phenoseal, 0.2% bwoc CD-32, 0.75 bwoc FL-52 1#/sx LCM-1 0.25#/sx Cello-Flake, 10#/sx CSE, 0.02#/sx Static Free (2.34 yield = 117 cf).

**2<sup>nd</sup> Lead Cement:** 253.2 sx Type III (35:65) POZ L (Fly Ash L) with 6% gel Bentonite, 2.5#/sx Phenoseal, 0.2% bwoc CD-32, 0.75 bwoc FL-52 1#/sx LCM-1 0.25#/sx Cello-Flake, 10#/sx CSE, 0.02#/sx Static Free (2.32 yield = 587 cf)

**Tail Cement -** 20 sx Type III (35:65) POZ L (Fly Ash L) with 6% gel Bentonite, 5#/sx Phenoseal, 0.2% bwoc CD-32, 0.75 bwoc FL-52 1#/sx LCM-1 0.25#/sx Cello-Flake, 10#/sx CSE, 0.02#/sx Static Free (1.91 yield = 38 cf).

\*The production casing cement is calculated to cover the openhole interval with 50% excess and annular volume 200' within intermediate shoe. Depending on hole conditions, the well may be cemented in a single stage or two staged.

Centralizer Program:

Surface: Total four (4) 1 @ 10' above shoe & top of 2<sup>nd</sup>, 4<sup>th</sup> & 6<sup>th</sup> joint

Intermediate: Total seven (7) – 10' above shoe, top of 1<sup>st</sup>, 2<sup>nd</sup>, 4<sup>th</sup>, 6<sup>th</sup>, & 8<sup>th</sup> jts & 1 jt. above surface casing.

Production: None planned.

Turbulators: Total Three (3) – on intermediate casing at 1<sup>st</sup> jt. below the Ojo Alamo and next 2 jts up.

**San Juan 31-6 #20M (MV/DK)**

**SURFACE CASING :**

Drill Bit Diameter	12.25 "	
Casing Outside Diameter	9.625 "	8.913
Casing Weight	36 ppf	
Casing Grade	H-40	
Shoe Depth	320 '	
Cement Yield	1.41 cuft/sk	
Excess Cement	165 %	

Hole / Casing Annulus Capacity	0.0558 bbl/ft	0.3132 cuft/ft
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Cement Required	197.6 sx
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SHOE	320 ',	9.625 ",	36 ppf,	H-40
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**INTERMEDIATE CASING :**

Drill Bit Diameter	8.75 "	
Casing Outside Diameter	7 "	6.455
Casing Weight	20 ppf	
Casing Grade	J-55	
Shoe Depth	3344 '	
Lead Cement Yield	2.37 cuft/sk	
Lead Cement Excess	120 %	
Tail Cement Length	211.5 '	
Tail Cement Yield	1.4 cuft/sk	
Tail Cement Excess	120 %	

Casing / Casing Annulus Capacity	0.0296 bbl/ft	0.1660 cuft/ft
Hole / Casing Annulus Capacity	0.0268 bbl/ft	0.1503 cuft/ft
Casing Capacity	0.0405 bbl/ft	0.2272 cuft/ft

Lead Cement Required	414.8 sx
Tail Cement Required	50.0 sx

SHOE	3344 ',	7 ",	20 ppf,	J-55
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**PRODUCTION CASING :**

Drill Bit Diameter	6.25 "	
Casing Outside Diameter	4.5 "	4.000
Casing Weight	11.6 ppf	
Casing Grade	I-80	
Top of Cement	3244 '	100' inside intermediat
Shoe Depth	7847 '	
Cement Yield	2.33 cuft/sk	
Cement Excess	50 %	
Tail Cement Length	248 '	
Tail Cement Yield	1.91 cuft/sk	
Tail Cement Excess	50 %	

Casing / Casing Annulus Capacity	0.0208 bbl/ft	0.1168 cuft/ft
Hole / Casing Annulus Capacity	0.0183 bbl/ft	0.1026 cuft/ft
Casing Capacity	0.0155 bbl/ft	0.0872 cuft/ft

Cement Required	303.2 sx
Tail Cement Required	20 sx

SHOE	7847 ',	4.5 ",	11.6 ppf,	I-80
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## **BOP AND RELATED EQUIPMENT CHECK LIST**

### **2M SYSTEM:**

2 hydr. rams (pipe & blind) or hydr. ram and annular with blind ram on bottom

Kill Line (2-inch minimum)

1 kill line valve (2-inch minimum)

1 choke line valve

2 chokes (refer to diagram in attachment 1) on choke manifold

Upper kelly cock valve in open position with handle available

Safety valve (in open position) and subs to fit all drill strings in use (with handle available)

Pressure gauged on choke manifold

2 inch minimum choke line

Fill-up line above the uppermost preventer

*The BOPs will be pressure tested according to Onshore Order #2 III, A 1 and 30% safety factor.*